



e-tendering

NIT No. **052/EDM/PUNE/2022-23/**

Estimated cost: ₹. 1,79,190/-

**PRASAR BHARATI
(INDIA'S PUBLIC SERVICE BROADCASTER)
EXECUTIVE ENGINEER (ELECTRICAL)
CIVIL CONSTRUCTION WING:
1st Floor New Broad Casting House,
All India Radio, H T Parikh Marg,
Opposite MLAs Hostel, Mumbai- 400020**

E-mail: ccwelect.airmum@nic.in
ccwelect@rediffmail.com

CONTACT 022-20821161

Name of Work: **Supply installation, testing and commissioning of Automatic fire alarm system for AIR Transmitter at Hudco Aurangabad**



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**Name of work: Supply installation, testing and commissioning of Automatic fire alarm system
for AIR Transmitter at Hudco Aurangabad**

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**INFORMATION AND INSTRUCTIONS FOR BIDDERS FOR e-TENDERING
FORMING PART OF BID DOCUMENT AND TO BE POSTED ON WEBSITE**

The Executive Engineer (E), CCW, AIR, Mumbai on behalf of President of India invites e-tender in two Bid system [Cover-1: Qualification of agencies as per eligibility criteria & Cover-2: Price bid] from approved and eligible Licensed Agencies for the purpose of the Maharashtra Fire Prevention and Life Safety Measures Act, 2006 of EFA & Fire Fighting System and contractors of CPWD by associating the Licensed Agencies for the purpose of the Maharashtra Fire Prevention and Life Safety Measures Act, 2006 of EFA & Fire Fighting System for the work:

NIT Number	052/EDM/PUNE/2022-23/
Name of work:	Supply installation, testing and commissioning of Automatic fire alarm system for AIR Transmitter at Hudco Aurangabad
Estimated Cost put to Tender	₹.1,79,190=00
Earnest Money Deposit	₹. 3,584=00
Period of completion	1 (One) Month
Last date and time of submission of Tender	Up to 11:00 Hrs. on 06/04/2023
Time and date of opening of Cover-1	11:30 Hrs. of 06/04/2023

1. The intending bidder must read the terms and conditions of CPWD-6 carefully. He should only submit his bid if he considers himself eligible and he is in possession of all documents required.
2. Information and instructions for bidders posted on website shall form part of bid document.
3. The bid document consisting of plans, specifications, schedule of quantities of various types of items to be executed and the set of terms and conditions of the contract to be complied with and other necessary documents can be seen and downloaded from the website <https://air.ewizard.in/> free of cost.
4. But the bid can only be submitted after depositing Processing Fee in favour of M/s. ITI Limited and deposition of original EMD online through E-Wizard portal within the period of bid submission and other documents as specified.
5. Detailed procedure can be seen in the CPWD-6 for e-Tendering
6. Contractors, who are not registered on the website mentioned above, are required to get registered beforehand. If needed they can be imparted training on online bidding process as per details available on the said website
7. The intending bidder must have valid **Class-III** Digital Signature to submit the bid.
8. On the date of opening of the Bid, the bidder can login and see the bid opening process. After opening of Bids he will receive the competitor bid sheets.
9. Bidder can upload documents in the JPG or PDF format.
10. SC/ST bidders enlisted under Class-V category are exempted from processing fee of e-Tender payable to M/s. ITI Ltd.
11. The Cover-1 Qualification of agencies as per eligibility criteria shall be opened first on due date and time as mentioned above & Cover-2: Price bid shall be opened of the eligible agencies after evaluation of eligibility documents submitted by the agencies.
13. ~~Pre Bid conference shall be held in the chamber of O/o EE (E), CCW, AIR, Mumbai on _____ at Mumbai _____ am/pm to clear the doubt of intending bidders if any. The intending bidders shall send their queries if any on or before _____ Hrs. of _____ by email to cwelect.airmum@nic.in or cwelect@rediffmail.com~~

List of documents to be scanned and uploaded within the period of bid submission:

1	EMD payment will be online through E-Wizard portal
2	Certificate of Registration for GST or UNDERTAKING If work is awarded to me, I/we shall obtain GST registration certificate as applicable within one month from the date of receipt of award letter or before release of any payment by CCW AIR, whichever is earlier, failing which I/we shall be responsible for any delay in payments which will be due towards me/us on account of the work executed and/or for any action taken by CCW AIR or GST department in this regard.
3	<p>Certificates of Work Experience, of similar nature in Para 1.2 of Form CPWD-6. (Not applicable for CPWD enlisted contractors of appropriate class.) The agency should have experience of having successfully completed in Central Government, State Government, PSUs and other Government Local bodies during last seven years ending last day of the month previous to the one in which applications are invited. Three similar completed works each of value not less than 40% of the estimated cost put to tender OR Two similar completed works each of value not less than 60% of the estimated cost put to tender OR One similar completed work of value not less than 80% of the estimated cost put to tender. All amounts rounded off to a convenient figure. Attested copies of completion certificate issued by the officer of the client department of the rank of Executive Engineer or equivalent will have to be furnished along with the application, the completion certificate must clearly indicate:</p> <ol style="list-style-type: none"> 1. Name of work: 2. Value of work: 3. The date of completion of work: 4. Performance of the work: <p>The agency should submit schedule of work against the completion certificate to assess the nature of similar work as per NIT</p>
4	Affidavit as per clause 1.2.2 of CPWD-6 on non-judicial stamp paper of Rs. 100/- duly notarized
5	Valid Enlistment Order of the Contractor or license for the purposes of the Maharashtra Fire Prevention and Life Safety Measures Act, 2006 of EFA & Fire Fighting System or CPWD enlistment order
6	Electrical Contractors license
7	<p>Certificate or Registration of EPF and ESI should be uploaded or in case the contractor feels that the EPF and ESI Acts are not applicable in his case and such registration certificates are not required for the work he shall upload the necessary undertaking to this effect</p> <p>Note: Tenderer shall be allowed to enter into the agreement only on production of Indemnity bond in favor of CCW-AIR against any EPF and ESI liability with a copy of PAN card. (In the event of failure on the part of the contractor, to comply with condition stated above, full EMD will be forfeited in favor of CCW-AIR and no claim what so ever shall be entertained on this account)</p>

**EXECUTIVE ENGINEER (ELECTRICAL)
CCW AIR PB (IPSB) MUMBAI-20**

No.EE (E)/MUM/CCW/NIT-052/2022-23/

Date: 27/03/2023

1. The Superintending Engineer (Elect.), CCW, AIR Nagpur
2. The Executive Engineer (Civil), CCW, AIR Mumbai/Pune/Vadodara.
3. The Assistant Engineer (Civil.) I/II, CCW, AIR MUMBAI/Pune/Vadodara/Ahmedabad/Rajkot.
4. The Assistant Engineer (E) CCW, AIR, MUMBAI/Pune.
5. Notice Board.
6. By mail to webupdates.pbns@gmail.com for uploading on Prasar Bharati Web site.

EXECUTIVE ENGINEER (ELECTRICAL)

PRASAR BHARATI
(India's Public Service Broadcaster)
CIVIL CONSTRUCTION WING, ALL INDIA RADIO

NOTICE INVITING e-TENDER

1. The Executive Engineer (E), CCW, AIR, Mumbai on behalf of President of India invites e-tender in two Bid system [Cover-1: Qualification of agencies as per eligibility criteria & Cover-2: Price bid] from approved and eligible Licensed Agencies for the purpose of the Maharashtra Fire Prevention and Life Safety Measures Act, 2006 of EFA & Fire Fighting System and contractors of CPWD by associating the Licensed Agencies for the purpose of the Maharashtra Fire Prevention and Life Safety Measures Act, 2006 of EFA & Fire Fighting System for the work: Supply installation, testing and commissioning of Automatic fire alarm system for AIR Transmitter at Hudco Aurangabad

The enlistment of the contractors should be valid on the last date of sale of tenders.

- 1.1 The work is estimated to cost **₹. 1,79,190/-**. This estimate, however, is given merely as a rough guide.
- 1.1.1. The authority competent to approve NIT for the combined cost and belonging to the major discipline will consolidate NITs for calling the bids. He will also nominate Division which will deal with all matters relating to the invitation of bids. For composite bid, besides indicating the combined estimated cost put to bid, should clearly indicate the estimated cost of each component separately. The eligibility of bidders will correspond to the combined estimated cost of different components put to bid
- 1.2. Intending bidder is eligible to submit the bid provided he has definite proof from the appropriate authority i.e. not below the rank of Executive Engineer, which shall be to the satisfaction of the competent authority, of having satisfactorily completed similar works, **(Similar work means SITC or Maintenance of Early Fire alarm & Fire Fighting System)** in the last seven years ending in Central Government, State Government, PSUs and other Government Local bodies. The works completed up to previous day of last date of submission of tender shall also be considered.

Criteria of eligibility for submission of bid documents

- 1.2.1. Conditions for Non-CPWD registered contractors only, if bids are also open to non-CPWD Contractors

For works estimated cost up to tendering limit of class -I Buildings & Roads (erstwhile Composite/ Building/ infrastructure) category Contractor (However, for Horticulture category, it may be modified as per bidding limit of CPWD class I contractors of Horticulture category).

