

**M. P. AUDYOGIK KENDRA VIKAS NIGAM LTD. (BHOPAL)**

**Tender Notice Text Display**

<b>Tender No</b>	: /2018-19	<b>N.I.T. Date</b>	: 04.10.2018
<b>N.I.T. No</b>	: 18 of 2018-19, 04.10.2018		
<b>Contractor Class</b>	: MP PWD REGISTRATION	<b>Contractor Level</b>	: MP PWD REGISTRATION
<b>Tender Category</b>	: Work-Percentage Tender, Open	<b>Currency</b>	: INR
<b>Description</b>	: Supply, installation & commissioning of hydraulic control valves with controller and Scada system for sector-A,B,C & D at I/A Mandideep, Distt-Raisen (M.P)		
<b>Report title</b>	: Supply, installation & commissioning of hydraulic control valves with controller and Scada system for sector-A,B,C & D at I/A Mandideep, Distt-Raisen (M.P)		
<b>No. of Work</b>	: 1	<b>Splitting Rule</b>	: No Restrictions
<b>Tender Type</b>	: Open		
<b>Basin / Project</b>	: Supply, installation & commissioning of hydraulic control valves with controller and Scada system for sector-A,B,C & D at I/A Mandideep, Distt-Raisen (M.P)	<b>Circle / Division</b>	: M.P. AKVN(Bhopal)
<b>Officer</b>	: A.K.S.Sengar	<b>Designation</b>	: Executive Engineer
<b>Remark</b>	: First Call		

**Tender Notice Text Contents**

OFFICE OF THE MANAGING DIRECTOR

**M.P.AKVN(Bhopal)**

DETAILED NOTICE INVITING TENDER

N.I.T. No. : 18 of 2018-19 dt. 04.10.2018

Online tenders are invited for the following Work-Percentage Tender. The Bid Seals (Hashes) will be received online on the portal [mpeproc.gov.in](http://mpeproc.gov.in) on or before **23.10.2018 5:30 p.m.** The Tenders will be opened in the office of the undersigned as mention tender time schedule (key date) If desired, the contractors or their duly authorized representatives may remain present at the time of opening of tender.

S.No.	Name of District	Name of Work	Probable Amount of contract (Rs. in Lakhs)	E.M.D. (in Rs.)	Cost of tender form (in Rs.)	Contractor Class	Time allowed
1.	Raisen	Supply, installation & commissioning of hydraulic control valves with controller and Scada system for sector-A,B,C & D at I/A Mandideep, Distt-Raisen (M.P)	<b>173.52</b>	<b>1,74,000.00</b>	<b>12,500.00+ 2250 (GST) = 14750.00</b>	MP PWD REGISTRATION	06 (Six Months) including rainy season.

**EMD Amount In Rs.: 1,74,000/-**

## Fee Structure

Sr.No.	Stage	Amount (Rs.)
1.	Tender Purchase - Online	12,500.00+ 2250 (GST) = 14750.00

## Key Dates

S.No.	MP AKVN Bhopal Stage	Start Date & Time	Expiry Date & Time	Envelopes
1.	Release of Tender	04.10.2018 17:30	-	-
2.	Purchase of Tender Start & End Date	04.10.2018 17:30	22.10.2018 17:30	-
3.	Bid Submission End Date (online)	04.10.2018 17:30	23.10.2018 17:30	
4.	Pre bid Meeting		12.10.2018 15:00	
4.	Bid Submission End Date (Physically) i.e. EMD & other documents.	-	25.10.2018 17:30	Envelopes A, B
5.	Open EMD & Technical / PQ Bid	27.10.2018 10:30	-	Envelopes A, B
6.	Open Financial Bid	03.11.2018 10:30	-	Envelopes C

- The bidders shall have to submit their online (Decrypt the bids and re-encrypt the bids) and upload the relevant documents from as per key dates. Original EMD instruments & Technical documents, Technical staff should reach the office of the Managing Director, Madhya Pradesh audyogik Kendra vikas nigam Bhopal First Floor, Bittan Market, E-5, Arera Colony, Bhopal-462016 M.P. by **25.10.2018 up to 5.30** p.m. through speed post A.D. or hand delivery Nigam will not be responsible for any postal delays.
- The successful contractor/Firm must get registered as mentioned in the tender document. Failure in compliance of which will lead to the forfeiture of the Earnest Money Deposit.
- Tender form can be purchased online only from e-portal <http://mpeproc.gov.in> by making online payment. The last date of purchase of tender **22.10.2018 up to 5:30 P.M.**
- The Bid Data should be filled and the Bid Seals (Hashes) of all the envelopes and the documents which are to be uploaded by the Bidders should be submitted online upto as per time schedule (key Dates)
- The Bidders shall have to submit their Bids online (decrypt the bids and re-encrypt the bids) and upload the relevant documents from as per time schedule (key Dates).
- Bidding documents can also be viewed on M.P. AKVN Bhopal Website <http://www.mpakvnbhopal.nic.in> however for bidding purpose online purchase procedure has to be followed as already mentioned in Note No. 3 above.
- Including all taxes & GST excluding.
- Other details can be seen in the tender documents.

**Executive Engineer**

**MP Audyogik Kendra Vikas Nigam (Bhopal)**  
**First Floor, Tawa Complex, Bittan Market,**  
**E-5, Arera Colony, Bhopal (MP)**

**Appendix 2.10**

**Tender Document**

**For Percentage Rate only**

Office of the –Managing Director, MPAKVN (Bhopal)

NIT Number and Date	
Agreement Number and Date	
Name of work	Supply, installation & commissioning of hydraulic control valves with controller and Scada system for sector-A,B,C & D at I/A Mandideep, Distt-Raisen (M.P)
Name of the Contractor	
Probable Amount of Contract	<b>1,73,51,956.00</b>
(Rs. in Figure)	<b>1,73,51,956.00</b>
(Rs. in Words)	One crore, seventy three lakh, fifty one thousand, nine hundred fifty six only.
Contract Amount	
(Rs. in Figure)	
(Rs. in Words)	
Stipulated Period of Completion	06 Months i/c rainy season.

## Appendix 2.10 (Tender Document)

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# SECTION 1

## Notice Inviting e-Tenders

First Floor, Tawa Complex, Bittan Market,  
E-5, Arera Colony, Bhopal (MP)

**N.I.T. No.18/e-tendering**

**Dated:04-10-2018**

Online percentage rate bids for the following works are invited from registered contractors and firms of repute fulfilling registration criteria:

S. No./Pkg/Code	Work	District(s)	Probable Amount (Rs. in lakh)	Completion Period (months)
	Supply, installation & commissioning of hydraulic control valves with controller and Scada system for sector-A,B,C & D at I/A Mandideep, Distt-Raisen (M.P)	Raisen	<b>1,73,51,956.00</b>	06 Months

1. Interested bidders can view the NIT on website [www.mpeproc.gov.in](http://www.mpeproc.gov.in) & Nigam website [www.mpakvnbhopal.nic.in](http://www.mpakvnbhopal.nic.in)
2. **The Bid Document can be purchased only online from 04-10-2018 upto 17.30 to 22-10-2018 upto 17:30 .**
3. Amendments to NIT, if any, would be published on website only, and not in newspaper.

**Executive Engineer**

## Notice Inviting Tender

First Floor, Tawa Complex, Bittan Market,  
E-5, Arera Colony, Bhopal (MP)

N.I.T. No. 18/AKVN/IND/TS/

**Dated:04.10.2018**

Online percentage rate bids for the following works are invited from registered contractors and firms of repute fulfilling registration criteria:

S. No./ Pkg/ Code	Name of work	District(s)	Probable Amount of Contract (Rs. in Lakh)	Earnest Money Deposit (EMD) (Rs. in lakh)	Cost of Bid Document (In Rupees)	Category of Contractor	Period of Completion (In Months)
	Supply, installation & commissioning of hydraulic control valves with controller and Scada system for sector-B at I/A Mandideep, Distt-Raisen (M.P)	Raisen	<b>173.52</b>	<b>1.74</b>	12500 + 2250 (GST) = 14750		06 months

1. All details relating to the Bid Document(s) can be viewed and downloaded free of cost on the website [www.mpeproc.gov.in](http://www.mpeproc.gov.in) & Nigam website [www.mpakvnbhopal.nic.in](http://www.mpakvnbhopal.nic.in)
2. Bid Document can be purchased (from [www.mpeproc.gov.in](http://www.mpeproc.gov.in)) after making online payment of portal fees through Credit/Debit/Cash Card/internet banking.
3. At the time of submission of the Bid the eligible bidder shall be required to:
  - i) Pay the cost of Bid Document;
  - ii) Deposit the Earnest Money;
  - iii) Submit a check list; and
  - iv) Submit an affidavit.

Details can be seen in the Bid Data Sheet.

#### **4. ELIGIBILITY FOR BIDDERS:**

- (a) At the time of submission of the Bid the bidder should have valid registration with the Government of Madhya Pradesh, PWD in appropriate class. However, such bidders who are not registered with the Government of Madhya Pradesh and are eligible for registration can also submit their bids after having applied for registration with appropriate authority.

- (b) The bidder would be required to have valid registration at the time of signing of the Contract.
  - (c) Failure to sign the contract by the selected bidder, for whatsoever reason, shall result in forfeiture of the earnest money deposit.
5. **Pre-qualification** – Prequalification conditions, wherever applicable, are given in the Bid Data Sheet.
  6. **Special Eligibility** - Special Eligibility Conditions, if any, are given in the Bid Data Sheet.
  7. The Bid Document can be purchased only online from 04-10-2018 **upto 17.30 to** 22-10-2018 **17:30** . Other key dates may be seen in bid data sheet.
  8. Amendments to NIT, if any, would be published on website only, and not in newspaper.

**Executive Engineer**

**SECTION 2**  
**INSTRUCTIONS TO BIDDERS (ITB)**

**A. GENERAL**

**1. Scope of Bid**

The detailed description of work, hereinafter referred as 'work', is given in the Bid Data Sheet.

**2. General Quality of Work:**

The work shall have to be executed in accordance with the technical specifications specified in the Bid Data sheet/Contract Data, and shall have to meet high standards of workmanship, safety and security of workmen and works.

**3. Procedure for Participation in E-Tendering**

The procedure for participation in e-tendering is given in the Bid Data Sheet.

**4. One bid per bidder**

4.1 The bidder can be an individual entity or a joint venture (if permitted as per Bid Data Sheet). In case the J.V. is permitted, the requirement of joint venture shall be as per the Bid Data Sheet.

4.2 No bidder shall be entitled to submit more than one bid whether jointly or severally. If he does so, all bids wherein the bidder has participated shall stand disqualified.

**5. Cost of Bidding**

The bidder shall bear all costs associated with the preparation and submission of his bid, and no claim whatsoever for the same shall lie on the Government.

**6. Site visit and Examination of Works**

The bidder is advised to visit and inspect the Site of Works and its surroundings and obtain for itself on its own responsibility all information that may be necessary for preparing the bid and entering into a contract for construction of the work. All costs in this respect shall have to be borne by the bidder.

**B. BID DOCUMENTS**

**7. Content of Bid documents**

The Bid Document comprises of the following documents:

1. NIT with all amendments.



2. Instructions to Bidders, Bid Data Sheet with all Annexure
  3. Conditions of Contract:
    - i. Part I General Conditions of Contract and the Contract Data with all Annexure and
    - ii. Part II Special Conditions of Contract.
  4. Specifications
  5. Drawings
  6. Priced Bill of Quantities
  7. Technical and Financial Bid
  8. Letter of Acceptance
  9. Agreement, and
  10. Any other document(s), as specified.
- 8.** The bidder is expected to examine carefully all instructions, conditions of contract, the **contract data**, forms, terms and specifications, bill of quantities, forms and drawings in the Bid Document. Bidder shall be solely responsible for his failure to do so.

**9. Pre-Bid Meeting (where applicable)**

Wherever the Bid Data Sheet provides for pre-bid meeting:

- 9.1 Details of venue, date and time would be mentioned in the Bid Data Sheet. Any change in the schedule of pre-bid meeting would be communicated on the website only, and intimation to bidders would not be given separately.
- 9.2 Any prospective bidder may raise his queries and/or seek clarifications in writing before or during the pre-bid meeting. The purpose of such meeting is to clarify issues and answer questions on any matter that may be raised at that stage. The Employer may, at his option, give such clarifications as are felt necessary.
- 9.3 Minutes of the pre-bid meeting including the gist of the questions raised and the responses given together with any response prepared after the meeting will be hosted on the website.
- 9.4 Pursuant to the pre-bid meeting if the Employer deems it necessary to amend the Bid Document, it shall be done by issuing amendment to the online NIT.

## 10. Amendment of Bid Documents

10.1 Before the deadline for submission of bids, the Employer may amend or modify the Bid Documents by publication of the same on the website.

10.2 All amendments shall form part of the Bid Document.

10.3 The Employer may, at its discretion, extend the last date for submission of bids by publication of the same on the website.

### C. Preparation of Bid

11. The bidders have to prepare their bids online, encrypt their Bid Data in the Bid Forms and submit Bid Seals (Hashes) of all the envelopes and documents related to the Bid required to be uploaded as per the time schedule mentioned in the key dates of the Notice Inviting e-Tenders after signing of the same by the Digital Signature of their authorized representative.

## 12. Documents comprising the Bid

The bid submitted online by the bidder shall be in the following parts:

**Part 1** – This shall be known as Online **Envelope A** and would apply for all bids .On line **Envelop A** shall contain the following as per details given in the Bid Data Sheet:

- i) Registration number or proof of application for registration and organizational details in format given in the Bid Data Sheet.
- ii) Payment of the cost of Bid Document;
- iii) Earnest Money; and
- iv) An affidavit duly notarized.

**Part 2** – This shall be known as Online **Envelope B** and required to be submitted only in works where pre-qualification conditions and/or special eligibility conditions are stipulated in the Bid Data Sheet. Online **Envelop B** shall contain a self-certified sheet duly supported by documents to demonstrate fulfilment of pre-qualification conditions.

**Part 3** – This shall be known as Online **Envelope C** and would apply to all bids.

**Envelop C** shall contain financial offer in the prescribed format enclosed with the Bid Data Sheet.

## 13. Language

The bid as well as all correspondence and documents relating to the bid exchanged by the Bidder and the Employer shall be in English or Hindi. Supporting documents and printed literature that are part of the Bid may be in another language provided they are accompanied by an accurate translation of the relevant passages in English. In such case, for the purposes of interpretation of the bid, such translation shall govern.

## **14. Technical Proposal**

14.1 Only, in case of bids with pre-qualification conditions defined in the Bid Data Sheet, the Technical Proposal shall comprise of formats and requirements given in the Bid Data Sheet.

14.2 All the documents/ information enclosed with the Technical Proposal should be self-attested and certified by the bidder. The Bidder shall be liable for forfeiture of his earnest money deposit, if any document / information are found false/ fake/ untrue before acceptance of bid. If it is found after acceptance of the bid, the bid sanctioning authority may at his discretion forfeit his performance security/ guarantee, security deposit, enlistment **deposit** and take any other suitable action.

## **15. Financial Bid**

i. The bidder shall have to quote rates in format referred in Bid Data Sheet, in overall percentage, and not item wise. If the bid is in absolute amount, overall percentage would be arrived at in relation to the probable amount of contract given in NIT. The overall percentage rate would apply for all items of work.

ii. Percentage shall be quoted in figures as well as in words. If any difference in figures and words is found, lower of the two shall be taken as valid and correct.

iii. The bidder shall have to quote rates inclusive of all duties, taxes, royalties and other levies; and the Employer shall not be liable for the same excluding GST.

iv. The material along with the units and rates, which shall be issued, if any, by the department to the contractor, is mentioned in the Bid Data Sheet.

## **16. Period of Validity of Bids**

The bids shall remain valid for a period specified in the Bid Data Sheet after the date of “close for bidding” as prescribed by the Employer. The validity of the bid can be extended by mutual consent in writing.

## **17. Earnest Money Deposit (EMD)**

17.1 The Bidder shall furnish, as part of the Bid, Earnest Money Deposit (EMD), in the amount specified in the Bid Data Sheet.

17.2 The EMD shall be in the form of Fixed Deposit Receipt of a scheduled commercial bank, issued in favour of the name given in the Bid Data Sheet. The Fixed Deposit Receipt shall be valid for six months or more after the last date of receipt of bids. However, other form(s) of EMD may be allowed by the Employer by mentioning it in the Bid Data Sheet.

