

# TENDER DOCUMENT

**Name of Work:- Development of Civil Airport at Bokaro.**

**SH Pavement works Resurfacing & Strengthening of Existing Runway, Apron, Taxi Track including grading of operational area at Bokaro Airport**

**(Tender ID: 2018\_AAI\_10460\_2)**



**AIRPORTS AUTHORITY OF INDIA**

BID MANAGER	:	Sr. Manager (Engg.-Civil)
TEL NO.	:	0651-2251248
EXTENSION NO.	:	1132
MOBILE NO.	:	7973994284
E-MAIL ID	:	simerdeep@aai.aero
FAX NO.	:	0651-2250500 (APD)

**Mgr, Engg.(C)**

**Sr. Mgr. Engg.(C)**

**Jt. GM Engg.(C)**

**GM Engg.(C)**

**Approved By  
RED (ER)**

**BIRSA MUNDA AIRPORT  
ENGINEERING WING (CIVIL)**

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**Mgr. Engg.(C)**

**Sr Mgr Engg.(C)**

**Jt. GM Engg.(C)**

**GM Engg.(C)**

**Approved  
RED (ER)**

AIRPORTS AUTHORITY OF INDIA  
B.M. AIRPORT, RANCHI

**NOTICE INVITING E-TENDER**

1. **Item rate** tenders are invited through the e-tendering portal by Senior Manager (Engg.-Civil) (Bid Manager), Airports Authority of India, B.M. Airport, Ranchi 834002 on behalf of Chairman, AAI, from the eligible AAI empanelled contractors under category –I ( for works costing more than Rs 10.00 crore) for the work for the work of **“Development of Civil Airport at Bokaro SH Pavement works- Resurfacing & Strengthening of Existing Runway, Apron, Taxi Track including grading of operational area at Bokaro Airport”** at an estimated cost of **Rs. 12,25,61,808.00** with period of completion **06 (Six) months** including 01 month rains.

The tendering process is online at e-portal URL address **<https://etender.gov.in/eprocure/app>** or **[www.aai.aero](http://www.aai.aero)** . Aspiring bidders may download and go through the tender document.

Prospective Tenderers are advised to get themselves register at CPP-portal, obtain ‘Login ID’ & ‘Password’ and go through the instructions available in the Home Page after log in to the CPP-portal **<https://etender.gov.in/eprocure/app>** or **[www.aai.aero](http://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. Bidders are requested to kindly mention the URL of the Portal and Tender ID in the subject while emailing any issue along with the contact details.

Bid documents may be scanned with 100 dpi with black and white option which helps in reducing size of the scanned documents.

**“No bid procedure related query shall be referred to Independent External Monitors (IEMs)”.**

Any bid related issue/query pertaining to technical support or otherwise on CPP-portal (**URL:- <https://etender.gov.in/eprocure/app>**) for submission of tender documents should be addressed to AAI Help Desk Support (details also mentioned in the web-NIT) as below:-

- (i) Call Helpdesk. 24 x 7 Help Desk details are as below :-

Tel: 120-4200462, 120-4001002, Mobile: 91-8826246593 or can send email at:  
support-eproc@nic.in

Bidders are requested to mention URL of the Portal and Tender ID in the e-mail sent along with their contact details.

- (ii) For any further technical assistance with regard to functioning of CPP portal, the bidder should contact personnel at following AAI help desk numbers on all working days below:-

08.00 hrs to 20.00 hrs (Mon-Sat) -

011 – 24632950, Ext-3512 (Six Lines), E-Mail:- [eprochelp@aai.aero](mailto:eprochelp@aai.aero)

09.30 hrs to 18.00 hrs (Mon-Fri) -

011 – 24632950, Ext-3523, E-Mail:- [etendersupport@aai.aero](mailto:etendersupport@aai.aero),  
[sanjeevkumar@aai.aero](mailto:sanjeevkumar@aai.aero) and [snita@aai.aero](mailto:snita@aai.aero).

09.30 hrs to 18.00 hrs (Mon-Fri)-

011 – 24657900, E-Mail:- [gmitchq@aai.aero](mailto:gmitchq@aai.aero)

In case of technical support regarding e-tender portal, if AAI Help Desk is non responsive, the Bid Manager can be contacted as below on all working days from 9.30 hrs. to 18.00 hrs.

Name : Sh. Simerdeep Singh, Sr. Mgr. (E-C)  
 Telephone No. : 0651-2251248  
 Extension No. : 1132  
 Mobile No. : 7973994284  
 E-mail ID : simerdeep@aai.aero  
 Fax No. : 0651-225050 (APD)

**All bid procedure related queries be referred to HELP DESK as above and then to BID Manager only. Please note that under no circumstances bid procedure related queries shall be referred to the IEMs.**

2. Following 2 Covers shall be submitted through online at CPP- portal by the bidder as per the following schedule:-

### **CRITICAL DATA SHEET**

Publishing Date	<b>08/05/2018</b>
Bid Document Download / Sale Start Date	<b>08/05/2018 from 18:00 hrs</b>
Clarification Start Date	<b>08/05/2018 from 18:00 hrs</b>
Clarification End Date	<b>17/05/2018 upto 11:00 hrs.</b>
Bid Submission Start Date	<b>08/05/2018 from 18:00 hrs.</b>
Bid Submission End Date	<b>17/05/2018 upto 18:00 hrs.</b>
Last date and time of submission of original BG/Demand Draft against EMD and Tender Fee, Signed hard copy of AAI Unconditional Acceptance Letter. Signed Integrity Pact	<b>21/05/2018 upto 18:00 hrs.</b>
Bid Opening Date (Cover – I)	<b>23/05/2018 at 11:00 hrs.</b>
Bid Opening Date (Cover – II)	<b>To be intimated later on through CPP-Portal</b>
Tender Fee	<b>Rs.3360/- (i/c. GST) Non-Refundable</b>
EMD	<b>Rs.24,51,237/-</b>

**Cover-I :- (Technical Bid containing scanned copy of Tender Fee, scanned copy of EMD, Unconditional Acceptance of AAI's Tender Conditions, Signed Integrity Pact, undertaking for machinery mentioned at SCC -Page-11-12, Declaration of works )**

The tenderer shall submit their application only at CPP Portal <https://etender.gov.in/eprocure/app>. Tenderer/Contractor are advised to follow the instruction provided in the tender document for online submission of bids. Tenders are required to upload the digitally signed file of scanned documents along with scanned copy of Demand Draft for Tender Fee, Scanned copy of **Earnest Money Deposit (EMD)** of value **Rs. 24,51,237.00** in the form of **Demand Draft** /Bank Guarantee/BG from Nationalised or any scheduled bank (but not from Co-operative or Gramin Bank), drawn in favour of **Airports Authority of India** payable at **Ranchi** as stipulated in the notice inviting tender may be submitted in **Cover-I (/Technical Bid)** along with Unconditional Acceptance of AAI's Tender Conditions (Proforma given in PR-1 of Tender Document), Signed Integrity Pact. Undertaking for Number of works in hand and undertaking for machinery as stipulated at SCC-page 11-12 on performa at page PR-14.

An agency already having **three or more** ongoing works (of any value) in AAI shall not be eligible to participate in limited tender(s) called from empanelled contractors. Numbers of works deem to include work(s) in hand till the completion of work has been recorded by the Engineer-in-charge. AAI reserve the right to review the empanelment and initiate suitable action against the agency submitting false information on this account. Contractor shall submit required declaration in Envelope I, which is available at Annexure- 10 of Page PR-17.

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.

Scanned copy of **Tender Fee of Rs 3360 (i/c. GST) Non-Refundable** will be required to be paid offline in the form of **Demand Draft** from Nationalised or any scheduled bank (but not from Co-operative or Gramin Bank), drawn in favour of **Airports Authority of India** payable at **Ranchi**. The original Demand Draft against Tender fee should reach by post/courier/given in person to the concerned officials, within 03 days of the last date of bid submission or as specified in the Tender Document. The details of Demand Draft / any other accepted instruments, physically sent, should tally with the details available in the scanned copy and the data entered during bid submission time.

**Cover-II: The financial e-Bid through CPP portal.**

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 bidders. 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). No other cells should be changed. Once the details have been completed, the bidder should save it and submit it online, without changing the filename. If the BOQ file is found to be modified by the bidder, the bid will be rejected.

3. Original EMD, hard copy of signed Unconditional Acceptance of AAI's Tender Conditions ,original Signed Integrity Pact be sent to the **Sr. Manager (Engg.-Civil), Airports Authority of India, B.M. Airport, Ranchi - 834002** and should reach to Bid Manager before the date and time mentioned in **CRITICAL DATA SHEET**. Tender of the tenderer whose EMD and unconditional acceptance of AAI's tender conditions, signed integrity pact are not received by the time of the opening of pre-qualification of tender then their tenders will be summarily rejected. Any postal delay will not be entertained.

4. **Bids opening Process is as below:-**

**Cover-I:** Containing Tender Fee & Technical bid shall be opened as per **CRITICAL DATA SHEET**. The intimation regarding acceptance/rejection of their bids will be intimated to the contractors/firms through e-tendering portal.

If any clarification is needed from the bidder about the deficiency in his uploaded documents in Cover-I , he will be asked to provide it through CPP portal. The bidder shall upload the requisite clarification/documents within time specified by AAI, failing which tender will be liable for rejection.

**Cover-II:** The financial bids of the Contractors/firms found to be meeting the qualifying requirements and technical criteria shall be as per **CRITICAL DATA SHEET. (Depending on Technical Bid evaluation the date shall be intimated through CPP portal).**

5. 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.

6. AAI reserve the right to disallow issue of tender document to working agencies whose performance at ongoing project (s) is below par and usually poor and has been issued letter of restrain/Temporary/Permanent debar by any department of AAI. **AAI reserve the right to verify the credential submitted by the agency at any stage (before or after the award of 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 firm then AAI shall take the following action:**
  - a) Forfeit the entire amount of EMD submitted by the firm.
  - b) The agency shall be liable for debarment from tendering in AAI, apart from any other appropriate contractual / legal action.
7. Consortium / JV Companies shall not be permitted. No single firm shall be permitted to submit two separate applications.
8. Purchase preference to Central Public Sector Undertaking shall be applicable as per the directive of Govt. of India prevalent on the date of acceptance.
9. Concession to Indian Micro and small Enterprises (MSEs) units will be given as per provisions (Para-10) of public procurement policy for MSEs order 2012 with upto date provisions, MSEs (Micro & Small Enterprises) registered with DIC/N SIC/KVIC/KVIB/Directorate of Handicraft and Handloom etc.

**Sr. Manager (Engg.-Civil)**  
(For and on behalf of the Chairman,  
Airports Authority of India)  
B.M. Airport, Ranchi – 834002  
Mobile No: 7973994284

# **AIRPORTS AUTHORITY OF INDIA**

## **INSTRUCTIONS FOR ONLINE BID SUBMISSION**

The bidders are required to submit soft copies of their bids electronically on the CPP Portal, using valid Digital Signature Certificates. The instructions given below are meant to assist the bidders in registering on the CPP Portal, prepare their bids in accordance with the requirements and submitting their bids online on the CPP Portal.

More information useful for submitting online bids on the CPP Portal may be obtained at **etenders.gov.in**

### **REGISTRATION**

- 1) Bidders are required to enrol on the e- Procurement module of the Central Public Procurement Portal at **etenders.gov.in** by clicking on the link “**Online bidder Enrolment**” on the CPP Portal which is free of charge.
- 2) As part of the enrolment process, the bidders will be required to choose a unique username and assign a password for their accounts.
- 3) Bidders are advised to register their valid email address and mobile numbers as part of the registration process. These would be used for any communication from the CPP Portal.
- 4) Upon enrolment, the bidders will be required to register their valid Digital Signature Certificate (Class II or Class III Certificates with signing key usage) issued by any Certifying Authority recognized by CCA India (e.g. Sify / nCode / eMudhra etc.), with their profile.
- 5) Only one valid DSC should be registered by a bidder. Please note that the bidders are responsible to ensure that they do not lend their DSC’s to others which may lead to misuse.
- 6) Bidder then logs in to the site through the secured log-in by entering their user ID / password and the password of the DSC / e-Token.

### **SEARCHING FOR TENDER DOCUMENTS**

- 1) There are various search options built in the CPP Portal, to facilitate bidders to search active tenders by several parameters. These parameters could include Tender ID, Organization Name, Location, Date, Value, etc. There is also an option of advanced search for tenders, wherein the bidders may combine a number of search parameters such as Organization Name, Form of Contract, Location, Date, Other keywords etc. to search for a tender published on the CPP Portal.
- 2) Once the bidders have selected the tenders they are interested in, they may download the required documents / tender schedules. These tenders can be moved to the respective ‘My Tenders’ folder. This would enable the CPP Portal to intimate the bidders through SMS / e-mail in case there is any corrigendum issued to the tender document.

- 3) The bidder should make a note of the unique Tender ID assigned to each tender, in case they want to obtain any clarification / help from the Helpdesk.

### **PREPARATION OF BIDS**

- 1) Bidder should take into account any corrigendum published on the tender document before submitting their bids.
- 2) Please go through the tender advertisement and the tender document carefully to understand the documents required to be submitted as part of the bid. Please note the number of covers in which the bid documents have to be submitted, the number of documents - including the names and content of each of the document that need to be submitted. Any deviations from these may lead to rejection of the bid.
- 3) Bidder, in advance, should get ready the bid documents to be submitted as indicated in the tender document / schedule and generally, they can be in PDF / XLS / RAR / DWF/JPG formats. Bid documents may be scanned with 100 dpi with black and white option which helps in reducing size of the scanned document.
- 4) To avoid the time and effort required in uploading the same set of standard documents which are required to be submitted as a part of every bid, a provision of uploading such standard documents (e.g. PAN card copy, annual reports, auditor certificates etc.) has been provided to the bidders. Bidders can use "My Space" or "Other Important Documents" area available to them to upload such documents. These documents may be directly submitted from the "My Space" area while submitting a bid, and need not be uploaded again and again. This will lead to a reduction in the time required for bid submission process.

### **SUBMISSION OF BIDS**

- 1) Bidder should log into the site well in advance for bid submission so that they can upload the bid in time i.e. on or before the bid submission time. Bidder will be responsible for any delay due to other issues.
- 2) The bidder has to digitally sign and upload the required bid documents one by one as indicated in the tender document.
- 3) Bidder has to select the payment option as "offline" to pay the tender fee / EMD as applicable and enter details of the instrument.
- 4) Bidder should prepare the EMD as per the instructions specified in the tender document. The original should be posted/couriered/given in person to the concerned official, latest by the last date of bid submission or as specified in the tender documents. The details of the DD/any other accepted instrument, physically sent, should tally with the details available in the scanned copy and the data entered during bid submission time. Otherwise the uploaded bid will be rejected.
- 5) Bidders are requested to note that they should necessarily submit their financial bids 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

bidders. 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). No other cells should be changed. Once the details have been completed, the bidder should save it and submit it online, without changing the filename. If the BOQ file is found to be modified by the bidder, the bid will be rejected.

- 6) The server time (which is displayed on the bidders' dashboard) will be considered as the standard time for referencing the deadlines for submission of the bids by the bidders, opening of bids etc. The bidders should follow this time during bid submission.
- 7) All the documents being submitted by the bidders would be encrypted using PKI encryption techniques to ensure the secrecy of the data. The data entered cannot be viewed by unauthorized persons until the time of bid opening. The confidentiality of the bids is maintained using the secured Socket Layer 128 bit encryption technology. Data storage encryption of sensitive fields is done. Any bid document that is uploaded to the server is subjected to symmetric encryption using a system generated symmetric key. Further this key is subjected to asymmetric encryption using buyers/bid openers public keys. Overall, the uploaded tender documents become readable only after the tender opening by the authorized bid openers.
- 7) The uploaded tender documents become readable only after the tender opening by the authorized bid openers.
- 8) Upon the successful and timely submission of bids (i.e. after Clicking "Freeze Bid Submission" in the portal), the portal will give a successful bid submission message & a bid summary will be displayed with the bid no. and the date & time of submission of the bid with all other relevant details.
- 9) The bid summary has to be printed and kept as an acknowledgement of the submission of the bid. This acknowledgement may be used as an entry pass for any bid opening meetings.

#### **ASSISTANCE TO BIDDERS**

- 1) Any queries relating to the tender document and the terms and conditions contained therein should be addressed to the Tender Inviting Authority for a tender or the relevant contact person indicated in the tender.
- 2) Any queries relating to the process of online bid submission or queries relating to CPP Portal in general may be directed to the 24x7 CPP Portal Helpdesk.

(i) For any technical related queries please call the Helpdesk. The 24 x 7 Help Desk details are as below:-

Tel: 0120 – 4200462, 0120 – 4001002, Mobile: 91 8826246593, E-mail: [support-eproc@nic.in](mailto:support-eproc@nic.in)

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

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

(ii) 08.00 hrs to 20.00 hrs (Mon-Sat)-

011 – 24632950, Ext-3512 (Six Lines), E-Mail:- [eprochelp@aai.aero](mailto:eprochelp@aai.aero)

(iii) 09.30 hrs to 18.00 hrs (Mon-Fri)-

011 – 24632950, Ext-3523, E-Mail:- [etendersupport@aai.aero](mailto:etendersupport@aai.aero),  
[sanjeevkumar@aai.aero](mailto:sanjeevkumar@aai.aero) and [snita@aai.aero](mailto:snita@aai.aero).

(iv) 09.30 hrs to 18.00 hrs (Mon-Fri)-

011 – 24657900, E-Mail:- [gmitichq@aai.aero](mailto:gmitichq@aai.aero)

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**AIRPORTS AUTHORITY OF INDIA**  
**GENERAL GUIDELINES FOR THE BIDDERS**

1. The e-tenders are invited on behalf of the Airports Authority of India for the work as mentioned at **Page No. 130 of GCC**. The estimated cost of the work is mentioned at **Page No. 130 of GCC**. This estimate, however, is given merely as rough guide.
2. The Tenders shall be in the prescribed Form.
3. The works are required to be completed within the period as mentioned at **Page No.-132 of GCC**.
4. Not more than one Tender shall be submitted by a contractor or by a firm of contractors.  
  
No two or more concerns in which an individual is interested, as Proprietor and/or partner shall tender for the execution of the same works. If they do so, all such Tenders shall be liable to be rejected.
5. The Accepting Authority as mentioned at **Page No.-131 of GCC** shall be the Accepting Officer hereinafter, referred to as such for the purpose of this contract.
6. Tender documents 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 open for inspection in the office of the **Sr. Manager (Engg-Civil), Airports Authority of India, B. M. Airport, Ranchi - 834002**, between hours of 11.00 am & 4.00 pm every day except Saturday, Sunday and Public Holidays. Tender document can be downloaded from the CPP portal without paying any tender fees. However, to participate in the tender/to submit the tender document, the Bidders must pay stipulated tender fee (Non- refundable) of Rs. 3360.00 (i/c. GST).
7. Bidders are advised to inspect and examine the site and its surroundings and satisfy themselves before submitting their Tenders, 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 to risks, contingencies and other circumstances which may influence or effect their Tender. A bidder 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 bidder 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 stores, tools and plant, etc. will be issued to him by Airports Authority of India, local conditions, local material rates and other factors bearing on the execution of the works.
9. 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 bidders. 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). No other cells should be changed. Once the details have been completed, the bidder should save it and submit it online, without changing the filename. If the BOQ file is found to be modified by the bidder, the bid will be rejected.
10. 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.
11. Tenders shall be uploaded by the bidder up to the date and time as mentioned in CRITICAL DATA SHEET at page e-NIT-2 and shall be opened on the date and time as mentioned therein.
12. Earnest Money of stipulated amount as mentioned at **Page No. 130 of GCC** in the form of Demand Draft/Bank Guarantee/BG from any Schedule bank of India preferably from Nationalized bank but not from cooperative/Gramin bank **in favour of Airports Authority of India payable at Ranchi.**
13. 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.

- 13.1 A **responsive bidder** is one who submits the financial bid and accepts all the terms and conditions of the tender document.
- 13.2 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.
- 13.3 A Bidders shall submit a responsive bid, failing which his Tender will be liable to be rejected.
- 13.4 The Accepting Authority reserves to himself the right of accepting the whole or any part of the Tender and Bidders shall be bound to perform the same at his quoted rates.
14. On acceptance of Tender earnest money will be treated as part of the security deposit.
15. Airports Authority of India will return the earnest money where applicable to every unsuccessful bidder except as provided in the Tender documents.
16. Canvassing in connection with Tenders is strictly prohibited and the Tenders submitted by the bidders who resort to canvassing will be liable to rejection.
17. The Bidders shall not be permitted to tender for works in Airports Authority of India, Engineering Department, responsible for award and execution of contracts, in which his near relative is posted as Manager Finance & Accounts or Sr. Officer or as an engineer in any capacity. 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 in Airports Authority of India. Any breach of this condition by the contractor would render him liable to be debarred from Tendering for next 2 years.

18. The contractors shall give a list of AAI employees related to him.
19. No Engineer of Gazetted rank or other Gazetted Officer employed in Engineering or Administrative duties in an Engineering Department of Airports Authority of India/Govt. of India is allowed to work as a contractor for a period of one year of his retirement from Airports Authority of India/ Government service, without the previous permission of Airports of India/Govt. of India. The 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 Airports Authority of India/Govt. of India as aforesaid before submission of the Tender or engagement in the contractor's service.
20. The Tender for works shall remain open for acceptance for a period of **90 (ninety) days** from the date of opening of financial bid. If any bidder withdraws his Tender before the said period or makes any modifications in the terms and conditions of the Tender which are not acceptable to the Department, then Airports Authority of India shall without prejudice to any other right or remedy, be at liberty to forfeit the full said earnest money absolutely.
21. 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 to the Engineer-in-Charge.
22. If at any stage, any information /documents submitted by the applicant is found to be incorrect/false or have some discrepancy which disqualifies the firm then AAI shall take the following action:
  - a) Forfeit the entire amount of EMD submitted by the firm.
  - b) The agency shall be liable for restrained from tendering in AAI, apart from any other appropriate contractual / legal action.
23. The site for the work may be made available in full or in parts as per the NOTAM and as decided by Engineer-In-Charge.

24. The successful Tender/contractor, on acceptance of his Tender by the Accepting Authority, shall within 30 days from the date of award of work sign the contract consisting of Notice Inviting Tenders, General Conditions of Contract, Special/additional condition, General and technical specifications, Tender conditions as issued at the time of invitation of Tender and acceptance thereof with any correspondence leading there to.

25. **Submission of Bank Guarantee**

The agency shall advise the branch of the bank issuing bank guarantee to send the original Bank guarantee directly to the Airports Authority of India (AAI) under Registered Post (A.D). However, in exceptional cases as in case of EMD, where the guarantee is to be handed over directly to the AAI for any genuine reasons, the branch shall immediately send by Registered Post (A.D) an unstamped duplicate copy of the guarantee directly to the AAI with a covering letter with request to compare the same with the original received from their customer and confirm that it is in order. The agency shall also advise the issuing bank branch to incorporate the address etc. of the Regional/Controlling Branch of the issuing Branch in a suitable space in the Bank Guarantee.

The agency shall also advise the issuing bank branch that whenever any letter is issued by AAI to the concerned Bank Branch for confirmation of having issued the guarantee, Branch must send the confirmation letter to the concerned authorities promptly.

26. Once the bidder has submitted the digitally signed documents as per NIT along with unconditional acceptance 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 (Except unconditional rebate on quoted rates i.e. header discount (%) if any).

27. a(i) All tendered rates should be inclusive of all taxes including GST @18% [Service Code-995421]. Wherever supplies/services involve imports, the same should be identified separately. Basic Custom Duty will be paid by AAI by utilizing EPCG license/duty scrip under SEI scheme of GOI. GST shall be paid to bidder for any taxable supply/services against a valid Tax Invoice.

(ii) The bidder is required to provide tax type and percentage in all bids other than that of civil work.

(iii) In case of composite work having component of SITC items, such as Electrical and Mechanical installation, Airport Security, IT, Furniture etc., should be identified separately with value of goods and services, Tax rate, amount of tax so as to enable AAI to claim input tax credit on such items.

(iv) In case of changes in rate of Tax or any 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.

(b)(i) An undertaking shall be submitted for having registration under GST and compliant of GST provisions. (Annexure-8, Page no. PR-15) (ii) In case of non-compliance of GST provisions and blockage of any input credit, the bidders shall be responsible to indemnify AAI. (iii) That all input credits have been passed on to AAI by the bidder. (c) 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 authorized 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.

(d) The contractor shall, within a period of 30 days of the imposition of any such further tax or levy, pursuant to the Constitution (Forty Sixth Amendment) Act, 1982, give a written notice thereof to the Engineer-in-Charge that the same is given pursuant to this condition together with all necessary information relating thereto

#### IMPLEMENTATION OF INTEGRITY PACT

Signing of Integrity Pact (as per Proforma enclosed in Tender Document) is mandatory for every Bidder/ contractor in this procurement/bid process, the signed original pact to be send to the Office of Asstt. General Manager (E-C), Bid Manager, Airports Authority of India, Deoghar Airport, Deoghar-814114 (Jharkhand) and should reach within 72 Hrs. (Three working days) after opening of the bid. Scanned copy of the same may be submitted in the Envelope-I of the e-tendering portal.

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.

The External Independent Monitor (EIM) for this work will be:

Sh. M.P. Juneja,  
(Retd. Addl. Member of Railway  
Board) e mail: [mp.juneja@yahoo.com](mailto:mp.juneja@yahoo.com)  
Mob:09811733362

Dr. Anup K Pujari  
IAS (Retd.)  
Email: [anup@nic.in](mailto:anup@nic.in)  
Mob:09899210944

The duties, responsibilities and powers of EIM are detailed in section 8 of the IP Act.

Any query related to tender document or problem in E-bidding process should normally be addressed to bid manager as detailed in para For Queries, Replies and clarifications.

The Consequence of integrity Pact may be perused on the website <http://www.aai.aero/>

**Sr. Manager (Engg.-Civil)**  
(For and on behalf of the Chairman  
Airports Authority of India),



## **GENERAL CONDITIONS OF CONTRACT**

# **2017**

# AIRPORTS AUTHORITY OF INDIA

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# AIRPORTS AUTHORITY OF INDIA

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## 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

Percentage Rate Tender/Item Rate Tender & Contract for Work

Airport : Ranchi
Branch : Engineering

Office of : Sr. Manager (Engg.-Civil)

(A) Tender for the work of:- Development of Civil Airport at Bokaro SH Pavement works- Resurfacing & Strengthening of Existing Runway, Apron, Taxi Track including grading of operational area at Bokaro Airport.

(i) To be submitted/ uploaded upto \_\_\_\_\_ hours (As per CRITICAL DATA SHEET) on \_\_\_\_\_ in NIC CPP Portal.

(ii) To be opened in presence of tenders who may be present on \_\_\_\_\_ at (As per CRITICAL DATA SHEET) \_\_\_\_\_ hrs. in the office of Sr. Manager (Engg.-Civil)

Issued to -----\*

Signature of officer issuing documents -----\*

Designation -----\*

Date of issue -----\*

\*(ii) Not applicable for e-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 3/2 bid system and not to make any modifications in its terms and conditions.

I/ We undertake and confirm that for eligibility of similar work(s) has / have not been got executed on back to back basis through another contractor. Further that, if such a violation comes to the notice of AAI, then I/We shall accept the decision of AAI if we are debarred for tendering in AAI in future works. Also, if such a violation comes to the notice of AAI before date of start of work, the Engineer-in-Charge shall be free to forfeit the entire amount of Earnest Money Deposit / Performance Guarantee.