- (i) **Three** similar completed works each of value not less than 40% of the estimated cost put to tender
OR Two similar completed works each of value not less than 60% of the estimated cost put to tender
OR One similar completed work of value not less than 80% of the estimated cost put to tender

- ~~(ii) For EPC tender under Mode -I/II only (Applicable for CPWD enlisted contractors of appropriate class also).—~~

~~One completed work costing not less than Rs. _____ executed with the structural system technology as proposed by bidder in the letter of transmittal during the last 7 years ending last day of the month previous to the one in which tenders are invited. This work can be part of eligible work at 1.2.1 (i) above or as a separate work~~

Note:-

For works costing above tendering limit of class -II Buildings & Roads (erstwhile Composite/ Building/ infrastructure) category contractors but up to tendering limit of Class-I Buildings & Roads (erstwhile Composite/ Building/ infrastructure) category Contractor (However, for Horticulture category, it may be modified as per bidding limit of CPWD class II and CPWD Class I contractors respectively of Horticulture Category) when bids are open to non-CPWD contractors also, then class II contractors of CPWD registered shall also be eligible if they satisfy the eligibility criteria specified in 1.2.1 above

1.2.2. ~~Criteria of eligibility for CPWD as well as non-CPWD contractors,~~

~~For works estimated to cost above the tendering limit of class -I (Super) Buildings & Roads (erstwhile Composite/ Building/ infrastructure) category Contractor (However for Horticulture category, it may be modified as per bidding limit of CPWD class I contractors of Horticulture Category):~~

- ~~(i) Three similar works each of value not less than Rs. Or two similar works each of value not less than Rs. or one similar work of value not less than Rs. (all figures rounded to nearest~~

convenient figure) during the last 7 years ending last day of the month previous to the one in which tenders are invited.

(ii) For EPC tender under Mode-I/II only (Applicable for CPWD enlisted contractors of appropriate class also).

One completed work costing not less than Rs. _____ executed with the structural system technology as proposed by bidder in the letter of transmittal during the last 7 years ending last day of the month previous to the one in which tenders are invited. This work can be part of eligible work at 1.2.1 (i) above or as a separate work

The value of executed works shall be brought to current costing level by enhancing the actual value of work at simple rate of 7% per annum, calculated from the date of completion to the last date of submission of bid. This is applicable for 1.2.1 as well as 1.2.2 (Para 1.2.1(i) and Para 1.2.2(i) are not applicable for CPWD enlisted contractors of appropriate class. Para 1.2.1(ii) and Para 1.2.2(ii) are also applicable for CPWD enlisted contractors of appropriate class).

To become eligible for issue of bid, the bidders shall have to furnish an affidavit in this regard on non-judicial stamp paper of Rs. 100/- duly notarized as under (~~Applicable if work experience is stipulated in para 1.2 above~~):

"I/We undertake and confirm that eligible similar work/s has/have not been got executed through another contractor on back to back basis. Further that, if such a violation comes to the notice of Department, then I/we shall be debarred for bidding in CCW-AIR in future forever. Also, if such a violation comes to the notice of Department before date of start of work, the Engineer-in-Charge shall be free to forfeit the entire amount of Earnest Money Deposit/Performance Guarantee." (Scanned copy is to be uploaded at the time of submission of bid).

- 1.2.3. When bids are invited from non CPWD contractors and CPWD class II contractors as per provisions of clause 1.2.1 above, it will be mandatory for non CPWD contractors and CPWD class-II contractors to upload the work experience certificate(s) and the affidavit as per the provisions of clause 1.2.2. But for such bids, Class-I contractors of CPWD are eligible to submit the bids without submission of work experience certificate and affidavit. Therefore, CPWD class-I contractors shall upload two separate letters for experience certificate and affidavit that these documents are not required to be submitted by them. Uploading of these two letters is mandatory otherwise system will not clear mandatory fields
2. Agreement shall be drawn with the successful tenderer on prescribed **Form No. 7**, which is available as a Govt. of India Publication. Tenderer shall quote his rates as per various terms and conditions of the said form which will form part of the agreement.
3. The time allowed for carrying out the work will be **1 (One) Month** from the date of start as defined in schedule 'F' or from the first date of handing over of the site, whichever is later, in accordance with the phasing, if any, indicated in the tender documents.
4. The site for the work is available.
5. Tender documents consisting of plans, specifications, the schedule of quantities of the various classes of work to be done and the set of terms & conditions of contract to be complied with by the contractor whose tender may be accepted and other necessary documents can be seen from website <https://air.ewizard.in/> free of cost.
6. After submission of the Tender the contractor can re-submit revised tender any number of times but before last time and date of submission of tender as notified.
7. While submitting the revised tender, contractor can revise the rate of one or more item/s any number of times (he need not re-enter rate of all items) but before last time and date of submission of tender as notified.
8. When tenders are invited in three stage system and if it is desired to submit revised financial bid then it shall be mandatory to submit revised financial bid. If not submitted then the tender submitted earlier shall become invalid.
9. Earnest Money of ₹ 3,584=00 the form of in the form of online.

The earnest money given by all the tenderers except the lowest tenderer shall be refunded immediately after the expiry of stipulated bid validity period or immediately after acceptance of the successful bidder, whichever is earlier. However, in case of two/ three bid system, earnest money deposit of bidders unsuccessful during technical bid evaluation etc. should be returned within 30 days of declaration of result of technical bid evaluation.

Interested contractor who wish to participate in the bid has also to make following payments within the period of bid submission:

E-Tender Processing Fee admissible shall be payable to M/s. ITI Limited through their e-gateway by credit/debit card, internet banking or RTGS/NEFT facility.

Copy of Enlistment Order and certificates of work experience and other documents as specified in the tender/press notice shall be scanned and uploaded to the e-Tendering website within the period of bid submission. However, certified copy of all the scanned and uploaded documents as specified in the tender notice shall have to be submitted by the lowest bidder only within a week physically in the office of tender opening authority.

Online bid documents submitted by intending bidders shall be opened only of those bidders, who have deposited e-Tender Processing Fee with M/s. ITI Limited and EMD within the period of bid submission and other documents scanned and uploaded are found in order.

The bid submitted shall be opened at 11:30 Hrs. on **06/04/2023**

10. The bid submitted shall become invalid and e-Tender Processing Fee shall not be refunded, if:
 - (i) The bidder is found ineligible;
 - (ii) The bidder does not upload all the documents (including GST) as stipulated in the bid document including online EMD
 - (iii) If any discrepancy is noticed between the documents as uploaded at the time of submission of bid and hard copies as submitted physically by the lowest tenderer in the office of tendering opening authority;
11. The contractor whose tender is accepted will be required to furnish Performance Guarantee of 3% (Three percent) of the tendered amount within the period specified in Schedule F. This guarantee shall be in the form of Insurance Surety Bonds, Account Payee Demand Draft, Fixed Deposit Receipt or Bank Guarantee from any of the Commercial Banks in accordance with the prescribed form.
In case the contractor fails to deposit the said performance guarantee within the period as indicated in Schedule 'F', including the extended period if any, the Earnest Money deposited by the contractor shall be forfeited automatically without any notice to the contractor.
12. Tenderers are advised to inspect and examine the site and its surroundings and satisfy themselves before submitting their tenders as to the nature of the ground and sub-soil (so far as is practicable), the form and nature of the site, the means of access to the site, the accommodation they may require and in general shall themselves obtain all necessary information as to risks, contingencies and other circumstances which may influence or affect their tender. A tenderer shall be deemed to have full knowledge of the site whether he inspects it or not and no extra charges consequent on any misunderstanding or otherwise shall be allowed. The tenderer shall be responsible for arranging and maintaining at his own cost all materials, tools & plants, water, electricity access, facilities for workers and all other services required for executing the work unless otherwise specifically provided for in the contract documents. Submission of a tender by a tenderer implies that he has read this notice and all other contract documents and has made himself aware of the scope and specifications of the work to be done and of conditions and rates at which stores, tools and plant, etc. will be issued to him by the Government and local conditions and other factors having a bearing on the execution of the work.
13. The competent authority on behalf of President of India does not bind himself to accept the lowest or any other tender, and reserves to himself the authority to reject any or all of the tenders received without the assignment of a reason. All tenders, in which any of the prescribed conditions is not fulfilled or any condition including that of conditional rebate is put forth by the tenderer, shall be summarily rejected.