- 17.3 Bid not accompanied by EMD shall be liable for rejection as non-responsive.
- 17.4 EMD of bidders whose bids are not accepted will be returned within ten working days of the decision on the bid.
- 17.5 EMD of the successful Bidder will be discharged when the Bidder has Signed the Agreement after furnishing the required Performance Security.
- 17.6 Failure to sign the contract by the selected bidder, within the specified period, for whatsoever reason, shall result in forfeiture of the earnest money deposit.

#### **D. Submission of Bid**

- 18. The bidder is required to submit online bid duly signed digitally, and Envelop 'A' in physical form also at the place prescribed in the Bid Data Sheet.

#### **E. Opening and Evaluation of Bid**

#### **19. Procedure**

- 19.1 Envelope 'A' shall be opened first online at the time and date notified and its contents shall be checked. In cases where Envelop 'A' does not contain all requisite documents, such bid shall be treated as non-responsive, and Envelop B and/or C of such bid shall not be opened.
- 19.2 Wherever Envelop 'B' (Technical Bid) is required to be submitted, the same shall be opened online at the time and date notified. The bidder shall have freedom to witness opening of the Envelop 'B'. Envelop 'C' (Financial Bid) of bidders who are not qualified in Technical Bid (Envelop 'B') shall not be opened.
- 19.3 Envelope 'C' (Financial Bid) shall be opened online at the time and date notified. The bidder shall have freedom to witness opening of the Envelop 'C'.
- 19.4 After opening Envelop 'C' all responsive bids shall be compared to determine the lowest evaluated bid.
- 19.5 The Employer reserves the right to accept or reject any bid, and to annul the bidding process and reject all the bids at any time prior to contract award, without incurring any liability. In all such cases reasons shall be recorded.
- 19.6 The Employer reserves the right of accepting the bid for the whole work or for a distinct part of it.

## **20. Confidentiality**

- 20.1 Information relating to examination, evaluation, comparison and recommendation of contract award shall not be disclosed to bidders or any other person not officially concerned with such process until final decision on the bid.
- 20.2 Any attempt by a bidder to influence the Employer in the evaluation of the bids or contract award decisions may result in the rejection of his bid.

## **F. Award of Contract**

### **21. Award of Contract**

The Employer shall notify the successful bidder by issuing a 'Letter of Acceptance' (LOA) that his bid has been accepted.

### **22. Performance Security**

- 22.1 Prior to signing of the Contract the bidder to whom LOA has been issued shall have to furnish performance security of the amount in the form and for the duration, etc. as specified in the Bid Data Sheet.
- 22.2 Additional performance security, if applicable, is mentioned in the Bid Data Sheet and shall be in the form and for the duration, etc. similar to Performance Security.

### **23. Signing of Contract Agreement**

- 23.1 The successful bidder shall have to furnish Performance Security and Additional Performance Security, if any, and sign the contract agreement within 15 days of issue of LOA.
- 23.2 The signing of contract agreement shall be reckoned as intimation to commencement of work. No separate work order shall be issued by the Employer to the contractor for commencement of work.
- 23.3 In the event of failure of the successful bidder to submit Performance Security and Additional Performance Security, if any or sign the Contract Agreement, his EMD shall stand forfeited without prejudice to the right of the employer for taking any other action against the bidder.

## 24. Corrupt Practices

The Employer requires that bidders observe the highest standard of ethics during the procurement and execution of contracts. In pursuance of this policy, the Employer:

- i. may reject the bid for award if it determines that the bidder recommended for award has, directly or through an agent, engaged in corrupt, fraudulent, collusive, or coercive practices in competing for the Contract; and
- ii. may debar the bidder declaring ineligible, either indefinitely or for a stated period of time, to participate in bids, if it at any time determines that the bidder has, directly or through an agent, engaged in corrupt, fraudulent, collusive, or coercive practices in competing for, or in executing, a contract.

For the purposes of this provision, the terms set forth above are defined as follows:

- a. “corrupt practice” means the offering, giving, receiving, or soliciting, directly or indirectly, anything of value to influence improperly the actions of another party;
- b. “fraudulent practice” means any act or omission, including a misrepresentation, that knowingly or recklessly misleads, or attempts to mislead, a party to obtain a financial or other benefit or to avoid an obligation;
- c. “coercive practice” means impairing or harming, or threatening to impair or harm, directly or indirectly, any party or the property of the party to influence improperly the actions of a party;
- d. “collusive practice” means an arrangement between two or more parties designed to achieve an improper purpose, including influencing improperly the actions of another party.

**[End of ITB]**

## BID DATA SHEET

### General

Sr. No.	Particulars	Data	
1	Office Inviting Tender	MP Audyogik Kendra Vikas Nigam (Bhopal)	
2	NIT No.	18	
3	Date of NIT	04-10-2018	
4	Bid document download available from date & time	04-10-2018	10.31 onwards
5	Website link	<a href="http://www.mpeproc.gov.in">http://www.mpeproc.gov.in</a> & on <a href="http://www.mpakvnbhopal.nic.in">www.mpakvnbhopal.nic.in</a>	

### Section 1 – NIT

NIT Clause	Particulars	Data
1	Portal Fees	As notified in E-Tendering Web site
2	Cost of Bid Document	Rs. 12500.00 + 2250.00 (GST) = 14750.00
	Cost of Bid Document Payable at	Online
	Cost of Bid Document In favour of	Managing Director, MPAKVN(Bhopal)
3	Affidavit format	Annexure B
4	Pre-qualifications required	Yes
	If Yes, details	Annexure C
5	Special Eligibility	No
	If Yes, details	Annexure D
6	Key Dates	Annexure A

### Section 2 – ITB

Clause Reference	Particulars	Data
1	Name of work	Supply, installation & commissioning of hydraulic control valves with controller and Scada system for sector-A,B,C & D at I/A Mandideep, Distt-Raisen (M.P)
2	Specifications	Annexure – E In addition to as below: (a) Specification as mentioned in NIT (b) CPHEEO Manual (c) As per relevant USOR of MP PHED with effect from 03-07-2018 with amendment (d) As per instructions of Engineer In charge (Executive Engineer)

3	Procedure for participation in e-tendering	Annexure – F	
4	Whether Joint Venture is allowed	No	
9	Pre bid meeting to be held	Yes	
12	Envelope –A Containing	At the office of the Managing Director, MPAKVN(Bhopal)	
	(i) Registration number or proof of application for registration and organizational details as per Annexure H		
	(ii) Cost of Bid Document		Rs. 12500.00 + 2250.00 (GST) = 14750.00
	(iii) EMD		Rs. 1.74 Lakh
	(iv) An affidavit duly notarized as per Annexure – B should reach in physical form		
14	Envelope-B Technical Proposal	Annexure – 1 and Annexure – I (Format I-1 to I-5)	
15	Envelope-C Financial Bid	Annexure- J	
	Materials to be issued by the department	NIL	
16	Period of Validity of Bid	180 Days	
17	Earnest Money Deposit	Rs. 1.74 Lakh	
	Forms of Earnest Money Deposit	(i) FDR (ii) Demand draft of scheduled commercial bank	
	EMD valid for a period of	180 Days	
	FDR must be drawn in favour of	Managing Director, MPAKVN(Bhopal)	
21	Letter of Acceptance (LoA)	Annexure – L	
22	Amount of Performance Security	5% of contract amount	
	Additional Performance Security, if any	Equal to an amount arrived at, by multiplying the contract amount with difference of percentage between percent rates (below/minus) of successful bid and fifteen percent (below/minus), considering bid rates less than fifteen percent below PAC, to be unworkable and shall require additional performance security (guarantee)	
	Performance security in the format	Annexure – M	
	Performance Security in favour of	Managing Director, MPAKVN(Bhopal)	
	Performance security valid up to	Valid Contract period plus 3 months	



**KEY DATES**

S.No.	MP AKVN Bhopal Stage	Start Date & Time	Expiry Date & Time	Envelopes
1.	Release of Tender	04.10.2018 17:30	-	-
2.	Purchase of Tender Start & End Date	04.10.2018 17:30	22.10.2018 17:30	-
3.	Bid Submission End Date (online)	04.10.2018 17:30	23.10.2018 17:30	
4.	Pre bid Meeting		12.10.2018 15:00	
4.	Bid Submission End Date (Physically) i.e. EMD & other documents.	-	25.10.2018 17:30	Envelopes A, B
5.	Open EMD & Technical / PQ Bid	27.10.2018 10:30	-	Envelopes A, B
6.	Open Financial Bid	03.11.2018 10:30	-	Envelopes C

**The last date for submission of physical Envelop A and B is 18-10-2018 upto 17.30. No price bid should be submitted manually otherwise Bid will be rejected.**

Original term deposit receipt of earnest money deposit, demand draft for the cost of bid document and affidavit, technical bid shall be submitted by the bidder so as to reach the office as prescribed in Bid Data Sheet, at least one calendar day before specified start time and date in key dates for opening of technical proposal as per Key dates in Bid Data Sheet.

**Annexure – B**

*(See clause 3 of Section 1 – NIT)*

**|| AFFIDAVIT ||**  
**(To be Contained in Envelope A)**  
**(On Non Judicial Stamp of Rs. 100)**

I/we \_\_\_\_\_ who is/ are \_\_\_\_\_ (status in the firm/ company) and competent for submission of the affidavit on behalf of M/S \_\_\_\_\_ (contractor) do solemnly affirm an oath and state that:

I/we am/are fully satisfied for the correctness of the certificates/records submitted in support of the following information in bid documents which are being submitted in response to notice inviting e-tender No. \_\_\_\_\_

for \_\_\_\_\_ (name of work) dated \_\_\_\_\_ issued by the \_\_\_\_\_ (name of the department).

I/we am/ are fully responsible for the correctness of following self-certified information/ documents and certificates:

1. That the self-certified information given in the bid document is fully true and authentic.
2. That:
  - a. Term deposit receipt deposited as earnest money, demand draft for cost of bid document and other relevant documents provided by the Bank are authentic.
  - b. Information regarding financial qualification and annual turnover is correct.
  - c. Information regarding various technical qualifications is correct.
3. No close relative of the undersigned and our firm/company is working in the department.

**OR**

Following close relatives are working in the department:

Name \_\_\_\_\_ Post \_\_\_\_\_ Present Posting \_\_\_\_\_

**Signature with Seal of the Deponent (bidder)**

I/ We, \_\_\_\_\_ above deponent do hereby certify that the facts mentioned in above paras 1 to 4 are correct to the best of my knowledge and belief.

Verified today \_\_\_\_\_ (dated) at \_\_\_\_\_ (place).

**Signature with Seal of the Deponent (bidder)**

Note: Affidavit duly notarized in original shall reach at least one calendar day before opening of the bid.

### PRE- QUALIFICATIONS CRITERIA

**The bidder should have:**

#### **A. Financial**

- i. experience of having successfully executed similar nature of work (hydraulic control valves)  
:
  - a) three similar works, each costing not less than the amount equal to 20% of the probable amount of contract during the last 3 financial years;  
or
  - b) two similar works, each costing not less than the amount equal to 30% of the probable amount of contract during the last 3 financial years;  
or
  - c) One similar work of aggregate cost not less than the amount equal to 50% of the probable amount of contract in any one financial year during the last 3 financial years;
- ii. Average annual construction turnover on the construction works not less than 50% of the probable amount of contract during the last 3 financial years.
- iii. Executed similar items of work in any one financial year during the last 3 financial years, which should not be less than the minimum, physical requirement, if any, fixed for the work.
- iv. **Bid Capacity** – Bidder shall be allotted work up to his available Bid Capacity, Not less than PAC , which shall be worked out as given in format I-2 of Annexure I.

#### **B. Physical**

Physical qualifications for the work shall be as below

S. No.	Particulars	Quantity	Period
1	Physical qualification required	Yes	Last 03 financial years.
2	Electronically operated valve and flow meter.	10 Nos.	
3	Scada system for operation	01 Nos.	

(The employer shall specify all physical qualification required.)

**Note-** Above criteria are indicative, subject to suitable stipulations by the department and specific Bid.

**SPECIAL ELIGIBILITY CRITERIA**

No Special Eligibility Criteria are required.

## **Specifications**

- a. Specification as mentioned in NIT
- b. CPHEEO Manual
- c. As per relevant USOR of MP PHED with effect from 03-07-2018 with amendment.\
- d. As per instructions of Engineer In charge (Executive Engineer).

*The provisions of general / special conditions of contract, those specified elsewhere in the bid document, as well as execution drawings and notes, or other specifications issued in writing by the Employer shall form part of the technical specifications of this work.*

## **Procedure for Participation in e-Tendering**

### **1. Registration of Bidders on e-Tendering System:**

All the PWD registered bidders are already registered on the new e-procurement portal <https://www.mpeproc.gov.in>. The user id will be the contractor ID provided to them from MP Online. The password for the new portal has been sent to the bidders registered email ID. for more details may contact M/s. Tata Consultancy Services Corporate Block, 5<sup>th</sup> floor, DB City BHOPAL-462011 email id: [eproc\\_helpdesk@mpsdc.gov.in](mailto:eproc_helpdesk@mpsdc.gov.in). Helpdesk phone numbers are available on website.

### **2. Digital Certificate:**

The bids submitted online should be signed electronically with a Class III Digital Certificate to establish the identity of the bidder submitting the bid online. The bidders may obtain Class III Digital Certificate issued by an approved Certifying Authority authorized by the Controller of Certifying Authorities, Government of India. A Class III Digital Certificate is issued upon receipt of mandatory identity proofs along with an application. Only upon the receipt of the required documents, a Digital Certificate can be issued. For details please visit [cca.gov.in](http://cca.gov.in).

#### **Note:**

- i. *It may take upto 7 working days for issuance of Class III Digital Certificate; hence the bidders are advised to obtain the certificate at the earliest. Those bidders who already have valid Class III Digital Certificate need not obtain another Digital Certificate for the same. The bidders may obtain more information and the Application Form required to be submitted for the issuance of Digital Certificate from*

[CCA.GOV.IN](http://CCA.GOV.IN)

- ii. *Bids can be submitted till bid submission end date. Bidder will require digital signature while bid submission.*

The digital certificate issued to the Authorized User of a Partnership firm / Private Limited Company / Public Limited Company and used for online bidding will be considered as equivalent to a no-objection certificate / power of attorney to that user.

In case of Partnership firm, majority of the partners have to authorize a specific individual through Authority Letter signed by majority of the partners of the firm.

In case of Private Limited Company, Public Limited Company, the Managing Director has to authorize a specific individual through Authority Letter. Unless the certificate is revoked, it will be assumed to represent adequate authority of the specific individual to bid on behalf of the organization for online bids as per information Technology Act 2000. This Authorized User will be required to obtain a Digital Certificate. The Digital Signature executed through the use of Digital Certificate of this Authorized User will be binding on the firm. It shall be the responsibility of Management / Partners of the concerned firm to inform the Certifying Authority, if the Authorized User changes, and apply for a fresh Digital Certificate for the new Authorized User.

**3. Set Up of Bidder's Computer System:**

In order for a bidder to operate on the e-tendering System, the Computer System of the bidder is required to be set up for Operating System, Internet Connectivity, Utilities, Fonts, etc. The details are available at <https://www.mpeproc.gov.in>

**4. Key Dates:**

The bidders are strictly advised to follow the time schedule (Key Dates) of the bid on their side for tasks and responsibilities to participate in the bid, as all the stages of each bid are locked before the start time and date and after the end time and date for the relevant stage of the bid as set by the Department.

**5. Preparation and Submission of Bids**

The bidders have to prepare their bids online, encrypt their bid Data in the Bid forms and submit Bid of all the envelopes and documents related to the Bid required to be uploaded as per the time schedule mentioned in the key dates of the Notice inviting e-Tenders after signing of the same by the Digital Signature of their authorized representative.

**6. Purchase of Bid Document**

For purchasing of the bid document bidders have to pay Service Charge online ONLY which is Rs. [as per Bid Date Sheet]. Cost of bid document is separately mentioned in the Detailed NIT. The Bid Document shall be available for purchase to concerned eligible bidders immediately after online release of the bids and upto scheduled time and date as set in the key dates.

The payment for the cost of bid document shall be made online through Debit/Credit card, Net banking or NeFT Challan through the payment gateway provided on the portal.

**7. Withdrawal, Substitution and Modification of Bids**

Bidder can withdraw and modify the bid till Bid submission end date.