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. 24,51,237.00 (Rupees Twenty Four Lac Fifty One Thousand Two Hundred Thirty Seven Only)** is here by submitted as Demand Draft/BG\* in the format prescribed in tender documents as earnest money (Appendix-I). If I/we, fail to furnish the prescribed performance bank guarantee within prescribed period, I/we agree that the said Chairman, A.A.I. 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, A.A.I. 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. (\* To be deleted which are not applicable)

Date :

Signatures of Contractor :

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 &amp; Directions

1.	<b>General Rules &amp; Directions</b>	<p>All work proposed for execution by contract are notified in a form of invitation to tender pasted in public places /NIC CPP Portal and signed by the officer inviting tender or by publication in Newspapers and posted on AAI web-site and NIC CPP Portal <a href="http://etenders.gov.in">http://etenders.gov.in</a> and <a href="http://www.aai.aero">www.aai.aero</a> (for reference only).</p> <p>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.</p>
2.		<p>In the event of the e-tender being submitted by a firm, it must be digitally signed. Such tender will be treated as signed tender. For physical tender it must be signed separately by each partner thereof or in the event of the absence of any partner, it must be signed on his behalf by a person holding a power-of-attorney authorizing him to do so, such power of attorney to be produced with the tender, and it must disclose that the firm is duly registered under the Indian Partnership Act, 1952.</p>
2. (A)		<p>In case of the tender submitted by a Joint Venture / Consortium, a copy of joint venture / consortium agreement in the specified proforma defining the lead partner should be submitted. The lead partner shall sign all the documents in respect of the works. The documents signed by any other person or firm other than the lead partner shall not be entertained.</p>
3.		<p>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.</p>
4.	<b>Applicable for item Rate Tender only .</b>	<p>Any person who submits a tender shall fill up the usual printed form, stating at what rate he is willing to undertake each item of the work. Tenderers, which propose any alteration in the work 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. No single tender shall include more than one work, but contractors who wish to tender for two or more works shall submit separate tender for each. Tender shall have the name and number of the works to which they refer, written on the envelopes.</p> <p>The rate(s) must be quoted in decimal coinage. Amount must be quoted in full Rupees by ignoring 50 paise and considering more than 50 paise as Rupee one. In case the lowest tendered amount (worked out on the basis of quoted rate of Individual items) of two or more contractors is same, then such lowest contractors will be asked to submit revised offer quoting rate of each item of the schedule of quantity for all sub sections/sub heads as the case may be, but the revised quoted rate of each item of schedule of quantity for all sub sections/sub heads should not be higher than their respective original rate quoted already at the time of submission of tender. The lowest tender shall be decided on the basis of</p>

		<p>revised offer.</p> <p>If the revised tendered amount (worked out on the basis of quoted rate of individual items) of two or more contractors received in revised offer is again found to be equal, then the lowest tender, among such contractors, shall be decided by draw of lots in the presence of Jt. GM (Engg)/ DGM (Engg)/ AGM (Engg)/ Sr Manager (Engg) in-Charge of major and minor component(s) work and the lowest contractors those have quoted equal amount of their tenders.</p> <p>In case of any such lowest contractor in his revised offer quotes rate of any item more than their respective original rate quoted earlier at the time of submission of tender, then such revised offer shall be treated invalid. Such case of revised offer of the lowest contractor or case of refusal to submit revised offer by the lowest contractor shall be treated as withdrawal of his tender before acceptance and 50% of his earnest money shall be forfeited.</p> <p>In case all the lowest contractors those have same tendered amount (as a result of their quoted rate of individual items), refuse to submit revised offers, then tenders are to be recalled after forfeiting 50% of EMD of each lowest contractors.</p> <p>Contractor, whose earnest money is forfeited because of non-submission of revised offer, or quoting higher revised rate(s) of any item(s) than their respective original rate quoted already at the time of submission of his bid shall not be allowed to participate in the retendering process of the work.</p> <p><b>Note:</b> Till the time software supports the above provisions, revised offers from tenderers forming the tie shall be obtained and procedure prescribed for “Restricted call of tenders” shall be adopted (for e-tenders).</p>
<p><b>4. (A)</b></p>	<p><b>Applicable for Percentage Rate Tender only.</b></p>	<p>In case of Percentage Rate Tenders, tenderer shall fill up the usual printed form, stating at what percentage below/above (in figures as well as in words) the total estimated cost given in Schedule of Quantities at Schedule-A, he will be willing to execute the work. The tender submitted shall be treated as invalid if;</p> <ol style="list-style-type: none"> <li>1. The contractor dose not quote percentage above/below on the total amount of tender or any section/sub-head of the tender.</li> <li>2. The percentage above/below is not quoted in figures &amp; words both on the total amount of tender or any section/sub-head of the tender.</li> <li>3. The percentage quoted above/below is different in figures and words on the total amount of tender or any section/sub-head of the tender.</li> </ol> <p>Tenders, which propose any alteration in the work 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.</p> <p>No single tender shall include more than one work, but contractors who wish to tender for two or more works shall submit separate tender for each. Tender shall have the name and number of the works to which they refer, written on the envelopes.</p> <p>In case the lowest tendered amount (estimated cost + amount worked on the basis of percentage above/below) of two or more bidders is same, such lowest bidders will be asked to submit revised offer in the form of letter mentioning percentage above/ below on estimated cost of tender including all sub sections/sub heads as the case may be, but the revised percentage quoted above/below on tendered cost or on each sub section/ sub head should not be higher than the percentage quoted at the time of submission of tender. The lowest tender shall be decided on the basis of revised offers. In case any of such contractor refuses to submit revised offer, then it shall be treated as withdrawal of his tender before acceptance and 50% of earnest money shall be forfeited.</p> <p>If the revised tendered amount of two more bidders received in revised offer is again found to be equal , the lowest tender, among such bidders, shall be decided by draw of lots in the presence of Jt. GM (Engg)/ DGM (Engg)/ AGM (Engg)/ Sr</p>

		<p>Manager (Engg) in-Charge of work &amp; the lowest bidders those who have quoted equal amount of their tenders. In case all the lowest bidders those have quoted same tendered amount, refuse to submit revised offers, then tenders are to be recalled after forfeiting 50% of EMD of each bidder.</p> <p>Bidders, whose earnest money is forfeited because of non-submission of revised offer, shall not be allowed to participate in the re-tendering process of the work.</p> <p><b>Note: Till the time software supports the above provisions, revised offers from tenderers forming the tie shall be obtained and procedure prescribed for "Restricted call of tenders" shall be adopted.</b></p>
<p>4. (B)</p>		<p>In case the lowest tendered amount (estimated cost + amount worked on the basis of percentage above/below) of two or more contractor is same, such lowest contractor will be asked to submit sealed revised offer in the form of letter mentioning percentage above/below on estimated cost of tender including all sub section/sub heads as the case may be, but the revised percentage quoted above/below on tendered cost or on each sub section /sub head should not be higher than the percentage quoted at the time of submission of tender. The lowest tender shall be decided on the basis of revised offers.</p> <p>In case any of such contractor refuses to submit revised offer, then it shall be treated as withdrawal of his tender before acceptance and 50% of earnest money shall be forfeited.</p> <p>If the revised tendered amount of two more contractors received in revised offers is again found to be equal, the lowest tender, among such contractor, shall be decided by draw of lots in the presence of Jt.GM(Engg)/DGM (Engg), AGM (Engg)/Sr. Manager (Engg) in Charge of major &amp; minor component(s) of work &amp; the lowest bidders those who have quoted same tendered amount of their tenders.</p> <p>In case all the lowest contractors those have quoted same tendered amount, refuse to submit revised offers, then tenders are to be recalled after forfeiting 50% of EMD of each bidder.</p> <p>Bidders, whose earnest money is forfeited because of non submission of revised offer, shall not be allowed to participate in the re-tendering process of the work.</p>
<p>5.</p>		<p>The officer inviting tender or his duly authorized representative, will open tenders in the presence of any intending bidders who may be present at the time, and will enter the amounts of the several tenders in a comparative statement in a suitable form. In the event of a tender being accepted, a receipt for the earnest money shall thereupon be given to the contractor who shall thereupon for the purpose of identification sign copies of the specifications and other documents mentioned in Rule – I.</p> <p>In the event of a tender being rejected, the earnest money shall thereupon be returned to the contractor remitting the same, without any interest.</p>
<p>6.</p>		<p>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.</p>
<p>7.</p>		<p>The receipt of an accountant or clerk for any money paid by the bidder towards tender fee will not be considered as any acknowledgement or payment to the officer inviting tender and the bidder shall be responsible for seeing that he procures a receipt signed by the officer inviting tender or a duly authorised cashier.</p>
<p>8.</p>		<p>The memorandum of work tendered for and the schedule of materials to be supplied by the department and their issue-rates, shall be filled and completed in the office of the officer inviting tender before the tender form is issued. If a form is issued to an intending bidder without having been so filled in and incomplete, he shall request the officer to have this done before he completes and delivers his tender.</p>

9.		The bidders shall sign a declaration under the official Secret Act 1923, for maintaining secrecy of the tender documents drawings or other records connected with the work given to them. The unsuccessful bidders shall return all the drawings given to them.
9(A).		Use of correcting fluid any where in tender document is not permitted. Such tender is liable for rejection. If there is any correction it should be cut with a straight line and should be initialed and cello tape to be provided on all the rates quoted in case of physical tenders.
10.	<b>Applicable for Item Rate Tender Only.</b>	<p>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,</p> <ol style="list-style-type: none"> <li>i. 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.</li> <li>ii. 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.</li> <li>iii. 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.</li> <li>iv. 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 items(s) shall be derived from the amount(s) quoted by the contractor against such item(s).</li> <li>v. 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.</li> <li>vi. Sub Para i to iv above shall not be applicable in case of e-tendering.</li> </ol>
	<b>Applicable for percentage rate tender only .</b>	<p>In case of percentage Rate Tenders only percentage quoted shall be considered. Any tender containing item rates is liable to be rejected Percentage quoted by the bidder in percentage rate tender shall be accurately filled in figures and words, so that there is no discrepancy.</p> <p>However, if the bidder has worked out the amount of the tender and if any discrepancy is found in the percentage quoted in words and figures,</p> <ol style="list-style-type: none"> <li>i. The percentage which corresponds with the amount worked out by the bidder shall, unless otherwise proved, be taken as correct.</li> <li>ii. If the amount of the tender is not worked out by the bidder or it does not correspond with the percentage written either in figures or in words, then the percentage quoted by the bidder in words shall be taken as correct.</li> <li>iii. Where the percentage quoted by the bidder in figures and in words tally but the amount is not worked out correctly, the percentage quoted by the bidder will, unless otherwise proved, be taken as correct and not the amount.</li> </ol>
11.		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.
12.	<b>Applicable for Item Rate Tender only.</b>	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.
12(A).	<b>Applicable for percentage rate tender only.</b>	In Percentage Rate Tender, the tenderer shall quote percentage below / above (in figures as well as in words) at which he will be willing to execute the work. He shall also work out the total amount of his offer and the same should be written in figures as well as in words in such a way that no interpolation is possible. In case of figures, the word 'Rs' should be written before the figure of rupees and work '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. (quoting of rates in Paise is not applicable in e-tenders)
13	<b>Acceptance of abnormally low quoted bid (Capital &amp; Revenue Expenditure Contract)</b>	<p>Wherever the price of the lowest bidder is lower than the justified cost by more than 25%, lowest bid can be termed as Abnormally Low Quoted Bid (ALQB). Processing of such bid shall be as follows:</p> <ol style="list-style-type: none"> <li>i) All such items which are more than 25% below the justified rate shall be terms as 'Abnormally Low Quote Items (ALQI)' and these items shall be identified by the Bid Processing Manager.</li> <li>ii) The Bid Processing Manager shall take approval of the accepting authority to seek clarification from the lowest bidder.</li> <li>iii) The lowest bidder has to submit justification of their price either in NIC portal, if possible, or through a separate letter along with analysis of rates for all such ALQI.</li> <li>iv) On receipt of clarifications, a committee comprising of officials from Engineering, Finance and other related directorates, to be decided by ED (Engg.) at CHQ level and RED at Regional Head Quarter Level, shall analyze the bidder's justification and shall give their recommendation to accept or reject the bid. The recommendation of the committee can be accepted by the authority next higher to the officer competent to accept the tender as per the Delegation of Powers. However Chairman shall have the full power. Reasons for such acceptance/rejection shall be on record.</li> <li>v) On decision to accept the tender, the bidder shall be asked to submit a bank guarantee for all such "ALQI", amounting to 10% of the difference between the 75% of justified cost and the cost quoted by the bidder. This bank guarantee shall be termed as Quality Protection Bank Guarantee (QPBG) and shall be over and above the other normal bank guarantees and shall be valid up to the defect liability period.</li> <li>vi) In case of Percentage Rate Tenders, Bank Guarantee shall be asked for 10% of the difference between 75% of the estimated cost and the correspondence cost worked out on the basis of percentage quoted by bidder.</li> <li>vii) This QPBG for any tender shall be a fixed amount as one time measure and will not vary at any stage during the currency of the work or contract.</li> <li>viii) In case of labour intensive ALQB like MESS, Annual Maintenance Contract for supply of labors, Operation &amp; Maintenance Contract and other similar works, contractor shall transfer / deposit salary of the individual worker to their bank account which should be linked with AADHAR card and a statement to be submitted to AAI.</li> </ol>

13A		In case the contractor does not carry out the work on ALQ items as per schedule or as per NIT specifications, the Engineer-in-charge shall issue a letter to the contractor to comply its obligations as per NIT, for ALQ items. Engineer-in-charge shall also give one reminder after 10 days of 1 <sup>st</sup> letter and if contractor still do not start the work on ALQ items, then bank guarantee i.e. QPBG should be encashed and work should be got executed through another agency at his risk and cost.
14		<ol style="list-style-type: none"> <li>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.</li> <li>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.</li> <li>iii. In works where condition of submission of Performance Guarantee is not applicable, the security deposit @ 10% of the tendered value shall be deducted.</li> <li>iv. The Security deposit (under ii &amp; 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.</li> <li>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.</li> </ol>
15.		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.
16.		<ol style="list-style-type: none"> <li>1. All Tendered rates should be inclusive of all taxes including GST@18% (Service Code-995421) Wherever supplies/services involve imports, the same should be identified separately. Basic Custom Duty will be paid by AAI by utilizing EPCG license/duty scrip under SEI scheme of GOI. GST shall be paid to bidder for any taxable supply/services against a valid Tax Invoice.</li> <li>2. The bidder is required to provide Tax type and Tax percentage in all bids other than that of civil works.</li> <li>3. In case of composite works having component of SITC items, such as Electrical &amp; Mechanical Installation, Airport System. Security, IT, Furniture etc should be identified separately with value of goods and services, Tax Rate, amount of Tax so as to enable AAI to claim Input Tax Credit on such items.</li> <li>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.</li> </ol>
17.		The contractor/ bidder shall give a list of AAI employees related to him.

18.		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.
19.		The tender for composite work includes, in addition to building work, all other works such as sanitary and water supply installations drainage installation, electrical work, horticulture work, roads and paths etc. The tenderer apart from being a registered contractor (B&R) of appropriate class, must associate himself with agencies of appropriate class which are eligible to tender for sanitary and water supply drainage, electrical and horticulture works in the composite tender.
20.		The contractor/ bidder shall submit list of works completed in last 5 years* as well as which are in hand (in progress) in the following format for assessing Bidding capacity of the bidders:

Name of work 1	Name and particulars of Office where work is being executed 2	Value of work 3	Position of works in progress 4	Remarks 5

21		The contractor/bidder shall comply with the provisions of the Apprentices Act 1961, and the rules and orders issued there under from time to time. If he fails to do so, his failure will be a breach of the contract and the Executive Director (Engg.) may in his discretion, without prejudice to any other right or remedy available in law, 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.
22		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.  <b>Note:</b> In such case para 23 below may be deleted by NIT approving authority
23		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.  <b>Note:</b> In such case para 22 above may be deleted by NIT approving authority

## CONDITIONS OF CONTRACT

### Definitions :

1.		The <b>contract</b> means the documents forming the tender and acceptance thereof and the formal agreement executed between the competent authority on behalf of the Chairman, Airports Authority of India 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 and shall be complimentary to one another.
2.		In the contract, the following expressions shall, unless the context otherwise requires, have the meanings, hereby respectively assigned to them :-
		<ul style="list-style-type: none"> <li>i. The expression <b>works</b> or <b>work</b> 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.</li> <li>ii. The <b>site</b> 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.</li> <li>iii. The <b>Contractor/tenderer/bidder</b> 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.</li> <li>iv. <b>The Chairman</b> means the Chairman Airports Authority of India and his Successors.</li> <li>v. The <b>Engineer-in-Charge</b> 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.</li> <li>vi. <b>AAI or Airports Authority of India</b> shall mean the Chairman Airports Authority of India.</li> <li>vii. The terms <b>Member(Planning)</b> means the head of Department of Engineering, Airports Authority of India.</li> <li>viii. <b>Accepting Authority</b> shall mean the authority mentioned in Schedule 'F'.</li> <li>ix. <b>Excepted Risk</b> 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.</li> <li>x. <b>Market Rate</b> 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.</li> </ul>

		<p>xi. <b>Schedule(s)</b> 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.</p> <p>xii. <b>Department</b> means Airports Authority of India, which invites tender on behalf of Chairman, Airports Authority of India.</p> <p>xiii. <b>Tendered value</b> means the value of the entire work as stipulated in the letter of award.</p>
3.	<b>Scope and Performance</b>	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.	<b>Works to be carried out</b>	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.	<b>Sufficiency of Tender</b>	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.	<b>Discrepancies and Adjustment of Errors</b>	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 :-
		<ul style="list-style-type: none"> <li>i. Description of Schedule of Quantities.</li> <li>ii. Particular/ technical Specification and Special Condition, if any.</li> <li>iii. Drawings.</li> <li>iv. C P W D Specifications.</li> <li>v. Indian Standard Specifications of B I S./ IRC Code of Practice / ASTM standards.</li> <li>vi. Sound Engineering practice as directed by the Engineer-in-charge, whose decision in this regard shall final and binding on the contractor.</li> </ul>
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	<b>Payment for similar items with different quoted rates in different subheads of the contract agreement</b>	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.	<b>Reverse Auction for purchase tenders</b>	AAI may opt for reverse auction in case of purchase tender if value of supplies put to tender is more than Rs. 2Cr. <b>DELETED</b>
10.	<b>Signing of Contract</b>	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, sign the contract consisting of :
i)		<ul style="list-style-type: none"> <li>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.</li> <li>ii. Standard AAI Form as mentioned in Schedule 'F' consisting of :           <ul style="list-style-type: none"> <li>a. Various standard clauses with corrections upto the date stipulated in Schedule 'F' alongwith annexures thereto.</li> <li>b. AAI Safety Code.</li> <li>c. Model Rules for the protection of health, sanitary arrangements for workers employed by AAI or its contractors.</li> <li>d. AAI Contractor's Labour Regulations.</li> <li>e. List of Acts and omissions for which fines can be imposed.</li> </ul> </li> <li>iii. <b>No payment for the work done will be made unless contract in form of agreement is signed by the contractor.</b></li> </ul>

## CLAUSES OF CONTRACT

### CLAUSE 1

	<b>Performance Guarantee</b>	This clause is applicable for the works for which the estimated cost put to tender is more than Rs.5 crores.
		<p>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 Fixed Deposit Receipts or Guarantee Bonds of any Scheduled bank but not Co-operative or Gramine bank in accordance with the form annexed hereto.(Appendix-XI) In case a fixed deposit receipts of any Bank is furnished by the contractor to the AAI as part of the performance guarantee and the Bank is unable to make payment against the said fixed deposit receipts or Guarantee Bonds, the loss caused thereby shall fall on the contractor and the contractor shall forthwith on demand furnish additional security to make good the deficit.</p>
		<p>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<sup>st</sup> running account bill. Moreover, interest @10% per annum on performance guarantee amount would be levied (non-refundable) for delayed period of submission.</p>
		<p>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.</p>
		<p>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:</p> <p>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.</p> <p>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.</p>
		<p>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.</p>

**CLAUSE 1 A**

	<p><b>Recovery of Security Deposit</b></p>	<p>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 along with the sum already deposited as earnest money, will amount to security deposit of 5% of the tendered value of the work. Earnest money shall be adjusted first in the security deposit and further recovery of security deposit shall commence only when the update amount of security deposit starts exceeding the earnest money. Such deductions will be made and held by way of Security Deposit unless he/they has/have deposited the amount of Security at the rate mentioned above in the form of fixed deposit receipts or guarantee bonds of any Scheduled Bank but not Co-operative or Gramin Bank. In case a fixed deposit receipts or Guarantee Bonds of any Bank is furnished by the contractor to the AAI as part of the security deposit and the Bank is unable to make payment against the said fixed deposit receipt or 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 along with the sum already deposited as earnest money 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 receipts or Guarantee Bonds tendered by the Scheduled Banks (but not any Co-operative or Gramin bank) (if deposited for more than 12 months) endorsed in favour of the 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 of the contractor at the rates mentioned above and the Earnest money deposited at the time of tenders will be treated as part of the Security Deposit. The security deposit as deducted above can be released against bank guarantee issued by any Scheduled Bank (but not from Co-operative / GraminBank), on its accumulations to a minimum of Rs. 5 lakh subject to the condition that amount of such bank guarantee, except last one, shall not be less than Rs. 5 lakh.</p> <p><b>Note 1:</b> Provided further that the validity of Bank Guarantee including the one given against the earnest money 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 &amp; Clause 5.</p> <p><b>Note 2:</b> Note 1 above shall be applicable for both clause 1 and 1 A.</p>
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**Clause 2**

	<p><b>Compensation for Delay</b></p>	<p>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.</p> <p>i) Compensation for delay of work</p> <p>If the completion of work is delayed due to reasons attributed to contractor, AAI shall be entitled for compensation for delay as detailed below :</p> <p><b>i. For works costing upto Rs. 20.00 Lac:</b> 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.</p> <p><b>ii For the works costing more than Rs 20 Lac</b></p> <p><b>a. For the works having completion period less than 2 years</b> 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.</p> <p><b>b. For the works having completion period more than 2 years</b> 0.5% of tendered value per fortnight of delay or lesser amount as decided by the competent authority subject to a maximum of 10% of the tendered value.</p>
		<p>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.</p> <p>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.</p>

		<p>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.</p> <p>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.</p> <p>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.</p>
	<b>Clause 2A</b>	
	<b>Incentive for early completion</b>	<p>In case, the contractor completes the work ahead of updated stipulated date of completion or justified extended date of completion as determined under clause 5.3,12 &amp; 15, 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. Provided that justified time for extra work shall be calculated on pro – rata basis as cost of extra work x stipulated period/tendered value. The amount of bonus, if payable, shall be paid along with final bill after completion of work. Provided always that provision of the Clause 2A shall be applicable only when so provided in 'Schedule F'.</p> <p>This clause shall be applicable for the work which estimated cost put to tender is Rs. 50.00 Cr. and above for pavement work and Rs.100.00 Cr. and above for building work.</p>

**Clause 2B**

	<b>Release of withheld amount against compensation for delay.</b>	<p>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) will authorize such action on receipt of proposal from the Engineer-In-Charge through proper channel.</p>
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**Clause 3**

	<b>When Contract can be Determined</b>	<p>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</p>
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<p>A.A..</p>		<p>any of the following cases:</p> <ul style="list-style-type: none"> <li><b>i.</b> 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.</li> <li><b>ii.</b> 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.</li> <li><b>iii.</b> 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.</li> <li><b>iv.</b> 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.</li> <li><b>v.</b> 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.</li> <li><b>vi.</b> 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.</li> <li><b>vii.</b> 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.</li> <li><b>viii.</b> 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 sequestration of his estate or if a trust deed be executed by him for benefit of his creditors.</li> <li><b>ix.</b> 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.</li> <li><b>x.</b> If the contractor shall suffer an execution being levied on his goods and allow it to be continued for a period of 21 days.</li> </ul>
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		<p><b>xi.</b> 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 :</p> <p>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.</p> <p>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.</p>
	<p><b>CLAUSE 3 A</b></p>	
		<p>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 Earnest Money Deposit and the Performance Guarantee of the contractor shall be refunded within 30 days.</p> <p>Neither party shall claim any compensation for such eventuality. This clause is not applicable for any breach of the contract by either party.</p>

**CLAUSE 4**

	<p><b>Contractor liable to pay compensation even if action not taken under Clause-3</b></p>	<p>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.</p>
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**CLAUSE 5**

	<p><b>Time and Extension for Delay</b></p>	<p>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 prejudice to any other right or remedy available in law, be at liberty to forfeit the earnest money &amp; performance guarantee absolutely.</p>
<p>5.1</p>		<p>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</p>

<p>A.A.I.</p>		<p>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.</p> <p>c. Contractor shall submit monthly progress reports (2 copies) highlighting status of various activities and physical completion of work.</p> <p><b>PROGRAMME CHART</b></p> <p>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.</p> <p>ii. The programme chart should include the following:</p> <ol style="list-style-type: none"> <li>a. Descriptive note explaining sequence of the various activities.</li> <li>b. Network (PERT / CPM / BAR CHART).</li> <li>c. Programme for procurement of materials by the contractor.</li> </ol> <p>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.</p> <p>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.</p> <p>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.</p> <p>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</p>
	<p>C.....I.....O.....</p>	<p>Page 22</p>

		progress report.
5.2		<p>If the work(s) be delayed by:-</p> <ul style="list-style-type: none"> <li>i. Force majeure, or an act of terrorism</li> <li>ii. Abnormally bad weather, or</li> <li>iii. Serious loss or damage by fire, or</li> <li>iv. Civil commotion, local commotion of workmen, strike or lockout, affecting any of the trades employed on the work, or</li> <li>v. Delay on the part of other contractors or tradesmen engaged by Engineer- in- Charge for executing work not forming part of the Contract, or</li> <li>vi. Non-availability of stores, which are the responsibility of AAI to supply or</li> <li>vii. Non-availability or break down of tools and Plant to be supplied or supplied by AAI or</li> <li>viii. Any other cause which, in the absolute discretion of the Engineer-in-Charge is beyond the Contractor's control.</li> </ul> <p>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. The contractor shall also sign the hindrance register at appropriate place for each hindrance.</p>
5.3		<p>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.</p>
5.4		<p>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.</p>

**CLAUSE 6**

	<b>Measurements of Work Done</b>	<p>Engineer-in-charge shall, except as otherwise provided, ascertain and determine by measurement, the value in accordance with the contract of work done. All measurement of all items having financial value shall be entered in Measurement Book and/or level field book so that a complete record is obtained of all works performed under the contract.</p> <p>All measurements and levels shall be taken jointly by the Engineer-in-Charge or his authorized representative and by the contractor or his authorised representative from time to time during the progress of the work and such measurements shall be signed and dated by the Engineer-in-Charge and the contractor or their representatives in token of their acceptance. If the contractor objects to any of the measurements recorded, a note shall be made to that effect with reason and signed by both the parties.</p> <p>If for any reason the contractor or his authorized representative is not available and the work of recording measurements is suspended by the Engineer-in-</p>
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		<p>Charge or his representative, the Engineer-in-Charge and the Department shall not entertain any claim from contractor for any loss or damages on this account. If the contractor or his authorized representative does not remain present at the time of such measurements after the contractor or his authorized representative has been given a notice in writing three (3) days in advance or fails to countersign or to record objection within a week from the date of the measurement, then such measurements recorded in his absence by the Engineer-in-Charge or his representative shall be deemed to be accepted by the Contractor.</p> <p>The contractor shall, without extra charge, provide all assistance with every appliance, labour and other things necessary for measurements and recording levels.</p> <p>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 items 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.</p> <p>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 measurement any work in order that the same may be measured and correct dimensions thereof be taken before the same is covered up or placed beyond the reach of 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 measurements without such notice having been given or the Engineer-in-Charge'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.</p> <p>Engineer-in-Charge or his authorized representative may cause either themselves or through another officer of the department to check the measurements recorded jointly or otherwise as aforesaid and all provisions stipulated herein above shall be applicable to such checking of measurements or levels.</p> <p>It is also a term of this contract that recording of measurements of any item of work in the measurement book and/or its payment in the interim, on account or 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.</p>
<p><b>Clause 6 A</b></p>		
	<p><b>Computerised Measurement Book</b></p>	<p>Computerized 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</p>

		<p>the format of the department so that a complete record is obtained of all the items of works performed under the contract.</p>
<p>A.A.I.</p>		<p>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.</p> <p>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.</p> <p>The final, fair, computerised measurement book given by the contractor, duly bound, with its pages machine numbered, should be 100% 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.</p> <p>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 along with 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.</p> <p>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.</p> <p>Except where any general or detailed description of the work expressly shows to the contrary, measurements shall be taken in accordance with the procedure setforth in the specifications notwithstanding any provision in the relevant Standard Method of measurement or any general of 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.</p> <p>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</p>
<p>A.A.I.</p>		<p style="text-align: center;">C.....I.....O.....</p> <p style="text-align: right;">Page 25</p>

		<p>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-in-charge'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.</p>
		<p>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.</p>

**CLAUSE 7**

	<p><b>Payment on Intermediate Certificate to be regarded as Advances</b></p>	<p>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. The amount admissible shall be paid by 10th working day after the day of presentation of the bill by the Contractor to the Engineer-in-Charge or his Asstt. Manager / Manager (Engg.) together with the account of the material issued by the department, or dismantled materials, if any. In the case of works outside the headquarters of the Engineer- in-Charge, the period of ten working days will be extended to fifteen working days. 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</p>
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		<p>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.</p> <p>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.</p> <p>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 by taking detailed measurements thereof.</p>
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**CLAUSE 8**

	<p><b>Completion Certificate and Completion Plans</b></p>	<p>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.</p> <p>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 :</p> <p>Submits completion plan, maintenance manual, manufactures catalogue and gives performance test for system.</p> <p>b. For repair works: The performance of the repaired system has been tested and found satisfactory.</p> <p>c. For AMC work: The system has been tested for its performance/ completeness and taken over by AAI / next agency for operation and</p>
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		maintenance.
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**CLAUSE 8 A**

	<b>Contractor to keep site clean</b>	<p>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.</p> <p>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.</p>
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**CLAUSE 8 B**

	<b>Completion Plans to be Submitted by the Contractor</b>	<p>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.</p> <p>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.</p> <p>The contractor shall also submit catalogues of all equipment's and maintenance manual for the complete E &amp; 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.</p>
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**CLAUSE 9**

	<b>Payment of final bill</b>	<p>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 extinguished. Payments of those items of the bill in respect of which there is no dispute and of items in dispute, for quantities and rates as approved by Engineer-in- charge, will, as far as possible be made within the period specified herein under, the period being reckoned from the date of receipt of the bill by the Engineer-incharge or his authorised Asstt. Manager / Manager (Engg.), complete with account of materials issued by the Department and dismantled materials.</p> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">SI</th> <th style="text-align: left;">Value of work</th> <th style="text-align: left;">Time limit</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">1</td> <td>If the Tendered value of work is up to Rs. 50 lac</td> <td>2 months</td> </tr> <tr> <td style="text-align: center;">2</td> <td>If the Tendered value of work is more than Rs.50 lac and up to Rs. 2.5 Crore:</td> <td>3 months</td> </tr> <tr> <td style="text-align: center;">3</td> <td>If the Tendered value of work exceeds Rs.</td> <td>6 months</td> </tr> </tbody> </table>	SI	Value of work	Time limit	1	If the Tendered value of work is up to Rs. 50 lac	2 months	2	If the Tendered value of work is more than Rs.50 lac and up to Rs. 2.5 Crore:	3 months	3	If the Tendered value of work exceeds Rs.	6 months
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3	If the Tendered value of work exceeds Rs.	6 months												

		<p>2.5 Crore:</p> <p>In case of delay in payment of final bills after prescribed time limit, a simple interest @ 5% per annum shall be paid to the contractor from the date of expiry of prescribed time limit which will be compounded on yearly basis, provided the final bill submitted by the contractor found to be in order.</p> <p>The Final bill shall be prepared for both L1 &amp; 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.</p>
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**CLAUSE 9 A**

	<p><b>Payment of contractor's bills to Banks</b></p>	<p>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.</p> <ul style="list-style-type: none"> <li>i. Informations as per proforma attached.</li> <li>ii. An authorisation in the form of a legally valid document such as power of attorney conferring authority on the bank to receive payments and</li> <li>iii. 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.</li> </ul> <p>Nothing herein contained shall operate to create in favour of the bank any rights or equities vis-à-vis the Airports Authority of India.</p>
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**CLAUSE 10**

	<p><b>Materials supplied by Authority</b></p>	<p>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 place his indent in writing for issue of such materials at least 7 days in advance of his requirement.</p> <p>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, form 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.</p> <p>The contractor shall submit alongwith every running bill (on account or interim bill) material-wise reconciliation statements supported by complete calculations</p>
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		<p>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.</p> <p>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.</p> <p>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 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.</p> <p>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.</p>
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**CLAUSE 10 A**

<p><b>Materials to be provided by the contractor and Mandatory Tests</b></p>	<ol style="list-style-type: none"> <li>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.</li> <li>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.</li> <li>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.</li> <li>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.</li> <li>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.</li> <li>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 materials, 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.</li> <li>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</li> </ol>
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		<p>the same to be supplied and all costs which may be attracted for such removal and substitution shall be borne by the Contractor.</p> <p>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.</p> <p>9. Details in respect of all mandatory tests shall be maintained in the desired format and attached with each Running Account Bill.</p>
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**CLAUSE 10 B**

(1)	<b>Secured Advance on Nonperishable materials</b>	<p>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.</p> <p>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.</p> <p>The secured advance shall also be payable against items brought at site for use in electrical and mechanical systems. Such secured 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.</p>
(II)	<b>Mobilisation Advance</b>	<p>2. Mobilisation advance not exceeding 10% of the tendered value shall be paid for the works costing more than Rs 5.00 Cr, subject to the availability of funds and if requested by the contractor in writing within period as indicated below.</p> <p>a. For the works costing between Rs. 5 crores – Rs.100 crores the application for the issue of mobilization advance must be received in writing within 30 days of handing over of the site.</p> <p>b. For the works costing more than Rs. 100 crores the application for the issue of mobilization advance must be received in writing within 45 days of handing over of the site.</p> <p>c. The contractor shall execute a Bank Guarantee Bond from any Scheduled Bank but not Co-operative or Gramin Bank as specified by Engineer-in-charge for 110% of value of installment of mobilisation advance before such advance is released. The 1<sup>st</sup> installment should not exceed Rs.20.00 Cr for the work for which the estimated cost is kept as Rs. 500.00 Cr. or more. The no. of installments</p>