14. Canvassing whether directly or indirectly, in connection with tenders is strictly prohibited and the tenders submitted by the contractors who resort to canvassing will be liable to rejection.
15. The competent authority on behalf of President of India reserves to himself the right of accepting the whole or any part of the tender and the tenderer shall be bound to perform the same at the rate quoted.
16. The contractor shall not be permitted to tender for works in the CCW AIR PB(BCI) Circle (responsible for award and execution of contracts) in which his near relative is posted as Divisional Accountant or as an officer in any capacity between the grades of Superintending Engineer and Junior Engineer (both inclusive). He shall also intimate the names of persons who are working with him in any capacity or are subsequently employed by him and who are near relatives to any gazetted officer in the Civil Construction Wing of All India Radio or in the Ministry of Information & Broadcasting. Any breach of this condition by the contractor would render him liable to be removed from the approved list of contractors of this Department.
17. No Engineer of Gazette rank or other Gazette officer employed in Engineering or Administrative duties in an Engineering Department of the Government of India is allowed to work as a contractor for a period of two years after his retirement from Government service, without the previous permission of the Government of India in writing. This contract is liable to be cancelled if either the contractor or any of his employees is found any time to be such a person who had not obtained the permission of the Government of India as aforesaid before submission of the tender or engagement in the contractor's service.
18. The tender for the works shall remain open for acceptance for a period of **30 (Thirty) days** from the date of opening of **Price Bid**. If any tenderer withdraws his tender before the said period or issue of letter of acceptance, whichever is earlier, or makes any modifications in the terms and conditions of the tender which are not acceptable to the Department, then the Government shall, without prejudice to any other right or remedy, be at liberty to forfeit **50%** of the said earnest money as aforesaid.
19. This Notice Inviting Tender shall form a part of the contract document. The successful tenderer/contractor, on acceptance of his tender by the Accepting Authority, shall, within 7 days from the stipulated date of start of the work sign the contract consisting of:-
 - a) The Notice Inviting Bid, all the documents including additional conditions, specifications and drawings, if any, forming part of the bid as uploaded at the time of invitation of bid and the rates quoted online at the time of submission of bid and acceptance thereof together with any correspondence leading thereto.
 - b) Standard C.P.W.D. **Form No. 7**.

EXECUTIVE ENGINEER (E)
CCW AIR PB (IPSB) MUMBAI-20

P R A S A R B H A R A T I
(INDIAS PUBLIC SERVICE BROADCASTER)
CIVIL CONSTRUCTION WING, ALL INDIA RADIO

State : **MAHARASHTRA**
Branch : E & M.
Zone : WEST

Circle : NAGPUR
Division : MUMBAI
Sub-Division : **FTII Pune**

Percentage rate Tender & Contract for Works

**Name of work: ARMO Electrical works at FTII PUNE for 2022-23 Phase I Main campus.
(Sub Head: Non Comprehensive Maintenance of Early Fire alarm & Fire Fighting System & operation of water supply pump sets).**

- (i) To be submitted online through the website <https://air.ewizard.in/> by 11:00 hours on **06/04/2023** to the Executive Engineer (E), Civil Construction Wing, All India Radio, Prasar Bharati (IPSB), Mumbai-20.
- (ii) To be opened online at the website <https://air.ewizard.in/> in presence of tenderers who may be present online at 11:30 hours on **06/04/2023** in the office of the Executive Engineer (E), Civil Construction Wing, All India Radio, Prasar Bharati (IPSB), Mumbai-20.

Tender submitted online at the website <https://air.ewizard.in/> by the contractor

T E N D E R.

I/We have read and examined the notice inviting tender, schedule A, B, C, D, E & F, specifications applicable, drawings & designs, General Rules and Directions, Conditions of Contract, clauses of contract, special conditions, Schedule of Rate & other documents and Rules referred to in the conditions of contract and all other contents in the tender document for the work.

I/We hereby tender for the execution of the work specified for the President of India within the time specified in Schedule 'F', viz. Schedule of quantities and in accordance in all respects with the specifications, designs, drawings and instructions in writing referred to in Rule-1 of General Rules and Directions and in Clause 11 of the Conditions of contract and with such materials as are provided for, by, and in respects in accordance with, such conditions so far as applicable.

We agree to keep the tender open for **30 (Thirty) days** from the Opening of **Price Bid** thereof and not to make any modifications in its terms and conditions.

A sum of ₹ 3,584=00 in the form of online as EMD is submitted. If I/we, fail to furnish the prescribed performance guarantee within prescribed period, I/we agree that the said President of India or his successors in office shall without prejudice to any other right or remedy, be at liberty to forfeit the said earnest money absolutely. Further, if I/we fail to commence the work specified I/we agree that the said President of India or his successors in office shall without prejudice to any other right or remedy available in law, be at liberty to forfeit the said performance guarantee absolutely. The said Performance Guarantee shall be a guarantee to execute all the works referred to in the tender documents upon the terms and conditions contained or referred to those in excess of that limit at the rates to be determined in accordance with the provision contained in Clause 12.2 and 12.3 of the tender form. Further, I/we agree that in case of forfeiture of Earnest Money or Performance Guarantee as aforesaid, I/we shall be debarred for participation in the re-tendering process of the work.

I/We hereby declare that I/we shall treat the tender documents drawings and other records connected with the work as secret/confidential documents and shall not communicate information/derived there from to any

person other than a person to whom I/we am/are authorized to communicate the same or use the information in any manner prejudicial to the safety of the State.

Dated: _____

Signature of Contractor

Postal Address: _____

Witness:

Address:

Occupation:

ACCEPTANCE

The above tender (as modified by you as provided in the letters mentioned hereunder) is accepted by me for and on behalf of the President of India for a sum of ₹ _____

(Rupees _____

_____)

The letters referred to below shall form part of this contract Agreement:

i)

ii)

iii)

For and on behalf of the President of India,

Dated: _____

Signature: _____

Designation: **Executive Engineer (E)**
Civil Construction Wing
All India Radio, PB (IPSB)
MUMBAI-400 020.

SCHEDULES

Name of work: Supply installation, testing and commissioning of Automatic fire alarm system for AIR Transmitter at Hudco Aurangabad

SCHEDULE 'A'

Schedule of quantities - As per "schedule of quantity" from Page No. 32

SCHEDULE 'D'

Extra Schedule for specific requirements/documents for the work, if any.	Additional Commercial Conditions /documents & Technical Specifications attached
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SCHEDULE 'E'

Reference to General Conditions of Contract:-	GCC 2020 for construction works with amendments up to last date of submission of Bid.
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Name of Work	Supply installation, testing and commissioning of Automatic fire alarm system for AIR Transmitter at Hudco Aurangabad	
i)	Estimated cost work	Rs 1,79,190=00
ii)	Earnest Money	Rs 3,584=00
iii)	Performance Guarantee	3% of Tendered Amount
iv)	Security Deposit	2.5% of tendered value Plus 50% of stipulated P.G

SCHEDULE 'F'

General Rules & Directions:

Officer inviting Tender	:	Executive Engineer (E),CCW, AIR, PB (IPSB), Mumbai-20
Maximum percentage for quantity of items of work to be executed beyond which rates are to be determined in accordance with Clauses 12.2 & 12.3	:	As per Clause 12
Definitions :		
2(v) Engineer-in-Charge	:	Executive Engineer (E),CCW, AIR, PB (IPSB), Mumbai-20
2 (viii) Accepting Authority	:	Executive Engineer (E), CCW AIR Mumbai
2 (x) Percentage on cost of materials and labor to cover all overheads and profits	:	15%
2 (xi) Standard schedule of Rates	:	CPWD DSR 2022 with amendments up to last date of submission of Bid
2 (xii) Department	:	Civil Construction Wing, All India Radio
9 (ii) Standard CPWD contract form	:	CPWD form 7 (Percentage rate) with amendments up to last date of submission of Bid

Clause 1

Time allowed for submission of Performance Guarantee from the date of issue of letter of acceptance, Program Chart (Time and Progress) and applicable labor licenses, registration with EPFO, ESIC, and BOCW welfare Board or proof of applying thereof from the date of issue of letter of acceptance.	:	07 days
Maximum allowable extension with late fee 0.1% per day of Performance Guarantee amount beyond the period provided in (i) above.	:	05 days

Clause 2

Authority for fixing compensation under clause – 2	:	Superintending Engineer (E) Civil Construction Wing, All India Radio, Nagpur
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Clause 2A

Whether Clause 2A shall be applicable	:	YES / NO
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Clause 5

Number of days from the date of issue of letter of acceptance for reckoning date of start	:	07 (Seven) Days
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MILE STONE (S) AS PER TABLE GIVEN BELOW**Table of Milestone (s)**

S.N o.	Description of Milestone (Physical)	Time allowed in days (from date of start)	Amount to be with-held in case of non-achievement of mile stone
1			
2			
3			
4			

Time allowed for execution of work	:	1 (One) Month
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Authority to Decide:

1. Extension of time	:	Executive Engineer (E) Civil Construction Wing, All India Radio, Mumbai
2. Rescheduling of mile stones	:	Executive Engineer (E) Civil Construction Wing, All India Radio, Mumbai
3. Shifting of date of start in case of delay in handing over of site	:	Executive Engineer (E) Civil Construction Wing, All India Radio, Mumbai

Clause 7

Gross work to be done together with net payment / adjustment of advances for material collected, if any, since the last such payment for being eligible to interim payment.	:	Tendered amount or ₹5,00,000/- whichever is lower
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Clause 7 A

Whether Clause 7A shall be applicable. No running account bill shall be paid for the work till the application labour licenses, registration with EPFO, ESIC and	:	Yes/No
---	---	--------

BOCW welfare board which ever applicable are submitted by the contractor to the Engineer-in-Charge.		
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Clause 8 A

Authority to decide compensation on account if contractor fails to submit completion plans	:	Engineer-in-Charge
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Clause 10 A

List of testing equipment to be provided by the contractor at site lab.	:	As per instruction of Engineer-in-charge & requirement of work
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Clause 10-B (ii)

Whether clause 10-B(ii) shall be applicable	:	No
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Clause 10-C.

