



DEPARTMENT OF ENGINEERING **ELECTRICAL**

भारतीय विमानपत्तन प्राधिकरण, चंडीगढ़

AIRPORTS AUTHORITY OF INDIA, CHANDIGARH

TENDER DOCUMENT

Name of work:- Construction of Glide Path & Localizer Building and other associated works inside Airforce Area at Chandigarh Airport. SH- SITC of LT panel, Split AC & internal wiring works.

INDEX

Name of work:- Construction of Glide Path & Localizer Building and other associated works inside Airforce Area at Chandigarh Airport. SH- SITC of LT panel, Split AC & internal wiring works.

THE DETAILS OF TENDER DOCUMENT ARE GIVEN BELOW:

Sr. No.	Description	Page No.	
1	INDEX		01
2	E-TENDER NOTICE	e-NIT	01 – 07
3	PERFORMA	PERFORMA	01 - 06
4	GUIDANCE TO TENDER	GTT	01 – 03
5	GENERAL TERMS AND CONDITION	GCC	01- 134
6	SPECIAL CONDITION OF CONTRACT	SCC	01 - 14
7	TECHNICAL SPECIFICATION	TS	01 - 30
8	LIST OF PREFERRED MAKE	LPM	01 - 10
9	SCHEDULE OF QUANTITY	SOQ	01 - 05
	TOTAL		210

This tender document contains total pages **210 (Two Hundred & Ten Only)** as detailed above.



Ref. No.:- AAI/CHD/Engg. (E)/ILS Electrical/NIT-02/2026-27

Date: 03.07.2026

NOTICE INVITING e-TENDER (2 BOT – 2 Envelope Open Tender)

(Tender ID :- 2026_AAI_282923_1)

- 1) Item Rate/ ~~Percentage rate/ EPC~~ e-tenders are invited through the e-tendering on CPP Portal by AGM (Engg. Elect.), Airports Authority of India, Chandigarh (Bid Manager) on behalf of Chairman, AAI from the eligible contractors for the work of **“Construction of Glide Path & Localizer Building and other associated works inside Airforce Area at Chandigarh Airport. SH- SITC of LT panel, Split AC & internal wiring works”** at an estimated cost of Rs. 28,43,518.00 (excluding GST) with completion period of **02 (Two) months**.

The tendering process is online at CPP Portal URL address <https://etenders.gov.in/eprocure/app> / www.aai.aero. Prospective Tenderers may download and go through the tender document.

Prospective Tenderers are advised to register themselves at CPP-portal, obtain ‘Login ID’ & ‘Password’ and go through the instructions available in the Home Page after log into the CPP portal <https://etenders.gov.in/e-procure/app> or www.aai.aero. They should also obtain Digital Signature Certificate (DSC) in parallel which is essentially required for submission of their application. The process normally takes 03 days’ time. The tenderer may also take guidance from AAI Help Desk Support through path [aai.aero/tender/e-tender/help desk support](http://aai.aero/tender/e-tender/help%20desk%20support).

For any technical related queries please call the Help desk. The 24X7 Help Desk details are as below:

-

Tel: 0120-4711508, 0120-4001002, 0120-4001005, 0120-6277787

E-mail: support-eproc@nic.in.

International bidders are requested to prefix 91 as country code.

Tenderers are requested to mention the URL of the Portal and Tender ID in the subject while emailing any issue along with the contact details.

Before submitting queries, bidders are requested to follow the instruction given in “Guidelines to Bidders” and get their computer system configured according to the recommended settings as specified in the portal at “System Settings for CPPP”.



For any further technical assistance with regard to functioning CPP portal the tenderer may contact to the following AAI help desk numbers on all working days only between-

Sl. No.	Support Persons	Escalation Matrix	E-mail Address	Contract Numbers	Timings*
1	Technical Help Desk Team	Instant Support	eprochelp@aai.aero	011-24632950 Ext. 3512	0800-2000Hrs. (MON – SAT)
2	JE (IT)	After 4 Hrs. of Issue	etendersupport@aai.aero or vaibhav_g@aai.aero	011-24632950 Ext. 3523	0930-1800Hrs. (MON – FRI)
3	Sr. Manager (IT)	After 12 Hrs	shripatim@aai.aero	011-24632950 Ext. 3509	0930-1800Hrs. (MON – FRI)
4	Jt. GM (IT)	After 24 Hrs.	Sunil.km@aai.aero	011-24632950 Ext. 3506	0930-1800Hrs. (MON – FRI)
5	General Manager (IT)	After 03 Days	gmit@aai.aero	011-2465790	0930-1800Hrs. (MON – FRI)

*The help desk services shall remain closed on all Govt. Gazetted Holidays.

In case of technical support regarding e-tender portal, if the AAI Help Desk is non-responsive, the Bid Manager may be contacted as below on all working days from 09:30 hrs. to 18:00 hrs.

Name : Smt. Preeti Beniwal
Designation : AGM (Engg.-Elect.)
Telephone No. : 0172-2242404
E-mail ID : hodelectrical@chial.org

All bid procedure related queries be referred to HELP DESK as above and then to Bid Manager only.

If the bidder has any query related to the Bid Document of the work, they should use ‘Seek Clarification’ on CPP portal to seek clarifications. No other means of communication in this regard shall be entertained.

Tender Processing Fee of **Rs. 1,180.00 (i/c GST)**, non-refundable will be required to be paid online through SBI payment Gateway Integrated / mapped with CPP Portal only.

The Earnest Money Deposit (EMD) is **Rs. 85,400/-** will be required to be paid online through SBI payment Gateway Integrated / mapped with CPP Portal only.



- 2) Following 2 envelopes shall be submitted through online at CPP-portal by the tenderer as per the following schedule:-

CRITICAL DATE SHEET

Publishing Date	Date 03.07.2026
Bid Document Download / Sale Start Date	Date 04.07.2026 from 0900 hrs.
Clarification Start Date	Date 04.07.2026 from 0900 hrs.
Clarification End Date	Date 10.07.2026 upto 1800 hrs.
Bid Submission Start Date	Date 04.07.2026 from 0900 hrs.
Bid Submission End Date	Date 25.07.2026 upto 1800 hrs.
Bid Opening Date (Envelope- I)	Date 27.07.2026 at 1000 hrs.
Bid Opening Date (Envelope- II)	To be intimated through CPP portal
Tender Processing Fee (To be paid online through CPP Portal)	Rs. 1,180/- (i/c GST) Non-refundable
Earnest Money Deposit (EMD) (To be paid online through CPP Portal)	Rs. 85,400/-

Note: If the bidder has any query related to the Bid Document of the work, they should use 'Seek Clarification' on CPP portal to seek clarifications. No other means of communication in this regard shall be entertained.

Envelope-I (Technical Bid and Pre-qualification): -

A) Technical Bid containing the following -

- Scanned Copy of Tender Processing Fee paid online.
- Scanned Copy of EMD paid online.
- Scanned copy of Permanent Account Number (PAN) and GST Registration Number.
- Scanned copy of Bid Acceptance Letter on Bidder's Letter head (As per Annexure- I).
- Scanned copy of "Undertaking" regarding Blacklisting/Debarment on Bidder's Letter Head (As per Annexure- II).
- Scanned copy of 'Undertaking' regarding deployment of sufficient plant and machinery on Bidder's Letter Head (As per Annexure- III).
- Scanned copy of Form- A details of similar works completed during last seven years supported with completion certificate issued by client.
- Scanned copy of Form- B – Financial information.
- Scanned copy of Form – C – Net worth.
- Bidder other than propriety firm shall submit, scanned copy of authorization letter/power of attorney along with copy of certificate of incorporation of the company under companies Act showing CIN/LLPIN/name of Directors of the company & copy of Board Resolution regarding authority to assign power of Attorney.
Proprietary firm shall submit scanned copy of Authorization letter/power of attorney only if the bid is processed by a person other than proprietor.
- Copy of Work Experience documents along with Completion certificates, Award Letters and Schedule of Quantities (SOQ) of requisite value as given below.
- Valid Electrical License.



B) Qualifying requirement of contractors /bidders containing the following:-

i. Should have successfully completed or *substantially completed three works, each of **Rs. 11,37,407.00 (Excluding GST)** or two works, each of **Rs. 14,21,759.00 (Excluding GST)** or one work of **Rs. 22,74,814.00 (Excluding GST)** in single contract of similar nature of “**Internal & External Electrical Works**” during the last seven years ending on last day of month previous to the one in which bids are invited. (i.e. 30.06.2026).

The details of similar works completed during last seven years in the given format- Form-A with supporting documents issued by client.

Note:-

- a) ~~The Tenders invited for Annual Rate Contracts for O&M/ AMC/ CMC works, agency having experience of completed AMC contract of more than one year shall be counted for the value of work for a completed one year on pro-rata basis. However, the agency who has completed one year of work in running AMC contract of more than one year, may be counted for the value of work for a completed one year on pro-rata basis.~~
- b) Experience gained by executing work on back-to-back contract /sub-contract basis is acceptable in the following conditions:
- Work should be actually executed by the second agency (sub-contractor) with due concurrence of the owner as tripartite agreement/ written approval. It should be backed by valid agreement and experience certificate.
 - Payments received by second agency should be reflected in TDS certificates.
- c) Experience gained in composite works for the specialized nature of works were executed by main contractor either by in-house expertise & experience or by engaging the specialized agencies with the approval of main client as per contract conditions. In such cases, main contractor as well as specialized agency both get the experience certificate for the same work from their respective client(s) i.e. main contractor for composite work along with specialized works from owner and specialized agency for specialized work(s) from the main contractor.

In this situation, the experience certificate of either specialized agency or main agency having in-house expertise & experience, who has actually executed the specialized work(s), shall be considered for Technical /Pre-qualifying criteria in similar specialized nature of work(s).

- d) Substantial completion shall be based on 80 (eighty) per cent (value wise) or more works completed under the contract. Substantial completion should not be defined in terms of percentage completion. rather it should be based on functional consideration. Certificate for 'substantial completion' of project/work/asset should contain two parts. Part -I shall contain 'financial value of work done' and part-II shall contain 'certificate of functional completion of project/work/asset'.

“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 date of bid opening (Cover- I / Technical bid)”.

Client certificate for experience should show the nature of work done, the value of work, date of start, date of completion as per agreement, actual date of completion and satisfactory completion of work. **Bidders showing work experience certificate from non-government/non-PSU organizations should submit copy of tax deduction at sources (TDS) certificate(s) along with a UDIN generated certificate issued by registered Chartered Accountant, clearly specifying the name of work, total payment received against the work and TDS amount for the work.**



- ii. Should have average Annual financial turnover of **Rs 10,06,605.00** during last three years (FY 2022-23, 2023-24 & 2024-25) previous financial year. The Financial information shall be submitted in the given format- Form- B with valid UDIN. Bidders showing continuous losses during FY 22-23, 23-24 & 24-25 in the balance sheet shall be summarily rejected.
- iii. The bidder should have a minimum net worth of **Rs. 4,26,528.00** Issued by certified Chartered Accountants for the FY 2024-25. The certificate should be submitted in the given format- Form- C with valid UDIN.
- iv. The documents submitted by bidders without valid UDIN shall not be accepted /entertained.
Scanned copy of all the Documents of Envelope-I mentioned above shall be submitted on the CPP portal (Online payment copy for Tender Processing Fee and EMD is required to be submitted)

3) Envelope-II: - The Financial e-Bid.

- All rates shall be quoted in the format provided and no other format is acceptable. If the price bid has been given as a standard BOQ format with the tender document, then the same is to be downloaded and to be filled by all the tenderers. Tenderers are required to download the BOQ file, open it and complete with their respective financial quotes and other details (such as name of the tenderer). No other cells should be changed. Once the details have been completed, the tenderer should save it and submit it online, without changing the file name. If the BOQ file is found to be modified by the tenderer, the bid will be rejected.

4) Refund of EMD:

EMD deposited by all the bidders except the confirmed lowest bidder shall be returned within one week from the date of opening of the financial bid. EMD of the successful bidder shall be returned on receipt of Security Deposit equivalent to EMD amount/ performance bank guarantee.

- 5) The tenderer shall submit their application only at CPP Portal: <https://etenders.gov.in/eprocure/app>. Tenderer/Contractor are advised to follow the instructions provided in the tender document for online submission of bids. Tenderers are required to upload the digitally signed file of scanned documents as per Para 2. Bid documents may be scanned with 100 dpi with black and white option which helps in reducing size of the scanned document.
Uploading of application in location other than specified above shall not be considered. Hard copy of application shall not be entertained.
- 6) Not more than one tender shall be submitted by one tenderer or tenderers having business relationship. Under no circumstance will father and his son(s) or other close relations who have business relationship with one another (i.e. when one or more partner(s)/director(s) are common) be allowed to tender for the same contract as separate competitors. A breach of this condition will render the tenders of both parties liable to rejection.
- 7) Tenderer who has downloaded the tender from CPP Portal, shall not tamper/modify the tender form including downloaded price bid template in any manner. In case if the same is found to be tampered/modified in any manner, tender will be completely rejected and EMD would be forfeited and tenderer is liable to be banned from doing business with AAI.



8) Bids Opening Process is as below: -

Envelope-I (Technical bid and Pre-qualification):

- Envelope-I containing documents as per Para 2 (A, B) (uploaded by the tenderers) shall be opened on date & time mentioned in Critical data Sheet.
- If any clarification is needed from the tenderer about the deficiency in his uploaded documents in Envelope – I, he will be asked to provide it through CPP portal, if required. The tenderer shall upload the requisite clarification/documents within time specified by AAI, failing which it shall be presumed that bidder does not have anything to submit and bid shall be evaluated accordingly.
- The intimation regarding acceptance/rejection of their bids will be intimated to the tenderers through CPP portal.

Envelope-II (Financial Bid):

Envelope-II containing financial bid of the tenderers found to be meeting the technical criteria and qualifying requirements shall be opened on date & time mentioned in CRITICAL DATE SHEET. (In case the date and time for opening of Envelope-II (Financial Bid) is required to be changed, the same shall be intimated through CPP Portal).

- 9) AAI reserves the right to accept or reject any or all applications without assigning any reasons. AAI also reserves the right to call off tender process at any stage without assigning any reason.
- 10) AAI reserves the right to disallow the working agencies from participating in the tender process whose performance at ongoing project (s) is below par and usually poor and has been issued letter of restrain/Temporary or Permanent debarment/black listing by any department of AAI.
- 11) AAI reserves the right to verify the credential submitted by the tenderer at any stage (before or after the award the work). If at any stage, any information /documents submitted by the applicant is found to be incorrect/false or have some discrepancy which disqualifies the tenderer then AAI shall take the following action:
- a) Forfeit the entire amount of EMD submitted by the tenderer.
 - b) The tenderer shall be liable for debarment for a period upto two years (or upto date amendment) from tendering in AAI, including termination of the contract apart from any other appropriate contractual/legal action.
- 12) Consortium/JV companies shall not be permitted.
- 13) Purchase preference to Central Public Sector Undertaking shall be applicable as per the directive of Govt. of India prevalent on the date of acceptance.
- 14) Concessions to Indian Micro & Small Enterprises (MSEs) units registered with DIC / NSIC / KVIC / KVIB / Directorate of Handicraft and Handloom etc., to be given as per the provisions of Public Procurement Policy for MSEs order 2012 with up to date amendments, shall be applicable for tenders of supply/services and shall not be extended to construction work. This work fall under category of “Works”, hence, Concessions to Indian Micro & Small Enterprises (MSEs) units registered with DIC / NSIC / KVIC / KVIB / Directorate of Handicraft and Handloom etc is not applicable.



- 15) Tenderers have to submit Unique Document Identification Number (UDIN) generated documents like Financial information (Turnover with loss/ profit), Net worth Certificate, TDS certificate for works from non Govt./non-PSU organization etc. as per NIT conditions duly certified by CA and having UDIN. The documents submitted by bidders without valid UDIN shall not be entertained.
- 16) Department of Promotion of Industry and Internal Trade (DPIIT), Ministry of Commerce and Industry, Government of India, issued Public Procurement (Preference to Make in India), Order 2017 vide OM No. P-45021/2/2017-PP(BE-II) dated 16.09.2020 is applicable.
- 17) Requirement of registration by the Bidder from a country sharing land border with India based on order No. F No. 6/18/2019-PPD dated 23/07/2020 of Government of India, Ministry of Finance, Department of Expenditure (Public procurement Division) with up to date amendments, regarding restriction under Rule 144(xi) of the General Financial Rules (GFR) 2017 shall be applicable. Bidder shall submit scanned copy of 'Undertaking' on Company's letter head in this regard. (Annexure- LBS).

AGM (Engg. Elect.)
For and on Behalf of Chairman, AAI

BID ACCEPTANCE LETTER
(ON COMPANY LETTER HEAD)

Date :

To,

AGM (Engg. Elect.),
Bid Manger,
Airports Authority of India,
Chandigarh- 160003

Sir,

Sub.:- Acceptance of Terms & Conditions of Bid.

Name of Work:- Construction of Glide Path & Localizer Building and other associated works inside Airforce Area at Chandigarh Airport. SH- SITC of LT panel, Split AC & internal wiring works.

Sir,

- 1) I/ We have downloaded / obtained the Bid document(s) for the above mentioned 'Bid/Work' from CPP Portal as per your advertisement.
- 2) I / We hereby certify that I / we have inspected the site and read the entire terms and conditions of the bid documents, corrigendum(s) and reply to query if any made available to me/ us which shall form part of the contract agreement and I / we shall abide hereby by the terms / conditions / clauses contained therein.
- 3) I / We hereby unconditionally accept the bid conditions of AAI's bid documents in its totality / entirety for above mentioned work.
- 4) I/We declare that I/We have not paid and will not pay any bribe to any officer of AAI for awarding this contract at any stage during its execution or at the time of payment of bills, and further if any officer of AAI asks for bribe/gratification, I will immediately report it to the Appropriate Authority in AAI'.
- 5) I/ We hereby submitted that I/ We paid/ submitted the required earnest money as per bid conditions.
- 6) I / We certify that all information/ documents furnished by our Firm is true & correct and in the event at any stage, the information/ documents is found to be incorrect/ untrue or found violated, then we shall be liable for debarment from bidding in AAI without giving any notice or reason therefore or summarily reject the bid or terminate the contract, without prejudice to any other rights or remedy including the forfeiture of the full said earnest money deposit absolutely.

Yours Faithfully

(Signature of the Bidder, with Official Seal)

UNDERTAKING REGARDING DEBARMENT/BLACKLISTING

(ON COMPANY LETTER HEAD)

Name of Work:- Construction of Glide Path & Localizer Building and other associated works inside Airforce Area at Chandigarh Airport. SH- SITC of LT panel, Split AC & internal wiring works.

I / We (name and post of authorized signatory) on behalf of (Name of firm) do here by solemnly affirm and declare as follows:

- (i) Our firm is not restrained/ debarred/ blacklisted by AAI / Ministry of Civil Aviation (MoCA) / Dept. of Expenditure (DoE), Ministry of Finance and the debarment/ blacklisting/ restraintment is not in force as on last date of opening of bid (Envelope-I, normally called as technical bid).
- (ii) None of Proprietor /Partners /Board Members /Directors of M/s..... (Name of firm) has remained Proprietor /Partner /Board Member /Director in any firm which stands debarred /blacklisted/restrained by AAI / MoCA/ DoE and the debarment/ blacklisting/ restraintment is not in force as on last date of opening of bid (Envelope-I, normally called as technical bid).
- (iii) Our firm understands that if our firm either debarred before the date of opening of bid (first bid, normally called as technical bid, in case of two packet/two stage bidding) or debarred before the date of contract by AAI / MoCA / DoE (Debarment applicable for all Ministries/ Departments), our bid is liable to be rejected at that stage.
- (iv) Our firm understands that at any stage, if above statements are found to be false, our firm shall be liable for debarment from bidding in AAI, apart from any other appropriate contractual legal action including debarment/ blacklisting/ restraintment, termination of the contract etc. as deemed fit.

Date:

**[Signature and name of the
authorized signatory of the firm]**

Place:

UNDERTAKING REGARDING PLANT & MACHINERY

(ON COMPANY LETTER HEAD)

Name of Work:- Construction of Glide Path & Localizer Building and other associated works inside Airforce Area at Chandigarh Airport. SH- SITC of LT panel, Split AC & internal wiring works.

I/We hereby undertake that I/We will deploy sufficient plant and machinery as per requirement of work in consultation with the Engineer-In-Charge (EIC) to achieve the milestones/ targets and overall completion within the time period.

Date:

**[Signature and name of the
authorized signatory of the firm]**

Place:

FORM “A”

DETAILS OF SIMILAR WORKS SUCCESSFULLY COMPLETED OR SUBSTANTIALLY COMPLETED DURING THE LAST SEVEN YEARS ENDING ON ...

Sl. No.	Details of work	W- 1	W- 2	W- 3
1	Name of work/ project and Location			
2	Name and Address of client			
3	Awarded Cost of work (in Rs. Lakhs)			
4	Date of commencement as per contract			
5	Stipulated date of completion			
6	Actual date of completion			
7	Completion Cost/ Actual work done			
8	Whether the work was done on back to back basis Yes/No			

**SIGNATURE (S) OF BIDDER (S)
(WITH STAMP)**

Note: The contractor should give list of only of eligible category works of requisite amount with supporting documents issued from client.

FORM-B
FINANCIAL INFORMATION

Name of the firm / contractor.....

1. Financial Analysis - Details to be furnished turnover on construction works with profit / loss as per figure in balance sheet account for the last three years duly certified by the Chartered Accountant as submitted by the applicant to the Income - Tax Department

Fig in lakhs Rs.

Sl. No.	Particulars	Financial Year (Last three years)		
		FY 2022-23	FY 2023-24	FY 2024-25
1	Turn-Over			
2	Profit / (loss) after Taxes (standalone)			

2. Financial arrangements for carrying out the proposed work.

Unique Document Identification Number (UDIN).....

Signature of Chartered Accountant with Seal

SIGNATURE (S) OF BIDDER (S)

Note: The bidder should give information strictly in above format.

FORM 'C'

FORM FOR CERTIFICATE OF NET WORTH FROM CHARTERED ACCOUNTANT

This is to certify that as per audited balance sheet and profit & loss account during the financial year....., the Net Worth of M/S. (Name & registered address of Individual/Firm/Company), as on(the date of certificate) is Rsafter considering all liabilities. It is further certified that Net Worth of the company has not eroded by more than 30 % in last three years ending on 31st March 2025.

Unique Document Identification Number (UDIN).....

Signature of Chartered Accountant

Name of Chartered Accountant.....

Membership No. of ICAI.....

Date and Seal

SIGNATURE (S) OF BIDDER (S)

*The relevant year shall be the financial year ending 31st March preceding the calendar year of bid submission or 31st March of the financial year preceding the previous financial year, if the balance sheet of the previous financial year has not been audited.

GUIDANCE TO TENDERERS/BIDDERS

1. Item Rate Tenders are invited through CPP portal on behalf of Chairman, AAI for the work with estimated cost as mentioned in NIT. This estimate, however, is given merely as rough guide.
2. The Tenders shall be in the prescribed Form, are invited in open e-Tender two envelope system
3. The works are required to be completed within the period as mentioned in eNIT & Schedule-F.
4. Not more than one Tender shall be submitted by a contractor or a firm. Not more than one concern in which an individual is interested as Proprietor and/or partner shall tender for the execution of the same work. If they do so, all such Tenders shall be liable to be rejected.
5. The Accepting Authority as mentioned in schedule “F” shall be the Accepting Officer hereinafter referred to as such for the purpose of this contract.
6. Tender document consisting of plans, specifications, Schedule(s) of quantities of the various classes of work to be done, the conditions of contract and other necessary documents will be available on CPP portal, can be downloaded from the CPP portal.
7. 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 nature of the site, the means of access to the site, the accommodation they may require, working conditions including space for stacking of materials, installation of T&P, rates of various materials to be incorporated in works, conditions affecting accommodation and movement of labours etc. and in general shall themselves obtain all necessary information as risks, contingencies and other circumstances which may influence or effect 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.
8. 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 works to be done and of conditions and rates at which land for stores, tools and plant, etc. will be allotted to him by AAI, local conditions, local material rates and other factors bearing on the execution of the works.
9. All rates shall be quoted as mentioned in eNIT on CPP Portal and no other format is acceptable.
10. As this tender is an Item rate Tender, rates for all items quoted shall only be considered. Any Tender containing percentage below/above the total estimated cost is liable to be rejected. Tenderers which propose any alteration in the works specified in the said form of invitation to tender, or in the time allowed for carrying out the work, or which contain any other conditions of any sort including conditional rebates will be summarily rejected. Any Tender containing percentage below/above the rates quoted is liable to be rejected.
11. Notification of Award of contract will be made in writing to the successful bidder by the Accepting Authority or his representative. The contract will normally be awarded to the qualified and responsive Bidder offering lowest evaluated bid in conformity with the requirements of the specifications and contract documents and the Accepting Authority shall be the sole judge in this regard. The Accepting Authority does not bind himself to accept the lowest or, any tender or to give any reason for his decision.
 - 11.1 A responsive bidder is one who submits priced Tender and accepts all terms and conditions of the specifications and contract documents.
 - 11.2 A major modification is one which affects in any way the quality, quantity and period of completion of the work or which limits in any way the responsibilities or liabilities of the Bidder or any right of AAI, as required in the specifications and contract documents. Any modification in the terms and conditions of the Tender which are not acceptable to AAI shall also be treated as a major modification.

- 11.3 A Tenderer shall submit a responsive bid, failing which his Tender will be liable to be rejected.
12. The Accepting Authority reserves to himself the right to accept the whole or any part of the Tender and Tenderer shall be bound to perform the same at his quoted rates. No claim whatsoever will be entertained on this account.
13. On acceptance of Tender, "Earnest Money" will be treated as part of the security deposit as per Clause 1A of GCC or will be refunded only after equivalent amount deducted in RA bills as per part of security deposit as per clause 1A of GCC.
14. The site for the work is available & shall be handed over.
15. MODE OF SUBMISSION OF TENDERS:
- 15.1 Tender for the work shall be submitted online through CPP portal in open tender two envelope system as detailed below:
Tenderer should download the Tender Documents from the CPP portal, fill up the required information and upload the same well in time along with authorization letter /power of attorney, if any, required.
Last date for the online submission of e-bid (Envelope I & II) is as per CPP portal.
- 15.2
- i. The Bidders shall quote their item rates online through CPP portal only.
 - ii. The Price Bids / Financial Bids of those Bidders who are fulfilling the qualifying criteria shall be opened.
 - iii. All rates shall be quoted in the format provided and no other format is acceptable. If the price bid has been given as a standard BOQ format with the tender document, then the same is to be downloaded and to be filled by all the tenderers. Tenderers are required to download the BOQ file, open it and complete the cells with their respective financial quotes and other details (such as name of the tenderer). No other cells should be changed. Once the details have been completed, the tenderer should save it and submit it online, without changing the filename. If the BOQ file is found to be modified by the tenderer, the bid will be rejected.
 - iv. In event no rate has been quoted for any item(s) leaving amount blank, it will be presumed that the contractor has included the cost of this / these item(s) in other items and rate for such item(s) will be considered as zero and work will be required to be executed accordingly.
 - v. All rates shall be quoted as per ENIT conditions.
 - vi. AAI does not give any concessional forms / certificates / permits towards any taxes, duties & levies etc.
- 15.3 Once the contractor has uploaded the Tender acceptance Letter as an attachment, he is not permitted to upload any additional file or put any remark(s)/ conditions(s) in / along with the Tender Document.
- 15.4 In case, the condition 15.3 and above are found violated, the tender shall be rejected and entire amount of EMD (if applicable) shall be forfeited.

- 15.5 Only those tenderers who are meeting the eligibility criterion spelt out in Notice inviting e – tender and their Envelope-I is accepted by AAI their (Envelope-II) shall be opened. The Pre-qualification documents of technical Bid documents will be examined and their techno – commercial bid shall be evaluated to determine whether they are complete, meets tender requirements, free from computational errors, whether the data have been properly filled up, and whether the requisite documents as detailed have been submitted in conformity to the tender specifications, drawings and conditions.

16. Clarifications: -

If the bidder has any query related to the bid document of the work, they should Seek clarification on CPP Portal as per ENIT. No other means of communication in this regard shall be entertained.

If any clarification is needed from the tenderer about the deficiency in his uploaded documents in Envelope – I, he will be asked to provide it through CPP Portal if required. The tenderer shall upload the requisite clarification / Documents within time specified by AAI, failing which it shall be presumed that the bidder does not have anything to submit and bid shall be evaluated accordingly.

17. PROCEDURE FOR OPENING OF TENDER

Following steps shall be followed for opening of tender documents.

- i. **Envelope-I:** Envelope-I shall be opened as mentioned in CPP portal.
 - ii. **Envelope-II:** (Price Bid Folder): Envelope-II will be opened only of those bidders who will be qualifying/meeting the Eligibility Criteria as per Envelope –I of e-NIT.
18. Tenderers are advised to get themselves acquainted for e-tendering participation requirements, register themselves at CPP portal, obtain ‘User ID’ & ‘Password’ and go through the ‘CPP manuals’ available in the CPP portal.
19. Tenderers are advised to go through the CPP portal guidelines, before online registration and submission of their applications/bids.
20. Bidders may please note that CPP is capturing and showing the IP addresses used by the Buyer and the Bidder(s) /Seller(s). The received bids having matching/common IP address with either Bidder(s)/Seller(s) or Buyer, shall be outrightly rejected & shall not be considered for further evaluation.
21. AAI is not responsible for any postal delay or delay due to link failure /internet problem etc. in respect of submission /receipt of any documents or in submission of e-Bid. Bidders who are intending to submit responsive e-Bids are requested to submit the same well in advance before the due date & time. It is the responsibility of the Bidder to make sure that the required documents /e- Bid is submitted in time.



GENERAL CONDITIONS OF CONTRACT

2017



AIRPORTS AUTHORITY OF INDIA

INDEX

Sl. No.	Details of Pages	Page No.
1.	General Guidelines	1
2.	Tender forms	2
i)	General Rules and Directions.	4
ii)	Conditions of contract	7
iii)	Clauses of contract	10
iv)	AAI Safety code	75
v)	Model Rules	80
vi)	AAI contractor's labour Regulations	85
vii)	Various Formats to be maintained (Appendix I to XX)	90
viii)	Sketch of Cement Godown	128
3.	Proforma of Schedules A to F	129

GENERAL GUIDELINES

1. This book of “General Conditions of Contract” is applicable to both types of tenders i. e.” Percentage rate tenders and Item rate tenders”. Accordingly, alternative provisions for conditions Nos. 4, 10 & 12 of the General Rules and Directions are given in this book. The appropriate alternatives will be applicable in specific cases depending on whether this is used for percentage rate tenders or item rate tenders
2. Notice Inviting Tender, Schedules A to F, special conditions/specifications and drawings only will be issued to intending bidders. The standard form will not be issued along with the Tender Documents but the same shall form part of the agreement to be drawn and signed by both parties after acceptance of tender.
3. All blanks are confined to Notice Inviting Tender and Schedules A to F.
4. Authority approving the Notice Inviting Tenders (NIT) shall fill up all the blanks in Notice Inviting Tender and in Schedules B to F before issue of Tender documents.
5. The intending bidders will quote their rates in Schedule A.
6. The proforma for registers and Schedules A to F are only for information and guidance. These are not to be filled in the Standard Form. The Schedules with all blanks, duly filled, shall be separately issued to all intending tenderers.

AIRPORTS AUTHORITY OF INDIA

Item Rate Tender & Contract for Work

Airport : Airports Authority of India

Branch : Engineering (Electrical)
Airport

Office of : AGM (Engg.-Elect.), AAI

Tender for the work of:- Construction of Glide Path & Localizer Building and other associated works inside Airforce Area at Chandigarh Airport. SH- SITC of LT panel, Split AC & internal wiring works.

To be submitted/ uploaded shall be as per CRITICAL DATA SHEET

(i) To be opened in presence of tenders who may be present or _____ at _____ hrs. in the office of _____

Issued to----- *

Signature of officer issuing documents----- *

Designation----- *

Date of issue----- *

*(ii) Not applicable for tendering

TENDER

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 Rates & 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 Chairman Airports Authority of India within the time specified in Schedule 'F', viz., schedule of quantities and in accordance in all respects with the referred to in Rule-1 of General Rules and Directions and in Clause 11 of the Conditions of contract and with such material 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 Ninety (90) days from the date of opening of financial bid in 2 bid system and not to make any modifications in its terms and conditions.

I/ We further undertake and confirm that information/ documents submitted by us are genuine, and if at any stage such documents/ information found false, then we shall be liable for debarment from tendering in AAI, and any other appropriate legal action.

A sum of Rs. 85,400.00 (EMD Amount) is hereby deposited by way of online payment / ~~Surity Bond~~ as per ENIT. If I/we, fail to furnish the prescribed performance EMD/~~bank guarantee~~ within prescribed period, I/we agree that the said Chairman, AAI or his successors in office shall without prejudice to any other right or remedy, be at liberty to take appropriate action as per terms of contract. Further, if I/ we fail to commence work as specified, I/we agree that Chairman, AAI or his successors in office shall without prejudice to any other right or remedy available in law, be at liberty to forfeit the said earnest money absolutely, otherwise the said earnest money shall be retained by AAI towards security deposit to execute all the works referred to in the tender documents upon the terms and conditions contained or referred to therein and to carry out such deviations as may be ordered, upto maximum of the percentage mentioned in Schedule 'F' and 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~~ or both Earnest Money & ~~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 authorised to communicate the same or use the information in any manner prejudicial to the safety of the State.

Date : _____ Signatures of Contractor/authorized signatory :

Witness: _____ Postal Address _____

Occupation: _____

ACCEPTANCE

The above tender (as modified by you as provided in the letters mentioned hereunder) is accepted by competent authority on behalf of the Chairman, Airports Authority of India for sum of Rs. _____ (Rupees _____).

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

- (i)
- (ii)
- (iii)

For & on behalf of Chairman, Airports
Authority of India

Signature-----

Designation-----

Date-----

AIRPORTS AUTHORITY OF INDIA**General Rules & Directions**

1.	General Rules & Directions	All work proposed for execution by contract are notified in a form of invitation to tender pasted in public places / CPP Portal and signed by the officer inviting tender or by publication in Newspapers and posted on AAI web-site and CPP Portal https://etenders.gov.in/eprocure/app or www.aai.aero (for reference only). This form will state the work to be carried out, as well as the date for submitting and opening tenders and the time allowed for carrying out the work, also the amount of earnest money to be deposited with the tender, and the amount of the security deposit and Performance guarantee to be deposited by the successful tenderer and the percentage, if any, to be deducted from bills. Copies of the specifications, designs and drawings and any other documents required in connection with the work signed for the purpose of identification by the officer inviting tender shall also be open for inspection by the contractor at the office of officer inviting tender during office hours.
2.		Receipts for payment made on account of work, when executed by a firm, must also be signed by all the partners, except where contractors are described in their tender as a firm, in which case the receipts must be signed in the name of the firm by one of the partners, or by some other person having due authority to give effectual receipts for the firm. Bank details shall be furnished by the firm through an application duly signed by all partners for payment to the firm through bank transfer.
3.		The officer inviting tenders shall have the right of rejecting all or any of the tenders and will not be bound to accept the lowest or any other tender.
4.	Applicable for Item Rate Tender Only.	In the case of Item Rate Tenders, only rates quoted shall be considered. Any tender containing percentage below / above the rates quoted is liable to be rejected. Rates quoted by the bidder in item rate tender in figures and words shall be accurately filled in so that there is no discrepancy in the rates written in figures and words. However, - if a discrepancy is found between rates in figures and in words, then the rates which correspond with the amount worked out by the bidder shall unless otherwise proved be taken as correct. - If the amount of an item is not worked out by the bidder or it does not correspond with the rates written either in figures or in words, then the rates quoted by the contractor in words shall be taken as correct. - Where the rates quoted by the bidder in figures and in words tally, but the amount is not worked out correctly, the rates quoted by the contractor will unless otherwise proved be taken as correct and not the amount. - In event no rate has been quoted for any item(s) leaving space blank both in figure(s) and word(s) or cancelled the quoted rate in figure(s), and word(s) but the amount corresponding to the item(s) is worked out by the bidder and added to the grand total, then rate(s) of the item(s) shall be derived from the amount(s) quoted by the contractor against such item(s). - In event no rate has been quoted for any item(s), leaving space both in figure(s), word(s), and amount blank, it will be presumed that the bidder has included the cost of this/these item(s) in other items and

		rate for such item(s) will be considered as zero and work will be required to be executed accordingly. vi. Sub Para i to iv above shall not be applicable in case of e-Tendering
5.		In the case of any tender where unit rate of any item / items appear unrealistic, such tender will be considered as unbalanced and in case the tenderer is unable to provide satisfactory explanation, such a tender is liable to be disqualified and rejected.
6.	Applicable for Item Rate Tender only.	All rates shall be quoted on the tender form. The amount for each item should be worked out and requisite totals given. Special care should be taken to write the rates in figures as well as in words and the amount in figures only, in such a way that interpolation is not possible. The total amount should be written both in figures and in words. In case of figures, the word 'Rs' should be written before the figure of rupees and word 'P' after the decimal figures, e.g. 'Rs. 2.15 P' and in case of words, the word 'Rupees' should precede and the word 'Paise' should be written at the end. Unless the rate is in whole rupees and followed by the word 'only' it should invariably be upto two decimal places. While quoting the rate in schedule of quantities, the word 'only' should be written closely following the amount and it should not be written in the next line.
7	Additional Performance Security	The contractor shall submit an irrevocable additional performance security in the form of an irrevocable Insurance Surety bond, demand draft, bank guarantee issued from Scheduled Commercial Bank (i.e. Indian or Foreign Banks included in the Second Schedule of Reserve Bank of India Act, 1934 excluding Co-Operative /Regional Rural Banks, if the Bid price offered by the selected bidder is lower than 10% of the estimated cost put to tender. This clause shall be binding and enforceable in relation to all works, irrespective of their nature, scope, or value.
8		i. The bidder, whose tender is accepted, will be required to furnish performance guarantee of 5% (Five Percent) of the tendered amount within the period specified in Schedule F. This guarantee shall be in the form of Fixed Deposit Receipts or Guarantee Bonds of any Scheduled Bank but not co-operative or Gramin Bank, in accordance with the prescribed form, provided confirmatory advice is enclosed. ii. The bidder, whose tender is accepted, will also be required to furnish by way of Security Deposit for the fulfillment of his contract, an amount equal to 5% of the contract amount of the work. iii. In works where condition of submission of Performance Guarantee is not applicable, the security deposit @ 10% of the tendered value shall be deducted. iv. The Security deposit (under ii & iii above) will be collected by deductions from the running bills of the contractor at the rates mentioned above and the earnest money deposited at the time of tenders, will be treated as a part of the Security Deposit. v. Security deposit will also be accepted in form of Fixed Deposit Receipts / Guarantee Bonds of any Scheduled Bank but not co-operative or Gramin Bank in accordance with the prescribed form, provided confirmatory advice is enclosed.
9.		On acceptance of the tender, the name of the accredited representative(s) of the contractor who would be responsible for taking instructions from the Engineer-in- Charge shall be communicated in writing to the Engineer-in-Charge.
10.		1. The Bidders/ Service providers shall quote the rate inclusive of all taxes, duties, Cess, Fee, Royalty charges, GST etc levied under

		any statute. Wherever supplies/services involve imports, the same should be identified separately. Basic Custom Duty will be paid by AAI by utilizing EPCG license/duty Credit Scrip under Service Export from India Scheme (SEIS) of GOI. - In case of independent supplies, for example supply of furniture, computer, air conditioners, etc each of which are governed by separate contract clause without being subservient to any principal product, GST rate of each such independent supply shall be applicable. - In case of work contract in relation to SITC (affixed to Civil structure) for example E & M Installation etc, whether the contract is for a single SITC or a single contract as a whole is governing multiple SITC, rate of GST as applicable for work contract shall be applicable for such SITC contract. - In case of composite supply for example supply of movable machineries / items etc, GST rate for principal item in such composite supply shall be applicable. - GST shall be paid to bidder for any taxable supply/services against a valid Tax Invoice as per terms and condition of contract. - Terms & conditions if any, in respect of indirect taxes subsumed in GST i.e. Excise duty, VAT, Sales tax, Royalty etc may be treated dispensed with in this tender document.
11.		The contractor/ bidder shall give a list of AAI employees related to him.
12.		The tender for the work shall not be witnessed by a contractor or contractors/ bidders who himself / themselves has / have tendered or who may and has / have tendered for the same work. Failure to observe this condition would render, tenders of the contractors tendering, as well as witnessing the tender, liable to summary rejection.
13		If complete site is available for work, the work shall be completed in the manner specified here in special condition of contract and NIT specifications. Note: In such case para 14 below may be deleted by NIT approving authority
14		If complete site is not available for taking up the work, the same shall be made available in phases. The scope of work covered in each phase, time for completion of work in each phase and methodology of taking over completed work in phased manner has been specified under special conditions of contract. The completion time for each phase shall be applicable as indicated in tender documents. The work shall also be taken over by Engineer-In-Charge in phases. The warranty for the works executed in each phase shall be applied independently w.e.f. date of completion /taking over of individual phase. Note: In such case para 13 above may be deleted by NIT approving authority

CONDITIONS OF CONTRACT

Definitions :

1.		The contract means the documents forming the tender and acceptance thereof and the formal agreement / agreements executed between the competent authority(s) on behalf of the Chairman, AAI and the Contractor, together with the documents referred to therein including these conditions, the specifications, designs, drawings and instructions issued from time to time by the Engineer-in-Charge and all these documents taken together, shall be deemed to form one contract / two contracts and shall be complimentary to one another. Contractor has to sign agreement. one consisting BOQ for Civil works and another one for SITC and O&M / AMC / AICMC part. Engineer in charge could be common for both the agreements. Separate invoices for the civil / construction works and SITC / O&M / AICMC / AMC works have to be raised by the agency referring to the respective agreements to facilitate AAI to claim input tax credit on such SITC / O&M / AICMC / AMC works as mentioned in Schedule 'F' para 2(v).
2.		In the contract, the following expressions shall, unless the context otherwise requires, have the meanings, hereby respectively assigned to them :- i. The expression works or work shall, unless there be something either in the subject or context repugnant to such construction, be construed and taken to mean the works by or by virtue of the contract contracted to be executed whether temporary or permanent, and whether original, altered, substituted or additional. ii. The site shall mean the land / or other places on, into or through which work is to be executed under the contract or any adjacent land, path or street through which work is to be executed under the contract or any adjacent land, path or street which may be allotted or used for the purpose of carrying out the contract. iii. The Contractor/tenderer/bidder shall mean the individual, firm or company whether incorporated or not, Joint Venture / Consortium undertaking the works and shall include the legal personal representative of such individual or the persons constituting such firm or company, or the successors of such firm or company and the permitted assignees of such individual, firm or company. iv. The Chairman means the Chairman Airports Authority of India and his Successors. v. The Engineer-in-Charge means the Engineering Officer who shall supervise and be incharge of the work and who shall sign the contract on behalf of the Chairman, Airports Authority of India as mentioned in Schedule 'F' hereunder. vi. AAI or Airports Authority of India shall mean the Chairman Airports Authority of India. vii. AAI or Airports Authority of India shall mean the Chairman Airports Authority of India. viii. Accepting Authority shall mean the authority mentioned in Schedule 'F'. ix. Excepted Risk are risks due to riots (other than those on account of contractor's employees), war (whether declared or not) invasion, act of foreign enemies, hostilities, civil war, rebellion revolution, insurrection, terrorism, military or usurped power, any acts of Airports Authority of India, damages from aircraft, acts of God, such as earthquake, lightening and unprecedented floods, and other causes over which the contractor has no control and accepted as such by the Accepting Authority or causes solely due to use or occupation by Airports Authority of India of the part of the works in respect of which a certificate of completion has been issued or a cause solely due to Airports Authority of India's faulty design of works. x. Market Rate shall be the rate as decided by the Engineer-in-Charge on the basis of the prevailing cost of materials and labour at the site where the work is to be executed plus the percentage mentioned in Schedule 'F'

		to cover, all overheads and profits. Provided that no extra overheads and profits shall be payable on the parts of works assigned to other agency(s) by the contractor as per terms of contract. xi. Schedule(s) referred to in these conditions shall mean the relevant schedule(s) annexed to the tender papers or the standard Schedule of Rates of the government mentioned in Schedule 'F' hereunder, with the amendments thereto issued upto the date of receipt of the tender. xii. Department means Airports Authority of India, which invites tender on behalf of Chairman, Airports Authority of India. xiii. Tendered value means the value of the entire work as stipulated in the letter of award.
3.	Scope and Performance	Where the context so requires, words imparting the singular only also include the plural and vice versa. Any reference to masculine gender shall whenever required include feminine gender and vice versa.
4.		Headings and Marginal notes to these General Conditions of Contract shall not be deemed to form part thereof or be taken into consideration in the interpretation or construction thereof or of the contract.
5.		The contractor shall be furnished, free of cost one certified copy of the contract documents except standard specifications, Schedule of Rates and such other printed and published documents, together with all drawings as may be forming part of the tender papers. None of these documents shall be used for any purpose other than that of this contract.
6.	Works to be carried out	The work to be carried out under the Contract shall, except as otherwise provided in these conditions, include all labour, materials, tools, plants, equipment and transport which may be required in preparation of and for and in the full and entire execution and completion of the works. The descriptions given in the Schedule of Quantities (Schedule – A) shall, unless otherwise stated, be held to include wastage on materials, carriage and cartage, carrying and return of empties, hoisting, setting, fitting and fixing in position and all other labours necessary in and for the full and entire execution and completion of the work as aforesaid in accordance with good practice and recognized principles.
7.	Sufficiency of Tender	The Contractor shall be deemed to have satisfied himself before tendering as to the correctness and sufficiency of his tender for the works and of the rates and prices quoted in the Schedule of Quantities, which rates and prices shall, except as otherwise provided, cover all his obligations under the Contract and all matters and things necessary for the proper completion and maintenance of the works.
8.	Discrepancies and Adjustment of Errors	The several documents forming the Contract are to be taken as mutually explanatory of one another, detailed drawings being followed in preference to small scale drawing and figured dimensions in preference to scale and special conditions in preference to General Conditions.
8.1		In the case of discrepancy between the Schedule of Quantities, the Specifications and / or the Drawings, the following order of preference shall be observed :-
		i. Description of Schedule of Quantities. ii. Particular/ technical Specification and Special Condition, if any. iii. Drawings. iv. C P W D Specifications. v. Indian Standard Specifications of B I S./ IRC Code of Practice / ASTM standards. vi. Sound Engineering practice as directed by the Engineer-in-charge, whose decision in this regard shall final and binding on the contractor.

8.2		If there are varying or conflicting provisions made in any one document forming part of the contract, the Accepting Authority shall be the deciding authority with regard to the intention of the document and his decision shall be final and binding on the contractor.
8.3		Any error in description, quantity or rate in Schedule of Quantities or any omission therefrom shall not vitiate the Contract or release the Contractor from the execution of the whole or any part of the works comprised therein according to drawings and specifications or from any of his obligations under the contract.
8.4	Payment for similar items with different quoted rates in different subheads of the contract agreement	If the contractor has quoted different rates for the same item appearing in two or more subheads, then the lowest of the rates quoted shall only be considered for payments during execution of work. In case of deviation of quantity of such item, payments shall be made at the lowest quoted rate for quantity executed upto the deviation limit specified in the contract. Beyond the deviation limit the rate shall be derived as per relevant contract provision.
9.	Reverse Auction	AAI may opt for reverse auction in order to have competitive tenders for procurement of goods/services for the estimated cost (put to tender) excluding GST above Rs .2Cr.
10.	Signing of Contract	The successful tenderer / contractor, on acceptance of his tender by the Accepting Authority, shall, within 15 days from the stipulated date of start of the work, shall sign either single or Two agreements , as the case may be , one consisting BOQ for Civil works and another one for SITC and O&M / AMC / AICMC part.:
i)		i. The notice inviting tender, all the documents including drawings, if any, forming the tender as issued at the time of invitation of tender and acceptance thereof together with any correspondence leading thereto. ii. Standard AAI Form as mentioned in Schedule 'F' consisting of : a. Various standard clauses with corrections upto the date stipulated in Schedule 'F' alongwith annexures thereto. b. AAI Safety Code. c. Model Rules for the protection of health, sanitary arrangements for workers employed by AAI or its contractors. d. AAI Contractor's Labour Regulations. e. List of Acts and omissions for which fines can be imposed. iii. No payment for the work done will be made unless contract in form of agreement is signed by the contractor. iv. The agreement shall be executed on a non-judicial stamp paper of Rs. 100/- (Rs. One Hundred only) and the cost of the stamp paper shall be borne by the contractor.

CLAUSES OF CONTRACT

CLAUSE 1

	Performance Guarantee	This clause is applicable for the works for which the estimated cost put to tender is more than Rs.5 crores.
		i. The contractor shall submit an irrevocable Performance Guarantee of 5% (Five percent) of the Tendered amount in addition to other deposits mentioned elsewhere in the contract for his proper performance of the contract agreement, (not withstanding and/or without prejudice to any other provisions in the contract) within period specified in Schedule 'F' from the date of issue of award letter. This guarantee shall be in the form of Insurance surety bonds, Account payee Demand Draft, Or Bank Guarantee (Including e- Bank Guarantee) from any of the scheduled commercial banks (i.e Indian or Foreign Banks included in the second schedule of Reserve Bank Of India Act, 1934 excluding Co-operative/ Regional Rural Banks) in accordance with the form annexed hereto.(Appendix-XI).
		ii Performance guarantee should be furnished within 30 days of issue of award letter. In case the contractor fails to deposit performance guarantee within the stipulated period, no payment will be released to the contractor for the work done in respect of 1 st running account bill. Moreover, interest @10% per annum on performance guarantee amount would be levied (non-refundable) for delayed period of submission.
		iii. The Performance Guarantee shall be initially valid upto the stipulated date of completion plus 180 days beyond that. In case the time for completion of work gets enlarged, the contractor shall get the validity of Performance Guarantee extended to cover such enlarged time for completion of work. After recording of the completion certificate for the work by the competent authority, the performance guarantee shall be returned to the contractor, without any interest. However, in case of contracts involving maintenance of buildings and services / any other work thereafter, 50% of Performance Guarantee shall be retained as Security Deposit as per contract conditions. The same shall be returned on successful completion of commitment year wise proportionately.
		iv The Engineer-in-Charge shall not make a claim under the performance guarantee except for amounts to which the AAI is entitled under the contract (not withstanding and/or without prejudice to any other provisions in the contract agreement) in the event of: a. Failure by the contractor to extend the validity of the Performance Guarantee as described herein above, in which event the Engineer-in-Charge may claim the full amount of the Performance Guarantee. b. Failure by the contractor to pay the Chairman, AAI any amount due, either as agreed by the contractor or determined under any of the Clauses/Conditions of the agreement, within 30 days of the service of notice to this effect by Engineer-in-Charge.
		v. In the event of the contract being determined or rescinded under provision of any of the Clause/Condition of the agreement, the performance guarantee shall stand forfeited in full and shall be absolutely at the disposal of the Chairman, AAI.

CLAUSE 1 A

	Recovery of Security Deposit	The person/persons whose tender(s) may be accepted (hereinafter called the contractor) shall permit AAI at the time of making any payment to him for work done under the contract to deduct a sum at the rate of 5% of the gross amount of each running and final bill till the sum deducted will amount to security deposit of 5% of the tendered value of the work.. Such deductions will be made and held by AAI by way of Security Deposit unless he/they has/have deposited the amount of Security at the rate mentioned above in the form of Bank Guarantee (Including e- Bank Guarantee) from any of the commercial banks (i.e Indian or Foreign Banks included in the second schedule of Reserve Bank Of India Act, 1934 excluding Co-operative/ Regional Rural Banks). In case a guarantee bonds of any bank is furnished by the contractor to AAI as part of security deposit and the bank is unable to make payment against the said Guarantee Bond, the loss caused thereby shall fall on the contractor and the contractor shall forthwith on demand furnish additional security to the AAI to make good the deficit. In works where condition of submission of performance guarantee is not applicable, the security deposit at the rate of 10% (Ten Percent) of gross amount of each running bill shall be deducted instead of 5%, till the sum will amount to security deposit of 10% of the contract value of work. Other conditions shall remain same as stated above. All compensations or the other sums of money payable by the contractor under the terms of this contract may be deducted from, or paid by the sale of a sufficient part of his security deposit or from the interest arising therefrom, or from any sums which may be due to or may become due to the contractor by AAI on any account whatsoever and in the event of his Security Deposit being reduced by reason of any such deductions or sale as aforesaid, the contractor shall within 10 days make good in fixed deposit receipt, Insurance Surety bonds, account payee demand draft or Bank Guarantee from any of the commercial bank (if deposited for more than 12 months) endorssaid in favour of Airports Authority of India, any sum or sums which may have been deducted from, or raised by sale of his security deposit or any part thereof. The security deposit shall be collected from the running bills and the final bill of the contractor at the rates mentioned above. The security deposit as deducted above can be released against bank guarantee issued by any commercial bank (i.e Indian or Foreign banks included in the second Schedule of Reserve bank of India Act,1934 excluding Co-operative / Regional Rural Banks), on its accumulations to a minimum of Rs. 5 lakh to the condition amount of such bank guarantee, except last one, shall not be less than Rs. 5 lakh. Note 1: Provided further that the validity of Bank Guarantee shall be in conformity with provisions contained in the clause 17 which shall be extended from time to time depending upon extension of contract under provision of Clause 2 & Clause 5. Note 2: Note 1 above shall be applicable for both clause 1 and 1 A.
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	CLAUSE 1 B	
	Additional Performance Security	The contractor shall submit an irrevocable additional performance security in the form of an irrevocable Insurance Surety bond, demand draft, bank guarantee issued from Scheduled Commercial Bank (i.e. Indian or Foreign Banks included in the Second Schedule of Reserve Bank of India Act, 1934 excluding Co-Operative /Regional Rural Banks, if the Bid price offered by the selected bidder is lower than 10% of the estimated cost put to tender. This clause shall be binding and enforceable in relation to all works, irrespective of their nature, scope, or value.
		Additional performance security Amount and Treatment - The additional performance security shall be calculated as below- (i) <u>Where the bid price is below 10% but not below 20% of the project cost put to bid</u>, the additional performance security percentage shall be incremented by 0.25% for every percentage of bid price below 10% of the project cost put to bid starting at 11% with the additional bid performance security being 0.25% and this additional performance security percentage shall be applied on the bid price; (ii) <u>Where the bid price is below 20% but not below 25% of the project cost put to bid</u>, the additional performance security percentage shall be incremented by 0.50% for every percentage of bid price below 20% of the project cost put to bid starting at 21% with the additional bid performance security being 0.50% and this additional performance security percentage shall be applied on the bid price; (iii) <u>Where the bid price is below 25% but not below 30% of the project cost put to bid</u>, the additional performance security percentage shall be incremented by 0.75% for every percentage of bid price below 25% of the project cost put to bid starting at 26% with the additional bid performance security being 0.75% and this additional performance security percentage shall be applied on the bid price; (iv) <u>Where the bid price is below 30%</u>, the additional performance security percentage shall be incremented by 1% for every percentage of bid price below 30% of the project cost put to bid starting at 31% with the additional bid performance security being 1% and this additional performance security percentage shall be applied on the bid price; (v) <u>The</u> additional performance security percentage shall be rounded off to the next lower percentage based on whether the decimal point of the percentage of bid price is below 0.5% or next higher percentage based on whether the decimal point of the percentage of bid price is 0.5% or more. Accordingly, Performance Guarantee and Additional Performance Guarantee shall be taken within 30 days of issue of letter of intent, failing which the tender shall be stands cancelled without any notice. Further EMD shall be forfeited and contractor shall be liable for debarment upto a period of 2 years / as per latest amendment. The award letter shall be issued on receipt of Performance Guarantee and Additional Performance Guarantee. The Performance Guarantee and Additional Performance Guarantee shall be in prescribed form as provided in Clause 1 and Clause 1B respectively of the General Conditions of Contract (GCC). All matters pertaining to validity, extension, claims, forfeiture, and any other conditions in relation to the additional performance security shall be governed by the shall be governed by the Clause-I Performance Guarantee/Performance Security.