		<p>shall be decided by AAI depending on progress of work and availability of funds.</p> <p>d. The second and subsequent installments shall be released by the Engineer-in-charge only after the contractor furnishes a proof of the satisfactory utilisation of the earlier installment to the entire satisfaction of the Engineer-in-charge. Provided provision of Clause 10B(II) shall be applicable only when so provided in Schedule 'F'. The contractor shall accordingly submit Bank Guarantee in parts for release of corresponding mobilisation advance and validity of BG shall be for an extended period of 3 months beyond stipulated date of completion.</p>
	<p><b>Interest on Mobilisation advance</b></p>	<p>3. The mobilisation advance bear simple interest at the rate of 10% 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.</p> <p>a. However, in rare cases, wherein progress of work is delayed beyond stipulated period of completion due to reasons beyond control of contractor, deferment in recovery of mobilization advance with accumulated interest thereon may be considered by AAI. In such case of deferred recovery, an enhanced rate of interest i.e 15% per annum shall be payable with recovery of outstanding mobilization amount @ 50% of gross value of running account bill(s), subject to Engineer-In-Charge certifying that deferment towards recovery of outstanding advance is proposed in the overall interest of the project and is necessitated to improve the progress of work..</p>
	<p><b>Recovery of Mobilisation advance</b></p>	<p>4. Recovery of such advanced of sums against above and the interest thereon shall be made by deduction from (the contractor's bill) the on-account payments in suitable percentage in relation to the stipulated period of completion as detailed below :</p> <p>a. 25% of the amount advanced plus interest due upto 1/4<sup>th</sup> of the stipulated period of the completion.</p> <p>b. 60% of the amount advanced plus interest due upto ½ of the stipulated period of the completion.</p> <p>c. 100% of the amount advanced plus interest due upto 3/4<sup>th</sup> of the stipulated period of the completion or 80% of the progress of work whichever is earlier.</p> <p>d. Wherein progress of work is delayed beyond stipulated period of completion due to reasons beyond control, deferment in recovery of mobilization advance with accumulated interest thereon may be considered at an enhanced rate of interest i.e. 15% per annum with recovery of outstanding mobilization advance @50% of gross value of running account bill.</p> <p>e. In case requisite amount as recoverable above is not available in on-account payments mentioned above, the agency shall deposit the same within 7 days of its due otherwise all Bank Guarantees submitted by the agency towards mobilization advance shall be encashed by the Engineer-in-charge.</p>

**CLAUSE 10 C**

	<p><b>Payment on Account of Increase in Prices/ Wages due to Statutory Order(s)</b></p>	<p>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 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.</p> <p>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.</p> <p>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.</p> <p>For this purpose, the labour component of the value of the work executed during period under consideration shall be _____ 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.</p> <p>The cost of work for which escalation applicable (w) is same as cost of work done as worked out as indicated in clause 10 CC minus the amount of full assessed value of secured advances.</p>
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**CLAUSE 10 CA**

	<p><b>Payment due to variation in prices of materials after</b></p>	<p>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</p>
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<p>A.A.I.</p>	<p><b>receipt of tender</b></p>	<p>including the justified period extended under the provisions of clause 5 of the contract without any action under Clause 2.</p> <p>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).</p> <p>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.</p> <p>The amount of the contract shall accordingly be varied for all such materials worked out as per the formula given below for individual material:</p> <p>Adjustment for component of individual material.</p> $V = P \times Q \times \frac{CI - CIO}{CIO}$ <p>where,</p> <p>V = Variation in material cost i.e. increase or decrease in the amount in rupees to be paid or recovered</p> <p>P = Base price of material as issued under authority of DG, CPWD or concerned Zonal Chief Engineer CPWD and as indicated in Schedule 'F'.</p> <p>For Projects and original works</p> <p>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</p> <p>For maintenance works</p> <p>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</p> <p>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</p>
<p>A.A.I.</p>		<p>C.....I.....O.....</p> <p style="text-align: right;">Page 35</p>

		<p>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'.</p> <p>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.</p> <p><b>Note:</b></p>
		<p>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.</p> <p>Provided always that provisions of the preceding Clause 10 C shall not be applicable in respect of materials covered in this Clause.</p> <p>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.</p> <p>iii. Cement mentioned wherever in this clause includes cement component used in RMC brought at site from outside approved RMC plants, if any.</p> <p>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.</p> <p>v. If built-up steel items are brought at site from workshop, than the variation shall be paid for structural steel up-to the period when the built-up item/finished product is brought at site.</p>

**Clause 10CC**

<p><b>Payment due to Increase/ Decrease in Prices / Wages (excluding material covered under clause 10CA) after Receipt of Tender for works.</b></p>	<p>If the prices of materials (not being materials supplied or services rendered at fixed prices by the Department in accordance with clause 10 &amp; 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.</p> <p>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 <b>Schedule 'F'</b>. Such compensation for escalation in the prices of materials and labour, when due, shall be worked out based on the following provisions:</p> <ol style="list-style-type: none"> <li>i. The base date for working out such escalation shall be the last stipulated date of the receipt of tenders including extension, if any.</li> <li>ii. The cost of work on which escalation will be payable shall be reckoned as below:             <ol style="list-style-type: none"> <li>a. Gross value of work done upto this quarter (A)</li> <li>b. Gross value of work done upto the last quarter (B)</li> <li>c. Gross value of work done since previous quarter (A-B) (C)</li> <li>d. Full assessed value of secured advance (excluding material covered under clause 10CA) fresh paid in this quarter (D)</li> <li>e. Full assessed value of secured advance (excluding material covered under clause 10CA) recovered in this quarter (E)</li> <li>f. Full assessed value of secured advance for which escalation is payable In this quarter (D-E) (F)</li> <li>g. Advance payment made during this quarter (G)</li> <li>h. Advance payment recovered during this quarter (H)</li> <li>i. Advance payment for which escalation is payable in this quarter (G-H) (I)</li> <li>j. Extra items/ deviated quantities of items paid as per clause 12 based (J) on prevailing market rates during this quarter: Then, <math>M=(C+F+I-J)</math> <math>N= 0.85 M</math></li> <li>k. Less cost of material supplied by the department as per clause 10 and recovered during the quarter (K)</li> <li>l. Less cost of services rendered at fixed charges as per Clause 34 and recovered during the quarter (L)</li> </ol> <p><b>Cost of work for which escalation is applicable</b> <b><math>W=N-(K+L)</math></b></p> </li> </ol>
	<ol style="list-style-type: none"> <li>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.</li> <li>iv. The compensation for escalation for other materials (except Bitumen, cement,</li> </ol>

		<p>reinforcement bars, structural steel or others material covered under clause 10CA) and P.O.L. shall be worked as per the formula(m &amp; 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.</p>
<p><b>Materials</b></p>		<p><b>m. Formula for adjustment in material cost</b></p> $V_m = W \times X_m \times \frac{MI - M_{lo}}{100} \times \frac{M_{lo}}{M_{lo}}$ <p><math>V_m</math> = Variation in material cost i.e. increase or decrease in the amount in rupees to be paid or recovered.</p> <p><math>W</math> = Cost of work done, worked out as indicated in sub para (ii) of Clause 10 CC</p> <p><math>X_m</math> = 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.</p> <p><math>MI</math> = 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 &amp; 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.)</p> <p><math>M_{lo}</math> = 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.</p> <p>* <b>Note:</b> relevant component only will be applicable</p>
<p><b>POL</b></p>		<p><b>n. Formula for adjustment in POL cost</b></p> $V_f = W \times Z \times \frac{FI - F_{lo}}{100} \times \frac{F_{lo}}{F_{lo}}$ <p><math>V_f</math> = Variation in cost of Fuel, Oil &amp; Lubricant i.e. increase or decrease in the amount in rupees to be paid or recovered.</p> <p><math>W</math> = Cost of work done, worked out as indicated in sub para (ii) of Clause 10 CC</p> <p><math>Z</math> = Component of Fuel, Oil and Lubricant expressed as a percentage of the total value of the work</p> <p><math>FI</math> = 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 &amp; 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 or the prevailing index of the period under consideration, whichever is less, shall be considered)</p> <p><math>F_{lo}</math> = All India wholesale price index for Fuel, Oil and Lubricant valid on the last stipulated date of receipt of tenders including extensions, if any.</p>

		<p>v. The following principles shall be followed while working out the indices mentioned in above para</p> <p>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.</p> <p>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.</p>
<p><b>Labour</b></p>		<p><b>vi Formula for adjustment in Labour cost</b></p> <p>The compensation for escalation for <b>labour</b> shall be worked out as per the formula given below:</p> $V_i = W \times Y \times \frac{LI - L_{l0}}{100} \times \frac{L_{l0}}{L_{l0}}$ <p><math>V_i</math> = Variation in labour cost i.e. amount of increase or decrease in rupees to be paid or recovered</p> <p><math>W</math> = Value of work done, worked out as indicated in sub para (ii) above</p> <p><math>Y</math> = Component of labour expressed as a percentage of the total value of the work</p> <p><math>LI</math> = 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 prorata basis only as cost of extra work x stipulated period/tendered cost, shall be considered.) or the minimum wage prevailing on the last date of the quarter previous to the one under consideration, whichever is less, shall be considered.</p> <p><math>L_{l0}</math> = 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.</p>

		<p>vii. The following principles will be followed while working out the compensation as per sub para (vi) above:</p> <ol style="list-style-type: none"> <li>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.</li> <li>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.</li> <li>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.</li> </ol> <p>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:</p> <ol style="list-style-type: none"> <li>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.</li> <li>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.</li> </ol> <p>ix. Provided always that :</p> <ol style="list-style-type: none"> <li>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.</li> <li>b. Where provisions of clause 10CC are not applicable, provisions of Clause 10C and 10CA will become applicable.</li> </ol> <p>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 as finally entered in the measurement book by AM / Mgr / SM / AGM or the date of submission of bill by the contractor to the Department. This shall be the guiding factor to decide the bill relevant to that period in case of computerized billing.</p>
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**CLAUSE 10 D**

	<p><b>Dismantled Material AAI Property</b></p>	<p>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.</p>
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**CLAUSE 11**

<p><b>Work to be executed in accordance with specifications, drawings, orders etc.</b></p>	<p>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.</p>
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**CLAUSE 12**

	<p><b>Deviations / variations extent and pricing</b></p>	<p>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 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.</p>
<p>12.1</p>		<p>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:</p> <ul style="list-style-type: none"> <li>i. In the proportion which the additional cost of the altered, additional or substituted work, bears to the original tendered value plus</li> <li>ii. 25% of the time calculated in (i) above or such further additional time as may be considered reasonable by the engineer-in-charge.</li> </ul>
<p>12.2</p>	<p><b>Deviation, Extra Items and Pricing</b></p>	<p>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.</p>

	<p><b>Deviation, substituted items pricing</b></p>	<p>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.</p> <p>(i) 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).</p> <p>(ii) 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).</p>
	<p><b>Deviation, Deviated Quantities, Pricing</b></p>	<p>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.</p>
<p>12.3</p>		<p>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.</p>
<p>12.4</p>		<p>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.</p>
<p>12.5</p>		<p>For the purpose of operation of Schedule F, the following works shall be treated as works relating to foundation unless &amp; otherwise defined in the contract:</p> <ul style="list-style-type: none"> <li>i. For Buildings: All works up to 1.2 metres above ground level or up to floor 1 level whichever is lower.</li> <li>ii. For abutments, piers and well staining: All works up to 1.2 m above the bed level.</li> <li>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.</li> </ul>

		<ul style="list-style-type: none"> <li>iv. For roads, apron, runway &amp; taxitrack all items of excavation, filling GSBC and including treatment of sub-base.</li> <li>v. For reservoirs/tanks (other than overhead reservoirs/tanks): All works up to 1.2 metres above the ground level.</li> <li>vi. For basement: All works up to 1.2 m above ground level or up to floor 1 level whichever is lower.</li> </ul>
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**

<p><b>Foreclosure of contract due to Abandonment or Reduction in Scope of Work</b></p>	<p>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;</p> <ul style="list-style-type: none"> <li>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.</li> <li>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.</li> <li>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.</li> </ul>
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		<p>iv. Reasonable compensation for transfer of T &amp; P from site to contractor’s permanent stores or to his other works, whichever is less. If T &amp; P are not transported to either of the said places, no cost of transportation shall be payable.</p> <p>v. Reasonable compensation for repatriation of contractor’s site staff and imported labour to the extent necessary.</p> <p>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.</p> <p>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.</p> <p>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.</p>
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**CLAUSE 14**

	<p><b>Carrying out part Work at risk &amp; cost of contractor</b></p>	<p>a. If contractor:</p> <p>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</p> <p>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</p> <p>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.</p> <p>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:</p> <p>i. Take possession of the site and any materials, constructional plant, implements, stores, etc., thereon; and/or</p> <p>ii. Carry out the part work / part incomplete work of any item(s) by any means at the risk and cost of the contractor.</p>
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<p><b>CLAUSE 15</b></p>		<p>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.</p> <p>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.</p> <p>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.</p> <p>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 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.</p> <p>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.</p>
	<p><b>Suspension of Work</b></p>	<p>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:</p> <ol style="list-style-type: none"> <li>a. on account of any default on the part of the contractor or;</li> <li>b. for proper execution of the works or part thereof for reasons other than the default of the contractor; or</li> <li>c. for safety of the works or part thereof.</li> </ol> <p>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.</p>

<p><b>CLAUSE 15 A</b></p>	<p>ii. If the suspension is ordered for reasons (b) and (c) in sub-para (i) above (but not attributed to contractor):</p> <p>a. 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;</p> <p>b. 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.</p> <p>c. 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.</p>
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<p><b>Compensation in case of delay due to late supply of stipulated material by AAI.</b></p>	<p>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.</p> <p><del>DELETED</del></p> <p>This clause 15 A will not be applicable for works where no material is stipulated for issue by AAI.</p>
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**CLAUSE 16**

	<p><b>Action in case Work not done as per Specifications</b></p>	<p>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.</p> <p>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 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.</p> <p>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.</p>
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**CLAUSE 17**

	<p><b>Contractor Liable for Damages, defects during maintenance period</b></p>	<p>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</p>
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		<p>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 Engineer-in-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.</p> <p>In case of Maintenance and Operation works of E&amp;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.</p>
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**CLAUSE 18**

	<p><b>Contractor to Supply Tools &amp; Plants etc.</b></p>	<p>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-incharge’s stores) machinery, tools &amp; 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-incharge 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.</p>
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**CLAUSE 18 A**

	<p><b>Recovery of Compensation paid to Workmen</b></p>	<p>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</p>
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		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**

	<b>Ensuring Payment and Amenities to Workers if Contractor fails</b>	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 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**

	<b>Labour laws to be complied by the Contractor</b>	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 fourteen years shall be employed on the work.
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**CLAUSE 19 B**

	<b>Payment of wages</b>	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,
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<p>A.A.I.</p>		<p>including any labour engaged by his sub contractors in connection with the said work, as if the labour had been immediately employed by him.</p> <p>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)</p> <p>iv. The following deductions shall be permissible to be made by the Engineer-in-Charge.</p> <p>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.</p> <p>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.</p> <p>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.</p> <p>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.</p> <p>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.</p> <p>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.</p> <p>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.</p>
		<p>C.....I.....O.....</p> <p style="text-align: right;">Page 50</p>

		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 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**

		<p>The contractor shall submit by the 4th and 19th of every month, to the Engineer-in-charge a true statement showing in respect of the second half of the preceding month and the first half of the current month respectively:</p> <ol style="list-style-type: none"> <li>i. the number of labourers employed by him on the work,</li> <li>ii. their working hours,</li> <li>iii. the wages paid to him,</li> <li>iv. 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</li> <li>v. 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.</li> </ol>
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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 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**

		<p>Leave and pay during leave shall be regulated as follows:</p> <ol style="list-style-type: none"> <li>1. Leave:       <ol style="list-style-type: none"> <li>i. 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.</li> <li>ii. In the case of miscarriage - upto 3 weeks from the date of miscarriage.</li> </ol> </li> <li>2. Pay:       <ol style="list-style-type: none"> <li>i. 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.</li> <li>ii. In the case of miscarriage – leave pay at the rate of average daily earning</li> </ol> </li> </ol>
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		<p>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.</p> <p>3. 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.</p> <p>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.</p>
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**CLAUSE 19 G**

		<p>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.</p> <p>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&amp;A) Central Rules 1971, for the protection of health and sanitary arrangements for work – people employed the contractor (s) (hereinafter referred as “the said Rules”) the Engineer-in-Charge shall have power to give notice in writing to the contractor</p> <p>(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).</p>
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**CLAUSE 19 H**

		<p>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.</p> <p><b>i. Facility to be provided</b></p> <p>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.</p> <p>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.</p> <p>c. The contractor(s) shall also construct temporary latrines and urinals for the use</p>
		<p>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.</p> <p>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.</p> <p><b>ii. Specifications</b></p> <p>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.</p> <p>b. The contractor (s) shall provide each hut with proper ventilation.</p> <p>c. All doors, windows and ventilators shall be provided with suitable leaves for security purposes.</p> <p>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.</p> <p><b>iii. Water Supply</b></p> <p>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.</p> <p>iv. The site selected for the camp shall be high ground, removed from jungle.</p> <p><b>v. Disposal of Excreta:</b></p> <p>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</p>

		<p>Municipality / authority. The contractor shall provide one sweeper for every eight seats in case of dry system.</p> <p>vi. <b>Drainage</b> The contractor (s) shall provide efficient arrangements for draining away sullage water so as to keep the camp neat and tidy.</p> <p>vii. The contractor (s) shall make necessary arrangements for keeping the camp area sufficiently lighted to avoid accidents to the workers.</p> <p>viii. <b>Sanitation</b> 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.</p>
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**CLAUSE 19 I**

		<p>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.</p>
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**CLAUSE 19 J**

		<p>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.</p>
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**CLAUSE 19 K**

	<p><b>Employment of skilled / semiskilled workers</b></p>	<p>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 (NICMAR) 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 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</p>
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		<p>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.</p> <p>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.</p>
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**CLAUSE 19 L**

	<b>Registration with EPFO and ESIC</b>	<p>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.</p>
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**CLAUSE 19 M**

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

	<b>Minimum Wages Act to be Complied with</b>	<p>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.</p>
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**CLAUSE 20(A)**

	<b>Employees Provident Fund &amp; Miscellaneous Provision Act 1952/Jammu &amp; Kashmir Employees Provident Funds (and Miscellaneous Provisions) Act, 1961 and State Insurance (ESI) Act, 1948.</b>	<p>The Contractor shall comply with all the provisions of the Employees Provident Fund &amp; Misc. Provisions Act, 1952/ Jammu &amp; Kashmir Employees Provident Funds (and Miscellaneous Provisions) Act, 1961 and ESI Act, 1948, amended from time to time and rules framed thereunder. Some of the provisions are given below:</p> <ol style="list-style-type: none"> <li>a. The contractor shall intimate his PF Account Code No. allotted by Regional PF Commissioner and ESI Registration No. allotted by ESI Corporation after award of work and shall continue to have valid PF Account Code No. and ESI Registration No. till actual completion of the contract.</li> <li>b. The contractor shall provide a list of contract Workers engaged for contract work along with their PF Account No. &amp; ESI Registration No.</li> <li>c. The contractor by 20th of every month shall provide a monthly statement showing recoveries of contribution and proof of remittance of provident fund contribution to RPFC and ESI contributions to ESI Corporation in respect of Workers engaged in contract work.</li> <li>d. The contractor shall provide copies of PF &amp; ESI challans of monthly contributions in respect of contract workers engaged for contract work on month to month basis.</li> </ol> <p>AAI reserves the right to withhold minimum amount as detailed under, from the</p>
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		running account payments, if PF / ESI contributions are not paid by the contractor and proof to that effect have not been produced regularly on due dates. To withhold 3% for building work & 1.5% for road/pavement work of the total amount of work done during the period considered.
		ESI & EPF amount paid to the statutory authorities by the contractor shall be reimbursed on actual basis on submission of documentary evidence.

**CLUASE 21**

	<b>Work not to be sublet. Action in case of insolvency</b>	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**

	<b>Changes in firm's Constitution to be intimated</b>	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**

<p><b>Dispute Resolution Mechanism and Arbitration</b></p>		<p>Except where otherwise provided in the contract, all questions and disputes relating to the meaning of the specifications, design, drawings and instruction here-in before mentioned and as to the quality of workmanship or materials used on the work or as to any other question , claim, right, matter or thing whatsoever, in any way arising out of or relating to the contract, designs, drawings, specifications, estimates, instructions, orders or these conditions or otherwise concerning the work or the execution or failure to execute the same whether arising during the progress of the work or after the cancellation, termination, completion or abandonment thereof shall be dealt with as mentioned hereinafter:</p> <p>i. If the contractor considers any work demanded of him to be out side the requirement of the contract, or disputes any drawing, record or decision given in writing by the Engineer-in-Charge or if the Engineer in Charge considers any act or decision of the contractor on any matter in connection with or arising out of the contract or carrying out of the work, to be unacceptable and is disputed such party shall promptly within 15 days of the arising of the disputes request the Executive Director (Engg.)/Regional Executive Director/Member (Plg) /Chairman, AAI as the case may be, who shall refer the dispute to Dispute Redressal Committee (DRC) within 15 days along with a list of disputes with amounts claimed if any, in respect of each such disputes. The Dispute Redressal Committee (DRC) shall give the opposing party two weeks for written response, and give its decision within a period of 60 days extendable by 30 days by consent of both the parties from the receipt of reference from the Executive Director (Engg.)/Regional Executive Director/Member (Plg) /Chairman, AAI. Provided that no party shall be represented before the Dispute Redressal Committee by an advocate / legal counsel etc.</p> <p>If the Dispute Redressal Committee (DRC) fails to give its decision within aforesaid period or any party is dis-satisfied with the decision of Dispute Redressal Committee (DRC) or expiry of time limit given above, then either party may within a period of 30 days from the receipt of the decision of Dispute Redressal Committee (DRC), give notice to the Executive Director (Engg.)/Regional Executive Director/Member (Plg) /Chairman, AAI as the case may be for appointment of Arbitrator on prescribed proforma as per Appendix-XVII.under intimation to the other party.</p> <p>It is also a term of contract and each party invoking Arbitration must exhaust the aforesaid mechanism of settlement of claims/disputes prior to invoking Arbitration. The Executive Director (Engg.)/Regional Executive Director/Member (Plg) /Chairman, AAI shall in such case appoint the sole arbitrator or one of the three arbitrators as the case may be within 30 days of receipt of such a request and refer such disputes to arbitration. Wherever the Arbitral Tribunal consists of three Arbitrators, the contractor shall appoint one arbitrator within 30 days of making request for arbitration or of receipt of request by Engineer in Charge to Executive Director (Engg.)/Regional Executive Director/Member (Plg) /Chairman, AAI for appointment of arbitrator, as the case may be, and two appointed arbitrators shall appoint the third arbitrator, who shall act as the presiding arbitrator. In the event of :</p> <ol style="list-style-type: none"> <li>a. A party fails to appoint the second arbitrator, or</li> <li>b. The two appointed arbitrators fail to appoint the Presiding Arbitrator, then Member (Plg)/Chairman,AAI shall appoint the second or Presiding Arbitrator as the case may be.</li> </ol>
<p>A.A.I.</p>		<p style="text-align: center;">C.....I.....O.....</p> <p style="text-align: right;">Page 57</p>

<p><b>CLAUSE 26</b></p>		<p>ii Disputes or difference shall be referred for adjudication through arbitration by a Tribunal having Sole Arbitrator where tendered amount is Rs. 300.00 Cr or less. Where tendered value is more than Rs. 300.00 Cr., Tribunal shall consist of three arbitrators as above. The requirements of the arbitration and the conciliation act, 1996 (26 of 1996) and further modified Act in 2015 and any further statutory modifications or reenactment thereof and the rules made thereunder and for the time being in force shall be applicable.</p> <p>It is a term of this contract that the party invoking Arbitration shall give a list of disputes with amounts, claimed, if any, in respect of each such disputes along with the notice for appointment of Arbitrator and giving reference to the decision of the DRC.</p> <p>It is also term of this contract that any member of Arbitration Tribunal shall be a graduate engineer with experience in handling public works, engineering contracts at a level not lower than Chief Engineer. This shall be treated as mandatory qualification to be appointed as Arbitrator.</p> <p>Parties, before or at the time of appointment of Aarbitral Tribunal may agree in writing for fast track arbitration as per the Arbitration and Conciliation Act, 1996 (26 of 1996) as amended in 2015.</p> <p>Subject to provision in the Arbitration and Conciliation Act, 1996 (26 of 1996) as amended in 2015 whereby the counter claims if any can be directly filed before the arbitrator without any requirement of rereference by the Appointing Authority, the Arbitrator shall adjudicate on only such disputes as are referred to him by the appointing authority and give separate award against each disputes and claim referred to him and in all cases where the total amount of the claims by any party exceed Rs. 1,00,000/-, the Arbitrator shall give reasons for the award.</p> <p>It is also a term of the contract that if any fees are payable to the arbitrator, these shall be paid as per the Act. It is also a term of the contract that the arbitrator shall be deemed to have entered on the reference on the date he issues notice to both the parties calling them to submit their statement of claims and counter statement of claims.</p> <p>The place of the arbitration shall be mentioned in schedule 'F'. In case there is no mention of place of arbitration, the Arbitral Tribunal shall determine the place of arbitration. The venue of the arbitration shall be such place as may be fixed by the Arbitral Tribunal in consultation with both the parties. Failing any such agreement, then the Arbitral Tribunal shall decide the venue.</p>
	<p><b>Contractor to indemnify AAI against Patent Rights</b></p>	<p>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.</p>

**CLAUSE 27**

	<p><b>Lump sum Provisions in Tender</b></p>	<p>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.</p>
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**CLAUSE 28**

	<p><b>Action where no specifications are specified</b></p>	<p>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.</p>
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**CLAUSE 29**

	<p><b>With-holding and lien in respect of sums due from contractor</b></p>	<p>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 even 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</p>
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		<p>capacity or otherwise.</p> <p>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.</p> <p>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 Executive Director Engineering / General Manager Engineering on the one hand and the contractor on the other under any term of the contract permitting payment for work after assessment by the Executive Director Engineering / General Manager Engineering.</p>
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**CLAUSE 29 A**

	<p><b>Lien in respect of claims in other Contracts</b></p>	<p>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.</p> <p>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.</p>
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**CLAUSE 30**

	<p><b>Employment of coal mining or controlled area labour not permissible</b></p>	<p>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.</p> <p>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.</p> <p>iii. The contractor shall immediately remove any labourer who may be pointed</p>
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		<p>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.</p> <p>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.</p> <p><b>Explanation :-</b> 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.</p>
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**CLAUSE 31**

	<p><b>Unfiltered water supply</b></p>	<p>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.</p> <p>i. That the water used by the contractor (s) shall be fit for construction purposes to the satisfaction of the Engineer-in-Charge.</p> <p>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.</p>
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**CLAUSE 31A**

	<p><b>Departmental water supply, if available</b></p>	<p>Water if available may be supplied to the contractor by the department subject to the following conditions:-</p> <p>i. The water charges @1% shall be recovered on gross amount of the work done.</p> <p>ii. The contractor(s) shall make his/their own arrangement of water connection and laying of pipelines from existing main of source of supply.</p> <p>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.</p>
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**CLAUSE 32**

	<p><b>Alternate water arrangements</b></p>	<p>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</p>
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		<p>contractor on this account and his decision shall be binding on the contractor.</p> <p>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.</p>
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**CLAUSE 33**

	<p><b>Return of Surplus materials</b></p>	<p>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 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.</p>
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**CLAUSE 34**

	<p><b>Hire of plant &amp; Machinery</b></p>	<p>i. The Contractor shall arrange at his own expense all tools, plant, machinery and equipment(hereinafter referred to as T&amp;P) required for execution of the work except for the Plant &amp; Machinery listed in Schedule 'C' and stipulated for issue to the contractor. If the contractor requires any item of T&amp;P on hire from the T&amp;P available with the AAI over and above the T&amp;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 &amp; P shall also be applicable to such T&amp;P as is agreed to be issued.</p> <p>ii. Plant &amp; 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.</p>
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<p>A.A.I.</p>		<p>(v) 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.</p> <p>(vi) 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 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.</p> <p>(vii) The hire charges shown above are for each day of 8 hours (inclusive of the one hour lunch break) or part thereof.</p> <p>(viii) 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.</p> <p>(ix) 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.</p> <p>(x) 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.</p> <p>(xi) 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.</p> <p>(xii) 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</p>
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		<p>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).</p> <p>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 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.</p> <p>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.</p> <p>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.</p> <p>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.</p>
<p><b>CLAUSE 35</b></p>		
	<p><b>Condition relating to use of asphaltic materials</b></p>	<p>i. The contractor undertakes to make arrangement for the supervision of the work by the firm supplying the tar or bitumen used.</p> <p>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.</p>

		<p>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.</p>
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**CLAUSE 36**

<p><b>Employment of Technical Staff and employees</b></p>		<p><b>Contractors Superintendence, Supervision, Technical staff &amp; Employees</b></p> <p>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.</p> <p>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.</p> <p>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</p>
<p>A.A.I.</p>		<p>C.....I.....O.....</p> <p style="text-align: right;">Page 65</p>

		<p>specified in Schedule 'F' and the decision of the Engineer-in-Charge as recorded in the site order book and measurement recorded checked/test 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.</p> <p>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.</p> <p>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.</p>
	<p><b>CLAUSE 37</b></p>	
	<p><b>Levy/Taxes/ Royalty/ Land Licence fee payable by Contractor</b></p>	<p>1. Taxes:</p> <p>a. All Tendered rates should be inclusive of all taxes including GST @18%. Wherever supplies/services involve imports, the same should be identified separately. Basic Custom Duty will be paid by AAI by utilizing EPCG license/duty scrip under SEI scheme of GOI. GST shall be paid to bidder for any taxable supply/services against a valid Tax Invoice.</p> <p>b. The bidder is required to provide Tax type and Tax percentage in all bids other than that of civil works.</p> <p>c. In case of composite works having component of SITC items, such as Electrical &amp; Mechanical Installation, Airport System. Security, IT, Furniture etc should be identified separately with value of goods and services, Tax Rate, amount of Tax so as to enable AAI to claim Input Tax Credit on such items.</p>