**JOINT VENTURE (J.V.) ALLOWED**

If J.V. is allowed following conditions and requirements must be fulfilled -

1. Number of partners in a Joint Venture shall not exceed 3 (three). The partners shall comply with the following requirements:
  - a. one of the partners shall be nominated as being Lead Partner, and this authorization shall be evidenced by submitting a power of attorney signed by legally authorized signatories of all the partners;
  - b. the bid and, in case of a successful bid, the Agreement, shall be signed so as to be legally binding on all partners;
  - c. the partner in charge shall be authorized to incur liabilities and receive instructions for and on behalf of any and all partners of the joint venture and the entire execution of the contract, including payment, shall be done exclusively with the partner in charge;
  - d. all partners of the joint venture shall be liable jointly and severally for the execution of the contract in accordance with the contract terms, and a statement to this effect shall be included in the authorization mentioned under[c] of above, as well as in the bid and in the Agreement tin case of a successful bid];
  - e. The joint venture agreement should indicate precisely the role of all members of IV in respect of planning, design, construction equipment key personnel, work execution, and financing of the project. All members of JV should have active participation in execution during the currency of the contract. This should not be varied/modified subsequently without prior approval of the employer;
  - f. The-joint venture agreement should be registered, so as to be legally valid and binding on all partners and
  - g. a copy of the joint Venture Agreement entered into by the partners shall be submitted with the bid.
2. The figures for each of the partners of a joint venture shall be added together to determine the Bidder’s compliance with the minimum qualifying criteria required for the bid. All the partners collectively must meet the criteria specified in full. Failure to comply with this requirement will result in rejection of the joint venture’s bid.
3. The performance security of a joint venture shall be in the name of the partner Lead Partner/joint venture.
4. Attach the power of attorney of the partners authorizing the Bid signatory(ies) On behalf of the joint venture
5. Attach the agreement among all partners of the joint venture [and which is legally binding on all partners], which shows the requirements as indicted in the Instructions to Bidders’.
6. Furnish details of participation proposed in the joint venture as below:

**DETAILS OF PARTICIPATION IN THE IOINT VENTURE**

PARTICIPATION DETAILS	. FIRM ‘A’ (Lead Partner)	FIRM ‘B’	FIRM ‘C’
Financial			
Name of the Banker(s)			
Planning			
construction Equipment			
Key Personnel			
Execution of Work (Give details on contribution of each)			

7. The partners of J.V. should satisfy the qualification criteria as below,
  - a. The Lead Partner must meet at least 50% requirement of Technical and Financial eligibility criteria required for the bid.
  - b. The other partner(s) must meet at least 25% requirement of Technical and financial eligibility criteria required for the bid.
  - c. The lead partner and the other partners should together meet 100% of all the eligibility criteria required for the bid.
8. For the meeting the minimum qualification criteria of experience of similar nature work. Every partner can have experience of different works as defined in similar nature works and together should have the experience of all type of works described in similar nature works.

### ORGANIZATIONAL DETAILS

(To be Contained in Envelope-A)

S. No.	Particulars	Details
1	Registration number issued by Centralized Registration System of Govt. of M.P. of Proof of application for registration.	(If applicable, scanned copy of application for registration to be uploaded)
2	Valid Registration of bidder in appropriate class through Centralized Registration of Govt. of M.P.	Registration No..... Date ..... (Scanned copy of Registration to be uploaded)
3	Name of Organization/Individual/Proprietary Firm/ Partnership Firm	
4	Entity of Organization Individual/Proprietary Firm/Partnership Firm (Registered under Partnership Act)/Limited Company (Registered under the Companies Act-1956)/Corporation/Joint Venture	
5	Address of Communication	
6	Telephone Number with STD Code	
7	Fax Number with STD Code	
8	Mobile Number	
9	E-mail Address for all communications	
	<b>Details of Authorized Representative</b>	
10	Name	
11	Designation	
12	Postal Address	
13	Telephone Number with STD Code	
14	Fax Number with STD Code	
15	Mobile Number	
16	E-mail Address	

Note: In case of partnership firm and limited company certified copy of partnership deed/Articles of Association and Memorandum of Association along with registration certificate of the company shall have to be enclosed.

**Signature of Bidder with Seal**

Date: .....

**Envelope – B, Technical Proposal**

**Technical Proposal shall comprise the following documents:**

<b>S. No.</b>	<b>Particulars</b>	<b>Details to be submitted</b>
1	Experience – Financial & Physical	Annexure –I (Format: 1-1)
2	Annual Turnover	Annexure –I (Format: 1-2)
3	List of technical personnel for the key positions	Annexure –I (Format: 1-3)
4	List of Key equipments/machines for quality control labs	Annexure –I (Format: 1-4)
5	List of Key equipments/machines for construction work	Annexure –I (Format: 1-5)

Note:

1. Technical Proposal should be uploaded duly page numbered and indexed.
2. Technical Proposal uploaded otherwise will not be considered.

**Annexure –I (Format: I-1)***(See clause 14 of section 2 -ITB)***FINANCIAL & PHYSICAL EXPERIENCE DETAILS****A. Financial Requirement:**

The bidder should have completed either of the below:

- a) Three similar works, each costing not less than the amount equal to 20% of the probable amount of contract during the last 3 financial years; or
- b) Two similar works each costing not less than the amount equal to 30% of the probable amount of contract during the last 3 financial years; or
- c) One similar work of aggregate cost not less than the amount equal to 50% of the probable amount of contract in any one financial year during the last 3 financial years;

**To be filled in by the contractor:**

- i. Details of successfully completed similar works shall be furnished in the following format.
- ii. Certificate duly signed by the employer shall also be enclosed for each completed similar work.

Agreement Number & Year	Name of work	Date of Work Order	Date of Completion	Amount of Contract	Employer's Name and Address

**Existing commitments – (Value of 'C' for Bid Capacity formula)**

Agreement Number & Year	Name of work	Date of Work Order	Date of Completion	Amount of Contract	Amount of balance work	Employer's Name and Address

**B. Physical Requirement:**

Execution of similar items of work in any one financial year during the last 3 financial years should not be less than the minimum physical requirement fixed for the work.

No.	Particulars	Actual Quantity Executed (To be filled in by the contractor )		
		Year-1	Year-2	Year-3
	Physical qualification required	Yes		
	Electronically operated valve and flow meter.			
	Scada system for operation			

**Note:**

1. Certificate duly signed by the employer shall be enclosed for the actual quantity executed in any year during the last 3 financial years.
2. Similar works: Electronically operated valve with flow meter and Scada system.

### ANNUAL TURN OVER

**Requirement:**

Average annual construction turnover on the construction works not less than 50% of the probable amount of contract during the last 03 financial years;

To be filled in by the contractor:

Financial Year	Payments received for contracts in progress of completed
1. 2015 – 2016	
2. 2016 – 2017	
3. 2017 - 2018	

**Note:**

- i. Annual turnover of construction should be certified by the Chartered Accountant.
- ii. Audited balance sheet including all related notes, and income statements for the above financial years to be enclosed.

### Bid Capacity

Applicants who meet the minimum qualifying criteria in the evaluation as stated above are to be evaluated further for bid capacity as under:

$$\text{Bid Capacity} = (1.5 A \times B) - C$$

Where

A= Maximum value of civil engineering works executed in any one year during the last five year (10% weightage per year shall be given to bring the value of work executed at present price level)

B= Proposed contract period in years.

C= Amount of work in hand at present.

**List of Technical Personnel for the Key Positions**

Minimum requirement							Available with the bidder						
S. No.	Key Position	Minimum requirement	Qualification	Age Limit	Similar work experience	Total Work Experience	S. No.	Name of Personnel	Key Position	Qualification	Age	Similar work experience	Total work Experience

**Annexure –I (Format: I-4)**  
(See clause 14 of section 2 -ITB)

**List of Key Equipments/Machines for Quality Control Labs**

<b>Minimum requirement</b>			<b>Available with the bidder</b>	
<b>S. No.</b>	<b>Name of Equipment/ Machinery</b>	<b>Quantity</b>	<b>Name of Equipment/ Machinery</b>	<b>Quantity</b>
a)				
b)				
c)				
d)				
e)				
f)				

**Annexure –I (Format: I-5)**  
(See clause 14 of section 2 -ITB)

**List of Key Equipments/Machines for Construction Work**

Minimum requirement			Available with the bidder	
S. No.	Name of Equipment/ Machinery	Quantity	Name of Equipment/ Machinery	Quantity
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				



**FINANCIAL BID  
(To Be Contained in Envelope-C)**

**NAME OF WORK :** Supply, installation & commissioning of hydraulic control valves with controller and Scada system for sector-B at I/A Mandideep, Distt-Raisen (M.P)

I/We hereby bid for the execution of above work within the time specified at the **rate (in figures) ..... (in words) .....percent below/above or** at par based on the Bill of Quantities and item wise rates given therein all respects and in accordance with the specifications, designs, drawings and instructions in writing in all respect in accordance with such conditions so far as applicable. I/We have visited the site of work and am/are fully aware of all the difficulties and conditions likely to affect the carrying out the work. I/We have fully acquainted myself/ourselves about the conditions in regard to accessibility of site and quarries/kilns, nature and the extent of ground, working conditions including stacking of materials, installation of tools and plant conditions effecting accommodation and movement of labour etc. required for the satisfactory execution of contract.

Should this bid be accepted, I/We hereby agree to abide by and fulfil all the terms and provisions of the said conditions of contract annexed hereto so far as applicable, or default thereof to forfeit and pay to the Governor of Madhya Pradesh or his successors in office the sums of money mentioned in the said conditions.

**Note:**

- i *Only one rate of percentage above or below or at par based on the Bill of Quantities and item wise rates given therein shall be quoted.*
- iii. *Percentage shall be quoted in figures as well as in words. If any difference in figures and words is found lower of the two shall be taken as valid and correct rate. If the bidder is not ready to accept such valid and correct rate and declines to furnish performance security and sign the agreement his earnest deposit shall be forfeited.*
- iv. *In case of the percentage “above” or “below” is not given by a bidder his bid shall be treated as non responsive.*
- v. *All duties, taxes and other levies payable by the bidder shall be included in the percentage quoted by the bidder excluding GST.*

**Signature of Bidder**

**Name of Bidder**

The above bid is hereby accepted by mean on behalf of MPAKVN (Bhopal) dated the ..... day of ..... 20.....

**Signature of Officer by whom accepted.**

.....

**MATERIALS TO BE ISSUED BY THE DEPARTMENT**

<b>S.no.</b>	<b>Name of material</b>	<b>Rate (Issue rate)</b>	<b>Unit</b>	<b>Remarks</b>

**LETTER OF ACCEPTANCE (LOA)**

No. \_\_\_\_\_

Dated: \_\_\_\_\_

To

M/s \_\_\_\_\_  
(Name and address of the contractor)

Subject: \_\_\_\_\_  
(Name of the work as appearing in the bid for the work)

Dear Sir (s),

Your bid for the work mentioned above has been accepted on behalf of the M.D., MPAKVN (BHOPAL) at your bided percentage \_\_\_\_\_ below/above or at par the Bill of Quantities and item wise rates given therein.

You are requested to submit within 15 (Fifteen) days from the date of issue of this letter:

- a. The performance security/performance guarantee of Rs. \_\_\_\_\_ (in figures)  
(Rupees \_\_\_\_\_ in words only).

The performance security shall be in the shape of term deposit receipt/bank guarantee of any nationalized/scheduled commercial bank valid up to three months after the expiry of defects liability period.

- b. Sign the contract agreement.

Please note that the time allowed for carrying out the work as entered in the bid is \_\_\_\_\_ months including/excluding rainy season, shall be reckoned from the date of signing the contract agreement.

Signing the contract agreement shall be reckoned as intimation to commencement of work and no separate letter for commencement of work is required. Therefore, after signing of the agreement, you are directed to contact the Engineer-in-charge for taking the possession of site and necessary instructions to start the work.

Yours faithfully,

Executive Engineer

**PERFORMANCE SECURITY**

To

----- (Name of Employer)

-----

----- (address of employer)

-----

WHEREAS \_\_\_\_\_ [name and address of Contractor] (Hereinafter called “the Contractor”) has undertaken, in pursuance of Letter of Acceptance No. \_\_\_\_\_ dated \_\_\_\_\_ to execute \_\_\_\_\_ [name of Contract and brief description of Works] (hereinafter called "the Contract”).

AND WHEREAS it has been stipulated by you in the said Contract that the Contractor shall furnish you with a Bank Guarantee by a recognized bank for the sum specified therein as security for compliance with his obligation in accordance with the contract;

AND WHEREAS we have agreed to give the Contractor such a Bank Guarantee:

NOW THEREFORE we hereby affirm that we are the Guarantor and responsible to you on behalf of the Contractor, up to a total of \_\_\_\_\_ [amount of guarantee]\* \_\_\_\_\_ (in words), such sum being payable in the types and proportions of currencies in which the contract Price is payable, and we undertake to pay you, upon your first written demand and without cavil or argument, any sum or sums within the limits of \_\_\_\_\_ [amount of guarantee] as aforesaid without your needing to prove or to show grounds or reasons for your demand for the sum specified therein.

We hereby waive the necessity of your demanding the said debt from the contractor before presenting us with the demand.

We further agree that no change or addition to or other modification of the terms of the Contract of the Works to be performed there under or of any of the Contract documents which may be made between you and the Contractor shall in any way release us from any liability under this guarantee, and we hereby waive notice of any such change, addition or modification.

Our liability under this bank guarantee shall not exceed Rs.....(Rs.....only) & We further declare that this Bank Guarantee will be valid from ..... to ..... and we declare that this Bank Guarantee will be renewed automatically; we undertake to renew this bank guarantee on our own till the matter is account without the consent of the MD MPAKVN Bhopal. The libality of the importer shall not be discharged in any account without the consent of MD MPAKVN Bhopal in writing.

This guarantee shall be valid until 3 (three) months from the date of expiry of the Defect Liability Period.

Signature, Name and Seal of the guarantor \_\_\_\_\_

Name of Bank \_\_\_\_\_

Address \_\_\_\_\_

Phone No., Fax No., E-mail Address, of Signing Authority \_\_\_\_\_

Date \_\_\_\_\_

An amount shall be inserted by the Guarantor, representing the percentage the Contract Price specified in the Contract including additional security for unbalanced Bids, if any and denominated in Indian Rupees.

### SECTION 3

**Table of Clauses of GCC**

Clause No.	Particulars	Clause No.	Particulars
	A. General	21	Payments for Variations and/ or Extra Quantities
1	Definitions	22	No compensation for alterations in or restriction of work to be carried out.
2	Interpretations and Documents	23	No Interest Payable
3	Language and Law	24	Recovery from Contractors
4	Communications	25	Tax
5	Subcontracting	26	Check Measurements
6	Personnel	27	Termination by Engineer-in-Charge
7	Force Majeure	28	Payment upon Termination
8	Contractor's Risks	29	Performance Security
9	Liability For Accidents to Person	30	Security Deposit
10	Contractor to Construct the Works	31	Price Adjustment
11	Discoveries	32	Mobilization and Construction Machinery Advance
12	Dispute Resolution system	33	Secured Advance
	<b>B. Time Control</b>	34	Payment Certificates
13	Programme		<b>E. Finishing the Contract</b>
14	Extension of Time	35	Completion Certificate
15	Compensation for Delay	36	Final Account
16	Contractor's quoted percentage		<b>F. Other Conditions of Contract</b>
	<b>C. Quality Control</b>	37	Currencies
17	Tests	38	Labour
18	Correction of Defects noticed during the Defect Liability Period	39	Compliance with Labour Regulations
	<b>D. Cost Control</b>	40	Audit and Technical Examination
19	Variations – Change in Original Specifications, Designs, Drawings etc.	41	Death or Permanent Invalidity of Contractor
20	Extra Items	42	Jurisdiction

**Conditions of Contract**  
**Part – I General Conditions of Contract (GCC)**

**A. General**

**1. DEFINITIONS**

- 1.1 **Bill of quantities** means the priced and completed bill of quantities forming part of the Bid.
- 1.2 **Chief Engineer:** means Chief Engineer of the MPTRIFAC, Bhopal.
- 1.3 **Completion:** means completion of the work as certified by the Engineer-in-charge, accordance with the provision of agreement.
- 1.4 **Contract:** means the contract between the Employer and the Contractor to execute, complete and/or maintain the work. Agreement is synonym of Contract and carries the same meaning wherever used.
- 1.5 **Contract Data:** means the documents and other information which comprise of the contract.
- 1.6 **Contractor:** means a person or legal entity whose bid to carry out the work has been accepted by the Employer.
- 1.7 **Contractor's bid:** means the completed bid document submitted by the Contractor to the Employer.
- 1.8 **Contract amount:** means the amount of contract work out on the basis of accepted bid.
- 1.9 **Completion of work:** means completion of the entire contracted work. Exhaustion of quantity of any particular item mentioned in the bid document shall not imply completion of work or any component thereof.
- 1.10 **Day:** means the calendar day
- 1.11 **Defect:** means any part of the work not completed in accordance with the specifications included in the contract.
- 1.12 **Department:** MPAKVN(Bhopal) which adopts this document.
- 1.13 **Drawing:** means drawings including calculations and other information provided or approved by Engineer-in-charge.
- 1.14 **Employer:** means the party as define in the contract data, who employs the contractor to carry out the work. The employer may delegate any or all functions to a person or body nominated by him for specified functions. The word employer/ Government /Department wherever used denote the employer.
- 1.15 **Engineer:** means the person named in the contract data.
- 1.16 **Engineer in charge:** means the person named in the contract data.
- 1.17 **Equipment:** means the Contractor's machinery and vehicles brought temporarily to the site for execution of work.
- 1.18 **Government:** means Government of Madhya Pradesh.
- 1.19 **In Writing:** means communicated in written form and delivered against receipt.
- 1.20 **Material:** means all supplies, including consumables, used by the contractor for the incorporation in the work.