Clause 2

Compensation for Delay	If the contractor fails to maintain the required progress in terms of clause 5 or to complete the Work and clear the site on or before the contract or justified extended date of completion as per clause 5(excluding any extension under clause 5.5) as well as any extension granted under clause 12 and 15, he shall, without prejudice to any other right or remedy available under the law to the AAI on account of such breach, pay as compensation the amount calculated at the rates stipulated below as the authority specified in schedule 'F' may decide on the amount of Tendered Value of the work for every completed day/month (as determined) that the progress remains below that specified in Clause 5 or that the work remains incomplete. This will also apply to items or group of items for which a separate period of completion has been specified.	
	i) Compensation for delay of work	If the completion of work is delayed due to reasons attributed to contractor, AAI shall be entitled for compensation for delay as detailed below : i. For works costing upto Rs. 10.00 Lakh: 1.0% (one percent) of tendered value per week of delay or lesser amount as decided by the competent authority subject to a maximum of 10% of contract value. ii For the works costing more than Rs 10 Lakh 0.5% (half percent) of tendered value per week of delay or lesser amount as decided by the competent authority subject to a maximum of 10% of the tendered value.
		Provided always that the total amount of compensation for delay to be paid under this condition shall not exceed 10% of the Tendered Value of work or of the Tendered Value of the Sectional part of work as mentioned in schedule 'F'for which a separate period of completion is originally given. In case no compensation has been decided by the authority in Schedule 'F'during the progress of work, this shall be no waiver of right to levy compensation by the said authority if the work remains incomplete on final justified extended date of completion. If the Engineer in Charge decides to give further extension of time allowing performance of work beyond the justified extended date, the contractor shall be liable to pay compensation for such extended period. If any variation in amount of contract takes place during such extended period beyond justified extended date and the contractor becomes entitled to additional time under clause 12, the net period for such variation shall be accounted for while deciding the period for levy of compensation. However, during such further extended period beyond the justified extended period, if any delay occurs by events under sub clause 5.2, the contractor shall be liable to pay compensation for such delay. Provided that compensation during the progress of work beyond the justified extended date of completion for delay under this clause shall be for non-achievement of sectional completion or part handing over of work

		on stipulated/justified extended date for such part work or if delay affects any other works/services. This is without prejudice to right of action by Engineer-in-Charge under clause 3 for delay in performance and claim of compensation under that clause. In case action under clause 2 has not been finalized and the work has been determined under clause 3, the right of action under this clause shall remain post determination of contract but levy of compensation shall be for days the progress is behind the schedule on date of determination, as assessed by the authority in schedule 'F', after due consideration of justified extension. The compensation for delay, if not decided before the determination of contract, shall be decided after of determination of contract. The amount of compensation may be adjusted or set-off against any sum payable to the Contractor under this or any other contract with AAI. In case, the contractor does not achieve a particular milestone mentioned in schedule F, or the re-scheduled milestone(s) in terms of Clause 5.4, the amount shown against that milestone shall be withheld, to be adjusted against the compensation levied as above. With-holding of this amount on failure to achieve a milestone, shall be automatic without any notice to the contractor. However, if the contractor catches up with the progress of work on the subsequent milestone(s), the withheld amount shall be released. In case the contractor fails to make up for the delay in subsequent milestone(s), amount mentioned against each milestone missed subsequently also shall be withheld. However, no interest, whatsoever, shall be payable on such withheld amount.
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Clause 2A

	Incentive for early completion	In case, the contractor completes the work ahead of updated stipulated date of completion so provided in schedule F, a bonus @ 1 % (one per cent) of the tendered value per month computed on per day basis, shall be payable to the contractor, subject to a maximum limit of 5% (five per cent) of the tendered value. The amount of bonus, if payable, shall be paid along with final bill after completion of work. Bonus/ Incentive shall be applicable for the contract completed before stipulated dated of completion and shall not be applicable for the contract extended beyond the stipulated period even with justified hindrance and without any action of compensation for delay. This clause shall not be applicable for the works which estimated cost put to tender is less than Rs. 50.00 Cr.
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Clause 2B

	Release of withheld amount against compensation for delay.	Withheld amount towards compensation for delay over and above Rs. 50.00 lacs, can be released against Bank Guarantee (on the format given at Appendix-1) or in the form of fixed deposit receipts or guarantee bonds of any Scheduled Bank but not Co-operative or Gramin Bank, pending finalization of case of extension of time by competent authority as per delegation of powers. Concerned Executive Director (Engg)/ Competative Authority will authorize such action on receipt of proposal from the Engineer-In-Charge through proper channel.
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Clause 3

	When Contract can be Determined	Subject to other provisions contained in this clause, the Engineer-in-Charge may, without prejudice to his any other rights or remedy against the contractor in respect of any delay, inferior workmanship, any claims for damages and/or any other provisions of this contract or otherwise, and whether the date of completion has or has not elapsed, by notice in writing absolutely determine the contract in any of the following cases: i. If the contractor having been given a notice by the Engineer-in-Charge in writing to rectify, reconstruct or replace any defective work or that the work is being performed in an inefficient or otherwise improper or un-workman like manner shall omit to comply with the requirement of such notice for a period of seven days thereafter. ii. If the contractor has, without reasonable cause, suspended the progress of the work or has failed to proceed with the work with due diligence and continues to do so after a notice in writing of seven days from the Engineer-in-Charge. iii. If the contractor fails to complete the work or section of work with individual date of completion on or before the stipulated or justified extended date on or before such date of completion, and the Engineer in Charge without any prejudice to any other right or remedy under any other provision in the contract has given further reasonable time in a notice given in writing in that behalf as either mutually agreed or in absence of such mutual agreement by his own assessment making such time essence of contract and in the opinion of Engineer in Charge, the contractor will be unable to complete the same or does not complete the same within the period specified. iv. If the contractor persistently neglects to carry out his obligations under the contract and / or commits default in complying with any of the terms and conditions of the contract and does not remedy it or take effective steps to remedy it within 7 days after a notice in writing is given to him in that behalf by the Engineer-in-Charge. v. If the contractor shall offer or give or agree to give to any person in AAI service or to any other person on his behalf any gift or consideration of any kind as an inducement or reward for doing or forbearing to do or for having done or forborne to do any act in relation to the obtaining or execution of this or any other contract for AAI. vi. If the contractor shall enter into a contract with Airports Authority of India in connection with which commission has been paid or agreed to be paid by him or to his knowledge, unless the particulars of any such commission and the terms of payment thereof have been previously disclosed in writing to the Engineer-in-charge. vii. If the contractor shall obtain a contract with AAI as a result of wrong tendering or other non-bonafide methods of competitive tendering or commits any breach of Integrity Pact. viii. If the contractor being an individual, or if a firm, any partner thereof shall at any time be adjudged insolvent or have a receiving order or order for administration of his estate made against him or shall take any proceedings for liquidation or composition (other than a voluntary liquidation for the purpose of amalgamation or reconstruction) under any Insolvency Act for the time being in force or make any conveyance or assignment of his effects or composition or arrangement for the benefit of his creditors or purport so to do, or if any application be made under any Insolvency Act for the time being in force for the
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		sequestration of his estate or if a trust deed be executed by him for benefit of his creditors. ix. If the contractor being a company shall pass a resolution or the court shall make an order that the company shall be wound up or if a receiver or a manager on behalf of a creditor shall be appointed or if circumstances shall arise which entitle the court or the creditor to appoint a receiver or a manager or which entitle the court to make a winding up order. x. If the contractor shall suffer an execution being levied on his goods and allow it to be continued for a period of 21 days. xi. If the contractor assigns (excluding part(s) of work assigned to other agency(s) by the contractor as per terms of contract), transfers, sublets (engagement of labour on a piece-work basis or of labour with materials not to be incorporated in the work, shall not be deemed to be subletting) or otherwise parts with or attempts to assign, transfer, sublet or otherwise parts with the entire works or any portion thereof without the prior written approval of the Engineer-in-Charge. When the contractor has made himself liable for action under any of the cases aforesaid, the Engineer-in-Charge on behalf of the Chairman, AAI shall have powers : a. To determine the contract as aforesaid so far as performance of work by the Contractor of work is concerned (of which determination notice in writing to the contractor under the hand of the Engineer-in-Charge shall be conclusive evidence). Upon such determination, the Earnest Money Deposit, Security Deposit already recovered and Performance Guarantee under the contract shall be liable to be forfeited and shall be absolutely at the disposal of the AAI. b. After giving notice to the contractor to measure up the work of the contractor and to take such whole, or the balance or part thereof, as shall be un-executed out of his hands and to give it to another contractor or any other means to complete the work. The contractor, whose contract is determined as above, shall not be allowed to participate in the tendering process for the balance work. In the event of above courses being adopted by the Engineer-in-Charge, the contractor shall have no claim to compensation for any loss sustained by him by reasons of his having purchased or procured any materials or entered into any engagements or made any advances on account or with a view to the execution of the work or the performance of the contract. And in case action is taken under any of the provision aforesaid, the contractor shall not be entitled to recover or be paid any sum for any work thereof or actually performed under this contract unless and until the Engineer-in-Charge has certified in writing the performance of such work and the value payable in respect thereof and he shall only be entitled to be paid the value so certified.
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CLAUSE 3 A

		In case, the work cannot be started due to reasons not within the control of the contractor within 1/8th of the stipulated time for completion of work or one month whichever is higher, either party may close the contract by giving notice to the other party stating the reasons. In such eventuality, the
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		Earnest Money Deposit and the Performance Guarantee of the contractor shall be refunded within 30 days. Neither party shall claim any compensation for such eventuality. This clause is not applicable for any breach of the contract by either party.
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CLAUSE 3 B

	Debarment of Contractor	i) Contractor may be debarred, if it is determined under breached the integrity of Clause 41(a) and code of integrity of clause 41(b) ii) Contractor can also be debarred for the reasons like supply of substandard material, Non-supply of material, abandonment of work, sub standard quality of work, poor/unsatisfactory performance. iii) The period of debarment shall be upto 2 years or as per latest amendment.
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CLAUSE 4

	Contractor liable to pay compensation even if action not taken under Clause-3	In any case in which any of the powers conferred upon the Engineer-in-Charge by Clause-3 thereof, shall have become exercisable and the same are not exercised, the non-exercise thereof shall not constitute a waiver of any of the conditions hereof and such powers shall notwithstanding be exercisable in the event of any future case of default by the contractor and the liability of the contractor for compensation shall remain unaffected. In the event of the Engineer-in-Charge putting in force all or any of the powers vested in him under the preceding clause he may, if he so desires after giving a notice in writing to the contractor, take possession of (or at the sole discretion of the Engineer-in-Charge which shall be final and binding on the contractor) use as on hire (the amount of the hire money being also in the final determination of the Engineer-in-Charge) all or any tools, plant, materials and stores, in or upon the works, or the site thereof belonging to the contractor, or procured by the contractor and intended to be used for the execution of the work/ or any part thereof, paying or allowing for the same in account at the contract rates, or, in the case of these not being applicable, at current market rates to be certified by the Engineer-in-Charge, whose certificate thereof shall be final, and binding on the contractor, clerk of the works, foreman or other authorised agent to remove such tools, plant, materials, or stores from the premises (within a time to be specified in such notice) in the event of the contractor failing to comply with any such requisition, the Engineer-in-Charge may remove them at the contractor's expense or sell them by auction or private sale on account of the contractor and his risk in all respects and the certificate of the Engineer-in-Charge as to the expenses of any such removal and the amount of the proceeds and expenses of any such sale shall be final and conclusive against the contractor.
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CLAUSE 5

	Time and Extension for Delay	The time allowed for execution of the Works as specified in the Schedule 'F' or the extended time in accordance with these conditions shall be the essence of the Contract. The execution of the works shall commence from such time period as mentioned in schedule 'F' or from the date of handing over of the site whichever is later. If the Contractor commits default in commencing the execution of the work as aforesaid, AAI shall without
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		prejudice to any other right or remedy available in law, be at liberty to forfeit the earnest money & performance guarantee absolutely.
5.1		After the Contract is awarded, within 15 days, the Contractor shall submit a Time and Progress Chart for each mile stone and get it approved by the Engineer-in-charge. The Chart shall be prepared in direct relation to the time stated in the Contract documents for completion of items of the works. It shall indicate the forecast of the dates of commencement and completion of various trades of sections of the work and may be amended as necessary by agreement between the Engineer in Charge and the Contractor within the limitations of time imposed in the contract documents, and further to ensure good progress during the execution of the work, the contractor shall in all cases in which the time allowed for any work, exceeds one month (save for special jobs for which a separate programme has been agreed upon) complete the work as per mile stones given in Schedule 'F'. Project Management shall be done: a. For works costing upto Rs. 5.00 Cr. — CPM/ PERT Chart b. Works costing more than Rs. 5.00 Cr. — By using Project Management Software like Primavera / MS Project or any other software with the approval of Engineer in-charge. c. Contractor shall submit monthly progress reports (2 copies) highlighting status of various activities and physical completion of work. PROGRAMME CHART i. The Contractor shall prepare an integrated programme chart in Project Management Software for the execution of work, showing clearly all activities from the start of work to completion, with details of manpower, equipment and machinery required for the fulfillment of the programme within the stipulated period or earlier and submit the same for approval to the Engineer in Charge within fifteen days of award of the contract. A recovery of Rs. 2500/- (for works costing upto Rs. 5.00 Crores) / Rs. 5000/- (for works costing more than Rs. 5.00 Crores) shall be made on per day basis in case of delay in submission of the above programme. ii. The programme chart should include the following: — a. Descriptive note explaining sequence of the various activities. — b. Network (PERT / CPM / BAR CHART). — c. Programme for procurement of materials by the contractor. Programme for deployment of machinery / equipment's having adequate capacity, commensurate with the quantum of work to be done within the stipulated period, by the contractor. In addition to above, to achieve the progress of work as per programme, the contractor must bring at site adequate shuttering material required for cement concrete and R.C.C. works etc. for three floors within one month from the date of start of work till the completion of RCC work as per requirement of work. The contractor shall submit shuttering schedule adequate to complete structure work within laid down physical milestone. iii. If at any time, it appears to the Engineer in Charge that the actual progress of work does not conform to the approved programme referred above or after rescheduling of milestones, the contractor shall produce a revised programme within 7 (seven) days, showing the modifications to the approved programme to ensure timely completion

		of the work. The modified schedule of programme shall be approved by the Engineer in Charge. A recovery of Rs. 2500/- (for works costing upto Rs.5.00 Crores) / Rs. 5000/- (for works costing more than Rs.5.00 Crores) shall be made on per day basis in case of delay in submission of the modified programme. iv. The submission for approval by the Engineer in Charge of such programme or such particulars shall not relieve the contractor of any of the duties or responsibilities under the contract. This is without prejudice to the right of Engineer in Charge to take action against the contractor as per terms and conditions of the agreement. v. The contractor shall submit the progress report using MS Project/Primavera software with base line programme referred above for the work done during previous month to the Engineer in charge on or before 5th day of each month failing which a recovery Rs. 2500/- (for works costing upto Rs.5.00 Crores) / Rs. 5000/- (for works costing more than Rs.5.00 Crores) shall be made on per day basis in case of delay in submission of the monthly progress report.
5.2		If the work(s) be delayed by:- - Force majeure, or an act of terrorism - Abnormally bad weather, or - Serious loss or damage by fire, or - Civil commotion, local commotion of workmen, strike or lockout, affecting any of the trades employed on the work, or - Delay on the part of other contractors or tradesmen engaged by Engineer- in- Charge for executing work not forming part of the Contract, or - Non-availability of stores, which are the responsibility of AAI to supply or - Non-availability or break down of tools and Plant to be supplied or supplied by AAI or - Any other cause which, in the absolute discretion of the Engineer-in-Charge is beyond the Contractor's control. then upon the happening of any such event causing delay, the contractor shall immediately give notice thereof in writing to the Engineer-in-Charge but shall nevertheless use constantly his best endeavors to prevent or make good the delay and shall do all that may be reasonably required to the satisfaction of the Engineer-in-charge to proceed with the works. All correspondence with the agency and concerned stakeholders during execution of works will be taken into consideration for evaluation of hindrances causing delay, for grant of extension of time by the Competent Authority.
5.3		Request for rescheduling of Milestones and extension of time, to be eligible for consideration, shall be made by the contractor in writing within fourteen days of the happening of the event causing delay on the prescribed form to the authority indicated in schedule 'F'. The contractor may also, if practicable, indicate in such a request the period for which extension is desired.
5.4		In any such case the Engineer-in-Charge with the approval of authority indicated in Schedule 'F' may give a fair and reasonable extension of time and reschedule the Milestones for completion of work. Such extension or re-scheduling of the milestone shall be communicated to the contractor by the Engineer-in-charge in writing, within 1 month or 4 weeks of the date of receipt of such request respectively. Non-application by the contractor for extension of time/ re-scheduling of milestones shall not be a bar for giving

		a fair and reasonable extension / re-scheduling of milestones by the Engineer-in-charge with the approval of authority indicated in schedule 'F' and this shall be binding on the contractor.
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CLAUSE 6

	Measurements of Work Done	Computerized measurement will be done.
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Clause 6 A

	Computerised Measurement Book	Computerised measurement is mandatory for works costing more than Rs 5.00 Lacs. However in case of works costing lesser than Rs. 5.00 Lacs Engineer-in-Charge may decide for adopting computerized measurement if required, except as otherwise provided, ascertain and determine by measurement the value of work done in accordance with the contract. All measurements of all items having financial value shall be entered by the contractor and compiled in the shape of the Computerized Measurement Book having pages of A-4 size as per the format of the department so that a complete record is obtained of all the items of works performed under the contract.
		All such measurements and levels recorded by the contractor or his authorised representative from time to time, during the progress of the work, shall be got checked by the contractor from the Engineer-in-Charge or his authorised representative as per interval or program fixed in consultation with Engineer-in-Charge or his authorised representative. After the necessary corrections made by the Engineer-in-Charge, the measurement sheets shall be returned to the contractor for incorporating the corrections and for resubmission to the Engineer-in-Charge for the dated signatures by the Engineer-in-Charge and the contractor or their representatives in token of their acceptance. Whenever bill is due for payment, the contractor would initially submit draft computerized measurement sheets and these measurements would be got checked/test checked <i>from</i> the Engineer-in-Charge and/or his authorized representative. The contractor will, thereafter, incorporate such changes as may be done during these checks/test checks in his draft computerised measurements, and submit to the department a computerised measurement book, duly bound, and with its pages machine numbered. The Engineer-in-Charge and/or his authorised representative would thereafter check this MB, and record the necessary certificates for their checks/test checks. The final, fair, computerised measurement book given by the contractor, duly bound, with its pages machine numbered, should be <i>100%</i> correct, and no cutting or overwriting in the measurements would thereafter be allowed. If at all any error is noticed, the contractor shall have to submit a fresh computerized MB with its pages duly machine numbered and bound, after getting the earlier MB cancelled by the department. Thereafter, the MB shall be taken in the records of Engineer-in-charge, and allotted a number as per the Register of Computerized MBs. This should be done before the corresponding bill is submitted to the Engineer-in-charge for payment. The contractor shall submit two spare copies of such

		computerized MB's for the purpose of reference and record by the various officers of the department. The contractor shall also submit to the department separately his computerized Abstract of Cost and the bill based on these measurements, duly bound, and its pages machine numbered alongwith two spare copies of the "bill. Thereafter, this bill will be processed by the Engineer-in-charge and allotted a number as per the computerized record in the same way as done for the measurement book meant for measurements. The contractor shall, without extra charge, provide all assistance with every appliance, labour and other things necessary for checking of measurements / levels by the Engineer-in-charge or his representative. Except where any general or detailed description of the work expressly shows to the contrary, measurements shall be taken in accordance with the procedure set forth in the specifications notwithstanding any provision in the relevant Standard Method of measurement or any general or local custom. In the case of item which are not covered by specifications, measurements shall be taken in accordance with the relevant standard method of measurement issued by the Bureau of Indian Standards and if for any item no such standard is available then a mutually agreed method shall be followed. The contractor shall give not less than seven days' notice to the Engineer-in- Charge or his authorized representative of the work before covering up or otherwise placing beyond the reach of checking and / or test checking the measurement of any work in order that the same be checked and / or test checked and correct dimensions thereof be taken before the same is covered up or placed beyond the reach of checking and / or test checking measurement and shall not cover up and place beyond reach of measurement any work without consent in writing of the Engineer-in-charge or his authorized representative of the work who shall within the aforesaid period of seven days inspect the work, and if any work shall be covered up or placed beyond the reach of checking and / or test checking measurements without such notice having been given or the Engineer-incharge's consent being obtained in writing the same shall be uncovered at the contractor's expense, or in default thereof no payment or allowance shall be made for such work or the materials with which the same was executed.
		Engineer-in-charge or his authorised representative may cause either themselves or through another officer of the department to check the measurements recorded by contractor and all provisions stipulated herein above shall be applicable to such checking of measurements or levels. It is also a term of this contract that checking and/or test checking the measurements of any item of work in the measurement book and/or its payment in the interim, on account of final bill shall not be considered as conclusive evidence as to the sufficiency of any work or material to which it relates nor shall it relieve the contractor from liabilities from any over measurement or defects noticed till completion of the defects liability period.

CLAUSE 7

Payment on Intermediate Certificate to be regarded as Advances	No payment shall be made for work, estimated to cost Rs. One lac or less till after the whole of the work shall have been completed and certificate of completion given. For works estimated to cost over Rs. One lac, the interim or running account bills shall be submitted by the contractor for the work executed on the basis of such recorded measurements on the format of the Department in triplicate on or before the date of every month fixed for the same by the Engineer in Charge. The contractor shall not be entitled to be paid any such interim payment if the gross work done together with net payment/ adjustment of advances for material collected, if any, since the last such payment is less than the amount specified in Schedule 'F', in which case the interim bill shall be prepared on the appointed date of the month after the requisite progress is achieved. Engineer-in-Charge shall arrange to have the bill verified by taking or causing to be taken, where necessary, the requisite measurements of the work. In the event of the failure of the contractor to submit the bills, Engineer-in-Charge shall prepare or cause to be prepared such bills in which event no claims whatsoever due to delays on payment including that of interest shall be payable to the contractor. Payment on account of amount admissible shall be made by the Engineer in Charge certifying the sum to which the contractor is considered entitled by way of interim payment at such rates as decided by the Engineer in Charge. An amount of ad-hoc payment not less than 75% of the net amount of the bill under check, shall be made within 10 working days of submission of the bill by the Contractor to the Engineer in Charge or his Authorized Engineer together with the account of the material issued by the department, or dismantled materials, if any. The remaining payment is also to be made after final checking of the bill within 28 working days of submission of bill by the contractor. In case of delay in payment of intermediate bills after 30 days of submission of bill by the contractor, provided the bill submitted by the contractor found to be in order, a simple interest @ prevailing rate of interest of General Provident Fund shall be paid to the contractor from the date of expiry of prescribed time limit. All such interim payments shall be regarded as payment by way of advances against final payment only and shall not preclude the requiring of bad, unsound and imperfect or unskilled work to be rejected, removed, taken away and reconstructed or re-erected. Any certificate given by the Engineer in charge relating to the work done or materials delivered forming part of such payment, may be modified or corrected by any subsequent such certificate(s) or by the final certificate and shall not by itself be conclusive evidence that any work or materials to which it relates is are in accordance with the contract and specifications. Any such interim payment, or any part thereof shall not in any respect conclude, determine or affect in any way powers of the Engineer in charge under the contract or any of such payments be treated as final settlement and adjustment of accounts or in any way vary or affect the contract. Pending consideration or extension of date of completion, interim payments shall continue to be made as herein provided without prejudice to the right of the department to take action under the terms of this contract for delay in the completion of work, if the extension of date of completion is not granted by the competent authority.
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		The Engineer in Charge in his sole discretion on the basis of a certificate from the Asstt Manager / Manager (Engg) to the effect that the work has been completed up to the level in question make interim advance payments without detailed measurements for work done (other than foundations, items to be covered under finishing items) up to lintel level (including sunshade etc.) and slab level, for each floor working out at 75% of the assessed value. The advance payments so allowed shall be adjusted in the subsequent interim bill(s) to be submitted by the contractor within 10 days of the interim payment. In case of delay in submission of bill by the contractor a simple interest @ 10% (percent) per annum on the advance payment made shall be paid to the AAI from the date of expiry of prescribed 10 days.
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CLAUSE 7A

		No Running Account Bill shall be paid for the work till the applicable labour licenses, registration with EPFO, ESIC and BOCW Welfare Board, whatever applicable are submitted by the contractor to the Engineer in Charge
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CLAUSE 8

	Completion Certificate and Completion Plans	Within ten days of the completion of the work, the contractor shall give notice of such completion to the Engineer-in-Charge and within thirty days of the receipt of such notice, the Engineer-in-Charge shall inspect the work and if there is no defect in the work, shall furnish the contractor with a final certificate of completion, otherwise a provisional certificate of physical completion indicating defects (a) to be rectified by the contractor and/or (b) for which payment will be made at reduced rates, shall be issued. But no final certificate of completion shall be issued, nor shall the work be considered to be complete for 'Civil Construction Works' until the contractor shall have removed from the premises on which the work shall be executed all scaffolding, surplus materials, rubbish and all huts and sanitary arrangements required for his/their work people on the site in connection with the execution of the works as shall have been erected or constructed by the contractor(s) and cleaned off the dirt from all wood work, doors, windows, walls, floor or other parts of the building, in, upon, or about which the work is to be executed or of which he may have had possession for the purpose of the execution; thereof, and not until the work shall have been measured by the Engineer-in-charge. If the contractor shall fail to comply with the requirements of this Clause as to removal of scaffolding, surplus materials and rubbish and all huts and sanitary arrangement as aforesaid and cleaning off dirt on or before the date fixed for the completion of work, the Engineer-in-charge may at the expense of the contractor remove such scaffolding, surplus materials and rubbish etc., and dispose of the same as he thinks fit and clean off such dirt as aforesaid, and the contractor shall have no claim in respect of scaffolding or surplus materials as aforesaid except for any sum actually realised by the sale thereof.
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		a. For electrical and mechanical capital works: The contractor shall remove the rubbish from the site. Following conditions must be met before recording completion certificate : Submits completion plan, maintenance manual, manufactures catalogue and gives performance test for system. b. For repair works: The performance of the repaired system has been tested and found satisfactory. c. For AMC work: The system has been tested for its performance/ completeness and taken over by AAI/ next agency for operation and maintenance.
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CLAUSE 8 A

	Contractor to keep site clean	When the annual repairs and maintenance of works are carried out, the splashes and droppings from white washing, colour washing, painting etc., on walls, floor, windows etc. shall be removed and the surface cleaned simultaneously with the completion of these items of work in the individual rooms, quarters or premises etc. Where the work is done without waiting for the actual completion of all the other items of work in the contract, in case the contractor fails to comply with the requirements of this clause, the Engineer-in-charge shall have the right to get this work done at the cost of the contractor either departmentally or through any other agency. Before taking such action, the Engineer-in-charge shall give ten days notice in writing to the contractor.
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CLAUSE 8 B

	Completion Plans to be Submitted by the Contractor	The contractor shall submit completion plan as required vide General Specifications for Electrical works (Part I internal) 2013 and (Part II External) 1994 or latest available specifications, as applicable within thirty days of the completion of the work. The contractor shall submit completion plan for building works, all services, and obtain occupancy certificate from local bodies on the basis of completion drawings within a period of 30 days from the date of completion. The contractor shall also submit catalogues of all equipment's and maintenance manual for the complete E & M systems. If contractor fails to submit completion plans of all works, he shall be liable to pay compensation @ 0.5% of the tendered value of works costing up to Rs. 5 Crores subject to maximum of Rs. 1.00 Lac and 0.25% for works costing more than Rs. 5 crores subject to maximum of Rs. 1.5.Lac. The decision of Project in charge in this regard shall be final and binding on the contractor.
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CLAUSE 9

	Payment of final bill	The corrected final bill shall be submitted by the contractor in the same manner as specified in interim bills within three months of physical completion of the work or within one month of the date of the final certificate of completion furnished by the Engineer-in-charge whichever is earlier. No further claims shall be made by the contractor after submission of the final bill and these shall be deemed to have been waived and
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		extinguished. Payments of those items of the bill in respect of which there is no dispute and for those items which are in dispute on account of quantity and/ or rates shall be paid at approved quantity and/ or rates by the Engineer-in-charge, within three months period reckoned from the date of receipt of the bill by the Engineer in- Charge or his authorized representative, complete with account of materials issued by the Department and dismantled materials. If the final bill is submitted by the contractor within the period specified above and payment of final bills is made by the AAI within above prescribed time limit, if delay in payment, a simple interest @ prevailing rate of interest of General Provident Fund shall be paid to the contractor from the date of expiry of prescribed time limit, provided the final bill submitted by the contractor is found to be in order. The Final bill shall be prepared for both L1 & L2 bidders for all tendered items (excluding Extra Items based on market rate) and payment shall be made on the basis of lower of the two.
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CLAUSE 9 A

	Payment of contractor's bills to Banks	Payments due to the contractor and refund of various nature may, if so desired by him and wherever possible in banks be made through electronic payment mechanism instead of direct to him, provided that the contractor furnishes to the Engineer-in- Charge. - Informations as per proforma attached. - An authorisation in the form of a legally valid document such as power of attorney conferring authority on the bank to receive payments and - His own acceptance of the correctness of the amount made out as being due to him by Authority or his signature on the bill or other claim preferred against Authority before settlement by the Engineer-in-charge of the account or claim by payment to the bank. While the receipt given by such banks shall constitute a full and sufficient discharge for the payment, the contractor shall whenever possible present his bills duly receipted and discharged through his bank. Nothing herein contained shall operate to create in favour of the bank any rights or equities vis-à-vis the Airports Authority of India.
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CLAUSE 10

	Materials supplied by Authority	Materials which Authority will supply are shown in Schedule 'B' which also stipulates quantum, place of issue and rate(s) to be charged in respect thereof. The contractor shall be bound to procure them from the Engineer-in-charge. As soon as the work is awarded, the contractor shall finalise the programme for the completion of work as per clause 5 of this contract and shall give his estimates of materials required on the basis of drawings/ or schedule of quantities of the work. The contractor shall give in writing his requirement to the Engineer in charge, which shall be issued to him keeping in view the progress of work as assessed by the Engineer-in-Charge in accordance with the agreed phased programme of work indicating monthly requirements of various materials. The contractor shall
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	place his indent in writing for issue of such materials at least 7 days in advance of his requirement. Such materials shall be supplied for the purpose of the contract only and the value of the materials so supplied at the rates specified in the aforesaid schedule shall be set off or deducted, as and when materials are consumed in items of work (including normal wastage) for which payment is being made to the contractor, from any sum then due or which may therefore become due to the contractor under the contract or otherwise or from the security deposit. At the time of submission of bills, the contractor shall certify that balance of materials supplied is available at site in original good condition. The contractor shall submit alongwith every running bill (on account or interim bill) material wise reconciliation statements supported by complete calculations reconciling total issue, total consumption and certified balance (diameter/ section-wise in the case of steel) and resulting variations and reasons thereof. Engineer-in-charge shall (whose decision shall be final and binding on the contractor) be within his rights to follow the procedure of recovery in clause 42 at any stage of the work if reconciliation is not found to be satisfactory. The contractor shall bear the cost of getting the material issued, loading, transporting to site, unloading, storing under cover as required, cutting assembling and joining the several parts together as necessary. Notwithstanding anything to the contrary contained in any other clause of the contract and all stores / materials so supplied to the contractor or procured with the assistance of the AAI shall remain the absolute property of Authority and the contractor shall be the trustee of the stores/ materials, and the said stores/ materials shall not be removed/ disposed off from the site of the work on any account and shall be at all times open to inspection by the Engineer in-charge or his authorised agent. Any such stores/ materials remaining unused shall be returned to the Engineer in-charge in as good a condition in which they were originally supplied at a place directed by him, at a place of issue or any other place specified by him as he shall require, but in case it is decided not to take back the stores/ materials the contractor shall have no claim for compensation on any account of such stores/ materials so supplied to him as aforesaid and not used by him or for any wastage in or damage to in such stores/ materials. On being required to return the stores/ materials, the contractor shall hand over the stores/ materials on being paid or credited such price as the Engineer in-charge shall determine, having due regard to the condition of the stores/ materials. The price allowed for credit to the contractor, however, shall be at the prevailing market rate not exceeding the amount charged to him, excluding the storage charge, if any. The decision of the Engineer in-charge shall be final and conclusive. In the event of breach of the aforesaid condition, the contractor shall in addition to throwing himself open to account for contravention of the terms of the licenses or permit and/ or for criminal breach of trust, be liable to Authority for all advantages or profits resulting or which in the usual course would have resulted to him by reason of such breach. Provided that the contractor shall in no case be entitled to any compensation or damages on account of any delay in supply or non-supply thereof all or any such materials and stores provided further that the contractor shall be bound to execute the entire work if the materials are supplied by the Authority within the original scheduled time for completion of the work plus 50% thereof or schedule time plus 6 months whichever is more if the time of completion of work exceeds 12 months, but if a part of the materials only has been supplied within the
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	aforesaid period, then the contractor shall be bound to do so much of the work as may be possible with the materials and stores supplied in the aforesaid period. For the completion of the rest of the work, the contractor shall be entitled to such extension of time as may be determined by the Engineer in charge whose decision in this regard shall be final and binding on the contractor. The contractor shall see that only the required quantities of materials are got issued. Any such material remaining unused and in perfectly good/ original condition at the time of completion or determination of the contract shall be returned to the Engineer in charge at the stores from which it was issued or at a place directed by him by a notice in writing. The contractor shall not be entitled for loading transporting, unloading and stacking of such unused material except for the extra lead, if any involved, beyond the original place of issue.
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CLAUSE 10 A

Materials to be provided by the contractor and Mandatory Tests	1. The contractor shall, at his own expense, provide all materials, required for the works other than those which are stipulated to be supplied by the Authority. 2. The contractor shall, at his own expense and without delay; supply to the Engineer in- charge samples of materials to be used on the work and shall get these approved in advance. All such materials to be provided by the contractor shall be in conformity with the specifications laid down or referred to in the contract. The contractor shall, if requested by the Engineer-in-charge furnish proof, to the satisfaction of the Engineer-in- charge that the materials so comply. The Engineer-in-charge shall within thirty days of supply of samples or within such further period as he may require intimate to the Contractor in writing whether samples are approved by him or not. If samples are not approved, the Contractor shall forthwith arrange to supply to the Engineer-incharge for his approval, fresh samples complying with the specifications laid down in the contract. When materials are required to be tested in accordance with specifications, approval of the Engineer-in-charge shall be issued after the test results are received. 3. The contractor shall at his risk and cost submit the samples of materials to be tested or analysed and shall not make use of or incorporate in the work any materials represented by the samples until the required tests or analysis have been made and materials finally accepted by the Engineer-in-charge. 4. If any additional tests apart from mandatory tests specified in the contract are required to be carried out at the instance of AAI or any other advisory body, to ensure conformity of the item to the contract specifications, the cost of such tests shall be borne by AAI. In case the material / equipment fails in the above tests, the expenditure incurred by AAI on testing of such material or equipment along with incidental charges borne by AAI (if any) shall be recovered from the dues of the contractor and action shall be taken under Clause 16 and other relevant clauses of the contract. 5. The contractor shall not be eligible for any claim or compensation either arising out of any delay in the work or due to any corrective measures required to be taken on account of and as a result of testing of materials.
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		6. The contractor shall, at his risk and cost, make all arrangements and shall provide all facilities as the Engineer-in-charge may require for collecting and preparing the required number of samples for such tests at such time and to such place or places as may be directed by the Engineer-in-charge and bear all charges and cost of testing unless specifically provided for otherwise elsewhere in the contract or specifications. The Engineer-in-charge or his authorised representative shall at all times have access to the works and to all workshops and places where work is being prepared or from where material, manufactured, articles or machinery are being obtained for the works and the contractor shall afford every facility and every assistance in obtaining the right to such access. 7. The Engineer-in-charge shall have full powers to require the removal from the premises of all materials which in his opinion are not in accordance with the specifications and in case of default, the Engineer-in-charge shall be at liberty to employ at the expense of the contractor, other persons to remove the same without being answerable or accountable for any loss or damage that may happen or arise to such materials. The Engineer-in-charge shall also have full powers to require other proper materials to be substituted thereof and in case of default, the Engineer-in-charge may cause the same to be supplied and all costs which may be attracted for such removal and substitution shall be borne by the Contractor. 8. The contractor shall at his own expense, provide a material testing lab at the site for conducting routine field tests. The lab shall be equipped atleast with the testing equipment as specified in Schedule F. 9. Details in respect of all mandatory tests shall be maintained in the desired format and attached with each Running Account Bill.
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CLAUSE 10 B

(1)	Secured Advance on Nonperishable materials	1. The Contractor, on signing an indenture in the form to be specified by the Engineer in-charge, shall be entitled to be paid during the progress of the execution of the work upto 75% of the assessed value of any materials which are in the opinion of the Engineer in-charge nonperishable, nonfragile and noncombustible and are in accordance with the contract and which have been brought on the site in connection therewith and are adequately stored and/ or protected against damage by weather or other causes but which have not at time of advance been incorporated in the works. When materials on account of which an advance has been made under this sub-clause are incorporated in the work, the amount of such advance shall be recovered/ deducted from the next payment made under any of the clause or clauses of this contract. Such secured advance shall also be payable on other items of perishable nature, fragile and combustible with the approval of the Engineer in-charge provided the contractor provides a comprehensive insurance cover for the full cost of such materials. The decision of the Engineer in-charge shall be final and binding on the contractor in this matter. No secured advance, shall however, be paid on high-risk materials such as ordinary glass, sand, petrol, diesel etc. The secured advance shall also be payable against items brought at site for use in electrical and mechanical systems. Such secured
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		advance shall be paid on submission of Collateral Bank Guarantee submitted by the vendor against the payment in case equipment/system fails to perform on testing and commissioning. Normally secured advance is paid up to 75% of the assessed value of items but in any case it shall not exceed 80% of cost of items indicated for supply of equipment.
(II)	Mobilisation Advance	2. Mobilisation advance not exceeding 10% of the tendered value may be given if requested by the contractor in writing within 06 Months of the order to commence the work. Such advance shall be released in two or more installments to be determine by the Engineer in Charge at his sole dicreation. The first installment of such advance shall be released by the Engineer in charge to the contractor on a request made by the contractor to the Engineer in charge in this behalf. The second and subsequent installments shall be released by the Engineer in-charge only after the contractor furnishes a proof of the satisfactory utilization of the earlier installment (s) to the satisfaction of Engineer in-charge. Before any instalment of advance is released, the contractor shall execute Bank Guarantee Bonds not more than 6 (six) in number from commercial Bank for the amount equal to 110% of the amount of advance and valid for the period till recovery of advance. This (Bank Guarantee from commercial Bank on prescribed format for the amount equal to 110% of the balance amount of advance) shall be kept renewed from time to time to cover the balance amount and likely period of complete recovery.
	Interest on Mobilisation advance	The mobilization advance bear simple interest at the rate as mentioned in Schedule F per annum and shall be calculated from the date of payment to the date of recovery, both days inclusive, on the outstanding amount of advance
	Recovery of Mobilisation advance	Recovery of such sums advanced shall be made by the deduction from the contractor's bills commencing after first ten percent of the gross value of the work is executed and paid, on pro rata percentage basis to the gross value of the work billed beyond 10% in such a way that the entire advance is recovered by the time eighty percent of the gross value of the contract is executed and paid, together with interest due on the entire outstanding amount up to the date of recovery of the installment. If the circumstances are considered reasonable by the Engineer in Charge, the period mentioned for request by the contractor in writing for grant of mobilization advance may be extended at the discretion of the Engineer in Charge.

CLAUSE 10 C

	Payment on Account of Increase in Prices/ Wages due	If after submission of the tender, the price of any material incorporated in the works (excluding the materials covered under Clause 10CA and not being a material supplied from the Engineer in-charge's stores in accordance with Clause 10 thereof) and/ or wages of labour increases as a direct result of the coming into force of any fresh law or statutory rule or
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	to Statutory Order(s)	order (but not due to any variation of rates in GST applicable on such materials being considered under this clause) beyond the prices / wages prevailing at the time of last stipulated date for receipt of the tenders including extensions, if any, for the work, during contract period including the justified period extended under the provisions of the Clause 5 of the Contract without any action under Clause 2, then the amount of the contract shall accordingly be varied. If after submission of the tender, the price of any material incorporated in the works (excluding the material covered under clause 10CA and not being a material supplied from the Engineer in charge's stores in accordance with clause 10 thereof) and / or wages of labour as prevailing at the time of last stipulated date of receipt of tender including extensions, if any, is decreased as a direct result of the coming into force of any fresh law or statutory rule or order (not due to any changes in GST /Custom duty). Authority shall in respect of materials incorporated in the works (excluding the material covered under clause 10CA and not being materials supplied from the Engineer in charge's stores in accordance with Clause 10 hereof) and/ or labour engaged on the execution of the work after the date of coming into force of such law, statutory rule or order be entitled to deduct from the dues of the contractor, such amount as shall be equivalent to the difference between the prices of the materials and/ or wages as prevailed at the time of the last stipulated date for receipt of tenders including extensions if any for the work and the prices of materials and/ or wages of labour on the coming into force of such law, statutory rule or order. This will be applicable for the contract period including the justified period extended under the provisions of clause 5 of the contract without any action under clause 2. Engineer in charge shall call books of account and other relevant documents from the contractor to satisfy himself about reasonability of increase in prices of materials and wages. The contractor shall, within a reasonable time of his becoming aware of any alteration in the price of any such materials and/ or wages of labour, give notice thereof to the Engineer in charge stating that the same is given pursuant to this condition together with all information relating thereto which he may be in position to supply. For this purpose, the labour component of 85% of the value of the work executed during period under consideration shall not exceed the percentage as specified in Schedule F, and the increase / decrease in labour shall be considered on the minimum daily wages in rupees of any unskilled mazdoor, fixed under any law, statutory rule or order. The cost of work for which escalation applicable (w) is same as cost of work done as worked out as indicated in clause 10CC minus the amount of full assessed value of secured advances.
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CLAUSE 10 CA

	Payment due to variation in prices of materials after receipt of tender	If after submission of the tender, the price of materials specified in Schedule F increases/ decreases beyond the base price(s) as indicated in schedule F for the work, then the amount of the contract shall accordingly be varied and provided further that any such variations shall be effected for stipulated period of contract including the justified period extended under the provisions of clause 5 of the contract without any action under Clause 2.
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	However for work done/ during the justified period extended as above, it will be limited to indices prevailing at the time of updated stipulated date of completion considering the effect of extra work (Extra time to be calculated on pro-rata basis only as cost of extra work X stipulated period/ tendered cost). The increase/ decrease in prices of cement, steel reinforcement, structural steel, Bitumen and POL shall be determined by the Price indices issued by the Director General, CPWD. For other items provided in the Schedule 'F', this shall be determined by the All India Wholesale Price Indices of materials as published by Economic Advisor to Government of India, Ministry of Commerce and Industry. Base price for cement, steel reinforcement, structural steel and POL shall be as issued under authority of Director General, CPWD applicable for Delhi including Noida, Gurgaon, Faridabad and Ghaziabad and for other places as issued under the authority of Zonal Chief Engineer, CPWD and base price of other materials issued by concerned Zonal Chief Engineer and as indicated in Schedule 'F'. In case, price index of a particular material is not issued by Ministry of Commerce and Industry then the price index of nearest similar material as indicated in Schedule F shall be followed. The amount of the contract shall accordingly be varied for all such materials worked out as per the formula given below for individual material: Adjustment for component of individual material. $V = P \times Q \times \frac{CI - CI_0}{CI_0}$ where, V = Variation in material cost i.e. increase or decrease in the amount in rupees to be paid or recovered P = Base price of material as issued under authority of DG, CPWD or concerned Zonal Chief Engineer CPWD and as indicated in Schedule 'F'. For Projects and original works Q = Quantity of material brought at site for bonafide use in the works since previous bill excluding any such quantity consumed in the deviated quantity of items beyond deviation limit and extra/substituted item, paid/to be paid at rates derived on the basis of market rates under clause 12.2 For maintenance works Q = Quantity of material brought at site for bonafide use in the works since previous bill including any such quantity consumed in the deviated quantity of items beyond deviation limit paid at agreement rates and extra/substituted item being scheduled items, but excluding nonscheduled extra/substituted item paid/to be paid at market rates under clause 12.2
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		CI0 = Price index for cement, steel reinforcement bars, structural steel and POL as issued by the DG, CPWD and corresponding to the time of base price of respective material indicated in schedule 'F'. For other items, if any provided in Schedule 'F', All India Wholesale Price Index for the material as published by the Economic Advisor to Government of India, Ministry of Industry and Commerce and corresponding to the time of base price of respective material indicated in Schedule 'F'. CI = Price index for cement, steel reinforcement bars, structural steel and POL as issued under the authority of DG, CPWD for period under consideration. For other items, if any, provided in Schedule 'F' All India Wholesale Price Index for the material for the period under consideration as published by Economic Advisor to Government of India, Ministry of Industry and Commerce.
		Note: i. In respect of justified period extended under the provisions of Clause 5 of the contract without any action under clause 2, the index prevailing at the time of updated stipulated date of completion considering the effect of extra work (extra time to be calculated on prorata basis only as cost of extra work X stipulated period/ tendered cost) shall be considered. Provided always that provisions of the preceding Clause 10 C shall not be applicable in respect of materials covered in this Clause. ii. If during progress of work or at the time of completion of work, it is noticed that any material brought at site is in excess of requirement, then amount of escalation if paid earlier on such excess quantity of material shall be recovered on the basis of cost indices as applied at time of payment of escalation or as prevailing at the time of effecting recovery, whichever is higher. iii. Cement mentioned wherever in this clause includes cement component used in RMC brought at site from outside approved RMC plants, if any. iv. The date wise record of ready mix concrete shall be kept in a register and cement consumption for the same shall be calculated accordingly. v. If built up steel items are brought at site from workshop, then the variation shall be paid for structural steel up to the period when the built up item/finished product is brought at site.

Clause 10CC

	Payment due to Increase/ Decrease in Prices/ Wages (excluding material covered under clause 10CA) after Receipt of Tender for works.	If the prices of materials (not being materials supplied or services rendered at fixed prices by the Department in accordance with clause 10 & 34 thereof) and/ or wages of labour required for execution of work increase, the contractor shall be compensated for such increase as per provisions detailed below and the amount of the contract shall accordingly be varied, subject to the condition that such compensation for escalation in prices and wages shall be available only for the work done during the stipulated period of the contract including the justified period extended under the provisions of clause 5 of the contract without any action under clause 2. No such compensation shall be payable for a work for which the stipulated period of completion is equal to or less than the time as specified in Schedule 'F'. Such compensation for escalation in the prices of materials and labour, when due, shall be worked out based on the following provisions: i. The base date for working out such escalation shall be the last stipulated date of the receipt of tenders including extension, if any. ii. The cost of work on which escalation will be payable shall be reckoned as below: a. _____ Gross value of work done upto this quarter (A) b. _____ Gross value of work done upto the last quarter (B) c. _____ Gross value of work done since previous quarter (A-B) (C) d. _____ Full assessed value of secured advance (excluding material covered under clause 10CA) fresh paid in this quarter (D) e. _____ Full assessed value of secured advance (excluding material covered under clause 10CA) recovered in this quarter (E) f. _____ Full assessed value of secured advance for which escalation is payable In this quarter (D-E) (F) g. _____ Advance payment made during this quarter (G) h. _____ Advance payment recovered during this quarter (H) i. _____ Advance payment for which escalation is payable in this quarter (G-H) (I) j. _____ Extra items/ deviated quantities of items paid as per clause 12 based (J) on prevailing market rates during this quarter: Then, $M = (C + F + I - J)$ $N = 0.85 M$ k. _____ Less cost of material supplied by the department as per clause 10 and recovered during the quarter (K) l. _____ Less cost of services rendered at fixed charges as per Clause 34 and recovered during the quarter (L) Cost of work for which escalation is applicable $W = N - (K + L)$
		iii. Components for materials, (except Bitumen, cement, reinforcement bars, structural steel or others material covered under clause 10CA) labour, P.O.L. etc. shall be pre-determined for every work and incorporated in the conditions of contract attached to the tender papers included in Schedule F. The decision of the Engineer incharge in working out such percentage shall be binding on the contracts.

		iv. The compensation for escalation for other materials (except Bitumen, cement, reinforcement bars, structural steel or others material covered under clause 10CA) and P.O.L. shall be worked as per the formula(m & n) given below: a. Adjustment for civil component (except Bitumen, cement, reinforcement bars, structural steel and others material covered under clause 10CA) /electrical component of construction.
	Materials	m. Formula for adjustment in material cost $V_m = \frac{W}{100} \times \frac{X_m}{100} \times \frac{MI - MI_0}{MI_0}$ V_m = Variation in material cost i.e. increase or decrease in the amount in rupees to be paid or recovered. _____ _____ _____ W = Cost of work done, worked out as indicated in sub para (ii) of Clause 10 CC X_m = Component of 'materials' (except cement, structural steel, reinforcement bars, POL and other materials covered under clause 10 CA) expressed as percent of the total value of work. _____ Component of materials (except cement, reinforcement bars and structural steel, and other materials covered under clause 10CA) expressed as a percent of the total value of the work. _____ _____ _____ MI = All India wholesale price index for civil component/ electrical component* of construction material as worked out on the basis of All India Wholesale Price Index for Individual Commodities/ Group Items for the period under consideration as published by the Economic Advisor to Government of India, Ministry of Industry & Commerce and applying weightage to the Individual Commodities/ Group Items (in respect to the justified period extended under the provisions of clause 5 of the contract without any action under Clause 2, the index prevailing at the time of updated stipulated date of completion considering the effect of extra work (extra time to be calculated on prorata basis only as cost of extra work x stipulated period/tendered cost, shall be considered.) MI_0 = All India wholesale price index for civil component/ electrical component* of construction material as worked out on the basis of All India Wholesale Price Index for Individual Commodities/ Group Items valid on the last stipulated date of receipt of tenders including extensions, if any, as published by the Economic Advisor to Government of India, Ministry of Industry and Commerce and applying weightage to the Individual Commodities/ Group Items. * Note: relevant component only will be applicable
	POL	n. Formula for adjustment in POL cost $V_F = W \times \frac{Z}{100} \times \frac{FI - FI_0}{FI_0}$

		$\frac{VF}{100} = \frac{FI_t - FI_0}{FI_0}$ VF = Variation in cost of Fuel, Oil & Lubricant i.e. increase or decrease in the amount in rupees to be paid or recovered. W = Cost of work done, worked out as indicated in sub para (ii) of Clause 40-CC Z = Component of Fuel, Oil and Lubricant expressed as a percentage of the total value of the work FI = All India wholesale price index for Fuel, Oil and Lubricant for the period under consideration as published by the Economic Advisor to Government of India, Ministry of Industry & Commerce (in respect to the justified period extended under the provisions of clause 5 of the contract without any action under Clause 2, the index prevailing at the time of updated stipulated date of completion) FI₀ = All India wholesale price index for Fuel, Oil and Lubricant valid on the last stipulated date of receipt of tenders including extensions, if any. v. The following principles shall be followed while working out the indices mentioned in above para a. The compensation for escalation shall be worked out at quarterly intervals and shall be with respect to the cost of work done as per bills paid during the three calendar months of the said quarter. The dates of preparation of bills as finally entered in the measurement book/date of submission of bill finally by the contractor to the department in case of computerized measurement book shall be the guiding factor to decide the bills relevant to the quarterly interval. The first such payment shall be made at the end of three months after the month (excluding the month in which the tender was accepted) and thereafter at three months' interval. At the time of completion of the work, the last period for payment might become less than 3 months depending on the actual date of completion. b. The index (MI/FI etc.) relevant to any quarter/ period for which such compensation is paid shall be the arithmetical average of the indices relevant to the three calendar months. If the period up to date of completion after the quarter covered by the last such installment of payment is less than three months, the index MI and FI shall be the average of the indices for the months falling within that period.
	Labour	vi— Formula for adjustment in Labour cost The compensation for escalation for labour shall be worked out as per the formula given below: $\frac{V_t}{100} = W \times \frac{Y}{100} \times \frac{LI - LI_0}{LI_0}$ V_t = Variation in labour cost i.e. amount of increase or decrease in rupees to be paid or recovered W = Value of work done, worked out as indicated in sub para (ii) above

		Y = Component of labour expressed as a percentage of the total value of the work L₁ = Minimum wage in rupees of an unskilled adult male mazdoor, fixed under any law, statutory rule or order as applicable on the last date of the quarter previous to the one under consideration (in respect to the justified period extended under the provisions of clause 5 of the contract without any action under Clause 2, the minimum wage prevailing on the last date of quarter previous to the quarter pertaining to updated stipulated date of completion considering the effect of extra work (extra time to be calculated on prorated basis only as cost of extra work x stipulated period/tendered cost, shall be considered.) L₀ = Minimum daily wage in rupees of an unskilled adult male mazdoor, fixed under any law, statutory rule or order as on the last stipulated date of receipt of tender including extension if any. vii. The following principles will be followed while working out the compensation as per sub para (vi) above: a. The minimum wage of an unskilled male mazdoor mentioned in sub para (vi) above shall be the higher of the wage notified by Government of India, Ministry of Labour and that notified by the local administration both relevant to the place of work and the period of reckoning. b. The escalation for labour also shall be paid at the same quarterly intervals when escalation due to increase in cost of materials and/or P.O.L. is paid under this clause. If such revision of minimum wages take place during any such quarterly intervals, the escalation compensation shall be payable at revised rates only for work done in subsequent quarters. c. Irrespective of variations in minimum wages of any category of labour, for the purpose of this clause, the variation in the rate for an unskilled male mazdoor alone shall form the basis for working out the escalation compensation payable on the labour component. viii. In the event the price of materials and/or wages of labour required for execution of the work decrease/s, there shall be a downward adjustment of the cost of work so that such price of materials and/or wages of labour shall be deductible from the cost of work under this contract and in this regard the formula herein before stated under this Clause 10CC shall <i>mutatis mutandis</i> apply, provided that: a. No such adjustment for the decrease in the price of materials and/or wages of labour aforementioned would be made in case of contracts in which the stipulated period of completion of the work is equal to or less than the time as specified in Schedule F. b. The Engineer in charge shall otherwise be entitled to lay down the procedure by which the provision of this sub clause shall be implemented from time to time and the decision of the Engineer in charge in this behalf shall be final and binding on the contractor. ix. Provided always that: a. Where provisions of clause 10CC are applicable, provisions of clause 10 C will not be applicable but provisions of clause 10CA will be applicable.
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		b. Where provisions of clause 10CC are not applicable, provisions of Clause 10C and 10CA will become applicable. Note: Updated stipulated date of completion (period of completion plus extra time for extra work for compensation under clause 10C, 10CA and 10CC, the factor of 1.25 taken into account for calculating the extra time under clause 12.1 for extra time shall not be considered while calculating the updated stipulated date of completion for this purpose in clause 10C, clause 10CA, and clause 10CC. The date of preparation of bill shall be finally entered in the measurement book by AM/Mgr/SM/AGM or the date of submission of bill by contractor to the department. This shall be the guiding factor to decide the bill relevant to the period in case of computersized billing.
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CLAUSE 10 D

	Dismantled Material AAI Property	The contractor shall treat all materials obtained during dismantling of a structure, excavation of the site for a work etc. as property of AAI and such materials shall be disposed off to the best advantage of Authority according to the instructions in writing issued by the Engineer-in-charge.
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CLAUSE 11

	Work to be executed in accordance with specifications, drawings, orders etc.	The contractor shall execute the whole and every part of the work in the most substantial and workmanlike manner both as regards materials and otherwise in every respect in strict accordance with the specifications. The contractor shall also conform exactly, fully and faithfully to the design, drawings and instructions in writing in respect to the work signed by the Engineer in charge and the contractor shall be furnished free of charge one copy of the contract documents together with specifications, designs, drawings and instructions as are not included in the standard specifications of Central Public Works Department specified in Schedule F or in any Bureau of Indian Standard or any other published standard or code or Schedule of Rates or any other printed publication referred to elsewhere in the contract. The contractor shall comply with the provisions of the contract and with the care and diligence execute and maintain the works and provide all labour and materials, tools and plants including for measurements and supervision of all works, structural plans and other things of temporary or permanent nature required for such execution and maintenance in so far as the necessity for providing these, is specified or is reasonably inferred from the contract. The contractor shall take full responsibility for adequacy suitability and safety of all the works and methods of construction.
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CLAUSE 12

	Deviations / variations extent and pricing	The engineer-in-charge shall have power (i) to make alteration in, omissions from, additions to, or substitutions for the original specifications, drawings, designs and instructions that may appear to him to be necessary or advisable during the progress of the work, and (ii) to omit a part of the works in case of non-availability of a portion of the site or for any other reasons and the contractor shall be bound to carry out the works in accordance with any instructions given to him in writing signed by the Engineering- charge and such alterations, omissions, additions or
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		substitutions shall form part of the contract as if originally provided therein and any altered, additional or substituted work which the contractor may be directed to do in the manner specified above as part of the works, shall be carried out by the contractor on the same conditions in all respects including price on which he agreed to do the main work except as hereafter provided.
12.1		The time for completion of the works shall, in the event of any deviations resulting in additional cost over the tendered value being ordered, be extended, if requested by the contractor, as follows: - In the proportion which the additional cost of the altered, additional or substituted work, bears to the original tendered value plus 25% of the time calculated in (i) above or such further additional time as may be considered reasonable by the engineer-in-charge.
12.2	Deviation, Extra Items and Pricing	In the case of extra item(s) (items that are completely new, and in addition to the items contained in the contract) the contractor may within fifteen days of receipt of order or occurrence of the item(s) claim rates, supported by proper analysis, for the work and the Engineer-in-charge shall within Six weeks of the receipt of the claims supported by analysis, after giving consideration to the analysis of the rates submitted by the contractor, determine the rates on the basis of the market rates and the contractor shall be paid in accordance with the rates so determined.
	Deviation, substituted items pricing	In the case of substituted items (items that are taken up with partial substitution or in lieu of items of work in the contract), the rate for the agreement item (to be substituted) and substituted item shall also be determined in the manner as mentioned in the following para. - If the market rate for the substituted item so determined is more than the market rate of the agreement item (to be substituted), the rate payable to the contractor for the substituted item shall be the rate for the agreement item (to be substituted) so increased to the extent of the difference between the market rates of substituted item and the agreement item (to be substituted). - If the market rate for the substituted item so determined is less than the market rate of the agreement item (to be substituted), the rate payable to the contractor for the substituted item shall be the rate for the agreement item (to be substituted) so decreased to the extent of the difference between the market rates of substituted item and the agreement item (to be substituted).
	Deviation, Deviated Quantities, Pricing	In the case of contract items, substituted items, contract cum substituted items, which exceed the limits laid down in schedule F, the contractor may within fifteen days of receipt of order or occurrence of the excess, claim revision of the rates, supported by proper analysis for the work in excess of the above mentioned limits, provided that if the rates so claimed are in excess of the rates specified in the schedule of quantities, the Engineer-in-Charge shall within prescribed time limit of receipt of the claims supported by analysis, after giving consideration to the analysis of the rates submitted by the contractor, determine the rates on the basis of the market rates and the contractor shall be paid in accordance with the rates so determined.
12.3		The provisions of the preceding paragraph shall also apply to the decrease in the rates of items for the work in excess of the limits laid down in Schedule F, and the Engineer-in-Charge shall after giving notice to the

		contractor within one month of occurrence of the excess and after taking into consideration any reply received from him within fifteen days of the receipt of the notice, revise the rates for the work in question within one month of the expiry of the said period of fifteen days having regard to the market rates.
12.4		The contractor shall send to the Engineer-in-Charge once every three months, an upto date account giving complete details of all claims for additional payments to which the contractor may consider himself entitled and of all additional work ordered by the Engineer-in-Charge, which he has executed during the preceding quarter failing which the contractor shall be deemed to have waived his right. However, the Executive Director Engineering may authorise consideration of such claims on merits.
12.5		For the purpose of operation of Schedule F, the following works shall be treated as works relating to foundation unless & otherwise defined in the contract: i. For Buildings: All works up to 1.2 metres above ground level or up to floor 1 level whichever is lower. ii. For abutments, piers and well staining: All works up to 1.2 m above the bed level. iii. For retaining walls, wing walls, compound walls, chimneys, over head reservoirs/tanks and other elevated structures: All works up to 1.2 m above the ground level. iv. For roads, apron, runway & taxi-track all items of excavation, filling GSBC and including treatment of sub-base. v. For reservoirs/tanks (other than overhead reservoirs/tanks): All works up to 1.2 metres above the ground level. vi. For basement: All works up to 1.2 m above ground level or up to floor 1 level whichever is lower.
12.6		Any operation incidental to or necessarily has to be in contemplation of tenderer while filing, tender, or necessary for proper execution of the item included in the Schedule of quantities or in the schedule of rates mentioned above, whether or not, specifically indicated in the description of the item and the relevant specifications, shall be deemed to be included in the rates quoted by the tenderer or the rate given in the said schedule of rates, as the case may be. Nothing extra shall be admissible for such operations.