	<p><b>CLAUSE 38</b></p>	<p>d. 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.</p> <p>2. Royalty:</p> <p>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.</p> <p>b. This will also be applicable to forest produce.</p> <p>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.</p> <p>3. License fee for land</p> <p>a. The contractor shall be liable to pay license fee for the land allotted by AAI for installation of plants,labour camp, cement godown and site office at AAI prevailing rates of license fee for unpaved land at the time of call of tender.</p> <p>b. In addition a security deposit at the rate of Rs 500/- per sqm in the form of DD/BG shall also be deposited by the contractor. In case contractor do not deposit security deposit same shall be deducted from Ist Running Account Bill.</p> <p>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.</p>
	<p><b>Conditions for reimbursement of levy/taxes if levied after receipt of tenders</b></p>	<p>1. All Tendered rates should be inclusive of all taxes including GST @18%. Wherever supplies/services involve imports, the same should be identified separately. Basic Custom Duty will be paid by AAI by utilizing EPCG license/duty scrip under SEI scheme of GOI. GST shall be paid to bidder for any taxable supply/services against a valid Tax Invoice.</p>
		<p>2. The bidder is required to provide Tax type and Tax percentage in all bids other than that of civil works.</p> <p>3. In case of composite works having component of SITC items, such as Electrical &amp; Mechanical Installation, Airport System. Security, IT, Furniture etc should be identified separately with value of goods and services, Tax Rate, amount of Tax so as to enable AAI to claim Input Tax Credit on such items.</p>

		<p>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.</p> <p>5. 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.</p> <p>6. The contractor shall, within a period of 30 days of the imposition of any such further tax or levy or cess, give a return notice thereof to the Engineer-in-charge that the same is given pursuant to the condition, together with all necessary information relating thereto.</p>
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**CLAUSE 39**

	<p><b>Termination of contract on death of contractor</b></p>	<p>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.</p>
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**CLAUSE 40**

	<p><b>If relative working in AAI then the contractor not allowed to tender.</b></p>	<p>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.</p> <p>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.</p>
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**CLAUSE 41**

	<p><b>No any officer in Department of Engineering to work as contractor within one year of retirement</b></p>	<p>Engineer or any officer employed in engineering or administrative duties in an engineering department of AAI shall not work as a contractor or 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.</p>
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**CLAUSE 41(a)**

	<p><b>Integrity Pact and Independent External Monitor.</b></p>	<p>Signing of Integrity Pact (As per Appendix XVIII) is mandatory for every bidder/contractor if provided so in Schedule F.</p> <p>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).</p> <p>i. The Contractor/Supplier shall have to act in accordance with the conditions laid down in the integrity pact.</p> <ul style="list-style-type: none"> <li>a. 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.</li> <li>b. 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.</li> <li>c. 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.</li> </ul> <p>ii. In case any violation of above conduct is established, AAI reserves right to take following actions.</p> <ul style="list-style-type: none"> <li>a. 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.</li> <li>b. 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.</li> <li>c. Authority may initiate appropriate proceedings against the contractor.</li> <li>d. Contractor will be liable to pay damages as determined by the Authority.</li> <li>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.</li> <li>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.</li> </ul>
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**CLAUSE42**

	<p><b>Return of material and recovery for excess material issued.</b></p>	<ul style="list-style-type: none"> <li>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;             <ul style="list-style-type: none"> <li>a. Quantity of cement &amp; bitumen shall be calculated on the basis of quantity of cement &amp; 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.</li> <li>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.</li> <li>c. Theoretical quantity of G.I. &amp; 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 &amp; comparison being made diameter-wise &amp; category-wise.</li> <li>d. For any other material as per actual requirements.</li> </ul> </li> <li>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.</li> <li>g. 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.</li> <li>h. 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.</li> </ul>
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**CLAUSE 43**

	<p><b>Compensation during warlike situations / act of terrorism</b></p>	<p>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 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.</p>
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**CLAUSE 44**

	<p><b>Apprentices Act provisions to be complied with</b></p>	<p>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.</p>
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**CLAUSE 45**

	<p><b>Release of security deposit after labour clearance</b></p>	<p>Security Deposit of the work shall not be refunded till the contractor produces a clearance certificate from the Labour Officer. As soon as the work is virtually complete the contractor shall apply for the clearance certificate to the Labour Officer under intimation to the Engineer-in-Charge. The Engineer-in-Charge, on receipt of the said communication, shall write to the Labour Officer to intimate if any complaint is pending against the contractor in respect of the work. If no complaint is pending, on record till after 3 months after completion of the work and / or no communication is received from the Labour Officer to this effect till six months after the date of completion, it will be deemed to have received the clearance certificate and the Security Deposit will be released if otherwise due.</p>
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**CLAUSE 46**

<p>A.A.I.</p>	<p><b>Contractor's Liability and Insurance of Works</b></p>	<ul style="list-style-type: none"> <li>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 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 &amp; 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 &amp; 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.</li> <li>ii. In the event of any loss or damage to the Works or any Part thereof or to any T &amp; P, to any material or articles at the Site from any of the Excepted Risks the following provisions shall have effect:             <ul style="list-style-type: none"> <li>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 &amp; P, articles and/or materials as may be directed;</li> <li>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</li> </ul> </li> <li>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.</li> <li>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;             <ul style="list-style-type: none"> <li>a. All works including temporary works to their full value executed from time to time.</li> <li>b. The construction materials and equipments to their full value brought on to the site by the contractor.</li> </ul> </li> <li>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.</li> <li>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.</li> <li>vii. The contractor shall at all times indemnify AAI against all claims, damages or compensation under the provisions of Payment or Wages Act, 1936,</li> </ul>
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		<p>Minimum Wages Act, 1948, Employer’s Liability Act, 1938, the Workmen’s Compensation Act, 1923, Industrial Disputes Act, 1947 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.</p> <p>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.</p> <p>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.</p> <p>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.</p> <p>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.</p> <p>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.</p> <p>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.</p>
	<p><b>CLAUSE 47</b></p>	
	<p><b>Composite Contract and responsibilities of main agency</b></p>	<p>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 be considered for execution of composite work. However the agency shall be allowed to</p>

		<p>execute only those specialized subheads of works for which bidder meets PQ criteria individually.</p> <p>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.</p> <p>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.</p> <p>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.</p>
	<p><b>Composite contract-Tripartite agreement</b></p>	<p>This clause is applicable for the works for which the estimated cost put to tender is more than Rs.500.00 crores.</p> <p>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.</p> <p>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.</p> <p>iii. Main contractor shall submit list of associated agency for each specialized work within 1/12<sup>th</sup> 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.</p> <p>iv. The main contractor shall submit duly signed tripartite agreement on the format provided by AAI within 2/12<sup>th</sup> 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.</p>
	<p><b>Conditions of composite contract</b></p>	<p>i. Main contractor shall be responsible for submission of earnest money.</p> <p>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.</p> <p>iii. The security deposit shall be deducted from the running bills of main</p>

		<p>contractor after adjustment of full earnest money.</p> <p>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.</p> <p>v. The coordination meetings called by AAI or it's 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.</p>
	<p><b>Payment Conditions for Composite Contract</b></p>	<p>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 &amp; subsequent bills till all Tripartite Agreements are signed by all agencies concerned.</p> <p>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).</p> <p>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.</p>

**Clause 48**

	<p><b>Escrow Account</b></p>	<p>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 descretion 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.</p> <p>ii. Mobilization advance for mobilisation of resources and purchase of plant &amp; 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.</p> <p>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%.</p> <p>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)</p>
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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 back ground 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. 1copy 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 14 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 on .....at....."

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.



**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 Airport Authority of India having its head 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 at .....do 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 substantiates 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-n-charge , notice of which extension (s) to the bank is hear 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)

**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.



**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  
**[See rule 2(1)]**  
**[Part-A: For all Establishments]**  
**Register of Workmen Employed by Contractor**

**APPENDIX-VI**

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.....

LIN-----

Name of the Establishment-----

Name of Owner-----

-----

-----

-----

-----

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.



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. No.	Name of work Man	Sex	Father's/ Husband's	Date					Remark
				1	2	3	4	5	
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	Recoveries			Total
13	14	15	16	17	18	19	20	21	22

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



## FORM C

### FORMAT OF REGISTER OF LOAN/ RECOVERIES

Name of Establishment \_\_\_\_\_ LIN \_\_\_\_\_

Sl. Number In Employee register	Name	Recovery Type (Damage/loss/fine/advance/loans)	Particulars	Date of damage/Loss*	Amount
1	2	3	4	5	6

Whether show cause issued*	Explanation heard in presence of*	Number of Installments	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								
Sl. 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	Dearness Allowance	Over-time	Other cash Payment. (indicate nature )	Total	Deduction if any (indicate nature )	Net Amount paid	Sig. or thumb Impression of the work men	Initial contract or his Representative
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16



**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	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  
78 (2)  
[See rule 78 (1) (b)]

**APPENDIX-IX**

**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



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. SI. 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



**FORM OF 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. .... (Rupees .....only) 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)  
 Signaure \_\_\_\_\_  
 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 undertaking from the Depositor to Bank**

(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 Airport 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 Airport 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 Airport Authority of India.

Signature of the  
Depositor

Place:

Date:

**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. Willful 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 gratifications
4. Habitual late attendance.
5. Drunkenness lighting, riotous or disorderly or indifferent behaviour
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 Damages 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 installments	Date of recovery		Remark
										First Instalment	Last Instalment	
1	2	3	4	5	6	7	8	9	10	11	12	13



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



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.....

Sl. No.	Name of workmen	Father's/ Husbands 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



**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 .....,  
.....

**INTEGRITY PACT**

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

“This Pact made this .....day 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 Rajiv Gandhi Bhawan, New Delhi, and offices at .....in 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 for .....The 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 of .....NOW, 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.
- The Bidder / Contactor has not entered and will not enter with other bidders
- 2.3 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/Contractor 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 / Contactor 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/Contactor 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/Contactor 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**
- The Bidder/Contractor declares that no previous transgression occurred in the
- 3.1 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.
- The Bidder/Contractor agrees that if it makes incorrect statement on this
- 3.2 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.
- That the Bidder/Contractor undertakes to get this Pact signed by the
- 3.3 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.
- That sub-contractor(s)/ associate(s) engaged by the Contractor, with the
- 3.4 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 minimum period of three years, which may be further extended at the discretion of the Authority.
- 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.  
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.
- 7.3.
- 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.  
That as soon as the Monitor notices, or believes to notice, a violation of this
- 7.5. 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)

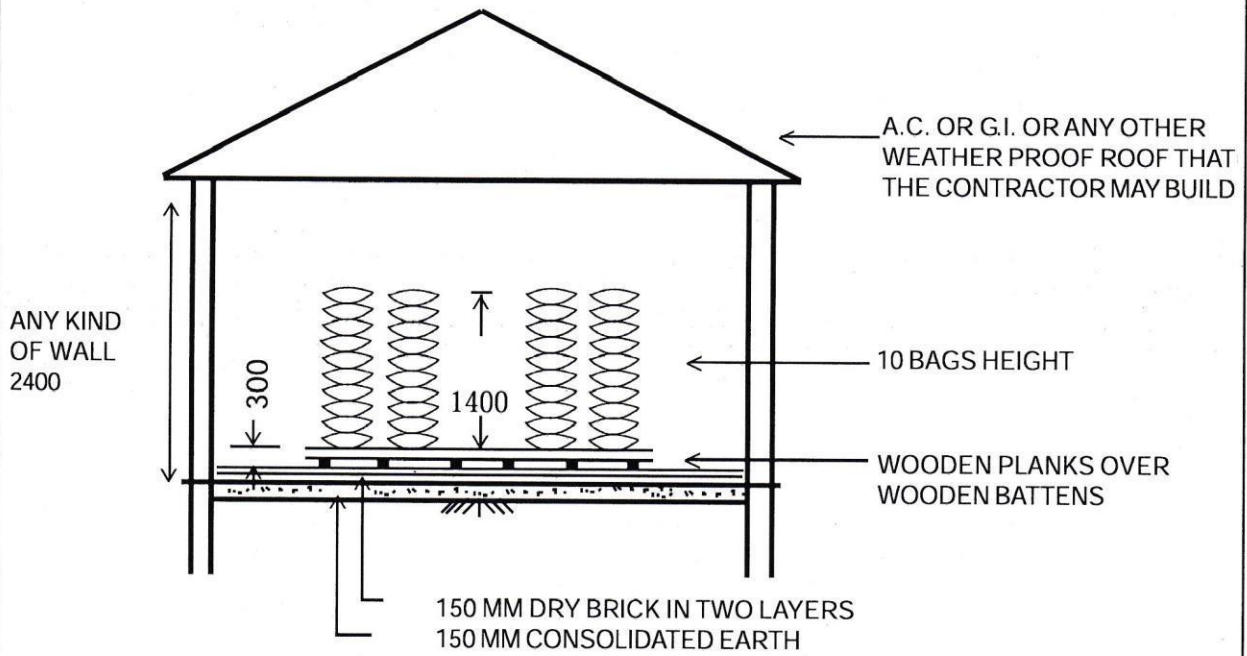
Ratio of direct payment to the specialized agency in case of composite contract : ...% of the net payment to be made to Specialized agency

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

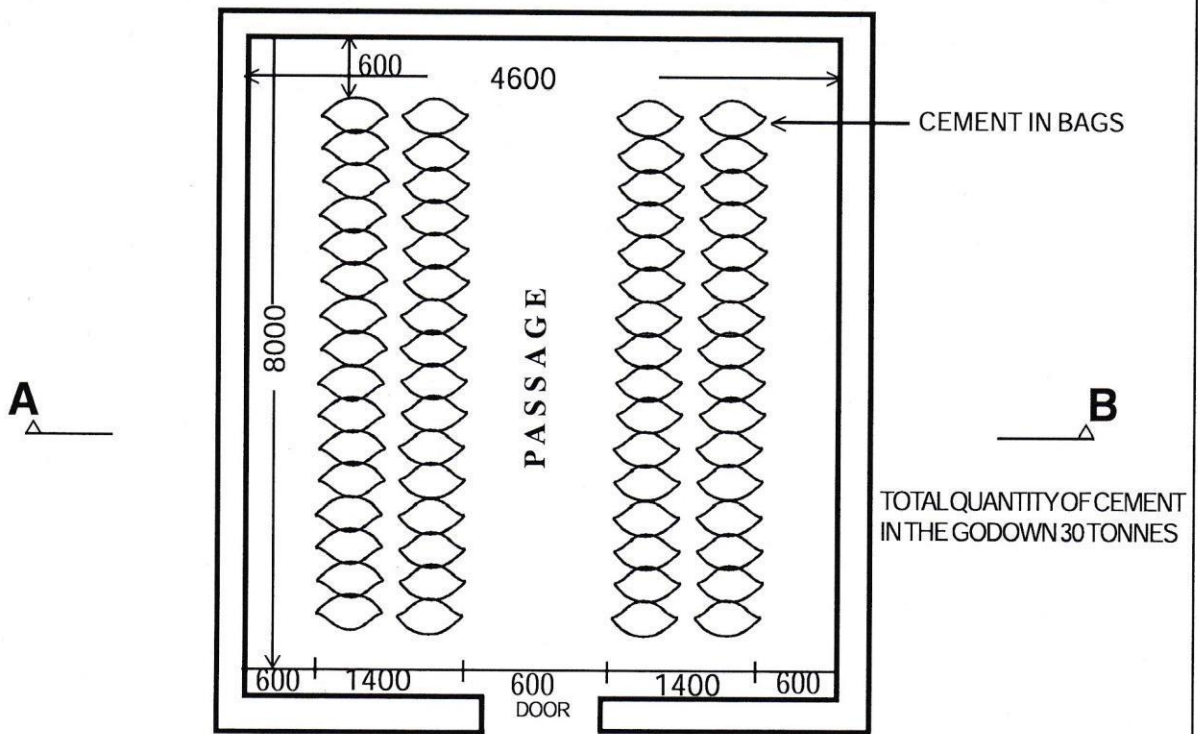
**Note:**

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



**SECTION AB**



ALL DIMENSIONS IN MM

**PLAN**

**SKETCH OF CEMENT GODOWN**

## SCHEDULES

### SCHEDULE `A`

All rates shall be quoted in the format provided and no other format is acceptable. The price bid has been given as a standard BOQ format at page no. BOQ - 1 to BOQ – 3 with the tender document, then the same is to be downloaded and to be filled by all the bidders. 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). No other cells should be changed. Once the details have been completed, the bidder should save it and submit it online, without changing the File name. 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
<b>Not Applicable</b>				

Schedules  
**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

**NO TOOLS AND PLANTS WILL BE ISSUED DEPARTMENTALLY.**

**SCHEDULE `D`**

**Not Applicable**

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

**SCHEDULE `E`**

Reference to General Condition of contract  
 Name of work

**Development of Civil Airport at Bokaro SH Pavement works- Resurfacing & Strengthening of Existing Runway, Apron, Taxi Track including grading of operational area at Bokaro Airport.**

Estimated cost of work **Rs 12,25,61,808.00**

i. Earnest Money **Rs. 24,51,237.00**

ii Performance Guarantee: **5% of contract value**

A.A.I. C.....I.....O.....

Schedules

iii Security deposit:

5% or ~~10%~~ of contract value (Delete whichever not applicable)



**SCHEDULE 'F'**

**GENERAL RULES & DIRECTION**

Officer inviting tender

: **Jt. GM (Engg.-Civil)**

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	a: 30% (Overall) b: 100% ( for foundation Items)
--	---

**Definitions:**

Office inviting tender : **Jt. GM (Engg.-Civil)**  
O/o- **Sr. Manager (Engg.-Civil),**  
**AAI, B.M. Airport, Ranchi-834002.**

2(v) Engineer-in-Charge **DGM (Engg.-Civil)/Jt. GM (Engg.-Civil)**  
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 CPWD DSR 2016, with up to date correction slips as on last date of submission of tenders & market rates. Cost Index 17.04% and applicable GST .

2(xii) Department AAI, Engineering

**Clause 1**

(i)	Time allowed for submission of Performance Guarantee from the date of issue of letter of acceptance	<del>Not Applicable</del> / Within 30 days
(ii)	Maximum allowable period of extension	<del>Not Applicable</del> / As per clause -1

**Clause 2**

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

**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
As per Clause no.5 of GCC & Special Condition of Contract.			

**Time Allowed for Execution of Work.** : **06 (Six) Months (Including 01 Month Rain)**

**Authority to decide:**

- i. Extension of time.....Engineer-in-Charge.
- ii. Rescheduling of milestone .....GM(Engg.)
- iii. Shifting of date of start in case of delay in handing over of site.....RED (ER)/.ED (Engg.)

**Clause 6, 6A**

Clause applicable – (6 or 6A) : 6 A

**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.	50.00 Lacs
--	------------

**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
--	-----

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

**Component of labour expressed as percent of value of work: 10%**

**Clause 10 CA**

Materials covered under this clause	Nearest Material <b>(other than cement*, bars, structural steel &amp; Bitumen)</b> 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/ PPC)		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.
2. ~~Base price and its corresponding period of all the materials covered under clause 10CA is to be mentioned at the time of approval of NIT. In case of recall of tenders, the base price may be modified by adopting latest base price and its corresponding period.~~

**Clause 10 CC**

Clause 10CC to be applicable in contracts with stipulated period of completion exceeding the period shown in next column	Not Applicable
--	----------------

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 work .....Xm .....%.

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) " Latest CPWD Specification , Vol. I to II with upto date correction slips, MORTH or other specification as applicable. b) Technical Specification. c) Manufacturer's Specification.
--	---

**Clause 12**

12.2 & 12.3	Deviation limit beyond which clauses 12.2 & 12.3 shall apply for building work above plinth level or 1.2 Mtrs. Above ground level	30% (Thirty Percent of contract value of respective item)
12.5	Deviation limit beyond which clauses 12.2 & 12.3 shall apply for foundation work	100% (Hundred Percent of contract value of respective item)

**Clause 16**

	Competent Authority for deciding reduced rates	DGM / Jt. GM (Engg.)
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**Clause 18****Mandatory machineries, 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. Please refer SCC Page-11

**Clause 25**

**Place of Arbitration : .....As per AAI Guidelines.....**

**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	No.	Rate at which recovery shall be made from the contractor in the event of not fulfilling provision of clause 36	
						Figures Rs.	Words
1.	Graduate	Civil	Project Manager	03 Years	01	1500.00 Per Day	Rupees Fifteen Hundred Only
2.	Diploma	Civil	Site/Lab Engineer	02 Years	02	1000.00 Per Day	Rupees One Thousand Only
3.							

- 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**

As per norms of SAIL.

License Fee for unpaved land

**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 CONDITION OF CONTRACT (CIVIL WORKS)**

### **1. GENERAL**

- 1.1 The following Special condition of Contract shall be read in conjunction with General Conditions of Contract, Technical Specifications, Drawings and any other documents forming part of this contract wherever the context so requires.
- 1.2 Notwithstanding the sub-division of the documents into these separate sections and volume every part of each shall be deemed to be supplementary to and complementary of every other part and shall be read with and into the CONTRACT so far as it may be practicable to do so.
- 1.3 Where any portion of the General Condition of Contract is repugnant to or at variance with any provision of the Special Conditions of Contract, unless a different intention appears, the provisions of the Special Conditions of Contract shall be deemed to over-ride the provisions of the General Special Condition of Contract and shall to the extent of such repugnancy, or variations, prevail.

### **2. TEMPORARY WORKS**

- 2.1 A site office with attached store yard if felt necessary by E.I.C. shall be established by the Contractor at his own cost at a suitable location as directed by the Engineer-In-Charge or his authorized representative within 30 days from the date of award of work. Land for construction of site office and store yard shall be made available by AAI within the airport area. Charges will be levied for such temporary used of land by contractor as per AAI norms except land used for stacking of material.
- 2.2 Necessary furniture's like table, chairs, almirah, racks etc for running the site office and store shall be provided by the contractor within seven days of the establishment of site office as stipulated in para 2.1 above and no extra payment for these shall be paid by AAI. On expiry of the contract, the furniture may be taken back by the contractor.
- 2.3 In case any vacant room and store yard of Govt. of Jharkhand/SAIL can be spared, same will be handed over to the contractor for use as site office and store yard and he shall pay license fee as per Departmental norms for use and occupation of the same any application in this regard shall be processed through E-I-C of the work.
- 2.4 Such use or occupation shall be governed by the rule of Govt. of Jharkhand/SAIL
- 2.5 The contractor shall be liable to vacate the occupied Land/Room/Store yard within 15 days on demand by the Engineer-In-Charge or his authorize representative. In case of establishment of site office and store yard by the contractor at his own cost, he shall demolish the structure, remove the debris and vacate the occupied land within 15 days of the physical completion of the contract or within 15 days on demand by the Engineer-In-Charge whichever is earlier.
- 2.6 Where any existing site office and store yard cannot be provided by Govt. of Jharkhand/SAIL, the contractor shall construct a site office and attached store yard at his own cost within 30 days from the date of award of work. In this regard application shall be made to Govt. of Jharkhand/SAIL through E-I-C of the work.
- 2.7 The contractor shall construct the site office and store yard as per site requirement and direction of Engineer-In- Charge.

- 2.8 The Tenderer should see the approaches and conditions of the same. If any approach from main road is required at site or existing approach is to be made and maintained for cartage of materials etc. by the Contractor, the same shall be provided, improved and maintained by the Contractor at his own cost.
- 2.9 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.

### 3. PAYMENTS

- 3.1 The bill with details of measurement shall be submitted each month on or before the date fixed by the Engineer-In-Charge for all the works executed in previous month. The contractor shall submit all the bills on the Proforma prescribed by the Engineer-In-Charge, preferably through computerized billing in triplicate.
- 3.2 The payment due to the contractor shall be made within 30 days of the submission of the bill by the contractor and the measurements shall be verified by the Engineer-In-Charge or his representative within 10 days of submission of the bill.
- 3.3 The bill shall not be entertained if the gross amount of the work done including secured advance payable is less than **Rs. 50.00 lakhs** except Final Bill.
- 3.4 It is incumbent upon the contractor to keep a watch over regular testing of materials before submitting bill at the stage of each running account bill. For this purpose, details in respect of mandatory test should be attached with each running bill as per the proforma to be made available by the Engineer-in Charge. It is incumbent on the contractor to ensure that all mandatory test as per frequency, stipulated in the contract, are carried out regularly. Details of such mandatory test (as per proforma to be provided by the Engineer-in-charge) shall be maintained and attach with each running account bill.

### 4. WATER

- 4.1 Generally water required for the work shall not be given by AAI and same has to be arranged by the Contractor. In case water source is available near the work site and contractor wants to use the same he should apply to Govt. of Jharkhand through the EIC of the work.
- 4.2 Whenever water source of Govt. of Jharkhand/SAIL is used by the Contractor, the application for the same should be processed through EIC and payment for the same (if any) may be made directly to the Govt. of Jharkhand as per their terms and condition.

### 5. POWER SUPPLY

- 5.1 Generally electricity required for the work shall not be given by AAI and same has to be arranged by the Contractor. In case electricity source is available near the work site and electricity can be spared to the contractor as per discretion of Engineer-In-Charge, the Contractor may draw electricity from the available source as approved by Engineer-In-Charge. The application for the same should be processed through EIC and payment for the same (if any) may be made directly to the Govt. of Jharkhand/SAIL as per their terms and condition.
- 5.2 Necessary meter and connection from the source shall be arranged by the Contractor at his own cost with the approval of Govt. of Jharkhand /SAIL through EIC. Payment shall be made as per the terms and condition of Govt. of Jharkhand.
- 5.3 Whenever AAI/SAIL electricity source is used by the Contractor as applicable per unit of meter reading or the charge as fixed by the local Electricity Board / Airport Authority / SAIL whichever is higher shall be recovered from the running / final bill of the contractor.

### 6. CONTRACT AGREEMENT

- 6.1 The contract agreement shall be executed on a non-judicial stamp paper of value Rs.100/-(Rupees one hundred) and cost of the stamp paper shall be borne by the Contractor.
- 6.2 AAI is not responsible for any Postal delay in receipt of Tender. The Tenderer may make sure that the Tender reaches before the due date and time.

- 6.3 The tender can be accepted in full or part by AAI. In case of tender accepted in part the rates offered by contractor and Terms and Conditions of Tender shall remain same and in binding on the Contractor.
- 6.4 Contractor's tender 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.

7. **SITE ORGANISATION**

Subject to the provisions in the tender documents and without prejudice to contractor's 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 personal deployed at site shall be removed from the site without prior approval of the Engineer-In-Charge.

~~8. **CLOSING DAY'S WORK**~~

~~8.1 After the closure of day's work, all equipment and stock piled materials must be so placed that after darkness their tops are below a fifty to one ratio from the ends of the basic strips of the runway and twenty to one from sides of useable aircraft traffic areas and must be marked with red flags by day and red lights by night to indicate that they project above the general contour of the aerodrome, if the work is in operational area.~~

~~8.2 Work shall be closed at 2 hours notice for VVIP movement and also other exigencies if directed by the Engineer in Charge. No compensation shall be entertained on this account from the contractor.~~

9. **ADMISSION TO SITE**

9.1 If the works falls in operational area, all men and vehicles shall be permitted to enter the aerodrome operational area only on possession of the security passes issued by **AIRPORT-IN-CHARGE**. The contractor shall apply in writing in advance of the commencement of work for issue of security passes and shall submit a list of personnel concerned with their addresses and shall satisfy the Engineer-In-Charge who shall, at his discretion, have the right to recommend the issue of passes to control the admission of contractor, his agents, his staff and workmen. The contractor shall ensure that his men shall work in areas/zones allotted to them. Passes shall be deposited with the Engineer-In-Charge on demand and in any case immediately after completion of work. The contractor's staff/workmen shall observe all the rules promulgated from time to time by the concerned authorities such as prohibition of smoking and lighting, search of persons on entry and exit, keeping to specified routes etc. Any person found violating the security rules laid down by the authorities will be expelled from the area without assigning any reasons whatsoever and contractor shall have no claim on this account. If contractor is found to violate any of security regulations, he shall be black listed and will be subjected to other legal proceedings.

10. **STORES, MATERIALS AND EQUIPMENTS & MACHINERIES**

10.1 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.

10.2 All the stores, materials including Cement and Bitumen, etc. equipments and machinery required for the satisfactory completion of the works, shall be arranged by contractor from his own sources / open market. No claim whatsoever shall be entertained by the AAI on account of delay in either in providing the materials, arranging for plant, equipments and machinery or non availability of the materials or equipments in the market. No Materials etc. shall be issued by AAI.

10.3 The contractor shall be allowed to install plants and machineries, store and stack the material and construct temporary hutments for labour during construction operation within Airport premises in non-operational area subject to availability. Location selected by Engineer-In-Charge shall be final and binding and nothing extra shall be payable to the contractor for any extra lead involved from the work site. Charges will be levied for such temporary use of land by contractor for installation of plants, labour camp (if provided), Cement Godown, Site Office etc. as per Govt. of Jharkhand/SAIL norms. ~~That he shall pay a nominal license fee for land allotted by AAI for labour Camp (if provided), Cement Godown and site office, license fee from contractor is chargeable for land @ Rs. 6300/- per Sqm per annum. (20% higher if land allotted in paved area ) with annual cumulative escalation @ 7.5% w.e.f. 01.04.2015. A security deposit of Rs. 500/- per Sqm in the form of Cash /DD/BG is also to be obtained from the contractor for this purpose. This security deposit can be released only after ensuring that allotted land has been vacated and Engineer In charge to certify this fact in the final bill. Land used for stacking of material to the extent available is , however , shall be provided at free of cost, with the approval of project/ Airport In charge. However contractor has to vacate the Airport premises occupied for above said purpose immediately after completion of the work.~~

- 10.4 The contractor shall co-operate with any other agency 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.
- 10.5 Materials brought to the site by the contractor shall be stored by the contractor in a safe / dry storage space. The contractor shall be responsible for safe custody of materials at site till such time the installation is commissioned and handed over to the Engineer-In-Charge.
- 10.6 Cement bags shall be stored in separate godowns to be constructed by Contractor at his own cost with weather proof roofs and walls. Each godowns shall be provided with a single door with two locks, the keys of one lock shall remain with AAI Engineer-In-Charge of work and that of the other lock with the authorized agent of the contractor at the site of work so that the cement is removed from the godown according to the daily requirement with the knowledge of both the parties and the account maintained in the Proforma approved by the Engineer-In-Charge.
- 10.7 The contractor is required to submit the invoices / bill receipt for bitumen, cement, steel, lime, paint and any other item incorporated in works for which Engineer-In-Charge directs.
- 10.8 The materials such as Good Earth, Moorum, Coarse and Fine aggregate and other materials shall be brought to site only after approval of the quarry/source by the Engineer-In-Charge.
- 10.9 The contractor shall without prejudice to his overall responsibility to execute and complete the work as per specifications and time schedule, progressively deploy adequate equipments and 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 schedule.
- 10.10 No construction equipment shall be supplied by AAI.
- 10.11 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 or for timely completion of the work the contractor shall execute the work during the night as and when asked by the Engineer-In-Charge. For proper execution, the work site shall be properly illuminated. Nothing extra shall be payable to contractor for working in night time.
- 10.12 In the event of any dispute of any kind related to the works the decisions of the Engineer-in-Charge shall be final and binding. Engineer-in-Charge shall mean the Sr. Manager Engg. (C) / Asst. Gen. Manager (E-C) of the concern work and site Engineer-in-Charge concern is the Authorized Officer of AAI to carry out general supervision, issue day to day instructions and approve material & workmanship.