Component of labour expressed as percent of value of work	:	20%
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Clause 10 CA

Applicable/Not Applicable

S. No	Materials covered under this clause	Nearest material (other than cement, reinforcement bars and structural steel) for which All India Wholesale price index to be followed	Base price of all the materials covered under clause 10CA
1			
2			
3			

Clause 10CC

Clause 10CC to be applicable in contracts with stipulated period of completion exceeding the period shown in next column.	:	More Than 12 Months
Schedule of component of other Materials, Labour, POL etc. for price escalation.	:	Not Applicable

Component of civil (Except materials covered under clause 10 CA)/ Electrical construction materials expressed as percent of total value of work.	Xm	Not Applicable
Component of labour expressed as percent of total value of work.	Y	
Component of POL expressed as percent of total value of work	Z	

Clause 11

Specifications to be followed for execution of work	:	CPWD General Specifications Part VI Fire Detection and Alarm System – 2018 with up to date amendments and additional commercial & technical conditions attached.
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Clause 12

Authority to decide deviation up to 1.5 times of tendered amount : Engineer-in Charge

Type of Work	:	ORIGINAL/ MAINTENANCE
12.2. & 12.3		
(i) Deviation limit beyond which clauses 12.2 & 12.3 shall apply for foundation work (except earth work)	:	100%/ No Limit
(ii) Deviation Limit for items in earth work sub head of DSR or related items	:	Not applicable

Clause 16

Competent authority for deciding reduced rates	:	Superintending Engineer (E) Civil Construction Wing, All India Radio, PB(IPSB), Nagpur
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Clause 18

List of mandatory machinery, tools & plants to be deployed by the contractor at site.	:	As per requirement at site
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Clause 19C

Authority to decide penalty for each default Clause	:	Engineer-in Charge
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Clause 19D

Authority to decide penalty for each default Clause	:	Engineer-in Charge
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Clause 19G

Authority to decide penalty for each default Clause	:	Engineer-in Charge
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Clause 19K

Authority to decide penalty for each default Clause	:	Engineer-in Charge
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Clause 25

Constitution of Dispute Redressal Committee (DRC)

For all claims in dispute

Chairman-		
Member-1		
Member-2		

Clause 32**Requirement of Technical Representative(s) and recovery Rate**

Cost of work (Rs. in crores)	Requirement of Technical Staff		Minimum experience (Years)	Designation Technical staff	Rate at which recovery shall be made from the contractors in the event of not fulfilling
	Qualification	Number (of Major + Minor component)			
More than 15 lakh to 1.5 crore	Graduate Engineer or Diploma Engineer (E&M)	1 of major component	2 or 5 respectively	Project Manager Cum planning/ quality/ site/ billing Engineer	Rs. 15,000/- per Month per person

Assistant Engineers retired from Government services that are holding Diploma will be treated at par with Graduate Engineers.

Diploma holder with minimum 10 year relevant experience with a reputed construction company can be treated at par with Graduate Engineers for the purpose of such deployment subject to the condition that such diploma holders should not exceed 50% of requirement of degree engineers.

Clause 38

- i. (a) Schedule/statement for determining theoretical quantity of cement & bitumen on the basis of N.A. printed by CPWD
- ii. Variation permissible on theoretical quantities:

a) Cement for works with estimated cost put to tender not more than Rs. 5 lakhs	:	Not Applicable
for works with estimated cost put to tender more than Rs 5 lakh	:	Not Applicable
b) Bitumen for all works.	:	Not Applicable
c) Steel Reinforcement and structural steel sections for each diameter, section and category.	:	Not Applicable
d) All other materials	:	Nil

INTEGRITY PACT

To,

.....,

.....,

.....

Sub: NIT No **052/EDM/PUNE/2022-23/** for the work **Supply installation, testing and commissioning of Automatic fire alarm system for AIR Transmitter at Hudco Aurangabad**

Dear Sir,

It is here by declared that CCW AIR is committed to follow the principle of transparency, equity and competitiveness in public procurement.

The subject Notice Inviting Tender (NIT) is an invitation to offer made on the condition that the Bidder will sign the integrity Agreement, which is an integral part of tender/bid documents, failing which the tenderer/bidder will stand disqualified from the tendering process and the bid of the bidder would be summarily rejected.

This declaration shall form part and parcel of the Integrity Agreement and signing of the same shall be deemed as acceptance and signing of the Integrity Agreement on behalf of the CCW AIR.

Yours faithfully

Executive Engineer

INTEGRITY PACT

To,
Executive Engineer (Electrical),
Civil Construction Wing,
All India Radio, Mumbai

Sub: Submission of Tender for the work of **Supply installation, testing and commissioning of Automatic fire alarm system for AIR Transmitter at Hudco Aurangabad**

Dear Sir,

I/We acknowledge that CCW AIR is committed to follow the principles thereof as enumerated in the Integrity Agreement enclosed with the tender/bid document.

I/We agree that the Notice Inviting Tender (NIT) is an invitation to offer made on the condition that I/We will sign the enclosed integrity Agreement, which is an integral part of tender documents, failing which I/We will stand disqualified from the tendering process.

I/We acknowledge that THE MAKING OF THE BID SHALL BE REGARDED AS AN UNCONDITIONAL AND ABSOLUTE ACCEPTANCE of this condition of the NIT.

I/We confirm acceptance and compliance with the Integrity Agreement in letter and spirit and further agree that execution of the said Integrity Agreement shall be separate and distinct from the main contract, which will come into existence when tender/bid is finally accepted by CCW AIR.

I/We acknowledge and accept the duration of the Integrity Agreement, which shall be in the line with Article 1 of the enclosed Integrity Agreement.

I/We acknowledge that in the event of my/our failure to sign and accept the Integrity Agreement, while submitting the tender/bid, CCW AIR shall have unqualified, absolute and unfettered right to disqualify the tenderer/bidder and reject the tender/bid in accordance with terms and conditions of the tender/ bid.

Yours faithfully

(Duly authorized signatory of the Bidder)

To be signed by the bidder and same signatory competent / authorized to sign the relevant contract on behalf of CCW AIR.

INTEGRITY AGREEMENT

This Integrity Agreement is made at **Mumbai** on this..... Day of..... 20.....

BETWEEN

President of India represented through Executive Engineer (E) CCW AIR Mumbai, (Hereinafter referred as the (Address of Sub Division) 'Principal/Owner', which expression shall unless repugnant to the meaning or context hereof include its successors and permitted assigns)

AND

..... (Name and Address of the Individual/firm/Company) through..... (Hereinafter referred to as the (Details of duly authorized signatory) "Bidder/Contractor" and which expression shall unless repugnant to the meaning or context hereof include its successors and permitted assigns)

Preamble

WHEREAS the Principal / Owner have floated the Tender (NIT No. **052/EDM/PUNE/2022-23/** (hereinafter referred to as "Tender/Bid") and intends to award, under laid down organizational procedure, contract for **Supply installation, testing and commissioning of Automatic fire alarm system for AIR Transmitter at Hudco Aurangabad**

Hereinafter referred to as the "Contract". AND WHEREAS the Principal/Owner values full compliance with all relevant laws of the land, rules, regulations, economic use of resources and of fairness/transparency in its relation with its Bidder(s) and Contractor(s).

AND WHEREAS to meet the purpose aforesaid both the parties have agreed to enter into this Integrity Agreement (hereinafter referred to as "Integrity Pact" or "Pact"), the terms and conditions of which shall also be read as integral part and parcel of the Tender/Bid documents and Contract between the parties.

NOW, THEREFORE, in consideration of mutual covenants contained in this Pact, the parties hereby agree as follows and this Pact witnesses as under:

Article 1: Commitment of the Principal/Owner

1. The Principal/Owner commits itself to take all measures necessary to prevent corruption and to observe the following principles:
 - a) No employee of the Principal/Owner, personally or through any of his/her family members, will in connection with the Tender, or the execution of the Contract, demand, take a promise for or accept, for self or third person, any material or immaterial benefit which the person is not legally entitled to.
 - b) The Principal/Owner will, during the Tender process, treat all Bidder(s) with equity and reason. The Principal/Owner will, in particular, before and during the Tender process, provide to all Bidder(s) the same information and will not provide to any Bidder(s) confidential / additional information through which the Bidder(s) could obtain an advantage in relation to the Tender process or the Contract execution.
2. The Principal/Owner shall endeavor to exclude from the Tender process any person, whose conduct in the past has been of biased nature.
3. If the Principal/Owner obtains information on the conduct of any of its employees which is a criminal offence under the Indian Penal code (IPC)/Prevention of Corruption Act, 1988 (PC Act) or is in violation of the principles herein mentioned or if there be a substantive suspicion in this regard, the Principal/Owner will inform the Chief Vigilance Officer and in addition can also initiate disciplinary actions as per its internal laid down policies and procedures

Article 2: Commitment of the Bidder(s)/Contractor(s)