CLAUSE 13

	Foreclosure of contract due to Abandonment or Reduction in Scope of Work	If at any time after acceptance of the tender or during the progress of work the purpose or object for which the work is being done changes due to any supervening cause and as a result of which the work has to be abandoned or reduced in scope the Engineer-in-Charge shall give notice in writing to that effect to the contractor and the contractor stating the decision as well as the cause for such decision and the contractor shall act accordingly in the matter. The contractor shall have no claim to any payment of compensation or otherwise whatsoever, on account of any profit or advantage which he might have derived from the execution of the works in full but which he did not derive in consequence of the foreclosure of the whole or part of the works. The contractor shall be paid at contract rates, full amount for works executed at site and, in addition, a reasonable amount as certified by the Engineer-in-Charge for the items hereunder mentioned which could not be utilized on the work to the full extent in view of the foreclosure;
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		i. Any expenditure incurred on preliminary site work, e.g. temporary access roads, temporary labour huts, staff quarters and site office; storage accommodation and water storage tanks. ii. AAI shall have the option to take over contractor's materials or any part thereof either brought to site or of which the contractor is legally bound to accept delivery from suppliers (for incorporation in or incidental to the work) provided, however AAI shall be bound to take over the materials or such portions thereof as the contractor does not desire to retain. For materials taken over or to be taken over by AAI, cost of such materials as detailed by Engineer-in-Charge shall be paid. The cost shall, however, take into account purchase price, cost of transportation and deterioration or damage which may have been caused to materials whilst in the custody of the contractor. iii. If any materials supplied by AAI are rendered surplus, the same except normal wastage shall be returned by the contractor to AAI at rates not exceeding those at which these were originally issued, less allowance for any deterioration or damage which may have been caused whilst the materials were in the custody of the contractor. In addition, cost of transporting such materials from site to AAI stores, if so required by AAI, shall be paid. iv. Reasonable compensation for transfer of T & P from site to contractor's permanent stores or to his other works, whichever is less. If T & P are not transported to either of the said places, no cost of transportation shall be payable. v. Reasonable compensation for repatriation of contractor's site staff and imported labour to the extent necessary. The contractor shall, if required by the Engineer-in-Charge, furnish to him, books of account, wage books, time sheets and other relevant documents and evidence as may be necessary to enable him to certify the reasonable amount payable under this condition. The reasonable amount of items on (i), (iv) and (v) above shall not be in excess of 2% of the cost of the work remaining incomplete on the date of closure, i.e. total stipulated cost of the work as per accepted tender less the cost of work actually executed under the contract and less the cost of contractor's materials at site taken over by the AAI as per item (ii) above. Provided always that against any payments due to the contractor on this account or otherwise, the Engineer-in-Charge shall be entitled to recover or be credited with any outstanding balances due from the contractor for advance paid in respect of any tool, plants and materials and any other sums which at the date of termination were recoverable by the AAI from the contractor under the terms of the contract. In the event of action being taken under clause 13 to reduce the scope of work, the contractor may furnish fresh Performance Guarantee on the same conditions, in the same manner and at the same rate for the balance tendered amount and initially valid upto the extended date the completion or stipulated date of completion if no extension has been granted plus 180 days beyond that. Wherever, such a fresh Performance Guarantee is furnished by the contractor, the Engineer in Charge may return the previous Performance Guarantee.
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CLAUSE 14

	Carrying out part Work at risk & cost of contractor	a. If contractor: i. At any time makes default during currency of work or does not execute any part of the work with due diligence and continues to do so even after a notice in writing of 7 days in this respect from the Engineer-in-Charge; or ii. Commits default in complying with any of the terms and conditions of the contract and does not remedy it or takes effective steps to remedy it within 7 days even after a notice in writing is given in that behalf by the Engineer-in-Charge; or iii. Fails to complete the work(s) or items of work with individual dates of completion, on or before the date(s) so determined, and does not complete them within the period specified in the notice given in writing in that behalf by the Engineer-in-Charge. b. The Engineer- in-Charge without invoking action under clause 3 may, without prejudice to any other right or remedy against the contractor which have either accrued or accrue thereafter to AAI, by a notice in writing to take the part work / part incomplete work of any item(s) out of his hands and shall have powers to: i. Take possession of the site and any materials, constructional plant, implements, stores, etc., thereon; and/or ii. Carry out the part work / part incomplete work of any item(s) by any means at the risk and cost of the contractor. c. The Engineer-in-Charge shall determine the amount, if any, is recoverable from the contractor for completion of the part work/ part incomplete work of any item(s) taken out of his hands and executed at the risk and cost of the contractor, the liability of contractor on account of loss or damage suffered by AAI because of action under this clause shall not exceed 10% of the tendered value of the work. d. In determining the amount, credit shall be given to the contractor with the value of work done in all respect in the same manner and at the same rate as if it had been carried out by the original contractor under the terms of his contract, the value of contractor's materials taken over and incorporated in the work and use of plant and machinery belonging to the contractor. The certificate of the Engineer-in-Charge as to the value of work done shall be final and conclusive against the contractor provided always that action under this clause shall only be taken after giving notice in writing to the contractor. Provided also that if the expenses incurred by the department are less than the amount payable to the contractor at his agreement rates, the difference shall not be payable to the contractor. e. Any excess expenditure incurred or to be incurred by AAI in completing the part work/ part incomplete work of any item(s) or the excess loss of damages suffered or may be suffered by AAI as aforesaid after allowing such credit shall without prejudice to any other right or remedy available to AAI in law or per as agreement be recovered from any money due to the contractor on any account, and if such money is insufficient, the contractor shall be called upon in writing and shall be liable to pay the same within 30 days. f. If the contractor fails to pay the required sum within the aforesaid period of 30 days, the Engineer-in-Charge shall have the right to sell any or all
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		of the contractors' unused materials, constructional plant, implements, temporary building at site etc. and adjust the proceeds of sale thereof towards the dues recoverable from the contractor under the contract and if thereafter there remains any balance outstanding, it shall be recovered in accordance with the provisions of the contract/ provisions of law. In the event of above course being adopted by the Engineer-in-Charge, the contractor shall have no claim to compensation for any loss sustained by him by reason of his having purchased or procured any materials or entered into any engagements or made any advance on any account or with a view to the execution of the work or the performance of the contract.
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CLAUSE 15

	Suspension of Work	i. The contractor shall, on receipt of the order in writing of the Engineer-in-Charge, (whose decision shall be final and binding on the contractor) suspend the progress of the works or any part thereof for such time and in such manner as the Engineer-in-Charge may consider necessary so as not to cause any damage or injury to the work already done or endanger the safety thereof for any of the following reasons: - on account of any default on the part of the contractor or; - for proper execution of the works or part thereof for reasons other than the default of the contractor; or - for safety of the works or part thereof. The contractor shall, during such suspension, properly protect and secure the works to the extent necessary and carry out the instructions given in that behalf by the Engineer-in-Charge.
		ii. If the suspension is ordered for reasons (b) and (c) in sub-para (i) above (but not attributed to contractor): - the contractor shall be entitled to an extension of time equal to the period of every such suspension PLUS 25% for completion of the item or group of items of work for which a separate period of completion is specified in the contract and of which the suspended work forms a part, and; - If the total period of all such suspensions in respect of an item or group of items or work for which a separate period of completion is specified in the contract exceeds thirty days, the contractor shall, in addition, be entitled to such compensation as the Engineer-in-Charge may consider reasonable in respect of salaries and/or wages paid by the contractor to his employees and labour at site, remaining idle during the period of suspension, adding thereto 2% to cover indirect expenses of the contractor provided the contractor submits his claim supported by details to the Engineer-in-Charge within fifteen days of the expiry of the period of 30 days. - If the works or part thereof is suspended on the orders of the Engineer-in-Charge for more than three months at a time, except when suspension is ordered for reasons (a) in sub-para (i) above, the contractor may after receipt of such order serve a written notice on the Engineer-in-Charge requiring permission within fifteen days from receipt by the Engineer-in-charge of the said notice, to proceed with the work or part thereof in regard to which progress has been

		suspended and if such permission is not granted within that time, the contractor, if he intends to treat the suspension, where it affects only a part of the works as an omission of such part by AAI or where it affects whole of the works, as an abandonment of the works by AAI, shall within ten days of expiry of such period of 15 days give notice in writing of his intention to the Engineer-in-Charge. In the event of the contractor treating the suspension as an abandonment of the contract by AAI, he shall have no claim to payment of any compensations on account of any profit or advantage which he might have derived from the execution of the work in full but which he could not derive in consequence of the abandonment. He shall, however, be entitled to such compensation, as the Engineer-in-Charge may consider reasonable, in respect of salaries and/or wages paid by him to his employees and labour at site, remaining idle in consequence adding to the total thereof 2% to cover indirect expenses of the contractor provided the contractor submits his claim supported by details to the Engineer-in-Charge within 30 days of the expiry of the period of 3 months.
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CLAUSE 15 A

	Compensation in case of delay due to late supply of stipulated material by AAI.	The contractor shall not be entitled to claim any compensation from AAI for the losses suffered by him on account of delay by AAI in the supply of materials in Schedule 'B' where such delay is covered by the difficulties relating to supply of wagons, force majeure or any reasonable cause beyond the control of AAI. This clause 15 A will not be applicable for works where no material is stipulated for issue by AAI.
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CLAUSE 16

	Action in case Work not done as per Specifications	All works under or in course of execution or executed in pursuance of the contract, shall at all times be open and accessible to the inspection and supervision of the Engineer-in-Charge, his authorize subordinates in charge of the work and all the superior officers, officer of the Quality Assurance Unit of the AAI or any organization engaged by the Department of Quality Assurance and of the Chief technical Examiner's Office, and the contractor shall, at all times, during the usual working hours and at all other times at which reasonable notice of the visit of such officers has been given to the contractor, either himself be present to receive orders and instructions or have a responsible agent duly accredited in writing, present for that purpose. Orders given to the Contractor's agent shall be considered to have the same force as if they had been given to the contractor himself. If it shall appear to the Engineer-in -charge or his authorized subordinates in charge of the work or to the Executive Director-In-charge of quality assurance or his subordinate officers or the officers of the organization engaged by the AAI for quality Assurance or to the Chief Technical Examiner or his subordinate officers, that any work has been executed with unsound, imperfect, or unskillful workmanship, or with materials or articles provided by him for the execution of the work which are unsound or of a quality inferior to that contracted or otherwise not in accordance with the contract, the contractor shall, on demand in writing which shall be made within twelve months (six months in the case of work costing Rs.10 lac and
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		below except road work) of the completion of the work from the Engineer-in-Charge specifying the work, materials or articles complained of notwithstanding that the same may have been passed, certified and paid for forthwith rectify, or remove and reconstruct the work so specified in whole or in part, as the case may require or as the case may be, remove the materials or articles so specified and provide other proper and suitable materials or articles at his own charge and cost. In the event of the failing to do so within a period specified by the Engineer-in-Charge in his demand aforesaid, then the contractor shall be liable to pay compensation at the same rate as under clause 2 of the contract (for non completion of the work in time) for this default. In such case the Engineer-in-Charge may not accept the item of work at the rates applicable under the contract but may accept such items at reduced rates as the authority specified in schedule 'F' may considered reasonable during the preparation of on account bills or final bill if the item is so acceptable without detriment to the safety and utility of the item and the structure or he may reject the work outright without any payment and/or get it and other connected and incidental items rectified, or removed and re-executed at the risk and cost of the contractor. Decision of the Engineer-in-Charge to be conveyed in writing in respect of the same will be final and binding on the contractor.
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CLAUSE 17

	Contractor Liable for Damages, defects during maintenance period	If the contractor or his working people or servants shall break, deface, injure or destroy any part of building in which they may be working, or any building, road, road kerb fence, enclosure, water pipe, cables, drains, electric or telephone post or wires, trees, grass or grassland, or cultivated ground contiguous to the premises on which the work or any part is being executed, or if any damage shall happen to the work while in progress, from any cause whatever or if any defect, shrinkage or other faults appear in the work within twelve months (six months in the case of work costing Rs. Ten lacs and below except road work) after a certificate final or otherwise of its completion shall have been given by the Engineer-in-charge as aforesaid arising out of defect or improper materials or workmanship the contractor shall upon receipt of a notice in writing on that behalf make the same good at his own expense or in default the Engineerin- charge cause the same to be made good by other workmen and deduct the expense from any sums that may be due or at any time thereafter may become due to the contractor, or from his security deposit or the proceeds of sale thereof or of a sufficient portion thereof. The security deposit of the contractor shall not be refunded before the expiry of twelve months (six months in the case of work costing Rs.Ten lacs and below except road work) after the issue of the certificate final or otherwise, of completion of work, or till the final bill has been prepared and passed whichever is later. Provided that in the case of road work, if in the opinion of the Engineer-in-charge, half of the security deposit is sufficient, to meet all liabilities of the contractor under this contract, half of the security deposit will be refundable after six months and the remaining half after twelve months of the issue of the said certificate of completion or till the final bill has been prepared and passed whichever is later. In case of Maintenance and Operation works of E&M services, the security deposit deducted from contractors shall be refunded within one month from the date of final payment or within one month from the date of completion of the maintenance contract whichever is earlier.
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CLAUSE 18

	Contractor to Supply Tools & Plants etc.	The contractor shall provide at his own cost all materials (except such special materials, if any, as may in accordance with the contract be supplied from the Engineer-in-charge's stores) machinery, tools & plants as specified in Schedule F. in addition to this, appliances, implements, other plants, ladders, cordage, tackle, scaffolding and temporary works required for the proper execution of the work, whether original, altered or substituted and whether included in the specifications or other documents forming part of the contract or referred to in these conditions or not, or which may be necessary for the purpose of satisfying or complying with the requirements of the Engineer-in-charge as to any matter as to which under these conditions he is entitled to be satisfied, or which he is entitled to require together with carriage therefor to and from the work. The contractor shall also supply without charge the requisite number of persons with the means and materials, necessary for the purpose of setting out works, and counting, weighing and assisting the measurement for examination at any time and from time to time of the work or materials. Failing his so doing, the same may be provided by the Engineer-in-charge at the expense of the contractor and the expenses may be deducted, from any money due to the contractor, under this contract or otherwise and/ or from his security deposit or the proceeds of sale thereof, or of a sufficient portions thereof.
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CLAUSE 18 A

	Recovery of Compensation paid to Workmen	In every case in which by virtue of the provisions sub-section(i) of Section 12, of the Workmen's Compensation Act, 1923, AAI is obliged to pay compensation to a workman employed by the contractor, in execution of the works, AAI will recover from the contractor, the amount of the compensation so paid, and, without prejudice to the rights of the AAI under sub-section(2) of Section 12, of the said act, AAI shall be at liberty to recover such amount or any part thereof by deducting it from the security deposit or from any sum due by AAI to the contractor whether under this contract or otherwise. AAI shall not be bound to contest any claim made against it under subsection(1) of Section 12, of the said Act, except on the written request of the contractor and upon his giving to AAI full security for all costs for which AAI might become liable in consequence of contesting such claim.
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CLAUSE 18 B

	Ensuring Payment and Amenities to Workers if Contractor fails	In every case in which by virtue of the provisions of the Contract Labour (Regulation and Abolition) act 1970, and the Contract Labour (Regulation and Abolition) Central Rules, 1971, AAI is obliged to pay any amounts of wages to a workman employed by the contractor in execution of the works, or to incur any expenditure in providing welfare and health amenities required to be provided under the above said Act and the rules under Clause 19H or under the AAI Contractor's Labour Regulations or under the Rules framed by AAI from time to time for the protection of health and sanitary arrangements for workers employed by AAI Contractors, AAI will recover from the contractor the amount of wages so paid or the amount of expenditure so incurred and without prejudice to the rights of the AAI under sub section (2) of Section 20, sub section (4) of Section 21, of the Contract Labour (Regulation and Abolition) Act, 1970, AAI shall be at liberty to
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		recover such amount or any part thereof by deducting it from the security deposit or from any sum due by AAI to the contractor whether under this contract or otherwise AAI shall not be bound to contest any claim made against it under sub section (1) of Section 20, sub section (4) of Section 21, of the said Act, except on the written request of the contractor and upon his giving to the AAI full security for all costs for which AAI might become liable in contesting such claim.
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CLAUSE 19

	Labour laws to be complied by the Contractor	The contractor shall obtain a valid license under the contract labour (R&A) Act, 1970 and the Contract Labour (Regulation and Abolition) Central Rules, 1971, before the commencement of the work, and continue to have a valid license until the completion of the work. The contractor shall also abide by the provisions of the Child Labour (Prohibition and Regulation) Act, 1986. The contractor shall also comply with the provisions of the building and other construction workers (Regulation of Employment & Conditions of Service) Act, 1996 and the building and other Construction Workers Welfare Cess Act, 1996. Any failure to fulfill these requirements shall attract the penal provisions of this contract arising out of the resultant non execution of the work.
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CLAUSE 19 A

		No labour below the age of Eighteen years shall be employed on the work.
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CLAUSE 19 B

	Payment of wages	Payment of wages: - i The contractor shall pay to labour employed by him either directly or through sub contractors, wages not less than fair wages as defined in the AAI Contractor's Labour Regulation or as per the provisions of the Contract Labour (Regulation and Abolition) act, 1970 and the contract labour (Regulation and Abolition) Central Rules, 1971 wherever applicable. - ii The contractor shall, notwithstanding the provisions of any contract to the contrary, cause to be paid fair wage to labour indirectly engaged on the work, including any labour engaged by his sub contractors in connection with the said work, as if the labour had been immediately employed by him. - iii In respect of all labour directly or indirectly employed in the works for performance of the contractor's part of this contract, the contractor shall comply with or cause to be complied with the Airports Authority of India contractor's Labour Regulations made by AAI from time to time in regard to payment of wages wage period, deductions from wages recovery of wages not paid and deductions unauthorisedly made, maintenance of wage books or wage slips, publication of scale of wages and other terms of employment, inspection and submission of periodical returns and all other matters of the like nature or as per the provisions of the Contract Labour (Regulation and Abolition) Act, 1970 and the Contract Labour (Regulation and Abolition) Central Rules, 1971, wherever applicable.
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		iv. The following deductions shall be permissible to be made by the Engineer-in-Charge. a. The Engineer-in-charge concerned shall have the right to deduct from the moneys due to the contractor or any sum required or estimated to be required for making good the loss suffered by a worker or workers by reason of non fulfillment of the conditions of the contract for the benefit of the workers, non payment of wages or of deductions made from his or their wages which are not justified by their terms of the contract or non observance of the Regulations. b. Under the provision of Minimum Wages (Central) Rule 1950 the contractor is bound to allow to the labours directly or indirectly employed in the works one day rest for 6 days continuous work and pay wages at the same rate as for duty. In the event of default, the Engineer-in-charge shall have the right to deduct the sum or sums not paid on account of wages for weekly holidays to any labours and pay the same to the persons entitled thereto from any money due to the contractor by the Engineer-in-charge concerned. In the case of Union Territory of Delhi, however, as the all inclusive minimum daily wages fixed under Notification of the Delhi Administration No.F.12(162)MWO/DAB/43884-91, dated 31.12.1979 as amended from time to time are inclusive of wages for the weekly day of rest, the question of extra payment for weekly holiday would not arise. v. The contractor shall comply with the provisions of the Payment of wages Act, 1936, Minimum Wages Act, 1948, Employees Liability Act, 1938, Workmen's Compensation Act, 1923, Industrial Disputes Act, 1947, Maternity Benefits Act, 1961, and the Contractor's Labour (Regulation and Abolition) Act 1970, or the modifications thereof or any other laws relating thereto and the rule made thereunder from time to time. vi. The contractor shall indemnify and keep indemnified Authority against payments to be made under and for the observance of the laws aforesaid and the AAI Contractor's Labour Regulations without prejudice to his right to claim indemnity from his sub contractors. vii. The laws aforesaid shall be deemed to be a part of this contract and any breach thereof shall be deemed to be a breach of this contract. viii. Whatever is the minimum wage for the time being, or if the wage payable is higher than such wage, such wage shall be paid by the contractor to the workmen directly without the intervention of Jamadar and that Jamadar shall not be entitled to deduct or recover any amount from the minimum wage payable to the workmen as and by way of commission or otherwise. ix. The contractor shall ensure that no amount by way of commission or otherwise is deducted or recovered by the Jamadar from the wage of workmen.
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CLAUSE 19 C

		In respect of all labour directly or indirectly employed in the work for the performance of the contractor's part of this contract, the contractor shall at his own expense arrange for the safety provisions as per AAI Safety Code framed from time to time and shall at his own expense provide for all facilities in connection therewith. In case the contractor fails to make arrangement and provide necessary facilities as aforesaid, he shall be
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		liable to pay a penalty of Rs. 200/- for each default and in addition, the Engineer-in-charge shall be at liberty to make arrangement and provide facilities as aforesaid and recover the costs incurred in that behalf from the contractor.
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CLAUSE 19-D

		The contractor shall submit by every month, to the Engineer in-charge a true statement of the preceding month showing: the number of labourers employed by him on the work, their working hours, the wages paid to him, the accidents that occurred during the said fortnight showing the circumstances under which they happened and the extent of damage and injury caused by them, and the number of female workers who have been allowed maternity benefit according to Clause 19F and the amount paid to them Failing which the contractor shall be liable to pay to AAI, a sum not exceeding Rs. 200/- for each default or materially incorrect statement. The decision of the Engineer-in-charge shall be final in deducting from any bill due to the contractor; the amount levied as fine and shall be binding on the contractor.
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CLAUSE 19 E

		In respect of all labour directly or indirectly employed in the works for the performance of the contractor's part of this contract, the contractor shall comply with or cause to be complied with all the rules framed by AAI/AAI from time to time for the protection of health and sanitary arrangements for workers employed by the AAI and its contractor.
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CLAUSE 19 F

		Leave and pay during leave shall be regulated as follows: - Leave: In the case of delivery — maternity leave not exceeding 8 weeks, 4 weeks upto and including the day of delivery and 4 weeks following that day. In the case of miscarriage — upto 3 weeks from the date of miscarriage. - Pay: In the case of delivery — leave pay during maternity leave will be at the rate of women's average daily earnings, calculated on total wages earned on the days when full time work was done during a period of three months immediately preceding the date on which she gives notice that she expects to be confined or at the rate of Rupee one only a day whichever is greater. In the case of miscarriage — leave pay at the rate of average daily earning calculated on the total wages earned on the days when full time work was done during a period of three months immediately preceding the date of such miscarriage. - Conditions for the grant of Maternity Leave: No maternity leave benefit shall be admissible to a woman unless she has been employed for a total period of not less than six months immediately preceding the date on which she proceeds on leave.
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		4. The contractor shall maintain a register of Maternity (Benefit) in the Prescribed Form as shown in appendix — III and IV, and the same shall be kept at the place of work.
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CLAUSE 19 G

		In the event of the contractor (s) committing a default or breach of any of the provisions of the Airports Authority of India Contractor's Labour Regulations and Model Rules for the protection of health and sanitary arrangements for the workers as amended from time to time or furnishing any information or submitting or filling any statement under the provisions of the above Regulations and Rules which is materially incorrect, he / they shall, without prejudice to any other liability, pay to the AAI a sum not exceeding Rs.200/- for every default, breach or furnishing, making, submitting, filing such materially incorrect statements and in the event of the contractor(s) defaulting continuously in this respect, the penalty may be enhanced to Rs.200/- per day for each day of default subject to a maximum of 5 per cent of the estimated cost of the work put to tender. The decision of the Engineer in Charge shall be final and binding on the parties. Should it appear to the Engineer in Charge that the contractor (s) is / are not properly observing and complying with the provision of the AAI Contractor's Labour Regulations and Model Rules and the provisions of the Contract Labour (Regulation and Abolition) Act 1970, and the Contract Labour (R&A) Central Rules 1971, for the protection of health and sanitary arrangements for work — people employed by the contractor (s) (hereinafter referred as "the said Rules") the Engineer in Charge shall have power to give notice in writing to the contractor (s) requiring that the said Rules be complied with and the amenities prescribed therein be provided to the work-people within a reasonable time to be specified in the notice. If the contractor (s) shall fail within the period specified in the notice to comply with and/ observe the said Rules and to provide the amenities to the work-people as aforesaid, the Engineer in Charge shall have the power to provide the amenities hereinbefore mentioned at the cost of the contractor (s). The contractor (s) shall erect, make and maintain at his / their own expense and to approved standards all necessary huts and sanitary arrangements required for his / their work — people on the site in connection with the execution of the works, and if the same shall not have been erected or constructed, according to approved standards, the Engineer in Charge shall have power to give notice in writing to the contractor (s) requiring that the said huts and sanitary arrangements be remodeled and / or reconstructed according to approved standards, and if the contractor (s) shall fail to remodel or reconstruct such huts and sanitary arrangements according to approved standards within the period specified in the notice, the Engineer in Charge shall have the power to remodel or reconstruct such huts and sanitary arrangements according to approved standards at the cost of the contractor (s).
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CLAUSE 19 H

		The contractor (s) shall at his / their own cost provided his / their labour with a sufficient number of huts (hereinafter referred to as the camp) on the following specifications on a suitable plot of land to be approved the Engineer in Charge. i. Facility to be provided
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		a. The minimum height of each hut at the eaves level shall be 2.10m (7ft.) and the floor area to be provided will be at the rate of 2.7 sq.m. (30 sq.ft.) for each member of the worker's family staying with the labourer. b. The contractor shall in addition construct suitable cooking places having a minimum area of 1.80m x 1.50m (6' x 5') adjacent to the hut for each family.
		c. The contractor(s) shall also construct temporary latrines and urinals for the use of the labourers each on the scale of not less than four per each one hundred of the total strength, separate latrines and urinals being provided for women. d. The contractor (s) shall construct sufficient number of bathing and washing places one unit for every 25 persons residing in the camp. These bathing and washing places shall be suitably screened. ii. Specifications a. All the huts shall have walls of sun-dried or burnt bricks laid in mud mortar or other suitable local materials as may be approved by the Engineer in Charge in case of sun-dried bricks, the walls should be plastered with mud gobri on both sides. The floor may be kutchra but plastered with mud gobri and shall be at least 15 cm (6") above the surrounding ground. The roofs shall be laid with the thatch or any other materials as may be approved by the Engineer in Charge and the contractor shall ensure that throughout the period of their occupation, the roofs remain water — tight. b. The contractor (s) shall provide each hut with proper ventilation. c. All doors, windows and ventilators shall be provided with suitable leaves for security purposes. d. There shall be kept an open space of at least 7.2 m (8 yards) between the rows of huts which may be reduced to 6m (20 ft.) according to the availability of site with the approval of the Engineer in Charge. Back to back construction will be allowed. iii. Water Supply The contractor (s) shall provided adequate supply of water for the use of labourers. The provisions shall not be less than two gallons of pure and wholesome water per head per day for drinking purposes and three gallons of clean water per head per day for bathing and washing purposes. Where piped water supply is available supply shall be at stand posts and where the supply is from wells or river, tanks which may be of metal or masonry, shall be provide. The contractor (s) shall also at his / their own cost make arrangements for laying pipe lines for water supply to his / their labour camp from the existing mains wherever available and shall pay all fees and charges therefor. iv. The site selected for the camp shall be high ground, removed from jungle. v. Disposal of Excreta: The contractor (s) shall make necessary arrangement for the disposal of excreta from the latrines by trenching or incineration which shall be according to the requirements laid down by the Local Health Authorities. If trenching or incineration is not allowed, the contractor (s) shall make arrangements for the removal of the excreta through the Municipal Committee / authority and inform it about the number of labourers employed so that arrangements may be made by such Committee / authority for the removal of excreta. All charges on this account shall be borne by the contractor and paid direct by him to the Municipality / authority. The

		contractor shall provide one sweeper for every eight seats in case of dry system. vi. Drainage The contractor (s) shall provide efficient arrangements for draining away sullage water so as to keep the camp neat and tidy. vii. The contractor (s) shall make necessary arrangements for keeping the camp area sufficiently lighted to avoid accidents to the workers. viii. Sanitation The contractor(s) shall make arrangements for conservancy and sanitation in the labour camps according to the rules of the Local Public Health and Medical Authorities.
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CLAUSE 19 I

		The Engineer-in-Charge may require the contractor to dismiss or remove from the site of the work any person or persons in the contractors' employ upon the work who may be incompetent or misconduct himself and the contractor shall forthwith comply with such requirements. In respect of maintenance/repair or renovation works etc. where the labour have an easy access to the individual work premises, the contractor shall issue identity cards to the labourers, whether temporary or permanent and he shall be responsible for any untoward action on the part of such labour. Assistant Manager/Junior Executive will display a list of contractors working in the colony/Blocks on the notice board in the colony and also at the service centre, to apprise the residents about the same.
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CLAUSE 19 J

		It shall be the responsibility of the contractor to see that the building under construction is not occupied by any body unauthorized during construction, and is handed over to the Engineer in Charge with vacant possession of complete building. If such building though completed is occupied illegally, then the Engineer in Charge shall have the option to refuse to accept the said building/buildings in that position. Any delay in acceptance on this account will be treated as the delay in completion and for such delay, a levy upto 5% of tendered value of work may be imposed by the General Manager Engg. Whose decision shall be final both with regard to the justification and quantum and be binding on the contractor. However, the Executive Director Engg., through a notice may require the contractor to remove the illegal occupation any time on or before construction and delivery.
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CLAUSE 19 K

	Employment of skilled / semiskilled workers	The contractor shall at all stages of work deploy skilled / semi skilled tradesmen who are qualified and possess certificate in particular trade from CPWD Training Institute / Industrial Training Institute/National Institution of Construction Management and research (NIGMAR) National Academy of Construction, CIDC or any similar reputed and recognized Institute managed / certified by State / Central Government. The number of such qualified tradesmen shall not be less than 20% of total skilled / semi skilled workers required in each trade at any stage of work. The contractor shall submit number of man days required in respect of each trade, its scheduling and the
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		list of qualified tradesmen alongwith requisite certificate from recognized Institute to Engineer in charge for approval. Notwithstanding such approval, if the tradesmen are found to have inadequate skill to execute the work of respective trade, the contractor shall substitute such tradesmen within two days of written notice from Engineer in Charge. Failure on the part of contractor to obtain approval of Engineer in Charge or failure to deploy qualified tradesmen will attract a compensation to be paid by contractor at the rate of Rs.100 per such tradesman per day. Decision of Engineer in Charge as to whether particular tradesman possesses requisite skill and amount of compensation in case of default shall be final and binding. Provided always, that the provision of this clause, shall not be applicable for works with estimated cost put to tender being less than Rs.5 crores.
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CLAUSE 19 L

	Registration with EPFO and ESIC	The ESI and EPF contributions on the part of employer in respect of this contract shall be paid by the contractor. These contributions on the part of the employer paid by the contractor shall be reimbursed by the Engineer in-charge to the contractor on actual basis. The verification of deployment of labour will be done through biometric attendance system or any other suitable method by the Engineer in Charge. The applicable and eligible amount of EPF & ESI shall be reimbursed preferably within 7 days but not later than 30 days of submission of documentary proof of payment provided same are in order
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CLAUSE 19 M

	Compliance of NGT guidelines	The contractor is required to follow latest NGT guidelines at the construction site and any violation of such guidelines will be in his account.
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CLAUSE 20

	Minimum Wages Act to be Complied with	The contractor shall comply with all the provision of the Minimum Wages Act, 1948, and Contract Labour (Regulation and Abolition) Act, 1970 amended from time to time and rules framed thereunder and other labour laws affecting contract labour that may be brought into force from time to time.
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CLUASE 21

	Work not to be sublet. Action in case of insolvency	The contract shall not be assigned or sublet without the written approval of Engineer-in-Charge. And if the contractor shall assign or sublet his contract, or attempt to do so, or become insolvent or commence any insolvency proceedings or make any composition with his creditors or attempt to do so, or if any bribe, gratuity, gift, loan, perquisite, reward or advantage pecuniary or otherwise, shall either directly or indirectly, be given, promised or offered by the contractor, or any of his servants or agent to any public officer or person in the employ of AAI in any way relating to his office or employment, or if any such officer or person shall become in any way directly or indirectly interested in the contract, the Engineers in Charge on behalf of the AAI shall have power to adopt the course specified in Clause 3 hereof in the interest of AAI and in the event of such course being adopted, the consequences specified in the said Clause 3 shall ensue.
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CLUASE 22

		All sums payable by way of compensation under any of these conditions shall be considered as reasonable compensation to be applied to the use of AAI without reference to the actual loss or damage sustained and whether or not any damage shall have been sustained.
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CLAUSE 23

	Changes in firm's Constitution to be intimated	Where the contractor is a partnership firm, the previous approval in writing of the Engineer-in-Charge shall be obtained before any change is made in the constitution of the firm. Where the contractor is an individual or a Hindu undivided family business concern such approval as aforesaid shall likewise be obtained before the contractor enters into any partnership agreement where under the partnership firm would have the right to carry out the works hereby undertaken by the contractor. If previous approval as aforesaid is not obtained, the contract shall be deemed to have been assigned in contravention of Clause 21 hereof and the same action may be taken and the same consequences shall ensue as provided in the said Clause 21.
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CLAUSE 24

		All works to be executed under the contract shall be executed under the direction and subject to the approval in all respects of the Engineer-in-Charge who shall be entitled to direct at what point or points and in what manner they are to be commenced, and from time to time carried on.
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CLAUSE 25

	Dispute Resolution Mechanism and Arbitration	All disputes or differences which may arise out of or in connection with or incidental to the Agreement(s) including any dispute or difference regarding the interpretation of terms and conditions of any clause(s) thereof shall be dealt with as provided hereinafter: i. Through Mediation: All dispute(s), at the first instance, shall be referred to the Mediation Committee of Independent Experts (MCIE) or individual mediator for mediation as per AAI Mediation Policy and applicable laws. All cost of mediation, shall be borne equally by the parties. In case either party withdraws from the Mediation or the dispute(s) is not resolved within 120 days of reference to the Mediation, then the aggrieved party may invoke arbitration through sub para (ii) within 30 days from the date of receipt of Partial Settlement Agreement or Failure Report. ii. Adjudication through Arbitration: In case no final settlement has been arrived at between the parties after mediation or partially settled as per sub Para (i) above, the unresolved dispute(s), on invocation by the aggrieved party shall be referred for adjudication by arbitration. a. When the amount involved is above 25 crores, adjudication shall be made by Arbitral Tribunal comprising of 03 arbitrators. Each party to appoint one arbitrator and the two appointed arbitrators shall appoint the Presiding Arbitrator. b. When the amount involved is Rs. 25 Crores and below shall be referred to a Sole Arbitrator to be appointed by
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		Chairman/Member, AAI, after obtaining consent of the other party, as per format annexed at APPENDIX-XVII (B). Unless the contract has already been repudiated or terminated, the parties shall, in every case, continue to proceed to perform their respective obligations under the agreement. Arbitration proceedings shall be conducted in accordance with the provisions of the Arbitration and Conciliation Act, 1996, as amended from time to time. Fee payable to the Arbitrator(s) shall be as per Schedule-IV of the Arbitration & Conciliation Act, 1996 and shall be borne by both the parties equally. No dispute shall be referred for resolution under this clause through arbitration in matters for which eviction & recovery procedure is provided under Chapter-VA of the Airports Authority of India Act, 1994.
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CLAUSE 26

	Contractor to indemnify AAI against Patent Rights	The contractor shall fully indemnify and keep indemnified the Chairman AAI against any action, claim or proceeding relating to infringement or use of any patent or design or any alleged patent or design rights and shall pay and royalties which may be payable in respect of any article or part thereof included in the contract. In the event of any claims made under or action brought against AAI in respect of any such matters as aforesaid, the contractor shall be immediately notified thereof and the contractor shall be at liberty, at his own expense, to settle any dispute or to conduct any litigation that may arise there from, provided that the contractor shall not be liable to indemnify the AAI if the infringement of the patent or design or any alleged patent or design right is the direct result of an order passed by the Engineer-in-Charge in this behalf.
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CLAUSE 27

	Lump sum Provisions in Tender	When the estimate on which a tender is made, includes lump sum in respect of parts of the work, the contractor shall be entitled to payment in respect of the items of work involved or the part of the work in question at the same rates as are payable under this contract for such items, or if the part of work in question is not, in the opinion of the Engineer in Charge payable of measurement, the Engineer in Charge may at his discretion pay the lump sum amount entered in the estimate, and the certificate in writing of the Engineer in Charge shall be final and conclusive against the contractor with regard to any sum or sums payable to him under the provision of the clause.
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CLAUSE 28

	Action where no specifications are specified	In the case of any class of work for which there is no such specifications as referred to in Clause 11, such work shall be carried out in accordance with the Bureau of Indian Standards Specifications. In case there are no such specifications in Bureau of Indian Standards, the work shall be carried out as per manufacturers' specifications. In case there are no such specifications as required above, the work shall be carried out in all respects in accordance with the instructions and requirements of the Engineer-in-Charge.
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CLAUSE 29

	With-holding and lien in respect of sums due from contractor	i. Whenever any claims for payment of a sum of money arises out of or under the contract or against the contractor, the Engineer-in-Charge or the AAI shall be entitled to withhold and also have a lien to retain such sum or sums in whole or in part from the security, if any deposited by the contractor and for the purpose aforesaid, the Engineer-in-Charge or the AAI shall be entitled to withhold the security deposit if any, furnished as the case may be and also have a lien over the same pending finalization or adjudication of any such claim. In the event of the security being insufficient to cover the claimed amount or amounts or if no security has been taken from the contractor, the Engineer-in-Charge or the AAI shall be entitled to withhold and have lien to retain to the extent of such claimed amount or amounts referred to above from any sum or sums found payable or which may at any time thereafter become payable to the contractor under the same contract or any other contract with the Engineer-in Charge of the AAI or any contracting person through the Engineer-in-Charge pending finalization of adjudication of any such claim. It is an agreed term of the contract that the sum of money or moneys so withheld or retained under the lien referred to above by the Engineer-in-Charge or AAI will be kept withheld or retained as such by the Engineer-in-Charge or AAI till the claim arising out of or under the contract is determined by the arbitrator. (if the contract is governed by the arbitration clause) or by the competent court, as the case may be and that the contractor will have no claim for interest or damages whatsoever on any account in respect of such withholding or retention under the lien referred to above and duly notified as such to the contractor. For the purpose of this clause, where the contractor is a partnership firm or a limited company, the Engineer-in-Charge or the AAI shall be entitled to withhold and also have a lien to retain towards such claimed amount or amounts in whole or in part from any sum found payable to any partner/limited company as the case may be, whether in his individual capacity or otherwise. ii. AAI shall have the right to cause an audit and technical examination of the works and the final bills of the contractor 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 contractor under the contract or any work claimed to have been done by the him under the contract and found not to have been executed, the contractor shall be liable to refund the amount of over payment and it shall be lawful for AAI to recover the same from him in the manner prescribed in sub-clause (i) of this clause or in any other manner legally permissible; 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 AAI to the contractor, without any interest thereon whatsoever. Provided that the AAI shall not be entitled to recover any sum overpaid, nor the contractor shall be entitled to payment of any sum paid short where such payment has been agreed upon between the CEO/Chairman AAI on the one hand and the contractor on the other under any term of the contract permitting payment for work after assessment by the Competitive Authority of AAI.
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CLAUSE 29 A

	Lien in respect of claims in other Contracts	i. Any sum of money due and payable to the contractor (including the security deposit refundable to him) under the contract may be withheld or retained by way of lien by the Engineer-in-Charge or the AAI or any other contracting person or persons through Engineer-in-Charge against any claim of the Engineer-in-Charge or AAI or such other person or persons in respect of payment of a sum of money arising out of or under any other contract made by the contractor with the Engineer-in-Charge or the AAI or with such other person or persons. ii. It is an agreed term of the contract that the sum of money so withheld or retained under this clause by the Engineer-in-Charge or the AAI will be kept withheld or retained as such by the Engineer-in-Charge or the AAI or till his claim arising out of the same contract or any other contract is either mutually settled or determined by the arbitration clause or by the competent court, as the case may be and that the contractor shall have no claim for interest or damages whatsoever on this account or on any other ground in respect of any sum of money withheld or retained under this clause and duly notified as such to the contractor.
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CLAUSE 30

	Employment of coal mining or controlled area labour not permissible	i. The contractor shall not employ coal mining or controlled area labour falling under any category whatsoever or in connection with the work or recruit labour from area within a radius of 32 km (20 miles) of the controlled area. Subject as above the contractor shall employ imported labour only i.e., deposit imported labour or labour imported by contractors from area, from which import is permitted. ii. Where ceiling price for imported labour has been fixed by State or Regional Labour Committees not more than that ceiling price shall be paid to the labour by the contractor. iii. The contractor shall immediately remove any labourer who may be pointed out by the Engineer in-Charge as being a coal mining or controlled area labourer. Failure to do so shall render the contractor liable to pay to AAI a sum calculated at the rate of Rs.10/- per day per labourer. The certificate of the Engineer in-Charge about the number of coal mining or controlled area labourer and the number of days for which they worked shall be final and binding upon all parties to this contract. iv. It is declared and agreed between the parties that the aforesaid stipulation in this clause is one in which the public are interested within the meaning of the exception in Section 74 of Indian Contract Act, 1872. Explanation :- Controlled area mean the following areas: Districts of Dhanbad, Hazaribagh, Jamtara Sub-Division under Santhal Pargana Commissionery, District of Bankuara, Birbhum, Burdwan, District of Bilaspur. Any other area which may be declared a Controlled Area by or with the approval of the Central Government.
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CLAUSE 31

	Unfiltered water supply	The contractor(s) shall make his/their own arrangements for water required for the work and nothing extra will be paid for the same. This will be subject to the following conditions.
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		i. That the water used by the contractor (s) shall be fit for construction purposes to the satisfaction of the Engineer in Charge. ii. The Engineer in Charge shall make alternative arrangements for supply of water at the risk and cost of contractor (s) if the arrangements made by the contractor (s) for procurement of water are in the opinion of the Engineer in Charge, unsatisfactory.
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CLAUSE 31A

	Departmental water supply, if available	Water if available may be supplied to the contractor by the department subject to the following conditions:- i. The water charges @1% shall be recovered on gross amount of the work done. ii. The contractor(s) shall make his/their own arrangement of water connection and laying of pipelines from existing main of source of supply. iii. The Department do not guarantee to maintain uninterrupted supply of water and it will be incumbent on the contractor (s) to make alternative arrangements for water at his/their own cost in the event of any temporary break down in the AAI's water main so that the progress of his/their work is not held up for want of water. No claim of damage or refund of water charges will be entertained on account of such break down.
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CLAUSE 32

	Alternate water arrangements	i. Where there is no piped water supply arrangement and the water is taken by the contractor from the wells or hand pump constructed by the AAI, no charge shall be recovered from the contractor or that account. The contractor shall, however, draw water at such hours of the day that it does not interfere with the normal use for which the hand pumps and well are intended. He will also be responsible for all damage and abnormal repairs arising out of his use, the cost of which shall be recoverable from him. The Engineer in Charge shall be the final authority to determine the cost recoverable from the contractor on this account and his decision shall be binding on the contractor. ii. The contractor shall be allowed to construct temporary wells in AAI land for taking water for construction purposes only after he has got permission of the Engineer in Charge in writing. No charges shall be recovered from the contractor on this account but the contractor shall be required to provide necessary safety arrangements to avoid any accidents or damage to adjacent buildings, roads and service lines. He shall be responsible for any accidents or damage caused due to construction and subsequent maintenance of the wells and shall restore the ground to its original condition after the wells are dismantled on completion of the work.
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CLAUSE 33

	Return of Surplus materials	Notwithstanding anything contained to the contrary in this contract, where any materials for the execution of the contract are procured with the assistance of AAI either by issue from AAI stocks or purchase made under orders or permits or licenses issued by AAI, the contractor shall hold the said materials economically and solely for the purpose of the contract and not dispose of them without the written permission of the AAI and return, if
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		required by the engineer-in-Charge, all surplus or unserviceable materials that may be left with him after the completion of the contract or at its termination for any reason whatsoever on being paid or credited such prices as the Engineer-in-Charge shall determine having due regard to the condition of the materials. The price allowed to the contractor however shall not exceed the amount charged to him excluding the element of storage charges. The decision of the Engineer-in-Charge shall be final and conclusive. In the event of breach of the aforesaid condition, the contractor shall in addition to throwing himself open to action for contravention of the terms of the license or permit and / or for criminal breach of trust, be liable to AAI for all moneys, advantages or profits resulting or which in the usual course would have resulted to him by reason of such breach.
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CLAUSE 34

	Hire of plant & Machinery	i. The Contractor shall arrange at his own expense all tools, plant, machinery and equipment(hereinafter referred to as T&P) required for execution of the work except for the Plant & Machinery listed in Schedule 'C' and stipulated for issue to the contractor. If the contractor requires any item of T&P on hire from the T&P available with the AAI over and above the T&P stipulated for issue, the AAI will, if such item is available, hire it to the contractor at rates to be agreed upon between him and the Engineer-in-charge. In such a case, all the conditions hereunder for issue of T & P shall also be applicable to such T&P as is agreed to be issued. ii. Plant & Machinery when supplied on hire charges shown in Schedule 'C' shall be made over and taken back at the departmental equipment yard / shed shown in Schedule 'C' and the contractor shall bear the cost of carriage from the place of issue to the site of work and back. The contractor shall be responsible to return the plant and machinery with condition in which it was handed over to him, and he shall be responsible for all damage caused to the said plant and machinery at the site of work or elsewhere in operation and otherwise during transit including damage to or loss of plant and for all losses due to his failure to return the same soon after the completion of the work for which it was issued. The Engineer-in-charge shall be the sole judge to determine the liability of the contractor and its extent in this regard and his decision shall be final and binding on the contractor. iii. The plant and machinery as stipulated above will be issued as and when available and if required by the contractor. The contractor shall arrange his programme of work according to the availability of the plant and machinery and no claim, whatsoever, will be entertained from him for any delay in supply by the department. iv. The hire charges shall be recovered at the prescribed rates from and inclusive of the date the plant and machinery made over upto and inclusive of the date of the return in good order even though the same may not have been working for any cause except major breakdown due to no fault of the contractor or faulty use requiring more than three working days continuously (excluding intervening holidays and Sundays) for bringing the plant in order. The contractor shall immediately intimate in writing to the Engineer-in-charge when any plant or machinery gets out of order requiring major repairs as aforesaid. The Engineer-in-charge shall record the date and time of receipt of such intimation in the log sheet of the plant or machinery. Based on this if the breakdown
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		before lunch period or major breakdown will be computed considering half a day's breakdown on the day of complaint. If the breakdown occurs in the post lunch period of major breakdown will be computed starting from the next working day. In case of any dispute under this clause, the decision of the Executive Director (Engg) /General Manager (Engg) shall be final and binding on the contractor. v. The hire charges shown above are for each day of 8 hours (inclusive of the one hour lunch break) or part thereof. vi. Hire charges will include service of operating staff as required and also supply of lubricating oil and stores for cleaning purposes. Power fuel of approved type, firewood, kerosene oil etc. for running the plant and machinery and also the full time chowkidar for guarding the plant and machinery against any loss or damage shall be arranged by the contractor who shall be fully responsible for the safeguard and security of plant and machinery. The contractor shall on or before the supply of plant and machinery sign an agreement indemnifying the Department against any loss or damage caused to the plant and machinery either during transit or at site of work. vii. Ordinarily, no plant and machinery shall work for more than 8 hours a day inclusive of one hour lunch break. In case of an urgent work however, the Engineer-in-charge may, at his discretion, allow the plant and machinery to be worked for more than normal period of 8 hours a day. In that case, the hourly hire charges for overtime to be borne by the contractor shall be 50% more than the normal proportionate hourly charges (1/8th of the daily charges) subject to a minimum of half day's normal charges on any particular day. For working out hire charges for over time, a period of half an hour and above will be charged as one hour and a period of less than half an hour will be ignored. viii. The contractor shall release the plant and machinery every seventh day for periodical servicing and / or wash out which may take about three to four hours or more. Hire charges for full day shall be recovered from the contractor for the day of servicing / wash out irrespective of the period employed in servicing. ix. The plant and machinery once issued to the contractor shall not be returned by him on account of lack of arrangements of labour and materials, etc. on his part, the same will be returned only when they are required for major repairs or when in the opinion of the Engineer-in-charge, the work or a portion of work for which the same was issued is completed. x. Log Book for recording the hours of daily work for each of the plant and machinery supplied to the contractor will be maintained by the Department and will be countersigned by the contractor or his authorised agent daily. In case the contractor contests the correctness of the entries and / or fails to sign the Log Book, the decision of the Engineer-in-charge shall be final and binding on him. Hire charges will be calculated according to the entries in the Log Book and will be binding on the contractor. Recovery on account of hire charges for road rollers shall be made for the minimum number of days worked out on the assumption that a roller can consolidate per day and maximum quantity of materials or area surfacing as noted against each in the annexed statement (see attached annexure). xi. In the case of concrete mixers, the contractors shall arrange to get the hopper cleaned and the drum washed at the close of the work each day or each occasion. (a) In case rollers for consolidation are employed by the contractor himself, log book for such rollers shall be maintained
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		in the same manner as is done in case of departmental rollers, maximum quantity of any items to be consolidated for each roller-day shall also be same as in Annexure to Clause 34(x). For less use of rollers, recovery for the less roller days shall be made at the stipulated issue rate. xii. The contractor shall be responsible to return the plant and machinery in the condition in which it was handed over to him and he shall be responsible for all damage caused to the said plant and machinery at the site of work or elsewhere in operation or otherwise or during transit including damage to or loss of parts, and for all losses due to his failure to return the same soon after the completion of the work for which it was issued. The Engineer-in-charge shall be the sole judge to determine the liability of the contractor and its extent in this regard and his decision shall be final and binding on the contractor. xiii. The contractor will be exempted from levy of any hire charges for the number of days he is called upon in writing by the Engineer-in-charge to suspend execution of the work, provided AAI's plant and machinery in question have, in fact, remained idle with the contractor because of the suspension. xiv. In the event of the contractor not requiring any item of plant and machinery issued by AAI though not stipulated for issue in Schedule 'C' any time after taking delivery at the place of issue, he may return it after two days written notice or at any time without notice if he agrees to pay hire charges for two additional days without, in any way, affecting the right of the Engineer-in-charge to use the said plant and machinery during the said period of two days as he likes including hiring out to a third party.
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CLAUSE 35