## 11. **STANDARD OF WORKMANSHIP**

- 11.1 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.

## 12. **BYE-LAWS**

- 12.1 The contractor shall comply with all bye-laws and regulations of local and statutory authorities having jurisdiction over the works and shall be responsible for payment of all fees and other charges and for giving and receiving of all necessary notices and keeping the Engineering-In-Charge, informed of the said compliance with the bye-laws, payments made, notices issued and received.
- 12.2 The contractor shall indemnify the AAI against all claims in respect of patent rights, design, trade marks of name or other protected rights in respect of any plant, machine, work or materials used for or in connection with the work or temporary works and from and against all claims, demands proceedings, cost, charges and expenses whatsoever in respect of or in relation thereto. The contractor shall defend all actions arising from such claims and shall himself pay all royalties license fees, damages, costs and charges of all and every sort that may be legally incurred in respect thereto.

(C-Nil...I-Nil...O-Nil)

## 13. **SITE PRECAUTIONS**

- i) 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.
- ii) It will be the responsibility of the contractor wherever applicable to see that Air Traffic Control Tower signals are instantly and rigidly observed and acted upon by all personal employed by the contractor on the job.
- iii) If any time there is hindrance in the execution of the work due to any reason, whatever, the Authority shall not be responsible and shall not entertain any claim whatever on this account from the contractor.
- iv) If on handing over the site or any time there after during the execution of the works the contractor considers that any drawing or information necessary for the execution of the work has not been provided, he is to inform the Engineer-in-charge in writing giving details.
- v) For the work to be carried out in operational area, whenever necessary, the work shall be carried out in the non-operational period. The Contractor shall have to co-ordinate with the Aerodrome Authority for locating T & P and stacking of materials etc. Nothing extra shall be paid to the contractor for all the above factor. No time extension shall be granted and nothing extra shall be payable by AAI on account of restriction due to non-operational hours and in restricted working conditions. The contractor shall adjust his labour, staff, plant, machinery etc. according to the requirements of work from time to time with particular regard to restricted working hours and no claim shall be entertained on account of idle labour, plant, machinery etc. due to any reason whatsoever.
- vi) 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.
- vii) Every transport vehicle shall carry entry pass of vehicles should be issued as per the rules regulation of Airport Operation Authority. ~~by the Chief Authority of Airport/Aerodrome concerned and shall be produced on demand by him or his authorized agent. All vehicles entering the Airport limits shall follow the routes prescribed by the Chief Authority of Airport for entering the areas and shall display red flags on top. No vehicle shall be allowed between sunset and sunrise also during the day when visibility is 500 meter or less within the Airport limits where motor vehicle Act does not apply.~~
- viii) 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.
- ix) The contractor shall, during construction, provide barricades at his own cost as per specifications prescribed by the Engineer-In-Charge to segregate the working area to ensure safety of all concerned.
- x) The contractor shall be responsible for any damage, resulting from his negligence, either to buildings, structures or airport fixtures such as underground cable contact lights, hard surface areas, water mains, other operational installation, 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.
- xi) The work shall be carried out in phases in such a way that there is least obstruction to the movements of Air Traffic at the Airport. 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.

14. The contractor shall take all precautions at his own cost 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.
  15. No payments 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.
  16. No payments 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. He will make good of all such damages at his own cost and no claim on this account will be entertained.
  17. The contractor shall remove the labour huts, temporary barricades etc. on completion of the work and leave the site in a neat and tidy state. The payment of final bill will be subject to the compliance of this condition by the contractor.
  18. Any cement slurry added over base surface or for continuation of concreting for bond is added its cost is deemed to have inbuilt in the item unless otherwise / explicitly stated and nothing extra shall be payable or extra cement considered with consumption of this account.
  19. The rates for all items of work shall unless clearly specified otherwise include cost of all labourers, materials and others inputs like curing etc. involved in the execution of the work.
  20. The foundation trenches shall be kept free from water while all the works below ground level are in progress.
  21. The rate of items of flooring is inclusive of providing sunk flooring in bath rooms, kitchen etc. and nothing extra on this account is admissible.
  22. The contractor shall be responsible for the protection of entire executed work including sanitary and water supply fittings and other and fixtures etc. against pilferage and breakage during the period of installation and there after until the building is handed over.
  23. The contractor shall laminate in perfect condition all works executed till the completion of the entire work allotted to him. Where phased delivery is contemplated the provision mentioned above will apply to each phase.
  24. The contractor will have to submit Rate Analysis for tendered rates for all items when asked for by AAI.
  25.
    - a. ~~The building work will be carried out in the manner complying in all respects with the requirement of relevant by laws of the local body under the jurisdiction of which the work is to be executed or as directed by the Engineer In Charge and nothing extra will be paid on this account.~~
    - b. ~~Water tanks, taps, pipes, fittings and accessories should conform to byelaws and specifications of the municipal body/Corporation authorities, wherever required, at his own cost. The work shall be carried out according to municipal byelaws.~~
    - c. ~~The contractor shall comply with proper and legal orders and directions of the local or public authority or municipality and abide by their rules and regulations any pay all fees and charges which may be liable.~~
    - d. ~~The work fire fighting, internal sanitary, installation and drainage work etc. shall be carried out as per local Municipal Corporation or such local bodies byelaws and the contractor shall produce necessary completion certificates from such authorities after completion of work.~~
    - e. ~~The sanitary water supply and drainage pipes and fittings other materials shall be of approved quality and shall confirm to the relevant CPWD specifications for works. The work shall be carried out without infringing on any of the local Municipal byelaws.~~
  26. ~~In respect of projected balconies, projected slabs at roof level and projected verandah, the payment for the RCC work shall be made under the item of RCC slabs.~~
- ~~Nothing extra shall be paid for the side shuttering at the edges of these projected balconies and projected verandah. All the exposed edge shall however, be finished as per specifications and nothing extra shall be paid for this.~~

~~27. In the items of RCC walls, railings and roofs etc. nothing extra shall be paid for making designs as per patterns given by Architects or for thickness of sections.~~

~~28. The rates for railing are inclusive of all labour and the material including execution as given in the description of the item, portion of the railings which is embedded in the masonry or RCC shall not be included for measurements.~~

~~29. The water will be tested with regard to its suitability for use in RCC work and nothing extra will be paid for on this account.~~

~~30. The rate of item of reinforcement in RCC including all operations including straightening, cutting, bending, biding with annealed wire and placing in position at all the floors height at all leads and lifts complete.~~

~~31. The contractor shall remove the labour huts, temporary barricades etc. on completion of the work and leave the site in a neat and tidy state. The payment of final bill will be subject to the compliance of this condition by the contractor.~~

~~32. **APPARTITIONING OF WORK**~~

~~The Airports Authority of India reserves the right to appartition the work at different levels amongst not more than two contractors, by negotiations if necessary.~~

**33. SUFFICIENCY OF TENDER**

Particulars and data furnished in the various sections of the tender documents need not be taken as complete by them selves. They are intended to serve as rough guidance only for the contractor to quote for the item rate tender. The tenderers shall, therefore, in their own interest examine the drawings, condition of contract and specifications of work furnished in the tender documents. They shall also inspect the site and satisfy themselves on their own as to the hydrological climatic and physical conditions prevailing at site, the nature extent and practicability of work, all existing and required roads and other means of communications and access to site, availability of housing and other facilities, the source, availability of housing and other facilities, the source of supply of different materials and their adequacy, royalties and ferry charges, if any, labour and probable site for labour camps, store and Godown etc.

They shall also obtain for themselves all necessary information as to risks, contingencies and other circumstances which may affect or influence their tender. No extra charges consequent on any insufficient appreciation of otherwise shall be allowed. 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 works/items, quotations or in bills of quantities which rates and price 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.

All rates quoted shall be inclusive of labour, materials and except specifically mentioned otherwise, shall include all charges like GST etc., as may have to be incurred by the Contractor for getting the respective items of works executed to proper order and complete finish.

Royalty at the prevalent rates shall have to be paid by the Contractor on all the boulders, metals, shingle, sand and moorum etc. collected by him for the execution of work direct to the Revenue Authority of the State Govt. or to any Private party who has the right on such a land. Claim on this account shall not be entertained by the Department.

Should thereby any discrepancy in or any doubt or obscurity as to the meaning of any of the tender documents, clarification should be sought for in writing, sufficiently in advance of the last date for the receipt of the tender from the EIC. The Department will have a right to make any amendments in the tender documents and any such changes will be intimated to the tenderer at least three days before the date fixed for receipt of tender.

**34. SCOPE OF WORK**

Works to be carried out as per the Bill of Quantities /Structural details and design as approved by AAI and any other related works considered necessary.

**Intent of the Plan and Specification:**

The contract drawings if any, together with the contract specifications, are intended to show and explain the manner of executing the work and to indicate the type and class of materials to be used. 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 that may be required in preparation of an for and in the full and entire execution and completion of the works and maintenance of the same during the construction and observation period. The description given in the schedule of works shall, unless otherwise stated be held to include waste on materials, carriage and cartage, carrying on hoisting, setting and fixing in position and all other labour necessary in and for the full and entire execution with good practice and recognized principles and any urgent and temporary works, fully contingent on the work.

**35. PERFORMANCE**

The contractor shall perform all works in substantial and acceptable manner in accordance with the plans and specifications and in accordance with such further any explanatory drawings, details and instructions as may from time to time be given by the Engineer-in-Charge. The work must be progressed within such sections and at each time as directed by the Engineer-in-Charge.

The contractor shall provide and do everything necessary for the proper execution of the works according to the true intent and meaning of the drawing and specifications taken together whether the same may or may not be particularly shown on that drawings or described in the schedule of quantities, provide that the same can be reasonable inferred there from. Figured dimensions to be followed in preference to scale dimensions and all dimension and particulars to be taken from the actual work.

It must be clearly understood that the whole of the condition are intended to be strictly enforced and that no extra charges in respect of extra work will be allowed unless they are clearly outside the sprit and meaning of the conditions or unless such works shall have been ordered in writing by the Engineer-n-Charge.

**36. TEMPORARY SERVICES ROAD, PREPARATION OF GROUND ETC.**

- a) The contractor shall bear all expenses and charges on special or temporary service roads required by him in connection with access to the site. He shall not object to the use of service roads by other construction traffic.
- b) Upon completion of the work such roads shall be broken up and leveled where so required by the drawings unless the Engineer-In-Charge shall otherwise direct.
- c) Conveyance of men and materials and inspections staff etc. to any portion of the work site involved in the construction shall be the responsibility of the contractor.

37. **SETTING OUT THE WORKS**

- a) The contractor shall be responsible for the true and proper setting out of the work and for the correctness of the positions levels and dimensions and alignments of all parts of the works and for the provisions of all necessary applications and labour in connections therewith.
- b) If any time during the progress of the work any error may appear or arise in the position, levels, dimension or alignments of any part of the work the contractor on being required to do so by the Engineer-In-Charge shall at his own expenses rectify such errors to the satisfaction of the Engineer-In-Charge.
- c) The checking or any setting out of any line by the Engineer-In-Charge or his representatives shall not relieve in any way the contractor of responsibility for the correctness therefore and shall carefully project and preserve all bench mark site rails, pegs and other things used in the set is out of work.
  - d) All duties concerning establishment of a set of bench marks, permanent theodolite stations, centre of pillars etc. for performing all the functions of work till the physical completion of all items of the work in question shall be carried out by the contractor at his own cost.
  - e) He shall also keep proper record of such permanent bench marks established denoting therein their correct levels.
  - f) The work establishing all such bench marks shall be carried out only by experience staff of the contractor with the help of precision instruments suitable for this type of work. The instruments shall be checked for their accuracy and for permanent adjustment before the commencement of the work and also frequent intervals during the progress of the work.
  - g) All such bench marks established by the contractor shall be subjected to check and approval of the Engineer-In-charge or duly representative and valuations noticed in the work as a result of important establishment of maintenance of such bench marks shall be at the contractor's risk and expense.
  - h) The contractor has to adjust his work and progress to work in co-ordination with other agencies working at site.

38. **Sub standard work :-**

All works have to be carried out strictly as per standard contract specification and the drawings applicable to the contract. Any work found below specification and not as per drawing is liable to be rejected. However, if any work is below specification but is technically acceptable as per direction of Engineer-In-Charge, the same work will be considered for acceptance and will be paid at a reduced rate at the sole discretion of Engineer-In-Charge, and his decision will be final in this respect and no claim of the contractor will be entertained in this regard at any stage. The decision of the Engineer-In-Charge regarding rejection or acceptance of sub standard work and its reduced rate payable shall be beyond the purview of the arbitration under clause 16 of the contract documents.

39. **The total amount of final bill worked out at the accepted tender rates, if found to be more than the amount worked out at the quoted rates of second lowest, the contractor shall be paid lower of the two.**

40. **Responsibility of the Contractor :-** Contractor has to assist AAI by providing vehicles, manpower, equipment etc. for proper demarcation of AAI land in close co-ordination with officials of Land Revenue Department and for proper liaisoning with Municipal / Panchayet / State Government Authorities. Nothing extra shall be paid on this account.

41. **INSPECTION OF SITE AND TESTING**

- i. 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.
- ii. Routine type tests for the various items of material shall be performed at the contractor's / Government approved laboratory and Manufacture's Test certificate should also be furnished wherever require. The contractor shall permit the Engineer-In-Charge or his authorized representative to be present during any or all of the test. After notification to the Engineer-In-Charge that the work has been completed, the contractor shall make under the direction and in the presence of Engineer-In-Charge such tests and inspections as have been specified or as the Engineer-In-Charge shall consider necessary to determine whether or not the full intent of requirements of the plans and specifications have been fulfilled. In case the work does not meet the full intent of the specifications it shall be rectified by the Contractor at no extra cost and the contractor shall bear all the expenses for any further tests considered necessary.
- iii. The various tests indicated in the specifications or as considered necessary by the Engineer-in-Charge or his authorized representative shall be carried out in the Laboratory approved by the Engineer-in-Charge. The Contractor shall bear the cost of the samples and testing charges. The results shall be final and binding on the contractor. Alternatively contractor shall provide at his expenses all testing equipment and other facilities at the site which may be required for the purpose of carrying out fields tests.
- iv. All tools, instruments, Plants and labour/operator required for the test shall be provided by the contractor at his own cost. The contractor will establish a laboratory at site at his own cost within one month from the date of issue of work order. The testing facilities should be sufficient to do various routine test of work and as approved by Engineer-In-Charge.
- v. The contractor at his own cost shall set up a furnished and adequately equipped field laboratory at site within 30 days from the schedule date of start of work and maintain the same by providing adequate technical and upkeep staff. The laboratory should have office space for engineers to do testing and store for storage of samples. The remaining space shall be provided for the installation of equipment, laboratory tables, working space for carrying out tests etc. Land for set up of field laboratory shall be made available by AAI. Charges will be levied for such temporary used of land by Contractor as per AAI norms. The following minimum equipment shall be provided in the laboratory.
- vi.

Sl. No.	Description of Items	Quantity
<b>A.</b>	<b><u>GENERAL</u></b>	
(i)	Balance 20 kg capacity-self indicating type	1 No.
(ii)	Electronic Balance 5 kg capacity 0.5 gm accuracy.	2 Nos.
(iii)	Spring balance - dial type, 100 Kg capacity.	1 No.
(iv)	Thermometers: Mercury-in glass thermometer range 0 to 250 deg C. Mercury-in steel thermometer with 30 cm stem, range upto 300 deg C.	4 Nos.
(v)	Electric Oven/electric hot plate /Kerosene or gas stove.	1 No.
(vi)	Measuring cylinders 100 ML, 200 ML, 250 ML, 500 ML -	2 Nos. each

(vii)	Set of IS sieves with lid and pan with mechanical shaking arrangement: (a) 450 mm diameter :65 mm, 40 mm, 25 mm, 12.5 mm, 10 mm and 4.75 mm size and any other sieve required at site.	2 Sets
	(b) 200 mm diameter: 2.36 mm, 2.0 mm, 1.18 mm, 600 micron, 425 micron, 300 micron, 150 micron and 75 micron and any other sieve required at site.	2 Sets
(viii)	First Aid Box	1 Set
<b>B</b>	<b><u>APPARATUS FOR AGGREGATES</u></b>	
(i)	Aggregate Impact Value Test apparatus	1 Set
(ii)	Flakiness and Elongation Test Gauges.	1 Set
(iii)	Standard measure of 30, 15 and 3 liters capacity along with standard tamping rod.	1 Set
<b>C.</b>	<b><u>SURVEYING INSTRUMENTS</u></b>	
(i)	Semi-Automatic Leveling Instrument with staff.	2 Sets
(ii)	Steel Tapes 30 meters, 15 meters and 5 meters.	2 Nos. each
<b>D.</b>	<b><u>BITUMINOUS WORKS INSTRUMENTS</u></b>	
(i)	3 m straight edge.	1 No.
(ii)	Camber Board	1 No.
(iii)	Marshal Stability apparatus.	1 Set
(iv)	Standard measure of 30, 15 and 3 liters capacity along with standard tamping rod.	1 Set
(v)	Penetration Test apparatus	1 No.
(vi)	Mould for cube test	12 Nos.

In addition to tools, equipments, apparatus and instruments as described above, if any, additional tool equipment apparatus and instrument is required for laboratory and execution of work as per technical specification of NIT the same shall be provided by contractor. Nothing extra shall be payable to contractor on this account.

- vi. The Engineer-In-Charge may at his discretion, check the test result obtained at contractors laboratory by independent tests at an approved laboratory. The cost of such material, transport, cost of testing etc. shall be borne by the contractor.
42. Along with their tenders, the Contractors are required to give the following general information:

## CONSTRUCTION EQUIPMENT

The contractor shall without prejudice to his overall responsibility to execute and complete the work as per specifications and time schedule, progressively deploy adequate equipments and 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 schedule. However, contractor has to deploy following minimum machineries within one (1) month of finalization of approved drawings, at site as given below: -

### LIST OF MACHINERIES TO BE DEPLOYED

Sl. No.	EQUIPMENT DESCRIPTION	CAPACITY	QUANTITY
1	Hot Mix Plant (100 Tonne. O-Nil)	100 TPH	1 No.

2	Sensor paver		1 No.
3	Vibratory Tandem Roller	8-10 Tonne	2 No.
4	Pneumatic tyre Roller		1 No.
5	Tippers		6 No.s
6	Surveying & Leveling Instrument set i/c. total station		2 No.
7	Pneumatic Tyre Roller		1 No.

**NOTE:**

1. Apart from the Tools and Plants quantity shown above, contractor is required to deploy additional T&P if required and directed by Engineer-in-Charge to ensure timely completion of work.
2. In the interest of progress of work, if early deployment of any machinery/equipment is desired by Engineer-in-Charge then the contractor shall deploy the same as per the direction of Engineer-in-Charge. For such early deployment no claim whatsoever shall be entertained.

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- a) The details of tools and plants including centering and shuttering etc. which will be employed by them for this work.
- b) The details of technical staff indicating their qualifications and experience who shall be employed on this work.

In case more tools and plants, technical staff are required for proper execution of work at site, the Contractor will have to provide the same and no extra claim shall be entertained by AAI on that account.

**43 GENERAL ARRANGEMENT TO BE MADE BY THE CONTRACTOR AT SITE**

43.1 The contractor shall deploy a minimum of one qualified full time supervisor at his own cost having adequate experience in supervising the works. Contractor shall be liable to pay compensation @ Rs. 500/- per day if he fails to provide the supervisor. However, this recovery don't relieve the contractor to pay levy of compensation for delay, in case work is not completed within the stipulated time.

43.2 The contractor shall provide a computer and printer with cartridges for entering data and other essential office works. The configuration of the computer and printer is as follows:

**Desktop Computer**

19" LED Digital Colour Monitor (Samsung), CPU Intel i3 or i5 compatible Intel Motherboard

Integrated Graphics, 3PCI & 1AGP, Memory: 4 GB DDR3 RAM, Hard Disk Drive: 500 GB, Keyboard (TVS GOLD), IBM Mouse Scroll Mouse with Mouse Pad, Ports 8 USB Ports 1 Serial Ports, 1 Parallel ports 2PS/2 Ports, Cabinet Desktop, DVD writer, Keyboard, Operating System Windows 7 ultimate, Preloaded software Quick Heal total security 2013 (upto latest version), MS office 2007, Adobe reader10, Nero 10, Set of two speakers **Printer** HP-LaserJet **Scanner** HP-Scanjet 2400

43.3 Necessary registers, Stationery, Ledger, MBs, level books (min 5 nos. each), ~~Blank CD, Blank DVD, Two pen drive of 16 GB, Digital camera of 12 or more megapixel with 10 x zoom and other stationeries like Xerox paper, pen, pencil, Cartridge of Printer, etc~~ required for entering data and test results etc shall be provided by the contractor at his own cost as directed by the Engineering-In-Charge. Photographs of every stages of work as desired by the E.I.C or his authorized representative during execution of work shall be provided by the contractor at his own cost. If the contractor fails to provide the required items, within 24 hours on demand by the E.I.C or his authorized representative, the same shall be arranged by AAI and 3 times the actual expenditure shall be recovered from the Bill of the contractor.

43.4 For General Administration of the Contract i.e. for taking the samples from work / plant site to laboratory and movement of the official during progress of work for checking / controlling the quality of work etc. a suitable Passenger Vehicle of minimum 4 seated capacity with good running condition having Hard Top in case of Jeep either petrol or diesel driven including driver shall be provided by the Contractor at his own cost.

Necessary diesel / petrol / fuel & lubricants etc. for smooth running of all the equipments, vehicles and machineries deployed for the work shall be provided by the contractor at his own expense. In the event of any break down of the plant, vehicles and machineries deployed for the work, the contractor shall take prompt remedial measure to put them back in working condition and nothing extra will be paid. To minimize the break down period, necessary spare parts shall be kept readily available at site by the contractor at his own expenses. I

If the contractor fails to provide the vehicle as specified in the contract, an amount of Rs. 750/- per day shall be debited to the contractor's account. However, this recovery don't relieve the contractor to pay levy of compensation for delay, in case work is not completed within the stipulated time.

44. Joint venture company / consortium of firms will not be permitted to bid for AAI works upto Rs.50.00 Crores.
45. AAI works manual, Technical Instruction/Circular, Vigilance Instruction/Circular and Govt. Instruction/Circular issued from time to time shall also be applicable for this Contract.
46. All rates quoted shall be inclusive of labour, materials and except specifically mentioned otherwise, shall include all charges like GST etc., as may have to be incurred by the Contractor for getting the respective items of works executed to proper order and complete finish.

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47. The contractor will have to submit Rate Analysis for tendered rates for all items when asked for by AAI.
48. Royalty at the prevalent rates shall have to be paid by the Contractor on all the boulders, metal, shingle, sand and morum etc. collected by him for the execution of work direct to the Revenue Authority of the State Govt. or to any Private party who has the right on such a land. Claim on this account shall not be entertained by the Department.
49. It is not binding on the AAI to accept the lowest or any tender and reserves the right to accept the whole or any part of the tender.
50. If at any stage, any information / document submitted by the applicant is found to be false the agency shall be liable for debarment from tendering in AAI, apart from any other appropriate / legal action.

51 The contractor shall be responsible for the following points during period of contract:-

- a) The contractor will be bound by the labour laws , industrial rules and the contract labour (Regulation and abolition ) Act 1970 with upto date amendments.
- b) The minimum rates of the wages of the staffs shall be payable as per the minimum wage Act 1948 and as per notification of the regional labour Commissioner (Central ) time to time.
- c) Maintaining all the records of the workers deployed for the work as per contract labour (Regulation and Abolition) Act 1970.
- d) The payment of the workmen engaged by the contractor has to be made on or before 7<sup>th</sup> of every month in presence of representative of AAI. The wage register will be countersigned by the representative of AAI with the remarks "Certified that the amount shown in column No. \_\_\_\_\_ has been paid to the workmen concerned in my presence on \_\_\_\_\_ at \_\_\_\_\_ Hrs"
- e) The contractor has to maintain the wage register for his employees and has to be produced for verification of the principal employer (AAI) as and when required.
- f) The contractor has to produced the photocopy of challan of the P.F/E.S.I or mediclaim /GSLIS paid to the concerned regulating bodies. Statement of the minimum wage paid for each month to their manpower in presence of authorised representative of AAI at the time of submission of bills. No payments shall be made to the firm without submissions

of these documents. Suitable amount as decided by EIC will be held from contractors running bills.

- g) If on account of any legislation /notification labour award the minimum wages rate for labours are increased at time or times often date of submission of tender the contractor has to pay increased minimum wages due to such increase. AAI shall reimburse to the contractor the actual difference amount of wage paid (As per prevailing minimum wage ) and justified rates calculated during submissions of tender or submission of documentary evidence without contractors overheads and profits on the final bill.

#### **DRAWINGS AND DOCUMENTS**

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The drawings (plan) will be available with Engg in Charge and will be issued before execution. After receiving the plan, contractor will have to prepare the working drawing and submit to the Engg- in –Charge before execution.

***The execution of work shall be as per the "Approved drawings" and detailed specifications. No claim whatsoever, shall be entertained for variation in the approved for construction drawings and architectural drawing***

## **TECHNICAL SPECIFICATIONS**

### **PREAMBLE**

These technical specifications shall be read in conjunction with the various other documents forming the contract, namely Notice Inviting Tender & Instructions to Tenderers, Conditions of Contract, Special Conditions of Contract, Bill of Quantities and other related documents, together with any addendum issued thereto.

Absence of terms such as providing, supplying, laying, installing, fixing etc. in the description does not even remotely suggest that the contractor is absolved of such providing, supplying etc. unless an explicit stipulation is made in this contract. The owner shall bear no costs of materials, equipment's duties, taxes, royalties etc.

The classification of various items of work for purpose of measurements and payments shall be as per bills of quantities (BOQ). Except where distinguished by the BOQ, the rates apply to all heights, depths, sizes, shapes and locations. They also cater for all cuts and wastages.

The specifications may have been divided in different sections/sub-head for convenience only. They do not restrict any cross-reference. The Contractor shall take in to account inter-relations between various parts of works/trades. No claim shall be entertained on basis of compartment interpretations.

### **OBLIGATIONS OF THE CONTRACTOR**

In order to ensure that the contract work is executed strictly in accordance with this Agreement and in time, the Contractor shall have the following obligations at no extra cost to AAI in addition to such other obligations and responsibilities as have been specified elsewhere in this Contract.

- i) Provision of adequate number of constructional Plant and machinery for mechanized system of construction, handling and transportation ;
- ii) Fulfill all the Contractor's labour regulations i.e. fair wages, display of notices regarding wages, payment of wages, labour records, attendance cards-cum-wage slips, labour welfare etc. as per standard practices and norms applicable at site;

All fossils, gold, silver, oil and other minerals, precious stones, coins, article of value, of antiquity and structures and other remains/ things of geological or archaeological interest discovered on the site of the works shall be notified by the Contractor immediately to the Engineer-in-Charge for onward information to the concerned authorities.

The Contractor shall take all reasonable precaution to prevent his workmen or any other person from removing or damaging any such article(s) or thing(s) and protect the same till the removal as per the instructions of the Engineer-in-Charge.

Clearance of the site of all rubbish, debris, materials, temporary structures, plant and machinery, scaffoldings and filling of all pits, excavation and hand over the site in a tidy and clean condition after completion of the work.

Opening up of covered work, if instructed by the Engineer, if such covering was done before inspection by the Engineer or without permission/ approval from the Engineer-in-Charge.

## **GENERAL**

The works will be executed as indicated in the nomenclature of each item and technical specifications as given hereunder as made applicable to this contract.

In the absence of any definite provision in the technical specifications contained herein, reference may be made to the latest CPWD, MORTH, IRC, ICAO Specifications and IS codes, in that order. Wherever these are silent, the construction and completion of the works shall conform to sound engineering practice and in case of any dispute arising out of the interpretation of the above, the decision of the Engineer-in-Charge shall be final and binding on the Contractor.

In addition, the abbreviations CPWD, IRC, MORTH, IS, BS, ICAO ASTM, AASHTO shall be considered to have the following meaning :-

CPWD	:	Central Public Works Department	IRC
	:	Indian Road Congress	
MORTH	:	Ministry of Road Transport and Highways, Government of India	IS
	:	Indian Standard of the Bureau of Indian Standards.	

BS : BritishStandardoftheBritishStandard

ICAO : International Civil Aviation Organization

ASTM : American Standards of the American Society of Testing Materials AASHTO :  
AmericanAssociationofStateHighwayandTransportationOfficials.

#### Submission and approval of proposed Finished levels & profile

The agency has to conduct the detailed design for structural stability of the x-section by conducting necessary tests as required by vetting agency on existing runway taxi track & apron. The same has to be got thoroughly vetted by AAI. The Structural design shall be as per the relevant BIS Code and sound Engineering practice. and the fee for the same shall be paid by the agency directly .The contractor shall be fully responsible for soil testing & structural design services performed by him and shall be in accordance with the accepted standards of safety.The contractor rates are inclusive of the testing & designing.No extra payment shall be paid on this account

There is a provision to take spot levels specified in various items before commencement of that ite.The contractor after taking complete spot levels shall submit the proposed finished levels & profile alongwith anticipated quantity of items as per ICA to engineer-in-charge for his approval. The contractor shall revise the same in case any modification is suggested by Engineer-in-charge in finished levels /profile before his approval > Nothing extra shall be paid on this account.

All the codes of practice, standards and specifications applicable shall be the latest editions with up to date correction slips etc. or as directed by the Engineer–in-charge

- i The work shall be executed and measured as per metric dimensions given in the scheduled of quantities, Drawings etc. (FPS Units wherever indicated if any are for guidance only).
- ii Any drawing, pattern, layout, colour / shade, shape, orientation etc. required in connection with execution of the work shall be prepared and submitted by the contractor at his own cost for approval of the Engineer-In-Charge. Any such drawing etc. shall be prepared / vetted by the concerned expert like architect/consultant before submitting for acceptance. In case the contractor failed or delayed in submission of such drawing within the period specified by the Engineer-In-Charge, the same shall be prepared by AAI through other agency as decided by the Engineer-In-Charge and the cost of the same shall be recovered from the contractor's due.
- iii While quoting the rate the contractor should consider the site condition, cleaning of Jungle and making approach to site.

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## Particular specifications

### AAI Specifications for Flexible Airfield Pavements

**Item No 1:** Providing and applying tack coat using hot straight run bitumen of Viscosity grade VG-30(60/70) including heating the bitumen, spraying the bitumen with mechanically operated spray unit fitted on bitumen boiler, cleaning the preparing the existing road surface as per specifications. 0.50 kg on bituminous surface.