1. It is required that each Bidder/Contractor (including their respective officers, employees and agents) adhere to the highest ethical standards, and report to the Government / Department all suspected acts of fraud or corruption or Coercion or Collusion of which it has knowledge or becomes aware, during the tendering process and throughout the negotiation or award of a contract.
2. The Bidder(s)/Contractor(s) commit himself to take all measures necessary to prevent corruption. He commits himself to observe the following principles during his participation in the Tender process and during the Contract execution:
 - a) The Bidder(s)/Contractor(s) will not, directly or through any other person or firm, offer, promise or give to any of the Principal/Owner's employees involved in the Tender process or execution of the Contract or to any third person any material or other benefit which he/she is not legally entitled to, in order to obtain in exchange any advantage of any kind whatsoever during the Tender process or during the execution of the Contract.
 - b) The Bidder(s)/Contractor(s) will not enter with other Bidder(s) into any undisclosed agreement or understanding, whether formal or informal. This applies in particular to prices, specifications, certifications, subsidiary contracts, submission or non-submission of bids or any other actions to restrict competitiveness or to cartelize in the bidding process
 - c) The Bidder(s)/Contractor(s) will not commit any offence under the relevant IPC/PC Act. Further the Bidder(s)/Contractor(s) will not use improperly, (for the purpose of competition or personal gain), or pass on to others, any information or documents provided by the Principal/Owner as part of the business relationship, regarding plans, technical proposals and business details, including information contained or transmitted electronically
 - d) The Bidder(s)/Contractor(s) of foreign origin shall disclose the names and addresses of agents/representatives in India, if any. Similarly Bidder(s)/Contractor(s) of Indian Nationality shall disclose names and addresses of foreign agents/representatives, if any. Either the Indian agent on behalf of the foreign principal or the foreign principal directly could bid in a tender but not both. Further, in cases where an agent participate in a tender on behalf of one manufacturer, he shall not be allowed to quote on behalf of another manufacturer along with the first manufacturer in a subsequent/parallel tender for the same item
 - e) The Bidder(s)/Contractor(s) will, when presenting his bid, disclose any and all payments he has made, is committed to or intends to make to agents, brokers or any other intermediaries in connection with the award of the Contract.
3. The Bidder(s)/Contractor(s) will not instigate third persons to commit offences outlined above or be an accessory to such offences
4. The Bidder(s)/Contractor(s) will not, directly or through any other person or firm indulge in fraudulent practice means a willful misrepresentation or omission of facts or submission of fake/forged documents in order to induce public official to act in reliance thereof, with the purpose of obtaining unjust advantage by or causing damage to justified interest of others and/or to influence the procurement process to the detriment of the Government interests.
5. The Bidder(s)/Contractor(s) will not, directly or through any other person or firm use Coercive Practices (means the act of obtaining something, compelling an action or influencing a decision through intimidation, threat or the use of force directly or indirectly, where potential or actual injury may befall upon a person, his/ her reputation or property to influence their participation in the tendering process).

Article 3: Consequences of Breach

Without prejudice to any rights that may be available to the Principal/Owner under law or the Contract or its established policies and laid down procedures, the Principal/Owner shall have the following rights in case of breach of this Integrity Pact by the Bidder(s)/Contractor(s) and the Bidder/ Contractor accepts and undertakes to respect and uphold the Principal/Owner's absolute right:

1. If the Bidder(s)/Contractor(s), either before award or during execution of Contract has committed a transgression through a violation of Article 2 above or in any other form, such as to put his reliability or credibility in question, the Principal/Owner after giving 14 days' notice to the contractor shall have powers to disqualify the Bidder(s)/Contractor(s) from the Tender process or terminate/determine the Contract, if already executed or exclude the Bidder/Contractor from future contract award processes. The imposition and duration of the exclusion will be determined by the severity of transgression and determined by the Principal/Owner. Such exclusion may be forever or for a limited period as decided by the Principal/Owner.
2. Forfeiture of EMD/Performance Guarantee/Security Deposit: If the Principal/Owner has disqualified the Bidder(s) from the Tender process prior to the award of the Contract or

terminated/determined the Contract or has accrued the right to terminate/determine the Contract according to Article 3(1), the Principal/Owner apart from exercising any legal rights that may have accrued to the Principal/Owner, may in its considered opinion forfeit the entire amount of Earnest Money Deposit, Performance Guarantee and Security Deposit of the Bidder/Contractor.

3. Criminal Liability: If the Principal/Owner obtains knowledge of conduct of a Bidder or Contractor, or of an employee or a representative or an associate of a Bidder or Contractor which constitutes corruption within the meaning of IPC Act, or if the Principal/Owner has substantive suspicion in this regard, the Principal/Owner will inform the same to law enforcing agencies for further investigation.

Article 4: Previous Transgression

1. The Bidder declares that no previous transgressions occurred in the last 5 years with any other Company in any country confirming to the anticorruption approach or with Central Government or State Government or any other Central/State Public Sector Enterprises in India that could justify his exclusion from the Tender process.
2. If the Bidder makes incorrect statement on this subject, he can be disqualified from the Tender process or action can be taken for banning of business dealings/ holiday listing of the Bidder/Contractor as deemed fit by the Principal/ Owner.
3. If the Bidder/Contractor can prove that he has resorted / recouped the damage caused by him and has installed a suitable corruption prevention system, the Principal/Owner may, at its own discretion, revoke the exclusion prematurely.

Article 5: Equal Treatment of all Bidders/Contractors/Subcontractors

1. The Bidder(s)/Contractor(s) undertake(s) to demand from all subcontractors a commitment in conformity with this Integrity Pact. The Bidder/Contractor shall be responsible for any violation(s) of the principles laid down in this agreement/Pact by any of its Subcontractors/sub-vendors
2. The Principal/Owner will enter into Pacts on identical terms as this one with all Bidders and Contractors
3. The Principal/Owner will disqualify Bidders, who do not submit, the duly signed Pact between the Principal/ Owner and the bidder, along with the Tender or violate its provisions at any stage of the Tender process, from the Tender process

Article 6- Duration of the Pact

This Pact begins when both the parties have legally signed it. It expires for the Contractor/Vendor 12 months after the completion of work under the contract or till the continuation of defect liability period, whichever is more and for all other bidders, till the Contract has been awarded. If any claim is made/lodged during the time, the same shall be binding and continue to be valid despite the lapse of this Pacts as specified above, unless it is discharged/determined by the Competent Authority, CCW AIR.

Article 7- Other Provisions

1. This Pact is subject to Indian Law, place of performance and jurisdiction is the Headquarters of the Division of the Principal/Owner, who has floated the Tender.
2. Changes and supplements need to be made in writing. Side agreements have not been made.
3. If the Contractor is a partnership or a consortium, this Pact must be signed by all the partners or by one or more partner holding power of attorney signed by all partners and consortium members. In case of a Company, the Pact must be signed by a representative duly authorized by board resolution.
4. Should one or several provisions of this Pact turn out to be invalid; the remainder of this Pact remains valid. In this case, the parties will strive to come to an agreement to their original intentions.
5. It is agreed term and condition that any dispute or difference arising between the parties with regard to the terms of this Integrity Agreement / Pact, any action taken by the Owner/Principal in accordance with this Integrity Agreement/ Pact or interpretation thereof shall not be subject to arbitration.

Article 8- LEGAL AND PRIOR RIGHTS

All rights and remedies of the parties hereto shall be in addition to all the other legal rights and remedies belonging to such parties under the Contract and/or law and the same shall be deemed to be cumulative and not alternative to such legal rights and remedies aforesaid. For the sake of brevity, both the Parties agree that this Integrity Pact will have precedence over the Tender/Contact documents with regard any of the provisions covered under this Integrity Pact.

IN WITNESS WHEREOF the parties have signed and executed this Integrity Pact at the place and date first above mentioned in the presence of following witnesses:

.....
(For and on behalf of Principal/Owner)
EXECUTIVE ENGINEER (E)
CCW AIR MUMBAI

.....
(For and on behalf of Bidder/Contractor)

WITNESSES:

1.
(Signature, name and address)

2.
(Signature, name and address)
Place:

Dated:

(On Non Judicial stamp paper of minimum Rs. 100)
(Guarantee offered by Bank to CCW AIR in connection with the execution of contracts)
**Form of Bank Guarantee for Earnest Money Deposit /Performance Guarantee/ Security
Deposit/Mobilization Advance**

- ~~1. Whereas the Executive Engineer (Electrical) CCW AIR Mumbai on behalf of the President of India (hereinafter called "The Government") has invited bids under NIT No.052/EDM/PUNE/2022-23/ for Supply installation, testing and commissioning of Automatic fire alarm system for AIR Transmitter at Hudco Aurangabad~~
- ~~2. The Government has further agreed to accept irrevocable Bank Guarantee for Rs. (Rupees only) valid up to (date)*..... as Earnest Money Deposit from..... (Name and address of contractor) '.....', (hereinafter called "the contractor") for compliance of his obligations in accordance with the terms and conditions of the said NIT.~~