	Condition relating to use of asphaltic materials	i. The contractor undertakes to make arrangement for the supervision of the work by the firm supplying the tar or bitumen used. ii. The contractor shall collect the total quantity of tar or bitumen required for the work as per standard formula, before the process of painting is started and shall hypothecate it to the Engineer in Charge. If any bitumen or tar remains unused on completion of the work on account of lesser use of materials in actual execution of for reasons other than authorised changes of specifications and abandonment of portion of work, a corresponding deduction equivalent to the cost of unused materials as determined by the Engineer in Charge shall be made and the material return to the contractors. Although the materials are hypothecated to AAI, the contractor undertakes the responsibility for their proper watch, safe custody and protection against all risks. The materials shall not be removed from site of work without the consent of the Engineer in Charge in writing. iii. The contractor shall be responsible for rectifying defects noticed within a year from the date of completion of the work and the portion of the security deposit relating asphaltic work shall be refunded after the expiry of this period.
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CLAUSE 36

	Employment of Technical Staff and employees	Contractors Superintendence, Supervision, Technical staff & Employees i. The contractor shall provide all necessary superintendence during execution of the work and all along thereafter as may be necessary for proper fulfilling of the obligations under the contract. The Contractor shall immediately after receiving letter of acceptance of the tender and before commencement of the work, intimate in writing to the Engineer-in-Charge, the name (s), qualifications experience, age, address (s) and other particulars along with certificates, of the principal technical representative to be charge of the work and other technical representative (s) who will be supervising the work. Minimum requirement of such technical representative (s) and their qualifications and experience shall not be lower than specified in schedule 'F". The Engineer-in-Charge shall within 3 days of receipt of such communication intimate in writing his approval or otherwise of such a representative (s) to the contractor. Any such approval may at any time be withdrawn and in case of such withdrawal, the contractor shall appoint another such representative (s) according to the provisions of this clause. Decision of the tender accepting authority shall be final and binding on the contractor in this respect. Such a principal technical representative and other technical representative (s) shall be appointed by the contractor soon after receipt of the approval from Engineer-in-charge and shall be available at site before start of work. All the provisions applicable to the principal technical representative under the clause will also be applicable to other technical representative(s). The principal technical representative and other technical representative (s) shall be present at the site of work for supervision at all times when any construction activity is in progress and also present himself/themselves, as required to the Engineer-in-Charge and / or his designated representative to take instructions. Instructions given to the principal technical representative or other technical representative (s) shall be deemed to have the same force as if these have been given to the contractor. The Principal Technical Representative and other technical representatives shall be actually available at site fully during all stages of execution work, during recording / checking / test checking of measurements of works whenever so required by the Engineer-in-Charge and shall also note down instructions conveyed by the Engineer-in-Charge or his designated representative (s) in the site order book and shall affix his/their signature in token of noting down the instructions and in token of acceptance of measurements / checked measurements / test checked measurements. The representative (s) shall not look after any other work. Substitutes, duly approved by engineer – in-Charge of the work in similar manner as aforesaid shall be provided in event of absence of any of the representative (s) by more than two days. If the Engineer-in-Charge, whose decision in this respect is final and binding on the contractor, is convinced that no such technical representative (s) is/are effectively appointed or is/are effectively attending or fulfilling the provision of this clause, a recovery (non-refundable) shall be effected from the contractor as specified in Schedule 'F' and the decision of the Engineer-in- Charge as recorded in the site order book and measurement recorded checked/test
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		checked in Measurement Books shall be final and binding on the contractor. Further if the contractor fails to appoint suitable technical Principal technical representative and / or other technical representative (s) and if such appointed persons are not effectively present or are absent by more than two days without duly approved substitute or do not discharge their responsibility satisfactorily, the Engineer-in-Charge shall have full powers to suspend the execution of the work until such date as suitable other technical representative (s) is / are appointed and the contractor shall be held responsible for the delay so caused to the work. The contractor shall submit a certificate of employment of the technical representative (s) (in the form of copy of Form- 16 or CPF deduction issued to the Engineer employed by him) alongwith every running account bill / final bill and shall produce evidence if at any times so required by the Engineer-in-Charge. ii. The contractor shall provide and employ on the site only such technical assistants as are skilled, and experienced in their respective fields and such foremen and supervisory staff as are competent to give proper supervision to the work. The contractor shall provide and employ skilled, semi-skilled and unskilled labour as is necessary for proper and timely execution of the work. The Engineer-in-Charge shall be at liberty to object to and require the contractor to remove from the works any person who in his opinion misconducts himself, or is incompetent or negligent in the performance of his duties or whose employment is otherwise considered by the Engineer-in Charge to be undesirable. Such person shall not be employed again at works site without the written permission of the Engineer-in-Charge and the persons so removed shall be replaced as soon as possible by competent substitutes. iii. The contractor shall not change his engineer/supervisory staff after approval of the Engineer-In-Charge. If Contractor wants to replace any of his staff due to unavoidable circumstances, he will seek permission of Engineer-In-Charge indicating reasons for such change, qualification and experience of the alternative employee suggested by him. The qualification and experience of the alternative staff shall not be inferior to the person employed earlier.
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CLAUSE 37

	Levy/Taxes/ Royalty/ Land Licence fee payable by Contractor	1. Taxes: a) The Bidders/ Service providers shall quote the rate inclusive of all taxes, duties, Cess, Fee, Royalty charges, GST etc levied under any statute. Wherever supplies/services involve imports, the same should be identified separately. Basic Custom Duty will be paid by AAI by utilizing EPCG license/duty Credit Scrip under Service Export from India Scheme (SEIS) of GOI. b) In case of independent supplies, for example supply of furniture, computer, air conditioners, etc each of which are governed by separate contract clause without being subservient to any principal product, GST rate of each such independent supply shall be applicable. c) In case of work contract in relation to SITC (affixed to Civil structure) for example E & M Installation etc, whether the contract is for a single SITC or a single contract as a whole is governing multiple
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		SITC, rate of GST as applicable for work contract shall be applicable for such SITC contract. d) In case of composite supply for example supply of movable machineries / items etc, GST rate for principal item in such composite supply shall be applicable. e) GST shall be paid to bidder for any taxable supply/services against a valid Tax Invoice as per terms and condition of contract. f) Terms & conditions if any, in respect of indirect taxes subsumed in GST i.e. Excise duty, VAT, Sales tax, Royalty etc may be treated dispensed with in this tender document. 2. Royalty: a. The contractor shall at his own expense, provide all materials required for the works other than those which are to be supplied by AAI. The contractor shall deposit royalty and obtain necessary permit for collection of stone, sand, red bajri, kankar etc. from the local authority in the matter and will abide by the notification issued by Central Govt. / State Government / Local State Authorities as applicable from time to time in this regard. The contractor is also bound to allow deduction from his bills any difference in statutory taxes/royalty and penalty proposed by Local State Authorities to AAI till finalization of settlement of all demands in this regard by Central / State Govt. b. This will also be applicable to forest produce. c. If pursuant to or under any law, notification or order any royalty, cess or the like becomes payable by the AAI and does not any time become payable by the contractor to the State Government. Local authorities in respect of any material used by the contractor in the works then in such a case, it shall be lawful to the AAI and it will have the right and be entitled to recover the amount paid in the circumstances as aforesaid from dues of the contractor. 3. License fee for land a. Land/Space (paved/unpaved/covered AC or Non AC), to the extent allotted to contractors during execution of work for the purpose of installation of plants, Labour camps, cement godown, site office, stacking of materials shall be provided at free of cost up to defect liability period/maintenance period. b. A security deposit @ Rs. 500/- per sqm in the form of DD/BG shall be deposited by the contractor, in case contractor do not deposit security deposit same shall be deducted from 1st running account bill. c. Such security deposit shall be released only after allotted land has been fully vacated by the contractor to entire satisfaction of engineer In-charge. If contractor fails to vacate the allotted land/space (paved/unpaved/covered AC/Non AC) after defect liability period/maintenance period of the work shall be charged as per prevailing license fee of the Airport plus 25% penalty over that.
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CLAUSE 38

Conditions for reimbursement of levy/taxes if	1. Rates to be quoted by the parties should be inclusive of all taxes, duties, CESS, fee, royalty charges, GST etc. levied under any statute applicable on last stipulated date of receipt of tender including extension if any. No adjustment i.e. increase or decrease shall be made for any
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	levied after receipt of tenders	variation in the rate of GSI Building and Other Construction Workers Welfare Cess or any tax, levy or Cess applicable on inputs. However, effect of variation, as per Govt. order after the last date of receipt of tender including extension if any, in rates of GST or Building and Other Construction Workers Welfare Cess or imposition or repeal of any other tax, levy or Cess applicable on output of the works contract shall be adjusted on either side, increase or decrease. Provided further that for Building and Other Construction Workers Welfare Cess or any tax (other than GST), levy or Cess varied or imposed after the last date of receipt of tender including extension if any, any increase shall be reimbursed to the contractor only if the contractor necessarily and properly pays such increased amount of taxes / levies / Cess. Provided further that such increase in tax / levy / Cess including GST shall not reimbursed if made in the extended period of contract for which the contractor alone is responsible for delay as determined by authority for extension of time under Clause 5 in Schedule F. 2. The contractor shall keep necessary books of accounts and other documents for the purpose of this condition as may be necessary and shall allow inspection of the same by a duly authorised representative of AAI or the Engineer-in-Charge and further shall furnish such other information /document as the Engineer-in- Charge may require from time to time. 3. The contractor shall, within a period of 30 days of the imposition of any such further tax or levy or Cess, give a written notice thereof to the Engineer-in-charge that the same is given pursuant to the condition, together with all necessary information / documents relating thereto.
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CLAUSE 39

	Termination of contract on death of contractor	Without prejudice to any of the rights or remedies under this contract, if the contractor dies, the Engineer-in-charge on behalf of the AAI shall have the option of terminating the contract without compensation to the contractor.
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CLAUSE 40

	If relative working in AAI then the contractor not allowed to tender.	The contractor shall not be permitted to tender for works in AAI wherein his near relative is posted as an Officer responsible for award and execution of work. 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 officer of AAI. Any breach of this condition by the Contractor would render him, the contract liable to be rejected at any stage. NOTE: By the term "near relatives" is meant wife, husband, parents and grand parents, children and grand children, brothers and sisters, uncles, aunts and cousins and their corresponding in-laws.
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CLAUSE 41

	No any officer in Department	Engineer or any officer employed in engineering or administrative duties in an engineering department of AAI shall not work as a contractor or
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of Engineering to work as contractor within one year of retirement	employee of contractor for a period of one year after his retirement from AAI service without the prior permission of AAI in writing. This contract is liable to be cancelled if either the contractor or any of his employees is found at any time to be such a person who had not obtained the permission of AAI as aforesaid, before submission of the tender or engagement in the contractor's service, as the case may be.
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CLAUSE 41(a)

Integrity Pact and Independent External Monitor.	Signing of Integrity Pact (As per Appendix XVIII) is mandatory for every bidder/contractor if provided so in Schedule F. All tenderers shall have to submit an undertaking as per Appendix XVIII along with tender documents. AAI shall appoint Independent External Monitor(s) to oversee effective implementation of Integrity Pact for such works/supplies. For this purpose, a panel of Independent External Monitors shall be constituted by the Authority in concurrence with Central Vigilance Commission (CVC). i. The Contractor/Supplier shall have to act in accordance with the conditions laid down in the integrity pact. - Signing of Integrity Pact is mandatory for every Bidder/Contractor in this procurement/bid process the signed original pact to be send to the office of Bid Manager and should reach before the due date mentioned in NIT. - The Bidder/contractor shall commit itself to ensure taking all measures necessary to prevent corrupt practices, unfair means and illegal activities during any stage of its bid or during any pre-contract or post-contract stage as specified in section 3 of the integrity pact. - Any breach of the aforesaid provisions by the Bidder or any one employed by it or acting on its behalf (whether with or without the knowledge of the Bidder) shall entitle the authority to take all or any one of the action as specified in section 6 of the integrity pact. ii. In case any violation of above conduct is established, AAI reserves right to take following actions. - If contractor commits a violation of its commitments and obligations under the Integrity Pact Program during bidding process, he shall be liable for disqualification from tender process and forfeiture of his Earnest Money Deposit/ Bid Security. - In case of violation of the Integrity Pact after award of the contract, Authority is entitled to terminate the contract and shall be entitled to demand and recover from the contractor damages equivalent to 5% of the contract value or the amount equivalent to Security Deposit or Performance Bank Guarantee, whichever is higher. - Authority may initiate appropriate proceedings against the contractor. - Contractor will be liable to pay damages as determined by the Authority.
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		e. Contractor against whom an action for violation of its commitments and obligations has been taken earlier, again commits a violation, the Authority is entitled to debar such contractor for future tender/ contract processes for a period as deemed fit. f. A violation is considered to have occurred if the Authority is fully satisfied with the available documents and evidence submitted along-with Independent External Monitor's recommendations / suggestions that no reasonable doubt exist in the matter.
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CLAUSE 41(b)

	Code of Integrity	No official of AAI or a bidder shall act in contravention of the codes which includes 1 prohibition of - making offer, solicitation or acceptance of bribe, reward or gift or any material benefit, either directly or indirectly, in exchange for an unfair advantage in the procurement process or to otherwise influence the procurement process. - any omission, or misrepresentation that may mislead or attempt to mislead so that financial or other benefit may be obtained or an obligation avoided. - any collusion, bid rigging or anticompetitive behaviour that may impair the transparency, fairness and the progress of the procurement process. - improper use of information provided by the procuring entity to the bidder with an intent to gain unfair advantage in the procurement process or for personal gain. - any financial or business transactions between the bidder and any official of the procuring entity related to tender or execution process of contract; which can affect the decision of the procuring entity directly or indirectly. - any coercion or any threat to impair or harm, directly or indirectly, any party or its property to influence the procurement process. - obstruction of any investigation or auditing of a procurement process. - making false declaration or providing false information for participation in a tender process or to secure a contract; 2 disclosure of conflict of interest. 3 Disclosure by the bidder of any previous transgressions made in respect of the provisions of sub-clause (i) with any entity in any country during the last three years or of being debarred by any other procuring entity.
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CLAUSE 42

	Return of material and recovery for excess material issued.	i. After completion of the work and also at any intermediate stage in the event of non-reconciliation of materials issued, consumed and in balance — (see Clause 10), Theoretical quantity of materials issued by the AAI for use in the work shall be calculated on the basis and method given hereunder;
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		a. Quantity of cement & bitumen shall be calculated on the basis of quantity of cement & bitumen required for different items of work as shown in the Schedule of Rates mentioned in Schedule 'F'. In case any item is executed for which standard co-efficients for the consumption of cement or bitumen are not available in the above mentioned schedule / statement or cannot be derived from the same shall be calculated on the basis of standard formula to be laid down by the Engineer in Charge. b. Theoretical quantity of steel reinforcement or structural steel sections shall be taken as the quantity required as per design or as authorised by Engineer in Charge, including authorised lappages, chairs etc. plus 3% wastage due to cutting into pieces, such theoretical quantity being determined and compared with the actual issues each diameter wise, section wise and category wise separately. c. Theoretical quantity of G.I. & C.I. or other pipes, conduits, wires and cables pig lead and G.I. / M.S. sheets shall be taken as quantity actually required and measures plus 5% for wastage due to cutting into pieces (except in the case of G.I./M.S. sheets it shall be 10%), such determination & comparison being made diameter wise & category wise. d. For any other material as per actual requirements. ii. Over the theoretical quantities of materials so computed a variation shall be allowed as specified in Schedule 'F'. The difference in the net quantities of material actually issued to the contractor and the theoretical quantities including such authorised variation, if not returned by the contractor or if not fully reconciled to the satisfaction of the Engineer in Charge within fifteen days of the issue of written notice by the Engineer in Charge to this effect shall be recovered at the rates specified in Schedule 'F', without prejudice to the provision of the relevant conditions regarding return of materials governing the contract. Decision of Engineer in Charge in regard to theoretical quantities of materials, which should have been actually used as per the Annexure of the standard schedule of rates and recovery at rates specified in Schedule 'F' shall be final and binding on the contractor. For non scheduled items, the decision of the Engineer in charge regarding theoretical quantities of materials which should have been actually used, shall be final and binding on the contractor. a. The said action under this clause is without prejudice to the right of the AAI to take action against the contractor under any other conditions of contract for not doing the work according to the prescribed specifications. b. For materials brought by the contractor for use in item of work at site, similar theoretical consumption shall be prepared and submitted to the Engineer in Charge for verification. If it is found that material consumed in the work is less than the theoretical consumption after taking into account permissible minus variation, the recovery for corresponding material shall be effected as per rates specified in schedule 'F' under Clause 42.
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CLAUSE 43

	Compensation during warlike	The work (whether fully constructed or not) and all materials, machines, tools and plants scaffolding, temporary buildings and other things connected therewith shall be at the risk of the contractor until the work has
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	situations / act of terrorism	been delivered to the Engineer-in-Charge and a certificate from him to that effect obtained. In the event of the work or any materials properly brought to the site for incorporation in the work being damaged or destroyed in consequence of hostilities or warlike operation or act of terrorism, the contractor shall when ordered (in writing) by the Engineer-in-Charge to remove any debris from the site, collect and properly stack or remove in store all serviceable materials salvaged from the damaged work and shall be paid at the contract rates in accordance with the provision of this agreement for the work of clearing the site of debris, stacking or removal of serviceable material and for reconstruction of all works ordered by the Engineer-in-Charge, such payments being in addition to compensation upto the value of the work original executed before being damaged or destroyed and not paid for. In case of works damaged or destroyed but not already measured and paid for, the compensation shall be assessed by the Engineer-in charge upto Rs.5,000/- and by the Executive Director Engg. concerned for a higher amount. The contractor shall be paid for the damages / destruction suffered and for restoring the material at the rate based on analysis of rates tendered for in accordance with the provision of the contract. The certificate of the Engineer-in- Charge regarding the quality and quantity of materials and the purpose for which they were collected shall be final and binding on all parties to this contract. Provided always that no compensation shall be payable for any loss in consequence of hostilities or warlike operation (a) unless the contractor had taken all such precautions against air raid as are deemed necessary by the A.R.P. Officers or the Engineer-in- Charge (b) for any material etc. not on the site of the work or for any tools plant, machinery, scaffolding, temporary building and other things not intended for the work. In the event of the contractor having to carry out reconstruction as aforesaid, he shall be allowed such extension of time for its completion as is considered reasonable by the Engineer – in - charge.
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CLAUSE 44

	Apprentices Act provisions to be complied with	The contractor shall comply with the provisions of the Apprentices Act, 1961 and the rules and orders issued thereunder from time to time. If he fails to do so, his failure will be a breach of the contract and the Executive Director Engg. / General Manager (Engg.) may, in his discretion, cancel the contract. The contractor shall also be liable for any pecuniary liability arising on account of any violation by him of the provisions of the said Act.
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CLAUSE 45

	Release of security deposit	The Security Deposit of the work shall be refunded if no labour complaint has been received from the labour officer till the due date of its payment. If a labour complaint is received during this period, the Engineer-in-Charge shall, after issue of notice in this regard to the contractor, withheld the amount required to settle the complaint from his security deposit and refund the balance amount.
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CLAUSE 46

	Contractor's Liability and	i. From commencement to completion of the Works, the Contractor shall take full responsibility for the case thereof and for taking precautions to prevent loss or damage and to minimize loss or damage to the
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	Insurance of Works	greatest extent possible and shall be liable for any damage or loss that may happen to the Works or any part thereof and all AA I's T & P from any cause whatsoever (save and except the Excepted Risks) and shall at his own cost repair and make good the same so that at completion, the Works and all AAI's T & P shall be in good order and condition and in conformity in every respect with the requirements of the Contract and instructions of the Engineer-in-Charge. ii. In the event of any loss or damage to the Works or any Part thereof or to any T & P, to any material or articles at the Site from any of the Excepted Risks the following provisions shall have effect: a. The Contractor shall, as may be directed in writing by the Engineer-in-Charge, remove from the Site any debris and so much of the works as shall have been damaged, taking to AAI's store such AAI's T & P, articles and/or materials as may be directed; b. The contractor shall, as may be directed in writing by the Engineer-in-Charge, proceed with the erection and completion of the Works under and in accordance with the provisions and Conditions of the Contract; and iii. Provided always that the Contractor shall not be entitled to payment under the above provisions in respect of so much loss or damage as has been occasioned by any failure on his part to perform his obligation under the Contract or not taking precautions to prevent loss or damage or minimize the amount of such loss or damage. iv. Without limiting its obligations and responsibilities under other clauses of General Conditions of Contracts ,the contractor at his own cost shall insure ,in the joint name of AAI and the contractor, against all losses or damages from whatever cause, arising (other than the accepted risks)for which he is responsible under the terms of the contract and in such manner that the AAI and the contractor are covered during the period of construction of works and any loss or damage occasioned by the contractor in the course of any operation carried out by them for the purpose of complying with its obligations of defects liability clause hereof; a. All works including temporary works to their full value executed from time to time. b. The construction materials and equipments to their full value brought on to the site by the contractor. v. The Contractor shall indemnify and keep indemnified AAI against all losses and claims for injuries or damage to any persons or any property whatsoever which may arise out of or in consequence of the construction and maintenance of Works and against all claims, demands proceedings, damage costs, charges and expenses whatsoever in respect of or in relation thereto. vi. Before commencing execution of the work, the Contractor shall, without in any way limiting his obligations and responsibilities under this condition, insure at his own cost against any damage, loss or injury which may occur to any AAI property, or to any person for at least the minimum amount of Rs. 1.00 lakh with unlimited number of occurrences (including any employee of AAI) by or arising out of carrying out of the Contract. vii. The contractor shall at all times indemnify AAI against all claims, damages or compensation under the provisions of Payment or Wages Act, 1936, Minimum Wages Act, 1948, Employer's Liability Act, 1938, the Workmen's Compensation Act, 1923, Industrial Disputes Act, 1947
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		and the Maternity Benefit Act, 1961 or any modifications thereof or any other law relating thereto and rules made there under from time to time or as a consequence of any accident or injury to any workman or other persons in or about the Works, whether in the employment of the Contractor or not, his agents or servants, and also against all costs, charges and expenses of any suit, action or proceedings arising out of such accident or injury and against all sum or sums which may with the consent of the Contractor be paid to compromise or compound any claim. Without limiting his obligations and liabilities as above provided, the Contractor shall insure against all claims, damages or compensation payable under the Workmen's Compensation Act, 1923 or any modification thereof or any other law relating thereto. viii. All insurance mentioned above shall be effected with any subsidiary of the General Insurance Company of India or by a company approved by the Insurance Regulatory Authority of India. ix. The aforesaid insurance policy / policies shall provide that they shall not be cancelled till the Engineer-in-Charge has agreed to their cancellation in writing. x. The Contractor shall prove to the Engineer-in-Charge from time to time that he has taken out all the insurance policies referred to above and has paid the necessary premiums for keeping the policies alive till expiry of the Defects Liability Period. A self-certified copy of such policies are required to be submitted to the Engineer-in-charge. xi. The Contractor shall ensure that similar insurance policies are taken out by his subcontractors (if any) and shall be responsible for any claims or losses to AAI resulting from their failure to obtain adequate insurance protection in connection thereof. The contractor shall produce or cause to be produced by his subcontractor (if any) as the case may be, the relevant policy or policies and premiums receipts as and when required by the Engineer-in-Charge. A self-certified copy of such policies are required to be submitted to the Engineer-in-charge. xii. If the Contractor and/or his subcontractor (if any) shall fail to effect and keep in force the insurance referred to above or any other insurance which he/they may be required to effect under the terms of the Contract then and in any such case AAI may, without being bound to, effect and keep in force any such insurance and pay such premium or premiums as may be necessary for that purpose and from time to time deduct the amount so paid by AAI from any moneys due or which may become due to the Contractor or recover the same as a debt due from the Contractor. xiii. In case contractor takes Contractor All Risk (CAR) Policy in joint name of AAI and Contractor for full tendered value alongwith third party liability (max of 10% of tendered value or as applicable as per Insurance Regulatory Authority of India) then there is no requirement for taking separate insurance by sub contractors. However, workmen compensation policy is required to be taken separately by main contractor and sub contractor for workers employed by them.
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CLAUSE 47

Composite Contract and responsibility	i. The tenders have been called for composite work consisting of civil construction and other associated specialized works. The pre-qualification criteria shall be applicable for each subhead of work independently. The agency meeting PQ criteria for the main work shall
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	es of main agency	be considered for execution of composite work. However the agency shall be allowed to execute only those specialized subheads of works for which bidder meets PQ criteria individually. ii. The main contractor shall be permitted to execute only those works (covered under one or more subhead) for which he meets all requirements of pre-qualification including financial, technical and technological requirement specified in the PQ criteria. iii. Main contractor will associate expert agencies for the execution of specialized works under various subheads for which he himself has failed to meet PQ criteria. In such case he will appoint his associate for the execution of each specialized work with the approval of the NIT approving authority. The main contractor shall intimate the names of only those agencies who fully meet the PQ criteria for each specialized work for the acceptance of the department. iv. Main contractor shall not be permitted to change their associate agencies in the course of execution of work. If change of agency is inevitable then a request shall be submitted to the engineer in charge in writing giving full justification for change of agency. The proposal should include name of the alternate agency along with his financial, technical capabilities and work experience in the appropriate field. Such change shall be allowed only after receiving approval from the competent authority.
	Composite contract- Tripartite agreement	This clause is applicable for the works for which the estimated cost put to tender is more than Rs.500.00 crores. i. The main contractor shall finalise his rates, terms and conditions and mode of execution of work with specialised agencies for all works covered in various subhead of works on receipt of work order but specifications, preferred makes of materials and performance of system shall remain as specified in tender document. ii. The main contractor shall arrange an agreement between department, main contractor and associated agencies for all subheads on receipt of work order from the engineer in charge. Main contractor and expert agency shall be jointly responsible for quality of work and performance of the system. iii. Main contractor shall submit list of associated agency for each specialized work within 1/12th of stipulated completion period or within one month from issue of work order whichever is later along with documentary evidence for financial soundness, technical capabilities and their experience for executing similar specialized works along with his application seeking acceptance for the name of associated agency. Approval / rejection for the name of associated agency shall be accorded thereafter by NIT approving authority within a period of 15 days each subhead wise. iv. The main contractor shall submit duly signed tripartite agreement on the format provided by AAI within 2/12th of stipulated completion period or 60 days whichever is later for acceptance and signature of department. The extension of time for signing of this agreement shall not be generally permitted. The signing time shall only be extended if handing over of site is delayed due to reasons beyond control of the contractor.
	Conditions of composite contract	i. Main contractor shall be responsible for submission of earnest money. ii. The mobilization advance shall be paid to main contractor as per terms and conditions of contract and indicated under Clause 10 B. The first instalment of mobilization advance shall be corresponding to the value of work which shall be executed by the main contractor. The

		subsequent mobilization advances corresponding to value of work covered in each subhead shall be released on signing of each Tripartite Agreement with expert agency for the same. iii. The security deposit shall be deducted from the running bills of main contractor after adjustment of full earnest money. iv. Main contractor shall be responsible for completion of work as per time schedule indicated in the NIT. The compensation for the delay shall be levied on the main contractor only. v. The coordination meetings called by AAI or its representative shall be attended by associated expert agencies as and when required. Expert agency shall be responsible for technical soundness, quality of work and adherence to tender specifications. The main contractor as well as associated agency shall be responsible for rectification of deficiencies noticed in specialized work.
	Payment Conditions for Composite Contract	i. It will be the responsibility of main contractor to finalize expert agencies for the execution of works covered under all subheads of NIT and get the tripartite agreements signed as per NIT requirement at an early date. The main contractor shall not be paid for value of work covered under second running bill & subsequent bills till all Tripartite Agreements are signed by all agencies concerned. ii. The main contractor must fill the ratio of work which shall govern the ratio of direct payment to the expert agency and to the main contractor for each subhead of work in schedule F. This ratio may also be indicated in tripartite agreement. Thus direct payment to each expert agency shall be released in the same ratio from the net payment (after all deductions). iii. The running bill for specialized work shall be processed as per terms and conditions of the contract. All deductions like security deposit, income tax and part rate for incomplete work or due to any other reason shall be made as per contract conditions from each running bill. In case the ratio as desired under (ii) is not filled by the main contractor AAI will make payment of 75% of the net payable amount to the expert agency directly and balance 25% shall be paid to the main contractor.

Clause 48

	Escrow Account	i. All payments for the works estimated cost more than Rs.500 Cr shall be made only through Escrow Account opened by the contractor. However for works costing less than Rs.500 Cr., it shall be at the discretion of Technical Sanctioning authority to opt for Escrow account or not. The bank charges for Escrow Account shall be borne by contractor. The detailed conditions of Escrow Account shall be drawn in consultation with associated bank. ii. Mobilization advance for mobilisation of resources and purchase of plant & machinery shall be credited directly to the escrow account opened for this contract through bank transfer as per terms and condition of contract. The agency shall be able to utilise 25% (or as decided by TS authority) of each instalment of mobilisation advance to meet minor expenses like construction of site office, purchase of office equipment and other minor works, while release of balance 75% fund shall be regulated by the department. The contractor shall seek prior concurrence of Engineer in Charge for release of payment to the supplier etc. through Escrow Account by the Bank. Funds against cheque issued by contractor shall be released by Bank on receipt of written consent from Engineer in Charge. iii. Payment received and credited against each RA Bill, can be utilised 25% directly by the contractor for minor expenses like salary, stationary, office expenses etc. AAI shall exercise control for release of payment by contractor for balance 75%. iv. The Contractor shall submit his proposal to the Engineer in Charge/Authority for utilisation of funds made available by AAI (75% against each RA bill) a. Name of agency for whom payment is proposed to be released. b. Details of work executed/material supplied by agency to whom he intends to release payment. c. Nature of advance payment if any, has to be released to the supplier for supply of material for the project only. d. Documentary evidence in support of his claim. v. Engineer in charge will examine and approve full/part of such payments as per agency's request within maximum of three working days. The terms and condition of Escrow Account shall be finalised with bank according to terms and conditions of contract. Bank shall release payment against such cheques only after written consent of authorised officer of AAI is received. vi. Contractor shall be permitted to close Escrow Account on receipt of final payment for the work/project or on receipt of letter for foreclosure of work by the AAI. All balances and liabilities against this Escrow Account shall be left at the disposal of the contractor.
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Note : In case of difference or ambiguity in Hindi and English version anywhere, the English version will prevail.

AIRPORTS AUTHORITY OF INDIA

SAFETY CODE

1. Suitable Scaffolds should be provided for workmen for all works that cannot safely be done from the ground, or from solid construction except such short period work as can be done safely from ladders. When a ladder is used, an extra mazdoor shall be engaged for holding the ladder and if the ladder is used for carrying materials as well suitable footholds and hand-hold shall be provided on the ladder and the ladder shall be given an inclination not steeper than $\frac{1}{4}$ to 1 ($\frac{1}{4}$ horizontal and 1 vertical).
2. Scaffolding of staging more than 3.6m (12ft.) above the ground or floor, swung or suspended from an overhead support or erected with stationary support shall have a guard rail properly attached or bolted, braced and otherwise secured at least 90 cm. (3ft.) high above the floor or platform of such scaffolding on staging and extending along the entire length of the outside and ends thereof with only such opening as may be necessary for the delivery of materials. Such scaffolding or staging shall be so fastened as to prevent it from swaying from the building or structure.
3. Working platforms, gangways and stairways should be so constructed that they should not sag unduly or unequally, and if the height of the platform or the gangway or the stairway is more than 3.6 m (12ft.) above ground level or floor level, they should be closely boarded, should have adequate width and should be suitably fastened as described in (2) above.
4. Every opening in the floor of a building or in a working platform shall be provided with suitable means to prevent the fall of person or materials by providing suitable fencing or railing whose minimum height shall be 90 cm.(3ft.)
5. Safe means of access shall be provided to all working platforms and other working places. Every ladder shall be securely fixed. No portable single ladder shall be over 9m. (30ft.) in length while the width between side rails in rung ladder shall in no case be less than 29 cm. (11 $\frac{1}{2}$ ") for ladder upto and including 3m. (10ft.) in length. For long ladders, this width should be increased at least $\frac{1}{4}$ " for each additional 30cm. (1 foot) of length. Uniform step spacing of not more than 30cm shall be kept. Adequate precautions shall be taken to prevent danger from electrical equipment. No materials on any of the site or work shall be so stacked or placed as to cause danger or inconvenience to any person or the public. The contractor shall provide all necessary fencing and lights to protect the public from accident and shall be bound to bear the expenses of defence of every suit, action or other proceedings at law that may be brought by any person for injury sustained owing to neglect of the above precautions and to pay any damages and cost which may be awarded in any such suit, action or proceedings to any such person on which may, with the consent of the contractor, be paid to compensate any claim by any such person.
6. a. **Excavation and Trenching** – All trenches 1.2 m. (4ft.) or more in depth, shall at all times be supplied with at least one ladder for each 30m. (100ft.) in length or fraction thereof, Ladder shall extend from bottom of the Trench to at least 90cm (3fts) above the surface of the ground. The side of the trenches which are 1.5 m. (5 ft.) or more in depth shall be stepped back to give suitable slope or securely held by timber bracing, so as to avoid the danger of sides collapsing. The excavated material shall not be placed within 1.5 m. (5 ft.) of the edges of the trench or half of the depth of the trench whichever is more. Cutting shall be done from top to bottom. Under no circumstances, undermining or undercutting shall be done.

b. Safety Measures for digging bore holes : -

- i. If the bore well is successful, it should be safely capped to avoid caving and collapse of the bore well. The failed and the abandoned ones should be completely refilled to avoid caving and collapse;
 - ii. During drilling, Sign boards should be erected near the site with the address of the drilling contractor and the Engineer-in-charge of the work;
 - iii. Suitable fencing should be erected around the well during the drilling and after the installation of the rig on the point of drilling, flags shall be put 50 Mtr all around the point of drilling to avoid entry of people/animals;
 - iv. After drilling the bore well, a cement platform (0.50 Mtr x 0.50 Mtr x 1.20 Mtr) 0.60 Mtr above ground level and 0.60 Mtr below ground level should be constructed around the well casing;
 - v. After the completion of the borewell, the contractor should cap the borewell properly by welding steel plate, cover the borewell with the drilled wet soil and fix thorny shrubs over the soil. This should be done even while repairing the pump;
 - vi. After the borewell is drilled the entire site should be brought to the ground level;
7. Demolition – Before any demolition work is commenced and also during the progress of the work,
- i) All roads and open areas adjacent to the work site shall either be closed or suitably protected.
 - ii) No electric cable or apparatus which is liable to be a source of danger or a cable or apparatus used by the operator shall remain electrically charged.
 - iii) All practical steps shall be taken to prevent danger to persons employed from risk of fire or explosion or flooding. No floor, roof or other part of the building shall be so overloaded with debris or materials as to render it unsafe.
8. All necessary personal safety equipment as considered adequate by the Engineer-in-Charge should be kept available for the use of the person employed on the site and maintained in a condition suitable for immediate use, and the contractor should take adequate steps to ensure proper use of equipment by those concerned. The following safety equipment shall invariably be provided.
- i) Workers employed on mixing asphaltic materials, cement and lime mortars shall be provided with protective footwear and protective goggles.
 - ii) Those engaged in white washing and mixing or stacking of cement bags or any material which is injurious to the eyes, shall be provided with protective goggles.
 - iii) Those engaged in welding works shall be provided with welder's protective eye-shields.
 - iv) Stone breaker shall be provided with protective goggles and protective clothing and seated at sufficiently safe intervals.
 - v) When workers are employed in sewers and manholes, which are in active use, the contractors shall ensure that the manhole covers are opened and ventilated atleast for an hour before the workers are allowed to get into the manholes, and the manholes so opened shall be cordoned off with suitable railing and provided with warning signals or boards to prevent accident to the public. In addition, the contractor shall ensure that the following safety measures are adhered to:-
- a) Entry for workers into the line shall not be allowed except under supervision of the Sr. Superintendent (Engg.) or any other higher officer.
 - b) Atleast 5 to 6 manholes upstream and downstream should be kept open for at least 2 to 3 hours before any man is allowed to enter into the manhole for working inside.
 - c) Before entry, presence of toxic gases should be tested by inserting wet lead acetate paper which changes colour in the presence of such gases and gives indication of their presence.

- d) Presence of Oxygen should be verified by lowering a detector lamp into the manhole. In case, no Oxygen is found inside the sewer line, workers should be sent only with oxygen kit.
 - e) Safety belt with rope should be provided to the workers. While working inside the manholes, such rope should be handled by two men standing outside to enable him to be pulled out during emergency.
 - f) The area should be barricaded or condoned off by suitable means to avoid mishaps of any kind. Proper warning signs should be displayed for the safety of the public whenever cleaning works are undertaken during night or day.
 - g) No smoking or open flames shall be allowed near the blocked manhole being cleaned.
 - h) The malba obtained on account of cleaning of blocked manholes and sewer lines should be immediately removed to avoid accidents on account of slippery nature of the malba.
 - i) Workers should not be allowed to work inside the manhole continuously. He should be given rest intermittently. The Engineer-in-Charge may decide the time upto which a worker may be allowed to work continuously inside the manhole.
 - j) Gas masks with Oxygen Cylinder should be kept at site for use in emergency.
 - k) Air-blowers should be used for flow of fresh air through the manholes. Whenever called for, portable air blowers are recommended for ventilating the manholes. The Motors for these shall be vapour proof and of totally enclosed type. Non sparking gas engines also could be used but they should be placed at least 2 metres away from the opening and on the leeward side protected from wind so that they will not be a source of friction on any inflammable gas that might be present.
 - l) The workers engaged for cleaning the manholes / sewers should be properly trained before allowing to work in the manhole.
 - m) The workers shall be provided with Gumboots or non sparking shoes bump helmets and gloves non sparking tools safety lights and gas masks and portable air blowers (when necessary). They must be supplied with barrier cream for anointing the limbs before working inside the sewer lines.
 - n) Workmen descending a manhole shall try each ladder stop or rung carefully before putting his full weight on it to guard against insecure fastening due to corrosion of the rung fixed to manhole well.
 - o) If a man has received a physical injury, he should be brought out of the sewer immediately and adequate medical aid should be provided to him.
 - p) The extent to which these precautions are to be taken depend on individual situation but the decision of the Engineer-in-Charge regarding the steps to be taken in this regard in an individual case will be final.
 - (vi) The Contractor shall not employ men and women below the age of 18 years on the work of painting with products containing lead in any form. Wherever men above the age of 18 are employed on the work of lead painting, the following precaution should be taken:-
 - a) No paint containing lead or lead products shall be used except in the form of paste or ready made paint.
 - b) Suitable face masks should be supplied for use by the workers when paint is applied in the form of spray or a surface having lead paint is dry rubbed and scrapped.
 - c) Overall shall be supplied by the contractors to the workmen and adequate facilities shall be provided to enable the working painters to wash during and on the cessation of work.
9. An additional clause (viii)(i) of AAI Safety Code (iv) the Contractor shall not employ women and men below the age of 18 on the work of painting with product containing lead in any form, wherever men above the age of 18 are employed on the work of lead painting, the following principles must be observed for such use:

- i) White lead, sulphate of lead or product containing these pigment, shall not be used in painting operation except in the form of pastes or paint ready for use.
 - ii) Measures shall be taken, wherever required in order to prevent danger arising from the application of a paint in the form of spray.
 - iii) Measures shall be taken, wherever practicable, to prevent danger arising out of from dust caused by dry rubbing down and scraping.
 - iv) Adequate facilities shall be provided to enable working painters to wash during and on cessation of work.
 - v) Overall shall be worn by working painters during the whole of working period.
 - vi) Suitable arrangement shall be made to prevent clothing put off during working hours being spoiled by painting materials.
 - vii) Cases of lead poisoning and suspected lead poisoning shall be notified and shall be subsequently verified by medical man appointed by competent authority of AAI.
 - viii) AAI may require, when necessary medical examination of workers.
 - ix) Instructions with regard to special hygienic precautions to be taken in the painting trade shall be distributed to working painters.

- 10. When the work is done near any place where there is risk of drowning, all necessary equipments should be provided and kept ready for use and all necessary steps taken for prompt rescue of any person in danger and adequate provision, should be made for prompt first aid treatment of all injuries likely to be obtained during the course of the work.

- 11. Use of hoisting machines and tackle including their attachments, anchorage and supports shall conform to the following standards or conditions:
 - i) (a) These shall be of good mechanical construction, sound materials and adequate strength and free from patent defects and shall be kept repaired and in good working order.
 - (b) Every rope used in hoisting or lowering materials or as a means of suspension shall be of durable quality and adequate strength, and free from patent defects.
 - ii) Every crane driver or hoisting appliance operator, shall be properly qualified and no person under the age of 21 years should be in charge of any hoisting machine including any scaffolding winch or give signals to operator.
 - iii) In case of every hoisting machine and of every chain ring hook, shackle swivel and pulley block used in hoisting or as means of suspension, the safe working load shall be ascertained by adequate means. Every hoisting machine and all gear referred to above shall be plainly marked with the safe working load. In case of a hoisting machine having a variable safe working load each safe working load and the condition under which it is applicable shall be clearly indicated. No part of any machine or any gear referred to above in this paragraph shall be loaded beyond the safe working load except for the purpose of testing.
 - iv) In case of departmental machines, the safe working load shall be notified by the Electrical Engineer-in-Charge. As regards contractor's machines the contractors shall notify the safe working load of the machine to the Engineer-in-Charge whenever he brings any machinery to site of work and get it verified by the electrical Engineer concerned.

- 12. Motors, gearing, transmission, electric wiring and other dangerous parts of hoisting appliances should be provided with efficient safeguards. Hoisting appliances should be provided with such means as will reduce to the minimum the risk of accidental descent of the load. Adequate precautions should be taken to reduce to the minimum the risk of any part of a suspended load becoming accidentally displaced. When workers are employed on electrical installations which are already energized, insulating mats, wearing apparel, such as gloves, sleeves and boots as may be

necessary should be provided. The worker should not wear any rings, watches and carry keys or other materials which are good conductors of electricity.

13. All scaffolds, ladders and other safety devices mentioned or described herein shall be maintained in safe condition and no scaffold, ladder or equipment shall be altered or removed while it is in use. Adequate washing facilities should be provided at or near places of work.
14. These safety provisions should be brought to the notice of all concerned by display on a notice board at a prominent place at work spot. The person responsible for compliance of the safety code shall be named therein by the contractor.
15. To ensure effective enforcement of the rules and regulations relating to safety precautions the arrangements made by the contractor shall be open to inspection by the Labour Officer or Engineer-in- Charge of the department or their representatives.
16. Notwithstanding the above clauses from (1) to (15), there is nothing in these to exempt the contractor from the operations of any other Act or Rules in force in the Republic of India.

MODEL RULES FOR THE PROTECTION OF HEALTH AND SANITARY ARRANGEMENTS FOR WORKERS EMPLOYED BY AAI OR ITS CONTRACTORS

1. APPLICATION

These rules shall apply to all buildings and construction works in charge of AAI in which twenty or more workers are ordinarily employed or are proposed to be employed in any day during the period during which the contract work is in progress.

2. DEFINITION

Work place means a place where twenty or more workers are ordinarily employed in connection with construction work on any day during the period during which the contract work is in progress.

3. FIRST-AID FACILITIES

- (i) At every work place, there shall be provided and maintained, so as to be easily accessible during working hours, first-aid boxes at the rate of not less than one box for 150 contract labour or part thereof ordinarily employed.
- (ii) The first-aid box shall be distinctly marked with a red cross on white background and shall contain the following equipment.
 - (a) For work places in which the number of contract labour employed does not exceed 50 Each first –aid box shall contain the following equipments:
 1. 6 small sterilised dressings
 2. 3 medium size sterilised dressings
 3. 3 large size sterilised dressings
 4. 3 large sterilised burn dressings
 5. 1 (30 ml) bottle containing a two per cent alcoholic solution of iodine.
 6. 1 (30 ml) bottle containing salvolatile having the dose and mode of administration indicated on the label.
 7. 1 snakebite lancet.
 8. 1 (30 gms) bottle of potassium permanganate crystals.
 9. 1 pair scissors.
 10. 1 copy of the first-aid leaflet issued by the Director General, Factory Advice Service and Labour Institute, Government of India.
 11. 1 bottle containing 100 tablets (each of 5 gms) of aspirin.
 12. Ointment for burns.
 13. A bottle of suitable surgical antiseptic solution.
 - (b) For work places in which the number of contract labour exceed 50. Each first-aid box shall contain the following equipments.
 1. 12 small sterilised dressings.
 2. 6 medium size sterilised dressings.
 3. 6 large size sterilised dressings
 4. 6 large size sterilised burn dressings.
 5. 6 (15 gms) packets sterilised cotton wool.
 6. 1 (60 ml). Bottle containing two per cent alcoholic solution iodine.
 7. 1 (60 ml) bottle containing salvolatile having the dose and mode of administration indicated on the label.
 8. 1 roll of adhesive plaster.
 9. 1 snake bite lancet.
 10. 1 (30 gms) bottle of potassium permanganate crystals.
 11. 1 pair scissors.
 12. 1 copy of the first-aid leaflet issued by the Director General Factory Advice Service and Labour Institute / Government of India.
 13. A bottle containing 100 tablets (each of 5 gms) of aspirin.

14. Ointment for burns.
15. A bottle of suitable surgical antiseptic solution.

- (iii) Adequate arrangements shall be made for immediate recoupment of the equipment when necessary.
- (iv) Nothing except the prescribed contents shall be kept in the First-aid box.
- (v) The first-aid box shall be kept in charge of a responsible person who shall always be readily available during the working hours of the work place.
- (vi) a person in charge of the First-aid box shall be a person trained in First-aid treatment in the work places where the number of contract labour employed is 150 or more.
- (vii) In work places where the number of contract labour employed is 500 or more and hospital facilities are not available within easy distance from the works. First-aid posts shall be established and run by a trained compounder. The compounder shall be on duty and shall be available at all hours when the workers are at work.
- (viii) Where work places are situated in places which are not towns or cities, a suitable motor transport shall be kept readily available to carry injured person or person suddenly taken ill to the nearest hospital.

4. DRINKING WATER

- i) In every work place, there shall be provided and maintained at suitable places, easily accessible to labour, a sufficient supply of cold water fit for drinking.
- ii) Where drinking water is obtained from an intermittent public water supply, each work place shall be provided with storage where such drinking water shall be stored.
- iii) Every water supply or storage shall be at a distance of not less than 50 feet from any latrine drain or other source of pollution. Where water has to be drawn from an existing well which is within such proximity of latrine, drain or any other source of pollution, the well shall be properly chlorinated before water is drawn from it for drinking. All such wells shall be entirely closed in and be provided with a trap door which shall be dust and waterproof.
- iv) A reliable pump shall be fitted to each covered well, the trap door shall be kept locked and opened only for cleaning or inspection which shall be done at least once a month.

5. WASHING FACILITIES

- i) In every work place adequate and suitable facilities for washing shall be provided and maintained for the use of contract labour employed therein.
- ii) Separate and adequate cleaning facilities shall be provided for the use of male and female workers.
- iii) Such facilities shall be conveniently accessible and shall be kept in clean and hygienic condition.

6. LATRINES AND URINALS

- i) Latrines shall be provided in every work place on the following scale namely:
 - a) Where female are employed, there shall be at least one latrine for every 25 females.
 - b) Where males are employed, there shall be at least one latrine for every 25 males.
- ii) Provided that, where the number of males or females exceeds 100, it shall be sufficient if there is one latrine for 25 males or females as the case may be upto the first 100, and one for every 50 thereafter.

- iii) Every latrine shall be under cover and so partitioned off as to secure privacy, and shall have a proper door and fastenings.
- iv) Construction of latrines: The inside walls shall be constructed of masonry or some suitable heat-resisting nonabsorbent materials and shall be cement washed inside and outside at least once a year, Latrines shall not be of a standard lower than borehole system.
- v) (a) Where workers of both sexes are employed, there shall be displayed outside each block of latrine and urinal, a notice in the language understood by the majority of the workers "For Men only" or "For Women Only" as the case may be.
(b) The notice shall also bear the figure of a man or of a woman, as the case may be.
- vi) There shall be at least one urinal for male workers upto 50 and one for female workers upto fifty employed at a time, provided that where the number of male or female workmen, as the case may be exceeds 500, it shall be sufficient if there is one urinal for every 50 males or females upto the first 500 and one for every 100 or part thereafter.
- vii) (a) The latrines and urinals shall be adequately lighted and shall be maintained in a clean and sanitary condition at all times.
(b) Latrines and urinals other than those connected with a flush sewage system shall comply with the requirements of the Public Health Authorities.
- viii) Water shall be provided by means of tap or otherwise so as to be conveniently accessible in or near the latrines and urinals.
- ix) Disposal of excreta: Unless otherwise arranged for by the local sanitary authority, arrangements for proper disposal of excreta by incineration at the work place shall be made by means of a suitable incinerator. Alternately excreta may be disposed of by putting a layer of night soil at the bottom of a pucca tank prepared for the purpose and covering it with a 15 cm. Layer of waste or refuse and then covering it with a layer of earth for a fortnight (when it will turn to manure).
- x) The contractor shall at his own expense, carry out all instructions issued to him by the Engineer-in-Charge to effect proper disposal of night soil and other conservancy work in respect of the contractor's workmen or employees on the site. The contractor shall be responsible for payment of any charges which may be levied by Municipal or Cantonment Authority for execution of such on his behalf.

7. PROVISION OF SHELTER DURING REST

At every place there shall be provided, free of cost, four suitable sheds, two for meals and the other two for rest separately for the use of men and women labour. The height of each shelter shall not be less than 3 metres (10 ft) from the floor level to the lowest part of the roof. These shall be kept clean and the space provided shall be on the basis of 0.6 sq.m. (6 sft) per head. Provided that the Engineer-in-Charge may permit subject to his satisfaction, a portion of the building under construction or other alternative accommodation to be used for the purpose.

8. CRECHES

- i) At every work place, at which 20 or more women workers are ordinarily employed, there shall be provided two rooms of reasonable dimensions for the use of their children under the age of six years. One room shall be used as a play room for the children and the other as their bedroom. The rooms shall be constructed with specifications as per clause 19 H (ii) a, b & c.
- ii) The rooms shall be provided with suitable and sufficient openings for light and ventilation. There shall be adequate provision of sweepers to keep the places clean.

- iii) The contractor shall supply adequate number of toys and games in the play room and sufficient number of cots and beddings in the bed room.
- iv) The contractor shall provide one ayah to look after the children in the crèche when the number of women workers does not exceed 50 and two when the number of women workers exceed 50.
- v) The use of the rooms earmarked as crèches shall be restricted to children, their attendants and mothers of the children.

9. CANTEENS

- i) In every work place where the work regarding the employment of contractor labour is likely to continue for six months and where in contract labour numbering one hundred or more are ordinarily employed, an adequate canteen shall be provided by the contractor for the use of such contract labour.
- ii) The canteen shall be maintained by the contractor in an efficient manner.
- iii) The canteen shall consist of at least a dining hall, kitchen, storeroom, pantry and washing places separately for workers and utensils.
- iv) The canteen shall be sufficiently lighted at all times when any person has access to it.
- v) The floor shall be made of smooth and impervious materials and inside walls shall be limewashed or colour washed at least once in each year. Provided that the inside walls of the kitchen shall be lime washed every four months.
- vi) The premises of the canteen shall be maintained in a clean and sanitary condition.
- vii) Waste water shall be carried away in suitable covered drains and shall not be allowed to accumulate so as to cause a nuisance.
- viii) Suitable arrangements shall be made for the collection and disposal of garbage.
- ix) The dining hall shall accommodate at a time 30 per cent of the contract labour working at a time.
- x) The floor area of the dining hall, excluding the area occupied by the service counter and any furniture except tables and chairs shall not be less than one square metre (10 sft) per diner to be accommodated as prescribed in sub-Rule (ix).
- xi) (a) A portion of the dining hall and service counter shall be partitioned off and reserved for women workers in proportion to their number. (b) Washing places for women shall be separate and screened to secure privacy.
- xii) Sufficient tables stools, chairs or benches shall be available for the number of diners to be accommodated as prescribed in Sub-Rule (ix).
- xiii) (a) 1. There shall be provided and maintained sufficient utensils crockery, furniture and any other equipment necessary for the efficient running of the canteen.
2. The furniture utensils and other equipment shall be maintained in a clean and hygienic condition.
(b) 1. Suitable clean clothes for the employees serving in the canteen shall be provided and maintained.
2. A service counter, if provided, shall have top of smooth and impervious material.
3. Suitable facilities including an adequate supply of hot water shall be provided for the cleaning of utensils and equipments.
- xiv) The food stuffs and other items to be served in the canteen shall be in conformity with the normal habits of the contract labour.
- xv) The charges for food stuffs, beverages and any other items served in the canteen shall be based on 'No Profit, No loss' and shall be conspicuously displayed in the canteen.
- xvi) In arriving at the price of foodstuffs, and other article served in the canteen, the following items shall not be taken into consideration as expenditure namely :-
 - a) The rent of land and building.
 - b) The depreciation and maintenance charges for the building and equipments provided for the canteen.

- c) The cost of purchase, repairs and replacement of equipments including furniture, crockery, cutlery and utensils.
- d) The water charges and other charges incurred for lighting and ventilation.
- e) The interest and amounts spent on the provision and maintenance of equipments provided for the canteen.
- xvii) The accounts pertaining to the canteen shall be audited once every 12 months by registered accountants and auditors.

10. ANTI-MALARIAL PRECAUTIONS

The contractor shall at his own expense, conform to all anti-malarial instructions given to him by the Engineer-in-Charge including the filling up of any borrow pits which may have been dug by him.

- 11. The above rules shall be incorporated in the contracts and in notices inviting tenders and shall form an integral part of the contracts.

12. AMENDMENTS

AAI may, from time to time, add to or amend these rules and issue directions - it may consider necessary for the purpose of removing any difficulty which may arise in the administration thereof.