- 1.21 **Superintending Engineer:** NA
- 1.22 **Stipulated period of completion:** means the period in which the contractor is required to complete the work. The stipulated period is specified in the contract data.
- 1.23 **Specification:** means the specification of the work included in the contract and any modification or addition made or approved by the Engineer-in-charge.
- 1.24 **Start Date:** means the date of signing of agreement for the work.
- 1.25 **Sub contractor:** means a person or corporate body who has a contract with the contractor, duly authorized to carry out a part of construction work under the contract.
- 1.26 **Temporary work:** means work, design, constructed, installed and removed by the contractor that are needed for construction or installation of the work.
- 1.27 **Tender/Bid, Tenderer/Bidder:** are the synonyms and carry the same meaning wherever used.
- 1.28 **Variation:** means any change in the work which is instructed or approved as variation under the contract.
- 1.29 **Work:** The expression “work” or “works” where used in these conditions shall unless there be something either in the subject or context repugnant to such construction be construed and taken to mean the work by virtue of contract, contracted to be executed, whether temporary or permanent and whether original, altered, substituted or additional.

## **2. INTERPRETATIONS AND DOCUMENTS**

### **2.1 Interpretations**

In all the contract, except where the context requires or otherwise;

- a. words indicating one gender include all genders;
- b. Words indicating the singular also include the plural and vice versa
- c. Provisions including the word “agree”, “agreed” or “agreement” require the agreement to be recorded in writing.
- d. “written” or “in writing” means hand-written, type-written, printed or electronically made, and resulting in a permanent record.

### **2.2 Documents Forming Part of Contract:**

- 1. NIT with all amendments
- 2. Instructions to Bidders (ITF, Bid Data Sheet with all Annexure)
- 3. Conditions of Contract:
  - i. Part I General Conditions of Contract and Contract Data; with all annexure
  - ii. Part II Special Conditions of Contract.
- 4. Specifications
- 5. Drawings
- 6. Bill of Quantities
- 7. Technical and Financial Bid
- 8. Agreement

9. Any other document(s), as specified.

**3. Language and Law**

The language of the Contract and the law governing the Contract are stated in the Contract Data.

**4. Communications**

All certificates, notice or instruction to be given to the Contractor by the Employer/Engineer shall be sent to the address or contact details given by Contractor in [Annexure H of ITB]. The address and contact details communication with the Employer/Engineer shall be as per the details given in the Contract Data. Communication between parties that are referred to in the conditions shall be in writing. The notice sent by facsimile (fax) or other electronic (email) shall also be effective on confirmation of the transmission. The notice sent by registered post or speed post shall be effective on delivery or at the expiry of the normal delivery period as undertaken by the postal service. In case of any change in address for communication, the same shall be immediately notified to Engineer-in-Charge.

**5. Subcontracting**

Sub Contracting shall be permitted for contracts of value more than amount in the Contract Data with following conditions.

- a. The Contractor may subcontract up to 25 percent of the contract price with approval of the Employer in writing, but will not assign the subcontracting shall not alter the Contractor's obligations.
- b. Following shall not form part of subcontracting:
  - i. Hiring of labour through a labour contractor
  - ii. The purchase of materials to be incorporated in the works.
  - iii. Hiring of plant & machinery.
- c. The sub-contractor will have to be registered in the **appropriate category** in the centralised registration system for contractors of the GoMP.

**6. Personnel**

- 6.1 The Contractor shall employ for the construction work and routine maintenance the technical personnel as provided in the Annexure I-3 of Bid Data Sheet, if applicable. If the Contractor fails to deploy required number of technical staff, recovery as specified in the Contract Data will be made from the contractor.
- 6.2 If the Engineer asks the Contractor to remove a person who is a member of Contractor's staff or work force, stating the reasons, the Contractor shall ensure that the person leaves the site within three days and has not further connection with the works in the contract.



## **7. Force Majeure**

7.1 The term “Force Majeure” means an exceptional event or circumstance:

- (a) Which is beyond a Party’s control
- (b) Which such Party could not reasonably have provided against before entering into the Contract,
- (c) Which, having arisen, such Party could not reasonably have avoided or overcome, and
- (d) Which is not substantially attributable to the other Party.

Force Majeure may include, but is not limited to, exceptional events or circumstances of the kind listed below, so long as conditions (a) to (d) above are satisfied:

- (i) War, hostilities (whether war be declared or not), invasion, act of foreign enemies,
- (ii) Rebellion, terrorism, sabotage by persons other than the Contractor’s Personnel, revolution, insurrection, military or usurped power, or civil war,
- (iii) Riot, commotion, disorder, strike or lockout by persons other than the Contractor’s Personnel,
- (iv) Munitions of war, explosive materials, ionising radiation or contamination by radio-activity, except as may be attributable to the Contractor’s use of such munitions, explosives, radiation or radio-activity, and
- (v) Natural catastrophes such as earthquake, hurricane, typhoon or volcanic activity.

7.2 In the event of either party being rendered unable by force majeure to perform any duty or discharge any responsibility arising out of the contract, the relative obligation of the party affected by such force majeure shall upon notification to the other party be suspended for the period during which force majeure event lasts. The cost and loss sustained by either party shall be borne by respective parties.

7.3 For the period of extension granted to the Contractor due to Force Majeure the price adjustment clause shall apply but the penalty clause shall not apply, it is clarified that this sub clause shall not give eligibility for price adjustment to contracts which are otherwise not subject to the benefit of price adjustment clause.

7.4 The time for performance of the relative obligation suspended by the force majeure shall stand extended by the period for which such clause lasts. Should the delay caused by force majeure exceed **twelve** months, the parties to the contract shall be at liberty to foreclose the contract after holding mutual discussions.

## **8. Contractor’s Risks**

- 8.1 All risks of loss or damage to physical property and of personal injury and death which arise during and in consequence of the performance of the Contract are the responsibility of the Contractor.
- 8.2 All risks and consequences arising from the inaccuracies or falseness of the documents, drawing, designs, other documents and/or information submitted by the contractor shall be the responsibility of the Contractor alone, not with standing the fact that the designs/ drawings or other documents have been approved by department.

## **9. Liability for Accidents to Person**

The contractor shall be deemed to have indemnified and saved harmless Government against all action, suits, claims, demands, costs etc. arising connection with injuries suffered by any persons employed by the contractor or his subcontractor for the works whether under the General law or under workman's compensation Act, or any other statute in force at the time of dealing with question of the liability of employees for the injuries suffered by employees and to have taken steps properly to ensure against any claim there under.

## **10. Contractor to Construct the Works**

- 10.1 The Contractor shall construct, install and maintain the Works in accordance with the Specifications and Drawings as specified in the Contract Data.
- 10.2 In the case of any class of work for which there is no such specification as is mentioned in Contract Data, such work shall be carried out in accordance with the instructions and requirement of the Engineer-in-Charge.
- 10.3 The contractor shall supply and take upon himself the entire responsibility of the sufficiency of the scaffolding, timbering, machinery, tools and implements, and generally of all means used for the fulfilment of this contract whether such means may or may not be approved or recommended by the Engineer.

## **11. Discoveries**

Anything of historical or other interest or of significant value unexpectedly discovered on the Site shall be the property of the Employer. The Contractor shall notify the Engineer of such discoveries and carry out the Engineer's instructions for dealing with them.

## **12. Dispute Resolution System**

- 12.1 No dispute can be raised except before the Competent Authority as defined in Contract Data in writing giving full description and grounds of dispute. It is clarified that merely recording protest while accepting measurement and/or payment shall not be taken as raising a dispute.
- 12.2 No dispute can be raised after 45 days of its first occurrence. Any dispute raised after expiry of 45 days of its first occurrence shall not be entertained and the Employer shall not be liable for claims arising out of such dispute.

- 12.3 The **Competent Authority** shall decide the matter within 45 days.
- 12.4 Appeal against the order of the Competent Authority can be preferred within 30 days to the **Appellate Authority** as defined in the Contract data. The Appellate Authority shall decide the dispute within 45 days.
- 12.5 Appeal against the order of the Appellate Authority can be preferred before the Madhya Pradesh Arbitration Tribunal constituted under Madhya Pradesh Madhyastham Adhikaran Adhiniyam, 1983.
- 12.6 The Contractor shall have to continue execution of the Works with due diligence notwithstanding pendency of a dispute before any authority or forum.

### **B. Time Control**

## **13. Programme**

- 13.1 Within the time stated in the Contract Data, the Contractor shall submit to the Engineer for approval a Programme showing the general methods, arrangements, order and timing for all the activities for the construction of works.
- 13.2 The program shall be supported with all the details regarding key personnel, equipment and machinery proposed to be deployed on the works for its execution. The contractor shall submit the list of equipment and machinery being brought to site, the list of key personnel being deployed, the list of machinery/equipment being placed in field laboratory and the location of field laboratory along with the Programme.
- 13.3 An update of the Programme shall be a programme showing the actual progress achieved on each activity and the effect of the progress achieved on the timing of the remaining Works, including any changes to the sequence of the activities.
- 13.4 The Contractor shall submit to the Engineer for approval an update Programme at intervals no longer than the period stated in the **Contract Data**. If the Contractor does not submit an updated Programme within the period, the Engineer may withhold the amount stated in the **Contract Data** from the next payment certificate and continue to withhold this amount until the next payment after the date on which the overdue Programme has been submitted.
- 13.5 The Engineer's approval of the Programme shall not alter the Contractor's obligations.

#### **14. Extension of Time**

- 14.1 If the Contractor desires an extension of time for completion of the work on the ground of his having been unavoidably hindered in its execution or on any other grounds, he shall apply, in writing, to the Engineer-in-Charge, on account of which he desires such extension. Engineer-in-Charge shall forward the aforesaid application to the Competent Authority as prescribed.
- 14.2 The competent authority shall grant such extension at each such occasion within a period of 30 days of receipt of application from contractor and shall not wait for finality of work. Such extensions shall be granted in accordance with provisions under clause-15 of this agreement.
- 14.3 In case the work is already in progress, the Contractor shall proceed with the execution of the works, including maintenance thereof, pending of the decision of the competent authority as aforesaid with all due diligence.

#### **15. Compensation for Delay**

- 15.1 The time allowed for carrying out the works, as entered in the agreement, shall be strictly observed by the Contractor.
- 15.2 The time allowed for execution of the contract shall commence from the date of signing of the agreement. It is clarified that the need for issue of work order is dispensed with.
- 15.3 In the event milestones are laid down in the Contract Data for execution of the works, the contractor shall have to ensure strict adherence to the same.
- 15.4 Failure of the Contractor to adhere to the timelines and/or milestones shall attract such liquidated damages as is laid down in the Contract Data.
- 15.5 In the event of delay in execution of the Works as per the timelines mentioned on the Contract Data the Engineer-in-Charge shall retain from the bills of the Contractor amount equal to the liquidated damages liveable until the Contractor make such delays good. However, the Engineer-in-Charge shall accept bankable security in lieu of retaining such amount.
- 15.6 If the Contractor is given extension of time after liquidated damages have been paid, the Engineer-in-Charge shall correct any over payment of liquidated damages by the Contractor in the next payment certificate.
- 15.7 In the event the Contractor fails to make good the delay until completion of the stipulated contract period (including extension of time) the sum so retained shall be adjusted against the liquidated damages levied.

#### **16. Contractor's quoted percentage**

The Contractor's quoted percentage rate referred to in the "Bid for works" will be deducted/ added from/ to the net amount of the bill after deducting the cost of material supplied by the department.

### **C. Quality Control**

#### **17. Tests**

- 17.1 The Contractor shall be responsible for:
- a. Carrying out the tests prescribed in specifications, and
  - b. For the correctness of the test results, whether preformed in his laboratory or elsewhere.
  - c. At least 10% test of material of prescribed frequencies should be carried out by Engineering College/MPPWD as directed by Engineer-in-Charge. The charges for the same paid by the contractor.
- 17.2 The contractor shall have to establish field laboratory within the time specified and having such equipments as are specified in the Contract Data.
- 17.3 Failure of the Contractor to establish laboratory shall attract such penalty as is specified in the Contract Data.

#### **18. Correction of Defects noticed during the Defect Liability Period**

- 18.1 The Defect Liability Period of work in the contract shall be as per the Contract Data.
- 18.2 The Contractor shall promptly rectify all defects pointed out by the Engineer well before the end of the Defect Liability Period. The Defect Liability Period shall automatically stand extended until the defect is rectified.
- 18.3 If the Contractor has not corrected a Defect pertaining to the Defect Liability Period to the satisfaction of the Engineer, within the time specified by the Engineer, the Engineer will assess the cost of having the Defect corrected, and the cost of correction of the Defect shall be recovered from the Performance Security or any amount due or that may become due to the contractor and other available securities.

### **D. Cost Control**

#### **19. Variations – Change in original Specifications, Designs and Drawings etc.**

- 19.1 The Engineer-in-Charge shall have power to make any alterations, omissions or additions to or substitutions in the original specifications, drawings, designs and instructions that may appear to him to be necessary during the progress of the work and the contractor shall carry out the work in accordance with any instructions which may be given to him in writing signed by the Engineer-in-Charge and such alterations, omission, additions or substitutions shall not invalidate the contract and any altered, additional or substituted work, which the contractor may be directed to do in the manner above specified, as part of the work, shall be carried out by the contractor on the same conditions in all respects on which he agrees to do the main work.

19.2 The time for the completion of the work shall be adjusted in the proportion that the altered, additional or substituted work bears to the original contract work and the certificate of the Engineer-in-Charge shall be conclusive as to such proportion.

## **20. Extra Items**

20.1 All such items which are not included in the priced BOQ shall be treated as extra items.

## **21. Payments for Variations and / or Extra Quantities**

21.1 The rates for such additional (Extra quantity), altered or substituted work / extra items under this clause shall be worked out in accordance with the following provisions in their respective order:-

- a. The contractor is bound to carry out the additional (Extra quantity), work at the same rates as are specified in the contract for the work.
- b. If the item is not in the priced BOQ and is included in the SOR of the department, the rate shall be arrived at by applying the quoted tender percentage on the concerning SOR rate.

**Note :- All SoR amendment applicable upto issue date of NIT.**

- c. If the rates for the altered or substituted work are not provided in applicable SOR – such rates will be derived from the rates for a similar class (type) of work as is provided in the contract (priced BOQ) for the work.
- d. If the rates for the altered, substituted work cannot be determined in the manner specified in the sub clause (c) above – then the rates for such composite work item shall be worked out on the basis of the concerned Schedule of Rates minus/plus the percentage quoted by the contractor.
- e. If the rates for a particular part or parts of the item is not in the Schedule of Rates and the rates for the altered, or substituted work item cannot be determined in the manner specified in sub clause (b) to (d) above, the rate for such part or parts will be determined by the Competent Authority as defined in the Contract Data on the basis of the rate analysis derived out of prevailing market rates when the work was done.

- f. But under no circumstances, the contractor shall suspend the work on the plea of non-acceptability of rates on items failing under sub clause (a) to (e). In case the contractor does not accept the rate approved by the Engineer-in-Charge for a particular item, the contractor shall continue to carry out the item at the rates determined by the Competent Authority. The decision on the final rates payable shall be arrived at through the dispute settlement procedure.

## **22. No compensation for alterations in or restriction of work to be carried out.**

- 22.1 If at any time after the commencement of the work, the Engineer-in-Charge, for any reason whatsoever, not require the whole or any part of the work as specified in the bid to be carried out; the Engineer-in-Charge shall give notice in writing of the fact to the contractor and withdraw that whole or any part of the work.
- 22.2 The contractor shall have no claim to any payments or compensation whatsoever, on account of any profit or advantage which he might have derived from the execution of work in full or on account of any loss incurred for idle men and machinery due to any alteration or restriction of work for whatsoever reason.
- 22.3 The Engineer-in-Charge may supplement the work by engaging another agency to execute such portion of the work, without prejudice to his rights.