OR

1. Whereas the Executive Engineer (Electrical) CCW AIR Mumbai on behalf of the President of India (hereinafter called "The Government") has invited bids under NIT NO 052/EDM/PUNE/2022-23/ for **Supply installation, testing and commissioning of Automatic fire alarm system for AIR Transmitter at Hudco Aurangabad**
2. The Government has further agreed to accept irrevocable Bank Guarantee for Rs..... (Rupees only) valid up to..... (Date)*..... as Performance Guarantee/ Security Deposit/Mobilization Advance from..... (Name and address of contractor) "....." (Hereinafter called "the contractor") for compliance of his obligations in accordance with the terms and conditions of the said NIT.
3. We _____ (Bank) _____ (hereinafter referred to as "the Bank") hereby undertake to pay to the Government an amount not exceeding Rs. _____ (Rupees _____ only) on demand by the Government.
4. We _____ (Bank) _____ do hereby undertake to pay the amounts due and payable under this Guarantee without any demure, merely on demand from the Government stating that the amount claimed is required to meet the recoveries due or likely to be due from the said contractor(s). Any such demand made on the Bank shall be conclusive as regards the amount due and payable by the bank under this Guarantee. However, our liability under this guarantee shall be restricted to an amount not exceeding Rs. _____ (Rupees _____ only).
5. We, the said bank further undertake to pay to the Government any money so demanded notwithstanding any dispute or disputes raised by the contractor(s) in any suit or proceeding pending before any court or tribunal relating thereto, our liability under this present being absolute and unequivocal. The payment so made by us under this bond shall be a valid discharge of our liability for payment thereunder and the contractor(s) shall have no claim against us for making such payment.
6. We _____ (Bank) _____ further agree with the Government that the Government shall have the fullest liberty without our consent and without effecting in any manner our obligations hereunder to vary any of the terms and conditions of the said agreement or to extend time of performance by the said contractor(s) from time to time or to postpone for any time or from time to time any of the powers exercisable by the Government against the said contractor(s) and to for-bear or enforce any of the terms and conditions relating to the said agreement and we shall not be relieved from our liability by reason of any such variation, or extension being granted to the said contractor(s) or for any for-bearance, act of omission on the part of the Government or any indulgence by the Government to the said contractor(s) or by any such matter or thing whatsoever which under the law relating to sureties would, but for this provision, have effect of so relieving us.
7. We _____ (Bank) _____ further agree that the Government at its option shall be entitled to enforce this Guarantee against the Bank as a principal debtor at the first instance without proceeding against the contractor and notwithstanding any security or other guarantee the Government may have in relation to the Contractor's liabilities
8. This guarantee will not be discharged due to the change in the constitution of the Bank or the contractor(s).
9. We _____ (Bank) _____ lastly undertake not to revoke this guarantee except with the previous consent of the Government in writing.
10. This guarantee shall be valid up to _____ unless extended on demand by Government. Notwithstanding anything mentioned above, our liability against this guarantee is restricted to Rs. _____ (Rupees _____ only) and unless a claim in writing is

lodged with us within six months of the date of expiry or the extended date of expiry of this guarantee all our liabilities under this guarantee shall stand discharged.

Date:

Witnesses:

1 Signature
Name and Address

2 Signature
Name and Address

Authorized signatory

Name:

Designation:

Staff Code No:

Bank Seal

*Date to be worked out on the basis of validity period of 90 days where only financial bids are invited and 180 days for two/three bid system from the date of submission of tender.

**In paragraph 1, strike out the portion not applicable. Bank Guarantee will be made either for earnest money or for performance guarantee/security deposit/mobilization advance, as the case may be

TERMINATION OF CONTRACT ON DEATH

Without prejudice to any of the rights or remedies under this contract if the contractor dies, the Divisional Officer on behalf of the President of India shall have the option of terminating the contract without compensation to the contractor.

Whenever any claim, against the contractor from the payment of sum money arises out or under the contractor, Government shall be entitled to recover such by appropriating. In part or whole, the security deposit of the contractor and he shall any Government promise notes, etc. forming the whole or part of such security. In the event of the security being insufficient or if no sum recoverable as the case may be shall be deducted from any sum then due which at any time. where after may become due from the contractor under this or any other contract with Government should this sum be not sufficient to cover the full amount recoverable the contractor shall be to Government on demand the balance remaining due.

Government shall have the right to cause any audit and technical examination of the works and the bill of the contractor including all supporting vouchers, abstracts 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 him under contract and found not to have been executed the contractor shall be liable to refund the amount cover the same from him the manner prescribed in sub-clause(1) of this clause or in any other manner legally permissible and if as result of audit and technical examination it is found that the contractor was paid less than that was due to him under if the amount of such under payment shall be fully paid by the Government to the contractor.

Provided the Government shall not entitled to recover any such overpaid, nor the contractor shall be entitled to payment of any such paid short where as payment has been agreed upon between the Superintending Engineer or Executive Engineer on the one hand and the contractor on the other hand under any term of the contract permitting payment of work after assessment by the Superintending Engineer or the Executive Engineer.

EXECUTIVE ENGINEER (ELECT)

- **SPECIFICATION FOR ADDRESSABLE FIRE DETECTION & ALARM SYSTEM**

The scope of work is supplying and installing of Analogue Addressable Fire Detection and Alarm System.

The work under this system shall consist of furnishing all materials, equipment, appliances and labor necessary to install the complete Fire Detection and Alarm System, complete with Main Fire Alarm Control Panel, Sensors, Sounders, Strobes, Manual Call Stations, Relays etc. for interfacing with other systems if required.

It shall include laying of cabling duct, conduits and power supply etc., necessary for installation of the system with supply of sensors and devices as appropriate and as indicated in the Specification and Bill of Quantities.

The Building should be designated as multiple fire zones with each area forming one or more software programmed zones. All wiring shall be done using 2 x 1.5 mm² twisted pair shielded PVC insulated armored copper cable while exposed, and in PVC Conduits while concealed in concrete.

- **Fire Alarm System**

The Fire Alarm System shall conform to EN54 or UL Listed, BS: 5839 or NFPA 71/72. The System shall give Audio/Visual Alarm Signals when there is rise in temperature in case of Heat Detector or while measuring Smoke Density in case of Smoke Detector, while it exceeds the pre-set limit. The system shall give pinpoint location of fire with warning system and voice communication for commands and instruction if required. It shall be possible to program each loop with up to 99 Detectors & 99 Modules in a circuit.

The system shall be based on an "Open Protocol" to ensure flexibility of using Sensors / Detectors of an alternate manufacturer, in case the user requires such an option at a later date.

- **Fire Alarm Control Panel (FACP)**

The Fire Alarm Control Panel shall be microprocessor based fully Analogue Addressable, Analogue Control Unit which shall control all Analogue Addressable Detectors, Manual Call Stations and Switching Systems (for disconnecting AHU and power supply) connected to it.

All addressable units shall be connected to the FACP through the Loop Cards. The FACP shall be able to obtain analogue value for all detectors in the circuit through a pulsed digitalized current data. The FACP shall be able to analyze all analogue inputs from all addressable units, and through its own software and ambient level screening the FACP shall be able to identify fire, possible fire or fault conditions. The unit supervision shall be dynamic and continuous.

The FACP shall itself have one loop card built in. The loop shall be able to address 99 addressable detectors & 99 devices. 99 FACP units may be networked to enhance system capacity as and when required. All the networked panels shall display all the events occurring anywhere in the system. Each FACP on the network to function effectively as a repeater panel as well.

The FACP shall have a Liquid Crystal Display of Alphanumeric type to indicate immediately all conditions. The display should be high resolution, back lit 2 (lines) x 40 character. In case of testing of the system from the FACP the Display shall be able to give readouts of analogue value of all detectors being tested. The FACP shall also be able to carry out continuous self-monitoring when in normal condition.

It shall be able to withstand temperature variations from 00C to 550C. Relative Humidity (non-condensing type) up to 95% shall not hamper its performance. The voltage rating shall be from 15V DC to 32V DC, though the voltage may be change depending upon the working voltages of a proprietary FACP.

The FACP shall have its own Battery Backup of a minimum of 48 hours in normal condition and then half an hour in alarm condition. The backup time calculation shall be done as per IS 2189 standards. The Battery shall be suitable voltage as per OEM standard DC and of sealed lead acid rechargeable maintenance free type, housed inside the FACP.

The logic circuitry shall be based on high noise immunity solid state hardware employing modular construction. Logic cards shall be of epoxy fiber glass construction.

The FACP shall have the approval of EN54: or UL Listed.

The FACP shall be capable of being networked (future expansion) with other similar FACP's located at different part of the premises through a single RS485 bus.

Analogue Addressable Detectors

All detectors are fitted with plug-in system type connections. An alarm release will not affect a detector's good functioning. After resetting the alarm, the detector will resume operations without readjustment of any kind.

It shall have in-built locking mechanism to check the removal and pilferage of the detector. The quiescent current flow must not exceed 250 micro amps and alarm currents shall be maximum 10 mille amps.

The base of the Detector shall be electronics free and interchangeable with other type of detectors such as smoke or heat detectors.

It shall be able to withstand temperature variations from - 10 degree centigrade to 60 degree centigrade. Further, Relative Humidity (non-condensing type) up to 80% shall not hamper its performance. The voltage rating shall be from 15V -32V DC though the voltage may be changed depending upon the working voltages of a proprietary FACP.

The Detector shall have LPCB approval and CE Markings. It shall be possible to test the Detectors working both from the FACP as well as locally by means of a magnet to simulate a Functional Test Condition.

The Detector Addressing should be strictly through Decade Code Wheel Rotary Switch of ten's and units for ease of addressing. No DIL Switches, Electronic Addressing or programming through hand held programmers are accepted for addressing the devices and modules.