AIRPORTS AUTHORITY OF INDIA

Contractor's Labour Regulations

1. SHORT TITLE

These regulations may be called the AAI Contractors Labour Regulations.

2. DEFINITIONS

(i) Workman means any person employed by AAI or its contractor directly or indirectly through a subcontractor with or without the knowledge of the AAI to do any skilled, semiskilled or unskilled manual, supervisory, technical or clerical work for hire or reward, whether the terms of employment are expressed or implied but does not include any person:-

- a) Who is employed mainly in a managerial or administrative capacity: or
- b) Who, being employed in a supervisory capacity draws wages exceeding five hundred rupees per mensem or exercises either by the nature of the duties attached to the office or by reason of powers vested in him, functions mainly of managerial nature : or
- c) Who is an out worker, that is to say, person to whom any article or materials are given out by or on behalf of the principal employers to be made up cleaned, washed, altered, ornamental finished, repaired adopted or otherwise processed for sale for the purpose of the trade or business of the principal employers and the process is to be carried out either in the home of the out worker or in some other premises, not being premises under the control and management of the principal employer. No person below the age of 18 years shall be employed to act as a workman.

(ii) Fair Wages means wages whether for time or piece work fixed and notified under the provisions of the Minimum Wages Act from time to time.

(iii) Contractors shall include every person who undertakes to produce a given result other than a mere supply of goods or articles of manufacture through contract labour or who supplies contract labour for any work and includes a subcontractor.

(iv) Wages shall have the same meaning as defined in the Payment of Wages Act.

3. i) Normally working hours of an adult employee should not exceed 9 hours a day. The working day shall be so arranged that inclusive of interval for rest, if any, it shall not spread over more than 12 hours on any day.
- ii) When an adult worker is made to work for more than 9 hours on any day or for more than 48 hours in any week, he shall be paid over time for the extra hours put in by him at double the ordinary rate of wages.
- iii) a) Every worker shall be given a weekly holiday normally on a Sunday, in accordance with the provisions of the Minimum Wages (Central) Rules 1960 as amended from time to time irrespective of whether such worker is governed by the Minimum Wages Act or not.
- b) Where the minimum wages prescribed by the Central/State Government under the Minimum Wages Act are not inclusive of the wages for the weekly day of rest, the worker shall be entitled to rest day wages at the rate applicable to the next preceding day, provided he has worked under the same contractor for a continuous period of not less than 6 days.
- c) Where a contractor is permitted by the Engineer-in-Charge to allow a worker to work on a normal weekly holiday, he shall grant a substituted holiday to him for the whole day on one of the five days immediately before or after the normal weekly holiday and pay wages to such worker for the work performed on the normal weekly holiday at overtime rate.

4. **DISPLAY OF NOTICE REGARDING WAGES ETC.**

The contractor shall before he commences his work on contract, display and correctly maintain and continue to display and correctly maintain in a clear and legible condition in conspicuous places on the work, notices in English and in the local Indian languages spoken by the majority of the workers giving the minimum rates of wages fixed under Minimum Wages Act, the actual wages being paid, the hours of work for which such wage are earned, wages periods, dates of payments of wages and other relevant information as per Appendix 'VIII'.

5. **PAYMENT OF WAGES**

- (i) The contractor shall fix wage periods in respect of which wages shall be payable.
- (ii) No wage period shall exceed one month.
- (iii) The wages of every person employed as contract labour in an establishment or by a contractor where less than one thousand such persons are employed shall be paid before the expiry of seventh day and in other cases before the expiry of tenth day after the last day of the wage period in respect of which the wages are payable.
- (iv) Where the employment of any worker is terminated by or on behalf of the contractor the wages earned by him shall be paid before the expiry of the second working day from the date on which his employment is terminated.
- (v) All payment of wages shall be made on a working day at the work premises and during the working time and on a date notified in advance and in case the work is completed before the expiry of the wage period, final payment shall be made within 48 hours of the last working day.
- (vi) Wages due to every worker shall be paid to him direct or to other person authorised by him in this behalf.
- (vii) All wages shall be paid in current coin or currency or in both.
- (viii) Wages shall be paid without any deductions of any kind except those specified by the Central Government by general or special order in this behalf or permissible under the Payment of Wages Act 1956.
- (ix) A notice showing the wages period and the place and time of disbursement of wages shall be displayed at the place of work and a copy sent by the contractor to the Engineer-in-Charge under acknowledgement.
- (x) It shall be the duty of the contractor to ensure the disbursement of wages in the presence of the Senior Superintendent Engg or authorised representative of the Engineer-in-Charge who will be required to be present at the place and time of disbursement of wages by the contractor to workmen.
- (xi) The contractor shall obtain from Engineer in charge or the authorised representative of the Engineer-in-Charge a certificate under his signature at the end of the entries in the "Register of Wages" or the "Wage-cum-Muster Roll" as the case may be in the following form:
 "Certified that the amount shown in column No. has been paid to the workman concerned in my presence onat....."

Note: In case of payment of wages paid through bank, the contractor shall submit a copy of bank statement for relevant period duly signed by him.

6. **FINES AND DEDUCTIONS WHICH MAY BE MADE FROM WAGES**

- (i) The wages of a worker shall be paid to him without any deduction of any kind except the following:
 - a) Fines
 - b) Deductions for absence from duty i.e. from the place or the places where by the terms of his employment he is required to work. The amount of deduction shall be in proportion to the period for which he was absent.

- c) Deduction for damage to or loss of goods expressly entrusted to the employed person for custody, or for loss of money or any other deduction which he is required to account, where such damage or loss is directly attributable to his neglect or default.
 - d) Deduction for recovery of advances or for adjustment of overpayment of wages, advances granted shall be entered in a register.
 - e) Any other deduction which the Central Government may from time to time allow.
- (ii) No fines should be imposed on any worker save in respect of such acts and omissions on his part as have been approved of by the Chief Labour Commissioner.
Note: An approved list of Acts and Omissions for which fines can be imposed is enclosed at Appendix-XII.
 - (iii) No fine shall be imposed on a worker and no deduction for damage or loss shall be made from his wages until the worker has been given an opportunity of showing cause against such fines or deductions.
 - (iv) The total amount of fine which may be imposed in any one wage period on a worker shall not exceed an amount equal to three paise in a rupee of the total wages, payable to him in respect of that wage period.
 - (v) No fine imposed on any worker shall be recovered from him by installment, or after the expiry of sixty days from the date on which it was imposed.
 - (vi) Every fine shall be deemed to have been imposed on the day of the act or omission in respect. of which it was imposed.

7. LABOUR RECORDS

- (i) The contractor shall maintain a Register of persons employed on work on contract in Form XIII of the CL(R&A) Central Rules 1971 (Appendix VI)
- (ii) The contractor shall maintain a Muster Roll register in respect of all workmen employed by him on the work under Contract in Form XVI of the CL (R&A) Rules 1971 (Appendix VII).
- (iii) The contractor shall maintain a Wage Register in respect of all workmen employed by him on the work under contract in Form XVII of the CL (R&A) Rules 1971 (Appendix VIII)
- (iv) **Register of accident** - The contractor shall maintain a register of accidents in such form as may be convenient at the work place but the same shall include the following particulars :
 - (a) Full particulars of the labourers who met with accident.
 - (b) Rate of Wages
 - (c) Sex
 - (d) Age
 - (e) Nature of accident and cause of accident
 - (f) Time and date of accident
 - (g) Date and time when admitted in Hospital
 - (h) Date of discharge from the Hospital
 - (i) Period of treatment and result of treatment
 - (j) Percentage of loss of earning capacity and disability as assessed by Medical officer
 - (k) Claim required to be paid under Workmen's Compensation Act.
 - (l) Date of payment of compensation
 - (m) Amount paid with details of the person to whom the same was paid
 - (n) Authority by whom the compensation was assessed.
 - (o) Remarks
- (v) The contractor shall maintain a **Register of Fines** in the Form XII of the CL(R&A) Rules 1971 (Appendix-XIII).
The contractor shall display in a good condition and in a conspicuous place of work the approved list of acts and omissions for which fines can be imposed (Appendix-XII)

- (vi) The contractor shall maintain a **Register of deductions for damage or loss** in Form XX of the CL (R&A) Rules 1971 (Appendix-XIV)
- (vii) The contractor shall maintain a **Register of Advances** in Form XXIII of the CL (R&A) Rules 1971 (Appendix-XV)
- (viii) The contractor shall maintain a **Register of Overtime** in Form XXIII of the CL (R&A) Rules 1971 (Appendix-XVI).

8. ATTENDANCE CARD-CUM-WAGE SLIP

- (i) The contractor shall issue an **Attendance card-cum-wage** slip to each workman employed by him in the specimen form at (Appendix-IX)
- (ii) The card shall be valid for each wage period.
- (iii) The contractor shall mark the attendance of each workman on the card twice each day, once at the commencement of the day and again after the rest interval, before he actually starts work.
- (iv) The card shall remain in possession of the worker during the wage period under reference.
- (v) The contractor shall complete the wage slip portion on the reverse of the card at least a day prior to the disbursement of wages in respect of the wage period under reference.
- (vi) The contractor shall obtain the signature or thumb impression of the worker on the wage slip at the time of disbursement of wages and retain the card with himself.

9. EMPLOYMENT CARD

The contractor shall issue an **Employment Card** in Form XIV of the CL (R&A) Central Rules 1971 to each worker within three days of the employment of the worker (Appendix-X).

10. SERVICE CERTIFICATE

On termination of employment for any reason whatsoever the contractor shall issue to the workman whose services have been terminated, a **Service certificate** in Form XV of the CL(R&A) Central Rules 1971.

11. PRESERVATION OF LABOUR RECORDS

All records required to be maintained under Regulations Nos. 6 & 7 shall be preserved in original for a period of three years from the date of last entries made in them and shall be made available for inspection by the Engineer-in-Charge or Labour Officer or any other officers authorised by the Ministry of Urban Development in this behalf.

12. POWER OF LABOUR OFFICER TO MAKE INVESTIGATIONS OR ENQUIRY

The Labour Officer or any person authorised by Central Government on their behalf shall have power to make enquiries with a view to ascertaining and enforcing due and proper observance of Fair Wage Clauses and the Provisions of these Regulations. He shall investigate into any complaint regarding the default made by the contractor or subcontractor in regard to such provision.

13. REPORT OF LABOUR OFFICER

The Labour Officer or other persons authorised as aforesaid shall submit a report of result of his investigation or enquiry to the Engineer-in-Charge concerned indicating the extent, if any, to which the default has been committed with a note that necessary deductions from the contractor's bill be made and the wages and other dues be paid to the labourers concerned. In case an appeal is made by the contractor under Clause

13 of these regulations, actual payment to labourers will be made by the Engineer-in-Charge after G.M. Engg. has given his decision on such appeal.

(i) Engineer-in-Charge shall arrange payments to the labour concerned within 45 days from the receipt of the report from the Labour Officer or the G.M. Engineer as the case may be.

14. APPEAL AGAINST THE DECISION OF LABOUR OFFICER

Any person aggrieved by the decision and recommendations of the Labour Officer or other person so authorised may appeal against such decision to the Engineer-in-Charge concerned within 30 days from the date of decision, but subject to such appeal, the decision of the officer shall be final and binding upon the contractor.

15. PROHIBITION REGARDING REPRESENTATION THROUGH LAWYER

- (i) A workman shall be entitled to be represented in any investigation or enquiry under these regulations by :
 - a) An officer of a registered trade union of which he is a member.
 - b) An officer of a federation of trade unions to which the trade union referred to in Clause (a) is affiliated.
 - c) Where the employer is not a member of any registered trade union, by an officer of a registered trade union, connected with the industry in which the worker is employed or by any other workman employed in the industry in which the worker is employed.
- (ii) An employer shall be entitled to be represented in any investigation or enquiry under these regulations by :
 - a) An officer of an association of employers of which he is a member.
 - b) An officer of a federation of associations of employers to which association referred to in Clause(a) is affiliated.
 - c) Where the employers is not a member of any association of employers, by an officer of association of employer connected with the industry in which the employer is engaged or by any other employer, engaged in the industry in which the employer is engaged.
- (iii) No party shall be entitled to be represented by a legal practitioner in any investigation or enquiry under these regulations.

16. INSPECTION OF BOOKS AND SLIPS

The contractor shall allow inspection of all the prescribed labour records to any of his workers or to his agent at a convenient time and place after due notice is received or to the Labour Officer or any other person, authorised by the Central Government on his behalf .

17. SUBMISSION OF RETURNS

The contractor shall submit periodical returns as may be specified from time to time.

18. AMENDMENTS

The Central Government/AAI may from time to time add to or amend the regulations and on any question as to the application/interpretation or effect of those regulations the decision of the General Manager (Engg.) concerned shall be final.

APPENDIX-I

FORM OF BANK GUARANTEE IN LIEU OF SECURITY DEPOSIT & AMOUNT WITHHELD AGAINST COMPENSATION FOR DELAY IN INDIVIDUAL CONTRACT (on Non-Judicial Stamp Paper of Rs.100/-)

[Refer Clause 1A and 2B]

To
The Airports Authority of India

.....
.....

1. In consideration of the Airports Authority of India having its corporate office at New Delhi [hereinafter called the "AAI" which expression shall unless repugnant to the subject or context include its administrator, successors and assigns) having agreed under the terms and condition of Contract Agreement No.dated.....made between.....and AAI in connection with the work of(hereinafter called the said contract) to accept Deed of Guarantee as herein provided for Rs.....(Rupees.....only) from a Nationalized Bank in lieu of the Security deposit to be made by the contractor or lieu of the amount withheld towards compensation for delay pending final extension of time to be made from the contractors contained in the said Contractor. We, the.....bank (hereinafter referred to as "the said Bank" and having our registered office atdo hereby under take and agree to identify and keep indemnified AAI from time to time to the extent of Rs.....(Rupees.....only) against any loss or damage, cost,, charges and expenses caused to or suffered by or that may be caused to or suffered by AAI by reason of any breach or breaches by the said Contractor of any of the terms and condition contained in the said contract and to unconditionally pay the amount claimed by AAI on demand and without demur to the extent aforesaid.
2. We Bank, further agree that AAI shall be the sole judge of and as to whether the said Contractor has committed any breach or breaches of any of the terms and conditions of the said contract and the extent of loss, damage, costs, charges and expenses caused to or suffered by or that may be caused to or suffered by AAI on account thereof and the decision of AAI that the said Contractor has committed such breach and breaches and as to the amount or amounts of loss, damage, costs, charges and expenses caused to or suffered of that may be caused to or suffered by AAI from time to time shall be final and binding on us.
3. We, the said Bank, further agree that the Guarantee herein contained shall remain in full force and effect during the period that would be taken for the performance of the said contracts and till all the dues of AAI under the said contract or by virtue of any of the terms and conditions governing the said contract including compensation for delay if any as decided by AAI, have been fully paid and its claims satisfied or discharged and till the Accepting Authority of the contract certifies that the terms and condition and accordingly Contract have been fully and properly carried out by the said contractor and accordingly discharges this guarantee subject, however that AAI shall have no claim under this Guarantee after 90(Ninety) days from the date of expiry of the defects Liabilities periods or Final /Extension of Time grated by AAI as provided available in agreements clause no.....as provided in the said Contract, i.e.....(date) or from the date of cancellation of the said contract, as the case may be, unless a notice of the claim under this Guarantee has been served on the Bank before the expiry of the period in which case the same shall be enforceable against the Bank notwithstanding the fact, that the same is enforced after the expiry of the said period.

4. AAI shall have the fullest liberty without affecting in any way the liability of the bank under this Guarantee or Indemnity from time to time to vary any of the terms and conditions of the said contract or to extend time of performance by the said Contractor or to postpone for any time and from time to time any of the powers exercisable by it against the said Contractor and either to enforce or forbear from enforcing any of terms and conditions governing the said contract or securities available to AAI and the said Bank shall not be released from its liability under these present by any exercise by AAI of any liberty with reference to the matters aforesaid or by reason of time being given to the said contractor or any other forbearance, act or omission on the part by AAI or any indulgence by AAI to the said Contractor or any other matter or thing whatsoever which under the law relating to sureties would but for this provision have the effect of so releasing the Bank from its such liability.
5. It shall not be necessary for AAI to proceed against the contractor before proceeding against the Bank and the Guarantee herein contained shall be enforceable against the Bank, notwithstanding any security which AAI may have obtained or obtain from the Contractor at the time when proceedings are taken against the Bank hereunder be outstanding or unrealized.
6. We, the said Bank, lastly undertake not to revoke this Guarantee during its currency except with the previous consent of AAI in writing and agree that any charge in the Constitution of the said Contract or the said Bank shall not discharge our liability hereunder.

In presence of

Dated this _____ Day of _____

WITNESS

1.

2.

For and on behalf of (The Bank)
 Signature _____
 Name & Designation _____
 Authorisation No. _____
 Name & Place _____
 Bank's Seal _____

The above Guarantee is accepted by Airports Authority of India.

For and on behalf of Airports Authority of India

Signature _____

Name _____

Designation _____

Dated _____

APPENDIX-1A**FORM OF BANK GUARANTEE AGAINST EARNEST MONEY DEPOSIT**

WHEREAS, contractor _____ (Name of contractor) (hereinafter called "the contractor") has submitted his tender dated _____ (date) for the construction of " _____ "(name of work) (hereinafter called "the TENDER").

KNOW ALL PEOPLE by these presents that we _____ (name of bank) having our registered office at _____ (hereinafter called "the bank") are bound unto _____ (Name of Senior Manager) (hereinafter called "the Engineer-in-charge") in the sum of Rs. _____ (Rs. In words _____) for which payment well truly to be made to the said Engineer-in-charge the bank binds itself, his successors and assigns by these presents.

SEALED with the Common Seal of the Bank this _____ day of _____ 20____.

THE CONDITIONS of this obligation are:

- (1) If after tender opening the Contractor withdraws, his tender during the period of validity of tender (including extended validity of tender) specified in the Form of Tender.
- (2) If the contractor having been notified of the acceptance of his tender by the engineer-in-charge.
 - a) Fails or refuses to execute the form of Agreement in accordance with the instructions to contractor, if required –
OR
 - b) Fails or refuses to furnish the performance guarantee, in accordance with the provisions of tender document and instructions to contractor,
OR
 - c) Fails or refuses to start the work, in accordance with the provisions of the contract and instructions to contractor,
OR
 - d) Fails or refuses to submit fresh bank guarantee of an equal amount of this bank guarantee against security deposit after award of contract.

We undertake to pay to the engineer-in-charge either up to the above amount or part thereof upon receipt of his first return demand, without the engineer-in-charge having to substantiate his demand, provided that in his demand the engineer-in-charge will note that the amount claimed by him is due to him owing to the concurrence of one or any of the above conditions, specifying the occurred condition or conditions.

This guarantee will remain in force up to and including the date* _____ after the deadline for submission of tender as such deadline is stated in the instructions to contractor or as it may be extended by the engineer-in-charge, notice of which extension (s) to the bank is heard by waived. Any demand in respect of this guarantee should reach the bank not later than the above date.

DATE

SIGNATURE OF THE BANK

WITNESS
(SIGNATURE NAME AND ADDRESS)

SEAL

*Date to be worked out on the basis of validity period of 6 months from last date of receipt of tender-

APPENDIX-II**PROFORMA FOR MANDATORY TESTS TO BE ATTACHED WITH RUNNING ACCOUNT BILLS**

Name of work:..... Name of

Contractor.....

Contract Agreement No. and Date..... R/A Bill

No.....

Sl. No.	Item	Quantities as per Agreement	Frequency as per Specification	No. of Tests Required	Upto date Quantity	No. of Tests Required	No. of Tests actually done	Remarks
1	2	3	4	5	6	7	8	9

Note: If the number of tests done are less than required, then reasons shall be recorded.

Signature of Sudt. (Engg)

Signature of Engineer-in-Charge. Signature of Manager / AM (Engg)

APPENDIX-III**REGISTER OF MATERNITY BENEFITS (Clause 19 F)**

Name and address of the
contractor.....

Name and location of the
work.....

Name of the employee	Father's/husband's name	Nature of employment	Period of actual employment	Date on which notice of confinement given
1	2	3	4	5

Date on which maternity leave commenced and ended

Date of delivery/miscarriage	<u>In case of delivery</u>		<u>In case of delivery</u>	
	Commenced	Ended	Commenced	Ended
6	7	8	9	10

Leave Pay paid to the employee

<u>In case of delivery</u>		<u>In case of miscarriage</u>		Remark
Rate of leave pay	Amount paid	Rate of leave pay	Amount paid	
11	12	13	14	15

APPENDIX-IV

**SPECIMEN FORM OF THE REGISTER, REGARDING MATERNITY BENEFIT
ADMISSION TO THE CONTRACTOR'S LABOUR IN
AIRPORTS AUTHORITY OF INDIA WORKS(CLAUSE 19F)**

Name and address of the contractor -----

Name and location of the work -----

-
- 1) Name of the woman and her husband's name
 - 2) Designation
 - 3) Date of appointment
 - 4) Date with months and years in which she is employed.
 - 5) Date of discharge/dismissal, if any
 - 6) Date of production of certificates in respect of pregnancy.
 - 7) Date on which the woman informs about the expected delivery.
 - 8) Date of delivery/miscarriage/death.
 - 9) Date of production of certificate in respect of delivery/miscarriage.
 - 10) Date with the amount of maternity/death benefit paid in advance of expected delivery
 - 11) Date with amount of subsequent payment of maternity benefit
 - 12) Name of the person nominated by the woman to receive the payment of the maternity benefit after the death.
 - 13) If the woman dies, the date of her death, the name of the person to whom maternity benefit amount was paid, the month thereof and the date in the register.
 - 14) Signature of the contractor authenticating entries in the register.
 - 15) Remarks column for the use of Inspection Officer.

APPENDIX-V**Labour Board**

Name of work _____

Name of Contractor-----

-----Address of Contractor -----

Name and address of A. A. I. Division -----

Name of A. A. I. Labour Officer -----

Address of A. A. I. Labour Officer -----

Name of A.A.I Labour Officer-----

Sl.No.	Category	Minimum wage fixed	Actual wage paid	Number present	Remark
--------	----------	-----------------------	---------------------	-------------------	--------

Weekly holiday -----

Wage period -----

Date of payment of wages -----

Working hours -----

Rest interval-----



Form-XIII

APPENDIX-VI

[See rule 2(1)]

[Part-A: For all Establishments]

Register of Workmen Employed by Contractor

Name and address of contractor.....

Name and address of establishment which contractor is carried on.....

Name and location of work.....

Name and address of Principal Employer.....

Name of the Establishment-----**Name of Owner**-----**LIN**-----

Sl. No.	Employee Code	Name	Surname	Gender	Father's/Spouse Name	Date of Birth#	Nationality	Education Level	Date of Joining	Designation
1	2	3	4	5	6	7	8	9	10	11

Category Address *(HS/S/SS/US)	Type of Employment	Mobile	UAN	PAN	ESIC IP	LWF	AADHAAR	Bank A/c Number	Bank	Branch (IFSC)	Present Address	Permanent
12	13	14	15	16	17	18	19	20	21	22	23	24

Servie Book No.	Date of Exit	Reason for Exit	Mark of Identification	Photo	Specimen Signature/Thumb Impression	Remarks
25	26	27	28	29	30	31

*(Highly Skilled/Skilled/Semi Skilled/Un Skilled)

#Note: In case the age is between 14 to 18 years, mention the nature of work, daily hours of work and Intervals of rest in the remarks Column.

APPENDIX-VII

Form-XVI
[See Rule 78 (1) (a) (i)]

Muster Roll

Name and address of contractor.....

Name and address of establishment which contractor is carried on.....

Name and location of work.....

Name and address of Principal Employer.....For the month of fortnight.....

Sl . 1	Name of work Man 2	Se x 3	Father's/ Husband's 4	Date					Remark
				1	2	3	4	5	



FORM B
 [See Rule 78 (1) (a) (i)]
APPENDIX-VIII
FORMAT FOR WAGE REGISTER

Name and address of contractor.....

Name and address of establishment which contractor is carried on.....

Name and location of work.....

Name and address of Principal Employer.....For the month of fortnight.....

Rate of Minimum Wages and since the date.....				
	Highly Skilled	Skilled	Semi-Skilled	Un Skilled
Minimum Basic				
DA				
Overtime				

Name of the Establishment_____Name of Owner_____LIN_____Wage period

From_____To_____ (Monthly/Fortnightly/Weekly/Daily/Piece Rated)

Sl. No. in Employee register	Name	Rate of Wage	No. of Days worked	Overtime hours worked	Basic	Special Basic	DA	Payments Overtime	HRA	Others	Total
1	2	3	4	5	6	7	8	9	10	11	12



Deduction								Net Payment	Employer Share PF Welfare Found
PF	ESIC	Society	Income Tax	Insurance	Others	Recoverie s	Total		
13	14	15	16	17	18	19	20	21	22

Receipt by Employee/Bank Transaction ID	Date of Payment	Remark s
23	24	25



FORM C

FORMAT OF REGISTER OF LOAN/ RECOVERIES

Name of Establishment _____ LIN _____

Sl. Number In Employee register	Nam e	Recovery Type (Damage/loss/fine/advance/loan s	Particular s	Date of damage/Loss*	Amount
1	2	3	4	5	6

Whether show cause issued*	Explanation heard in presence of*	Number of Instalments	First Month/Year	Last Month/Year	Date of Complete Recovery	Remarks
7	8	9	10	11	12	13

*Applicable only in case of damage/loss/fine



Form-XVII

[See Rule 78 (2) (a)]

Register of wages

Name and address of contractor.....

Name and address of establishment which contractor is carried on.....

Name and location of work.....

Name and address of Principal Employer.....For the month of fortnight.....

							Amount of wages								
S. No	Name of workman	Serial no in the register of workman	Description/ nature of work done	No. of days worked	Units of work done	Daily rates of wages/ piece rate	Basic wages	Earnings Allowance	Over-time	Other cash payment. (indicate nature)	Total	Deduction if any (indicate nature)	Net amount paid	Sig. or thumb impression of the workmen	Initial contractor his representative
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

C-Nil, I-Nil, O-Nil

GCC- 101



APPENDIX-VIIIA

WAGE CARD

Wages Card No.....

Name and Address of Contractor.....Date of issue.....

Name and location of work.....Designation.....

Name of workman.....Month/Fortnight.....

Rate of Wages.....

1	2	3	4	5	6	7	8	9	1	1	1	1	1	1	1	1	1	2	2	2	2	2	2	2	2	2	3	31	
									0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	8	0

Morning

Rate

Evening

Amount

Initial

Received from.....the sum of Rs.....on account of my wages
Signature

The Wage Card is valid for one month from the date of iss

19/Form-XIX
APPENDIX-IX
78 (1)
[See rule 78 (1) (b)]

Wages Slip

Name and address of contractor.....

Name and Father's/Husband name of workman.....

Name and location of work.....

For the week/Fortnight/Month ending.....

1. No. of days worked.....

2. No. of units worked in case of piece rate workers.....

3. Rate of daily wages/piece rate.....

4. Amount of overtime wages.....

5. Gross wages payable.....

6. Deduction, if any.....

7. Net amount of wages paid.....

Initials of the contractor or his representative

APPENDIX-X

14/Form-XIV
[See rule 76]
Employment Card

Name and address of contractor.....

Name and address of establishment under which is carried.....

Name of work and location of work.....

Name and address of Principal Employee.....

1. Name of the workman.....

2. Sl. No. in the register of workman employed.....

3. Nature of employment/designation.....

4. Wage rate (with particulars of unit in case of piece work).....

5. Wage period.....

6. Tenure of employment.....

7. Remark.....

Signature of Contractor

APPENDIX-XI

FORM OF PERFORMANCE SECURITY / ADDITIONAL PERFORMANCE SECURITY (GUARANTEE)

Bank Guarantee Bond (On Non-Judicial Stamp Paper of Rs100/-)

1. In consideration of the Chairman, AAI (hereinafter called "AAI") having offered to accept the terms and conditions of the proposed agreement between
[hereinafter called the said contractor(s)] for the work
(hereinafter "the said agreement") having agreed to production of a irrevocable Bank Guarantee for Rs. (Rupeesonly) as a security / guarantee from the contractor(s) for compliance of his obligations in accordance with the terms and conditions in the said agreement.
We (Indicate the name of the Bank) (hereinafter referred to as "the Bank") hereby undertake to pay to the Chairman, AAI an amount not exceeding Rs. (Rupees only) on demand by AAI.
2. We (Indicate the name of the Bank) do hereby undertake to pay the amounts due to payable under this Guarantee without any demure, merely on a demand from AAI 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).
3. We, the said Bank, further undertake to pay the Chairman, AAI 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 there under and the contractor(s) shall have no claim against us for making such payment.
4. We..... (Indicate the name of bank) further agree that the guarantee herein contained shall remain in full force and effect during the period that would be taken for the performance of the said agreement and that it shall continue to be enforceable till all the dues of AAI under or by virtue of the said agreement have been fully paid and its claims satisfied or discharged or till Engineer-In-Charge on behalf of AAI certified that the terms and conditions of the said agreement have been fully and properly carried out by the said contractor(s) and accordingly discharges this guarantee.
5. We..... (indicate the name of the bank) further agree with AAI that AAI shall have the fullest liberty without our consent and without effecting in any manner our obligations hereunder to vary any of 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 AAI against in the said contractor(s) and to forebear and 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 extensions being granted to the said contractor(s) or for any forbearance, act of omission on the part of AAI or any indulgence by the AAI to the said contractor(s) or by any such matter or thing whatsoever which under the law relating to securities would, but for this provision, have effect of so relieving us.

6. This guarantee will not be discharged due to the change in the constitution of the Bank or the contractor(s).
7. We..... (Indicate the name of the bank) lastly undertake not to revoke this guarantee except with the previous consent of AAI in writing.
8. This guarantee shall be valid upto unless extended on demand by AAI. Notwithstanding anything mentioned above, our liability against this guarantee is restricted to Rs. (Rupees only) and unless a claim in writing is lodged 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.

In presence of

Dated this _____ Day of _____

Witness

- 1.
- 2.

For and on behalf of (The Bank)
Signature _____
Name & Designation _____
Authorisation No. _____
Name & Place _____
Bank's Seal _____

The above Guarantee is accepted by Airports Authority of India. For and on behalf of Airports Authority of India

Signature _____

Name _____

Designation _____

Dated _____

Note : * Date of validity should be schedule date of completion + Six months.

APPENDIX-XI-A

Format for Letter of understanding from the Depositor to Bank (In case of BG)
(To be submitted along with Security Deposit / Earnest Money / Performance
Guarantee to Airports Authority of India)
(To be submitted in the Letter head of the firm)

The Branch Manager,
.....Bank,
.....

Sub: - My / Our Bank Guarantee bearing No.....dated for amount.....
Issued in favour of Airports Authority of India A/c.....

Sir,

The subject Bank Guarantee is obtained from your bank for the purpose of
Security Deposit / Earnest Money / Performance Guarantee on account of contract
awarded / to be awarded by M/s Airports Authority of India to me / us.

I hereby authorized the Airports Authority of India in whose favour the deposit is
made to close the subject Bank Guarantee before maturity/ on maturity toward
adjustment of dues without any reference /consent /notice from me / our side and the
bank is fully discharged by making the payment to Airports Authority of India.

Signature of the Depositor

Place:

Date:

APPENDIX-XII

LIST OF ACTS AND OMISSIONS FOR WHICH FINES CAN BE IMPOSED

In accordance with rule 7(v) of the AAI Contractor's Labour Regulations to be displayed prominently at the site of work both in English and local Language.

1. Wilful insubordination or disobedience, whether alone or in combination with other.
2. Theft fraud or dishonesty in connection with the contractors beside a business or property of AAI.
3. Taking or giving bribes or any illegal gratification.
4. Habitual late attendance.
5. Drunkenness lighting, riotous or disorderly or indifferent behavior
6. Habitual negligence.
7. Smoking near or around the area where combustible or other materials are locked.
8. Habitual Indiscipline.
9. Causing damage to work in the progress or to property of the AAI or of the contractor.
10. Sleeping on duty.
11. Malingering or slowing down work.
12. Giving of false information regarding name, age, father's name, etc.
13. Habitual loss of wage cards supplied by the employer's
14. Unauthorised use of employer's property of manufacturing or making of unauthorised particles at the work place
15. Bad workmanship in construction and maintenance by skilled workers which is not approved by the Department and for which the contractors are compelled to undertake rectifications.
16. Making false complaints and/or misleading statements.
17. Engaging on trade within the premises of the establishments.
18. Any unauthorised divulgence of business affairs of the employees.
19. Collection or canvassing for the collection of any money within the premises of an establishment unless authorised by the employer.
20. Holding meeting inside the premises without previous sanction of the employers.
21. Threatening or intimidating any workman or employer during the working hours within the premises.

**APPENDIX-XIII**

Form-XVII

[See Rule 78 (2) (d)]

Register of Fines

Name and address of contractor.....

Name and address of establishment which contractor is carried on.....

Name and location of work.....

Name and address of Principal Employer.....

Sl. No.	Name of workman	Father's/ Husband's Name	Designation nature of employment	Act or action for which fine imposed	Date of Offence	Whether workman showed cause against fine	Name of person in whose presence employee's explanation was heard	Wage period and wages payable	Amount of the imposed	Date on which fine realised	Remarks
1	2	3	4	5	6	7	8	9	10	11	12

**APPENDIX-XIV**

Form-XVII
[See Rule 78 (2) (d)]
Register of Deduction for Damage or Loss

Name and address of contractor.....

Name and address of establishment under which contract is carried on.....

Name and location of work.....

Name and address of Principal Employer.....

Sl. No.	Name of workman	Father's Husband's Name	Designation/nature of employment	Particular of Damage or Loss	Date of damages or loss	Whether workman showed cause against deduction	Name of person in whose presence employee's explanation was heard	Amount of deduction imposed	No. of installations	Date of recovery		Remark
										First Installation	Last Installation	
1	2	3	4	5	6	7	8	9	10	11	12	13

**APPENDIX-XV**

Form-XXII
[See Rule 78 (2) (d)]
Register of Advances

Name and address of contractor.....

Name and address of establishment under which contract is carried on.....

Name and location of work.....

Name and address of Principal Employer.....

Sl. No.	Name of workman	Father's Husband's Name	Designation/nature of employment	Wage period and wages payable	Date and amount of advance paid	Purpose for which advance paid	Number of installment by which advance to be repaid	Date and amount of each installment repaid	Date on which last installment was repaid	Remark
1	2	3	4	5	6	7	8	9	10	11

**APPENDIX-XVI**

Form-XXIII

[See Rule 78 (2) (e)]

Register of Overtime

Name and address of contractor.....

Name and address of establishment under which contract is carried on.....

Name and location of work.....

Name and address of Principal Employer.....

S.No	Name of work men	Father's/ Husband's Name	Sex	Designation/ nature of employment	Date on which overtime worked	Total overtime worked at project in case of piece rate	Normal rate of wages	Overtime rate of wages	Overtime earning	Rate on which overtime paid	Remarks
1	2	3	4	5	6	7	8	9	10	11	12

APPENDIX-XVII (A)

NOTICE FOR APPOINTMENT OF ARBITRATOR

[Refer Clause 25]

To

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

Dear Sir,

In terms of clause 25 of the agreement, particular of which are given below, I/we hereby give notice to you to appoint an arbitrator for settlement of disputes mentioned below:

1. Name of applicant
2. Whether applicant is Individual/Prop. Firm /Partnership Firm/Ltd. Co.
3. Full address of the applicant.
4. Name of the work and contract number in which arbitrator sought.
5. Name of the office which entered into contract.
6. Contract amount in the work.
7. Date of contract.
8. Date of initiation of work.
9. Stipulated date of completion of work.
10. Actual date of completion of work (if completed).
11. Total number of claim made.
12. Total amount claimed.
13. Date of intimation of final bill (if work is completed).
14. Date of payment of final bill (if work is completed).
15. Amount of final bill (if work is completed).
16. Date of request made to ED for decision.
17. Date of receipt of ED's decision.
18. Date of appeal.
19. Date of receipt of decision on our appeal.

Specimen signature of the applicant
(Only the person/authority who
Signed the contract should sign)

I/We certify that the information given above is true to the best of my/our knowledge. I/We enclose following documents.

1. Statement of claims with amount of claims.
- 2.
- 3.
- 4.

Yours faithfully

(Signature)

Copy to:

1. The Engineer-in-charge,
.....

APPENDIX-XVII (B)

Format Consent Letter
Dispute Resolution Clause-Para 2 ii(b)

To,
The Chairman/Member. Regional Executive Director,
AAI,

SUB:- Request for appointment of arbitrator under Clause _____ of the _____
agreement dated _____ for _____

Sir/Madam,

1. We state that _____ (contractor/agency) was awarded work/concession of _____ at _____ Airport/ _____ (other location) of the AAI through Award Letter dated _____
2. Dispute related to _____ arose between us (contractor/agency) and AAI.
3. On _____ (date), dispute was referred to Mediation as per AAI Mediation Policy and any settlement on the following claims/disputes was not reached between the parties:
 - (i)
 - (ii)
 - (iii)
4. A concise statement along with claim in respect of each of such disputes is attached herewith.
5. In view of the above, we invoke arbitration under clause _____ of the _____ agreement between us and AAI and as per proviso to Section-12 (5) of the Arbitration & Conciliation Act, 1996, we hereby agree and request the Chairman/Member/Regional Executive Director AAI to appoint arbitrator from AAI's panel of arbitrators.
6. I/We also give my/our consent for appointing any of an arbitrator from AAI's approved panel of arbitrators, as per paragraph-5 above.

Thanking You

(_____)

Authorized signatory of

Encl: As above

[Format for opting Mediation in existing Agreements*]-Paragraph 06 of T1

From:

To

No. _____ Date: _____

Reference: Agreement No. _____ **for the work of** _____
Court _____ **case** _____ **Number/Arbitration**
between _____ **&** _____

Subject: Request to refer the existing dispute for mediation through medication committee of Independent Experts.

Sir,

Please refer the subject cited above. Vide agreement dated _____ for _____, disputes arose with regard to _____ and the matter is pending for/yet to be referred for resolution/adjudication by _____ Dispute Resolution Committee/Dispute Resolution Board/Arbitrator/_____ court.

I/We _____, do hereby request the Airports Authority of India to refer our disputes/ongoing dispute to MCIE as per AAI Mediation Policy dated _____ which are listed as under:

- (i)
- (ii)
- (iii)

We undertake to abide by the terms and conditions of the said policy of AAI and would not question any settlement, if arrived, through Mediation. All cost/expenses of mediation shall be borne equally with the Accepting party.

It is consented that by referring the matter to mediation, dispute resolution through DRC, DRB under clause _____ of the agreement, is dispensed with

Yours faithfully,

(_____)

Authorized Representative of Requesting Party

(_____)

Authorized Representative of Accepting Party

INTEGRITY PACT

The integrity pact shall be signed by both the parties in the following format

— “This Pact made thisday of between Airports Authority of India, a body corporate constituted by the Central Government under the Airports Authority of India Act, 1994 and having its Corporate Office at New Delhi, and offices atin India, hereinafter called the Authority (which term shall unless excluded by or is repugnant to the context, be deemed to include its Chairman, or Member, Executive Directors, Airport Directors, officers or any of them specified by the Chairman in this behalf, and shall also include its successors and assigns) of the one part

AND

—represented by of the other part, hereinafter called the “Bidder/Contractor “(which term shall unless excluded by or is repugnant to the context be deemed to include its heirs, representatives, successors and assigns of the Bidder/ Contractor)

— WHEREAS the Authority intends to award, under laid down organizational procedures, tender/ contract forThe Authority, while discharging its functions on business principles, values proper compliance with all relevant laws and regulations, and the principles of natural justice, ethics, equity, fairness and transparency in its relations with the Bidders/ Contractors.

— WHEREAS the Authority is desirous to make its business mechanism more transparent, thus to ensure strict adherence of the aforesaid objectives/goals, the Authority hereby adopts the instrument developed by the renowned international non-governmental organization “Transparency International” (T I) headquartered in Berlin (Germany). The Authority will appoint an Independent External Monitor (IEM) who will monitor the tender process and the execution of the contract for compliance with the principles mentioned above.

— AND WHEREAS the Bidder is submitting a tender to the Authority for In response to the NIT (Notice Inviting Tender) dated Contractor is signing the contract for execution ofNOW, therefore, To avoid all forms of corruption by following a system that is fair, transparent and free from any influence/prejudiced dealings prior to, during and subsequent to the currency of the contract to be entered into with a view to Enabling the Authority to obtain the desired said stores/equipment/execution of works at a competitive price in conformity with the defined specifications by avoiding the high cost and the distortionary impact of corruption on public procurement, and Enabling Authority to abstain from bribing or indulging in any corrupt practice in order to secure the contract by providing assurance to them that their competitors will also abstain from bribing and other corrupt practices and the Authority will commit to prevent corruption, in any form, by its officials by following

~~transparent procedures. The parties hereto hereby agree to enter into this Integrity Pact and agree as follows:~~

~~1. Commitments of the Authority;~~

- ~~1.1 The Authority undertakes that no official of the Authority, connected directly or indirectly with the contract, will demand, take a promise for or accept, directly or through intermediaries, any bribe, consideration, gift, reward, favour or any material or immaterial benefit or any other advantage from the BIDDER, either for themselves or for any person, organization or third party related to the contract in exchange for an advantage in the bidding process, bid evaluation, contracting or implementation process related to the contract.~~
- ~~1.2 The Authority will, during the pre-contact stage, treat all BIDDERS alike, and will provide to all BIDDERS the same information and will not provide any such information to any particular BIDDER which could afford an advantage to that particular BIDDER in comparison to other BIDDERS.~~
- ~~1.3 All the officials of the Authority will report to the appropriate authority office any attempted or completed breaches of the above commitments as well as any substantial suspicion of such a breach.~~
- ~~1.4 In case any such preceding misconduct on the part of such official(s) is reported by the BIDDER to the Authority with full and verifiable facts and the same is prima facie found to be correct by the Authority, necessary disciplinary proceedings, or any other action as deemed fit, including criminal proceedings may be initiated by the Authority and such a person shall be debarred from further dealings related to the contract process. In such a case while an enquiry is being conducted by the Authority the proceedings under the contract would not be stalled.~~

~~1. Commitments of Bidders/Contractor.~~

- ~~———— The Bidder/Contractor commits itself to take all measures necessary to prevent corrupt practice, unfair means and illegal activities during any stage of its bid or during any pre contract or post contract stage in order to secure the contract or in furtherance to secure it and in particular commit itself to the following.~~
- ~~2.1 The Bidder/Contractor will not offer, directly or through intermediaries, any bribe, gift, consideration, reward, favour, any material or immaterial benefit or other advantage, commission, fees, brokerage or inducement to any official of the Authority, connected directly or indirectly with the bidding process, or to any person, organization or third party related to the contract in exchange for any advantage in the bidding, evaluation, contracting and implementation of the contract.~~
- ~~2.2 The Bidder/Contractor further undertakes that it has not given, offered or promised to give, directly or indirectly any bribe, gift, consideration, reward,~~

~~favour, any material or immaterial benefit or other advantage, commission, fees, brokerage or inducement to any official of the Authority or otherwise in procuring the Contract or forbearing to do or having done any act in relation to the obtaining or execution of the contract or any other contract with the Authority for showing or forbearing to show favour or disfavour to any person in relation to the contract or any other contract with the Authority.~~

- ~~2.3 The Bidder / Contactor has not entered and will not enter with other bidders into any undisclosed agreement or understanding, whether formal or informal. This applies in particular to prices, specification, certifications, subsidiary contracts, submission or non-submission of bids or any actions to restrict competitiveness or to introduce cartelization in the bidding process.~~
- ~~2.4 The Bidder/Contractor shall, when presenting his bid, disclose the name and address of agents and representatives and Indian BIDDERS shall disclose their foreign principals or associates.~~
- ~~2.5 The Bidder/Contactor shall when presenting his bid disclose any and all the payments he has made or, is committed to or intends to make to agents/brokers or any other intermediary, in connection with this bid/contract.~~
- ~~2.6 The Bidder/Contractor further confirms and declares to the Authority that the BIDDER is the original manufacturer/integrator/ authorized government sponsored export entity of the stores and has not engaged any individual or firm or company whether Indian or foreign to intercede, facilitate or in any way to recommend to the Authority or any of its functionaries, whether officially or unofficially to the award of the contract to the BIDDER, nor has any amount been paid, promised or intended to be paid to any such individual, firm or company in respect of any such intercession, facilitation or recommendation.~~
- ~~2.7 The Bidder/Contractor, either while presenting the bid or during pre-contract negotiations or before signing the contract, shall disclose any payments he has made or has committed to or intends to make to officials of the Authority or their family members, agents, brokers or any other intermediaries in connection with the contract and the details of services agreed upon for such payments.~~
- ~~2.8 The Bidder/Contractor will not collude with other parties interested in the contract to impair the transparency, fairness and progress of the bidding process, bid evaluation, contracting and implementation of the contract.~~
- ~~2.9 The Bidder/Contractor will not accept any advantage in exchange for any corrupt practice, unfair means and illegal activities.~~
- ~~2.10 The Bidder / Contactor shall not use improperly, for purposes of competition or personal gain ,or pass on to others, any information provided by the~~

~~Authority as part of the business relationship, regarding plans, technical proposals and business details, including information contained in any electronic data carrier. The Bidder / Contractor also under takes to exercise due and adequate care lest any such information is divulged.~~

~~2.11 The Bidder/Contractor will inform to the Independent External Monitor.~~

~~i) If he receives demand for an illegal/undue payment/benefit.~~

~~ii) If he comes to know of any unethical or illegal payment/benefit.~~

~~iii) If he makes any payment to any Authority's associate(s)~~

~~2.12 The Bidder/Contractor commit to refrain from giving any complaint directly or through any other manner without supporting it with full and verifiable facts.~~

~~2.13 The Bidder/Contractor shall not instigate or cause to instigate any third person to commit any of the actions mentioned above.~~

~~2.14 If the Bidder/Contractor or any employee of the Bidder/Contractor or any person acting on behalf of the Bidder/ Contractor, either directly or indirectly, is a relative of any of the officers of the Authority, or alternatively, if any relative of an officer of the Authority has financial interest/stake in the Bidder's/Contractor's firm, the same shall be disclosed by the Bidder/Contractor at the time filing of tender. The term 'relative' for this purpose would be as defined in Section 6 of the Companies Act 1956.~~

~~2.15 The Bidder/Contractor shall not lend to or borrow any money from or enter into any monetary dealings or transactions, directly or indirectly, with any employee of the Authority.~~

~~2.16 That if the Bidder/ Contractor, during tender process or before the award of the contract or during execution of the contract/work has committed a transgression in violation of section 2 or in any other form such as to put his reliability or credibility as Bidder/Contractor into question, the Authority is entitled to disqualify him from the tender process or to terminate the contract for such reason and to debar the BIDDER from participating in future bidding processes.~~

~~2. Previous Transgression~~

~~3.1 The Bidder/Contractor declares that no previous transgression occurred in the last three years immediately before signing of this Integrity Pact, with any other company in any country in respect of any corrupt practices envisaged hereunder or with any Public Sector Enterprise in India or any Government Department in India that could justify Bidders's exclusion from the tender process.~~

- 3.2 ~~The Bidder/Contractor agrees that if it makes incorrect statement on this subject, he can be disqualified from the tender process or the contract, if already awarded, can be terminated for such reason and he may be considered for debarment for future tender/contract processes.~~
- 3.3 ~~That the Bidder/Contractor undertakes to get this Pact signed by the subcontractor (s) and associate(s) whose value of the work contribution exceeds Rs 0.5 Cr. (Rupees zero point five Cr.) and to submit the same to the Authority along with the tender document/ contract before contract signing.~~
- 3.4. ~~That sub-contractor(s)/ associate(s) engaged by the Contractor, with the approval of the Authority after signing of the contract, and whose value of the work contribution exceeds Rs 0.5 Cr. (Rupees Zero point five Cr.) will be required to sign this Pact by the Contractor, and the same will be submitted to the Authority before doing/ performing any act/ function by such subcontractor(s) / associate(s) in relation to the contract/ work.~~
- 3.5 ~~That the Authority will disqualify from the tender process all Bidder(s) who don't sign this Pact or violate its provisions or fails to get this Pact signed in terms of policy of authority~~
- 3.6 ~~That if the Contractor(s) does/ do not sign this Pact or violate its provisions or fails to get this Pact signed in terms of policy of authority. Authority will terminate the contract and initiate appropriate action against such Contractor(s).~~
4. ~~**Earnest Money, Security Deposit, Bank Guarantee, Draft, Pay order or any other mode and its validity i/c Warranty Period, Performance Guarantee/Bond.**~~
- ~~While submitting bid, the BIDDER shall deposit an EMD/SD/BG/DRAFT/PAY ORDER ETC I/C WARRANTY PERIOD, PG/BOND, VALIDITY etc. , which is as per terms and conditions and details given in NIT / tender documents sold to the Bidders.~~
5. ~~**Sanctions for Violations/Disqualification from tender process and exclusion from future Contacts.**~~
- 5.1 ~~Any breach of the aforesaid provisions by the BIDDER or any one employed by it or acting on its behalf (whether with or without the knowledge of the BIDDER) shall entitle the Authority to take all or any one of the following actions, wherever required:~~
- ~~i) To immediately call off the pre-contract negotiations without assigning any reason or giving any compensation to the BIDDER. However, the proceedings with the other BIDDER(s) would continue.~~
 - ~~ii) To immediately cancel the contract, if already signed, without giving any compensation to the BIDDER.~~

- ~~iii) If the Authority has disqualified / debarred the Bidder from the tender process prior to the award under section 2 or 3 or 4, the Authority is entitled to forfeit the earnest money deposited/bid security.~~
- ~~iv) To recover all sums already paid by the Authority, and in case of an Indian BIDDER with interest thereon at 2% higher than the prevailing Prime Lending Rate of State Bank of India, while in case of a BIDDER from a country other than India with interest thereon at 2% higher than the LIBOR. If any outstanding payment is due to the BIDDER from the Authority in connection with any other contract or any other stores, such outstanding payment could also be utilized to recover the aforesaid sum and interest.~~
- ~~v) To en-cash the advance bank guarantee and performance bond/warranty bond, if furnished by the BIDDER, in order to recover the payments, already made by the BUYER, along with interest.~~
- ~~vi) To cancel all or any other Contracts with the BIDDER. The BIDDER shall be liable to pay compensation for any loss or damage to the Authority resulting from such cancellation/rescission and the Authority shall be entitled to deduct the amount so payable from the money(s) due to the BIDDER.~~
- ~~vii) To debar the BIDDER from participating in future bidding processes for a period upto two years.~~
- ~~viii) To recover all sums paid in violation of this Pact by BIDDER(s) to any middleman or agent or broker with a view to securing the contract.~~
- ~~ix) In case where irrevocable Letters of Credit have been received in respect of any contract signed by the Authority with the BIDDER, the same shall not be opened.~~
- ~~x) Forfeiture of Performance Bond in case of a decision by the BUYER to forfeit the same without assigning any reason for imposing sanction for violation of this Pact.~~
- ~~xi) That if the Authority have terminated the contract under section 2 or 3 or 4 or if the Authority is entitled to terminate the contract under section 2 or 3 or 4, the Authority shall be entitled to demand and recover from the contractor damages equivalent to 5% of the contract value or the amount equivalent to security deposit or performance bank guarantee, whichever is higher.~~
- ~~xii) That the Bidder / Contractor agrees and undertakes to pay the said amount without protest or demur subject only to condition that if the Bidder/Contractor can prove and establish to the satisfaction of the Authority that the disqualification / debarment of the bidder from the~~

~~tender process or the termination of the contract after award of the contract has caused no damage to the Authority.~~

~~5.2 The Authority will be entitled to take all or any of the actions mentioned at para 5.1 above.~~

~~5.3 (i) to (xii) of this Pact also on the Commission by the BIDDER or any one employed by it or acting on its behalf (whether with or without the knowledge of the BIDDER), of an offence as defined in Chapter IX of the Indian Penal code, 1860 or Prevention of Corruption Act, 1988 or any other statute enacted for prevention of corruption.~~

~~5.4 That if the Bidder/Contractor applies to the Authority for premature revocation of the debarment and proves to the satisfaction of the Authority that he has installed a suitable and effective corruption prevention system and also restored/recouped the damage, if any, caused by him, the Authority may, if thinks fit, revoke the debarment prematurely considering the facts and circumstances of the case, and the documents/evidence adduced by the Bidder/Contractor for first time default.~~

~~5.5 That a transgression is considered to have occurred if the Authority is fully satisfied with the available documents and evidence submitted along with Independent External Monitor's recommendations/suggestions that no reasonable doubt is possible in the matter.~~

~~5.6 The decision of the Authority to the effect that a breach of the provisions of this Pact has been committed by the BIDDER shall be final and conclusive on the BIDDER. However, the BIDDER can approach the Independent External Monitor(s) appointed for the purpose of this Pact.~~

~~6. Allegations against Bidders/Contractors/ Sub-Contractors/ Associates:~~

~~That if the Authority receives any information of conduct of a Bidder/ Contractor or Sub- Contractor or of an employee or a representative or an associate of the Bidder, Contractor or Sub- Contractor which constitute corruption, or if the Authority has substantive suspicion in this regard, the Authority will inform the Vigilance Department for appropriate action.~~

~~7. Independent External Monitor(s),~~

~~7.1. That the Authority has appointed competent and credible Independent External Monitor(s) for this Pact.~~

~~7.2 The task of the Monitor(s) is to review independently and objectively, whether and to what extent the parties comply with the obligations under this Pact. He will also enquire into any complaint alleging transgression of any provision of this Pact made by the Bidder, Contractor or Authority.~~

- 7.3. ~~That the Monitor(s) is not subject to any instructions by the representatives of the parties and would perform his functions neutrally and independently. He will report to the Chairperson of the Board of the Authority.~~
- 7.4 ~~That the Bidder / Contractor accepts that the Monitor(s) has the right to access without restriction to all project documentation of the Authority including that provided by the Bidder/Contractor. The Bidder/Contractor will also grant the Monitor, upon his request and demonstration of a valid interest, unrestricted and unconditional access to his project documentation including minutes of meeting. The same is applicable to Sub- Contractors and Associates. The Monitor is under obligation to treat the information and documents of the Authority and Bidder/ Contractor / Sub- Contractors/ Associates with confidentiality.~~
- 7.5. ~~That as soon as the Monitor notices, or believes to notice, a violation of this Pact, he will so inform the management of the Authority and request the management to discontinue or heal the violation, or to take other relevant action. The Monitor(s) can in this regard submit his recommendations/ suggestions. Beyond this, the Monitor(s) has no right to demand from the parties that they act in a specific manner, refrain from action or tolerate action.~~
- 7.6 ~~That the Authority will provide to the Monitor(s) sufficient information about all meetings among the parties related to the project provided such meetings could have an impact on the contractual relations between the Authority and the Contractor / Bidder. The parties offer to the Monitor(s) the option to participate in such meetings.~~
- 7.7 ~~That the Monitor(s) will submit a written report to the Chairperson of the Board of the Authority within 2 weeks from the date of reference or intimation to him by the Authority and, should the occasion arise, submit proposals for correcting problematic situations.~~
- 7.8 ~~That if the Monitor(s) has reported to the Chairperson of the Board a substantiated suspicion of an offence under relevant Anti- Corruption Laws of India and the Chairperson has not, within reasonable time, taken visible action to proceed against such offence or reported it to the Vigilance Department, the Monitor may also transmit this information directly to the Central Vigilance Commissioner, Government of India.~~
- 7.9 ~~The word 'Monitor' would include singular and plural.~~