## **23. No Interest Payable**

No interest shall be payable to the Contractor on any payment due or awarded by any authority.

## **24. Recovery from Contractors**

Whenever any claim against the Contractor for the payment arises under the contract, the Department may be entitled to recover such sum by:

- (a) Appropriating, in part or whole of the Performance Security and Additional Performance Security, if any; and/or Security Deposit and/or any sums payable under the contract to the contractor.
- (b) If the amount recovered in accordance with (a) above is not sufficient, the balance sum may be recovered from any payment due to the contractor under any other contract of the department, including the securities which become due for release.
- (c) The department shall, further have an additional right to effect recoveries as arrears of land revenue under the M.P. Land Revenue Code.

## **25. Tax**

- 25.1 The rates quoted by the contractor shall be deemed to be inclusive of the commercial tax and other levies, duties, cess, toll, taxes of Central and State Governments, local bodies and authorities.

- 25.2 The liability, if any, on account of quarry fees, royalties, octroi and any other taxes and duties in respect of materials actually consumed on public work, shall be borne by the contractor excluding GST.
- 25.3 Any changes in the taxes due to change in legislation or for any other reason shall not be payable to the contractor.

## **26. Check Measurements**

- 26.1 The department reserves to itself the right to prescribe a scale of check measurement of work in general or specific scale for specific works or by other special orders.
- 26.2 Checking of measurement by superior officer shall supersede measurements by subordinate officers(s), and the former will become the basis of the payment.
- 26.3 Any over/excess payments detected, as a result of such check measurement or otherwise at any stage up to the date of completion of the defect liability period specified in this contract, shall be recoverable from the Contractor, as per clause 24 above.

## **27. Termination by Engineer-in-Charge**

- 27.1 If the Contractor fails to carry out any obligation under the Contract, the Engineer-in-Charge may by notice require the Contractor to make good the failure and to remedy it within a specified reasonable time.
- 27.2 The Engineer-in-Charge shall be entitled to terminate the Contract if the Contractor
- a. abandons the Works or otherwise plainly demonstrates the intention not to continue performance of his obligations under the contract;
  - b. the Contractor is declared as bankrupt or goes into liquidation other than for approved reconstruction or amalgamation;
  - c. without reasonable excuse fails to comply with the notice to correct a particular defect within a reasonable period of time;
  - d. the Contractor does not maintain a valid instrument of financial security as prescribed;
  - e. the Contractor has delayed the completion of the works by such duration for which the maximum amount of liquidated damages is recoverable;
  - f. If the Contractor fails to deploy machinery and equipment or personnel or set up a field laboratory as specified in the Contract Data;
  - g. If the Contractor, in the judgment of the Engineer-in-Charge has engaged in corrupt or fraudulent practices in completing for or in executing the contract;
  - h. Any other fundamental breaches as specified in the Contract Data.



- 27.3 In any of these events or circumstances, the Engineer-in-Charge may, upon giving 14 days notice to the Contractor, terminate the Contract and expel the Contractor from the Site. However, in the case of sub-paragraph (b) or (g) of clause 27.2, the Engineer-in-Charge may terminate the Contract immediately.
- 27.4 Notwithstanding the above, the Engineer-in-Charge may terminate the Contract for convenience by giving notice to the Contractor.

## **28. Payment upon Termination**

- 28.1 If the contract is terminated under clause 27.3, the Engineer shall issue a certificate for value of the work accepted on final measurements, less Advance Payments and Penalty as indicated in the Contract Data. The amount so arrived at shall be determined by the Engineer-in-Charge and shall be final and binding on both the parties.
- 28.2 Payment on termination under clause 27.4 above –  
If the Contract is terminated under clause 27.4 above, the Engineer shall issue a certificate for the value of the work done, the reasonable cost of removal of Equipment, repatriation of the Contractor's personnel employed solely on the Works, and the Contractor's costs of protecting and securing the Works and less advance payments received up to the date of the certificate, less other recoveries due in terms of the contract and less taxes due to be deducted at source as per applicable law.
- 28.3 If the total amount due to the Employer exceeds any payment due to the Contractor, the difference shall be recovered as per clause 24 above.

## **29. Performance Security**

The Contractor shall have to submit performance security and additional performance security, if any, as specified in the Bid Data Sheet at the time of signing of the contract. The contractor shall have to ensure that such performance security and additional performance security, if any, remains valid for the period as specified in the Contract Data.

## **30. Security Deposit**

- 30.1 Security Deposit shall be deducted from each running bill at the rate as specified in the Contract Data. The total amount of Security Deposit so deducted shall not exceed the percentage of Contract Price specified in the Contract Data.
- 30.2 The security deposit may be replaced by equivalent amount of bank guarantee or fixed deposit receipt assigned to the Employer, with validity up to 3 (three) months beyond the completion of Defect Liability Period/ extended Defect Liability Period.
- 30.3 The Security Deposit shall be refunded on completion of Defect Liability Period.

## **31. Price Adjustment**

### **31.1 Applicability**

1. Price adjustment shall be applicable only if provided for in the Contract Data.
2. The price of adjustment clause shall apply only for the works executed from the date of signing of the agreement until the end of the initial intended completion date or extensions granted for reasons attributed to the Employer by the Engineer.
3. The Contractor shall not be entitled to any benefit arising from the price adjustment clause for extension in the contract period for reasons attributed to the Contractor.
4. In the Force Majeure event the price escalation clause shall apply.

### **31.2 Procedure**

1. Contract price shall be adjusted for increase or decrease in rates and price of labour, materials, fuels, and lubricants in accordance with following principles and procedures and as per formula given in the contract data.
2. The price adjustable shall be determined during each quarter from the formula given in the contract data
3. Following expression and meaning are assigned to the work done during each quarter:  
$$R = \text{Total value of work during the quarter. It would include the amount of secured advance granted, if any, during the quarter, less the amount of secured advance recovered, if any during the quarter, less value of material issued by the department, if any, during the quarter.}$$
4. Weightages of various components of the work shall be as per the Contract Data.

**31.3** To the extent that full compensation for any rise or fall in costs to the contractor is not covered by the provisions of this or other clauses in the contract, the unit rates and prices included in the contract shall be deemed to include amounts to cover the contingency of such other rise or fall in costs.

**31.4** The index relevant to any quarter, for which such compensation is paid, shall be the arithmetical average of the indices relevant of the indices relevant of the calendar month.

**31.5** For the purpose of clarity it is pointed out that the price adjustment may be either positive or negative, i.e. if the price adjustment is in favour of the Employer, the same shall be recovered from the sums payable to the contractor.

### **32. Mobilization and Construction Machinery Advance**

- 32.1 Payment of advances shall be applicable if provided in the Contract Data.
- 32.2 If applicable, the Engineer in charge shall make interest bearing advance payment to the contractor of the amounts stated in the Contract Data, against Provision by the contractor of an unconditional Bank Guarantee in a form and by a nationalized/ scheduled banks, in the name as stated in the Contract Data, in amounts equal to the advance payment. The guarantee shall remain effective until the advance payment has been repaid, but the amount of the guarantee shall be progressively reduced by the amounts repaid by the contractor.
- 32.3 The rate of interest chargeable shall be as per Contract Data.
- 32.4 The construction machinery advance, if applicable, shall be limited to 80% of the cost of construction machinery and admissible only for new construction machinery.
- 32.5 The advance payment shall be recovered as stated in the Contract Data by deducting proportionate amounts from payment otherwise due to the Contractor. No account shall be taken of the advance payment or its recovery in assessing valuations of work done, variations, price adjustments, compensation events, or liquidated damages.

### **33. Secured Advance**

- 33.1 Payment of secured Advance shall be applicable if provided in the Contract Data.
- 33.2 If applicable, the Engineer shall make advance payment against materials intended for but not yet incorporated in the Works and against provision by the contractor of an unconditional Bank Guarantee in a form and by a nationalized/ scheduled bank, in the name as stated in the Contract Data, in amounts equal to the advance payment. The guarantee shall remain effective until the advance payment has been adjusted, but the amount of the guarantee shall be progressively reduced by the amounts adjusted by the contractor.
- 33.3 The Amount of secured advance and conditions to be fulfilled shall be as stipulated in the Contract Data.
- 33.4 The Secured Advance paid shall be recovered as stated in the Contract Data.

### **34. Payment Certificates**

The payment to the contractor will be as follows for construction work:

- (a) The Contractor shall submit to the Engineer monthly statements of the value of the work executed less the cumulative amount certified previously, supported with detailed measurement of the items of work executed.
- (b) The Engineer shall check the contractor's monthly statement and certify the amount to be paid to the contractor.

- (c) The value of work executed shall be determined, based on the measurements approved by the Engineer/Engineer-in-charge.
- (d) The value of work executed shall comprise the value of the quantities of the items in the Bill of quantities completed.
- (e) The value of work executed shall also include the valuation of variations and compensation Events.
- (f) All payments shall be adjusted for deductions for advance payment, security deposit, other recoveries in terms of contract and taxes at source as applicable under the law.
- (g) The Engineer may exclude any item certified in a previous certificate or reduce the proportion of any item previously certified in any certificate in the light of later information.
- (h) Payment of intermediate certificate shall be regarded as payments by way of advance against the final payment and not as payments for work actually done and completed.
- (i) Intermediate payment shall not preclude the requiring of bad, unsound and imperfect or unskilled work to be removed and taken away and reconstructed or be considered as an admission of the due performance of the contractor any part thereof, in any respect or the occurring of any claim.
- (j) The payment of final bill shall be governed by the provisions of clause 36 of GCC.

## **E. Finishing the Contract**

### **35. Completion Certificate**

- 35.1 A Completion Certificate in the prescribed format in contract Data shall be issued by the Engineer-in-Charge after physical completion of the Work.
- 35.2 After Final payment to the contractor, a Final Completion Certificate in the prescribed format in the Contract Data shall be issued by the Engineer-in-Charge.

## **36. Final Account**

- 36.1 The Contractor Shall Supply the Engineer with a detailed account of the total amount that the contractor considers payable for works under the contract within 21 days of issue of certificate of physical completion of works. The Engineer shall issue a Defects Liability Certificate and certify any payment that is due to the Contractor within 45 days of receiving the Contractor's account if it is correct and complete. If the account is not correct or complete, the Engineer shall issue within 45 days a schedule that states the scope of the corrections or additions that are necessary, If the Account is still unsatisfactory after it has been resubmitted, the matter shall be referred to the Competent Authority as defined in the Contract Data, who shall decide on the amount payable to the Contractor after hearing the Contractor and the Engineer in charge.
- 36.2 In case the account is not received within 21 days of issue of Certificate of Completion as provided in Clause 35.1 above, the Engineer shall proceed to finalise the account and issue a payment certificate within 28 days.

## **F. Other Conditions of Contract**

### **37. Currencies**

All payments will be made in Indian Rupees.

### **38. Labour**

- 38.1 The Contractor shall, unless otherwise provided in the Contract, make his own arrangements for the engagement of all staff and labour, local or other, and for their payment, housing, feeding and transport.
- 38.2 The Contractor shall, if required by the Engineer, deliver to the Engineer a return in detail, in such form and at such intervals as the Engineer may prescribe, showing the staff and the numbers of the several classes of labour from time to time employed by the Contractor on the Site and such other information as the Engineer may require.

### **39. Compliance with Labour Regulations**

39.1 During continuance of the Contract, the Contractor and his sub-Contractors shall abide at all times by all existing labour enactments and rules made there under, regulations, notifications and bye laws of the State or Central Government or local authority and any other labour law (including rules), regulations, bye laws that may be passed or notification that may be issued under any labour law in future either by the State or Central Government or local authority. Salient features of some of the major labour laws that are applicable to construction industry are given in the Contract Data. The Contractor shall keep the Employer indemnified in case any action is taken against the Employer by the competent authority on account of contravention of any of the provisions of any Act or rules made there under, regulations or notifications including amendments. If the Employer is caused to pay or reimburse, Such amounts as may be necessary to cause or observe, or for non-observance of the provisions stipulated in the notifications /byelaws/Acts/Rules/regulations including amendments, if any, on the part of the Contractor, the Engineer/Employer shall have the right to deduct from any money due to the Contractor including his amount of performance security. The Employer /Engineer shall also have right to recover from the Contractor any sum required or estimated to be required for making good the loss or damage suffered by the Employer. The Employees of the Contractor and the Sub-contractor in no case shall be treated as the employees of the Employer at any point of time.

### **40. Audit and Technical Examination**

Government / Industrial Infrastructure Development Corporation (Gwalior) MP. Ltd. shall have the right to cause an audit and technical examination of the works and the final bill of the contract including all supporting vouchers, Abstract etc. to be made after payment of the final bill and if as a result of such audit and technical examination any sum is found to have been overpaid in respect of any work done by the contractor under the contract and found not to, have been overpaid in respect of any work done by the contractor under the contract or any work claimed by him to have been done under the contract and found not to, have been executed, the Contractor shall be liable to refund the amount of overpayment and it shall be lawful for Government / Industrial Infrastructure Development Corporation (Gwalior) MP. Ltd. to recover the same from him in the manner prescribed in clause 24 above and if it is found that the Contractor was paid less than what was due to him, under the contract in respect of any work executed by him under it, the amount of such under payment shall be duly paid by Government / Industrial Infrastructure Development Corporation (Gwalior) MP. Ltd. to the Contractor.

**41. Death or Permanent Invalidity of Contractor**

If the Contractor is an individual or a proprietary concern, partnership concern, dies during the currency of the contract or becomes permanently incapacitated, where the surviving partners are only minors, the contracts shall be closed without levying any damages/compensation as provided for in clause 28.2 of the contract agreement. However, if the competent authority shall enter into a fresh agreement for the remaining work strictly on the same terms and conditions under which the contract was awarded.

**42. Jurisdiction**

This Contract has been entered into the State of Madhya Pradesh and its validity, construction, interpretation and legal effect shall be subjected to the courts at the place where this agreement is entered into. No other jurisdiction shall be applicable.

**[End of GCC]**

## Contract Data

GCC Clause	Particulars	Data
1.14	Employer	MPAKVN(Bhopal)
1.15	Engineer	Junior Engineer, Assistant Engineer, Executive Engineer
1.16	Engineer-in-Charge	Executive Engineer
1.22	Stipulated period of completion	06 months including rainy season
3	Language & Law of Contract	English
4	Address & contact details of the Contractor	As per Annexure – H
	Address & contact details of the Employer/Engineer- Phone, Fax, e-mail	Executive Engineer, First floor, Tawa complex, E-5, Arera colony, Bittan Market , Bhopal-462016 Phone – 0755-2420301-3 Fax – 0755-2420277 E-mail – mpakvnbhopal@gmail.com
5	Subcontracting permitted for the Contract Value	No
6	Technical Personnel to be provided by the Contractor – requirement, &	As per Annexure-I (Format I-3)
	Penalty, if required Technical Personnel not employed	Rs. 30000/- for each month of default in case of a graduate engineer and Rs 18000/- for each month of default in case of Diploma Holder..
10	Specifications	As per Annexure – E
	Drawings	As per Annexure – N
12	Competent Authority for deciding dispute under Dispute Resolution System	Managing Director, MPAKVN (Bhopal)
	Appellate Authority for deciding dispute under Dispute Resolution System	Chairman, MPAKVN (Bhopal) (Managing Director, MPTRIFAC, Bhopal)
13	Period for submission of updated construction program	Every month or at the end of Mile stone whichever is less
	Amount to be withheld for not submitting construction program in the prescribed period	Rs.10000/-
14	Competent Authority for granting Time Extension	Managing Director, MPAKVN (Bhopal)
15	Milestones laid down for the Contract	YES
	If Yes, details of Milestones	As per Annexure – O
	Liquidated damage	As per Annexure – P
17	List of equipment for lab	As per Annexure – Q
	Time to establish lab	15 days
	Penalty for not establishing field Laboratory	Rs. 10000/- per month for the delay
18	Defect Liability Period	3 (Three) years after physical completion of work
21	Competent Authority for determining the rate	Managing Director, MPAKVN (Bhopal)
27	Any other condition for breach of contract	Yes, as below: If the Contractor fails to achieve 50% Financial progress in any Milestone and/or fails to achieve 75% Financial progress in Two consecutive Milestones.