It shall be possible to mount the detectors in Duct Casting Unit for sampling of Supplying Air from the AHUs.

Secondary response indicators shall be provided for all the Above False Ceiling Detectors.

The detector shall have twin LED's for 360 degree viewing angle. LED on the detector shall blink each time the sensor is scanned by the FACP. If the FACP determines that the sensor is in alarm, the FACP will command the sensor LED to remain on to indicate the same. Each sensor will be capable of being tested for alarm via command from the FACP. Each sensor shall respond to FACP scan with the information about its type for identification.

It shall be possible to connect loop powered base sounders on the detector loop. The sounder shall have a sound output of at least 85db and will not require a separate cable for power supply.

- **Manual Call Stations**

The Manual Call Station shall be fully addressable with its own addressable module and operated by digitized signals from the FACP. The voltage range shall be from 15V to 32V. It shall have protection as per IP33. The operating temperature range shall be from -10 degree C to 60 degree C. Relative Humidity (non-condensing) range of performance parameters shall be between 10 to 93%.

- **Output Module**

The output modules are to be used to control zone of normally open dry-contact for Door Holders, Air Handling Unit Shut Down, etc., this should also be addressed through Direct Code Wheel Rotary Switch with built-in Magnetic Alarm Test Switch. This should be wired directly in the loop. The system shall also be able to handle separate modules to interface the speakers of the Public Address System and Conventional Sounder Circuits.

- **Input Module**

The input modules are to be used to monitor zone of normally open dry-contact alarm activation devices. This should also be addressed through Direct Code Wheel Rotary Switch with built-in Magnetic Alarm Test Switch. This should be wired directly in the loop.

- **Fault Isolator**

This unit shall be placed on the loop preferably after every 20–30 devices and shall be able to isolate electrical short circuit in the wiring. All the other detectors shall remain functional because of the Class A wiring of the loop. The isolator shall not utilize an address and shall be built into the detector base wherever required.

- **Fire Alarm Repeater / Annunciation Panel**

The Alarm Repeater/Annunciation Panel shall display fire/fault messages simultaneously with the FACP. It shall be capable of interfacing with the FACP on a single RS 485 Bus. The panel shall be capable of operating on 24 V DC supply.

The panel shall have a 2 x 40 characters back lit alphanumeric LCD display, which shall display date, time & description of alarm/trouble events that are displayed in the FACP with an in built buzzer to indicate fault/fire alarm. The panel shall be powered from the FACP. It shall have

control keys for Sound, Silence, and Mute and to reset the FACP from the repeater station. The repeater panel shall have the LED's indications of Supply, Fault, Mute, Silent, Disabled and Fire.

- **SOUNDER**

The sounder shall be addressable electronic type and shall give discontinuous/ intermittent audible alarm whenever any detector or MCP operates. The sound output from the Hooter should not be less than 85 decibels at the source point.

The sounder shall be powered from the 2-wire detector loop itself and no separate power supply or additional cable should be used.

- **FIRE ALARM SYSTEM TESTING**

- 1. FACP**

The FACP shall be checked for basic tests such as visually checking input voltage and amperage. All zones one by one shall be de wired to check for fault signal indication in the FACP.

The Power Source shall be cut off and checked for stand by Supply from the Batteries. After six hours the FACP Source shall be switched on to check for auto switch over to the Mains mode.

Tests shall be conducted for AC fail, charger fail, DC fail, Battery Disconnect or Battery fail. In all such cases the relevant L E D should glow and the piano sound shall also give sound output.

- 2. SMOKE DETECTOR**

The testing shall be carried out for each loop / zone, initially one detector in a zone and subsequently 2 or more disassociated detectors in each zone with time lapse between the detectors to test for Alarm Priority, Alarm Queuing and Call Logging.

An identified detector will be subjected to smoke aspiration from burning paper/cigarette puffs, rubber and other materials which give dense smoke held at 0.3 M distance from the detector. The FACP should indicate increased analogue output for that address and after the programmed delay time, a fire alarm signal shall be indicated. This delay shall be utilized for alarm verification.

The same test shall be carried out for two detectors in the same Loop but in different rooms. The FACP shall indicate Pre Alarm higher analogue levels for both detectors in its display with separate identification for both fires. One of the detectors in question is subjected to higher and longer levels of smoke aspiration. The FACP should give priority alarm for this address. The printout shall indicate individual addresses of the detectors with achieved analogue values and the time of event.

This test shall be carried out for different Loops as well as for 2 Loops simultaneously.

- 3. HEAT DETECTOR**

The same tests in the same sequence shall be carried out for this Detector but with the application of hot air from a hair dryer held at approximately 60-cm distance.

- 4. COMBINED TEST**

The next test will be in combination of Photoelectric / Heat Detectors simultaneously with time lapse between application of smoke or heat or as required by the Client.

- 5. ADDITIONAL TEST**

One detector of each type will be disconnected and subjected to slow dust build - up by means as desired by the Owner and again connected in the circuit.

The FACP shall indicate the changed ambient levels and automatically adjust the analogue values for the same. These Detectors are to be replaced by new Detectors of identical type and the FACP shall then be programmed accordingly and checked. The Bidder will take custody of the removed detectors without additional cost to the Owner.

Any part of the Loop shall be short-circuited. The FACP shall indicate the communication failure of all the devices connected in the short-circuited segment. After the short circuit is corrected, the Fault Isolator shall return to its normal status automatically, this being reflected in the FACP. The Loop shall then be in normal operation again. Any part of the Loop shall be de wired and tested as given above.

All other tests as required by the client at the time of handing over.

- **PREFERRED MAKES OF EQUIPMENTS FOR FIRE ALARM SYSTEM**

Fire Alarm Control Panel	Make: Edward, Eaton (Cooper), Notifier, Morley , Bosch, Apollo
Smoke Detector	Make: Edward, Eaton (Cooper), Notifier, Morley , Bosch, Apollo -- Compatible with the Panel
Fault Isolator Module	Make: Edward, Eaton (Cooper), Notifier, Morley , Bosch, Apollo -- Compatible with the Panel
Manual Call Point	Make: Edward, Eaton (Cooper), Notifier, Morley , Bosch, Apollo -- Compatible with the Panel
Sounder	Make: Edward, Eaton (Cooper), Notifier, Morley , Bosch, Apollo -- Compatible with the Panel
Cables	Make: ISI marked. Polycab / Havells / Finolex/Bonton Red color only
Fire Survival Cable	Make: ISI marked. Polycab / Havells / Finolex /Bonton Red color only

Commercial and Additional Conditions

1. General

This specification covers manufacture, testing as may be necessary before dispatch, delivery at site, all preparatory work, assembly and installation, commissioning putting into operation of early fire alarm system.

2. Location

The Early fire alarm system will be installed at All India Radio, Aurangabad.

1. The work shall be executed as per CPWD General Specifications for Electrical Works (Part VI) Fire Alarm System as per relevant IS and as per directions of Engineer-in-Charge. These additional specifications are to be read in conjunction with above and in case of variations; specifications given in this Additional condition shall apply. However, nothing extra shall be paid on account of these additional specifications & conditions as the same are to be read along with schedule of quantities for the work.
2. The tenderer should in his own interest visit the site and familiarizes himself with the site conditions before tendering.
3. No T&P shall be issued by the Department and nothing extra shall be paid on account of this.

3. Commercial Conditions

1. Type of contract

The work to be awarded by this e-tender shall be treated as indivisible works contract.

2. Submission and opening of Tenders

1. e-tender

2.

~~(i) Complete tender documents (part I), (on line) from CCW AIR including the schedule of work (without indicating the price) duly signed for acceptance of all terms and conditions~~

~~(ii) Complete technical particulars of all equipment & materials as per list attached.~~

3. The tenderers are advised not to deviate from the technical specifications/ items, commercial terms and conditions of NIT like terms of payment, guarantee, arbitration clause, escalation etc.
4. The Pre-qualification bid only shall be opened first on the due date and time, as specified in form CPWD-6 in the presence of tenderers or their authorized representatives who wish to remain present.
5. Scrutiny/ evaluation of the Pre-qualification bid shall be done by the department in consultation with any agency as deemed necessary .In case it is found that the technical-cum- commercial bid of a tenderer is not in line with NIT specifications, requirements and/or contains many deviations, the department reserves the right to reject the Pre-qualification bid of such firms (s) without making any reference to the tenderer (s).
6. Necessary clarifications required by the department shall have to be furnished by the tenderer within the time given by the department for the same. The tenderer will have to depute his representative to discuss with the officer(s) of the department as and when so desired. In case, in the opinion of the department a tenderer is taking undue long time in furnishing the desired clarifications, his bid will be rejected without making any reference.
7. After obtaining clarifications from all the tenderers, the department may modify the technical & commercial conditions/ specifications if required, and will intimate the tenderers whose Pre-qualification bids are acceptable.
8. The part II of the tender i.e. price bid will be opened by the Executive Engineer (E) in the presence of the representatives of the tenderers who wish to be present.
9. In the price bid, there shall be no conditions whatsoever. In case any tenderer mentions any condition including conditional rebates in their price part, tender shall be rejected forthwith.
10. A tenderer will also not be allowed to withdraw or modify any condition at a time after the technical bids have been accepted and the decision to open the price bid has been taken by the department.
11. The department reserves the right to reject any or all the price bids and call for fresh prices/ tenders as the case may be without assigning any reason.