8. ~~Facilitation of Investigation.~~

- ~~In case of any allegation of violation of any provisions of this Pact or payment of commission, the Authority or its agencies shall be entitled to examine all the documents including the Books of Accounts of the BIDDER and the BIDDER shall provide necessary information and documents in English and shall extend all possible help for the purpose of such Examination.~~

9. ~~Law and Place of Jurisdiction.~~

~~That this Pact is subject to provisions under Indian Law. The place of performance and jurisdiction is the Corporate Headquarter /the Regional Headquarter / office of the Authority, as applicable.~~

10. ~~Other Legal Actions~~

~~10.1 That the changes and supplements as well as termination notice need to be made in writing.~~

~~10.2 That if the Bidder / Contractor are a partnership or a consortium, this Pact must be signed by all the partners and consortium members or their authorized representatives.~~

11. ~~Pact duration (Validity)~~

~~11.1 That this Pact comes into force when both the parties have signed it. It expires for the Contractor 12 months after the final payment under the respective contract, and for all other Bidders 3 months after the contract is awarded.~~

~~11.2. That if any claim is made / lodged during this period, the same shall be binding and continue to be valid despite the lapse of this Pact as specified herein before, unless it is discharged/determined by Chairman of the Authority.~~

~~11.3 That should one or several provisions of this Pact turn out to be invalid; the remainder of this Pact shall remain valid. In this case, the parties will strive to come to an agreement to their original intentions.~~

12. ~~Company Code of Conduct~~

~~Bidders are also advised to have a company code of conduct (clearly rejecting the use of bribes and other unethical behaviour) and a compliance program for the implementation of the code of conduct throughout the company.~~

13. ~~The parties hereby sign this Integrity Pact at _____ on~~
~~_____~~

~~_____~~ **Buyer**
~~_____~~ Name of the Officer
Designation
Deptt./Ministry/PSU
Witness

1. _____

2. _____

Bidder

~~CHIEF EXECUTIVE OFFICER~~
Witness

1. _____

2. _____

APPENDIX-XIX

(To be filled by Contractor)
(CLAUSE-47)

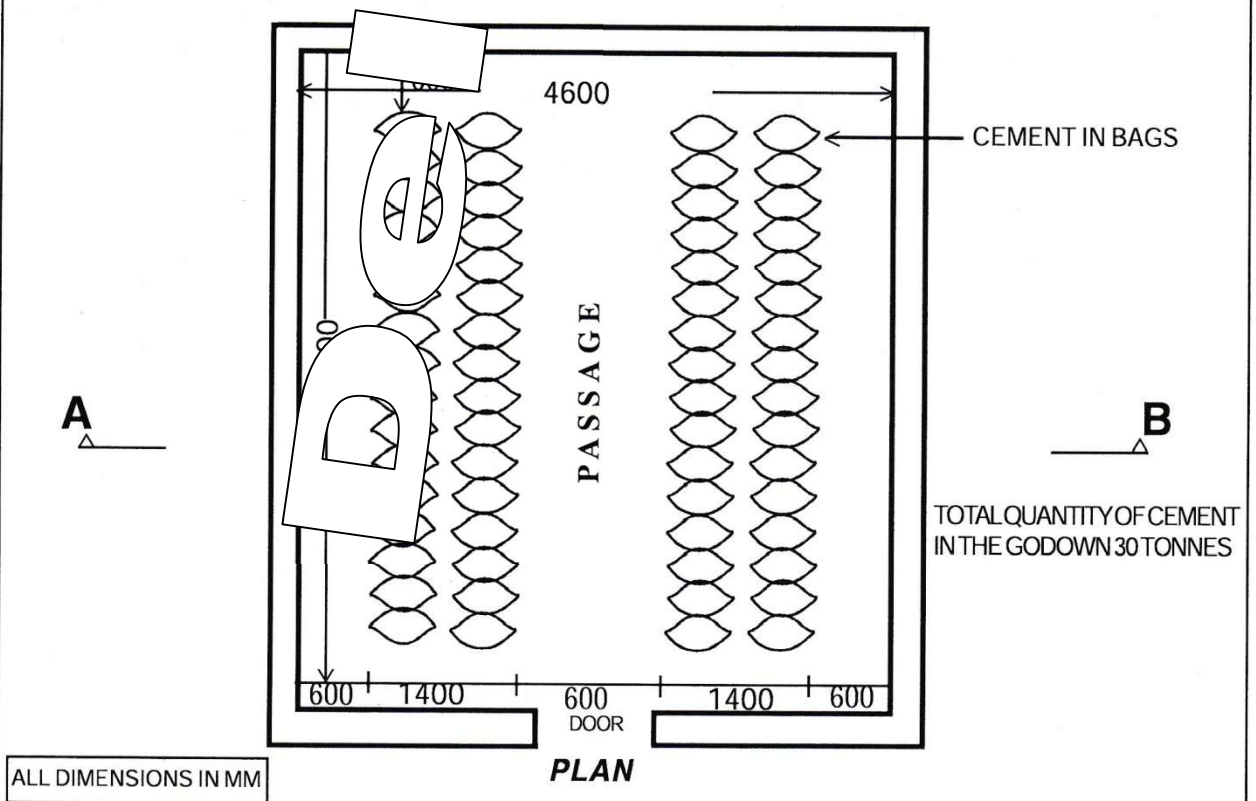
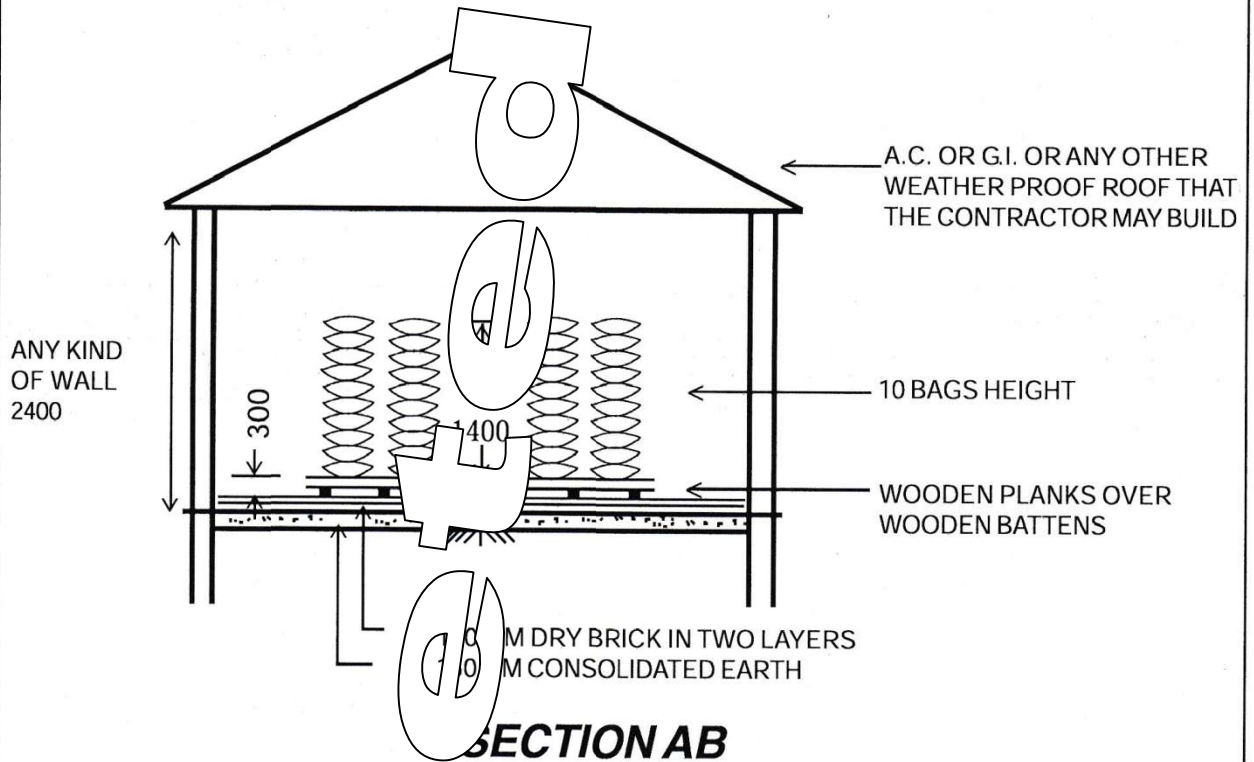
Ratio of direct payment to the specialized : ...% of the net payment to be made to
Specialized agency in case of composite contract agency

Sl.	Sub-head	Nature of work	% of the net payment to be made to Specialized agency
1	Sub-head I		

Note:

1. NIT approving authority must ensure that all sub-heads of works are covered in above table. The bidder must indicate percentage payable to specialized agency in case of all sub-heads.
2. If % is not filled in by the contractor against one or more subhead in this schedule, then 75% of the net payment admissible as per AAI for the subhead under consideration shall be paid directly to specialized agency in case of composite contract.

सीमेन्ट गोदाम का रेखाचित्र / SKETCH OF CEMENT GODOWN



SKETCH OF CEMENT GODOWN

SCHEDULES

SCHEDULE `A`

All rates shall be quoted in the format provided and no other format is acceptable. The price breakup sheet has been uploaded having **Page no. 1 to 5** Bidders are required to download the BOQ file, open it and complete the white coloured (unprotected) cells with their respective financial quotes and other details (such as name of the bidder alongwith bidder signed and stamp). No other cells should be changed. Once the details have been completed, the bidder should save it and submit it online in desired format on CPP portal i.e. pdf etc. if the BOQ file is found to be modified by the bidder, the bid will be rejected and EMD shall be forfeited.

SCHEDULE `B`

Schedule of materials to be issued to the contractor.

Sl. No.	Description of Item	Quantity	Rates in figures & words at which the material will be charged to the contractor	Place of Issue
1	2	3	4	5
			Nil	

SCHEDULE `C`

Tools and plants to be hired to the contractor.

Sl.No.	Description	Hire charges per day	Place of Issue
1	2	3	4
As per GCC and SCC			

SCHEDULE `D`

Extra schedule for specific requirements/ documents for the work, if any. -----

SCHEDULE `E`

Reference to General Condition of contract

Name of work : Construction of Glide Path & Localizer Building and other associated works inside Airforce Area at Chandigarh Airport.
SH- SITC of LT panel, Split AC & internal wiring works.

Estimated cost of work : **Rs 28,43,518.00 (Excluding GST)**

- i. Earnest Money : **Rs 85,400.00**
- ii Performance Guarantee : ~~5% of contract value~~ (Not Applicable)
- iii Additional Performance Guarantee : As per GCC clause- 1 B
- iv Security deposit : ~~5% or 10% of contract value~~ (Delete whichever not applicable)
- v Defect Liability Period : **12 Months**

SCHEDULE 'F'

GENERAL RULES & DIRECTION

Officer inviting tender : AGM (E E), AAI

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	See Below
--	-----------

Definitions:

Office inviting tender	: AGM (Engg-Elect.), AAI
2(v) Engineer-in-Charge	As per AAI's DOP.
2(viii) Accepting Authority	: As per AAI's DOP
2(x) Percentage on cost materials & Labour to cover all overheads & Profits	15%
2(xi) Standard schedule of rates	: Electrical DSR-2025, Civil DSR-2023 & Market rates.
2(xii) Department	: AAI, Engineering (Elect.)

Clause 1 & 1 B

(i)	Time allowed for submission of Performance Guarantee from the date of issue of letter of Intent	Not Applicable
(ii)	Time allowed for submission of Additional Performance Guarantee from the date of issue of letter of intent	30 Days
(iii)	Maximum allowable period of extension	As per Clause 1 of GCC

Clause 2

	Authority for fixing compensation under Clause 2	As per AAI DOP
--	--	----------------

Clause 2A

	Whether Clause 2A shall be applicable	Yes/No
--	---------------------------------------	--------

Clause 5

	Number of days from the date of issue of letter of acceptance for reckoning date of start	10 days or date mentioned in work order
--	---	---

Mile Stone(s) as per table given below:

Sl.No.	Description of Milestones (Physical)	Time allowed in days (from date of start)	Amount to be withheld in case of non achievement of milestone

Time allowed for execution of work. : **02 (Two) Months**

Authority to decide:

i.Extension of time.....Engineer-in-Charge/As per DOP .

ii.Rescheduling of milestone Engineer-in-Charge/As per DOP

iii.Shifting of date of start in case of delay in handing over of site..... Engineer-in-Charge/As per DOP

Clause 6, 6A

Clause applicable – (6 or 6A) : **6A is Applicable**

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.	As per SCC
--	-------------------

Clause 10A

Testing equipment to be provided by the contractor at site lab

~~All the Testing equipments required for conducting test for building/ pavement works as per CPWD, Morth, IRC and AAI specifications as applicable.~~

Clause 10 B(II)

	Whether Clause 10B(II) shall be applicable	Yes/No
	Interest on Mobilization advance	N/A

Clause 10C: **Applicable/ Not Applicable**

Component of labour expressed as percent of value of work: N/A

Clause 10-CA

Materials covered under this clause	Nearest Material (other than cement*, reinforcement bars, structural steel & Bitumen) for which All India Wholesale Price index is to be followed	Base price and its corresponding period of all the materials covered under clause 10CA
1. Cement (OPC/PPG)		Base price for cement and reinforcement steel to be determined as issued under authority of DG (Works). CPWD or concerned Zonal Chief Engineer, CPWD as on last date of receipt of tender. In case base price for cement, reinforcement steel and Bitumen as to be issued by CPWD is not available concerned ED (Engg) empowered to determine the same.
2. Reinforcement steel bars (TMT)		
3. Structural Steel		
4. Bitumen		

***Note:**

1. Includes cement component used in RMC brought at site from outside approved RMC plants, if any.

Clause 10-CC

Clause 10CC to be applicable in contracts with stipulated period of completion exceeding the period shown in next column	18 Months
--	-----------

Schedule of component of other materials, Labour, POL etc. for price escalation:-

Component of civil (except material covered under clause 10-CA) / Electrical construction materials express as percentage total value of workXm%.

Component of labour, expressed as % of total value of work.....Y.....%.

Component of POL, expressed as % of total value of work.....Z.....%

Note : Xm% should be equal to (100) — (material covered under clause 10-CA i.e. cement, steel and other materials specified in clause 10-CA + component of labour + component of POL).

Clause 11

Specification to be followed for execution of work	a) BOQ b) Special conditions of contract, c) Technical specification.as per Tender, d) Manufacturer's Specification. e) CPWD / AAI Specifications with upto date correction slips and amendments or other specification as applicable.
--	--

Clause 12

12.2 & 12.3	Deviation limit beyond which clauses 12.2 & 12.3 shall apply for building, pavements and all other works above foundation level.	15% (Fifteen Percent)
12.5	Deviation limit beyond which clauses 12.2 & 12.3 shall apply for foundation work	100% (Hunderd Percent)
	Overall Deviation including extra item, if any	30% (Thirty Percent)

Clause 16

	Competent Authority for deciding reduced rates	As per DOP/Works Manual, AAI
--	--	------------------------------

Clause 18**Mandatory machinery, tools & plants to be deployed by the contractor at site:**

To be provided as per NIT and other Machinery required for timely completion of work.

Clause 25**Place of Arbitration : CHANDIGARH/AS PER GCC****Clause 36(1) Requirement of Technical Representative(s) and recovery rate**

Sl. No.	Minimum Qualification of Technical Representative	Discipline	Designation (Principal Technical representative)	Minimum Experience	Number	Rate at which recovery shall be made from the contractor in the event of not fulfilling provision of clause 36	
						Figures Rs.	Words
1.		DELETED					
2.							

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

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

Clause 37

Licence Fee for unpaved land _____ Rs. _____

Clause 41(b)

Integrity Pact applicable _____ Yes/No

Clause 42

(i)	Schedule/statement for determining theoretical quantity of cement & bitumen on the basis of Delhi Schedule of Rates	DSR 2016 printed by C.P.W.D with up-to-date correction slips till last date of submission of tender, technical specifications & BOQ.
(ii)	Variations permissible on theoretical quantities	
a.	Cement for works with estimated cost put to tender not more than Rs.5 lakhs.	3% plus/minus
	For works with estimated cost put to tender more than Rs.5 lakhs	2% plus/minus
b.	Steel Reinforcement and structural steel section for each diameter, section and category	2% plus/minus
c.	Bitumen	2.5% plus only & NIL on minus side
d.	All other materials	

RECOVERY RATES FOR QUANTITIES BEYOND PERMISSIBLE VARIATION

Sl. No.	Description of items	Rates in figures and words at which recovery shall be made from the contractor	
		Excess _____ beyond permissible variation	Less use beyond the permissible variation*
1.	Cement		
2.	Steel reinforcement		
3.	Structural Sections		
4.	Bitumen issued free		
5.	Bitumen issued at stipulated fixed price		

* ~~Provided work is considered technically sound. Otherwise work has to be re-executed as per direction of Engineer in charge~~

Clause 48

Escrow Account : Applicable / Not applicable.

SPECIAL CONDITIONS OF CONTRACT

1. GENERAL

- 1.1 Special conditions of Contract shall be read in conjunction with Technical Specifications and any other documents forming part of this contract wherever the context so requires.
- 1.2 These special conditions of contract shall be read in conjunction with General Conditions of Contract for all the systems mentioned above. If there are any provisions in the SCC, which are at variance with the provisions of General conditions of contract, the provisions in the SCC shall take precedence.
- 1.3 The drawings enclosed are for reference only. The tenderer has to check the exact requirement suitable to the site conditions and design & offer the equipment.
- 1.4 The contractor shall be deemed to have satisfied himself before bidding as to the correctness and sufficiency of his tender for the works and of the rates and prices quoted in the schedule of quantities (SOQ) or in bills of Quantities (BOQ) which rates and prices shall, except and otherwise provided, cover all his obligations under the contract and all matters and things necessary for the proper completion and maintenance of the works.
- 1.5 Should there be any difference/discrepancy or contradiction in the provision of the specification of item of work and the description of the item given in the Schedule of Quantities, the scope of the items shall be taken according to the following order of preference:
 -
 - a. Nomenclature of the items as given in the Schedule of Quantities.
 - b. Special Conditions of Contract.
 - c. Technical specifications.
 - d. Drawings / Sketch enclosed, if any.
 - e. Indian Standard Specifications / Code of Practice
 - f. International Specifications / Code of Practice.
 - g. Sound Engineering Practices.
 - h. Direction of Engineer-in-Charge whose decision shall be final and binding on the contractor.

Any reference made to any of Standards/ Specifications shall imply the latest version of that standard, including revisions/amendments issued up to last date of receipt of Tender. The contractor shall keep, at his own cost.

2. Brief Scope of Work –

The location of work is ILS Building in IAF area, Chandigarh.

- i) Internal wiring, cabling and other associated electrical works.
- ii) Earthing including Excavation work
- iii) Supply and installation of Various Rating LED Luminaires and fixtures
- iv) SITC of LT Electrical Panel.
- v) SITC of Servo Controlled Automatic Voltage Stabilizer.
- vi) SITC of Split i/c Automatic Voltage Stabilizer, Smart AC timer switch for switching power

3. Important Note:

- a) Tenderers are advised to visit the site between 10:00 AM and 5:00 PM on all working days (Monday to Friday) prior to quoting, to assess the scope of work and understand the actual site conditions inside Indian Airforce area (IAF), Chandigarh.
- b) The dimensions provided in the enclosed drawings are indicative purpose only. Actual shall be verified on-site.

4. The time period allowed for completion of Work is **02 (Two) Months** from date of issue of award letter.

5. PRICES, TAXES AND DUTIES

5.1 Rates to be quoted by the parties should be inclusive of all taxes, duties, CESS, fee, royalty charges etc. levied under any statute **but exclusive of GST** for all the items. The GST shall be reimbursed to the successful bidder for all taxable supply / services against a valid tax invoice.

The contractor shall quote the tender based on the expenditure towards manpower, Tool & Plants, Spares, Statutory items, PIC Charges, miscellaneous expenses etc.

5.2 However, GST, as applicable, shall be paid to the contractor, for any taxable supply / services / construction rendered by the agency to AAI, against a valid GST invoice as per terms and conditions of the contract.

5.3 The contractor shall comply with all applicable provision of Goods and Service Tax (GST) levied by union Government and state Government (CGST, UTGST, SGST and IGST). The contractor shall get himself registered and discharge his obligations for payment of taxes, filing of returns etc. under the appropriate provisions of law in respect of all the taxes, duties, levies & cess, etc.

5.4 In case of change in rate of Tax or any provision relating to levy of Tax resulting in increase in burden of Tax on the contractor, the contractor shall be entitled to receive any compensation for such increase in quantum of Tax payable by the contractor. Similarly, recovery shall be made from the contractor on account of decrease of rate of Tax or any provision relating to levy of Tax.

5.5 The AAI shall be entitled to deduct at source any tax as may be required by the laws in force in India and in such a case shall furnish to the supplier a certificate to the form prescribed.

5.6 Any claim by the contractor for re-imbursement shall be made before submission of final bill of main work. No claim for re-imbursement shall be made or entertained in regards to Taxes and duties subsequent to settlement of final bill, contractor shall be fully responsible for any future claims arise from statutory authority.

5.7 The rates quoted for the maintenance contract shall be inclusive of all spares. Cost of spares required for maintenance shall also be included in the quote of Annual comprehensive maintenance rates.

5.8 The contractor shall send the goods to consignee i.e. Airports Authority of India in a fully packed condition as per requirement of component / equipment and fully insured.

5.9 The contractor shall be solely responsible to ensure the following:

- a. Sound packing of equipment / components.
- b. Shipment of the items by the due date as per schedule.
- c. Insurance.
- d. Custom Clearance and handling of items/components at port of entry in India.
- e. Forwarding and transshipment of equipment/components up to the destination.
- f. Insurance of Inland transshipment.
- g. Receipt of equipment at site and safe custody till they are installed, tested and commissioned & taken over by AAI.
- h. Design, Supply, installation, testing and commissioning of the installation as specified in the tender.
- i. Handing over of installation to the authorized representative of AAI.

6. Inspection of Site:

The bidder is advised to inspect and examine the site/installations and satisfy himself about the nature and scope of work involved before quoting the rates. The bidder is deemed to have the full knowledge of the site, whether the bidder inspected the site or not and no extra claim consequent to any misunderstanding or otherwise shall be allowed.

7. Security Deposit:

Security deposit amounting to 10% awarded cost shall be deposited within fifteen days of award of work, failing which 10% of the bill value will be recovered from each running bill after adjustment of EMD till the total value of SD becomes equal to the 10% of the total value of work executed in this contract.

8. Guarantee:

The materials/workmanship shall be guaranteed for a period of 1 Year from the date of completion of the work. Any defects noticed during the guarantee period shall be rectified / replaced in part or in full by the firm free of cost without charging anything extra to AAI. The contractor shall guarantee that all the material, machinery and components supplied, fabricated, designed and installed by him shall be free from defects due to faulty design material and/or workmanship.

9. SPECIFICATIONS TO BE FOLLOWED

The work shall be executed as per the specifications stated in the BOQ and those enclosed as a part of this tender document. If no specifications are expressly stated in the BOQ or no specifications are enclosed, relevant CPWD specifications, relevant IS codes with up to date amendments shall be followed.

10. COMPLETION SCHEDULE

- The works shall be executed strictly as per time schedule mentioned in tender document. Contractor shall have to plan his working program and activities so as to complete the work in the stipulated period. The period of completion given includes the time required for mobilization as well as testing, rectifications, if any, re-testing and completion in all respects to the entire satisfaction of Engineer-in-Charge.
- No additional payment shall be made to the contractor for any multiple shift work or other incentive methods contemplated by him in his work schedule even though the time schedule is approved by the Engineer-in-Charge.

11. BILL OF QUANTITIES

The bill of quantities shall be read in conjunction with special conditions of contract, technical specifications and any other document forming a part of this tender. The quantities shown against the various items are only approximate and subject to variations as made in tender document.

12. TEMPORARY WORKS

All temporary and ancillary works including enabling works connected with the work shall be responsibility of the contractor and the price quoted by them shall be deemed to have included the cost of such works which shall be removed by the contractor at his cost, immediately after completion of the work.

13. INCOME TAX AND LABOUR CESS

- 13.1 Income tax deductions shall be made from all payments made to the contractor as per the rules and regulations in force in accordance with the income tax act prevailing from time to time.
- 13.2 Labour Cess as per rules and regulations in force shall be deducted from the bills of the contractors and deposited with designated authorities.

14. POWER SUPPLY

- 14.1 Electricity required for execution of the work and for testing of electrical work after installation shall be provided by AAI to the contractor free of cost. However, the contractor shall make all necessary temporary power supply arrangements for extending electricity from the nearest electrical Distribution Board (DB) to the workplace, including extension boards, cables, and related accessories, including removal of these temporary power supply arrangements after completion of the work, at his own cost.
- 14.2 No extra payment shall be made by AAI to the agency on this account.

15. CONTRACT AGREEMENT

Contractor's bid including the letters of clarifications between the contractor and the AAI prior to the award of contract shall form a part of the contract agreement to the extent they have been accepted by AAI.

16. TOOLS FOR HANDLING AND ERECTION

- 16.1 The contractor shall without prejudice to his overall responsibility to execute and complete the work as per specifications and time schedule deploy adequate equipments, tools and tackles and augment the same as decided by the engineer-in-charge depending on the exigencies of the work so as to suit the construction/work schedule.

16.2 Equipments for night working:

In case, it appears, at any stage that the project may not be completed within the stipulated period due to restricted working hours in the day in view of operational reasons, the contractor shall execute the work during the night as and when asked by the Engineer- in-Charge in writing. Nothing extra shall be payable to contractor for working in night time. For proper execution, the work site shall be properly illuminated at the cost of contractor.

- 16.3 No equipment shall be supplied by AAI.

17. SITE ORGANISATION

Subject to the provisions in the bid document and without prejudice to contractors' liabilities and responsibilities to provide adequate qualified and skilled personnel on the work. Contractor shall deploy site organization and augment the same as decided by the engineer-in-charge depending on the exigencies of work. No engineering personnel deployed at site shall be removed from the site without prior approval of the engineer-in- charge.

The Engineer-in-charge may at his discretion, conduct independent test at an approved laboratory. The cost of such material, transport, cost of testing etc. shall be borne by the contractor.

18. RESTRICTIONS IN WORKING HOURS

- 18.1 Since the work has to be carried out in **IAF area, Chandigarh**. Contractor shall obtain the entry passes from the competent authority as per security rules and regulations. The contractor's staff working in Airport premise will obey the instructions of the Airport officials in clearing the site. The number of hours working in the area might be restricted due to VIP movement and contractor will not have any claim for extra payment on this account. It is the responsibility of the contractor to program his work accordingly.

- 18.2 After the closure of day's work, all equipment and stock piled materials must be removed from site to avoid any damage, loss or injury which may occur to AAI property, or to any person. The contractor shall be responsible for any damage resulting from his negligence to existing fixtures/installations and will restore, replace or repair any such damage at his cost to the complete satisfaction of the Engineer- in-charge.

19. LABOUR CAMPS

No labour camps will be allowed in the IAF operational area.

20. REGULATIONS

All men and vehicles will observe the regulations in force in the operational area and will do nothing to pose a danger to the aircraft and their operations. All vehicles will fly the mandatory red flag during day light hours and red lights during night while working in operational areas.

- 21. Entry Pass:-** The work site lies in restricted area. The contractor shall apply in writing in advance for issue of necessary entry passes of workmen engaged by him. The office/airport premises is an essential service covered under the maintenance of essential service Act and hence disruption of services rendered will be a statutory offence. The necessary police verification etc. as required for entry passes will be the responsibility of the contractor. All expenditure towards arranging security passes shall be borne by the Agency.

22. SECURITY

IAF / BCAS (Bureau of Civil Aviation Security) clearance is the mandatory requirement for the agency without it Entry Pass for vehicle and manpower cannot be issued.

The contractor and his employees shall abide by security regulation framed by IAF / AAI/ BCAS or Police Authorities. Any worker of the contractor, whose presence is found undesirable in AAI premises, shall not be allowed to work. The Contractor shall be fully responsible for the satisfactory working of his staff.

"If Contractor or his authorized representative or his employed workers are found violating any of security regulations, suitable action shall be taken by AAI as per prevailing rules".

All men and vehicles shall be permitted to enter the restricted office area only on possession of the security passes. The contractor shall apply in writing in advance before commencement of work for issue of security passes and shall submit a list of personnel concerned with their addresses. The contractor shall ensure that his men are deployed only in those area where the security passes issued is valid for. Passes shall be deposited back with Engineer-In-Charge on demand and in any case immediately after completion of work. The contractor or his staff/workmen shall observe all the rules promulgated from time to time by the concerned authorities. Any person found violating the security rules laid down by the authority will be expelled from the area without assigning any reason whatsoever and contractor shall have no claim on this account.

23. MATERIAL INSPECTION, EXAMINATION AND TESTING

All major items are to be dispatched after submission of Type test and Routine test certificates and Clearance by Engineer in Charge or his authorized representative.

The Engineer-in-Charge or his authorized representative shall have full power to inspect any portion of the work, examine the materials and workmanship at the contractor's works or at any other place from where the material is obtained. Acceptance of any material shall in no way relieve the contractor of his responsibility for meeting the requirement of the specifications.

On arrival of materials at site they shall be inspected and tested by AAI to ensure that the materials conform to the specifications and standards. The contractor shall give every facility and help to the Engineer-in-charge and his representatives for inspection, examination and testing of the materials. Acceptance of any material or equipment shall in no way relieve the contractor of his responsibility for meeting the requirements of the contract.

Approval of the Engineer-in-charge shall be taken well in advance for all materials to be used for the works by the contractor. The contractor has to submit the required catalogues / literature / test certificates / technical information etc. wherever applicable along with the samples, if so desired by the Engineer-in-Charge.

All tools, instruments, plants and labour /operating personnel for the test shall be provided by the contractor at his own cost.

The Engineer-in-Charge may conduct the test of the material from outside independent laboratory. The cost of such material, transport, cost of testing etc. shall be borne by the contractor.

24. STORES AND MATERIALS

Contractor shall have their own means of unloading mechanism required at site. No storage accommodation will be arranged by AAI, contractor shall make all such arrangements at his own cost to the satisfaction of engineer-in-charge.

The contractor shall co-operate with any other agencies working on the same project, compare plans, specifications and the time schedule and so arrange his work that there will be no interference. The contractor shall forward to the engineer-in-charge all correspondence and drawings so exchanged failure to check plans for conditions will render the contractor responsible for bearing the cost of any subsequent change found necessary, contractor should co-ordinate in such a way that on no account there should be any disturbance to the work.

The watch & ward of the stores, equipment & materials shall be the responsibility of the contractor till the completion, commissioning & handing over to AAI. Materials brought to site shall be stored properly to avoid damage, corrosion etc., execution shall be started only after obtaining approval from Engineer-in-charge.

25. STANDARD OF WORKMANSHIP

To determine the acceptable standard of workmanship, the contractor shall execute portion of the item of work as sample for approval of the engineer-in-charge, before taking up the actual execution of the particular item of work.

26. SITE PRECAUTIONS

Any materials or T & P etc. found lying outside the sites approved by the Engineer-in-Charge shall be removed by the Engineer-in-Charge at the risk and cost of the contractor. When the contractor's equipment or personnel require to cross areas which are not close to aircraft operations, the contractor shall provide competent flagmen at locations designated by the Engineer-in-Charge to relay signals from airport traffic control to personnel wishing to cross such areas.

With regard to construction safety measures, the contractor shall adhere to various Indian Standard Codes of Practice, requirements of Provincial Government and local Municipal Authority wherever the provisions of the latter two agencies shall be more stringent than the provisions of the former. When these codes do not exist, the contractor shall adhere to such safety measures as directed by the Engineer-in-Charge.

The contractor shall be responsible for any damage, resulting from his operations, either to buildings, structures, airport fixtures such as underground cable, contact lights, hard surface areas, water mains, other operational installations, Airport roads etc. The contractor shall restore, replace or repair any such damage to the complete satisfaction of the Engineer-in-Charge and in default the Engineer-in-Charge may cause the same to be made good by any other means and deduct the expenses from any sums due to contractor.

The work shall be carried out in phases in such a way that there is least obstruction to the passenger movement. The phasing shall be decided by the Engineer-in-Charge, who will be at liberty to change the phasing to suit the requirements. The contractor shall have to abide by these instructions and nothing extra shall be paid to him on this account.

27. The contractor shall take all precautions to avoid all accidents by exhibiting necessary day & night caution boards, speed limit boards, red flags, red lights and providing barriers. He shall be responsible for all damages and accidents caused due to negligence on his part. No hindrances shall be caused to traffic during execution of work.
28. No payment will be made to the contractor for damage caused by rains or other natural calamities during the execution of the works and no such claim on this account will be entertained.
29. Contractor shall remove labour huts, temporary barricades etc. on completion of the work and leave the site in a neat and tidy state. Payment of final bill will be subject to compliance of this condition by the contractor.
30. **MATERIALS AT SITE**

The contractor may be permitted to use space at the Airport premise and any other unutilized location available at the time, free of cost, solely for storage of materials, tools, and materials required for execution of this work. However, the contractor shall be fully responsible for the safety, security, and protection of these materials. AAI staff or any other agency shall not be responsible for any loss, theft, or damage to the contractor's materials.

The said space shall be provided only to facilitate ease of work and faster execution. The contractor may also arrange his own storage facility, if required. Further, the contractor shall shift or relocate the stored materials from one location to another, or clear the space, whenever instructed by the Engineer-in-Charge (EIC), without any extra cost to AAI.

The contractor shall co-operate with any other agencies working at same time, compare plans, specifications and the time schedule and so arrange his work that there will be no interference. The contractor shall forward to the engineer-in-charge all correspondence and drawings so exchanged failure to check plans for conditions will render the contractor responsible for bearing the cost of any subsequent change found necessary, contractor should co-ordinate in such a way that on no account there should be any disturbance to the work.

The watch & ward of the stores, equipment & materials shall be the responsibility of the contractor till the completion, commissioning & handing over to AAI. Materials brought to site shall be stored properly to avoid damage, corrosion etc., execution shall be started only after obtaining approval from Engineer-in-charge.

31. WORK IN RESTRICTED AREA

The work is to be carried out in restricted area. The Contractor shall have to coordinate with AAI for locating T&P and stacking of materials etc. Nothing extra shall be paid to the Contractor for all the above factors.

32. ARRANGEMENT TO BE MADE BY THE CONTRACTOR AT SITE

Necessary registers and stationers required for entering data and test results shall be provided by the contractor at his own cost as directed by the engineer- in-charge.

33. SAFETY DEVICES TO FIELD ENGINEERS / TECHNICIANS / WORKERS AT SITE.

The agency is also required to provide safety devices to the manpower deployed on site for the work in operational area as detailed below:-

- i) Safety helmets and foot wears are to be provided for each of the workers.
- ii) Safety belts, protective Goggles, Hand gloves, jackets etc are to be provided as per requirement and nature of jobs.
- iii) Helmets shall be provided for Contractor's & AAI Supervisor & Visiting / inspecting officials.

34. DAMAGE TO PERSON AND PROPERTY

The Contractor shall indemnify and keep indemnified AAI against all losses and claims for injuries or damage to any person or any property what so ever, which may arise out of or in consequence of the construction and maintenance of the works by them and against all claims, demands, proceedings of or in relation thereof.

35. LIABILITY UNDER THE WORKMEN'S COMPENSATIONS ACT

The contractor shall at all time indemnify the purchaser against any claims which may be made under the workmen's compensation Act 1923, or any statutory modification thereof or otherwise for or in respect of any damages or compensation payable in consequence of any accident or injury sustained by any workman or other person in the employment of the contractor.

36. TERMS OF PAYMENT

Payment will be given to the contractor in the following manner. Each stage payments shall be made, after deducting security deposit, IT, Labour welfare cess etc. and all other statutory recoveries for which the tenderer might have rendered liable as per the terms and conditions of the agreement. The agency must submit GST Invoice for payment.

- a) **For supply, installation, testing & commissioning items.**
 - 70% of item rate on pro-rata basis on delivery of material at site in good condition.
 - 20% of item rate on installation of equipment/materials.
 - 10% of item rate on Testing & Commissioning and handing over.
- b) **For installation, testing & commissioning items.**
 - 80% of item rate on installation of equipment/materials.
 - 20% of item rate on Testing & Commissioning and handing over.
- c) **For supply items**
 - 80% of item rate on pro-rata basis on delivery of material at site in good condition.
 - 20% of item rate on installation, Testing & Commissioning and handing over.

The following documents as applicable shall be produced and self-attested photo copy shall be submitted by the contractor during each running bills.

- a. Delivery challan/ copy of invoice of all the material supplied.
- b. Test Certificate to confirm that the materials meet the contract specification and relevant standard in all respects.

37. PAYMENTS

The bill shall be submitted in the prescribed format and GST tax invoice along with all Test Certificates & Challan as required. The contractor shall submit all the bills on the Proforma prescribed by the Engineer-in-Charge, preferably through computerized billing in triplicate for processing of bills.

38. Factory Acceptance Tests (FAT)

FAT shall be carried out at the plant/facility where contractor will be manufacturing/carrying out the value addition in India. In case, FAT is not conducted a recovery for amount of-

- i) Rs. 50,000/- shall be made against Electrical panel.

39. TERMINATION OF CONTRACT

- a) If the AAI considers that the performance of the contractor is unsatisfactory or not up to the expected standard, the AAI shall notify the same to contractor in writing and specify in detail the cause of such dissatisfaction. The AAI shall have the option to terminate the contract by giving 30 days' notice in writing to the contractor, if contractor fails to comply with the requisitions contained in the said written notice issued by the AAI and the decision of the AAI, Chandigarh shall be final and binding on the Contractor.
- b) AAI may also give Termination Notice and without compensation to the contractor to terminate the contract if the contractor becomes unwilling, bankrupt or otherwise insolvent without affecting its right of action or remedy as hirer.

- c) The contract can be terminated by issuing 60 days' notice in writing at any time by either party without assigning any reason and the contractor shall not cease to render the service facility until the AAI makes alternate arrangements thereof and informed the contractor accordingly. The extended period after expiry of the notice period will not, however, be more than 30 days in any case.
- d) Upon termination, under and with reference to this clause, the contractor shall be entitled to be paid for the work actually performed up to the date of termination in accordance with the provisions of the contract, but shall not be entitled to any other claim or compensation whatsoever, including (but not limited to) any claim or compensation for any expenditure incurred by the contractor in or for any equipment's, materials or facilities or for any loss in the profit or anticipated profit of the contractor.
- e) If at any stage during the period of execution of contract, any case involving moral turpitude is instituted in a court of law against the contractor or his employees, AAI reserves the exclusive and special right to the outright termination of the contract and the contractor shall not be entitled to any compensation from the AAI whatsoever.
- f) When the contractor has made himself liable for action under any of the cases aforesaid, the Engineer-in-charge on behalf of Chairman, AAI shall have powers :-
- g) To terminate or rescind the contract as aforesaid (of which termination or rescission notice in writing to the contractor under the hand of the engineer-in-charge shall be conclusive evidence). Upon such termination or rescission, the full Security Deposit/Bank guarantee and performance security (if applicable) shall be liable to be forfeited and shall be absolutely at the disposal of AAI.

Account information for Bank Guarantee

(i) The following bank details is incorporated in the tender document so that the prospective successful bidder may submit BG (PBG/BG-SD/FBG) in accordance with the bank details.

CORPORATE NAME	:	AIRPORTS AUTHORITY OF INDIA
BANK NAME	:	ICICI BANK
IFSC CODE	:	ICIC0000007
BG ADVISING MESSAGE	:	IFN 760COV (BG ISSUE) IFN 767COV (BG AMENDMENT)
*UNIQUE IDENTIFIER CODE	:	AAICHANDIGHAR

(ii) While submitting the documents to BG issuing bank, the vendor/customer/ concessionaire will also submit letter to the issuing bank as per the format mentioned in the Annexure-N.

(iii) Based on the above inputs from the vendor/customer/concessionaire, the BG Confirmation message through SFMS will be triggered to the beneficiary bank i.e. ICICI bank and on the basis of unique identifier code, the BG confirmation mail will be received in the designated email ids issued to the respective units.

(iv) While accepting the Original BG document from the vendor/customer/concessionaire, the respective department of AAI should ensure that the vendor attaches copy of the SFMS BG confirmation message sent by the BG issuing bank to ICICI bank.

Advisory: For Applicant and its BG Issuing Bank Branch.

It is to be noted that along with physical BG; an online facility to view the issued BG cover message transmitted to ICICI Bank through SFMS platform also activated.

➤ For availability of BG in this platform, it is necessary that BG issuing/amending bank send the BG advice in the form of message format **IFN 760COV (BG issuance) / IFN 767COV (BG Amendment)** via SFMS (Structured Financial Messaging System) as provided by RBI.

➤ In the event of BG issuing/amending bank not sending the message IFN 760COV/ IFN 767COV or **committing any error while capturing the details** at least in the below field, **BG confirmation through online portal would not be updated.**

BG advising message - IFN 760COV/ IFN 767COV via SFMS

IFSC CODE: ICIC0000007

Corporate Name- Airports Authority of India.

Field Number

(Particulars (to be mentioned in Row-1)

7037

< Unique identifier>

Please note that the issuing bank while issuing/amending the BG, should ensure that the above information is **correctly** captured in the message i.e. IFN 760COV/ IFN 767COV.

Sl. No.	Name of the AAI Unit	Email ID	UNIQUE IDENTIFIER CODE (7037)
1.	Chandigarh Airport	bgv.chandigarh@aai.aero	AAICHANDIGHAR

Request Letter: Transmission of Bank Guarantee Cover Message

< to be submitted by applicant to BG issuing bank >

Date:- _____

The Manager,
(Bank),
(Branch)

Sub: Inclusion of unique identifier code of AAI while transmitting BG cover messages where **beneficiary bank is ICICI Bank (IFSC-ICIC0000007).**

Dear Sir/Ma'am,

I/We, _____, request you to include unique identifier _____ in field 7037 of the SFMS cover messages IFN COV 760 (for BG issuance) and IFN COV 767 (for BG amendment) while transmitting the same to the beneficiary bank (ICICI Bank - IFSCICIC0000007).

Thanking You,

(Vendor/Customer/Concessionaire)

TECHNICAL SPECIFICATION OF CONTRACT

INTERNAL & EXTERNAL ELECTRICAL INSTALLATION I/C LIGHTING

1 GENERAL

This section deals with the requirements of Internal Electrical Installations, Lightning Protection System, LT Cables, MV Panels, Cable tray, Earthing etc.

The electrical Installation work shall be carried out in accordance with Indian Standard Code of Practice. It shall also be in conformity with the current Indian Electricity rules and regulations and requirements of the Electricity Supply Authority and Fire regulations, so far as these become applicable to the installation. Electrical work in general shall be carried out as per following CPWD Specifications amended upto date.

General Specifications for Electrical Works:

Part - I : Internal (2013)

Part - II : External (1994).

Wherever these specifications call for a higher standard of material and or workmanship than those required by any of the above mentioned regulations and specifications then the specifications here under shall take precedence over the said regulations and standards.

The details of scope of work sub-head wise are given in the subsequent paras. The quantities worked out in schedule of quantities are based on particular equipment considered at design stage. The contractor is required to recheck the quantities based on the approved design to achieve required parameters.

1.1 SCOPE OF WORK

This section covers general requirements of Electrical installations & allied works.

2. GENERAL INSTRUCTIONS

- 2.1 The Contractor shall include whole of the new material in accordance with the Particular Specifications for supply & fixing accessories for the complete installation. This shall also include any materials, appliances, equipment not specifically mentioned herein or noted on the drawings as being furnished or installed but which are necessary and customary to make the installation complete in all respects. In general, the work to be performed under this contract shall comprise supply and installation of the following as per schedule of quantities.

- **All MS conduit installed on surface inside hut should be painted with same colour of interior of Hut.**
- All conduit work shall include for junction boxes, outlet boxes, swapping and drawing fish wires etc. as required and as directed.

- Light control switches, plug sockets, cover plates, metal boxes etc. shall include under the wiring accessories. Back boxes required for the control switches shall also form part of the scope of work.
 - LT Cables for power to equipment and main panel boards sub-main panel boards and final distribution boards.
 - Main panel boards and final distribution boards.
 - Cables laying in existing trench / duct / ground / surface / on existing cable trays, all fixing accessories complete supplying and fixing of cable trays, excavation of trench & back filling (in case of cable laying in ground) etc.
 - Earthing system.
 - Lighting Fixtures.
 - Lightning Protection System.
 - Any other items, which is required for successful commissioning of system.
- 2.2 The Scope of work covered in this tender. The contractor has to coordinate with the other agencies for proper co-ordination and execution of the work at site.

3. QUALITY OF WORK

The work shall be carried out to the satisfaction of the Engineer In-charge. The supply, Installation, testing and commissioning shall comply with the latest requirements of Bureau of Indian Standards and code of practice as amended upto date. All equipments and materials being supplied shall meet the requirements of IS, Indian Electricity Rules, Local Electrical Inspectorate and other governmental statutory bodies.

4. DRAWINGS & SPECIFICATIONS

4.1 Specifications

The specifications shall be considered as part of contract. Any changes found essential to coordinate the installation of other services Installations and to comply with the Local Regulations shall be made without any cost to the CHIAL. The drawings are for the guidance of the contractor; exact locations, distances and levels shall be governed by the site conditions.

4.2 Shop drawings

On the basis of GFC drawings issued by the department, the Contractor shall prepare and submit shop drawings with proper visible scale min. on A2 Size to the Engineer In-charge for approval. The detailed shop drawing shall include all Schematics, Load distribution and balancing, Cable routing and Schedule, all lighting, UPS, Signages, Network / Telephone and Power Circuit layout, Distribution Board / Panels, Switch boards, Special Junction Boxes, Raceway layout, Earthing and any other item etc. provided by the contractor.

4.3 Completion drawings

On the completion of the work and before issuance of certificate of virtual completion, the Contractor shall submit a soft copy of as built drawings in a soft media after incorporating changes done during execution. These drawings should necessarily show the following details:

- Complete conduiting and wiring diagram including control circuits as installed from starting point i.e. power supply panel / telephone / network panel to last receiving end i.e. power / light / telephone/ network point and schematic drawings showing all connections, Junction box, DBs,

Raceway, Electrical switch gears, accessories etc. in the complete electrical system.

- Location of all earthing stations, routes and size of all earthing conductors, manholes i/c lightning Arrestor system etc.
- Layout and particulars of all cables.
- Instruction, maintenance and operation manuals, if any for the equipment.

5. MATERIALS AND EQUIPMENT

All materials and equipment's shall be of the one of the approved make listed in Appendix enclosed with this document and design. Unless otherwise called for only the best quality materials and equipment shall be used. The materials and equipments shall conform to relevant IS as listed under the sub-head 'Regulations and Standards'. The contractor shall be responsible for the safe custody of all materials. The materials shall be insured against theft or damage in handling or storage etc. All changes and substitutions shall be requested in writing and approvals obtained in writing from the Engineer In-charge shall be maintained.

6. TOOLS AND TACKLES

The contractor shall provide and install all necessary hoists, ladders, scaffolding, tools, tackles, plants, transport for labour and materials and plant necessary for the proper execution and completion of the work to the satisfaction of the Engineer In-charge.

7. SAFETY PROCEDURES

The policy is to clearly define responsibilities and then to obtain the commitment of all contractors to maintain a high safety standards compatible with the policy. Safe methods of working shall be the main consideration in all operations. Contractors shall provide the Engineer In-charge with details of their methods statement of work, highlighting the safety aspects and they shall update this information as necessary. It is the responsibility of all persons employed on this project to act responsibly to prevent accidents to themselves and others. The contract shall be governed by the Latest National Safety Rules and Regulations as stipulated from time to time and the contractor shall provide as mentioned herein, wherever required for the safety of working manpower: -

- Providing safe plant, tools, equipment etc. wherever required and working conditions
- Ensure and establish safe working procedures.
- Provide suitable protective equipment, clothing, gloves, ear muffs, goggles, safety belts, Helmets, Aluminium ladders, Steel scaffolding etc.
- Provide adequate job training.
- Provide fire extinguishers and First aid box with adequate medical supplies.
- SOP with emergency contact details etc. for clarity towards action to be taken by various persons, in case of accident / mis-happening.
- Report accidents and dangerous occurrences if any, to the Engineer In-charge with copies of relevant documents.
- Ensure that hazardous materials, if necessary on site, will be stored and used in the safe manner.
- The Contractor shall co-operate with CHIAL/ AAI in creating and maintaining a high standard of safety, health and welfare.
-

8. TESTING

On the completion of the work, the entire installation shall be subject to the following tests in the presence of the Engineer Incharge.:

- Wiring continuity test
- Insulation resistance test
- Earth continuity test
- Earth resistive test
- Any other Tests as per relevant CPWD / IS specifications as required.

9. DEMONSTRATION TO AAI

On completion of the Installation, devices subject to manual operation shall be operated at least in presence of Engineer In-Charge or his representative to demonstrate the satisfactory operation of the complete system.

10. MANUFACTURER'S INSTRUCTION

Where manufacturers have furnished specific instructions relating to the material used in the job and points that are not specifically mentioned in this document, manufacturer's instruction shall be followed.

11. POINT & SUBMAINS WIRING etc

11.1 SCOPE

This section covers the general technical requirements and measurement of the various components in Internal Electrical Installation Works.

11.2 TERMINOLOGY

The definition of terms shall be in accordance with IS 732: 1989 (Indian Standard Code of Practice for Electrical Wiring) and CPWD Specifications of Internal EI – 2013 with up to-date amendments.

11.3 POINT WIRING

11.3.1 Definition:

A point (other than socket outlet point) shall include all works necessary in complete wiring to the following outlets from the controlling switch. The scope of wiring for a point shall, however, includes the wiring work necessary in tapping from another point in the same distribution circuit: -

- a) Ceiling rose or connector (in the case of points for ceiling / exhaust fan points, pre-wired light fittings and call bells)
- b) Ceiling rose (in case of pendants except stiff pendants)
- c) Back plate (in the case of stiff pendants)
- d) Lamp holder (in the case of gooseneck type wall brackets, batten holders and fittings which are not pre-wired.

11.3.2 In the case of call bell points, the words "from the controlling switch or MCB" shall be read as "from the ceiling rose meant for connection to bell push".

11.3.3 SCOPE

i) Following shall be deemed to be included in point wiring -

- a) Conduit, accessories for the conduit and wiring cables between the switch box and point outlet, loop protective earthing of each fan / light fixture i/c loose wire in switch board & points for connection.

- b) All fixing accessories such as clips, nails, screws, Phil plug, rawl plug etc. as required.
- c) Metal switch boxes for control switches, regulators, sockets etc. recessed or surface type and phenolic laminated sheet covers in case of piano type switches and outer & inner cover plates in case of modular type switches.
- d) Outlet boxes, junction boxes, pull-through boxes etc. but excluding metal boxes if any, provided with switchboards for loose wires/ conduit terminations.
- e) Control switch or MCB as specified.
- f) Ceiling rose or connector as required/ flexible conduit for connecting the wires to fitting.
- g) Connections to ceiling rose, connector, lamp holder, switch etc.
- h) Interconnection wiring between points on the same circuit, in the same switch box or from another.
- i) Bushed conduit or porcelain tubing where wiring cables pass through wall i/c repairing cost etc.

(Note: In areas where false ceiling is provided, termination of wires should be at the fittings. Flexible conduits from ceiling junction box to the fittings shall be provided duly coupled at both ends. This shall be included within the scope of point wiring.)

ii) Following shall be deemed to be included in group control (Looped) point wiring:

Wiring for group controlled (looped) light point/fan point/exhaust fan point/ call bell point (without independent switch etc.) will include all work necessary from 1st switch controlled point to subsequent looped points which shall include wires / cable, earth wire/ cable as per SOQ as required.

All fixing accessories such as conduit, clips, nails, screws, Phil plug, rawl plug, loose wire for connection etc. as required.

Junction boxes pull-through boxes etc. Connector as required.

Bushed conduit or porcelain tubing where wiring cables pass through wall i/c repairing cost etc.

11.4 MEASUREMENT

11.4.1 POINT WIRING (OTHER THAN SOCKET OUTLET POINT)

- (i) Unless and otherwise specified, there shall be no linear measurement point wiring for light points, fan points, exhaust fan points and call bell points. These shall be measured on unit basis by counting, as per following: -

11.4.2 POINT WIRING FOR SOCKET OUTLET POINTS

- i) The light plug (6 Amp) point and power (16 Amp) point wiring i/c conduit, loose wire for connection shall be measured on linear basis, from the respective tapping point of live cable, namely, switchbox, another socket outlet point, or the Sub distribution board as the case may be, upto the socket

outlet.

- ii) The metal box with covers, switch/ MCB, socket outlet shall be measured and paid as separate item.

Note: There shall normally be no “on the board” light plug point.

- iii) The power point may be 16/6 Amp 6 pin socket outlet, where so specified in the Tender documents. (2 pin or 5 pin socket outlet shall not be permitted.)

11.4.3 GROUP CONTROL POINT WIRING

- i) In the case of points with more than one point controlled by same switch, such points shall be measured in part i.e. from switch to the first point outlet as one point and subsequent looping points i.e. from first point to another point in the same group will be measured as a subsequent/loop point without independent switch.
- ii) No recovery shall be made for non-provision of more than one switch in such cases.

11.4.4 MCB CONTROL GROUP POINT WIRING

- i) In the case of points with more than one point controlled by one MCB, such points shall be measured in part i.e. from MCB to the first point outlet as one point and subsequent looping points i.e. from first point to another point in the same group will be measured as a subsequent/loop point without independent MCB
- ii) Providing MCB is not covered in this scope and will be measured separately and shall be separately paid for.

11.4.5 TWIN CONTROL LIGHT POINTS WIRING

- i) A light point controlled by two numbers of two way switches shall be measured as two points from the fitting to the switches on either side.
- ii) No recovery shall be made for non-provision of more than one ceiling rose or connector in such cases.

12. CIRCUIT AND SUBMAIN WIRING

12.1 Circuit Wiring

Circuit wiring shall mean the wiring from the distribution board to the first tapping point inside the switchbox, from where point wiring starts.

12.2 Submain Wiring

Submain wiring shall mean the wiring from one Main/Distribution switchboard to another switch board.

12.3 Measurement of circuit and submain wiring

- i) Circuit and submain shall be measured on linear basis along the run of the wiring. The measurement shall include all lengths from end to end of conduit exclusive of interconnections inside the switchboard etc. The increase on account of diversion or slackness shall not be included in the measurement
- ii) The length of circuit wiring with three wires (including protective loop

earthing) shall be measured from the distribution board to the first nearest switch box from which point wiring starts. Looping of switch box will also be counted towards circuit wiring, measured along the length of conduit / channel.

- iii) When wires of different circuit are grouped in as single conduit the same shall be measured on linear basis depending on the actual numbers and sizes of wires run.
- iv) Conduit carrying sub main wiring will not carry circuit / point wiring. Similarly, conduit carrying circuit wiring will not carry submain/point wiring. Conduit carrying point wiring will not carry circuit/submain wiring.