GCC Clause	Particulars	Data
28	Penalty	Penalty shall include: <ul style="list-style-type: none"> <li>a. Security deposit as per clause 30 of General Conditions of Contract and</li> <li>b. Liquidated Damages imposed as per clause 15 or Performance Security (Guarantee) including Additional Performance Security (Guarantee), if any, as per clause 29 of General Conditions of Contract, whichever is higher</li> </ul>
29	Performance guarantee (Security) shall be valid up to	Three month beyond the Completion of Defect Liability Period
30	Security Deposit to be deducted from each running bill	At the rate of 5%
	Maximum limit of deduction of Security Deposit	Up to 5% of Final Contract Amount
31	Price Adjustment formula and procedure to calculate	<b>No</b>
31.1(1)	Price adjustment shall be applicable	No
32	Mobilization and Construction Machinery Advance Applicable	No Mobilization and Construction Machinery Advance payable
33	33.1 Secured Advance Applicable	No
	33.2 If yes, Unconditional Bank Guarantee	In the format prescribed in Annexure - T
	33.2 If yes, Amount of Secured Advance	75% of value of material as determined by the Engineer-in-Charge
	33.3 If yes, Conditions for Secured Advance	a. The materials are in-accordance with the specification for works:
		b. Such materials have been delivered to site, and are properly stored and protected against damage or deterioration to the satisfaction of the Engineer. The contractor shall store the bulk material in measurable stacks.;
		c. The Contractor's records of the requirements, orders, receipt and use of materials are kept in a form approved by the Engineer and such records shall be available for inspection by the Engineer;

GCC Clause	Particulars	Data
		d. The contractor has submitted with his monthly statement the estimated value of the materials on site together with such documents as may be required by the Engineer for the purpose of valuation of the materials and providing evidence of ownership and payment thereof;
		e. Ownership of such materials shall be deemed to vest in the Employer for which the Contractor has submitted an Indemnity Bond in an acceptable format; and
		f. The quantity of materials are not excessive and shall be used within a reasonable time as determined by the Engineer.
	33.4 If yes, Recovery of Secured advance	The advance shall be repaid from each succeeding monthly payments to the extent materials (for which advance was previously paid) have been incorporated into the Works.
35	Completion Certificate – after physical completion of the work	As per Annexure – U
	Final Completion Certificate – after final payment on completion of the Work	As per Annexure – V
36	Competent Authority	Managing Director, MPAKVN (Bhopal)
39	Salient features of some of the major labour laws that are applicable	As per Annexure – W
41	Competent Authority	Managing Director, MPAKVN (Bhopal)

## **Drawings**

Detail Drawing can be seen in the office of the Executive Engineer, 1<sup>st</sup> floor, Tawa complex, Bittan Market, E-5, Arera colony, Bhopal (MP)

## Details of Milestones

<b>Sl. No.</b>	<b>Milestone</b>	<b>Duration</b>	<b>Achievement</b>
1	1 <sup>st</sup>	Upto 1.5 months from commencement of work	25% of the Contract Amount
2	2 <sup>nd</sup>	Upto 3 months from commencement of work	50% of the Contract Amount
3	3 <sup>rd</sup>	Upto 4.5 months from commencement of work	75% of the Contract Amount
4	4 <sup>th</sup>	Upto 6 months from commencement of work	100% of the Contract Amount

### **Compensation for Delay**

If the contractor fails to achieve the milestones, and the delay in execution of work is attributable to the contractor, the Employer shall retain an amount from the sums payable and due to the contractor as per following scale –

- i. Slippage up to 25% in financial target during the milestone under consideration  
– 2.5% of the work remained unexecuted in the related time span.
- ii. Slippage exceeding 25% but Up to 50% in financial target during the milestone under consideration  
– 5% of the work remained unexecuted in the related time span.
- iii. Slippage exceeding 50% but Up to 75% in financial target during the milestone under consideration  
– 7.5% of the work remained unexecuted in the related time span.
- iv. Slippage exceeding 75% in financial target during the milestone under consideration  
- 10% of the work remained unexecuted in the related time span.

Note: For arriving at the dates of completion of time span related to different milestones, delays which are not attributable to the Contractor shall be considered. The slippage on any milestone is if made good in subsequent milestones or at the time of stipulated period of completion, the amount retained as above shall be refunded. In case the work is not completed within the stipulated period of completion along with all such extensions which are granted to the Contractor for either Employer's default or Force Majeure, the compensation shall be levied on the contractor at the rate of 0.05% per day of delay limited to a maximum of 10% of contract price.

The decision of **Managing Director** shall be final and binding upon both the parties.

## **List of Equipment for Quality Control Lab**

( As submitted by the bidder )

### Price Adjustment

The formulas for adjustment of price are as follow:

R= Value of work as defined in Clause 31.2(3) of General Conditions of Contract

Weightages\* of component in the work

S. No.	Component	Percentage of component in the work
1	Cement – $P_c$	
2	Steel - $P_s$	
3	Bitumen - $P_b$	
4	POL - $P_t$	

- Weightages of various components of the work shall be determined by the component technical sanction authority.

#### Adjustment for cement component

Price adjustment for increase or decrease in the cost of cement procured by the contractor shall be paid in accordance with the following formula:

$$V_c = 0.85 \times P_c / 100 \times R \times (C_1 - C_0) / C_0$$

$V_c$ = Increase or decrease in the cost of work during the month under consideration due to changes in rates for cement

$C_0$ = The all India wholesale price index for Grey cement on the date of opening of Bids as published by the Ministry of Industrial Development, Government of India, New Delhi. ([www.eaindustry.nic.in](http://www.eaindustry.nic.in))

$C_1$ = The all India average wholesale price index for Grey cement for the month under consideration as published by Ministry of Industrial Development, Government of India, New Delhi. ([www.eaindustry.nic.in](http://www.eaindustry.nic.in))

$P_c$ = Percentage of cement component of the work

Note: For the application of this clause, index of Grey Cement has been chosen to represent Cement group.

#### Adjustment of steel component

Price adjustment for increase or decrease in the cost of steel procured by the Contractor shall be paid in accordance with the following formula:

$$V_s = 0.85 \times P_s / 100 \times R \times (S_1 - S_0) / S_0$$

$V_s$  = Increase or decrease in the cost of work during the month under consideration due to changes in rates for steel.

$S_0$  = The all India wholesale price index for steel (Bars and Rods) on the date of opening of Bids as published by the Ministry of Industrial Development, Government of India, New Delhi. ([www.eaindustry.nic.in](http://www.eaindustry.nic.in))

$S_1$  = The all India average wholesale price index for steel (Bars and Rods) for the month under consideration as published by Ministry of Industrial Development, New Delhi. ([www.eaindustry.nic.in](http://www.eaindustry.nic.in))

$P_s$  = Percentage of steel component of the work

Note: For the application of this clause, index of Bars and Rods has been chosen to represent steel group.

#### **Adjustment of bitumen component**

Price adjustment for increase or decrease in the cost of bitumen shall be paid in accordance with the following formula:

$$V_b = 0.85 \times P_b / 100 \times R \times (B_1 - B_0) / B_0$$

$V_b$  = Increase or decrease in the cost of work during the month under consideration due to changes in rates for bitumen.

$B_0$  = The official retail price of bitumen at the IOC depot at nearest center on the date of opening of Bids.

$B_1$  = The official retail price of bitumen of IOC depot at nearest center for the 15<sup>th</sup> day of the month under consideration.

$P_b$  = Percentage of bitumen component of the work

#### **Adjustment of POL (fuel and lubricant) component**

Price adjustment for increase or decrease in cost of POL (fuel and lubricant) shall be paid in accordance with the following formula:

$$V_f = 0.85 \times P_f / 100 \times R \times (F_1 - F_0) / F_0$$

$V_f$  = Increase or decrease in the cost of work during the month under consideration due to changes in rates for fuel and lubricants.

$F_0$  = The official retail price of High Speed Diesel (HSD) at the existing consumer pumps of IOC at nearest center on the date of opening of Bids.

$F_1$  = The official retail price of HSD at the existing consumer pumps of IOC at nearest center for the 15<sup>th</sup> day of month of the under consideration.

$P_f$  = Percentage of fuel and lubricants component of the work

Note: For the application of this clause, the price of High Speed Diesel has been chosen to represent fuel and lubricants group.



**Bank Guarantee form for Mobilization and Construction Machinery Advance**

To

..... (name of Employer)  
..... (name of Employer)  
..... (name of Contractor)

In accordance with the provisions of the General Conditions of Contract, clause 31 (“Mobilization and Construction Machinery Advance”) of the above-mentioned Contract ..... (name and address of Contractor”) (hereinafter called “the Contractor”) shall deposit with ..... (name of Employer) a bank guarantee to his proper and faithful performance under the said Clause of the Contract in an amount of ..... (amount of Guarantee)\* ..... (in words).

We, the ..... (bank of financial institution), as instructed by the Contractor, agree unconditionally and irrevocably to guarantee as primary obligator and not as surety merely, the payment to ..... (name of Employer) on his first demand without whatsoever right of obligation on our part and without his first claim to the Contractor, in the amount not exceeding ..... (amount of guarantee)\* ..... (in words).

We further agree that no change or addition to or other modification of the terms of the Contractor or Works to be performed there under or of any of the Contract documents which may be made between ..... (name of Employer) and the Contractor, shall in any way release us from any liability under this guarantee, and we hereby waive notice of any such change, addition or modification.

This guarantee shall remain valid and in full effect from the date of the advance payment under the Contract until ..... (name of Employer) receives full repayment of the same amount from the Contractor.

Yours truly,

Signature and Seal .....

Name of Bank/Financial Institution.....

Address .....

Date .....

**Bank Guarantee form for Secured Advance**

INDENTURE FOR SECURED ADVANCES

This indenture made the ..... day of ..... 20.....  
BETWEEN ..... (hereinafter called the contractor which expression shall where the context so admits or implies be deemed to include his executors, administrators and assigns) or the one part and the Employer of the other part.

Whereas by an agreement dated ..... (hereinafter called the said agreement) the contractor has agreed.

AND WHEREAS the contractor has applied to the Employer that he may be allowed advanced on the security of materials absolutely belonging to him and brought by him to the site of the works the subject of the said agreement for use in the construction of such of the works as he has undertaken to executive at rates fixed for the finished work (inclusive of the cost of materials and labour and other charges).

AND WHEREAS the Employer has agreed to advance to the Contractor the sum of Rupees ..... On the security of materials the quantities and other particulars of which are detailed in Accounts of Secured Advance attached to the Running Account Bill for the said works signed by the Contractor on ..... date the Employer has reserved to himself the option of making any further advance or advances on the security of other materials brought by the Contractor to the site of the said works.

NOW THIS INDENTURE WITNESSETH that in pursuance of the said agreement and in consideration of the sum of Rs. ....on or before the execution of these presents paid to the Contractor by the Employer (the receipt where of the Contractor doth hereby acknowledge) and of such further advances (if any) as may be made to him as a for said the Contractor doth hereby covenant and agree with the President and declare as follows:

That the said sum of Rupees ..... so advanced by the Employer to

- (1) the Contractor as aforesaid and all or any further sum of sums advanced as aforesaid shall be employed by the Contractor in or towards expending the execution of the said works and for no other purpose whatsoever.
- (2) That the materials details in the said account of Secured Advances which have been offered to and accepted by the Employer as security are absolutely the Contractor's own propriety and free from encumbrances of any kind and the contractor will not make any application for or receive a further advance on the security of materials which are not absolutely his own property and free from encumbrances of any kind and the Contractor indemnified the Employer against all claims to any materials in respect of which an advance has be made to him as aforesaid.
- (3) That the materials detailed in the said account of Secured Advances and all other materials on the security of which any further advance or advances may hereafter be made as aforesaid (hereafter called the said materials) shall be used by the Contractor solely in the execution of the said works in accordance with the directions of the Engineer.
- (4) That the Contractor shall make at his own cost all necessary and adequate arrangements for the proper watch, safe custody and protection against all risks of the said materials and that until used in construction as aforesaid the said materials shall remain at the site of the said works in the Contractor's custody and on his own responsibility and shall at all times be open to inspection by the Engineer or any officer authorized by him. In the event of the said materials or any part thereof being stolen, destroyed or damaged or becoming deteriorated in a greater degree than is due to reasonable use and wear thereof the Contractor will forthwith replace the same with other materials of like quality or repair and make good the same required by the Engineer.
- (5) That the said materials shall not be removed from the site of the said works except with the written permission of the Engineer or an officer authorized by him on that behalf.

- (6) That the advances shall be repayable in full when or before the Contract receives payment from the Employer of the price payable to him for the said works under the terms and provisions of the said agreement. Provided that if any intermediate payments are made to the Contractor on account of work done than on the occasion of each such payment the Employer will be at liberty to make a recovery from the Contractor's bill for such payment by deducting there from the value of the said materials than actually used in the construction and in respect of which recovery has not been made previously, the value for this purpose being determined in respect of each description of materials at the rates at which the amounts of the advances made under these presents were calculated.
- (7) That if the Contractor shall at any time make any default in the performance or observance in any respect of any of the terms and provisions of the said agreement or of these presents the total amount of the advance or advances that may still be owing of the Employer shall immediately on the happening of such default be repayable by the Contractor to be the Employer together with interest thereon at twelve percent per annum from the date or respective dates of such advance or advances to the date of repayment and with all costs, charges, damages and expenses incurred by the Employer in or for the recovery thereof or the enforcement of this security or otherwise by reason of the default of the Contractor and the Contractor hereby covenants and agrees with the employer to reply and pay the same respectively to him accordingly.
- (8) That the Contractor hereby charges all the said materials with the repayment to the Employer of the said sum of Rupees.....and any further sum of sums advanced as aforesaid and all costs, charges, damages and expenses payable under these presents PROVIDED ALWAYS and it is hereby agreed and declared that notwithstanding anything in the said agreement and without prejudice to the power contained therein if and whenever the covenant for payment and repayment here-in-before contained shall become enforceable and the money owing shall not be paid in accordance there with the Employer may at any time thereafter adopt all or any of the following courses as he may deem best:

- (a) Seize and utilise the said materials or any part thereof in the completion of the said works on behalf of the Contractor in accordance with the provision in that behalf contained in the said agreement debiting the Contractor with the actual cost of effecting such completion and the amount due to the Contractor with the value of work done as if he had carried it out in accordance with the said agreement and at the rates thereby provided. If the balance is against the Contractor, he is to pay same to Employer on demand.
  - (b) Remove and sell by public auction the seized materials or any part thereof and out of the moneys arising from the sale retain all the sums aforesaid repayable or payable to the Employer under these presents and pay over the surplus (if any) to the Contractor.
  - (c) Deduct all or any part of the moneys owing out of the security deposit or any sum due to the Contractor under the said agreement.
- (9) That except in the event of such default on the part of the Contractor as aforesaid interest on the said advance shall not be payable.
- (10) That in the event of any conflict between the provisions of these presents and the said agreement the provisions of these presents shall prevail and in the event of any dispute or difference arising over the construction or effect of these presents the settlement of which has not been here-in-before expressly provide for the same shall be referred to the Employer whose decision shall be final and the provision of the Indian Arbitration Act for the time being in force shall apply to any such reference.

**Annexure – U**

(See clause 35 of Section 3 –GCC)

**Physical Completion Certificate**

Name of Work:

.....  
.....  
.....

Agreement No. .... Date .....

Amount of Contract Rs. ....

Name of Agency: .....

Used MB No. ....

Last measurement recorded:

- a. Page No. & MB No. ....
- b. Date .....

Certified that the above mentioned work was physically completed on .....  
(date) and taken over on ..... (date) and that I have satisfied myself to  
best of my ability that the work has been done properly.

Date of issued

**Executive Engineer**

.....  
.....

## Final Completion Certificate

Name of Work:

.....  
.....  
.....

Agreement No. .... Date .....

Name of Agency: .....

Used MB No. ....

Last measurement recorded:

a. Page No. & MB No. ....

b. Date .....

Certified that the above mentioned work was physically completed on .....  
(date) and taken over on ..... (date).

Agreed amount Rs. ....

Final amount paid to contractor Rs. ....

Incumbency of officers for the work.

I have satisfied myself to best of my ability that the work has been done properly.

Date of issue:

**Executive Engineer**

.....  
.....