#### **1.0 Tack Coat Of Hot Straight Run Bitumen**

**1.1** The rate of application of binder which shall be as specified and shall be laid with viscosity grade bitumen VG-30(BULKED) as decided by the Engineer-in-charge

a) 0.50 kg/sqm on existing black topped surface

**1.2** Where the material to receive an overlay is a freshly laid bituminous layer, that has not been subjected to traffic, or contaminated by dust, a tack coat is not mandatory where the overlay is completed within 2 days.

#### **1.3 Materials :**

**Bitumen :** This shall be straight run bitumen of specified Viscosity Grade30 (BULKED) conforming to IS 73 specifications.

#### **1.4 Preparation of surface**

**1.4.1 Cleaning :** Prior to the application of bitumen, all vegetation, loose material shall be removed from the entire surface of the pavement and from existing dummy, construction and expansion joints(wherever existing) by means of mechanical sweepers and blowers, otherwise with steel wire brushes, small picks, brooms or other implements as approved by the engineer-in-charge. The material so removed shall be disposed off as directed by the engineer-in-charge.

**1.4.2 Weather and seasonal limitations :** The tack coat shall not be applied nor any bitumen work done during rainy weather or when the surface is damp or wet or when the atmospheric temperature in the shade is not more than 16 degree C.

#### **1.5 Application of tack coat :**

**1.5.1 Heating :** Bitumen shall be heated in the boiler to a temperature of 165 degree C to 175 degree C and maintained at that temperature. Temperature shall be checked at regular intervals with the help of a thermometer.

**1.5.2 Application of bitumen :** Hot bitumen shall be applied evenly to the clean, dry surface by means of pressure sprayer at specified rate. Even and uniform distribution of bitumen shall be ensured. Bitumen shall be applied longitudinally along the length of the pavement and never across it. Excessive deposits of bitumen caused by stopping or starting of the sprayer or through leakage or any other reason shall be suitably rectified. Actual rate of application of Viscosity Grade bitumen shall be determined by field trials and shall be got approved from the engineer-in-charge before start of work.

**1.6 Quality Control of work:** For quality of the materials supplied and the works carried out, the relevant provisions of section 900 of MORT&H shall apply.

**1.7 Measurements :** Length and breadth shall be measured correct to a cm along the surface of pavement. Area shall be worked out in sqm correct to two places of decimal.

**1.8 Rate :** Rate shall include the cost of all materials (at an application rate as specified in clause 1.1 above) and labour involved in all the operations described above, with adjustment, plus or minus for the variation between this amount and actual amount approved by engineer-in-charge after field trials as specified in clause 1.5.2

\*\*\*\*\* END OF ITEM NO. 1\*\*\*\*\*

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**Item No.3:** Providing and laying of Hot Mix Semi Dense Asphaltic Concrete (SDAC) using crushed stone aggregate of quality, size and grading as specified and 2% cement by weight of aggregates as filler of quality as specified and Viscosity Grade Bitumen (supplied in bulk) in proportions as per job mix formula and laid to specified levels, grade and camber as per specification, drawings and as directed by the Engineer-in-charge i/c compacting with 8-10 tonne, preferably vibratory road roller of adequate capacity to achieve the specified values of compaction, strength, surface accuracy complete (for tendering purpose VG bitumen of grade (VG-30) content shall be taken as 114 kg/m<sup>3</sup> of mix supplied in bulk produced by Govt. refineries and 2% cement by weight of aggregates as filler material).

#### 1.0 Materials

##### 1.1 Coarse Aggregates

This shall consist of a crushed or broken from hard stone obtained from approved quarry. These shall be clean, strong, durable of fairly cubical shape and free from disintegrated, soft, friable, thin elongated or laminated pieces. This shall also be free from dirt, organic, deleterious material and any other foreign matter and adherent coatings. The grading of coarse aggregates shall conform to IS:383.

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##### 1.1.1 Physical Properties of Coarse Aggregate

Sl. No.	Property	Tests	Method	Frequency	Acceptance Criteria
1	Cleanliness	Grain Size Analysis	IS:2386 (Part.I)	Before approval of the quarry and at every subsequent change in the source of supply	Max. 5% passing 0.075mm sieve
2	Strength*	Aggregate impact value	IS:2386 (Part.IV)	Before approval of the quarry and at every subsequent change in the source of supply and one test for every 100m <sup>3</sup> of aggregates	Max.24%
		Los Angeles Abrasion value	IS:2386 (Part IV)	-do-	Max.30%
3	Durability	Soundness (V) Loss with	IS:2386 (Part V)	-do-	Max. 12%
		(VI)Loss with Magnesium Sulphate			Max. 18%
4	Particle Shape	Flakiness & Elongation Index (Combined)	IS:2386 (Part I)	-do-	Max.
5	Stripping	Coating and Stripping of Bitumen	IS:6241	-do-	Minimum Retained Coating
6	Water absorption	Water absorption	IS:2386 Part III	-do-	Max.2%
7	#Water Sensitivity	**Retained Tensile strength	AASHTO 283	-do-	Minimum 80%

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(C-Nil...I-Nil...O-Nil)

\* The aggregate may satisfy either of the two tests.

\*\* If the minimum retained tensile strength falls below 80%, use of anti-stripping agent is recommended to meet the minimum requirements

# The water sensitivity test is only required, if the minimum retained coating in stripping test is less than 95%.

Where anyone or some of the above conditions cannot be satisfied, it is left to the Engineer-in-Charge to allow reasonable tolerances, with the approval of ED Engg.

1.1.2 Anti-stripping Agent: Anti-stripping agent or additive if required shall be heat stable, shall not change the viscosity of the binder beyond specifications, shall contain no harmful ingredients, shall be added in recommended proportion by approved method and shall satisfy the requirements as stipulated in MORT&H Appendix-5. The cost of providing anti-stripping agent shall be borne by the contractor and nothing extra shall be paid on this account to the contractor.

### 1.2 Fine Aggregates

Fine aggregate shall consist of crushed or naturally occurring mineral material or combination of two, passing 2.36mm sieve and retained on 0.075mm sieve. The fine aggregate will be clean, hard, durable, dry, and free from dust and soft organic and other deleterious substances. Fine aggregates shall have

sand equivalent value not less than 50 when tested in accordance with the requirement of IS:2720 Part 37. The Plasticity Index of fraction of passing the 0.425mm sieve shall not exceed 4 when tested in accordance with IS:2720 Part 5.

### 15-6 Filler

The filler shall consist of cement of quality conforming to relevant IS code as approved by the Engineer-in-charge.

#### Cost Adjustment for Filler

For the purpose of tendering the contractor may base his rate assuming 2% cement as filler by weight of aggregates. If the actual quantity of cement required to be used, as per the design mix, is found to be different from the quantity of cement assumed above, necessary adjustment in cost of extra/short cement shall be made.

### 15-6 Bitumen

The bitumen shall be, Viscosity Grade Bitumen conforming to IS:73, supplied in bulk by Govt. refineries in India. Selection of VG grade bitumen shall be based upon the climatic conditions of the area as per Table-1 below:

Lowest Daily Mean Air Temperature	Highest Daily Mean Air Temperature		
	Less than 20 C	20 to 30 C	More than 30 <sup>o</sup>
More than -10 C	VG-10	VG-20	VG-30
-10 C or Lower	VG-10	VG-10	VG-20

The contractor shall mandatorily provide weigh bridge at the hot mix plant for accurate weighing of materials. Use of imported Bitumen shall not be allowed. The agencies shall submit copies of the purchase vouchers of the bitumen to the Engineer-in-Charge.

### 2.0 Combined Grading of Aggregates

In order to satisfy the design requirements for the Semi Dense Asphaltic Concrete(SDAC) as laid down in para 3.0, the mix shall contain coarse aggregates , fine aggregates in suitable proportions. True and representative samples of the aggregates proposed to be used on specific job shall be tested in material testing lab (approved by AAI/Govt. institutions i.e. IITs, NITs, Govt. Engg. College etc.) and proper blend of individual aggregates normally available shall be worked out so that the gradation of the final composition shall satisfy the limits laid down below:

Nominal Maximum Aggregate Size*	13.2 mm
Layer thickness	40-50 mm
IS Sieve (mm)	Percentage by weight passing
26.5	100
19	90-100
13.2	59-79
9.5	52-72
4.75	35-55
2.36	28-44
1.18	20-34
0.6	15-27
0.3	10-20
0.15	5-13
0.075	2-8

### 3.0 Job Mix Formula (JMF)

Twenty days prior to the start of work at site, the job mix formula shall be got determined by the contractor in a laboratory, as directed by the Engineer-in-Charge, by Marshall Design Method. The Job Mix Formula (JMF) so determined shall be submitted by the contractor, in writing, to the engineer-in-charge for his acceptance before the actual paving work starts at site. The Contractor also shall intimate, in writing, to the Engineer-in-Charge the details of source and location of all materials, their sizes, grading and test results. Besides conforming to the requirements of grading and quality for individual ingredients the mix shall meet the requirements enumerated below:

S.No.	Criteria	Value
1	No. of compaction blows on each side of Marshall specimen	75
2	Marshall stability in kN at 60°C	Not less than 9.0
3	Marshall flow value in mm for VG Bitumen	2-4
4	Marshall Quotient for Viscosity grade Paving Bitumen (Ratio of Stability/Flow)	2-5
5	Percentage Voids in Mix (VIM)	3-5
6	Percentage voids in mineral aggregates filled with bitumen (VFB)	65-75%
7	Bitumen (Viscosity Grade) content by weight of mix	As determined in the Lab.
8	Design laboratory density (Bulk density of the Marshall mould)	As determined in the Lab.
9	Retained Marshall Stability on Immersion Test	Not less than 75%
10	Tensile Strength Ratio	Not less than 80%

**Note:** Design of mix should also meet the following criteria:

- a) A test track of minimum 7m wide and 90m length and shall be of the same depth specified for the construction of the course which it represents, laid and tested by the contractor before commencement of actual work. The core cut from the test track on testing shall give a stability and density of not less than 98% of the respective design values.

In case of any deficiency, necessary adjustment in Job Mix formula, Plant operation, Placing procedures and /or rolling procedure shall be made and the test section shall be re-laid & tested. No extra payment shall be made on this account of making test track or changes in grading or any other changes, if any. Full production shall not begin

until acceptable test track has been constructed and accepted, in writing, by the Engineer-in-Charge.

### 3.1 Revision of Job Mix Formula

The Job Mix Formula shall be revised if there is change in source of material and/or if it is noticed by the Engineer-in-Charge that grading of Individual aggregates has changed. The Job Mix Formula (JMF) so determined shall be submitted by the contractor, in writing, to the engineer-in-charge for his acceptance before the actual paving work starts at site with new source of material/grading. No extra payment shall be made to the contractor on this account

### 3.2 Permissible Tolerances in the Job Mix Formula.

S.No.	Description	Permissible Variation
1	Aggregate passing 19mm sieve or larger	±7%
2	Aggregate passing 13.2mm, 9.5mm	±6%
3	Aggregate passing 4.75mm	±5%
4	Aggregate passing 2.36mm, 1.18mm, 0.6mm	±4%
5	Aggregate passing 0.3mm, 0.15 mm	±3%
6	Aggregate passing 0.075mm	±1.5%
7	Binder content	±0.3%

All the above tolerances are with respect to the Job Mix Formula as the datum.

### 4.0 Bitumen Content

The bitumen content of the mix shall be tested periodically and as directed by the Engineer-in-Charge using centrifugal extraction method or such method approved by the Engineer-in-Charge. The test shall generally be carried out in accordance with established practices and as directed by the Engineer-in-Charge. Whenever, there is a deviation in the resultant bitumen content from approved job-mix formula values, it shall be reported to the Engineer-in-Charge immediately and necessary correction made at the job-mix plant as directed.

#### 4.1 Cost adjustment for Bitumen

For the purpose of tendering, the Contractor may base his rate on the assumption that the bitumen content of the mixture shall be 114 Kg of bitumen per Cum. of total mix compacted to 100% density in Marshall mould. If the actual quantity of bitumen required to be used as a result of the laboratory test is found different from the quantity of bitumen that is assumed above, necessary adjustment in the cost of extra/short bitumen used shall be made as per Schedule –F, or purchase price of bitumen at the nearest IOC/HP/BP/Govt. Refinery, whichever is lower. The procurement price of bitumen (Basic rate plus GST & transportation charges) shall be ascertained by the Engineer-in-Charge on submission of documentary proof by the contractor. The rate of bitumen decided by the Engineer-in-Charge shall be final and binding. Except adjustment in cost due to variation in bitumen consumption as stated above, no other factor whatsoever shall be considered for adjustment in quoted rates.

In the event of change in materials available at site due to unforeseen exigencies, a fresh job mix formula shall be arrived at within the specified limits in the laboratory as approved by the Engineer-in-Charge. Nothing extra is payable due to this.

Laboratory charges for the Job-mix formula design, costs of materials, its cartage and other incidental expenses shall be borne by the Contractor.

### 5.0 Mixing

All plants used by the contractor for the preparation of Semi Dense Asphaltic Concrete should be equipped with the following:

- Means for accurately weighing or measuring each batch of aggregates.
- Bitumen tanks with arrangement of heating the material under effective and positive control at all times. In addition there should be satisfactory devices for weighing, metering of volumetric measurement of the bitumen to be used.
- A mixer unit capable of producing uniform mixture.

The hot aggregate and binder shall be thoroughly and intimately mixed together in the correct proportion for at least 30 seconds or longer and until every particle of aggregates is completely coated and homogenous mixture is obtained. The total mixing time may be reduced but not less than 30 seconds in any case, if the Engineer-in-Charge is satisfied that thorough mixing can be achieved in less time. In such cases the contractor shall obtain prior written permission of the Engineer-in-charge.

### 6.0 Hot Mix Plant

The Hot Mix Plant (HMP) employed by the contractor shall be a weigh batch plant having a minimum capacity of 100 TPH. Hot Mix Plant with electronic control of minimum capacity of 100TPH and capable of producing a proper quality mix shall be used for preparing the mix. The plant may be either a batch type or a continuous one, having a coordinative set of essential units such as drier for heating the aggregate, devices for grading and batching/feeding by weight or volume the required quantities of aggregates. The plant shall also have a binder heating and control unit for metering out the correct quantities of heated binder together with the mechanical mixer for thorough mixing of the binder and the aggregates.

## 7.0 Temperature

7.1 Following temperatures shall be adhered to for VG bitumen at the different stages of work:

Bitumen Viscosity Grade	Bitumen Temperature °C	Aggregate Temperature °C	Mixed Material Temperature °C	Laying Temperature °C	*Rolling Temperature °C
VG-40	160-170	160-175	160-170	150 Min.	100 Min.
VG-30	150-165	150-170	150-165	140 Min.	90 Min.
VG-20	145-165	145-170	145-165	135 Min.	85 Min.
VG-10	140-160	140-165	140-160	130 Min.	80 Min.

\*Rolling must be completed before the mat cools to these minimum temperatures.

At no time, shall the difference in temperature between the aggregates and the binder exceed 140C, at no time shall bitumen or aggregates be overheated.

## 8.0 Transportation of Hot Mix

The Hot Semi Dense Asphaltic Concrete shall be transported from mixing plant to the site in clean vehicle. Every precaution shall be taken to avoid segregation of the hot mix and to ensure that they do not become contaminated with dust or foreign materials. In order to maintain satisfactory temperature of mix in transit, particularly in cold weather and to prevent undue loss of heat adequate precautions shall be taken by covering the material so that the materials are well protected during transportation. The temperature of the mix in every transporting vehicle shall be checked immediately prior to discharge of mix into the spreader and shall be ensured that the temperature is within the limits as specified in clause 7.0 above. If the temperature of mix in any transporting vehicle is not as per the limits specified in clause 7.0 above, the mix shall be rejected and shall be removed from site immediately.

## 9.0 Laying

Mix transported from the Hot Mix Plant to the site be spread by means of self-propelled electronic paver with electronic sensor & hydraulic control with suitable screeds capable of spreading, temping and finishing the mix true to the specified width and profile without calling segregation, dragging, bringing irregularities or other surface defects. The paver shall be capable of being operated at a speed consistent with a character of mix and the thickness of the course being laid so as to produce a surface of having uniform density and surface texture. The thickness of the single compacted layer shall not exceed 75mm. The temperature of the mix at the time of laying shall be as per clause 7.0 above.

## 10.0 Weather Limitation

The bituminous mixture shall not be placed:

- i) in presence of standing water on the surface
- ii) when the rain is imminent and during rains, fog or dust storm.
- iii) When the base course is damp.
- iv) When the air temperature on the surface on which it is to be laid is below 100C for mix with VG bitumen as binder.

## 11.0 Rolling

After the mix being spread, rolling shall be carried in three consecutive stages as below:

- a) Break down rolling
- b) Intermediate rolling
- c) Finish rolling

11.1 The initial or Break down rolling shall be done with 8-10 tonne dead weight smooth wheeled roller. The intermediate rolling will be done with smooth wheel pneumatic tyred roller of 15 to 30 tonne capacity having tyre pressure 7 kg/cm<sup>2</sup>. Finish rolling shall be done with 8 to 10 tonne steel wheel roller. The finish rolling shall be accomplished before the temperature of mix falls below 100°C.

Alternatively all the compaction operations i.e. break down rolling, intermediate rolling and finished rolling can be accomplished by using vibratory roller of 8 to 10 tonnes static weight. During the initial or breakdown rolling and finished rolling, the vibratory system shall be switched off. The joints and edges shall be rolled with 8 to 10 tonnes three wheeled static roller.

11.2 Rolling shall commence longitudinally at the sides and proceed towards center of the pavement, overlapping on successive trips by atleast half the width of the rear wheels. Alternative trips of the roller shall be slightly of different lengths.

11.3 Break-down rolling shall preferably commence as soon as practicable after the mix is spread. The maximum break down temperature at which rolling can commence shall be determined by field trials. The attempt should be to obtain the maximum possible density.

11.4 The principal function of finish rolling is to remove roller marks. The surface shall be carefully examined for residual marks which should be cleanly rolled out. A neat finished appearance shall be obtained.

**11.5 Speed Of Rolling**

The speed of rolling shall not exceed 4 - 5 km / hr to prevent adhesion of the mixture to the roller. The wheels shall be kept moist but excess of water shall not be permitted. The line of rolling shall not suddenly be changed, thereby displacing the mix. Roller shall not be left standing on the new surfacing.

**11.6 Rolling Temperature**

The range of temperature during rolling shall be as per clause 7.0 above. No rolling shall be allowed below 100C in case of VG bitumen.

**12.0 Joints**

**12.1 Longitudinal Joints**

Longitudinal joints and edges shall be constructed true to the delineating line parallel to the centre line of runway. The longitudinal lane joints shall be truly vertical in straight lines which shall be continuous for the full length of the pavement, or in smooth curves around bends. The exposed vertical edges of the longitudinal lane joints shall be carefully cut back and trimmed to firm material in the compacted lane, or for a minimum of one and a half times the layer thickness, whichever is the greater. All debris/loose material arising from this operation shall be removed from the pavement and the underlying surface cleaned and painted with hot bitumen immediately before laying of the adjacent lane. Nothing extra shall be paid on this account.

**12.2 Transverse Joints**

They shall be formed at right angles to the longitudinal joints, and shall be truly vertical. The exposed vertical edges of the transverse joints shall be cut back and trimmed to firm material or for a distance of not less than 1-1/2 times the thickness of layer whichever is greater. All debris/loose material arising from this operation shall be removed from the pavement and the underlying surface cleaned. The exposed joints shall then be cleaned and painted with hot bitumen immediately before the laying of the lane continues. Nothing extra shall be paid on this account.

**13.0 Pavement Edges**

Pavement shall be laid to correct width and alignment. To achieve straight and vertical edge, Contractor shall either use adequate side shuttering or cut back the edges to correct width and alignment by removing extra mix spread. Nothing extra shall be paid on this account.

**13.1 Temporary Ramps**

Temporary ramps at the end of each day work shall be made to allow smooth movement of air traffic, as per direction of Engineer-in-charge. Nothing extra shall be paid on account of provision of ramps and nothing shall be deducted in case ramps are not required to be provided. The decision regarding provision of ramps or non-provision of ramps shall rest with the Engineer-in-charge.

**14.0 Determination of Field Density**

The field density shall be determined by sand replacement method. Metallic tray of field density unit shall be kept on level spot of the finished pavement surface and a hole of 10cm dia is cut in the entire thickness of the layer. All materials removed from the hole are carefully collected and weighed. A known weight of dry standard sand, passing 710 micron IS sieve and retained on 355 micron I.S.

Sieve is taken in the sand pouring cylinder. The cylinder is kept directly over the hole and the shutter of the cylinder is released without any jerk and closed when the hole is filled with the sand. The quantity of the residual sand in the cylinder is weighed and the quantity filling the cone of the cylinder is determined.

The in-situ Field density of the layer is calculated as follows:

$$\text{Field Density} = \frac{A}{\frac{W-(W1+W2)}{d}} \text{ gm. per cm}^3$$

A = Weight of the materials removed from the hole.

W = Initial weight of sand taken in the cylinder.

W1 = Weight of the sand filling the cone of the cylinder.

W2 = Weight of the sand remaining in the cylinder.

d = Bulk density, gm per cm<sup>3</sup> of sand.

**15.0 Quality Control Tests for Semi Dense Asphaltic Concrete(SDAC):**

Apart from the quality control tests given in clause 1.1.1, following additional tests shall be carried out:

S.No.	Test	method	Frequency	Acceptance Criteria
1	Quality of binder	IS:73	Number of samples as per lot.	As per IS:73
2	Deleterious materials	IS:2386 (Part-III)	As required by the Engineer- in- charge.	As required by engineer-in-charge
3	Mix grading	IS:2386 (Part-I)	One test for individual constituent and mixed aggregate from dryer for each 400 tonnes of mix subject to minimum of two tests per day per plant.	
4	Stability of mix , flow value, density and void content.	ASTMD1559	3 tests for stability, flow value, density and void contents for each 400 tonnes of mix subject to minimum of two tests per day per plant.	
5	Binder content	As per clause 4.0	One test for each 400 tonnes of mix subject to minimum of two tests per day per plant.	As per clause 3.2
6	Density of compacted layer	As per clause 14.0	One test per 500m <sup>2</sup> area.	As per clause 16.1

Note: One test shall consists of 3 samples.

#### 16.0 Acceptance Criteria

##### 16.1 Field Density

The work shall be accepted as of quality, measured and paid in full if the field density does not work out to be less than 98% of the Design Laboratory Density worked out in Job Mix Formula in Clause 3.0 above.

When the field density achieved in the Field is between 95% and 98% of the Design Laboratory Density, the work shall be accepted as not up to the standard and paid at reduced rate on pro-rata basis of Design Laboratory Density with full rate for 98% density as base.

When the field density works out to be less than 95% of the Design Laboratory Density, the surface shall be further consolidated till the required field density is achieved. If this is not found possible, the work represented by the sample shall be dismantled and redone by the Contractor at his own cost.

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### **16.2 Surface Accuracy**

The finished surface of Semi Dense Asphaltic Concrete shall be true to level, grade and camber as per the approved drawings and the directions of the Engineer-in-Charge. When a straight edge of 3 metres length is placed longitudinally or transversely, the

maximum deviation shall not be more than 3 mm in longitudinal and transverse directions.

The surface accuracy shall be checked immediately after rolling. Surface irregularities which fall outside specified tolerance limits as stipulated in above para shall be rectified by removing to full depth the affected area which shall not be less than 10 Sqm and relaying with fresh materials. In no case shall depressions be filled up with screenings or binding material.

### **17.0 Measurements:**

17.1 Before commencement of laying of Semi Dense Asphaltic concrete, levels shall be taken jointly by the Engineer-in-Charge or his representative and the Contractor at 3 metre intervals both ways or closer as directed by the Engineer-in-Charge. These levels shall be recorded in the level book and plotted on the plan on tracing of polyester film/graph paper/plain computer sheet, as decided by the Engineer-in-Charge, by the Contractor at his own cost and the same shall be signed by the Contractor. Proposed formation levels of the finished Semi Dense Asphaltic Concrete surface shall be marked at corresponding points. Tack coat shall then be applied and Semi Dense Asphaltic Concrete shall then be laid and compacted to required levels (Tack coat shall be paid separately in the respective item of BOQ). Levels of the compacted bituminous surface shall be taken at grid points at which levels were recorded earlier in the level book and also plotted on the plan. Level books as well as the plan shall be signed by the Contractor as token of acceptance of the levels.

17.2 The volume of compacted mix shall be worked out in cubic meter correct to two places of a decimal as the product of the measured surface area and average thickness laid. Average thickness shall be worked out on the basis of actual levels. The length and breadth shall be measured correct to cm.

17.3 In case SDAC is to be laid on Dense Bituminous Macadam(DBM) newly laid under this contract, the finished levels of previous surface shall be taken as initial levels for this purpose.

17.4 Quantity for payment shall be the theoretical quantity (Based on Proposed formation levels) or the actual quantity (based on actual finished levels) whichever is less.

### **18.0 Rate**

The rate shall include the cost of all materials, plant machinery and labour required in all operations described above including all carriage and lifts involved. The rate also includes all cost of setting up the laboratory at site and carrying out the quality control measures/tests enumerated above by the Contractor at his own cost in the presence of Engineer-in-Charge or his authorized representative and submission of test results on completion of tests to the Engineer-in-Charge thereof (The item of Tack Coat shall be paid separately and is not included in this item).

**Item No.2:** Providing and laying of Hot Mix Dense Asphaltic Concrete(DAC) using crushed stone aggregate of quality, size and grading as specified and 2% cement by weight of aggregates as filler of quality as specified and Viscosity Grade Bitumen (supplied in bulk) in proportions as per job mix formula and laid to specified levels, grade and camber as per specification, drawings and as directed by the Engineer-in-Charge including compacting with 8-10 tonne, preferably vibratory road roller of adequate capacity to achieve the specified values of compaction, strength, surface accuracy complete [for tendering purpose VG bitumen of grade VG-30 (BULKED) content shall be taken as 135 kg/m<sup>3</sup> of mix supplied in bulk produced by Govt. Refineries and 2% cement by weight of aggregates as filler material].

### 1.0 Materials

1.1 Coarse Aggregates This shall consist of a crushed or broken from hard stone obtained from approved quarry. These shall be clean, strong, durable of fairly cubical shape and free from disintegrated, soft, friable, thin elongated or laminated pieces. This shall also be free from dirt, organic, deleterious material and any other foreign matter and adherent coatings. The grading of coarse aggregates shall conform to IS:383.

#### 1.1.1 Physical Properties of Coarse Aggregate

The aggregate shall conform to the following Physical Properties:

Sl. No.	Property	Tests	Test Method	Frequency	Acceptance Criteria
1	Cleanliness	Grain Size Analysis	IS:2386 (Part.I)	Before approval of the quarry and at every subsequent change in the source of supply	Max.5% passing 0.075mm sieve
2	Strength*	Aggregate impact value	IS:2386 (Part.IV)	Before approval of the quarry and at every subsequent change in the source of supply and one test for every 100m <sup>3</sup> of aggregates	Max.24%
		Los Angeles Abrasion value	IS:2386 (Part IV)	-do-	Max. 30%
3	Durability	Soundness (III) Loss with Sodium Sulphate for 5 cycles (IV) Loss with Magnesium Sulphate with 5 cycles	IS:2386 (Part V)	-do-	Max. 12%
4	Particle Shape	Flakiness & Elongation Index (Combined)	IS:2386 (Part I)	-do-	Max. 30%
5	Stripping	Coating and Stripping of Bitumen Aggregate	IS:6241	-do-	Minimum Retained Coating 95%
6	Water absorption	Water absorption	IS:2386 Part III	-do-	Max. 2%
7	#Water Sensitivity	**Retained Tensile strength (CSN...I-Nil...O-Nil)	AASHTO 283	-do-	Minimum 80%

\* The aggregate may satisfy either of the two tests. \*\* If the minimum retained tensile strength falls below 80%, use of anti-stripping agent is recommended to meet the minimum requirements # The water sensitivity test is only required, if the minimum retained coating in stripping test is less than 95%.

Where anyone or some of the above conditions cannot be satisfied, the Engineer-in-Charge may allow reasonable tolerances, with the approval of ED Engg.

1.1.2 Anti-stripping Agent: Anti-stripping agent or additive if required shall be heat stable, shall not change the viscosity of the binder beyond specifications, shall contain no harmful ingredients, shall be added in recommended proportion by approved method and shall satisfy the requirements as stipulated in MORT&H Appendix-5. The cost of providing anti-stripping agent shall be borne by the contractor and nothing extra shall be paid on this account to the contractor.

1.2 Fine Aggregates Fine aggregate shall consist of crushed or naturally occurring mineral material or combination of two, passing 2.36mm sieve and retained on 0.075mm sieve. No natural sand will be allowed in the wearing course. The fine aggregate shall be clean, hard, durable, dry, and free from dust and soft organic and other deleterious substances. Fine aggregates shall have sand equivalent value not less than 50 when tested in accordance with the requirement of IS:2720 Part 37. The Plasticity Index of fraction of passing the 0.425mm sieve shall not exceed 4 when tested in accordance with IS:2720 Part 5.

### 1.3 Filler

The filler shall consist of cement of quality conforming to relevant IS code as approved by the Engineer-in-charge.

#### 1.3.1 Cost Adjustment for Filler

For the purpose of tendering the contractor may base his rate assuming 2% cement as filler by weight of aggregates. If the actual quantity of cement required to be used, as per the design mix, is found to be different from the quantity of cement assumed above, necessary adjustment in cost of extra/short cement shall be made.

### 1.4 Bitumen

The Viscosity Grade Bitumen shall conform to IS:73. and shall be, supplied in bulk by Govt. Refineries. Use of imported Bitumen shall not be allowed. The agencies shall submit copies of the purchase vouchers of the Bitumen to the Engineer-in-Charge.

Selection of VG grade bitumen shall be based upon the climatic conditions of the area as per Table-1 below:

**Table-1**

Lowest Daily Mean Air Temperature	Highest Daily Mean Air Temperature		
	Less than 20 <sup>0</sup> C	20 to 30 <sup>0</sup> C	More than 30 <sup>0</sup> C
More than -10 <sup>0</sup> C	VG-10	VG-20	VG-30
-10 <sup>0</sup> C or Lower	VG-10	VG-10	VG-20

The contractor shall mandatorily provide weigh bridge at the hot mix plant for accurate weighing of materials.

2.0 Combined Grading of Aggregates In order to satisfy the design requirements for the Dense Asphaltic Concrete(DAC) as laid down in para 3.0, the mix shall contain coarse aggregates , fine aggregates and filler in suitable proportions. True and representative samples of the aggregates proposed to be used on specific job shall be tested in material testing lab (approved by AAI/Govt. institutions i.e. IITs, NITs, Govt. Engg. College etc.) and proper blend of individual aggregates normally available shall be worked out so that the gradation of the final composition shall satisfy the limits laid down below:

Nominal Maximum Aggregate Size*	13.2 mm
Layer thickness	40-50 mm
IS Sieve (mm)	Percentage by weight passing
19	100
13.2	90-100
9.5	70-88
4.75	53-71
2.36	42-58
1.18	34-48
0.6	26-38
0.3	18-28
0.15	12-20
0.075	4-10

\* Nominal maximum aggregate size is the largest specified sieve size upon which any of the aggregate material is retained.