3. Terms of Payment

Part Payment only after completion of entire work at individual station

1. Security Deposit :

Security Deposit shall be deducted from each running bill and the final bill to the extent of 10% of the gross amount payable subject to maximum limit of 2.5% of the tendered value of work. The security deposit shall be released on the expiry of guarantee period of **12 Months** stipulated in the contract.

4. Rates

1. The rates quoted by the tenderer, shall be firm and inclusive of all taxes, duties and levies and all charges for packing forwarding, insurance, freight and delivery, installation, testing, commissioning etc. at site i/c temporary constructional storage, risks, overhead charges general liabilities/ obligations.
2. The contractor has to carry out routine & preventive maintenance for 12 months from the date of handing over. Nothing extra shall be paid.

5. Completeness of tender :

All sundry equipment, fittings, unit assemblies, accessories, hardware items, foundation bolts, termination lugs for electrical connections, and all other items which are useful and necessary for efficient assembly and installation of equipment and components of the work shall be deemed to have been included in the tender irrespectively of the fact whether such items are specifically mentioned in the tender documents or not.

6. For item / equipment requiring initial inspection at manufacturer's works' the contractor will intimate the date of testing of equipments at the manufacturers works before dispatch. The department also reserves the right to inspect the fabrication job at factory and the successful tenderer has to make the arrangement for the same. The successful tenderer shall give sufficient advance notice regarding the dates proposed for such tests/ inspection to the department's representative(s) to witness such testing/ fabrication. The cost of the Engineer's visit to the factory will be borne by the Department. Also equipment may be inspected at the manufacturer's premises, before dispatch to the site by the contractor.

7. Storage and custody of materials :

The Fire Control room may be used for storage of sundry materials and erection equipments if available or else the agency has to make his own arrangement. The department shall provide no separate storage accommodation. Watch and ward of the stores and their safe custody shall be the responsibility of the contractor till the final taking over of the installation by the department.

8. Care of the Building :

Care shall be taken by the contractor while handling and installing the various equipments and components of the work to avoid damage to the building. He shall be responsible for repairing all damages and restoring the same to their original finish at his cost. He shall also remove at his cost all unwanted and waste materials arising out of the installation from the site of work.

9. Completion of period :

The completion period of 2 (Two) months indicated in the tender documents is for the entire work of planning, designing, supplying, installation, testing, commissioning and handing over of the entire system to the satisfaction of the Engineer-in-charge.

10. Performance Guarantee :

1. The tender shall guarantee among other things, the following :
 - (i) Quality, strength and performance of the materials used.
 - (ii) Safe mechanical and electrical stress on all parts under all specified conditions of operation.
 - (iii) Satisfactory operation during the maintenance period.
2. The successful tenderer shall submit an irrevocable performance guarantee of 5% of tendered amount in addition to other deposits mentioned elsewhere in the contract for his proper performance of the contract agreement within 7 days of issue of letter of intent. This guarantee shall be in the form of government securities or fixed deposit receipts or guarantee bonds of any scheduled bank or the State Bank of India in the specified format. The performance guarantee shall be initially valid up to the stipulated date of completion plus 180 days beyond. This bank guarantee kept valid till the recording of completion certificate for the work by the competent authority.

11. Guarantee :

All equipments shall be guaranteed for a period of **12 months** from the date of taking over the installation by the department against unsatisfactory performance_and/or break down due to defective design, workmanship of material. The equipment's or components or any part thereof, so found defective during guarantee period shall be forthwith repaired or replaced free of cost, to the satisfaction of the Engineer-in-Charge. In case it is felt by the department that undue delay is being caused by the contractor in doing this, the same will be got done by the department at the risk and cost of the contractor. The decision of the Engineer-in-Charge in this regard shall be final.

12. Power Supply

Electric service connection of 415 V, 3 phases, 4 wires, 50 Hz, Ac supply shall be provided by the Department for installation purpose free of charge.

13. Water Supply

Water supply shall be made available by the department at one point.

~~14. Data Manual and Drawings to be furnished by the tenderers With Tender~~

~~The tenderer shall furnish along with the tender, detailed technical literature, pamphlets and performance data for appraisal and evaluation of the offer.~~

15. Extent of work :

1. The work shall comprise of entire labour including supervision and all materials necessary to make a complete installation and such tests and adjustments and commissioning as may be required by the department. The term complete installation shall not only mean major items of the plant and equipment's covered by specifications but all incidental sundry components necessary for complete execution and satisfactory performance of installation with all layout charts whether or not those have been mentioned in details in the tender document in connection with this contract.

2. Minor building works necessary for installation of equipment, foundation, making of opening in walls or in floors and restoring to their original condition, finish and necessary grouting etc. as required.

16. Inspection and testing :

1. Copies of all documents of routine and type test certificates of the equipment, carried out at the manufacturers premises shall be furnished to the Engineer-in-charge and consignee.

2. After completion of the work in all respect the contractor shall offer the installation for testing and operation.

17. Validity

Tenders shall be valid for acceptance for a period of 30 days from the date of opening of price bid.

18. Compliance with Regulations and Indian standards

1. All works shall be carried out in accordance with relevant regulation, both statutory and those specified by the Indian Standards related to the works covered by these specifications. In particular, the equipment and installation will comply with the following :

- (i) Factories Act
- (ii) Indian Electricity Rules
- (iii) I.S. & BS Standards as applicable
- (iv) Workmen's compensation Act
- (v) Statutory norms prescribed by local bodies like CFO, BMC etc.

2. Nothing in this specification shall be construed to relieve the successful tenderer of his responsibility for the design, manufacture and installation of the equipment with all accessories in accordance with currently applicable statutory regulations and safety codes.

3. Successful tenderer shall arrange for compliance with statutory provisions of safety regulations and departmental requirements of safety codes in respect of labour employed on the work by the tenderer. Failure to provide such safety requirement would make the tenderer liable for

penalty of Rs. 50/- for each default. In addition, the department will be at liberty to make arrangement for the safety requirements at the cost of tenderer and recover the cost thereof from him.

19. Indemnity

The successful tenderer shall at all times indemnify the department, consequent on this works contract. The successful tenderer shall be liable in accordance with the Indian Law and Regulations for any accident occurring due to any cause and the department shall not be responsible for any accident or damage incurred or claims arising there from during the period of erection, construction and putting into operation the equipment's and ancillary equipment under the supervision of the successful tenderer in so far as the latter is responsible. The successful tenderer shall also provide all insurance including third party insurance as may be necessary to cover the risk. No extra payment would be made to the successful tenderer due to the above.

20. Erection Tools

No tools and tackles either for unloading or for shifting the equipment's for erection purposes would be made available by the department. The successful tenderer shall make his own arrangement for all these facilities.

21. Verification of correctness of Equipment at Destination

The contractor shall have to produce all the relevant records to certify that the genuine equipment from the manufacturers has been supplied and erected.

22. Maintenance:

Sufficient trained and experienced staff shall be made available to meet any exigency of work during the guarantee period of one year from the handing over of the installation.

23. Interpreting Specifications

In interpreting the specifications, the following order of decreasing importance shall be followed in case of contradictions:

- (i) Schedule of quantities
- (ii) Technical specifications
- (iii) Drawing (if any)
- (iv) General Specifications

Relevant IS or other international code in case IS code is not available.

SCHEDULE OF WORK (PRICE BID)

NIT No. 052/EDM/PUNE/2022-23

Name Of Work : Supply, installation, testing & commissioning of Automatic fire alarm system for AIR Transmitter at Hudco Aurangabad

S.N.	Description	Qty	Unit	Rate	Amount
1	Supply, installation, testing & commissioning of single Loop Networkable Intelligent Analogue Addressable Fire Alarm Control Panel with minimum 80 characters LCD display including single Loop driver cards, network card, in-built battery backup for 24 Hrs. in standby mode & 30min in alarm condition mode and with required accessories.	1	Each	106232.00	106232.00
2	Supplying, installation, testing & commissioning of intelligent analogue addressable photo thermal detector complete with mounting base complete as required	13	Each	3039.00	39507.00
3	Supplying, installation, testing & commissioning of addressable horn cum strobe complete as required	2	Each	3728.00	7456.00
4	Supplying, installation, testing & commissioning of addressable manual call point complete as required	2	Each	4116.00	8232.00
5	Supplying, installation, testing & commissioning of addressable fire control module complete as required	1	Each	3193.00	3193.00
6	Supplying, installation, testing & commissioning of response indicator on surface/recessed MS Box having two LED, metallic cover complete with all connections etc. as required	2	Each	293.00	586.00
7	Supplying & Laying of 2 x 1.5 Sqmm fire alarm armoured cable 600/1000 v rated with annealed copper conductor having XLPE insulation, steel wire armouring & FRLS outer sheath complete as required.	76	Meter	184.00	13984.00
				TOTAL	1,79,190.00

Name of the Contractor

S.No	Description of Items	Estimated cost(Rs.)	Percentage above or below the estimated cost	% in Figures	Total (Rs)
1	Name Of Work : Supply, installation, testing & commissioning of Automatic fire alarm system for AIR Transmitter at Hudco Aurangabad	1,79,190.00			-