### **Salient Features of some Major Labour Laws Applicable**

- a) **Workmen Compensation Act 1923:-** The Act provides for compensation in case of injury by accident arising out of and during the course of employment.
- b) **Payment of Gratuity Act 1972:-** Gratuity is payable to an employee under the Act on satisfaction of certain conditions on separation if an employee has completed the prescribed minimum years (say, five years) of service or more or on death the rate of prescribed minimum days (say, 15 days) wages for every completed year of service the Act is applicable to all establishments employing the prescribed minimum number (say, 10) or more employees.
- c) **Employees P.F. and miscellaneous Provisions Act 1952:-** The Act provides for monthly contributions by the employer plus workers at the rate prescribed (say, 10% or 8.33%). The benefits payable under the Act are:
  - i. Pension or Family pension on retirement or death as the case may be.
  - ii. Deposit linked insurance on the death in harness of the worker.
  - iii. Payment of P.F. accumulation on retirement/death.
- d) **Maternity Benefit Act 1951:-** The Act provides for leave and some other benefits to women employees in case of confinement or miscarriage etc.
- e) **Contract Labour (Regulation & Abolition) Act 1970:-** The Act provides for certain welfare measures to be provided by the Contractor to contract labour and in case the Contractor fails to provide, the same are required to be provided, by the Principal Employer by the law. The Principal Employer is required to take Certificate of Registration and the Contractor is required to take license from the designated Officer. The act is applicable to the establishments or Contractor of Principal Employer if they employ prescribed minimum (say, 20) or more contract labour.
- f) **Minimum Wages Act 1948:-** The Employer is to pay not less than the minimum wages fixed by appropriate Government as per provision of the Act if the employment is a scheduled employment. Construction of buildings, roads, runways is scheduled employment.
- g) **Payment of Wages Act 1936:-** It lays down as to by what date the wages are to be paid, when it will be paid and what deductions can be made from the wages of the workers.
- h) **Equal Remuneration Act 1979:-** The Act provides for payment of equal wages for work of equal nature to male and female workers and for not making discrimination against female employees in the matters of transfers, training and promotions etc.



- i) **Payment of Bonus Act 1965:-** The Act is applicable to all establishments employing prescribed minimum (say, 20) or more workmen. The Act provides for payments of annual bonus within the prescribed range of percentage of wages to employees drawing up to the prescribed amount of wages, calculated in the prescribed manner. The Act does not apply to certain establishments. The newly set-up establishments are exempted for five years in certain circumstances. States may have different number of employment size.
- j) **Industrial Disputes Act 1947:-** The Act lays down the machinery and procedure for resolution of Industrial disputes, in what situations a strike or lock-out becomes illegal and what are the requirements for laying off or retrenching the employees or closing down the establishment.
- k) **Industrial Employment (Standing Orders) Act 1946:-** It is applicable to all establishments employing prescribed minimum (say, 100 or 50). The Act provides for laying down rules governing the conditions of employment by the Employer on matters provided in the Act and gets these certified by the designated Authority.
- l) **Trade Unions Act 1926:-** The Act lays down the procedure for registration of trade unions of workmen and Employers. The Trade Unions registered under the Act have been given certain immunities from civil and criminal liabilities.
- m) **Child Labour (Prohibition & Regulation) Act 1986:-** The Act prohibits employment of children below 14 years of age in certain occupations and processes and provides for regulations of employment of children in all other occupations and processes. Employment of child labour is prohibited in building and construction industry.
- n) **Inter-state Migrants Workmen's (Regulation of Employment & Condition of Service) Act 1979:-** The Act is applicable to an establishment which employs prescribed minimum (say, five) or more inter-state migrants workmen through an intermediary (who has recruited workmen in one state for employment in the establishment situated in other state). The Inter-State migrant workmen, in an establishment to which this act becomes applicable, are required to be provided certain facilities such as Housing, Medical-Aid, Travelling expenses from home up to the establishment and back etc.

- o) **The Building and Other Construction workers (Regulation of Employment & Condition of Service) Act 1996:-** All the establishment who carry on any building or other construction work and employs the prescribed minimum (say, 10) or more workers are covered under this Act. All such establishment are required to pay cess at the rate not exceeding 2% of the cost of construction as may be modified by the Government. The Employer of the establishment is required to provide safety measures, such as canteens, first-aid facilities, ambulance, housing accommodations for workers near the work place etc. The Employer to whom the Act applies to obtain a registration certificate from the Registering Officer appointed by the Government.
  
- p) **Factories Act 1948:-** The Act lays down the procedure for approval of program before setting up factory, health and safety provision, welfare provision, working hours, annual earn leave and rendering information regarding accident or dangerous occurrence to designated authorities. It is applicable to premises employing the prescribed minimum (say, 10) persons or more with aid of power or another prescribed minimum (say, 20) or more persons without the aid of power engaged in manufacturing process.

**Section - 03**  
**Conditions of Contract**

**Part – II Special Conditions of Contract (SCC)**  
**&**  
**Technical Specification**

## Special Conditions of Contract

### 1. **Submission of Work Plan and Schedule**

Submission of Work Plan and schedule – Contractor shall submit the detailed Work Plan, showing the various tasks to be performed in the order of their occurrence with in maximum 15 days from the issue date of letter of acceptance for approval.

Contractor during the construction resubmit the Work Plan and Schedule keeping track of the actual site progress for ease of monitoring the progress on regular basis on every 30 Days (THIRTY) to the Engineer-In-Charge & Consultant. Non submission of the updated program will cause withheld of amount specified in contract data

### 2. **Approval by the Consultant (If any)**

Consultant ( SQC/PMC) appointed by MPAKVN (Bhopal) shall be supervising the work and the contractor(s) shall make available to the consultant full access to the site of work and the site-testing laboratory and Contractor and their representative will have to be present during such inspections. All views and directions given by the consultant shall be followed in full.

Contractor shall ensure adherence to the different conditions during execution regarding approval from Consultant. The Consultants approval shall not alter the Contractor's responsibility for correct design of the both Temporary and Permanent Works.

### 3. **Other Conditions**

- a) The Contractor(s) will have to keep on site complete survey instruments like Total Station / Theodolite / Auto Level and Computers, Plotter, Printer, Fax, Scanner, consumables and other office accessories along with technical personnel to operate those instruments to facilitate and obtain the information required as instructed by Engineer-In-Charge/Consultant, for which no extra payment will be made.
- b) The Contractor shall conduct Total Station Survey of the site, all complete, including, Bench Marking Pillars, DTM, GTS Bench Mark, etc., as per IRC-SP-19, IRC-5 and MORT&H specifications. The contractor shall get the methodology and output model approved by the Consultant/ AKVN Engineers. The survey shall include validation wherever required. The contractor shall use Total Stations for layout of Proposed Design, Services and Features at site and as per approved Design and Drawings. The methodology of the same shall be approved by the Consultant.
- c) The schedule of quantities annexed with the tender, generally represents the work. However, MPAKVN (Bhopal) reserves the right to completely omit any item, add any item and the variance in the quantity of different items can be to any extent. No claim of contractor(s) will be entertained on this account.

- d) The drawings of certain items as specified by consultant shall serve as G.A. drawings for general layout. The contractor shall prepare and submit for approval, detailed working / setting out drawings as per work required and contractor shall submit these drawings for approval to the EIC/Consultant. It shall be the contractor's responsibility to see that all deviations if any from GAD drawings and specifications, noted on the drawings are brought to the attention of the consultant, otherwise approval shall be automatically voided. No extra cost shall be paid for preparing these drawings.
- e) The Contractor shall submit Design Calculations, Specifications and Working Drawings showing the Proposed Works (both Temporary and Permanent) to the EIC/Design Consultant, who has to approve them if they comply with the desired specifications and drawings.
- f) The Engineer-In-Charge's/Consultants approval shall not alter the Contractor's responsibility for correct design of the Works (both Temporary and Permanent).
- g) The Contractor shall obtain approval of third parties to the design of the Works where required as instructed by the EIC/Consultants.
- h) The contractor shall make available samples of all Materials etc. of all makes intended to be used at site, for the approval of EIC/Consultant.
- i) Contractor at his own cost (no extra payment shall be made by MPAKVN (Bhopal) for setting the laboratory) shall have to install and maintain at work site a well – equipped field laboratory for day to day testing of materials and quality of work along with experienced & technically qualified testing staff.
- j) The cost of materials consumed on testing either at field or in different laboratory and the cost of testing shall be considered included in the contract price and not paid additionally.
- k) Required test of electronically operated valve and flow meter with the GSM feeding to scada system and display arrangement to the satisfaction of Engineer-In-Charge. Copies of Registers containing record of such tests shall have to be presented along with running bill. Test shall have to be conducted by the contractor's Engineer under the supervision of the Engineer-In-Charge or his authorized representatives.
- l) Frequent testing as desired by the Engineer-In-Charge/Consultant will have to be carried out at other reputed laboratory to check the quality of materials procured by the contractor at site and to check the quality of the work executed. All charges for testing shall be paid by the contractor, failing which the same shall be got done by Engineer-In-Charge and charges shall be recovered from the contractor's bill at double the rates charged by the testing agency.
- m) The Employer shall give possession of the Site to the Contractor. The Contractor shall be responsible to co-ordinate with the Service Provider/Concerned Authorities for cutting of

trees, shifting of utilities, Removal of Encroachments Etc. and making the site unencumbered from the project construction area required for completion of the Work. This would include initial and frequent follow up meetings/actions/discussions with each involved service provider/concerned authorities. The Contractor will not be entitled for any additional compensation for delay in cutting of Trees, Shifting of utilities and removal of Encroachments by the service provider/concerned authorities. The Engineer-in-charge shall consider extension of time to such delays. Statutory Charges if any; for cutting of trees and shifting of utilities as required by concerned department shall be made by Employer.

- n) The Contractor shall construct and maintain such store houses, yards etc. as considered sufficient by the Engineer-In-Charge for proper up keep of the Material, Plant and Machinery and records for due discharge of contractors Obligations towards the Contract. Space for these works will have to be made available by contractor himself as per his own convenience at his own costs. Engineer-In-Charge/Consultants will be provided free access to these premises. The site handed over to the contractor will have to be vacated in the same condition within 1 (one) months of the completion of the contract.
- o) It will be the responsibility of the contractor to make necessary temporary arrangements for sufficient illumination of road being used by the road users during the period of the work at his cost. Contractor will also make adequate arrangements for illumination of work sites at his cost.
- p) All charges for temporary Water & Electrical connection and Consumption charges required to execute the total work are to be borne by contractor at no extra cost.
- q) Either the Engineer-In-Charge/Consultants may require the Contractor to attend a management meeting, which shall be held once every month or whenever specifically required. The business of a management meeting shall be to review the plans for remaining work and to deal with matters raised in accordance with the early warning procedure.
- r) No Claims whatsoever on grounds of delay in getting the temporary connections shall be admissible towards any extra payment.
- s) If required, he contractor shall have to produce test certificate in the Performa prescribed/approved by B.I.S., from the manufacturer for every batch of steel brought to site of work.
- t) The tenderer must obtain for himself, at his own responsibility and at his own expenses all the information, which must be necessary for purpose of submitting the tender and for entering into a contract. He is presumed to have examined the drawing and inspected the site of work, access to the work, and nature of the work, availability and quality of the materials pertaining there to the work. No claim for extra on account of non-availability of materials or otherwise shall be entertained.

- u) In Case of any discrepancies in specifications in any item of SOR, decision of Managing Director, MPAKVN (Bhopal) shall be final and binding on the Contractor.
- v) The contractor shall submit proof of royalty payment along with each running bills. The contractor shall also have to submit Royalty clearance certificate for the materials consumed from the concerned authority along with the final bills. In case of SEZ area it should be as per agreement and as per rules applicable in SEZ.
- w) During the execution of the work there is likelihood of such items of works, which do not find place in the schedule of items, but covered in SOR. Contractor will have to carry out these items of work; if found necessary to be executed in opinion of Engineer-In-Charge/Consultant. The rate for such SOR items shall be paid as per the sanctioned rate of the contract.
- x) The Contractor shall carry out all instructions of the Engineer-In-Charge, which comply with the applicable laws where the Site is located.
- y) The Contractor shall permit the Employer to inspect the Contractor's accounts and records relating to the performance of the Contractor and to have them audited by auditors appointed by the Bank, if so required by the Employer.
- z) The contractor shall maintain a SITE ORDER BOOK (issued by Employer) at the site of work. As far as possible all orders regarding the works are to be entered in the book. The following officials during inspection, shall record their observations in it.
  - i) Any Authorized representative of MD MPAKVN (Bhopal)
  - ii) Engineer-In-Charge of MPAKVN (Bhopal)
  - iii) Consultant and their Authorized Representative.
  - iv) Any other Senior Official.
- aa) The departmental officials in direct charge of the work & the contractor or his representative shall sign all entries there in.
- bb) The Site Order Book shall not be removed from site. The contractor or his representative shall be bound to take note of all instructions meant for the contractor as entered in the Site Order Book, without having to be called for separately to note them. The Contractor will ensure compliance of the observations noted in the site order book and shall submit compliance report along with remarks of Site Order Book to the Engineer-In-Charge & Consultant.
- cc) The Works are liable for inspection/checking by CTE (Chief Technical Examiner or any other Authority from concerned State Government Departments. Any defects pointed out by CTE or any other Authority mentioned above shall have to be made good by the contractor at his cost.

- dd) The Security Deposit to be taken for the due performance and maintenance of the contract under the terms and conditions, printed on the tender form, will be the performance security (five percent) plus a deduction from the payment made in the running bills security (five percent), till the two together amount 10 percent of the cost of work put to tender or 10 percent of the cost of the works executed when the same exceeds the cost of work put to tender. This amount can be replaced by bank guarantee which shall be valid for a period of 36 months from the date of actual completion of work. During this period the contractor shall inspect the work and will have to carry out all necessary repairs immediately. If the contractor fails to carry out the repair work within 15 days of receipt of such communication from the Engineer-In-Charge the department will carry out repairs and cost will be recovered from the security deposit and maintenance security. 50% SD shall be released to the contractor after 2 years from the date of completion. Balance 50% SD shall be released to the contractor after 3 years from the date of completion. Maintenance guarantee period shall be of three (3) years.
- ee) If the contractor fails to execute the agreement within the time prescribed in the N.I.T. or abandons the work after executing the agreement, he shall not be issued any tender form in this NIGAM for a period of 2 (Two) years and action for deregistration, degradation, suspension of registration, black listing etc. as per prevalent government norms shall be initiated.
- ff) If the contractor fails to execute the agreement within the time prescribed in the N.I.T., the contractor shall be liable to make payments of Fee/Charges due to the SQC/PMC consultant for the extended time period beyond stipulated time period prescribed in NIT.
- gg) SQC/PMC consultant will convene a monthly meeting to monitor the progress of above works. The meeting shall be presided by the Engineer-in-Charge. The proceedings & minutes etc. shall be maintained by the SQC/PMC Consultant month wise.
- hh) All serviceable material obtained from excavation shall be the property of MPAKVN (Bhopal) Contractor should deposit the same in MPAKVN (Bhopal) Store at his own cost.

#### **4. Traffic Management and Safety**

- a) The Contractor shall prepare and revise the Work Plan regularly to ensure the Traffic on the busy arterial Road flows safely and efficiently. The Traffic Management Plan shall be evolved in close co-ordination with Engineer-In-Charge, Employer and Traffic Police Authorities. Suitable precautions shall be taken to ensure safety of Road Users and work Personnel.



- b) The contractor shall prepare traffic diversion plan and provisions for smooth flow of traffic during execution at site. The contractor shall be responsible for getting these plans approved by the Traffic Police if required.
  - c) Adequate provision shall be made for prompt first aid treatment or injuries likely to be sustained during the course of the work.
  - d) The contractor shall, unless otherwise specified, be responsible for providing proper barricading, fencing, fire fighting and taking of the necessary safety measures for all works comprised in the contract and for the proper provision and construction of temporary road, way, foot way, guards, fences, caution notices (like work in progress, drive slow) etc., as far as the same may be rendered necessary by reasons of the work for the accommodation of workmen, foot passengers or other traffic and of owners and occupiers of adjacent property and the public and shall remain responsible for any accidents that may occur on account of his failure to take proper & timely precautions.
  - e) All the arrangements made for barricading; fencing and lighting shall be maintained by the contractor through the currency of the contract till the physical taking over of the work by department.
  - f) Contractor shall appoint Security Personnel to look after the Traffic Conditions at the site. The Security Personnel shall maintain proper precautions to ensure that no problems are created to the traffic flow due to ongoing work and no problems are created by the traffic to ongoing work.
  - g) The Contractor has to arrange for complete safety of the persons working for the project, users of the Road, i.e. Public and vehicles. The security Personnel shall ensure the safety by provision of Traffic Diversion where ever necessary by using diversion signs, traffic drums traffic cones, blinkers, safety tapes, and thermoplastic paint markings etc. securing the area of work from traffic flow. No extra payment shall be given for the same.
5. The contractor shall have to possess , install and make operational his fully computerized four bins Hot Plant as per MORT&H specifications within a maximum distance of 40 km and simultaneously bring at site a sensor paver /mechanical paver finisher as per specification fitted with screed vibratory road roller, a diesel road roller, mechanical broom, compressor , bitumen sprayer and all other equipments as per MORT&H specification.