13. OTHER WIRING WORKS

Except as specified above for point wiring, circuit wiring and submain wiring, other types of wiring shall be measured separately on linear basis along with the run of wiring depending on the actual number and sizes of wires run.

14. SYSTEM OF DISTRIBUTION AND WIRING

- (i) Each main distribution board and branch distribution board shall be controlled or provided with miniature circuit breaker (MCB) of specified rating on the phase or live conductor or combined phase and neutral control gear for incoming and outgoing as indicated in the SOQ. The system design and location of boards will be properly worked out.
- (ii) DBs shall be separate for light, UPS and power.
- (iii) Essential / non-essential / UPS distribution each will have a completely independent and separate distribution system starting from the main, switchboard upto final wiring for each system. As for example, conduit carrying non-essential wiring shall not have essential or UPS wiring. Wiring for essential and UPS supply will have their own conduit system. No mixing of wiring is allowed.
- (iv) Generally, no switchboard will have more than one source of incoming supply. Distribution of submain and circuits- As per final approved single line diagram.

14.1 Balancing of Circuits

The balancing of circuits in three wire or poly phase installations shall be done.

14.2 Wiring System

- i) Unless and otherwise specified in the tender documents, wiring shall be done only by the "Looping System". Phase of live conductors shall be looped at the switch boxes and neutral conductors at the point outlets.
- ii) Power wiring shall be kept separate & distinct from light wiring, from the level of circuits, i.e., beyond the branch distribution board. Conduit for light/power wiring shall be separate.
- iii) The wiring throughout the installation shall be such that there is no break in the neutral wire except in the form of linked switchgear.
- iv) All distribution boards should have 20 % (decimal point shall be rounded to next whole digit) of spare outgoing ways / shall be provided suitable capacity spare MCBs.

- v) Ferrules of suitable size indicating circuit & DB numbers are to be provided at both the ends.
- vi) Light, fans and call bells shall be wired in the 'lighting' circuits. 15A / 16A socket outlets and other power outlets shall be wired in the 'power' circuits. 5A / 6A socket outlets shall also be wired in the 'power' circuit both in residential as well as non-residential buildings.
- vii) Colour Coding

Following colour coding shall be followed in wiring:

Phase : Red / Yellow / Blue.(Three phase wiring)
Live :Red (Single phase wiring)

Neutral : Black Earth : Green.

- viii) Termination of Circuit into Switchboard
Circuit will consist of phase / neutral / earth wire. Circuit will terminate in a switch board (first tapping point, where from point wiring starts) in following manner:

Phase wire terminated in phase connector. Neutral wire terminated in neutral connector. Earth wire terminated in earth connector.

The switchboard will have phase, neutral and earth terminal connector blocks to receive phase/ neutral / earth wire.

14.3 Run of Wiring

The type of wiring shall be as specified in SOQ.

Surface wiring shall run, as far as possible, along the walls and ceiling so as to be easily accessible for inspection.

In no case, the open wiring shall be run above the false ceiling Wiring will be done in recessed conduit / surface conduit only.

In all types of wiring, due consideration shall be given for neatness, good appearance and safety.

Generally, conduits for wiring will not be taken in floor slabs. When it is unavoidable special precaution to be taken to provide floor channels with provision for safety and maintenance. Alternatively, false flooring can be provided.

14.4 Passing through walls or floors

When wiring cables are to pass through a wall, these shall be taken through a protection (Steel/ PVC) pipe or porcelain tube of suitable size such that they pass through in a straight line without twist or cross in them. The ends of metallic pipe shall be neatly bushed with porcelain, PVC or other approved material.

Where a wall pipe passes outside a building so as to be exposed to weather, the outer end shall be bell mouthed and turned downwards and properly bushed on the open end.

All floor openings for carrying any wiring shall be suitably sealed after installation.

14.5 Joints in Wiring

- i) No bare conductor in phase and / or neutral or twisted joints in phase, neutral, and/or protective conductors in wiring shall be permitted.

- ii) There shall be no joints in the through runs of cables. If the length of final circuit or submain is more than the length of a standard coil, thus necessitating a through joint, such joints shall be made by means of approved mechanical connectors in suitable junction boxes.
- iii) Termination of multi-stranded conductors shall be done using suitable crimping type thimbles.

15. INTERCHANGEABILITY

Similar parts of all switches, lamp holders, distribution boards, switchgears, ceiling roses, brackets, fans and all other fittings of the same type shall be interchangeable in each installation.

16. WIRING CABLES

- i) Copper conductor cable only will be used for submain/circuit/point wiring.
- ii) Minimum size of wiring:

Point wiring	:	1.5 sq.mm
Circuit Wiring	:	2.5 sq.mm
Power wiring	:	4.0 sq.mm Power circuit rated
more than 1 kW	:	size as per calculation.
- iii) Insulation : Copper conductor cable shall be PVC insulated, FR-LSH type conforming to BIS specification.
- iv) Multistranded cables : allowed to be used.

17. FLEXIBLE CABLES

- i) Conductor of flexible cables shall be of copper. The minimum cross sectional area of conductor for flexible cable shall be as per design
- ii) Only 3 core flexible cables shall be used for connecting single-phase appliances.
- iii) Unless flexible cables are mechanically protected by armour, or tough rubber, or PVC sheath, these shall not be used in workshops and other places where they are liable to mechanical damage.
- iv) Flexible cable connection to bell push from ceiling rose shall be taken through steel conduit / metallic casing and capping.

18. WIRING ACCESSORIES

18.1 (a) Control Switches for Points

18.1.1 Control switch (single pole switch) carrying not more than 16 A shall be modular type. The switch shall be 'ON' when the knob is down.

18.1.2 (a) In type I, II & III quarters, Barracks & school buildings (except principal's & staff rooms) etc. Piano type switches shall be provided (unless specifically asked for by the user department / Architect.)

(b) Modular type switches to be provided for remaining types of buildings

i.e. in all types of remaining non-residential buildings & residential buildings of type IV & above & Transit hostel or as may be decided by the Architect/ user department. (**Note:** Provision is meant for new constructions and in

existing buildings during rewiring if the building work renovation is also in progress in the area. Otherwise existing type of piano switches will be continued.)

18.1.3 It is recommended to provide double pole MCB in proper enclosure as power outlet for window type AC, geysers, etc.

18.1.4 Control switch shall be placed only in the live conductor of the circuit. No single pole switch or fuse shall be inserted in the protective (earth) conductor, or earthed neutral conductor of the circuit.

(b) Switch Box

(i) Switch box shall be hot dip galvanized, factory fabricated, suitable in size for surface/ recess mounting and suitable in size for accommodating the required number of switches and accessories (where required to be used for applications other than modular switches / sockets).

(ii) Switch box also can be of non-metallic material. The technical sanctioning authority will approve specified makes of reputed quality and specifications.

(c) Switch Box Covers (for application other than modular type)

Phenolic laminated sheets of approved shade shall be used for switch box covers. These shall be of 3 mm thick synthetic phenolic resin bonded laminated sheet as base material and conforming to grade P- I of IS 2036: 1974.

Switch box covers (for modular type)

Modular Switches/socket/ wiring devices plates shall be the same product as of switches/sockets/wiring devices. This shall be of best quality molded plastic grid mounting type device plates/frames and shall match with the type of switches/ sockets & boxes.

Note: Specification for switch boxes is covered in the chapters on the various types of wiring.

18.2 Socket Outlets

Combined switch cum socket shall not be permitted.

18.3 Switch box covers

Modular type switches / sockets suitable outer and inner cover plates as specified shall be provided over the standard box as recommended by the manufacturers of modular type switch / sockets and no separate sheet cover is required to be provided.

18.4 Ceiling Rose

18.4.1 A ceiling rose shall not be used on circuit the voltage of which normally exceeds 250 Volts.

18.4.2 Only one flexible cord shall be connected to ceiling rose. Specially designed ceiling roses shall be used for multiple pendants.

18.4.3 A ceiling rose shall not embody fuse terminal as an integral part of it.

18.5 Lamp Holders

18.5.1 The standard constructional feature of manufacturers (ISI approved) of lamp holders is acceptable. Where the lamp holders are part of light fixtures the holders shall be suitable for the type of lamps used.

19. FITTINGS

The type of fittings shall be as specified in SOQ of tender documents.

i) The contractors shall supply the specified model and make of the fittings as per Approved Make List of tender. The standard constructional features of specified make and model as given in the tender document are acceptable.

ii) Where conductors are required to be drawn through tube or channel leading to the fitting, the tube or channel must be free from sharp angles or projection edge, and of such size as will enable them to be wired with the conductors used for the final circuit without removing the braiding or sheathing. As far as possible all such tubes or channels should be of sufficient size to permit looping back.

iii) Fittings shall be installed such that the lamp is at a height specified in approved drawings or as directed by the Engineer-In-Charge.

20. ATTACHMENT OF FITTINGS AND ACCESSORIES

21.1 Conduiting Wiring System

i) All accessories like switches, socket outlets, call bell push and regulators shall be fixed in flush pattern inside the switch boxes. Accessories like ceiling roses, brackets, batten holders; stiff pendants etc. shall be fixed on metal outlet boxes.

ii) Brass screws/Aluminium Alloy screws shall be used to fix the accessories to their bases.

iii) The switch box shall normally be mounted with their bottom 1.25 m from floor level, unless otherwise directed by the Engineer-In-Charge.

21.2 Fixing on Walls and Ceiling

i) PVC sleeves / dash fasteners should normally be used for fixing to walls or ceiling. Wooden plugs are not allowed.

ii) Plugging of walls or ceiling is to be done in a better way for neatness. In all such cases, an approved type of asbestos or fiber fixing plug (rawl or Phil plug) with correct size of tools shall be used and done in a workmanlike manner.

iii) Looping of fittings etc. shall be done using connectors of suitable rating.

21. MARKING OF SWITCH BOARDS

i) Marking of each Main Board

Each main board/sub main board shall be marked indicating rating of each incoming / outgoing switch and the details of load/area it feeds. Detail /size of incoming and outgoing cable shall also be marked indicating from where the incoming cable has originated.

(ii) Marking of Distribution Board

Each Distribution Board shall be marked indicating detail of incoming switch (Size of cable and from where it is fed) and marking of each outgoing MCB indicating the area it feeds. Suitable marking sticker will be suitably fixed to indicate such details.

(iii) Marking of Power / Light DBs

Power/light DBs shall be marked 'P' and 'L' respectively.

(iv) **Marking for Non-essential / Essential / UPS / Switch Boards**

Each switchboard shall be marked essential / non-essential / UPS to indicate the nature of such switchboards.

(v) **Marking of Main Earthing Terminal**

Main earthing terminals in main / sub main switchboard shall be permanently marked, as “Safety Earth – Don’t Remove”. **TESTING OF INSTALLATION**

All the completed installations shall be tested as per specification for “Testing of Installation”.

21.3 Drawings

- I) The work shall be carried out in accordance with the approved drawings and also in accordance with modification thereto from time to time as approved by the Engineer-In- Charge.
- II) All wiring diagrams shall be deemed to be ‘Drawings’ within the meaning of the term as used in the Conditions of Contract. They shall indicate the main switchboard, the distribution boards (with circuit numbers controlled by them), the runs of various mains and submains and the position of all points with their controls.
- III) All circuits shall be indicated and numbered in the wiring diagram and all points shall be given the same number as the, circuit to which they are electrically connected.

22. **COMMISSIONING ON COMPLETION**

Before the workman leaves the work finally, he must make sure that the installation is commissioned, after due testing.

23. **Conformity to IE act, IE rule & standard**

Conformity to IE Act, IE Rule & standard. All Electrical works shall be commitment in Accordance with the provisions of Indian Electricity Act 2003 and Electricity Rules 1956 amended upto date.

24. **NON-METALLIC CONDUIT WIRING SYSTEM**

Scope: This chapter covers the detailed requirements for wiring work in non-metallic conduits. This chapter covers both surface and recessed types of wiring work.

24.1 **Application**

24.1.1 **Recessed conduit**

Recessed conduit work is generally suitable for all applications. Surface conduit work may be adopted in places like workshops etc. and where recessed work may not be possible to be done. The type of work shall be as specified in individual works.

24.1.2 **Flexible non-metallic conduits**

Flexible non-metallic conduits shall be used only at terminations, wherever specified.

24.1.3 **Special Precautions**

- (a) If the pipes are liable to mechanical damages, they should be adequately protected.
- (b) Non-metallic conduit shall not be used for the following applications: -
 - (i) In concealed/inaccessible places of combustible construction where ambient temperature exceeds 60 degrees C.
 - (ii) In places where ambient temperature is less than 5 degrees C.

- (iii) For suspension of fluorescent fittings and other fixtures.
- (iv) In areas exposed to sunlight.

24.2 Materials

24.2.1 Conduits

- (a) All non-metallic conduit pipes and accessories shall be of suitable material complying with IS 9537 (Part 3): 1983 (Reaffirmed 2017) and IS 3419:1988 (Reaffirmed 2017) for rigid conduits and IS 9537 (Part 5):2000 (Reaffirmed 2020) for flexible conduits. The interior of the conduits shall be free from obstructions. The rigid conduit pipes shall be ISI marked.
- (b) The conduits shall be circular in cross-section. The conduits shall be designated by their nominal outside diameter. The dimensional details of rigid non-metallic conduits are given in Table 5.1 below.
- (c) No non-metallic conduit less than 20 mm in diameter shall be used.
- (d) **Wiring Capacity**
The maximum number of PVC insulated aluminium/copper conductor cables of 650/1100 V grade conforming to IS 694: 2018 that can be drawn in one conduit of various sizes is given in Table 4.1 under clause 4.3.1 (c). Conduit sizes shall be selected accordingly.

24.2.2 Conduit Accessories

- (a) The conduit wiring system shall be complete in all respect including accessories.
- (b) Rigid conduit accessories shall be normally of grip type.
- (c) Flexible conduit accessories shall be of threaded type.
- (d) Bends, couplers etc. shall be solid type in recessed type of works, and may be solid or inspection type as required, in surface type of works.
- (e) Saddles for fixing conduits shall be heavy gauge non-metallic type with base.
- (f) The minimum width and the thickness of the ordinary clips or girder clips shall be as per Table 5.2.
- (g) For all sizes of conduit, the size of clamping rod shall be 4.5 mm (7 SWG) diameter.
- (h) All accessories of non-metallic conduit like junction box, bend etc. shall be ISI marked only (IS 3419:1988 (Reaffirmed 2017) for non metallic rigid conduits and BIS 3837:1976, Reaffirmed 2006, Accessories for Rigid non metallic Conduit).

24.2.3 Outlets

- (a) The switch box shall be made of either rigid PVC moulding, or mild steel, or cast iron on all sides except at the front. The regulator boxes shall however be made only of mild steel or cast iron.
- (b) PVC boxes shall comply with the requirements laid down in IS 14772: 2020. These boxes shall be free from burrs, fins and internal roughness.
- (c) The thickness of the walls and base of PVC boxes shall not be less than 2 mm. The clear depth of PVC boxes shall not be less than 60 mm.
- (d) The specifications for metallic boxes shall be as per requirements of clause 4.2.3.
- (e) 3 mm thick phenolic laminated sheet covers for all types of boxes shall be as per requirements of clause 3.14(c).
- (f) The modular switch boxes shall be of required number of modules, made of GI sheet steel/ PVC and compliant to relevant BIS.

24.3 Installation

24.3.1 Common Aspects for Both Recessed and Surface Conduit Works

- (a) The erection of conduits of each circuit shall be completed before the cables are drawn in.
- (b) **Conduit Joints**
 - (i) All joints shall be sealed/cemented with approved cement. Damaged conduit pipes/fittings shall not be used in the work. Cut ends of conduit pipes shall have neither sharp edges nor

any burrs left to avoid damage to the insulation of conductors while pulling them through such pipes.

- (ii) The Engineer-in-charge, with a view to ensuring that the above provision has been carried out, may require that the separate lengths of conduit etc. after they have been prepared shall be submitted for inspection before being fixed.

(c) Bends in Conduit

- (i) All bends in the system may be formed either by bending the pipes by an approved method of heating, or by inserting suitable accessories such as bends, elbows or similar fittings, or by fixing non-metallic inspection boxes, whichever is most suitable. Where necessary, solid type fittings shall be used.
- (ii) Radius of bends in conduit pipes shall not be less than 7.5 cm. No length of conduit shall have more than the equivalent of four quarter bends from outlet to outlet.
- (iii) Care shall be taken while bending the pipes to ensure that the conduit pipe is not injured, and that the internal diameter is not effectively reduced.

(d) Outlets

All switches, plugs, fan regulators etc. shall be fitted in flush pattern. The fan regulators can be mounted on the switch box covers, if so stipulated in the tender specifications, or if so directed by the Engineer-in-charge.

(e) Painting

After installation, all accessible surfaces of metallic accessories shall be painted in compliance with clauses under Chapter 15 "Painting".

24.3.2 Additional Requirements for Surface Conduit Work

- (a) Conduit pipes shall be fixed by heavy gauge non-metallic saddles with base, secured to suitable approved plugs with screws in an approved manner, at an interval of not more than 60 cm, but on either side of couplers or bends or similar fittings, saddles shall be fixed at a closer distance from the centre of such fittings. Slotted PVC saddles may also be used where the PVC pipe can be pushed in through the slots.
- (b) Where the conduit pipes are to be laid along the trusses, steel joists etc. the same shall be secured by means of saddles or girder clips as required by the Engineer-in-charge. Where it is not possible to use these for fixing, suitable clamps with bolts and nuts shall be used.
- (c) If the conduit pipes are liable to mechanical damage, they shall be adequately protected.

24.3.3 Additional Requirements for Recessed Conduit Work

- (a) Making Chase
Requirements under clause 4.3.3 (i) shall be complied with.
- (b) Fixing Conduits in Chase
 - (i) The conduit pipe shall be fixed by means of staples, or by means of non-metallic saddles, placed at not more than 60 cm apart, or shall be fixed by any other approved means of fixing.
 - (ii) At either side of the bends, saddles/staples shall be fixed at a distance of 15 cm from the centre of the bends.
- (c) Erection in RCC Work
Requirements under clause 4.3.3 (iii) shall be complied with.
- (d) Fixing Inspection Boxes
Requirements under clause 4.3.3 (iv) shall be complied with.
- (e) Fixing Switch Boxes and Accessories
Requirements under clause 4.3.3 (v) shall be complied with.
- (f) Fish Wire

- Requirements under clause 4.3.3 (vi) shall be complied with.
- (g) **Bunching of Cables**
For ease of maintenance, cables carrying direct current or alternating current shall always be bunched so that the outgoing and return cables are drawn in the same conduits.

24.3.4 **Earthing Requirements**

A protective (earth) conductor shall be drawn inside the conduit in all distribution circuits to provide for earthing of non-current carrying metallic parts of the installation. These shall be terminated on the earth terminal in the switch boxes, and/or earth terminal blocks at the DBs.

Gas or water pipe shall not be used as protective conductors (earth medium).

25. **L.T CABLES**

25.1 General

L.T. Cables shall be supplied, laid, tested and commissioned in accordance with drawings, specifications, relevant Indian Standards specifications and cable manufacturer's instructions. The cable shall be delivered at site in original drums with manufacturer's name clearly written on the drums. The recommendations of the cable manufacturer with regard to jointing and sealing shall be strictly followed.

25.2 Materials

All L.T. Power cables shall be XLPE insulated PVC sheathed type stranded aluminum / copper conductor armoured cable whereas control cable shall be armoured / unarmoured conforming to IS: 7098: 1988 (Part-I) with upto date amendments as specified in SOQ. **The outer sheath shall be FRLS.**

25.3 Inspection

All cables shall be inspected at site and checked for any damage during transit. The FAT for LT cable is waived off because of less quantity requirement at site.

25.4 Joints in Cables

The Contractor shall take care to see that the cables received at site are apportioned to various locations in such a manner as to ensure maximum utilization and avoiding of cable joints. This apportioning shall be got approved from Engineer-In-Charge before the cables are cut to lengths.

25.5 Laying of cables

Cables shall be laid directly in ground, pipes, masonry ducts, on cable tray, surface of wall / ceiling etc. as indicated on drawings and/or as per the direction of Engineer-In-Charge. Cable laying shall be carried out as per CPWD specifications.

25.5.1 Cables Laying in Ground

Cables shall be laid by skilled experienced workmen using adequate rollers. The cable drums shall be placed on jacks before unwinding the cable. With great care, it shall be unrolled on over wooden rollers placed in trenches at intervals not exceeding 2 meters.

Cables shall be laid at depth of 750 mm below ground level upto 1.1 KV grade and 1200 mm above 1.1 KV grade. A sand cushion of 80mm & 170 mm shall be provided below & above the cable respectively, joint boxes and other accessories. Cables shall not be laid in the same trench or alongside a water main. Width of the trench shall be 350 mm (minimum) for laying single cable.

For laying of additional cable in the same trench in one tier horizontal formation, the width of the cable trench shall be increased 200 mm for each additional cable and a uniform spacing of 200 mm (center to center) of adjacent cables shall be maintained. Both the cables shall be provided a sand cushion of 80 mm & 170 mm. The protective bricks shall be laid in such a way, a projection of 50 mm over the cables on both sides shall be provided.

The relative position of the cables, laid in the same trench shall be preserved. At all changes in direction in horizontal and vertical planes, the cables shall be bent smooth with a radius of bent not less than 12 times the diameter of cables. Minimum 3-meter-long loop shall be provided at both end of cable.

Distinguishing marks may be made on the cable ends for identifications of phases. Insulation tapes of appropriate voltage and in red, yellow and blue colours shall be wrapped just below the sockets for phase identifications.

25.5.2 Protection of Cables

The cables shall be protected by bricks laid on the top layer of the sand for the full length of underground cable. Where more than one cables is laid in the same trench, the bricks shall cover all the cables and shall project a minimum of approximately 50mm on either side of the cables. Cable under road crossings and any other places subject to heavy traffic shall be protected by running them through Hume / RCC / HDPE Pipes of suitable size.

25.5.3 Excavation & Back Fill

All excavation and back fill required for the installation of the cables shall be carried out by the contractor in accordance with the drawings and requirements laid down elsewhere. Trenches shall be dug true to line and grades. Back fill for trenches shall be filled in layer not exceeding 150 mm. Each layer shall be properly rammed and consolidated before laying the next layer.

The Contractor shall restore all surface, roadways, sidewalks, kerbs wall or the works cut by excavation to their original condition to the satisfaction of the Engineer-In-Charge.

25.5.4 Laying of cables on cable Tray / Surface of Wall / Ceiling

Cable shall be laid on perforated M.S. Cable tray. Cables shall be properly dressed before cable ties / clamps are fixed. Wherever cable tray is not proposed, cables shall be fixed on surface of wall or ceiling slab by suitable MS clamps / saddles. Care shall be taken to avoid crossing of cable.

25.5.5 Cables on Hangers or Racks

The Contractor shall provide and install all iron hangers' racks or racks with die cast cleats with all fixings, rag bolts or girder clamps or other specialist fixing as required.

Where hangers or racks are to be fixed to wall sides, ceiling and other concrete structures, the Contractor shall be responsible for cutting away, fixing and grouting in rag bolts and making good.

The hangers or racks shall be designed to leave at least 25mm clearance between the cables and the face to which it is fixed. Multiple hangers shall have two or more fixing holes. These shall be designed to keep provision of some spare capacity for future development.

26. CABLES TAGS

Cable tags shall be made out of 2mm thick aluminum sheets of suitable size & tagged with GI wire before entry in to the panel(s) / crossing / manholes. The cable tag shall indicate destination & origin point of cable along with its size.

27. TESTING OF CABLES

Prior to installation, burying of cables, following tests shall be carried out. Insulation test between phases, phase & neutral, phase & earth for each length of cable.

- a. Before laying.
- b. After laying.
- c. After jointing.

On completion of cable laying work, the following tests shall be conducted in the presence of the Engineer-In-Charge.

- a. Insulation Resistance Test (Sectional and overall).
- b. Continuity Resistance Test.
- c. Earth Test.

All tests shall be carried out in accordance with relevant Indian Standard code of practice and Indian Electricity Rules. The Contractor shall provide necessary instruments, equipments and labour for conducting the above tests & shall bear all expenses of conducting such tests.

28. EARTHING

28.1 Scope

This section covers the essential requirements of earthing system components and their installation. For details not covered in these specifications, IS Code of Practice on earthing (IS: 3043-1987) CPWD General Specifications for Electrical works (Part-I-Internal) as amended upto date and in the regulations of the local Electrical Supply Authority shall be referred to.

28.1.1 Application

- i) The electrical distribution system is with earthed neutral (i.e. neutral earthed at the transformer / generator end). In addition to the neutral earthing, provision is made for earthing the metallic body of equipments and non-current carrying metallic components in the substation, as well as in the internal / external electrical installations.
- ii) Earthing requirements are laid down in Indian Electricity Rules, 1956 and Indian Standard Specification IS: 3043:1987 with latest amendment as

amended from time to time, and in the Regulations of the Electricity Supply Authority concerned. These shall be complied with.

28.2 Materials

The material of earth and earth conductor shall be as specified in SOQ.

28.2.1 Earth Electrodes

The earth electrode shall be Plate / Pipe earth electrode as specified in SOQ and the materials and size of earth electrodes shall be as specified

28.2.2 Earthing Conductor

- a) The earthing conductor (protective conductor from earth electrode upto the main earthing terminal/ earth bus, as the case may be) shall be of the same material as the electrode, viz. GI or copper and in the form of wire or strip as specified. The size of earthing conductor shall be as specified.
- b) Each equipment shall be connected with two independent earth conductors to earth bar located in respective area. Each earth bar shall be connected to Earth Grid by two independent earth conductors. Earthing Grid shall be directly connected by two independent earth electrodes. Earthing shall be of GI or Copper.

28.3 Hardware Items

All hardware items used for connecting the earthing conductor with the electrode shall be of GI in the case of GI pipe and GI plate earth electrode and forged tinned brass in case of copper plate electrodes.

28.3.1 Protective (Earth Continuity / Loop Earthing) Conductor

- i) The material and size of protective conductors shall be as specified.
- ii) Unless otherwise specified, GI conductor should not be ordinarily used as protective conductor within any circuit beyond a Distribution Board downstream.

28.3.2 Location for Earth Electrodes

Normally earth electrodes shall not be located closer than 1.5 m from any building. Care shall be taken to see that the excavation for earth electrode does not affect the foundation of the building; in such cases electrodes may be located further away from the building, with the prior approval of the Engineering-In-Charge.

The location of the earth electrode shall be such that the soil has a reasonable chance of remaining moist as far as possible. Entrances, pavements and roadways, shall be avoided for locating earth electrodes.

When more than one electrode (plate / pipe) are to be installed, a separation of not less than 2m shall be maintained between adjacent electrodes.

28.4 Installation

28.4.1 Electrodes

a) Pipe Electrode

Earthing electrode shall consist of a medium class GI Pipe of approved make not less than 40 mm dia and 4.5 meters long. GI Pipe electrode shall

be cut tapered at the bottom and provided with holes of 12mm dia drilled at not less than 75 mm interval upto 2 meters length from bottom. The electrode shall be buried vertically in the ground as far as practicable below permanent moisture level with its top at not less than 20 cm below ground level. The electrode shall be in one piece and no joints shall be allowed in the electrode. Wherever possible earth electrodes shall be located as near water tap, water drain or a down take pipe. Earth electrodes shall not be located in proximity to a metal fence. It shall be kept clear of the building foundations and in no case shall be nearer than 2 meters from the outer face of the wall.

The pipe earth electrode shall be kept vertically and surrounded with 150 mm thick layer of charcoal dust and salt mixture upto a height of 2.0 meters from the bottom. At the top of the electrode a funnel with a mesh shall be provided for watering the earth. The main earth conductors shall be connected to the electrode just below the funnel, with proper terminal lugs and check nuts.

In locations where the full length of pipe electrode is not possible to be installed due to meeting a water table, hard soil or rock, the electrode may be reduced length, provided the required earth resistance result is achieved with or without additional electrodes, or any alternative method of earthing may be adopted, with the prior approval of the Engineer-In- Charge. Pipe electrodes may also be installed in horizontal formation in such exceptional cases.

b) Plate Earth Electrode

Earthing shall be provided with GI / copper plate electrode as mentioned in SOQ of following.

- GI Plate Electrode. : 600 mm x 600 mm x 6 mm thick
- Copper Plate Electrode. : 600 mm x 600 mm x 3 mm thick

The electrode shall be buried in ground with its faces vertical and not less than Three (3) meters below ground level. 20 mm dia medium class GI pipe shall be provided and attached to the electrode. Earth electrode shall not effect the column footing or foundation of the building. In such cases electrode shall be further away from the building.

c) Watering Arrangement

- i) In the case of plate earth electrodes, a watering pipe of 20 mm dia. medium class GI pipe shall be provided and attached to the electrodes as shown in the drawing and a funnel with mesh shall be provided on the top of this pipe for watering the earth.
- ii) In the case of pipe electrodes, a 40 mm x 20 mm reducer shall be used for fixing the funnel with mesh.
- iii) The watering funnel attachment shall be housed in a masonry enclosure of size not less than 300 mm x 300 mm x 350 mm deep.

MS frame with 6 mm thick MS cover and having ALLEN Key locking arrangement shall be suitably embedded in the masonry enclosure. The top enclosure shall be provided of 50 mm thick PCC.

- d) The details of Plate / Pipe earth electrode, a detailed drawing as referred in CPWD specification of Internal EI shall be referred.

28.4.2 Earth Conductor

In the case of plate earth electrodes, the earthing conductor shall be securely terminated on to the plate with two bolts, nuts, check nuts and washers.

In the case of pipe earth electrodes, wire type earthing conductor shall be secured by using a through bolts, nuts and washers and terminating socket.

The earthing conductor from the electrode upto the building shall be protected from mechanical injury by a medium class, 15 mm dia GI pipe in the case of wire, and by a minimum of 40 mm dia, medium class GI pipe in the case of strip. The protection pipe in ground shall be buried at least 30 cm deep (to be increased to 60 cm in case of road crossing and pavements). The portion within the building shall be fixed on walls.

The earthing conductor shall be securely connected at the other end to the earth stud/ earth bar provided on the switch board by Soldered or preferably crimped lug, bolt, nut and washer in the case of wire, and, Bolt nut and washer in case of strip conductor.

28.4.3 Earth Bus and Main Earthing Terminal

In all installations, main earthing terminal shall be provided at the main switchboard. This may be in the form of earth stud or single earth bar depending on the type of the switchboard. Following conductors shall be terminated on to the main earthing terminal.

- a) Earth connection from electric supply company (where provided)
- b) Earthing conductor from electrode.
- c) Protective conductors
- d) Equi-potential bonding conductors.

28.4.4 Protective (Loop Earthing / Earth Continuity) Conductor

Earth terminal of every switchboard in the distribution system shall be bonded to the earth bar/ terminal of the upstream switchboard by protective conductors.

Two protective conductors shall be provided for a switchboard carrying 3 phase switchgear thereon.

28.4.5 Earth Resistance

The earth resistance at each electrode shall be measured. No earth electrode shall have a greater ohmic resistance than 5 ohms as measured by an approved earth testing apparatus. In rocky soil the resistance may be upto 8 ohms.

Where the above stated earth resistance is not achieved, necessary improvement shall be made by additional provisions, such as additional electrode (s), different type of electrode, or artificial chemical treatment of soil etc., as may be directed by the Engineer-In-Charge.

28.4.6 Marking

- i) Earth bars / terminals at all switch board shall be marked permanently, as 'E'.
- ii) Main earthing terminal shall be marked 'SAFETY EARTH- DO NOT DISCONNECT'.

28.4.7 Measurement of Earth Electrode Resistance

- a) Two auxiliary earth electrodes, besides the test electrode, are placed at suitable distance from the test electrode. A measured current is passed between the electrode 'A' to be tested and an auxiliary current electrode 'C' and the potential difference between the electrode 'A' and auxiliary potential 'B' is measured. The resistance of the test electrode 'a' is then given by

$$R = V / I$$

Where,

R- Resistance of the test electrode in ohms
V- Reading of the voltmeter in volts

I-Reading of the ammeter in amps

- b) Stray currents flowing in the soil shall produce serious errors in the measurement of earth resistance. To eliminate this, hand driven generator is used.

If the frequency of the supply of hand driven generator coincides with the frequency of stray current, there shall be wandering of instrument pointer. An increase or decrease of generator speed shall cause this to disappear.

- c) At the time of test, the test electrode shall be separated from the earthing system.
- d) The auxiliary electrodes shall be of 13 mm diameter mild steel rod driven up to 1 m into the ground.
- e) All the three electrodes shall be so placed that they are independent of the resistance area of each other. If the test electrode is in the form of a rod, pipe or plate, the auxiliary current electrode C shall be placed at least 30m away from it and the auxiliary potential electrode 'B' shall be placed mid-way between them.
- f) Unless three consecutive readings of test electrode resistance agree, the test shall be repeated by increasing the distance between electrodes A and C up to 50m, and each time placing the electrode B mid-way between them.

29. PARTICULAR SPECIFICATION FOR L.T. OUTDOOR PANELS

29.1 Scope

The Scope of this section comprises Design, Fabrication, Supply, Installation, Testing and Commissioning of Low Tension electrical panel.

29.2 General

- Electrical Panel shall be provided and installed as specified. Switch gear rating, make and quantities are as specified in Schedule of Work.
- The electrical panels shall be fully compartmentalized with separate cable alleys, totally enclosed, metal clad, flush front and back, cubicle pattern suitable for front as well as back access. The electrical panels shall generally conform to IS: 8623.
- Drawing indicating the general arrangement of components & control wiring of LT panels shall be got approved from Engineer in charge before commencement of fabrication.

29.3 Construction

- Electrical Panels shall be of dust and vermin proof construction with classification of IP 54 (Minimum), suitable for indoor/Outdoor installation as specified in Schedule of Work.
- All doors and covers shall have neoprene gaskets. Adequate protection shall be provided so that ingress of dust and moisture encountered in indoor installation shall not in any amount be sufficient to interfere with the satisfactory operation of enclosed equipment.
- Electrical panels shall be free standing type or wall mounted type as specified with basic structure being fabricated as mentioned in Schedule of Work.
- All partitions shall be of 1.6mm thick sheet steel. Door knob should be provided. The panel should be provided with drawing pocket and lifting hooks etc.
- The switch gear shall comprise a continuous line up of single/multi tier cubicles. The installation of air circuit breaker shall be limited to the bottom two tiers only. The design shall be of fully compartmentalized execution with metal partitions. Each switch gear or breaker shall be housed in an individual front access door.
- The enclosure of electrical panels shall be rigid and strong. Electrical panels shall have a bus bar chamber and required number of feeder compartments in vertical section. The height of operating handle of the panel board shall be as per IS/CPWD specification. All the cables entry to be bottom.
- Suitable screw and rawl device shall be provided on each compartment door for locking the doors in position on the side of each vertical feeder / control compartment section. The compartment door shall be interlocked mechanically with the switch such that the door cannot be opened unless the switch is in OFF position. All vertical cable alleys shall be provided with separate doors. Cable Alley doors shall be hinged type. Suitable cable clamping arrangement with slotted angle shall be provided in the cable alleys.
- Removable cable gland plates shall be provided with suitable gasket. The plate thickness shall be a minimum of 3mm.

29.4 Bus Bar

All bus bars shall be suitable for 415 volts, 3 phase, 4 wire, 50 Hz, AC supply. Main horizontal and auxiliary vertical bus bars shall be made of high conductivity aluminium or as specified in BOQ. The bus bars shall be of sufficient cross section so that the current density of 130 amp/Sq. cm is not exceeded at nominal current rating for aluminium bus bars. The cross sectional area of neutral bus bar shall be the same as that of phase conductor up to 200 amps capacity and for the capacity beyond 200 amps the neutral bus bars shall not be less than 50% of the phase bus bars. However cross section must not be less than as given in table I.

Table-I

Current Ratings in amps. upto	Recommended rectangular cross-section			
	Aluminum		copper	
	No. of Strips/phase	Size inmm	No. of Strips/phase	Size in mm
100	1	20 X 5	1	20 X 3
200	1	30 X 5	1	25 X 5
300	1	50 X 5	1	40 X 5
400	1	50 X 6	1	50 X 5
500	1	75 X 6	1	60 X 5
600	1	80 X 6	-	-
800	1	100 X 6	-	-
1000	1	100 X 10	-	-
1200	1	125 X 10	--	-
1600	2	100 X 10	-	-
2000	2	125 X 10	-	-
2500	3	125 X 10	-	-

- Bus bars shall be supported from top as well as bottom at regular interval. Bus bars shall be supported with suitable insulating materials such as SMC/DMC. The insulating supports shall be of single piece.
- All the bus bars shall be adequately sleeved with heat shrinkable sleeves and shrouded and insulated from unit compartments and wire ways. Special care shall be taken in the design of bus bars with regard to safety aspects including provision of bus bar guards to prevent accidental contact.
- All buses and connections shall be supported and braced to withstand the stresses due to maximum short circuit current and also to take care of any internal expansion.
- Bus bars shall be colour coded for easy identification and so located that the sequence R-Y-B shall be from left to right, top to bottom or front to rear when viewed from the front of switch gear assembly.
- The minimum clearance to be maintained for bus bar should be as per CPWD Specs.

29.5 LT PANEL COMPONENTS: Unless otherwise specified, the specifications for LT Panel components shall be as follows. Bill of quantities/ Schedule of quantities may be referred.

- MOULDED CASE CIRCUIT BREAKER (MCCB)
- The type of release and number of poles of MCCBs shall be as specified in schedule of quantity (SOQ).
- The normal current rating and short circuit braking capacity of MCCBs shall be as specified in BOQ / SOQ. The MCCBs shall have $I_{cs} = I_{cu}$ for Short circuit breaking capacity specified.
- MCCB shall have spreader links, if required to maintain minimum clearance between bus bars. Fixing of internal accessories should be site fittable and user friendly.
- All MCCBs should be fitted with the Rotary operating mechanism (ROM). The ROM shall be of robust design. MCCB mounted with a minimum number of linkages to ensure maximum reliability. All rotary mechanism should be with door interlock (with defeat feature) & padlock facility.
- All protection releases for MCCBs should be shrouded to avoid unauthorized tampering. MCCB should be suitable for both Copper and Aluminium termination.
- The circuit breaker shall be provided with spring assisted quick-make, quick-break type manually operated trip free mechanism, mechanical ON/OFF/TRIP position indicators.
- MCCBs shall be capable of withstanding the thermal stresses caused by overloads and locked rotor currents of values associated with protective relay settings of the motor starting equipment and the mechanical stress caused by the peak short circuit current of value associated with the switchgear rating.
- The standard construction features of manufacturer are acceptable subject to functional protective and control feature.
- All MCCBs shall be current limiting type with features of load line reversibility and suitable for Horizontal/ Vertical mounting without any derating.

29.6 Inter connections

- Inter connection between bus bars and outgoing MCCB/Switches shall be as below:
 - a) For MCCB/Switches of capacity less than 100 Amps—PVC insulated cables/wires of suitable size with suitable socket/thimbles etc.
 - b) For MCCB/Switches of capacity 100A and above—Solid aluminium/copper strips of suitable size insulated with PVC sleeve of heat shrinkable type.
- All connections shall be made in such way that there is a clear metal-to-metal contact at the tapping so that current density of the bus bars at the point of contact does not exceed the permissible limit.

29.7 Earthing Arrangement: GI strip 25mmx5mm shall be run at the rear of the panel. 2 nos. earth terminals shall be provided at the ends of the GI strip for connection to earth system.

- 29.8 Unit Compartments: Unit compartments shall be of adequate dimension to house the switchgear and other feeder equipment and for easy maintenance. Each feeder compartment shall have a hinged door. The door shall have rubber gasket.
- 29.9 Feeder / Control Equipment: Control gear feeder and other control equipment shall be provided as per the Single Line Diagrams and schedule of quantities. All the components shall meet the relevant IS specification with up to date amendments.
- 29.10 Wiring: All control and auxiliary wiring shall be provided with copper conductor, PVC insulated wires. Wiring shall be properly colour coated, tag numbered (ferruled) and laid out neatly in bunches and firmly fastened to the sides in the trolley. The terminations for conductors shall be done by crimping lugs on to the conductor ends.
- The wiring shall be colour coded using red, yellow, blue and black for 3 phases and neutral respectively. The lugs shall be fastened to the equipment using suitable washers and screws.
- The size of conductor size shall be 2.5 Sq.mm.
- All the wiring shall be neatly bunched and fastened to the sides of the trolley.
- 29.11 Sheet Metal Surface Treatment: Sheet metal frame work, components and accessories of Electrical Panels shall be given a rigorous sheet metal treatment with a seven tank chemical process. The sheet metal should then be painted with grey enamel paint or powder coated as specified.
- Electrical panels shall be fabricated by an agency having seven-tank sheet treatment facility.
- 29.12 Type Test: The fabricating agency should have CPRI approval for similar panels for short circuit capacity not less than the highest KA fault level rating of switchgear connected. The agency shall have CPRI test certificate for similar panel for the requirement of IP protection.
- 29.13 Panel Accessories: Each incomer shall have 3 nos. indicating lamps with Protection MCBs. ammeters of suitable range with selector switch and suitable CT, voltmeter of suitable range with selector switch as mentioned in the Schedule of work. Current transformers shall be cast resin type. All secondary connection shall be brought to terminal blocks where wye or delta connection shall be made. Current transformer shall have an accuracy class of C1 5P20 for relays and class 1.0 ISF <5 for metering. The Voltmeters and Ammeters shall be of digital type flush mounting and accuracy class of 1.5 of IS 1248. The indicating lamps shall be of LED type. Suitable rating of MCBs shall be provided for protection of voltmeters & Phase indicating lamps. Selector switches of suitable size & rating shall be provided for Voltmeters and Ammeters. Terminal blocks shall be 660 V grade box-clamp type-marking strips, similar to Elmex 10 Sqmm. Not more than two wires shall be connected to any terminal.
- 29.14 Name Plate: Electrical panels as well as their individual compartments shall be provided with plastic black anodized nameplates with white letter on black background. The nameplate shall be held with self-tapping screws.
- 29.15 Danger Plate : Standard danger notice plate indicating the voltage grade shall be provided on each of the Electrical Panels.

29.16 Test / Certificate : The panels shall be tested after fabrication, assembling and wiring.

Wiring test shall be carried with 1000-volt megger to ensure adequate insulation resistance.
(At manufacturer's works)

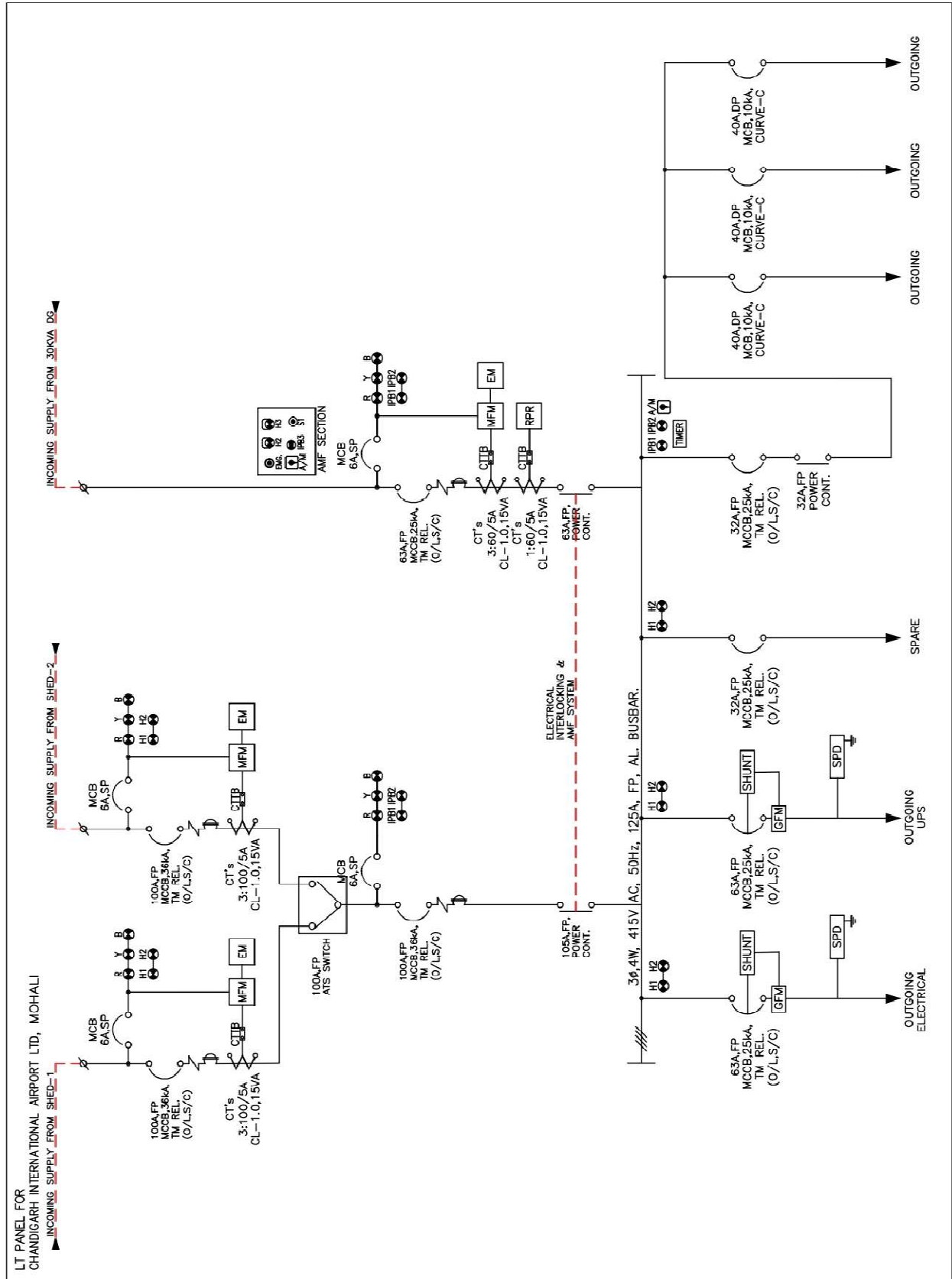
H.T. test shall be carried out as per IS at manufacturer's works. Functional tests of all components.

Dimensional checks & Visual examination.

29.17 Installation, testing and commissioning: The feeder pillar shall be provided M S angle base of suitable size frame angle stand (legs of stand 500 mm above ground and 300mm below grouted with cement concrete mortar of (1:2:4) concrete mixture.

29.18 The required cables shall be brought and terminated at the electrical panels using cable glands, cable bracket, lugs and sockets as per Schedule of Work. All the cables shall be properly arranged and dressed up in the cable alley. The various power and control cables shall be clamped firmly. The tightness of all main and auxiliary bus bar connections shall be checked. All wiring terminations and bus bar joints shall be tightened wherever necessary before energizing the electrical panels. The commissioning checks shall include functional checks of all components installed in the panel including interlocks if provided, insulation check with 500V megger (not less than 100 mega ohms) etc shall be carried out before the panel board is energized.

SLD OF OUTDOOR LT PANEL



30. Technical Specification

Supply, Installation, Testing and Commissioning (SITC) of 50 kVA, 3-Phase, Air-Cooled Servo Controlled Automatic Voltage Stabilizer

1. Scope of Work

The work shall consist of the **Supply, Installation, Testing and Commissioning (SITC)** of a **50 KVA, 3-phase, air-cooled, servo-controlled automatic voltage stabilizer** suitable for outdoor installation. The stabilizer shall be complete with all accessories, control and protection devices, interconnections, earthing, testing, commissioning, and satisfactory operation as required at site.

1	Applicable Standards	IS 9815
2	Technical Particulars	Rating : 50 KVA Cooling: Natural Air Cooled Mounting: Floor Mounted Input voltage Range : 280-450 V Output Voltage: 415 V $\pm$ 1%
3	Transformer	Buck & Boost Transformer (Copper wound)
4	Protection Features	Suitable rating TP MCCB at input Manual bypass switch High voltage cut-off Low voltage cut-off Overload protection Short circuit protection Surge suppression Servo motor overload protection Over-temperature protection Transformer thermal protection Neutral failure protection
5	Accessories	Multifunction Meter 3 Phase Indication Lamp for input and output Mains/Low / High indicators with buzzer Earthing terminals

31. Technical Specifications:-

SPLIT INVERTER TYPE AC UNITS:

- Supply, Installation Testing & commissioning of the 1.5TR Inverter type Split AC units having one indoor unit and one outdoor unit comprising of INVERTER rotary compressor (Variable Speed) functioning with environment friendly refrigerant like R32 or equivalent. The refrigerant used should be ozone non-depleting.
- The unit should have full function battery operated cordless remote control.
- The indoor units shall be mounted at a suitable height on frangible structures as required at site. The outdoor unit shall be mounted with stand on ground as per site condition or as directed by Engineer-In-Charge.
- The unit shall be supplied up to 03 meter length of copper refrigerant piping with insulation, PVC drain piping and up to 3.5 meter copper power cable etc. The power cable should be 3Cx4Sq mm. PVC sheathed, out of which one core should invariably be used for loop earthing.
- The drain PVC pipe should be as per Schedule with suitable length. The refrigerant pipe should be well insulated to avoid condensation. The unit shall be suitable to operate on 230V +/- 10%, 50Hz AC Supply for 1.5/2.0 TR units.
- The Unit shall be of Min BEE-5-star rating.
- Only copper material in condenser Coil units and cooling coil unit will be accepted.
- All finishing works like filling of frangible wall with suitable material, painting or any other Civil work from inside or outside of building as per site condition or as directed by Engineer-In-Charge shall be completed in all respects. This include Provision of ply board, or a suitable sheet or structure, for the installation of IDUs on frangible structures as required at site.
- The Makes of AC unit with associated accessories shall be according to the list of approved makes as attached.
- All drain pipes shall be routed to the nearest drain point as per site requirement.

Terms & Warranty for AC units:

1. WARRANTY: 1 year for the AC Unit, 5 years for indoor & outdoor PCB board & 05 years for compressor from date of completion of work
2. Type test required for AC As per IS 1391 (Part 2).
3. Standard Installation is required as per the BOQ.

STABILIZER FOR SPLIT AIR CONDITIONERS:

The detailed specification of Stabilizer for single Phase 1.5 Ton Split type Air conditioner wall mounting types are as following:

- Input Voltage: 150V to 285 V, 50HZ, AC Supply Working Voltage Range: 175V to 255V.
- Capacity: ≥ 15 Amps, 5KVA
- Type: Wall mounted and Metal Body

Protection of Stabilizer:

- i) Low and High Voltage Cut-off Protection
- ii) Built in Thermal Overload
- iii) Intelligent Time Delay System

Installation: This includes all accessories for installation of Stabilizer on frangible structures including up to 01 meter suitable length PVC 03 core cable as required at site.

Warranty for Stabilizer: 1 year warranty is required

SMART AC TIMER SWITCH:

The scope includes the supply, installation, testing, and commissioning of a Microcontroller/ Microprocessor-based Smart Cyclic Timer Switch. This unit is specifically configured for installation on frangible structures , including all necessary mounting accessories and specialized cabling.

- **Type:** Programmable Digital Cyclic Timer with Sequential Switching.
- **Enclosure:** Industrial-grade, flame-retardant (FR) housing.
- **Input Voltage:** 230V Single Phase, 50 Hz.
- **Contacts :** Shall be of copper materials only.
- **Load Capacity:** Sufficient to handle inductive compressor loads of two AC as per BOQ.
- **Programming Intervals:** User-selectable cycles for 4, 6, or 8-hour intervals (up to 24-hour programmability).
- **Power Recovery:** Auto-restart feature with memory retention of the current cycle position after a power outage.

Installation: The timer unit and associated switchgear must be mounted on frangible structures. This Includes Provision of up to 01 meter of 3-core PVC insulated and sheathed copper cable as per site requirement. The cable size must be a minimum of 2.5 sq. mm to ensure thermal stability under continuous AC load.

Warranty for Timer switch: 1 year warranty is required.

Outdoor unit shall be installed on MS stand as per site requirement on ground.

LIST OF PREFERRED MAKES FOR ELECTRICAL ITEMS

Note: The following list of preferred makes is exhaustive. However, additional manufacturers or brands may be considered for any specified product or item, depending on market availability, delivery timelines and proven satisfactory performance in similar projects or works—preferably where such a make or product has been used in quantities constituting at least eighty percent (80%) of the estimated or proposed requirement for the relevant project or work. To establish performance, completion certificates, performance certificates and purchase orders accompanied by tax invoices will be considered, provided that the products comply with the technical specifications stipulated in the tender document.