**3.0 Job Mix Formula (JMF)** Twenty days prior to the start of work at site, the job mix formula shall be got determined by the contractor in AAI empanelled or Govt. Institute/laboratory, as directed by the Engineer-in-Charge, by Marshall Design Method. The Job Mix Formula (JMF) so determined shall be submitted by the contractor, in writing, to the engineer-in-charge for his acceptance before the actual paving work starts at site. The Contractor also shall intimate, in writing, to the Engineer-in-Charge the details of source and location of all materials, their sizes, grading and test results. Besides conforming to the requirements of grading and quality for individual ingredients, the mix shall meet the requirements enumerated below:

S.No.	Criteria	Value
1	No. of compaction blows on each side of Marshall specimen	75
2	Marshall stability in kN at 60°C	Not less than 12
3	Marshall flow value in mm for VG Bitumen	2-4
4	Marshall Quotient for Viscosity Grade Paving Bitumen(Ratio of Stability/Flow	2.5
5	Percentage Voids in Mix (VIM)	3-5
6	Percentage voids in mineral aggregates filled with bitumen (VFB)	65-75%
7	Bitumen(PMB) content by weight of mix	As determined in the Lab.
8	Design laboratory density (Bulk density of the Marshall mould)	As determined in the Lab.
9	Retained Marshall Stability on Immersion Test	Not less than 75%
10	Tensile Strength Ratio	Not less than 80%

Note: Design of mix should also meet the following criteria:

a) A test track of minimum 7m wide and 90m length and shall be of the same depth specified for the construction of the course which it represents, laid and tested by the contractor before commencement of actual work. The core cut from the test track on testing shall give a stability and density of not less than 98% of the respective design values. b) Texture depth shall be measured by grease patch method and depth obtained by this test shall not be less than 1.5mm.

In case of any deficiency, necessary adjustment in Job Mix formula, Plant operation, Placing procedures and /or rolling procedure shall be made and the test section shall be re-laid & tested. No extra payment shall be made on this account of making test track or changes in grading or any other changes, if any. Full production shall not begin until acceptable test track has been constructed and accepted, in writing, by the Engineer-in-Charge.

### 3.1 Revision of Job Mix Formula

The Job Mix Formula shall be revised if there is change in source of material and/or if it is noticed by the Engineer-in-Charge that grading of Individual aggregates has changed. The Job Mix Formula (JMF) so determined shall be submitted by the contractor, in writing, to the engineer-in-charge for his acceptance before the actual paving work starts at site with new source of material/grading. No extra payment shall be made to the contractor on this account

### 3.2 Permissible Tolerances in the Job Mix Formula.

S.No.	Description	Permissible Variation
1	Aggregate passing 19mm sieve or larger	±7%
2	Aggregate passing 13.2mm, 9.5mm	±6%
3	Aggregate passing 4.75mm	±5%
4	Aggregate passing 2.36mm, 1.18mm, 0.6mm	±4%
5	Aggregate passing 0.3mm, 0.15 mm	±3%
6	Aggregate passing 0.075mm	±1.5%
7	Binder content	±0.3%

**4.0 Bitumen Content** The bitumen content of the mix shall be tested periodically and as directed by the Engineer-in-Charge using centrifugal extraction method or such method approved by the Engineer-in-Charge. The test shall generally be carried out in accordance with established practices and as directed by the Engineer-in-Charge. Whenever, there is a deviation in the resultant bitumen content from approved job-mix-formula values, it shall be reported to the Engineer-in-Charge immediately and necessary correction made at the job-mix plant as directed.

#### 4.1 Cost adjustment for Bitumen

For the purpose of tendering, the Contractor may base his rate on the assumption that the bitumen content of the mixture shall be 135 Kg of bitumen per Cum. of total mix compacted to 100% density in

Marshall mould. If the actual quantity of bitumen required to be used as a result of the laboratory test is found different from the quantity of bitumen that is assumed above, necessary adjustment in the cost of extra/short bitumen used shall be made as per Schedule –F, SI No- -- at NIT--- or purchase price of bitumen at the nearest IOC/HP/BP/Govt. Refinery, whichever is lower. The procurement price of bitumen (Basic rate plus GST & transportation charges) shall be ascertained by the Engineer-in-Charge on submission of documentary proof by the contractor. The rate of bitumen decided by the Engineer-in-Charge shall be final and binding. Except adjustment in cost due to variation in bitumen consumption as stated above, no other factor whatsoever shall be considered for adjustment in quoted rates.

In the event of change in materials available at site due to unforeseen exigencies, a fresh job mix formula shall be arrived at within the specified limits in the AAI empanelled laboratory or Govt. Institute/laboratory as approved by the Engineer-in-Charge. Nothing extra is payable due to this.

Laboratory charges for the Job-mix formula design, costs of materials, its cartage and other incidental expenses shall be borne by the Contractor.

#### 5.0 Mixing

All plants used by the contractor for the preparation of Dense Asphaltic Concrete should be equipped with the following:

- Means for accurately weighing or measuring each batch of aggregates.
- Bitumen tanks with arrangement of heating the material under effective and positive control at all times. In addition there should be satisfactory devices for weighing, metering of volumetric measurement of the bitumen to be used.
- A mixer unit capable of producing uniform mixture.

The hot aggregate and binder shall be thoroughly and intimately mixed together in the correct proportion for at least 30 seconds or longer and until every particle of aggregates is completely coated and homogenous mixer is obtained. The total mixing time may be reduced but not less than 30 seconds in any case, if the Engineer-in-Charge is satisfied that through mixing can be achieved in less time. In such cases the contractor shall obtain prior written permission of the Engineer-in-charge.

#### 6.0 Hot Mix Plant

The Hot Mix Plant (HMP) employed by the contractor shall be a weigh batch plant having a minimum capacity of 100 TPH. Hot Mix Plant with electronic control of minimum capacity of 100TPH and capable of producing a proper quality mix shall be used for preparing the mix. The plant may be either a batch type or a continuous one, having a coordinative set of essential units such as drier for heating the aggregate, devices for grading and batching/feeding by weight or volume the required quantities of aggregates. The plant shall also have a binder heating and control unit for metering out the correct quantities of heated binder together with the mechanical mixer for thorough mixing of the binder and the aggregates. It should preferably have a separate feeder for incorporating the correct quantity of filler by weight.

#### 7.0 Temperature

7.1 Following temperatures shall be adhered to at the different stages of work:

Bitumen Viscosity Grade	Bitumen Temperature °C	Aggregate Temperature °C	Mixed Material Temperature °C	Laying Temperature °C	*Rolling Temperature °C
VG-40	160-170	160-175	160-170	150 Min.	100 Min.
VG-30	150-165	150-170	150-165	140 Min.	90 Min.
VG-20	145-165	145-170	145-165	135 Min.	85 Min.
VG-10	140-160	140-165	140-160	130 Min.	80 Min.

\*Rolling must be completed before the mat cools to these minimum temperatures.

At no time, shall the difference in temperature between the aggregates and the binder exceed 140C, at no time shall bitumen or aggregates be overheated.

#### 8.0 Transportation of Hot Mix

The Hot Dense Asphaltic Concrete shall be transported from mixing plant to the site in clean vehicle. Every precaution shall be taken to avoid segregation of the hot mix and to ensure that they do not become contaminated with dust or foreign materials. In order to maintain satisfactory temperature of mix in transit, particularly in cold weather and to prevent undue loss of heat adequate precautions shall be taken by covering the material so that the materials are well protected during transportation. The temperature of the mix in every transporting vehicle shall be checked immediately prior to discharge of mix into the

spreader and shall be ensured that the temperature is within the limits as specified in clause 7.0 above. If the temperature of mix in any transporting vehicle is not as per the limits specified in clause 7.0 above, the mix shall be rejected and shall be removed from site immediately.

### **9.0 Laying**

Mix transported from the Hot Mix Plant to the site be spread by means of self-propelled electronic paver with electronic sensor & hydraulic control with suitable screeds capable of spreading, temping and finishing the mix true to the specified width and profile without calling segregation, dragging, bringing irregularities or other surface defects. The paver shall be capable of being operated at a speed consistent with a character of mix and the thickness of the course being laid so as to produce a surface of having uniform density and surface texture. The thickness of the single compacted layer shall not exceed 50mm.

The temperature of the mix at the time of laying shall be as per clause 7.0 above.

### **10.0 Weather Limitation**

The bituminous mixture shall not be placed:

- i) in presence of standing water on the surface
- ii) when the rain is imminent and during rains, fog or dust storm.
- iii) When the binder course is damp.
- iv) When the air temperature on the surface on which it is to be laid is below 10<sup>0</sup>C.

### **11.0 Rolling**

After the mix being spread, rolling shall be carried in three consecutive stages as below:

- a) Break down rolling
- b) Intermediate rolling
- c) Finish rolling

**11.1** The initial or Break down rolling shall be done with 8-10 tonne dead weight smooth wheeled roller. The intermediate rolling will be done with smooth wheel pneumatic tyred roller of 15 to 30 tonne capacity having tyre pressure 7 kg/cm<sup>2</sup>. Finish rolling shall be done with 8 to 10 tonne steel wheel roller. Alternatively all the compaction operations i.e. break down rolling, intermediate rolling and finished rolling can be accomplished by using vibratory roller of 8 to 10 tonnes static weight. During the initial or breakdown rolling and finished rolling, the vibratory system shall be switched off. The joints and edges shall be rolled with 8 to 10 tonnes three wheeled static roller.

**11.2** Rolling shall commence longitudinally at the sides and proceed towards center of the pavement, overlapping on successive trips by at least half the width of the rear wheels. Alternative trips of the roller shall be slightly of different lengths.

**11.3** Break-down rolling shall preferably commence as soon as practicable after the mix is spread. The maximum break down temperature at which rolling can commence shall be determined by field trials. The attempt should be to obtain the maximum possible density.

**11.4** The principal function of finish rolling is to remove roller marks. The surface shall be carefully examined for residual marks which should be cleanly rolled out. A neat finished appearance shall be obtained. Finish rolling shall be accomplished with tandem roller.

### **11.5 Cold Rolling**

The final compaction will be carried out with a pneumatic tyred roller of 15 to 30 tonne capacity having tyre pressure 7 kg/cm<sup>2</sup> after the entire paving operations are completed. This should be done on bright sunny days such that entire airfield is rolled minimum five times.

### **11.6 Speed Of Rolling**

The speed of rolling shall not exceed 4 - 5 km / hr to prevent adhesion of the mixture to the roller. The wheels shall be kept moist but excess of water shall not be permitted. The line of rolling shall not suddenly be changed, thereby displacing the mix. Roller shall not be left standing on the new surfacing.

### **11.7 Rolling Temperature**

The range of temperature during rolling shall be as per clause 7.0 above.

### **12.0 Joints**

#### **12.1 Longitudinal Joints**

Longitudinal joints and edges shall be constructed true to the delineating line parallel to the centre line of runway. The longitudinal lane joints shall be truly vertical in straight lines which shall be continuous for the full length of the pavement, or in smooth curves around bends. The exposed vertical edges of the longitudinal lane joints shall be carefully cut back and trimmed to firm material in the compacted lane, or for a minimum of one and a half times the layer thickness, whichever is the greater. All debris/loose material arising from this operation shall be removed from the pavement and the underlying surface cleaned and painted with hot bitumen immediately before laying of the adjacent lane. Nothing extra shall be paid on this account.

### 12.2 Transverse Joints

They shall be formed at right angles to the longitudinal joints, and shall be truly vertical. The exposed vertical edges of the transverse joints shall be cut back and trimmed to firm material or for a distance of not less than 1-1/2 times the thickness of layer whichever is greater. All debris/loose material arising from this operation shall be removed from the pavement and the underlying surface cleaned. The exposed joints shall then be cleaned and painted with hot bitumen immediately before the laying of the lane continues. Nothing extra shall be paid on this account.

### 13.0 Pavement Edges

Pavement shall be laid to correct width and alignment. To achieve straight and vertical edge, Contractor shall either use adequate side shuttering or cut back the edges to correct width and alignment by removing extra mix spread. Nothing extra shall be paid on this account.

### 13.1 Temporary Ramps

Temporary ramps at the end of each day work shall be made to allow smooth movement of air traffic, as per direction of Engineer-in-charge. Nothing extra shall be paid on account of provision of ramps and nothing shall be deducted in case ramps are not required to be provided. The decision regarding provision of ramps or non-provision of ramps shall rest with the Engineer-in-charge.

### 14.0 Determination of Field Density

The field density shall be determined by sand replacement method. Metallic tray of field density unit shall be kept on level spot of the finished pavement surface and a hole of 10cm dia is cut in the entire thickness of the layer. All materials removed from the hole are carefully collected and weighed. A known weight of dry standard sand, passing 710 micron IS sieve and retained on 355 micron I.S. Sieve is taken in the sand pouring cylinder. The cylinder is kept directly over the hole and the shutter of the cylinder is released without any jerk and closed when the hole is filled with the sand. The

quantity of the residual sand in the cylinder is weighed and the quantity filling the cone of the cylinder is determined.

The in-situ Field density of the layer is calculated as follows:

$$\text{Field Density} = \frac{A}{W-(W1+W2)} \quad \text{gm. per cm}^3$$

A = Weight of the materials removed in the hole.

W = Initial weight of sand taken in the cylinder.

W1 = Weight of the sand filling the cone of the cylinder.

W2 = Weight of the sand remaining in the cylinder.

d = Bulk density, gm per cm<sup>3</sup> of sand.

### 15.0 Quality Control Tests for Dense Asphaltic Concrete(DAC):

Apart from the quality control tests given in clause 1.1.1, following additional tests shall be carried out:

S.No.	Test	method	Frequency	Acceptance Criteria
1	Quality binder	IS:73	Number of samples as per lot.	As per IS:73.
2	Deleterious materials	IS:2386 (Part-III)	by the Engineer- in- charge.	As required by engineer-in-charge
3	grading	IS:2386 (Part-I)	One test for individual constituent and mixed aggregate from dryer for each 400 tonnes of mix subject to minimum of two tests per day per plant.	

(C Nil, O Nil)

4	Stability of mix, flow value, density and void content.	ASTMD1559	3 tests for stability, flow value, density and void contents for each 400 tonnes of mix subject to minimum of two tests per day per plant.	
5	Binder content	As per clause 4.0	One test for each 400 tonnes of mix subject to minimum of two tests per day per plant.	As per clause 3.2
6	Density of compacted layer	As per clause 14.0	One test per 500m area	As per clause 16.1

Note: One test shall consists of 3 samples.

## 16.0 Acceptance Criteria

### 16.1 Field Density

The work shall be accepted as of quality, measured and paid in full if the field density does not work out to be less than 98% of the Design Laboratory Density worked out in Job Mix Formula in Clause 3.0 above.

When the field density achieved in the Field is between 95% and 98% of the Design Laboratory Density, the work shall be accepted as not up to the standard and paid at reduced rate on pro-rata basis of Design Laboratory Density with full rate for 98% density as base.

When the field density works out to be less than 95% of the Design Laboratory Density, the surface shall be further consolidated till the required field density is achieved. If this is not found possible, the work represented by the sample shall be dismantled and redone by the Contractor at his own cost.

### 16.2 Surface Accuracy

The finished surface of Dense Asphaltic Concrete shall be true to level, grade and camber as per the approved drawings and the directions of the Engineer-in-Charge. When a straight edge of 3 metres length is placed longitudinally or transversely, the maximum deviation shall not be more than 3 mm in longitudinal and transverse directions.

The surface accuracy shall be checked immediately after rolling. Surface irregularities which fall outside specified tolerance limits as stipulated in above para shall be rectified by removing to full depth the affected area which shall not be less than 10 Sqm and relaying with fresh materials. In no case shall depressions be filled up with screenings or binding material.

## 17.0 Measurements:

17.1 Before commencement of laying of Dense Asphaltic concrete, levels shall be taken jointly by the Engineer-in-Charge or his representative and the Contractor at 3 metre intervals both ways or closer as directed by the Engineer-in-Charge. These levels shall be recorded in the level book and plotted on the plan on tracing of polyester film/graph paper/plain computer sheet, as decided by the Engineer-in-Charge, by the Contractor at his own cost and the same shall be signed by the Contractor. Proposed formation levels of the finished Dense Asphaltic Concrete surface shall be marked at corresponding points. Tack coat shall then be applied and Dense Asphaltic Concrete shall then be laid and compacted to required levels (Tack coat shall be paid separately in the respective item of BOQ). Levels of the compacted bituminous surface shall be taken at grid points at which levels were recorded earlier in the level book and also plotted on the plan. Level books as well as the plan shall be signed by the Contractor as token of acceptance of the levels.

17.2 The volume of compacted mix shall be worked out in cubic meter correct to two places of a decimal as the product of the measured surface area and average thickness laid. Average thickness shall be worked out on the basis of actual levels. The length and breadth shall be measured correct to cm.

17.3 In case DAC is to be laid on SDAC newly laid under this contract, the finished levels of previous surface shall be taken as initial levels for this purpose.

17.4 Quantity for payment shall be the theoretical quantity (Based on Proposed formation levels) or the actual quantity (based on actual finished levels) whichever is less.

## 18.0 Rate

The rate shall include the cost of all materials, plant machinery and labour required in all operations described above including all carriage and lifts involved. The rate also includes all cost of setting up the laboratory at site and carrying out the quality control measures/tests enumerated above by the Contractor at his own cost in the presence of Engineer-in-Charge or his authorized representative and

submission of test results on completion of tests to the Engineer-in-Charge thereof (The item of Tack Coat shall be paid separately and is not included in this item).

**NOTE: Specifications for the items not covered above, CPWD specifications with upto date correction slips shall be followed.**

**Item No.4:** Providing and laying of Hot Mix Dense Bituminous Macadam(**DBM**) using crushed stone aggregate of quality, size and grading as specified and 2% cement by weight of aggregates as filler of quality as specified and Viscosity Grade Bitumen (supplied in bulk) in proportions as per job mix formula and laid to specified levels, grade and camber as per specification, drawings and as directed by the Engineer-in-Charge including compacting with 8-10 tonne, preferably vibratory road roller of adequate capacity to achieve the specified values of compaction, strength, surface accuracy complete [for tendering purpose VG bitumen of grade (VG-30) shall be taken as 95.00

kg/m<sup>3</sup> of mix supplied in bulk produced by Govt. Refineries and 2% cement by weight of aggregates as filler material].

## 1.0 Materials

### 1.1 Coarse Aggregates

This shall consist of a crushed or broken from hard stone obtained from approved quarry. These shall be clean, strong, durable of fairly cubical shape and free from disintegrated, soft, friable, thin elongated or laminated pieces. This shall also be free from dirt, organic, deleterious material and any other foreign matter and adherent coatings. The grading of coarse aggregates shall conform to IS:383.

#### 1.1.1 Physical Properties of Coarse Aggregate

The aggregate shall conform to the following Physical Properties:

Sl. No.	Property	Tests	Test Method	Frequency	Acceptance Criteria
1	Cleanliness	Grain size Analysis	IS: 2386 (part-I)	Before approval of the quarry and at every subsequent change in the source of supply	Max. 5% passing 0.075mm sieve
2	Strength*	Aggregate value	IS: 2386 (PartIV)	Before approval of the quarry and at every subsequent change in the source of supply and one test for every 100m <sup>3</sup> of aggregates	Max. 27%
		Los Angeles Abrasion value (C-Nil...I-Nil...O-Nil)	IS: 2386 (Part-IV)	-do-	Max. 35%

	Durability	Soundness (i) Loss with Sodium Sulphate for 5 cycles  (ii) Loss with Magnesium Sulphate with 5 cycles	IS: 2386 (Part V)	-do-	Max. 12%  Max. 18%
4	Particle Shape	Flakiness & Elongation Index (Combined)	IS: 2386 (part-I)	-do-	Max. 35%
5	Stripping	Coating and stripping of Bitumen Aggregate	IS: 6241	-do-	Minimum Retained Coating 95%
6	Water Absorption	Water Absorption	IS: 2386 Part III	-do-	Max. 2%
7	# Water Sensitivity	** Retained Tensile Strength	AASHTO 283	-do-	Minimum 80%

\* The aggregate may satisfy either of two tests.

\*\* If the minimum retained tensile strength falls below 80%, use of anti-

stripping agent is recommended to meet the minimum requirements

The water sensitivity test is only required, if the minimum retained coating in stripping test is less than 95%.

Where anyone or some of the above conditions cannot be satisfied, it is left to the Engineer-in-Charge to allow reasonable tolerances, with the approval of ED Engg.

**1.1.2 Anti-stripping Agent:** Anti-stripping agent or additive if required shall be heat stable, shall not change the viscosity of the binder beyond specifications, shall contain no harmful ingredients, shall be added in recommended proportion by approved method and shall satisfy the requirements as stipulated in MORT&H Appendix-5. The cost of providing anti-stripping agent shall be borne by the contractor and nothing extra shall be paid on this account to the contractor.

## 1.2 Fine Aggregates

Fine aggregate shall consist of crushed or naturally occurring mineral material or combination of two, passing 2.36mm sieve and retained on 0.075mm sieve.

The fine aggregate will be clean, hard, durable, dry, and free from dust and soft organic and other deleterious substances. Fine aggregates shall have sand equivalent value not less than 50 when tested in accordance with the requirement of IS:2720 Part 37. The Plasticity Index of fraction of passing the

0.425mm sieve shall not exceed 4 when tested in accordance with IS:2720 Part 5.

### 1.3 Filler

The filler shall consist of cement of quality conforming to relevant IS code as approved by the Engineer-in-charge.

#### 1.3.1 Cost Adjustment for Filler

For the purpose of tendering the contractor may base his rate assuming 2% cement as filler by weight of aggregates. If the actual quantity of cement required to be used, as per the design mix, is found to be different from the quantity of cement assumed above, necessary adjustment in cost of extra/short cement shall be made.

### 1.4 Bitumen

The bitumen shall be, Viscosity Grade Bitumen conforming to IS:73, supplied in bulk by Govt. refineries in India. Selection of VG grade bitumen shall be based upon the climatic conditions of the area as per Table-1 below:

Table-1

Lowest Daily Means Air Temperature	Highest Daily Means Air Temperature		
	Less than 20 <sup>o</sup> C	20 to 30 <sup>o</sup> C	More than 30 <sup>o</sup> C
More than -10 <sup>o</sup> C	VG-10	VG-20	VG-30
- 10 <sup>o</sup> C or lower	VG-10	VG-10	VG-20

The contractor shall mandatorily provide weigh bridge at the hot mix plant for accurate weighing of materials.

Use of imported Bitumen shall not be allowed. The agencies shall submit copies of the purchase vouchers of the bitumen to the Engineer-in-Charge.

### 2.0 Combined Grading of Aggregates

In order to satisfy the design requirements for the Dense Bituminous Macadam (DBM) as laid down in para 3.0, the mix shall contain coarse aggregates, fine aggregates in suitable proportions. True and representative samples of the aggregates proposed to be used on specific job shall be tested in material testing lab (approved by AAI/Govt. institutions i.e. IITs, NITs, Govt. Engg. College etc.) and proper blend of individual aggregates normally available shall

be worked out so that the gradation of the final composition shall satisfy the limits laid down below:

<b>Grading</b>	<b>2</b>
<b>Nominal Maximum Aggregate Size</b>	<b>26.5mm</b>
<b>Layer thickness</b>	<b>50-100 mm</b>
<b>IS Sieve (mm)</b>	<b>Commulative Percentage by weight of percentage passing</b>
37.5	100
26.5	90-100
19	71-95
13.2	56-80
4.75	38-54
2.36	28-42
0.3	7-21
0.075	2-8

### **3.0 Job Mix Formula (JMF)**

Twenty days prior to the start of work at site, the job mix formula shall be got determined by the contractor in a laboratory, as directed by the Engineer-in-Charge, by Marshall Design Method. The Job Mix Formula (JMF) so determined shall be submitted by the contractor, in writing, to the engineer-in-charge for his acceptance before the actual paving work starts at site. The Contractor also shall intimate, in writing, to the Engineer-in-Charge the details of source and location of all materials, their sizes, grading and test results. Besides conforming to the requirements of grading and quality for individual ingredients the mix shall meet the requirements enumerated below:

S. No.	Criteria	Value
1	No. of compaction blows on each side of Marshall Specimen	75
2	Marshall stability in kN at 60 <sup>0</sup> C	Not less than 9.0
3	Marshall flow value in mm for VG bitumen	2-4
4	Marshall Quotient for Viscosity grade Paving Bitumen (Ratio of Stability/ Flow)	2-5
5	Percentage voids in Mix (VIM)	3-5
6	Percentage voids in mineral aggregates filled with bitumen (VFB)	65-75%
7	Bitumen (Viscosity Grade) content by weight of mix	As determined in the lab.
8	Design laboratory density (Bulk density of the Marshall mould)	As determined in the lab.
9	Retained Marshall Stability on immersion Test	Not Less than 75%

Note: Design of mix should also meet the following criteria:

A test track of minimum 7m wide and 90m length and shall be of the same depth specified for the construction of the course which it represents, laid and tested by the contractor before commencement of actual work. The core cut from the test track on testing shall give a stability and density of not less than 98% of the respective design values.

In case of any deficiency, necessary adjustment in Job Mix formula, Plant operation, Placing procedures and /or rolling procedure shall be made and the test section shall be re-laid & tested. No extra payment shall be made on this account of making test track or changes in grading or any other changes, if any. Full production shall not begin until acceptable test track has been constructed and accepted, in writing, by the Engineer-in-Charge

### **3.1 Revision of Job Mix Formula**

The Job Mix Formula shall be revised if there is change in source of material and/or if it is noticed by the Engineer-in-Charge that grading of Individual aggregates has changed. The Job Mix Formula (JMF)

so determined shall be submitted by the contractor, in writing, to the engineer-in-charge for his acceptance before the actual paving work starts at site with new source of material/grading. No extra payment shall be made to the contractor on this account.

### **3.2 Permissible Tolerances in the Job Mix Formula.**

<b>S. No.</b>	<b>Description</b>	<b>Permissible Variation</b>
1	Aggregate passing 19mm sieve or larger	±8%
2	Aggregate passing 13.2mm,9.5mm	±7%
3	Aggregate passing 4.75mm	±6%
4	Aggregate passing 2.36mm, 1.18mm, 0.6mm	±5%
5	Aggregate passing 0.3mm, 0.15 mm	±4%
6	Aggregate passing 0.075mm	±2%
7	Binder content	±0.3%

All the above tolerances are with respect to the Job Mix Formula as the datum.

### **4.0 Bitumen Content**

The bitumen content of the mix shall be tested periodically and as directed by the Engineer-in-Charge using centrifugal extraction method or such method approved by the Engineer-in-Charge. The test shall generally be carried out in accordance with established practices and as directed by the Engineer-in-Charge. Whenever, there is a deviation in the resultant bitumen content from approved job-mix- formula values, it shall be reported to the Engineer-in-Charge immediately and necessary correction made at the job-mix plant as directed.

### **4.1 Cost Adjustment for Bitumen**

For the purpose of tendering, the Contractor may base his rate on the assumption that the bitumen content of the mixture shall be 95Kg of bitumen per Cum. of total mix compacted to 100% density in Marshall mould. If the actual quantity of bitumen required to be used as a result of the laboratory test is found different from the quantity of

bitumen that is assumed above, necessary adjustment in the cost of extra/short bitumen used shall be made as per **Schedule-F**, or purchase price of bitumen at the nearest IOC/HP/BP/Govt. Refinery, which ever is lower. The procurement price of bitumen (Basic rate plus GST tax & transportation charges) shall be ascertained by the Engineer-in-Charge on submission of documentary proof by the contractor. The rate of bitumen decided by the Engineer-in-Charge shall be final and binding. Except adjustment in cost due to variation in bitumen consumption as stated above, no other factor whatsoever shall be considered for adjustment in quoted rates.

In the event of change in materials available at site due to unforeseen exigencies, a fresh job mix formula shall be arrived at within the specified limits in the laboratory as approved by the Engineer-in-Charge. Nothing extra is payable due to this. Laboratory charges for the Job-mix formula design, costs of materials, its cartage and other incidental expenses shall be borne by the Contractor.

## **5.0 Mixing**

All plants used by the contractor for the preparation of Dense Bituminous Macadam should be equipped with the following:

Means for accurately weighing or measuring each batch of aggregates.

Bitumen tanks with arrangement of heating the material under effective and positive control at all times. In addition there should be satisfactory devices for weighing, metering of volumetric measurement of the bitumen to be used.

A mixer unit capable of producing uniform mixture.

The hot aggregate and binder shall be thoroughly and intimately mixed together in the correct proportion for at least 30 seconds or longer and until every particle of aggregates is completely coated and homogenous mixer is obtained. The total mixing time may be reduced but not less than 30 seconds in any case, if the Engineer-in-Charge is satisfied that through mixing can be achieved in less time. In such cases the contractor shall obtain prior written permission of the Engineer-in-charge.

## **6.0 Hot Mix Plant**

The Hot Mix Plant (HMP) employed by the contractor shall be a weigh batch plant having a minimum capacity of 100 TPH. Hot Mix Plant with electronic control of minimum capacity of 100TPH and capable of producing a proper quality mix shall be used for preparing the mix. The plant may be either a batch type or a continuous

one, having a coordinative set of essential units such as drier for heating the aggregate, devices for grading and batching/feeding by weight or volume the required quantities of aggregates. The plant shall also have a binder heating and control unit for metering out the correct quantities of heated binder together with the mechanical mixer for thorough mixing of the binder and the aggregates.

## 7.0 Temperature

7.1 Following temperatures shall be adhered to for VG bitumen at the different stages of work

Bitumen Viscosity Grade	Bitumen Temperature °C	Aggregate Temperature °C	Mixed Material Temperature °C	Laying Temperature °C	*Rolling Temperature °C
VG-40	160-170	160-175	160-170	150 Min.	100 Min.
VG-30	150-165	150-170	150-165	140 Min.	90 Min.
VG-20	145-165	145-170	145-165	135 Min.	85 Min.
VG-10	140-160	140-165	140-160	130 Min.	80 Min.

\*Rolling must be completed before the mat cools to these minimum temperatures.

At no time, shall the difference in temperature between the aggregates and the binder exceed 14<sup>o</sup> C, at no time shall bitumen or aggregates be overheated.