6. All machineries and equipments related to the works shall be brought to the site within 15 days from the date of issue of work order. In case of failure in installing , possessing and making operational the Hot Mix Plant and other machineries /equipments within the aforesaid period. The EMD shall stand forfeited and action as per agreement shall be taken against the defaulting contractor and he will be debarred from tendering in MPAKVN (Bhopal) for a period of two years.
7. Each item covered in the agreement will have to be maintained by the agency for 3 years .what so ever be the reason, any damage happened to the above structures will be maintained by the contractor to the satisfaction of client. While handing over the site road surface should be pot hole free with roughness having 2500-3000 mm/Km. shoulder should be in required camber and free from vegetation. No water logging should be there during rainy season due to blockage of drain and culverts, if it covers in the agreement.

8. **TENDER CONDITION FOR EXEMPTION OF DUTIES AND TAXES**

If work is to be executed in SEZ, then, the contractor shall be provided with necessary documents to entitle him for exemption of taxes or duties prior to purchase of cement, steel as per MP Govt Act (applicable for work in SEZ). Tender condition for exemption of duties and taxes are given below:-

The Government of India has issued SEZ Act 2005 and SEZ Rules 2006 and the Government of M.P. has enacted MP SEZ Act as amended upto 2008. The MPAKVN (Bhopal) is a fully owned Govt. company. The Govt. of India and Govt. of MP by way of above enactments have provided special privileges for Developer as well as the units. In these provisions all the materials used to construct any facilities within notified SEZ shall be exempted from VAT, customs and excise duties, CST and other taxes, cess, levies and duties. Thus, MPAKVN (Bhopal) is entitled for availing the above mentioned exemptions. To avail these exemptions in AKVN works, following conditions have been added in tender.

- 1) Export etc. incentives available to exporter under SEZ Act other than above exemption, are the contractors responsibility in this regard they will have to arrange their own proceedings accordingly.
- 2) At the time of tendering, the Contractor will quote his rates for different items in schedule of services/work items excluding all the taxes and duties payable on different materials to be used for execution of the work construction, Operation & Maintenance, Consultancy Services, Security Services etc. of SEZ.
- 3) The Contractor shall to take the benefit of taxes for which contractor has to provide necessary documents to entitle him for exemption of such taxes and duties as per their requirement.
- 4) This shall be the contractor's duty to get the necessary papers and authorities from the concerned authorities to get the exemptions in taxes and duties. If the contractors fails to avail tax exemption no compensation shall be claimed by the contractor on this account.
- 5) Contractor will be required to submit the details of materials to get exemptions applicable in SEZ.

## **Technical Specification**

### **Specification – Electronically Modulated Flow Control Valve**

#### **Control parameters**

The valve will be controlled by an electronic-controller, which enables control of the requested flow rate or as per demand. The controller should enable receive as an input either pulse/volume contact-input or 4-20mA analogue signal. The start / stop operation of the controller can be made manually or by external dry-contacts (digital) signals. The flow set-value may be modified automatically on time basis, or by a pre-defined relation to pressure or another measured parameter

#### **Main Valve**

The main valve is electronically operated, direct-sealing diaphragm valve. A diaphragm and a spring will be the only moving parts, and the diaphragm itself is the component that closes or opens the liquid flow. Oblique-shaped pattern of valves, larger than 150mm, is not allowed due to dismantling difficulties of the internal trim. The standard basic valve has the capability to regulating at near zero flow, no low- flow devices such as a V-port or bypass valves are allowed.

The standard valve model **fits all control operations**, using different pilot control systems.

Valves at sizes 20mm to 250mm have a single control chamber and diaphragm, sizes 300mm and 400mm are assemblies of 2 control chambers and diaphragms, sizes 500 and 600mm are assemblies of 4 chambers and diaphragms, all actuated simultaneously by a common control circuit- as determined by the required control function.

The standard valve body is made of ductile iron, withstanding both high hydraulic and mechanical stresses. While the valve closes, the closure pace slows down, reducing the risk of water hammer.

The ratio between valve flow capacity (KV) and the valve position shall be linear so to allow stable regulation even under high pressure differentials and low-flow conditions.

Disassembly and reassembly of all the valve's components shall be made possible on site, without having to remove the valve from the line.

The valve shall contain a resilient, nylon reinforced rubber diaphragm.

Control-trim's fittings and devices will be produced of brass or SST and the control-tubes shall be flexible, reinforced polyethylene or higher grade and shall be hydrostatically tested with the main valve

**Material of Construction:**

Body	Ductile iron ASTM A536 (Valve should be WRAS approved)
Circuit fittings	Brass EN12164
Control tubes	Nylon
Surface Protection	Epoxy coating min. 150 microns, color RAL 5005 Blue Polyester coating min.100microns, color RAL 5005 Blue
Operation	Automatic, manual override enabled
Nut-Bolts and Studs	Stainless Steel AISI-304 ASTM-A 193 B7
Solenoid Valve (IP 65)	Brass/SST 316

**Maintenance**

- The bidder should propose a recommended five year set of spare parts per a batch of 5 valves of the same diameter and quote their price.
- The bidder should provide 7 years warranty period.
- The valve should require low maintenance. No set periodic packing or parts replacement should be required.
- The valve's pilot control loop should include a low maintenance, inline "self-cleaning" control-filter.
- The typical weight of any control chambers and trim assembled as a complete unit, regardless of valve diameter, shall not exceed the permitted lifting weight for a single person as defined in the regulations. Disassembly will not require usage of sophisticated, heavy lifting devices such as cranes of any type. Should such devices be required – these are to be provided and installed at the assembly site by the supplier.

**The valve manufacturer should:**

- Hold a range of the requested valve type at least in the range of 50mm to 600mm
- Prove a history of production of the requested valve type for over 20 years
- Be certified to OHSAS 18001, WRAS and ISO 14001
- Valve & Controller must be manufactured by same Company
- Valve approved make - OCV/CLA VAL/ DOROT

**Energy requirement of the controller and communication System:**

The control valve operation/regulation thru the controller should be independent of any solar energy or grid power supply. The controller battery must be powered by an independent power source of low friction turbine mounted on a main valve by-pass. The turbine should be designed in a way that it generates sufficient energy to charge the controller for regulation as well communication to central SCADA system. The responsibility of the power supply by turbine system, controller and communication will be of control valve manufacturer. **this should be applicable above 200 mm valve.**

**Electronic Controller and trim**

## Hardware Specifications:

- A specialized controller, designed for the control of hydraulic control valves
- Setup, override-control and monitoring is enabled from the street-level (when installed in a valve-chamber), using an application on any android device and short-distance Bluetooth communication
- Control over the valve via two continuous operation, 2/2 solenoid-valves and/or two latching type solenoid valves. This configuration enables both high regulation-accuracy as well as energy-efficient operation.
- Enables selection of the solenoid valves' types: normally-open and/or normally-closed
- Controller must be IP65 protection.
- The controller electronics, including battery, antennas and connection rail are packaged in an armored and corrosion-resistant casing
- The controller shall be supplied with a 12 VDC rechargeable battery, that enables the controllers operation even through power-outage that may last a few days.

The controller shall optionally be supplied with a charging unit supplied by local grid power, solar panel or water-driven dynamo.

- The controller shall have at least 4 analogue inputs (4-20mA).
- The controller shall have at least 6 digital inputs, including high-speed pulse type (for water-meter and flow-meter connection)
- Each of the inputs (both analogue and digital) can be used for remote actuation (enabled by programming): 'Start', 'Stop', 'Keep', 'Open' (full, uncontrolled opening) and 'Close' (full closure). The same functionality can be achieved via remote control communication (using R-Modbus protocol)
- The controller would have an extra two (2) configurable output relay contacts auxiliary device actuation (by-pass valve, pump etc.) and to be used as alarm contact in case of failure.
- All the wiring is done to a connections-terminal within the controller's casing via isolated and grounded cables.

## Software requirements:

- All the control functions, can be configured locally or sent to the user as a downloadable file.
- Any control function is user-configurable and/or pre-configurable by the supplier. These function include but are not limited to: 'Pressure-Reducing', 'Pressure-Sustaining', 'Flow control', 'Water-Level control', 'Pressure-Relief' etc.
- Combination of two or more of these control function is possible without any restriction, as long as this combination is not logically-contradicting and sufficient number of inputs is free.
- The controller will enable the control of any value, including non-hydraulic values (such as temperature, electric conductivity etc.)
- The user is able to allocate control inputs and outputs, per the used control-functions. Each input can be used for one or more control functions.
- Each analogue input's value, shall be converted and displayed with a user-defined display-units and per the measurement range of each sensor or control signal's source.
- The user can select the valve status to be fully open, closed or keep last position, on 'Stop' command and in case of hardware failure (low-battery, loss of sensor signal as well as customer defined failures).
- Actions such as fully open or close the valve by digital inputs, analogue input set-level, time, or remote communication are configurable by the user.
- Dynamic set-value modulation:
- Set-values are modifiable via remote communication or an analogue signal. In case of disconnected control-signal, the controller will continue to regulate per pre-set internal values.
- Set-values can be modulated to follow a change in another parameter in the system (example: change the reducing pressure according to flow changes). This, following to a pre-set profile. This pre-set profile can be set to be different for different days of the week, of the month or specific dates in the year.
- Set-values can be modulated according to the time of day and/or days of the week, of the month or specific dates in a year.
- Set values will be fixed in case any of the above fail or are not configured or are disabled.
- Failure shall be defined as low-battery power with no charge power, disconnection of a sensor or shortcut or disconnected solenoid-valve. Other configurable failures can be deviation of a measured value, contact opening

or closing etc. The operation of the valve in case of such failures will be user-defined as 'Keep last position', 'Open' (full, uncontrolled opening), 'Close' (full closure) or 'Continue regulating'.

- Control over the valve-controller shall be done via local (Android device), remote communication (R-modbus protocol or telemetry via a server service), digital contacts or analogue inputs.
- Configuration of the control-functions, the operation conditions and all other pre-operation definitions shall be done via any android device with strict User-management system.
- The user will not be required to have preliminary programming knowledge or have other special expertise. All the definitions can be done after a short training with no special skills or knowhow required.
- The controller design and compatibility must be approved by the valve manufacturer.
- Minimum of 10 controller should be installed in maximum 2 water supply projects in India to confirm the compatibility of the valve with controller.

## **SCADA characteristics & Architecture**

The central control system must be designed to monitor the pressure, level and flow valves on daily basis and control the electronically control valves as per desired hydraulic parameters. The central control and monitoring system must be tested and approved by the valve manufacturer regarding its compatibility/capability to regulate the control valves as per desired parameter. The central control system must be able to produce required reports for ESR Management, Flow and Pressure management of the water network.

3 levels of users must be available

1. Manager – Can define the different users in the network and configure valves. – requires training.
2. User – can modify the valve settings – moderate training
3. Viewer – can only view

### **The SCADA software must be based in WEB architecture.**

- a. Web architecture: The system must be a cloud based system allowing access from any web browser. No need to install any software for the users.
- b. Security: The web site is based in secure protocols and secure servers. In a native protocol way, optimized to avoid extra data consumption and power consumption.
- c. User management: The SCADA must support different user levels (administrator, manager, user and viewer). Each user can operate with different permission offer by his user creator.
- d. Database: SCADA data base must be an open database in BIG DATA architecture to share the information with third party SCADA such as MySQL systems.
- e. Database Storage. SCADA must store 1 year of data for all elements of the system.
- f. SCADA alarms. The SCADA must be able have configurable alarms for various scenarios allowing for external notification via email and messaging.
- g. Reporting: SCADA must have built-in reports and allow administrator to create tailor made reports.
- h. SCADA analysis variables tools must have the following:
  - Virtual variables: Allows to create new variables as a combination of logical or mathematic operation.
  - Comparison variable tools
  - Big data analysis
- i. Control of external devices.
  - Control of valve controller allowing changes in all parameters of operation.
  - Ability to control other external controllers via OPC.

## SECTION 4

### Bill of Quantities (BOQ)

**Name of Work :** Detailed Estimate for Supply, installation & commissioning of hydraulic control valves with controller and Scada system for sector- A, B, C & D at I/A Mandideep, Distt-Raisen (M.P)

S.No	Item Description	Unit	Qty.	Rate (Rs)	Amount (Rs)
1	Supply of make 100mm, Series 100 Electronically control valves operated, Direct-Sealing Diaphragm including controller.	Each	05	390604.00	1953020.00
2	Supply of make 150 mm, Series 100 Electronically control valves operated, Direct-Sealing Diaphragm including controller.	Each	09	478263.00	4304367.00
3	Supply of make 200mm, Series 100 Electronically control valves operated, Direct-Sealing Diaphragm including controller.	Each	04	632060.00	2528240.00
4	Supply of make 300mm, Series 100 Electronically Flow Control valves operated, Direct-Sealing Diaphragm including controller	Each	02	1044472.00	2088944.00
5	Supply of Flow meter with 4-20 mA signal to the electronic controller for flow management	Each			
	1- 300 mm dia meter	02	131450		262900.00
	2- 200 mm dia meter	04	108020		432080.00
	3- 150 mm dia meter	09	103895		935055.00
	4- 100 mm dia meter	05	95150		475750.00
6	Supply of Level Transmitter with 4-20 mA signal to the electronic controller for flow management	Each	05	89320.00	446600.00

<b>7</b>	<b>SCADA SYSTEM (AT AMC ZONE OFFICE)</b> SCADA System at Zonal Control Room for Overall Monitoring of Flow & other process data at AMC Zone Office or other suitable Location as decided by competent authority comprising of: a. 1 Nos. Desktop PC based HMI with min. 19” TFT LCD/LED Display & 1 no. All in One Desktop PC along with min. 40” TFT LCD / LED Display with required Licensed OS (Operating Consoles), Web based SCADA Software (Licensed Version) for Control and Monitoring along with required switches, communication ports, receiving modem, facility for GSM and GPRS / broad band connectivity, and hardware for data acquisition and storage for the data b. 4TB Data Storage Device (NAS System) – 1 No. c. A4 Laser Printer – 1 no. d. 2KVA (Min.) UPS with 1 Hour Back up – 1 No. e. 1 No. Laptop Along with programming software	Each	01	2750000.00	2750000.00
<b>8</b>	Survey, drawing, designing, flow rate including all technical data	01 Job		Lumsum	4,25,000.00
<b>9</b>	Cement Chamber including Pole with panel	Each	20 Nos.	25000	5,00,000.00
<b>10</b>	Providing Training to AKVN team for 6 months & O & M with 1 Engineer & 2 helpers	01 Job		Lumsum	2,50,000.00
<b>Total</b>					<b>1,73,51,956.00</b>

**Note: Rates are excluding GST**



**SECTION 5**  
**AGREEMENT FORM**  
**AGREEMENT**

This agreement, made on the ..... day of ..... between ..... (name and address of Employer) (hereinafter called “the Employer”) and ..... (name and address of contractor) hereinafter called “the Contractor” of the other part.

Whereas the Employer is desirous that the Contractor execute ..... (name and identification number of Contract) (hereinafter called “the Works”) and the Employer has accepted the Bid by the Contractor for the execution and completion of such Works and the remedying of any defects therein, at a cost of Rs.....

NOW THIS AGREEMENT WITNESSED as follows:

1. In this Agreement, words and expression shall have the same meanings as are respectively assigned to them in the conditions of contract hereinafter referred to and they shall be deemed to form and be read and construed as part of this Agreement.
2. In consideration of the payments to be made by the Employer to the Contractor as hereinafter mentioned, the Contractor hereby covenants with the Employer to execute and complete the Works as remedy any defects therein in conformity in all aspects with the provisions of the contract.
3. The Employer hereby covenants to pay the Contractor in consideration of the execution and completion of works and the remedying the defects wherein Contract Price or such other sum as may become payable under the provisions of the Contract at the times and in the manner prescribed by the Contract.
4. The following documents shall be deemed to form and be ready and construed as part of this Agreement viz.
  - i. Letter of Acceptance
  - ii. Contractor’s Bid
  - iii. Condition of Contract: General and Special
  - iv. Contract Data
  - v. Bid Data
  - vi. Drawings
  - vii. Bill of Quantities and
  - viii. Any other documents listed in the Contract Data as forming part of the Contract.

In witnessed whereof the parties were to have caused this Agreement to be executed the day and year first before written.

The Common Seal of ..... was hereunto affixed in the presence of:

Signed, Sealed and Delivered by the said

.....  
..... in the presence of:

**Binding signature of Employer .....**

**Binding Signature of Contractor .....**