ITEM CODE	ITEMS	PREFERRED MAKES (W.E.F. 10.07.2025)	CATEGORY FOR TEST CERTIFICATION/ INSPECTION
A. PANEL, SWITCHGEARS AND RELATED ITEMS			
1	LT PANELS (TTA)	MAK / SHIV SHAKTI ENGINEERS / TECHNOCRAFTS / TENCO / KONTACT / ABB / RISHA / MARINE ELECTRICALS / POWERTECH SWITCHGEARS / ULTIMA / RITTAL / URJAYANT / EXCEL CONTROL SYSTEMS / BALAJI ELECTRO CONTROLS PVT LTD / KRUTI / CMKL(CORE METAL) / KEPL(KHOKHAR) / LEGRAND (NOVATEUR) / CONQUERENT / MITSUBISHI / LS POWER / ZENIYA / NEPTUNE / LAURITZ KNUDSEN / C&S / BCH / ADVANCE / TRICOLITE / SCHNEIDER / SUDHIR / EAP / TRISQUARE / MILESTONE / ADLEC / UNILEC / CONSOUL (RR ISPAT) / PEATON/ HAROLD/ SPC ELECTROTECH / SIEMENS	CATEGORY-1
2	LT PANELS / FEEDER PILLAR (PTTA) / BUS TRUNKING	EXPERT ENGINEERS / MAK / APPLICATION CONTROL PANEL / AMBIT / ADLEC / SHIV SHAKTI ENGINEERS / TECHNOCRAFTS / EXCEL CONTROL SYSTEMS / GLOBAL / SUPERTECH CONTROL SYSTEMS / SWITCHGEARS & FABRICATORS / KONTACT / MARINE ELECTRICALS / R.P. CONTROLS / GOURAV EnerGen / TENCO / POWERTECH SWITCHGEARS / HAROLD / BALAJI ELECTRO CONTROLS PVT LTD / URJAYANT / KRUTI / ASES / ITE-GURGAON (INDIAN TRANSFORMERS) / LEGRAND (NOVATEUR) / CONQUERENT / CORONET / RST ELECTRICALS PVT LTD / HPL / C&S / LS POWER / ZENIYA / PRECISION / ABB / EAP / TRICOLITE / SUDHIR / SCHNEIDER / LAURITZ KNUDSEN / NEPTUNE / HENSEL / ADVANCE / KEPL(KHOKHAR) / PEATON / RISHA / TRISQUARE / CMKL (CORE METAL) / SPC ELECTROTECH / BCH / MILESTONE / YOGIJI DIGI (P) LTD / ELINS / EVA / UNILEC / HAROLD / ENGINEERS & ENGINEERS / SIEMENS / ULTIMA / NITYA	CATEGORY-1
3	AIR CIRCUIT BREAKERS	LS ELECTRIC / BCH / MITSUBISHI / HPL / LAURITZ KNUDSEN / LEGRAND (NOVATEUR) / ABB / C&S / HAVELLS / SCHNEIDER / SIEMENS	CATEGORY-2
4	MOULDED CASE CIRCUIT BREAKERS (MCCB)	LS ELECTRIC / BCH / MITSUBISHI / LAURITZ KNUDSEN / LEGRAND (NOVATEUR) / ABB / C&S / HAVELLS / INDO ASIAN (NOVATEUR) / HPL / SCHNEIDER / SIEMENS	CATEGORY-2
5	CHANGE OVER SWITCH/ FUSE DISCONNECTOR SWITCH/ SWITCH FUSE UNITS	BENTEC / BCH / INDO ASIAN (NOVATEUR) / SOCOMEC / LAURITZ KNUDSEN / C&S / LEGRAND (NOVATEUR) / HPL / ABB / HAVELLS / SIEMENS / SCHNEIDER	CATEGORY-2
6	METERS / MULTIFUNCTION METERS -ANALOGUE/DIGITAL	ELMEASURE / KRYKARD / SELEC / C&S / ABB / BENTEC / SELEC / C&S / MITSUBISHI / ABB / NEPTUNE / SOCOMEC / HPL / LAURITZ KNUDSEN / FINDER / SIEMENS / SCHNEIDER / CONSERVE / SECURE	CATEGORY-3
7	SELECTOR SWITCH, PUSH BUTTON SWITCH / EMERGENCY SWITCH	ABB/ TRINITY TOUCH / LAURITZ KNUDSEN / C&S/ BCH/ EATON / TEKNIC / SIEMENS / SCHNEIDER	CATEGORY-3
8	CT's / PT's	GLOBAL / KRUTI / WAGO / CG POWER / SELEC / NEWTEK / ANANT POWER (ADVANCE) / KAPPA	CATEGORY-3
9	PROTECTIVE RELAYS (ALL TYPE)	P2 POWER / WAGO / SELEC / HAVELLS / MITSUBISHI / LAURITZ KNUDSEN / CG POWER / C&S / ABB / SIEMENS	CATEGORY-2
10	CONTACTORS	MITSUBISHI / HPL / LAURITZ KNUDSEN / C&S / BCH / HAVELLS / ABB / TDK / SIEMENS / LEGRAND (NOVATEUR) / SCHNEIDER	CATEGORY-3
11	TIMERS / TIME SWITCH- ANALOGUE/DIGITAL	HAVELLS / LAURITZ KNUDSEN / SELEC / BCH / ABB / LEGRAND (NOVATEUR) / EATON / FINDER / SIEMENS / SCHNEIDER / C&S	CATEGORY-3
12	LED INDICATION LAMPS	EATON / OLIVE / ABB / LAURITZ KNUDSEN / C&S / BCH / VINAY LED / VAISHNOV / SCHNEIDER	CATEGORY-3

ITEM CODE	ITEMS	PREFERRED MAKES (W.E.F. 10.07.2025)	CATEGORY FOR TEST CERTIFICATION/ INSPECTION
B.	SUBSTATION RELATED ITEMS		
13	TRANSFORMER UP TO 500 KVA (DRY/OIL)	POWERWARE / ITE, GURGAON / ESENNAR / PVJ POWER / TRANSCON / AMES IMPEX / POWER STAR / JAY BEE / RTS / CG POWER / SUDHIR / VOLTAMP / BHARAT BIJLEE / KOTSONS/ SCHNEIDER / KIRLOSKAR	CATEGORY-1
14	TRANSFORMER MORE THAN 500 KVA (DRY/OIL)	POWERWARE / ITE, GURGAON / ESENNAR / PVJ POWER / TRANSCON / AMES IMPEX / POWER STAR / JAY BEE / RTS / CG POWER / SUDHIR / VOLTAMP / KOTSONS/ SCHNEIDER / BHARAT BIJLEE / KIRLOSKAR / SIEMENS	CATEGORY-1
15	H T PANEL	APPLICATION CONTROL PANEL / SHIV SHAKTI ENGINEERS / ITE, GURGAON / TECHNOCRAFTS / TENCO / MARINE ELECTRICALS / PASCAL / KEPL(KHOKHAR) / CONQUERENT / RISHA / CORONET / L.S POWER / ZENIYA / EAP / CG POWER (CFPISL) / TRICOLITE / SUDHIR / LAURITZ KNUDSEN / ABB / TRISQUARE / SCHNEIDER / MILESTONE / EATON / ANANT POWER (ADVANCE) / ADLEC / SIEMENS	CATEGORY-1
16	BUS DUCT-SANDWICH	RISHA / ADVANCE / RR KABEL / LAURITZ KNUDSEN / C&S / LEGRAND (NOVATEUR) / EAE / SCHNEIDER	CATEGORY-2
17	H.T/L.T TERMINATION & JOINTING KIT.	DENSONS / CABSEAL® (HARI CONSOLIDATED) / COMPAQ / RAYCHEM	CATEGORY-3
18	POWER CABLES ABOVE 1.1 KV	V-MARC / SBEE / SUYOG ELECTRICALS LTD / DICABS / APAR / GEMSCAB / HPL / RR KABEL / SPECIAL CABLES / JMW KABEL / PARAMOUNT / TIRUPATI / KEC / POLYCAB / DYNAMIC / HAVELLS / KEI / UNISTAR / GLOSTER / RAVIN CABLES / NICCO	CATEGORY-1
19	POWER CABLES UP TO AND INCLUDING 1.1 KV	ALLCAB / AURAFLEX / V-MARC / VISHAL / SBEE / POLYCORE / VIN POWER / TORTEK / SUYOG ELECTRICALS LTD / GEMSCAB / RR KABEL / PLAZA / SPECIAL CABLES / KEI / JMW KABEL / POLYCAB / AVOCAB (CHANDRESH) / DYNAMIC / PARAMOUNT / SVARN / RALLISON (LKB) / BCH / TIRUPATI / KEC / GRANDLAY / HPL / GLOSTER / BONTON / HAVELLS / UNISTAR / APAR / RAVIN CABLES / NICCO	CATEGORY-1
20	CONTROL CABLES	GEMSCAB / ALLCAB / AURAFLEX / V-MARC / SBEE / POLYCORE / TORTEK / NICCO / SUYOG ELECTRICALS LTD / RR KABEL / PLAZA / SPECIAL CABLES / JMW KABEL / AVOCAB (CHANDRESH) / PARAMOUNT / SVARN / RALLISON (LKB) / BCH / BONTON / TIRUPATI / KEI / KEC / GRANDLAY/ UNISTAR / NATCAB (KWALITY) / HPL / POLYCAB / DYNAMIC / ALOKE (ANKUR) / HAVELLS / GLOSTER / FINECAB / APAR / BATRA HENLAY/ RAVIN CABLES	CATEGORY-1
21	TELEPHONE CABLE	POLY INFOCOM CABLES PVT LTD / ORBIT / DUCAB / RR KABEL / PLAZA / JMW KABEL / PARAMOUNT / ALOKE (ANKUR) / RALLISON (LKB) / BONTON / TIRUPAT / HAVELLS / KEI / KEC / KVVS (INDUSTIRAL) / HPL / POLYCAB / NICCO	CATEGORY-2
22	CO- AXIAL/ INSTRUMENTATION/ FIBRE OPTIC/ CAT-6 / CAT-6A CABLES	AURAFLEX / SBEE / TORTEK / SUYOG ELECTRICALS LTD / ORBIT / POLYCORE / POLY INFOCOM CABLES PVT LTD / BATRA HENLAY / GEMSCAB / RR KABEL / PLAZA / SPECIAL CABLES / JMW KABEL / POLYCAB / PARAMOUNT / LEGRAND(NOVATEUR) / SVARN / RALLISON (LKB) / BONTON / HAVELLS / KEI / ROSENBERGER / KEC / GRANDLAY / GLOSTER / SCHNEIDER / APAR	CATEGORY-2
23	GI / SS CABLE MANAGEMENT SYSTEM (CABLE TRAY-PRE-FABRICATED/ PERFORATED / LADDER TYPE / WIRE MESH TYPE, ETC.)	GLOBAL / OBO BETTERMANN / MM ENTERPRISES / GLOBE / BEC / RMCON (RMG) / EXCEL CONTROL SYSTEMS / ADVANCE- ANANT / RMSCO (RAJASTHAN METAL) / SUMIP / CTM / L.S POWER / LEGRAND (NOVATEUR) / INDIANA / MM ENGG / SLOTCO / MEM	CATEGORY-3
24	UNDER FLOOR RACEWAYS & ITS ACCESSORIES	OBO BETTERMANN / BEC / ADVANCE- ANANT / SPC ELECTROTECH / CTM / MM ENTERPRISES	CATEGORY-3
25	CAPACITORS	SELEC / NEPTUNE / LAURITZ KNUDSEN / P2 POWER / LEGRAND (NOVATEUR) / HAVELLS / TDK INDIA / SCHNEIDER	CATEGORY-2

ITEM CODE	ITEMS	PREFERRED MAKES (W.E.F. 10.07.2025)	CATEGORY FOR TEST CERTIFICATION/ INSPECTION
26	APFC PANEL/ ACTIVE & PASSIVE (HYBRID) PANEL	MAK / APPLICATION CONTROL PANEL / SHIV SHAKTI ENGINEERS / TENCO / RISHA / INPHASE POWER TECHNOLOGIES PVT LTD / GLOBAL / R.P. CONTROLS / ULTIMA / SUPERTech CONTROL SYSTEMS / SWITCHGEARS & FABRICATORS (SGF) / POWERTECH SWITCHGEARS / HAROLD / AB POWER / URJAYANT / SELEC / EAP / CG POWER / P2 POWER / KEPL (KHOKHAR) / ITE-GURGON (INDIAN TRANSFORMERS) / CONQUERENT / BCH / ANANT POWER (ADVANCE) / RISHA / HAVELLS / CORONET / SPC ELECTROTECH / PEATON / L.S POWER / MILESTONE / LAURITZ KNUDSEN / LEGRAND (NOVATEUR) / C&S / NEPTUNE / SCHNEIDER / NEPTUNE / P2 POWER / SELEC / ANANT POWER (ADVANCE) / SCHNEIDER / SPC ELECTROTECH / ADLEC / RST ELECTRICALS PVT LTD / TDK INDIA / TRICOLITE / AMBIT	CATEGORY-1
27	LIGHTENING PROTECTION SYSTEM (LPS) COMPLYING UPDATED IEC / NBC	JEF / OBO BETTERMANN / GROUND ECA3G / NEXPO POWER SOLUTIONS / CAPE / JMV / ABB / DEHN / PHEONIX / TERCEL	CATEGORY-3
28	EARTHING SYSTEM (CHEMICAL)	JEF / OBO BETTERMANN / GROUND ECA3G / TERCEL / BEC / DEHN / ABB / JMV / NEXPO POWER SOLUTIONS / RMSCO (RAJASTHAN METAL) / CAPE / JK CHEMRODE / PROTEC-DHRUVA (DHRUVA) / APS	CATEGORY-3
29	SURGE PROTECTION DEVICES	OBO BETTERMANN / DSS / GROUND ECA3G / TERCEL / WAGO / HAVELLS / ABB / CAPE / LAURITZ KNUDSEN / LEGRAND (NOVATEUR) / DEHN / MERSEN / JMV / PHOENIX CONTACT / PROTEC ALLIED / SECOM / CITEL	CATEGORY-3
30	SCADA (HARDWARE & SOFTWARE, EXCEPT COMPUTER & ACCESSORIES)	LAURITZ KNUDSEN / WAGO / PHOENIX CONTACT / HONEYWELL / SCHNEIDER / SIEMENS	CATEGORY-2
31	SF6 CIRCUIT BREAKER/ VACUUM CIRCUIT BREAKER	EATON / VOLTAMP / LAURITZ KNUDSEN / PASCAL / EATON / CG POWER / ABB / SCHNEIDER / SIEMENS	CATEGORY-2
32	SERVO / AUTOMATIC VOLTAGE STABILIZER	POWERWARE / KRYKARD / FUJI ELECTRIC / PVJ POWER / SELEC / ITE-GURGON (INDIAN TRANSFORMERS) / P2 POWER	CATEGORY-2
33	AUTO TRANSFER SWITCH (ATS)	EATON / HPL / LAURITZ KNUDSEN / LEGRAND (NOVATEUR) / SOCOMEC / HAVELLS / ASCO (SCHNEIDER)	CATEGORY-2
34	COMPACT SUB STATION	PVJ POWER / CORONET / ITE-GURGON (INDIAN TRANSFORMERS) / CONQUERENT / SUDHIR POWER / PEATON / L.S POWER / VOLTAMP / LAURITZ KNUDSEN / ABB / SCHNEIDER	CATEGORY-1
35	EMERGENCY LIGHT - LED (PORTABLE)	LIFE-GUARD / PROLITE	CATEGORY-3
36	CABLES GLANDS	HENSEL / POLYCAB / TRINITY TOUCH / ROXTEC / BRACO / MCI / (METAL/ CRAFT)	CATEGORY-3
37	LUGS & THIMBLES	WAGO / POLYCAB / TRINITY TOUCH	CATEGORY-4
38	SYNTHETIC / PVC INSULATING MATS	CPRI certified for required voltage level	CATEGORY-2
39	INSULATION TAPE (HT / LT)	MODI's / BENLO / ANCHOR	CATEGORY-4
C	DG SETS & RELATED ITEMS		
40	DIESEL ENGINE ABOVE 250 KVA	GREAVES COTTON / BAUDOUIN (SHANDONG) / MAHINDRA POWEROL / PERKINS / CUMMINS / KOEL / CATERPILLAR	CATEGORY-1
41	DIESEL ENGINE UPTO AND INCLUDING 250 KVA	GREAVES COTTON / BAUDOUIN (SHANDONG) / TMTL (TAFE MOTERS) / CUMMINS / MAHINDRA POWEROL / ASHOK LEYLAND / KOEL / CATERPILLAR	CATEGORY-1

ITEM CODE	ITEMS	PREFERRED MAKES (W.E.F. 10.07.2025)	CATEGORY FOR TEST CERTIFICATION/ INSPECTION
42	ALTERNATOR	TDPS (TD POWER SYSTEM) / KIRLOSKAR / CATERPILLAR / GREAVES COTTON	CATEGORY-1
43	BATTERIES-LED ACID/LI-ION	CLN / EXIDE / AMARON	CATEGORY-3
44	BATTERY CHARGER	SELEC / VERTIV / DELTA	CATEGORY-2
45	UPS - ABOVE 10 KVA	DELTA / ORION / FUJI ELECTRIC / KRYKARD / 3EM / PROSTARM / UNILINE/ TMEIC / POWER ONE / RIELLO / ABB / SOCOMEC / EATON / SCHNEIDER / NUMERIC-LEGRAND/ VERTIV (EMERSON)	CATEGORY-3
46	UPS - UPTO 10 KVA	DELTA / ORION / FUJI ELECTRIC / KRYKARD / PROSTARM / RIELLO / UNILINE / ABB / POWER-ONE / DELTA / SOCOMEC / EATON / SCHNEIDER / NUMERIC-LEGRAND / VERTIV (EMERSON)	CATEGORY-3
D INTERNAL WIRING RELATED TEAMS			
47	MCB / ISOLATOR / MCBDB / RCCB / RCBO / ELCB	ANCHOR (PANASONIC) / ORIENT ELECTRIC / LAURITZ KNUDSEN / MITSUBISHI / LEGRAND (NOVATEUR) / C&S / HPL / ABB / POLYCARB / HAVELLS / SCHNEIDER / INDO ASIAN (NOVATEUR) / GM / MK HONEYWELL / BCH / EATON	CATEGORY-2
48	MS CONDUIT (ISI MARKED)	VPL / BEC / AKG / STEEL KRAFTS / TRINITY TOUCH / RMCON (RMG STEELS) / SUPER / JPC PIPES	CATEGORY-3
49	PVC CONDUIT (ISI MARKED)	VPL / FUSION / ASTRAL / SKYDA / BEC / NORPACK / MODI's / ANCHOR (PANASONIC) / POLYCARB / TRINITY TOUCH / AKG / GM / JPC PIPES	CATEGORY-3
50	INDUSTRIAL SOCKET IN SHEET STEEL ENCLOSURE WITH MCB/SWITCH	AJMERA ELECTROTECH LLP / LAURITZ KNUDSEN / POLYCARB / NEPTUNE-BALS / LEGRAND (NOVATEUR) / C&S / BCH / HAVELLS / HPL / SCHNEIDER	CATEGORY-4
51	INSULATED COPPER WIRE	RAJNIGANDHA / GEMSCAB / ALLCAB / AURAFLEX / V-MARC / SBEE / UNISTAR / POLYCORE / TORTEK / BATRA HENLAY / RR KABEL / AKG / ANCHOR (PANASONIC) / BENTEC / JMW KABEL / POLYCARB / AVOCAB (CHANDRESH) / SVARN / PARAMOUNT / RALLISON (LKB) / HAVELLS / NATCAB (KVALITY) / BONTON / GRANDLAY / GLOSTER / BCH / APAR / GM / PARAGON (ELEKTRON) / FINECAB / ZENIUM	CATEGORY-2
52	SWITCHES/ SOCKETS/ TELEPHONE/ TV/ DATA SOCKET/ BOXES (MODULAR TYPE)	RR KABEL / ANCHOR (PANASONIC) / ORIENT ELECTRIC / INDO ASIAN (NOVATEUR) / C&S / POLYCARB / HPL / LAURITZ KNUDSEN / LEGRAND (NOVATEUR) / HAVELLS / GM / MK HONEYWELL / WESTERN VEGA / ABB	CATEGORY-3
53	SWITCHES/ SOCKETS/ TELEPHONE/ TV/ DATA SOCKET/ BOXES (PIANO TYPE)	ANCHOR (PANASONIC) / BENTEC / HAVELLS / HPL / POLYCARB / MK HONEYWELL / WESTERN VEGA	CATEGORY-3
E FIRE ALARM EQUIPMENTS			
54	FIRE / SMOKE DETECTOR/ MULTI CRITERIA DETECTOR/ FIRE ALARM PANEL / REPEATER PANEL/ HOOTER/ MANUAL CALL POINT / RESPONSE INDICATOR/ FAULT ISOLATOR	NOTOFIRE / VELOX / SCHNEIDER / PANASONIC / EATON / HOCHIKI / RAVEL / SIEMENS / BOSCH / APOLLO / EDWARDS (UTC) / G + M / SCHRACK / HONEYWELL / KIDDE (UTC) / GST (UTC) / TYCO / ASES	CATEGORY-2

ITEM CODE	ITEMS	PREFERRED MAKES (W.E.F. 10.07.2025)	CATEGORY FOR TEST CERTIFICATION/ INSPECTION
55	FIRE SURVIVAL CABLE	GEMSCAB / SBEE / FRTEK / BATRA HENLAY / RR KABEL / SEPCIAL CABLES / SVARN / JMW KABEL / POLYCAB / ALOKE (ANKUR) / RALLISON (LKB) / KEC / GRANDLAY / RAVEL / GLOSTER / KEI / BONTON / BOSCH / WREXHAM / FUSION POLYMER	CATEGORY-2
56	FIRE SIGNAGES	ASES / LIFEGUARD (UNITED FIRE) / EATON / FIRE SHIELD / BOSCH / RAVEL / DELITE / AUTOGLO (PROLITE)	CATEGORY-3
57	ASPIRATION SYSTEM	SHOOTFIRE (VIMAL FIRE) / HOCHIKI / BOSCH / RAVEL	CATEGORY-2
F	LED LIGHT FIXTURE AND FANS		
58	LIGHT FIXTURE WITH LED - INDOOR	PYROTECH / GOLDWYN LED / KI KALINGIA / GM / NESSA / PLUS LIGHT TECH / LEGERO / MAGIK / LIGHTBOOK / LEKSA LIGHTING / R R KABEL (RR/ AARAYSTORM) / PANASONIC / EVEREADY / INSTAPOWER / POLYCAB / SURYA / HALONIX / HAVELLS / SIGNIFY / JAQUAR (JAQUAR LIGHTING) / HPL / BAJAJ / WIPRO / ORIENT / CROMPTON / REGENT	CATEGORY-2
59	LIGHT FIXTURE WITH LED - OUTDOOR/FACADE	PYROTECH / GOLDWYN LED / KI KALINGIA / GM / NESSA / PLUS LIGHT TECH / MAGIK / LIGHTBOOK / LEKSA LIGHTING / R R KABEL (RR/ AARAYSTORM) / PANASONIC / HPL / BENTEC (BENLO) / EVEREADY/ POLYCAB / K-LITE / SURYA / TRANSRAIL / HALONIX / HAVELLS / JAQUAR (JAQUAR LIGHTING) / SIGNIFY / INSTAPOWER / BAJAJ / WIPRO / ORIENT / CROMPTON / REGENT	CATEGORY-2
60	LINEAR LED/ CUSTOMISED/ DECORATIVE LED LIGHT FIXTURE	PYROTECH / GOLDWYN LED / KI KALINGIA / GM / LIGHT FORMS / PLUS LIGHT TECH / LEGERO / MAGIK / WMEL / FORUS / HUBLIT / LIGHTBOOK / PANASONIC / POLYCAB / R R KABEL (RR/ AARAYSTORM) / EVEREADY / SURYA / HALONIX / HAVELLS / HPL / SIGNIFY / BAJAJ / WIPRO / ORIENT / CROMPTON / REGENT	CATEGORY-2
61	AVIATION WARNING /OBSTRUCTION LIGHT	PYROTECH / FORUS / KI KALINGIA / HARYANA GENERAL INDUSTRIES / VSTP / K-LITE / SURYA / TRANSRAIL / HPL / INSTAPOWER / BAJAJ / WIPRO / CROMPTON /	CATEGORY-3
62	CEILING/ WALL / EXHAUST / PEDESTAL FAN (CONVENTIONAL / BLDC)	ORIENT ELECTRIC / RR KABEL / ANCHOR (PANASONIC) / POLYCAB / HALONIX / HAVELLS / ALMONARD / USHA / KHAITAN	CATEGORY-3
63	HVLS FANS	MARUT AIR / RR KABEL / RITE HITE	CATEGORY-3
G	AIRCONDITIONING AND FIRE FIGHTING ACCESSORIES		
64	G I / M S PIPE (ISI MARKED)	VPL / ITL / BEC / APL APOLLO / PRAKASH SURYA / JINDAL STAR / TATA / SAIL / HIRA PIPES (RR ISPAT) /	CATEGORY-2
65	MANUAL VALVE - BUTTERFLY/ SLUICE / CHECK / NRV / FOOT/GATE / GLOBE	LEHRY / SANT / VENUS / NEWAGE FIRE / CASTLE / ZOLOTO / VTM (VA VALVES) / EMERALD / ADVANCE VALVES / DIVINE / C&R	CATEGORY-2
66	MOTORISED VALVE - BALANCING / MODULATING / PICB / DELTA T / CONTROL / MIXING	SANT / VTM (VA VALVES) / CASTLE / DANFOSS / ZOLOTO / ANERGY	CATEGORY-2
67	SUCTION / POT / Y- STRAINER	VENUS / CASTLE / ZOLOTO / ANERGY / SANT / VTM (VA VALVES) / EMERALD	CATEGORY-2
68	FLEXIBLE CONNECTION FOR SPRINKLER / SPRINKLER	LIFEGUARD (UNITED FIRE) / FIRE SHIELD / NEWAGE / EXFLAME / HD / SAFEFIRE	CATEGORY-2
69	FIRE HYDRANT LANDING VALVES/ INSTALLATION VALVE/ FIRE BRIGADE CONNECTION.	SHOOTFIRE (VIMAL) / LIFEGUARD (UNITED FIRE) / ZOLOTO / KALPEX (KALPATARU) / NEWAGE / EXFLAME / SAFEFIRE / HD / FIRE SHIELD	CATEGORY-2

ITEM CODE	ITEMS	PREFERRED MAKES (W.E.F. 10.07.2025)	CATEGORY FOR TEST CERTIFICATION/ INSPECTION
70	FIRE HOSE PIPES/ FIRST AID HOSE REEL/ BRANCH PIPE / NOZZLE / COUPLINGS	SHOOTFIRE (VIMAL) / LIFEGUARD (UNITED FIRE) / KALPEX (KALPATARU) / NEWAGE / FIRE SHIELD / EXFLAME / SAFEFIRE	CATEGORY-2
71	FIRE EXTINGUISHERS	DSS / KANEX / SHOOTFIRE (VIMAL) / LIFEGUARD (UNITED FIRE) / CEASEFIRE / SAFEFIRE / AFS (ADVANCED) / KALPEX (KALPATARU) / EXFLAME / SUPREMEX / FIRE SHIELD / MINIMAX / SAFEX	CATEGORY-2
72	GAS BASED FIRE SUPPRESSION SYSTEM	SYNERGY & SYNERGY PLUS / FIRECEASE / FIRETREX / VIVINA / ASES / CEASEFIRE / SHOOTFIRE (VIMAL) / LIFEGUARD (UNITED FIRE) / KALPEX(KALPATARU) / FOAMTECH / SUPREMEX / SIEMENS / FIRETREX (SVS)	CATEGORY-2
73	KITCHENHOOD GAS BASED SUPPRESSION SYSTEM	SYNERGY / FIRECEASE / FIRETREX / VIVINA / SHOOTFIRE (VIMAL) / UNITED / FOAMTECH / CEASEFIRE / KALPATARU /	CATEGORY-2
74	HIGH/LOW PRESSURE WATER MIST BASED FIRE SUPPRESSION SYSTEM	SYNEAQUAMIST / FIRETREX / SHOOTFIRE	CATEGORY-2
75	FLOW SWITCH/PRESSURE SWITCH	OMICRON / ANERGY / DANFOSS / EMERALD / SWIZER	CATEGORY-3
76	FIREMAN AXE	LIFEGUARD (UNITED FIRE) / NEWAGE / FIRE SHIELD / ADVANCE	CATEGORY-3
77	DIESEL ENGINE DRIVEN PUMP FOR FIRE FIGHTING	TMTL (TAFE MOTERS) / KSB / WILO / GRUNDFOS / KIRLOSKAR / ASHOK LEYLAND / CATERPILLAR / MAHINDRA POWEROL	CATEGORY-2
78	PUMPS -VERTICAL/ HORIZONTAL / SUBMERSIBLE	HAVELLS / WILO / GRUNDFOS / ANDRITZ / KSB / KIRLOSKAR / XYLEM / AQUA_ANS / MATHER & PLATT / CROMPTON	CATEGORY-2
79	MOTORS	LHP / ROTOMOTIVE / KSB / HAVELLS / TMEIC / GRUNDFOS / BCH / KIRLOSKAR / BHARAT BIJLEE / ALSTOM / SIEMENS / CROMPTON	CATEGORY-2
80	MOTOR STARTER	BENTEC / KSB / HAVELLS / LS POWER / GRUNDFOS / PHOENIX / C&S / BCH / SCHNEIDER / EATON / MOTOVARIO / SIEMENS / SCHNEIDER	CATEGORY-2
81	SINGLE PHASE PREVENTER / OVER LOAD PROTECTION/HIGH VOLTAGE/LOW VOLTAGE/EARTH FAULT PROTECTION	C&S / LAURITZ KNUDSEN / SELEC / SIEMENS	CATEGORY-3
82	G I SHEETS	JSW STEEL / TATA / HSL / SAIL	CATEGORY-2
83	GRILLS /DIFFUSERS	PRECISE / ASAWA INSULATION / MAPRO (AIR FLOW) / CRYSTAL / TRISTAR	CATEGORY-3
84	INSULATION MATERIAL - ROCK WOOL/ GLASS WOOL	ENSAVE / ROCK INSUL / AEROLAM / SUNROCK (THERMOCARE ROCK WOOL) / INSUFLEX (THE SUPREME) / LIONROCK / POLYBOND / EPACK / TWIGA INSUL	CATEGORY-3
85	INSULATION MATERIAL - XLPE/EPDM/ NITRILE RUBBER	AEROFOAM / PARAMOUNT / SAFARI / AEROLAM / INSUFLEX (THE SUPREME) / EPACK / SUNROCK (THERMOCARE ROCK WOOL) / INSUFLEX (THE SUPREME) / LIONROCK / POLYBOND / TWIGA INSUL	CATEGORY-3

ITEM CODE	ITEMS	PREFERRED MAKES (W.E.F. 10.07.2025)	CATEGORY FOR TEST CERTIFICATION/ INSPECTION
86	PRE-INSULATED DUCT	ASAWA INSULATION / MECHEASY	CATEGORY-3
87	PRE-FABRICATED GI DUCT	ASAWA INSULATION / WAD / DUCTOFAB / WAVES / ZECO / ADVANCE VENTILATION	CATEGORY-3
88	FIRE DAMPERS	MAPRO (AIR FLOW) / GREENHECK / TRISTAR / RUSKIN / CARRIER	CATEGORY-2
89	AIR CURTAINS	EURONICS / MITZVAH / TECHNOCRATS / DOLPHY	CATEGORY-2
90	MODULATING MOTOR/FIRE DAMPER MOTOR	LHP / ANERGY / HONEYWELL / GRUNDFOS / BALEMO / SIEMENS	CATEGORY-2
91	AIR FILTERS (MERV/ESP/HEPA) FOR HVAC SYSTEM	MECHMAARK / ADITYA / O2 CURE / WAVES / HUMIDIN / INTELLIGREEN	CATEGORY-3
92	THERMOSTATS / HUMIDISTATS	OMICRON / ANERGY / FINDER / DANFOSS / HONEYWELL	CATEGORY-3
93	THERMOMETERS/ PRESSURE GAUGE	OMICRON / ANERGY / EMERALD / FIEBIG	CATEGORY-3
94	INTEGRATED BUILDING MANAGEMENT SYSTEM / (IBMS/BMS/ SCADA SYSTEM (HARDWARE* & SOFTWARE, EXCEPT COMPUTER & ACCESSORIES)	SCHNEIDER / ENLITE / PANASONIC / WAGO / PHOENIX / SIEMENS / AZBIL / LAURITZ KNUDSEN / TRIDIYM (* includes all hardware of BMS)	CATEGORY-3
95	FIELD DEVICES (FOR IBMS/BMS/SCADA)	SELEC / OMICRON	CATEGORY-3
96	VFD DRIVE	YASKAWA / SELEC / FUJI / TMEIC / LAURITZ KNUDSEN / DANFOSS / SCHNEIDER / SIEMENS	CATEGORY-3
H	AC PLANTS, AC UNITS & EQUIPMENTS		
97	AIR-CONDITIONER UNITS - SPLIT / WINDOW / CASSETTE/ TOWER	HAVELLS / HITACHI (JOHNSON) / LG / BLUE STAR / DAIKIN/ VOLTAS / SAMSUNG / HAIER / O GENERAL / PANASONIC / CARRIER	CATEGORY-2
98	PRECISION AIR CONDITIONING (PAC)	CLIMAVENTA / SWEGON BLUE BOX / SIDWAL	CATEGORY-3
99	PACKAGED AIRCONDITIONER	DAIKIN / HITACHI (JOHNSON) / VOLTAS / LG / SIDWAL / CARRIER / DAIKIN / BLUE STAR	CATEGORY-2
100	CHILLERS	KIRLOSKAR / DAIKIN / CARRIER / VOLTAS / BLUE STAR / LG / CLIMAVENETA / TRANE / YORK / SWEGON BLUE BOX / DUNHAMBUSH	CATEGORY-1
101	AIR HANDLING UNITS (AHU)	CRYSTAL / CITIZEN / WAVES / EDGETECH / CARRIER / ZECO / HUMIDIN / TRISTAR	CATEGORY-1
102	FAN COIL UNIT (FCU)	WAVES / CRYSTAL / ZECO / CITIZEN / EDGETECH / CARRIER / DAIKIN / TRISTAR / YORK	CATEGORY-2
103	VRV/ VRF HVAC UNIT	LG / HITACHI (JOHNSON) / SAMSUNG / DAIKIN / VOLTAS / HAIER / CARRIER / BLUE STAR	CATEGORY-2

ITEM CODE	ITEMS	PREFERRED MAKES (W.E.F. 10.07.2025)	CATEGORY FOR TEST CERTIFICATION/ INSPECTION
104	COOLING TOWER UP TO 200 TR.	DELTA / BELL COOLING TOWERS / MIHIR / PAHARPUR	CATEGORY-2
105	COOLING TOWER ABOVE 200 TR.	DELTA / BELL COOLING TOWERS / MIHIR / PAHARPUR	CATEGORY-2
106	EXPANSION TANK	ANERGY	CATEGORY-3
107	AIR & DIRT SEPARATOR	ANERGY	CATEGORY-3
108	FAN - AXIAL FLOW / INLINE / VENTILATION / PROPELLER / PLUG	DYNAIR-MAICO / DUSTECH / KRUGER / WAVES / HUMIDIN / WOLTER / AIR FLOW / RR KABEL / CRYSTAL / GREENHECK	CATEGORY-2
109	R O SYSTEM /WATER SOFTENING PLANT	SURYA RO / DELTA / WAE / VENZA (MGROW)	CATEGORY-3
110	WATER COOLER	CLIMATROL / VOLTAS / ORIENT ELECTRIC / SIDWAL	CATEGORY-3
111	WATER DISPENSER	WAE / VENZA (MGROW) / VOLTAS	CATEGORY-3
112	DRINKING WATER FOUNTAIN	WAE / VENZA (MGROW) / OASIS	CATEGORY-3
I	PA SYSTEM & RELATED ITEMS		
113	AMPLIFIERS	ATEIS / SCHRACK / HEINRICH / BOSCH / HONEYWELL / OPTIMUS / BOSE	CATEGORY-2
114	ANNOUNCEMENT MICROPHONES /CAR CALL CONSOLES	ATEIS / SCHRACK / HEINRICH / BOSCH / HONEYWELL / OPTIMUS / BOSE	CATEGORY-2
115	CONTROLLERS	ATEIS / SCHRACK / BOSCH / HEINRICH / HONEYWELL / OPTIMUS	CATEGORY-3
116	SPEAKER	ATEIS / SCHRACK / HEINRICH / BOSCH / NOTIFIRE / OPTIMUS / BOSE	CATEGORY-3
117	DIGITAL CALL STATION / WORK STATION	AVTRON / ATEIS / HEINRICH / BOSCH / OPTIMUS	CATEGORY-3
118	EQUIPMENT RACK	HEINRICH / BOSCH / PRESIDENT / ORDEIN	CATEGORY-3
119	DVD/DVR /MP3 PLAYER	TYCO / HEINRICH / BOSCH / HONEYWELL / SIEMENS / OPTIMUS	CATEGORY-2
120	CABLE FOR MICROPHONE / SPEAKER	RR KABEL / JMW KABEL / POLYCAB / BONTON / BOSCH / HPL / KVVS (INDUSTRIAL)	CATEGORY-2
121	DIGITAL LINE ARRAY SPEAKER	ATEIS / HEINRICH / BOSCH / BOSE / OPTIMUS	CATEGORY-2
122	CCTV CAMERA	AVTRON / TYCO ILLUSTRATE / HEINRICH / SIEMENS / BOSCH / HONEYWELL / ULTRAK / PELCO	CATEGORY-2
123	MONITOR /DISPLAY-LCD / LED / PLASMA	LG / PANASONIC / SAMSUNG / SONY	CATEGORY-2
124	COMPUTER /LAPTOP (FOR IBMS/BMS/SCADA)	HP / DELL / LENOVO / IBM	CATEGORY-4
125	COMPUTER ACCESSORIES (KEY BOARD/MOUSE)	HP / DELL / LENOVO / IBM	CATEGORY-4

ITEM CODE	ITEMS	PREFERRED MAKES (W.E.F. 10.07.2025)	CATEGORY FOR TEST CERTIFICATION/ INSPECTION
J	SOLAR PLANT & ACCESSORIES		
126	SOLAR INVERTER/ POWER CONDITIONING UNIT	SELEC / HAVELLS/ POWER ONE	CATEGORY-2
127	SOLAR MODULES	SWELECT / HAVELLS/ JAKSON	CATEGORY-2
128	DC CABLES	GEMSCAB / APAR / RR KABEL / SPECIAL CABLES / JMW KABEL / POLYCAB / HAVELLS / RALLISON (LKB) / KEC / HPL / GLOSTER / KEI / BONTON	CATEGORY-2
K	MISCELLANEOUS & OTHER MECHANICAL ITEMS		
129	HAND DRIER	TECHNOCRATS / EURONICS / DOLPHY / ANAND AUTOMATIC SYSTEM	CATEGORY-3
130	DOUBLE WALL CORRUGATED HDPE PIPE/PLAIN HDPE PIPE	VPL / GANGOTRI / ASTRAL / CPE / BEC PLAST / KESHAV KRIPA / VALENS / TIRUPATI PLASTOMATIC / GEMINI / HIMALYAN / MANGALAM	CATEGORY-3
131	AUTOMATIC SLIDING DOOR	HOUSYS / GEZE / NEPTUNE / S. ADITYA / DORMAKABA / TECHNOCRATS / AUTOINGRESS	CATEGORY-3
132	ELEVATOR	ORBIS / SCHINDLER / FUJITEC / INFRA / TRIO ELEVATOR / OMEGA ELEVATOR / ESCON / JOHNSON LIFTS / ECE / KONE / TKE / OTIS	CATEGORY-1
133	ESCALATOR /TRAVELATOR	ORBIS / SCHINDLER / TRIO ELEVATOR / OMEGA ELEVATOR / JOHNSON LIFTS / KONE / TKE / OTIS	CATEGORY-1
134	BOLLARD	HOUSYS / AVIANS / SWARAJ / S. ADITYA / TECHNOCRATS / EURONICS / NEPTUNE / BROSIS / FAAC	CATEGORY-3
135	BOOM BARRIER	HOUSYS / AVIANS / SWARAJ / S. ADITYA / DORMAKABA / TECHNOCRATS / BROSIS / NEPTUNE / AUTOINGRESS / FAAC / SPEEDGATZ	CATEGORY-3
136	TROLLEY GATE	AVIANS / SWARAJ / S. ADITYA / TECHNOCRATS / DELITE / AUTOINGRESS / LOTUS	CATEGORY-3
137	TYRE KILLER/SPIKE BARRIER	HOUSYS / SWARAJ / S. ADITYA / TECHNOCRATS / NEPTUNE / BROSIS / FAAC / SPEEDGATZ	CATEGORY-3
138	UNDER VEHICLE SCANNING SYSTEM	HOUSYS	CATEGORY-3
139	EXTERNAL LIGHTING POLES/ DECORATIVE LIGHT POLE	SUBHAM / AMBIKA POLES / LYSAGHTPOLE™ / VAKRANGEE / VSTP / UTKARSH / RMSCO (RAJASTHAN METAL) / SKIPPER / BP PROJECTS / K-LITE / TRANSRAIL / PRAKASH SURYA (SURYA ROSHNI) / SUMIP / SIGNIFY / BAJAJ / WIPRO / CROMPTON / ORIENT ELECTRIC	CATEGORY-3
140	HIGH MAST	SUBHAM / AMBIKA POLES / VAKRANGEE / VSTP / LYSAGHTPOLE™ / UTKARSH / SKIPPER/ BP PROJECTS / K-LITE / PRAKASH SURYA (SURYA ROSHNI) / TRANSRAIL / SIGNIFY / BAJAJ / WIPRO / ORIENT ELECTRIC / CROMPTON	CATEGORY-3
141	ALUMINIUM LADDERS / HYDRAULIC LADDERS	DELITE	CATEGORY-2
142	BOOM /SCISSOR/SPIDER/VERTICAL LIFT	MLIFT	CATEGORY-2
143	DASH FASTENERS	HILTI / FISCHER	CATEGORY-4
144	GEAR BOX	MGM VARVEL / IMAK	CATEGORY-3
145	GEARED MOTOR	LHP / LENZE / ROTOMOTIVE / MGM VARVEL / IMAK	CATEGORY-3
146	WEATHERPROOF JUNCTIONBOX	TRINITY TOUCH / SPELSBERG (CAPE) / RITTAL	CATEGORY-3

ITEM CODE	ITEMS	PREFERRED MAKES (W.E.F. 10.07.2025)	CATEGORY FOR TEST CERTIFICATION/ INSPECTION
147	EV CHARGERS	P2 POWER / E-FUEL / AXONIFY TECH SYSTEMS PRIVATE LIMITED	CATEGORY-1
L	GROUND LIGHTING ITEMS		
148	PAPI (NON-LED)	AMA / VARDHMAN / NASU SYSTEM	CATEGORY-1
149	LAMP (HALOGEN)	YOUYANG	CATEGORY-3
150	AGL FITTING (LED)	VARDHMAN / AMA	CATEGORY-1
151	AGL FITTING (NON-LED)	VARDHMAN / AMA	CATEGORY-1
152	ALCMS / ILCMS	VARDHMAN	CATEGORY-1
153	ISOLATING TRANSFORMER	TRIO / CTC (CREATIVE TRADING) / VARDHMAN / AMA / BILDAL / ELECTROMACH / YOUYANG	CATEGORY-1
154	CONSTANT CURRENT REGULATOR (CCR)	VARDHMAN / AMA / HONEYWELL / YOUYANG / NASU SYSTEM	CATEGORY-1
155	5 KV GRADE AFL CABLE - UNSHIELDED / SHIELDED	GEMSCAB / APAR / RR KABEL / ALOKE (ANKUR) / RALLISON (LKB) / JRD / KEI / GLOSTER	CATEGORY-1
156	1.1 KV GRADE SECONDARY LEAD FOR AFL CABLE	GEMSCAB / APAR / RR KABEL / AMA / ELECTROMACH / ALOKE (ANKUR) / RALLISON (LKB) / JRD	CATEGORY-2
157	PLUGS / RECEPTACLE / CONNECTOR	CTC (CREATIVE TRADING) / ELECTROMACH / ALOKE (ANKUR) / VARDHMAN / NEPTUNE / AMA / BILDAL / YOUYANG	CATEGORY-2

Note: This is mere enlistment as preferred make and is subject to the compliance of Technical Specification mentioned in tender.

CATEGORY REQUIREMENT OF TEST CERTIFICATE/ INSPECTION

CATEGORY-1:

- a) Type test certificate for similar item done. If not one of the items offered is to be type tested.
- b) OEMs routine test certificate.
- c) Acceptance test to be conducted in the presence of AAI representative at OEMs factory.

CATEGORY-2:

- a) Type test for similar done. If not, one of the items offered is to be type tested.
- b) OEMs routine test certificate.
- c) Visual and functional check by PMC / Engineering Consultant representative (AAI official incase of non avialibility of PMC/ Engineering Consultant) at AAI airport site.

CATEGORY-3:

- a) OEM/ Dealer/ Contractor routine test certificate.
- b) Visual and functional check by PMC / Engineering Consultant representative (AAI official incase of non avialibility of PMC/ Engineering Consultant) at AAI airport site.

CATEGORY-4:

- a) Visual and functional check by PMC / Engineering Consultant representative (AAI official incase of non avialibility of PMC/ Engineering Consultant) at AAI airport site.

SCHEDULE OF QUANTITY

Name of work:- Construction of Glide Path & Localizer Building and other associated works inside Airforce Area at Chandigarh Airport. SH-SITC of LT panel, Split AC & internal wiring works.

BOQ Item No.	Item Description	Unit	Qty.
1	SH I :- Internal Electrical Works Wiring for light point/ fan point/ exhaust fan point/ call bell point with 1.5 sq.mm FRLS/HFFR PVC insulated copper conductor single core cable in surface/ recessed steel conduit, with modular switch, modularplate, suitable GI box and earthing the point with 1.5 sq.mm FRLS/HFFR PVC insulated copper conductor single core cable etc. as required.. Group C	Point	24.00
2	Wiring for group controlled (looped) light point/fan point/exhaust fan point/ call bell point (without independent switch etc.) with 1.5 sq. mm FRLS/HFFR PVC insulated copper conductor single core cable in surface/ recessed steel conduit, and earthing the point with 1.5 sq. mm FRLS/HFFR PVC insulated copper conductor single core cable etc. as required.		
2.1	Group A	Point	26.00
2.2	Group C	Point	8.00
3	Wiring for circuit/ submain wiring along with earth wire with the following sizes of FRLS/HFFR PVC insulated copper conductor, single core cable in surface/ recessed steel conduit as required.		
3.1	2 X 2.5 sq. mm + 1 X 2.5 sq. mm earth wire	Mtrs.	200.00
3.2	2 X 4 sq. mm + 1 X 4 sq. mm earth wire	Mtrs.	500.00
3.3	2 X 16 sq. mm + 1 X 6 sq. mm earth wire	Mtrs.	60.00
3.4	4 X 10 sq. mm + 2 X 6 sq. mm earth wire	Mtrs.	30.00
4	Supplying and drawing following sizes of FRLS/HFFR PVC insulated copper conductor, single core cable in the existing surface/ recessed steel/ PVC conduit as required.		
4.1	3 x 1.5 sq. mm	Mtrs.	60.00
4.2	3 x 2.5 sq. mm	Mtrs.	60.00
4.3	3 x 4 sq. mm	Mtrs.	100.00
5	Supplying and fixing of following sizes of medium class PVC conduit along with accessories in surface/recess including cutting the wall and making good the same in case of recessed conduit as required.		
5.1	20 mm	Mtrs.	30.00
5.2	25 mm	Mtrs.	30.00
5.3	32 mm	Mtrs.	30.00
6	Supplying and fixing suitable size GI box with modular plate and cover in front on surface or in recess, including providing and fixing 6 pin 5/6 & 15/16 A modular socket outlet and 15/16 A modular switch, connections etc. as required.	Each	66.00
7	Supplying and fixing of following ways surface/ recess mounting, vertical type, 415 V, TPN MCB distribution board of sheet steel, dust protected, duly powder painted, inclusive of 200 A tinned copper bus bar, common neutral link, earth bar, din bar for mounting MCBs (but without MCBs and incomer) as required . 8 way (4 + 24), Double door	Each	2.00

SCHEDULE OF QUANTITY

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BOQ Item No.	Item Description	Unit	Qty.
8	Supplying and fixing following way, single pole and neutral, sheet steel, MCB distribution board, 240 V, on surface/ recess, complete with tinned copper bus bar, neutral bus bar, earth bar, din bar, interconnections, powder painted including earthing etc. as required. (But without MCB/RCCB/Isolator) 12 way, Double door	Each	4.00
9	Supplying and fixing TP sheet steel enclosure on surface/ recess along with 16/25/32 A 415 V "C" curve TP MCB complete with connections, testing and commissioning etc. as required.	Each	4.00
10	Supplying and fixing 5 A to 32 A rating, 240/415 V, 10 kA, "C" curve, miniature circuit breaker suitable for inductive load of following poles in the existing MCB DB complete with connections, testing and commissioning etc. as required.		
10.1	Single Pole	Each	40.00
10.2	Double pole	Each	40.00
10.3	Triple pole and neutral	Each	4.00
11	Supplying and fixing following rating, four pole, (three phase and neutral), 415 volts, residual current circuit breaker (RCCB), having a sensitivity current 30 mA in the existing MCB DB complete with connections, testing and commissioning etc. as required. 63 A	Each	2.00
12	Supplying and fixing 20 A, 240 V, SPN Industrial type socket outlet, with 2 pole and earth, metal enclosed plug top along with 20 A "C" curve, SP, MCB, in sheet steel enclosure, on surface or in recess, with chained metal cover for the socket out let and complete with connections, testing and commissioning etc. as required.	Each	12.00
13	Supply of following size of 1.1KV grade multicore stranded aluminium conductor XLPE insulated & PVC sheathed armoured cable (FRLS Type) as per IS: 7098 (Part-1) 1988 complete as required & as per enclosed specification. (3.5 x 35 Sqmm)	Meter	200.00
14	Laying of one number PVC insulated and PVC sheathed / XLPE power cable of 1.1 KV grade of following size in the existing RCC/ HUME/ METAL pipe as required. Upto 35 sq. mm	Meter	160.00
15	Laying and fixing of one number PVC insulated and PVC sheathed / XLPE power cable of 1.1 KV grade of following size on wall surface as required. Upto 35 sq. mm (clamped with 1mm thick saddle)	Meter	20.00
16	Supplying and making end termination with brass compression gland and aluminium lugs for following size of PVC insulated and PVC sheathed / XLPE aluminium conductor cable of 1.1 KV grade as required. 2 X 35 sq. mm (25mm)	Each	8.00

SCHEDULE OF QUANTITY

Name of work:- Construction of Glide Path & Localizer Building and other associated works inside Airforce Area at Chandigarh Airport. SH-SITC of LT panel, Split AC & internal wiring works.

BOQ Item No.	Item Description	Unit	Qty.
17	Supply, Installation, Testing and Commissioning of ceiling fan with Brush Less Direct Current (BLDC) Motor, class of insulation: B, 3 nos. metal(Aluminium alloy) blades, 30 cm long down rod, 2 nos. canopies, shackle kit, safety rope, copper winding, steel/Al body Power Factor not less than 0.9, Service Value 1200mm, service value ≥ 6.0 CM/Min/Watt, air delivery 210 CM/Min (Minimum)	Each	2.00
18	Earthing with G.I. earth pipe 4.5 Meter long, 40 mm dia including accessories, and providing masonry enclosure with cover plate having locking arrangement and watering pipe etc. with charcoal/ coke and salt as required.	Set	4.00
19	Supplying and laying 6 SWG G.I. wire at 0.50 Meter below ground level for conductor earth electrode, including connection/ termination with GI thimble etc. as required.	Mtr.	60.00
20	Providing and laying earth connection from earth electrode with 6 SWG dia G.I. Wire in 15 mm dia G.I. pipe from earth electrode including connection with G.I. thimble excavation and re-filling as required.	Mtr.	30.00
21	Supply, Installation, Testing and Commissioning of min. 18-22 W LED Batten light fixture having Extruded aluminium housing with LED's of preferred Make, having THD less than 10%, Efficacy Min 100 lumens/watt, having IP > 20, including driver/control gear, all accessories as required suitable for fixing on existing structure/surface, complying technical specification.	Each	30.00
22	Supply, Installation, Testing and Commissioning of 5700 K or more, pressure die cast aluminium housing, LED Street light fixture of 45 W of preferred Make, having THD less than 10%, Efficacy Min 110 lumens/watt, IP more than equal to 65, including driver/control gear, with arrangement for mounting i/c all accessories as required as per site requirement.	Each	8.00

SCHEDULE OF QUANTITY

Name of work:- Construction of Glide Path & Localizer Building and other associated works inside Airforce Area at Chandigarh Airport. SH-SITC of LT panel, Split AC & internal wiring works.

BOQ Item No.	Item Description	Unit	Qty.
23	SH II:- External Electrical works Outdoor LT Panel:- SITC of PTTA dust & vermin proof outdoor floor mounted distribution electric panel of suitable size on cement concrete foundations generally conforming to IS 5039 and to withstand rough usage and weather. The panel shall be fabricated with 14 SWG M.S. sheet with suitable flat iron frame work complete with hinged door on front with locking arrangement, doors/ covers for individual inside compartments, suitable angle/ channels frame in the bottom, legs for grouting in foundation, painting etc. including supplying and fixing of following accessories and making inter connections, earth connection etc. as required as per attached SLD in TS- 27 of Tender document. (A) INCOMER (1) MCCB,FP, 100 A, 415 V, 36 KA Breaking Capacity, TM release with O/L & S/C Protection - 3 Set (02 Nos. for incomer, 01 no common after changeover switch) (B) Automatic Transfer switch :- (1)100A FP Automatic Transfer switch for Source Changeover :- 01 Set (2) ON indication lamp for both source with control MCB :- 01 Set (C) INCOMER from 30 KVA DG set:- (1) MCCB,FP, 63 A, 415 V, 25 KA Breaking Capacity, TM release with O/L & S/C Protection - 1 Set (D) 30 KVA DG AMF START STOP control Part with suitable relay, contactors, MCB, Push buttons, LED indication Lamp etc. required to ON DG set in case of Power failure from output of Auto transfer Switch. :- 1 set alongwith necessary electrical interlocking with incomer 100 A. (E) OUTGOING (1) MCCB,FP, 63 A, 415 V, 25 KA Breaking Capacity, TM release with O/L & S/C Protection - 2 Set (2) MCCB,FP, 32 A, 415 V, 25 KA Breaking Capacity, TM release with O/L & S/C Protection - 2 Set (3) SURGE PROTECTION DEVICE 40KA, TYPE 2- 02 Set (4) DIGITAL Timer Switch :- 1 Set (5) 40 A DP MCB, 10 KA C curve for R-Y-B Phase - 01 set (F) 125 A 4 Pole Aluminium Bus Bar :- 01 Set (G) Suitable size GI Strip throughout the Panel :- 01 set Note :- 1. All Incoming MCCB (2+1) should be provided with spreader set, Auxillary contacts, rotary handle, Phase, ON, OFF Indication lamps with SP MCB, Digital Multifuntion meter with suitable size of CT, and with Energy meter CL 1 2. All out going MCCB should be provided with spreader set, Auxillary contacts, rotary handle, ON, OFF Indication lamps with SP MCB.	Job	2
24	SITC of 50 kVA, 3 Phase Air cooled Servo Controlled Automatic Voltage Stabilizer, suitable for operation on 415V, 50Hz AC supply. The stabilizer shall be equiped with Suitable size of Input MCCB, Bypass Switch, Single phase preventer, Over Load and Short circuit Protection etc complete as per site requirement.	Each	2.00

SCHEDULE OF QUANTITY

Name of work:- Construction of Glide Path & Localizer Building and other associated works inside Airforce Area at Chandigarh Airport. SH-SITC of LT panel, Split AC & internal wiring works.

BOQ Item No.	Item Description	Unit	Qty.
25	SH III:- Split AC Works Supplying , Installation, Testing and Commissioning of Air Cooled Hi Wall 1.5 TR with 5 Star BEE Rating split type Air conditioners complete with Indoor unit(IDU), Out door unit (ODU), surface / concealed copper Refrigerant piping with insulation (closed cell elastomeric nitrile rubber tubular pipe section) upto 3 Mtr (IDU to ODU), copper power cable upto 3.5 Mtr (IDU to ODU) i/c drain pipe R-32/R-410/ R-407 Green Refrigerant, wireless Remote control, suitable for working between 180-260V with low & high voltage cutoff and 50 hz ,1 phase AC supply capable of performing cooling, dehumidification, air circulation of following capacity with Inverter rotary compressor (Variable Speed). The system shall be able to deliver 100% of the rated capacity upto 42 °C. Min 5 year Original Equipment Manufacturer (OEM) warranty both compressor and Printed Circuit Board (PCB). Must comply : Electrical cable IS 694 or IS 9968 temperature sensing control IS /International Electrotechnical Commission (IEC) 60730, hermetic compressor IS 10617, heat exchanger IS 11329, capacitor IS 2993 and motor IS 12615. Complete as per CPWD specification and IS : 1391 Part II 2023. The system shall be able to operate up to 50 °C (out door ambient temperature). This include Provision of plyboard, or a suitable sheet or structure, for the installation of IDUs on frangible hut structures and MS stand for installation of ODU on ground as per site requirement.	Each	12
26	SITC of metal-based 5 KVA Automatic Voltage Stabilizer of suitable capacity with high / low cut off complete as reqd. suitable for input voltage range from 150 to 285 volt giving output 175-255 volt at 50 Hz A.C. Supply. The stabilisers should be suitable for 1.5/2 TR ACs as per BOQ Item No. 25.	Each	12
27	SITC of Smart AC timer switch for switching power alternatively between two ACs supplied as per BOQ Item No. 25. Timer will be programmable type which is adjustable over 24 hrs with 4-6- 8 hours intervals. This Item include suitable size wiring in between two AC to timer, mounting bracket, painting, sealing, civil finishing etc., complete as required at site.	Each	6