## 8.0 Transportation of Hot Mix

The Hot Dense Bituminous Macadam shall be transported from mixing plant to the site in clean vehicle. Every precaution shall be taken to avoid segregation of the hot mix and to ensure that they do not become contaminated with dust or foreign materials. In order to maintain satisfactory temperature of mix in transit, particularly in cold weather and to prevent undue loss of heat adequate precautions shall be taken by covering the material so that the materials are well protected during transportation. The temperature of the mix in every transporting vehicle shall be checked immediately prior to discharge of mix into the spreader and shall be ensured that the temperature is within the limits as specified in clause 7.0 above. If the temperature of mix in any transporting vehicle is not as per the limits specified in clause 7.0 above, the mix shall be rejected and shall be removed from site immediately.

## 9.0 Laying

Mix transported from the Hot Mix Plant to the site be spread by means of self propelled electronic paver with electronic sensor & hydraulic control with suitable screeds capable of spreading, temping and finishing the mix true to the specified width and profile without calling segregation, dragging, bringing irregularities or other surface defects. The paver shall be capable of being operated at a speed consistent with a character of mix and the thickness of the course being laid so as to produce a surface of having uniform density and surface texture. The thickness of the single compacted layer shall not exceed 75mm. The temperature of the mix at the time of laying shall be as per clause 7.0 above.

## 10.0 Weather Limitation

The bituminous mixture shall not be placed:

in presence of standing water on the surface  
when the rain is imminent and during rains, fog or duststorm.

When the base course is damp.

- iv) When the air temperature on the surface on which it is to be laid is below 10° C for mix with VG bitumen as binder.

## 11.0 Rolling

After the mix being spread, rolling shall be carried in three consecutive stages as below:

Break down rolling  
Intermediate rolling  
Finish rolling

**11.1** The initial or Break down rolling shall be done with 8-10 tonne dead weight smooth wheeled roller. The intermediate rolling will be done with smooth wheel pneumatic tyred roller of 15 to 30 tonne capacity having tyre pressure 7 kg/sqcm. Finish rolling shall be done with 8 to 10 tonne steel wheel roller. The finish rolling shall be accomplished before the temperature of mix falls below 100 degree C.

Alternatively all the compaction operations i.e. break down rolling, intermediate rolling and finished rolling can be accomplished by using vibratory roller of 8 to 10 tonnes static weight. During the initial or breakdown rolling and finished rolling, the vibratory system shall be switched off. The joints and edges shall be rolled with 8 to 10 tonnes three wheeled static roller.

**11.2** Rolling shall commence longitudinally at the sides and proceed towards center of the pavement, overlapping on successive trips by atleast half the width of the rear wheels. Alternative trips of the roller shall be slightly of different lengths.

**11.3** Break-down rolling shall preferably commence as soon as practicable after the mix is spread. The maximum break down temperature at which rolling can commence shall be determined by field trials. The attempt should be to obtain the maximum possible density.

**11.4** The principal function of finish rolling is to remove roller marks. The surface shall be carefully examined for residual marks which should be cleanly rolled out. A neat finished appearance shall be obtained.

### **11.5 Speed Of Rolling**

The speed of rolling shall not exceed 4 - 5 km / hr to prevent adhesion of the mixture to the roller. The wheels shall be kept moist but excess of water shall not be permitted. The line of rolling shall not suddenly be changed, thereby displacing the mix. Roller shall not be left standing on the new surfacing.

### **11.6 Rolling Temperature**

The range of temperature during rolling shall be as per clause 7.0 above. No rolling shall be allowed below 100<sup>0</sup> C in case of VG bitumen.

## **12.0 Joints**

### **12.1 Longitudinal Joints**

Longitudinal joints and edges shall be constructed true to the delineating line parallel to the centre line of runway. The longitudinal lane joints shall be truly vertical in straight lines which shall be continuous for the full length of the pavement, or in smooth curves around bends. Joints in the successive asphaltic concrete layers above shall be staggered by 500mm from those the underlying layers. The exposed vertical edges of the longitudinal lane joints shall be carefully cut back and trimmed to firm material in the compacted lane, or for a minimum of one and a half times the layer thickness, whichever is the greater. All debris/loose material arising from this operation shall be removed from the pavement and the underlying surface cleaned and painted with hot bitumen immediately before the laying of the adjacent lane. Nothing extra shall be paid on this account.

## **12.2 Transverse Joints**

They shall be formed at right angles to the longitudinal joints, and shall be truly vertical. Transverse joints shall be staggered from each other and in the layers above at least 500mm. The exposed vertical edges of the transverse joints shall be cut back and trimmed to firm material or for a distance of not less than 1 -1/2 times the thickness of layer whichever is greater. All debris/loose material arising from this operation shall be removed from the pavement and the underlying surface cleaned. The exposed joints shall then be cleaned and painted with hot bitumen immediately before the laying of the lane continues. Nothing extra shall be paid on this account.

## **13.0 Pavement Edges**

Pavement shall be laid to correct width and alignment. To achieve straight and vertical edge, Contractor shall either use adequate side shuttering or cut back the edges to correct width and alignment by removing extra mix spread. Nothing extra shall be paid on this account.

### **13.1 Temporary Ramps**

Temporary ramps at the end of each day work shall be made to allow smooth movement of air traffic, as per direction of Engineer-in-charge. Nothing extra shall be paid on account of provision of ramps and nothing shall be deducted in case ramps are not required to be provided. The decision regarding provision of ramps or non-provision of ramps shall rest with the Engineer-in-charge. During execution of work longitudinal ramps which was provided on the end of each day work for smooth aircraft movement has to be demolished first before the start of days work. Nothing extra shall be paid on account of dismantling of ramps.

## **14.0 Determination of Field Density**

The field density shall be determined by sand replacement method. Metallic tray of field density unit shall be kept on level spot of the finished pavement surface and a hole of 10cm dia is cut in the entire thickness of the layer. All materials removed from the hole are carefully collected and weighed. A known weight of dry standard sand, passing 75 micron IS sieve and retained on 425 micron I.S. Sieve is taken in the sand pouring cylinder. The cylinder is kept directly over the hole and the shutter of the cylinder is released without any jerk and closed when the hole is filled with the sand. The quantity of the residual sand in the cylinder is weighed and the quantity filling the cone of the cylinder is determined.

The in-situ Field density of the layer is calculated as follows:

$$\text{Field Density} = \frac{A}{W-(W1+W2)} \times d \quad \text{gm per cm}^3$$

- A = Weight of the materials removed from the hole.  
W = Initial weight of sand taken in the cylinder  
W1 = Weight of the sand filling the cone of the cylinder  
W2 = Weight of the sand remaining in the cylinder  
d = Bulk density, gm per cm<sup>3</sup> of sand.

### 15.0 Quality Control Tests for Dense Bitumenous macadam (DBM):

Apart from the quality control tests given in clause 1.1.1, following additional tests shall be carried out:

S. No.	Test	Test Method	Frequqncy	Acceptance Criteria
1	Quality of binder	IS: 73	Number of samles as per lot.	As per IS: 73
2	Deleterious materials	IS: 2386 (Part-III)	As required by the Engineer-in-charge.	As required by Engineer-in-charge
3	Mix grading	IS: 2386 (Part-I)	One test for individual constituent and mixed aggregate from dryer for each 400 tonnes of mix subject to minimum of two tests per day per plant.	
4	Stability of mix, flow value, density and void content for grading-2	ASTMD1559	3 tests for stability, flow value density and void contents for each 400 tonnes of mix subject to minimum of two tests per day per plant.	
5	Binder content	As per clause 4.0	One test for each 400 tonnes of mix subject to minimum of two tests per day per plant*.	As per clause 3.2
6	Density of compacted layer	As per clause 14.0	One test per 500m <sup>2</sup> area*.	As per clause 16.1

Note: \*one test shall consist of 3 samples.

## **16.0 Acceptance Criteria**

### **16.1 Field Density**

The work shall be accepted as of quality, measured and paid in full if the field density does not work out to be less than 98% of the Design Laboratory Density worked out in Job Mix Formula in Clause 3.0 above.

When the density achieved in the Field is between 95% and 98% of the Design Laboratory Density, the work shall be accepted as not up to the standard and paid at reduced rate on pro-rata basis of Design Laboratory Density with full rate for 98% density as base (please refer recovery chart for bituminous works provided at the end of flexible pavements specifications).

When the field density works out to be less than 95% of the Design Laboratory Density, the surface shall be further consolidated till the required field density is achieved. If this is not found possible, the work represented by the sample shall be dismantled and redone by the Contractor at his own cost.

### **16.2 Surface Accuracy**

The finished surface of Dense Bituminous Macadam shall be true to level, grade and camber as per the approved drawings and the directions of the Engineer-in-Charge. When a straight edge of 3 metres length is placed longitudinally or transversely, the maximum deviation shall not be more than 6 mm in longitudinal and transverse directions.

The surface accuracy shall be checked immediately after rolling. Surface irregularities which fall outside specified tolerance limits as stipulated in above para shall be rectified by removing to full depth the affected area which shall not be less than 10 Sqm and relaying with fresh materials. In no case shall depressions be filled up with screenings or binding material.

## **17.0 Measurements:**

**17.1** Before commencement of laying of Dense Bituminous Macadam, levels shall be taken jointly by the Engineer-in-Charge or his representative and the Contractor at 3 metre intervals both ways or closer as directed by the Engineer-in-Charge. These levels shall be recorded in the level book and plotted on the plan on tracing of polyester film/graph paper/plain computer sheet, as decided by the Engineer-in-Charge, by the Contractor at his own cost and the same shall be signed by the Contractor. Proposed formation levels of the finished Dense Bituminous Macadam surface shall be marked at corresponding points. Tack coat shall then be applied and Dense Bituminous Macadam shall then be laid and compacted to required levels

(Tack coat shall be paid separately in the respective item of BOQ). Levels of the compacted bituminous surface shall be taken at grid points at which levels were recorded earlier in the level book and also plotted on the plan. Level books as well as the plan shall be signed by the Contractor as token of acceptance of the levels.

**17.2** The volume of compacted mix shall be worked out in cubic meter correct to two places of a decimal as the product of the measured surface area and average thickness laid. Average thickness shall be worked out on the basis of actual levels. The length and breadth shall be measured correct to cm.

**17.3** In case DBM is to be laid on WMM newly laid under this contract, the finished levels of previous surface shall be taken as initial levels for this purpose.

**17.4** Quantity considered for payment shall be the theoretical quantity (Based on Proposed formation levels) or the actual quantity (based on actual finished levels) whichever is less.

### **18.0 Rate**

The rate shall include the cost of all materials, plant machinery and labour required in all operations described above including all carriage and lifts involved. The rate also includes all cost of setting up the laboratory at site and carrying out the quality control measures/tests enumerated above by the Contractor at his own cost in the presence of Engineer-in-Charge or his authorised representative and submission of test results on completion of tests to the Engineer-in-Charge thereof (The item of Tack Coat shall be paid separately and is not included in this item.

## **PARTICULAR SPECIFICATION FOR SELF ADHESIVE GLASS FIBER REINFORCEMENT GRID**

### **MATERIALS**

The glass fiber reinforcement grid manufactured by Maccaferri, saint Gobain, Techfab (India) or equivalent meeting the properties mentioned in succeeding para shall only be used.

### **PROPERTIES**

The glass grid shall have the properties or high tensile strength, high tensile modulus, low elongation and good resistance to high temperature confirming to following.

Mesh size

Transverse = 12.5 mm

Longitudinal = 12.5 mm

Tensile Strength (composite strands/strips strength)

Longitudinal direction = 100 kN/m

Transverse direction = 100 kN/m

The tensile strength is based on single glass fiber strand.

Young's Modulus of elasticity = 69000 MPa

Elongation at break = 5%

Grid Type = Pressure sensitive self adhesive

Grid Material = Fiber glass

Grid Weight (min) = 370 gram/sqm

Roll width (cm) = 260±10 to 520 ± 10

Melting Point = 2180 C

### **Storage Of Glass Grid**

Reinforcement grid must be stored as per manufacturer recommendation in a dry covered condition free from dust, dirt and moisture. The material should only be unpacked from its packing at

the laying only and not prior to its application under any circumstances.

#### **4. TESTING**

At least one sample from each lot at random shall be got tested from any CRRI/IIT's/NIT's as per the parameters mentioned in ASTM D-6637-01 or ASTM D-276 as applicable. The contractor shall also submit the certificate about the quality control testing from the original manufacturer for the supplied of each lot.

#### **5. Laying Of Fiber Reinforcement Class Grid**

Prior to placing the glass grid pavement shall be cleaned by a mechanical device by sweeping or vacuuming and be free of oil, vegetation sand, water, gravel and other debris. The surface temperature before laying the glass grid shall be between 5<sup>0</sup>C to 60<sup>0</sup> c. The glass grid shall be laid out by mechanical means under sufficient tension to eliminate ripples, should ripples occur, these must be removed by pulling the grid tight or in extreme cases (one tight radial), by cutting and laying flat. Transverse joint must be overlapped 150mm (min) and longitudinal joints must be 250mm overlapped (min). The surface of the grid shall be rolled with a rubber tire roller, or pneumatic tyre roller, to activate the adhesive. Tyre must be clean to avoid pickup of the grid. Construction and emergency traffic may run on grid after being rolled. However, it must be ensured that damage is not cause to the grid by vehicles while turning, braking etc. and the mesh must be kept be clean of mud, dust and other debris. Damage section shall be removed and patched without any extra cost taking care to completely cover the damaged area. The work is to be carried out by specialized agency and as per direction of Engineer-in-charge.

#### **6. TEST FOR ADHESION**

The glass grid should have the proper self adhesion and shall be able to pull of 5 kg without moving upward. Following procedure shall be followed for testing the adhesion of grid:

- i) Cut approx. 1m<sup>2</sup> of grid.
- ii) Place the grid on area to be paved.
- iii) Activate self adhesive glue by rolling with a rubber tired roller or by walking on the sample
- iv) Insert hook of spring balance at the centre of grid piece.
- v) Pull upward until grid starts to pull from the surface.
- vi) Record results in kg.

## **7. MEASUREMENT**

Length and breadth shall be measure correct to a centimeter. Area shall be worked out in square meters, correct to two placed of decimal.

## **8. RATE**

Rate shall include cost of all operations including providing/ laying complete materials like Glass grid, tools and labour involved in all the operations described above including all cartage to worksite, lifts and testing etc. complete. Nothing extra shall be payable on this account.

### **CONDITIONS FOR PROCUREMENT OF CEMENT**

The contractor shall procure cement conforming to BI Standards Codes, as required in the work from reputed manufactures of cement, such as ACC Cement, L&T Cement, J.P. Rewa Cement, Vikrm Cement, Shree Cement, Birla Jute Cement, Ambuja and Cement Corporation of India etc. as approved by Ministry of Industry, Government of India, and holding license to use BIS certification mark for their product, whose name shall be got approved from Engineer-in-charge. Supply of cement shall be taken in 50kg bags, bearing manufacturer's name and BIS marking. Samples of cement arranged by the contractor shall be taken by the Engineer-in-charge and got tested in for each lot accordance with provisions of relevant BIS codes. In case test result indicate that the cement arranged by the contractor does not conform to the relevant BIS codes, the same shall stand rejected and shall be removed from the site by the contractor at his own cost within a week's time of written order from the Engineer-in-charge.

The cement shall be brought at site in bulk supply as per the requirement to meet out the programme submitted by the firm and approved by the Engineer-in-charge.

The cement godown of the capacity to store a minimum of 2000 (Two thousand five hundred) bags of cement shall be constructed by the contractor at site of work for which no extra payment shall be made. Double lock provision shall be made to the door of the cement godown. The keys of one lock shall remain with Engineer-in-charge or his authorized representative and the keys of the other lock shall remain with the contractor. The contractor shall be responsible for the watch and ward and safety of the cement godwon. The contractor shall facilitate the inspection of the cement godown by the Engineer-in-charge and his authorized representative at any time.

The contractor shall supply the sample of cement required for testing free of charge. The cost of tests including all incidental charges shall be borne by the contractor.

The actual consumption of cement on work shall be regulated and proper accounts maintained. The theoretical consumption of cement shall be worked out as per procedure prescribed in Schedule 'F' at page 137 and shall be governed by the conditions laid therein.

Cement brought to site and cement remaining unused after completion of work shall not be removed from site without written permission of Engineer-in-charge.

The cement bags shall be stacked on proper floor consisting of two layers of dry bricks laid in well consolidated earth at a level at least 30cm above the ground level. These stacks should be in rows of two deep and 10 high with a minimum of 60 cm clear around. The bags shall be placed horizontally and continuous in each line as per condition for the issue of material.

The contractor shall distinctly display a board at work site on the cement store indicating the opening balance on a particular date, receipt during the day, issue during the day and closing balance at the end of the day. The entries shall be updated on physical receipt and physical issue.

Contractor shall use one brand of cement for entire work. In case of change in brand, all items of work requiring mix design shall have to be redesigned and no extra cost for the same shall be payable.

The contractor shall submit photostate copies of vouchers duly signed by their authorized representative and original for verification of actual purchasing of cement.

The contractor has to make his own arrangement of cement required for the cement works from reputed suppliers. Before using it in the work, the testing report/test results conducted at approved laboratories are to be submitted to the Engineer-in-charge and all the testing charges shall be borne by Agency. The testing has to be done for each lot of individual brand.

## DESIGN AND DRAWING

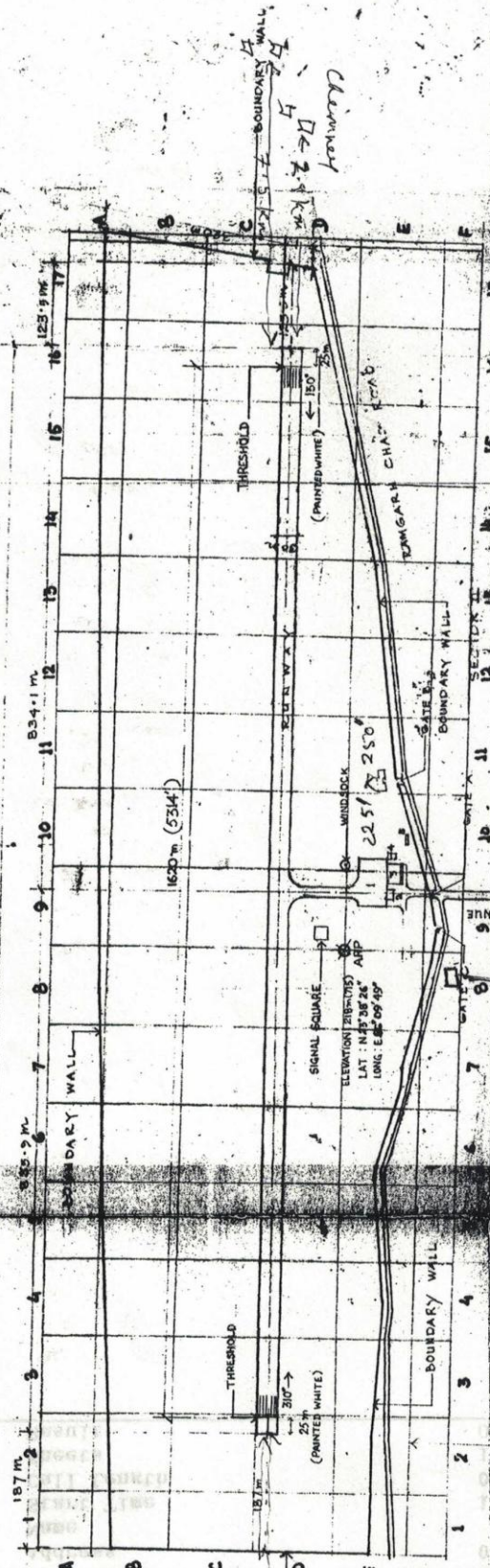
<b>DAC</b>	50mm
<b>SDAC</b>	50mm
<b>DBM</b>	75mm

50mm DAC, 50mm SDAC and 75mm DBM in the rough portion of the runway after removal of loose materials and with proper application of Tack Coat in each layer.  
The above cross- section is tentative.

Appendix - C

# GRID MAP BOKARO AERODROME

1670 m (5479.0')



1. APRON (HAS 2 PARKING BAYS)
2. VI P LOUNGE
3. HANGAR
4. SECURITY DUTY ROOM (TO BE USED AS SPARE PARTS STORE)
5. SECURITY DUTY ROOM.

① Transformer 250 KVA  
② 15 nos. 1.5 A/c split.

LAYOUT PLAN

Basic ship available

STEEL AUTHORITY OF INDIA LIMITED		CLEARANCE		APPROVAL		NOTES			
<b>BOKARO STEEL PLANT</b> ARCHITECTURE & CITY PLANNING DEPARTMENT B. BASU D. BASU P. BASU S. BASU T. BASU U. BASU V. BASU W. BASU X. BASU Y. BASU Z. BASU AA. BASU AB. BASU AC. BASU AD. BASU AE. BASU AF. BASU AG. BASU AH. BASU AI. BASU AJ. BASU AK. BASU AL. BASU AM. BASU AN. BASU AO. BASU AP. BASU AQ. BASU AR. BASU AS. BASU AT. BASU AU. BASU AV. BASU AW. BASU AX. BASU AY. BASU AZ. BASU BA. BASU BB. BASU BC. BASU BD. BASU BE. BASU BF. BASU BG. BASU BH. BASU BI. BASU BJ. BASU BK. BASU BL. BASU BM. BASU BN. BASU BO. BASU BP. BASU BQ. BASU BR. BASU BS. BASU BT. BASU BU. BASU BV. BASU BW. BASU BX. BASU BY. BASU BZ. BASU CA. BASU CB. BASU CC. BASU CD. BASU CE. BASU CF. BASU CG. BASU CH. BASU CI. BASU CJ. BASU CK. BASU CL. BASU CM. BASU CN. BASU CO. BASU CP. BASU CQ. BASU CR. BASU CS. BASU CT. BASU CU. BASU CV. BASU CW. BASU CX. BASU CY. BASU CZ. BASU DA. BASU DB. BASU DC. BASU DD. BASU DE. BASU DF. BASU DG. BASU DH. BASU DI. BASU DJ. BASU DK. BASU DL. BASU DM. BASU DN. BASU DO. BASU DP. BASU DQ. BASU DR. BASU DS. BASU DT. BASU DU. BASU DV. BASU DW. BASU DX. BASU DY. BASU DZ. BASU EA. BASU EB. BASU EC. BASU ED. BASU EE. BASU EF. BASU EG. BASU EH. BASU EI. BASU EJ. BASU EK. BASU EL. BASU EM. BASU EN. BASU EO. BASU EP. BASU EQ. BASU ER. BASU ES. BASU ET. BASU EU. BASU EV. BASU EW. BASU EX. BASU EY. BASU EZ. BASU FA. BASU FB. BASU FC. BASU FD. BASU FE. BASU FF. BASU FG. BASU FH. BASU FI. BASU FJ. BASU FK. BASU FL. BASU FM. BASU FN. BASU FO. BASU FP. BASU FQ. BASU FR. BASU FS. BASU FT. BASU FU. BASU FV. BASU FW. BASU FX. BASU FY. BASU FZ. BASU GA. BASU GB. BASU GC. BASU GD. BASU GE. BASU GF. BASU GG. BASU GH. BASU GI. BASU GJ. BASU GK. BASU GL. BASU GM. BASU GN. BASU GO. BASU GP. BASU GQ. BASU GR. BASU GS. BASU GT. BASU GU. BASU GV. BASU GW. BASU GX. BASU GY. BASU GZ. BASU HA. BASU HB. BASU HC. BASU HD. BASU HE. BASU HF. BASU HG. BASU HH. BASU HI. BASU HJ. BASU HK. BASU HL. BASU HM. BASU HN. BASU HO. BASU HP. BASU HQ. BASU HR. BASU HS. BASU HT. BASU HU. BASU HV. BASU HW. BASU HX. BASU HY. BASU HZ. BASU IA. BASU IB. BASU IC. BASU ID. BASU IE. BASU IF. BASU IG. BASU IH. BASU II. BASU IJ. BASU IK. BASU IL. BASU IM. BASU IN. BASU IO. BASU IP. BASU IQ. BASU IR. BASU IS. BASU IT. BASU IU. BASU IV. BASU IW. BASU IX. BASU IY. BASU IZ. BASU JA. BASU JB. BASU JC. BASU JD. BASU JE. BASU JF. BASU JG. BASU JH. BASU JI. BASU JJ. BASU JK. BASU JL. BASU JM. BASU JN. BASU JO. BASU JP. BASU JQ. BASU JR. BASU JS. BASU JT. BASU JU. BASU JV. BASU JW. BASU JX. BASU JY. BASU JZ. BASU KA. BASU KB. BASU KC. BASU KD. BASU KE. BASU KF. BASU KG. BASU KH. BASU KI. BASU KJ. BASU KK. BASU KL. BASU KM. BASU KN. BASU KO. BASU KP. BASU KQ. BASU KR. BASU KS. BASU KT. BASU KU. BASU KV. BASU KW. BASU KX. BASU KY. BASU KZ. BASU LA. BASU LB. BASU LC. BASU LD. BASU LE. BASU LF. BASU LG. BASU LH. BASU LI. BASU LJ. BASU LK. BASU LL. BASU LM. BASU LN. BASU LO. BASU LP. BASU LQ. BASU LR. BASU LS. BASU LT. BASU LU. BASU LV. BASU LW. BASU LX. BASU LY. BASU LZ. BASU MA. BASU MB. BASU MC. BASU MD. BASU ME. BASU MF. BASU MG. BASU MH. BASU MI. BASU MJ. BASU MK. BASU ML. BASU MN. BASU MO. BASU MP. BASU MQ. BASU MR. BASU MS. BASU MT. BASU MU. BASU MV. BASU MW. BASU MX. BASU MY. BASU MZ. BASU NA. BASU NB. BASU NC. BASU ND. BASU NE. BASU NF. BASU NG. BASU NH. BASU NI. BASU NJ. BASU NK. BASU NL. BASU NM. BASU NO. BASU NP. BASU NQ. BASU NR. BASU NS. BASU NT. BASU NU. BASU NV. BASU NW. BASU NX. BASU NY. BASU NZ. BASU OA. BASU OB. BASU OC. BASU OD. BASU OE. BASU OF. BASU OG. BASU OH. BASU OI. BASU OJ. BASU OK. BASU OL. BASU OM. BASU ON. BASU OO. BASU OP. BASU OQ. BASU OR. BASU OS. BASU OT. BASU OU. BASU OV. BASU OW. BASU OX. BASU OY. BASU OZ. BASU PA. BASU PB. BASU PC. BASU PD. BASU PE. BASU PF. BASU PG. BASU PH. BASU PI. BASU PJ. BASU PK. BASU PL. BASU PM. BASU PN. BASU PO. BASU PP. BASU PQ. BASU PR. BASU PS. BASU PT. BASU PU. BASU PV. BASU PW. BASU PX. BASU PY. BASU PZ. BASU QA. BASU QB. BASU QC. BASU QD. BASU QE. BASU QF. BASU QG. BASU QH. BASU QI. BASU QJ. BASU QK. BASU QL. BASU QM. BASU QN. BASU QO. BASU QP. BASU QQ. BASU QR. BASU QS. BASU QT. BASU QU. BASU QV. BASU QW. BASU QX. BASU QY. BASU QZ. BASU RA. BASU RB. BASU RC. BASU RD. BASU RE. BASU RF. BASU RG. BASU RH. BASU RI. BASU RJ. BASU RK. BASU RL. BASU RM. BASU RN. BASU RO. BASU RP. BASU RQ. BASU RR. BASU RS. BASU RT. BASU RU. BASU RV. BASU RW. BASU RX. BASU RY. BASU RZ. BASU SA. BASU SB. BASU SC. BASU SD. BASU SE. BASU SF. BASU SG. BASU SH. BASU SI. BASU SJ. BASU SK. BASU SL. BASU SM. BASU SN. BASU SO. BASU SP. BASU SQ. BASU SR. BASU SS. BASU ST. BASU SU. BASU SV. BASU SW. BASU SX. BASU SY. BASU SZ. BASU TA. BASU TB. BASU TC. BASU TD. BASU TE. BASU TF. BASU TG. BASU TH. BASU TI. BASU TJ. BASU TK. BASU TL. BASU TM. BASU TN. BASU TO. BASU TP. BASU TQ. BASU TR. BASU TS. BASU TT. BASU TU. BASU TV. BASU TW. BASU TX. BASU TY. BASU TZ. BASU UA. BASU UB. BASU UC. BASU UD. BASU UE. BASU UF. BASU UG. BASU UH. BASU UI. BASU UJ. BASU UK. BASU UL. BASU UM. BASU UN. BASU UO. BASU UP. BASU UQ. BASU UR. BASU US. BASU UT. BASU UY. BASU UZ. BASU VA. BASU VB. BASU VC. BASU VD. BASU VE. BASU VF. BASU VG. BASU VH. BASU VI. BASU VJ. BASU VK. BASU VL. BASU VM. BASU VN. BASU VO. BASU VP. BASU VQ. BASU VR. BASU VS. BASU VT. BASU VU. BASU VV. BASU VW. BASU VX. BASU VY. BASU VZ. BASU WA. BASU WB. BASU WC. BASU WD. BASU WE. BASU WF. BASU WG. BASU WH. BASU WI. BASU WJ. BASU WK. BASU WL. BASU WM. BASU WN. BASU WO. BASU WP. BASU WQ. BASU WR. BASU WS. BASU WT. BASU WU. BASU WV. BASU WW. BASU WX. BASU WY. BASU WZ. BASU XA. BASU XB. BASU XC. BASU XD. BASU XE. BASU XF. BASU XG. BASU XH. BASU XI. BASU XJ. BASU XK. BASU XL. BASU XM. BASU XN. BASU XO. BASU XP. BASU XQ. BASU XR. BASU XS. BASU XT. BASU XU. BASU XV. BASU XW. BASU XX. BASU XY. BASU XZ. BASU YA. BASU YB. BASU YC. BASU YD. BASU YE. BASU YF. BASU YG. BASU YH. BASU YI. BASU YJ. BASU YK. BASU YL. BASU YM. BASU YN. BASU YO. BASU YP. BASU YQ. BASU YR. BASU YS. BASU YT. BASU YU. BASU YV. BASU YW. BASU YX. BASU YY. BASU YZ. BASU ZA. BASU ZB. BASU ZC. BASU ZD. BASU ZE. BASU ZF. BASU ZG. BASU ZH. BASU ZI. BASU ZJ. BASU ZK. BASU ZL. BASU ZM. BASU ZN. BASU ZO. BASU ZP. BASU ZQ. BASU ZR. BASU ZS. BASU ZT. BASU ZU. BASU ZV. BASU ZW. BASU ZX. BASU ZY. BASU ZZ. BASU 		RELEVANT AVIATION DATA FINISHED & PROTECTED BY DEPT. OF AVIATION B.S.L. S.A. 11 DISTANCE FROM BOUNDARY WALL PROVIDED BY TA (MAY) DEPT.		REVISIONS BY APP. DRG.		DETAILS REFERENCE DRAWINGS		NOTES	
		SCALE: 1:1000 DATE: 27/02/1972		SECTION I SECTION II		APPROVAL		DATE: 27/02/1972	

**LIST OF APPROVED MANUFACTURES AND BRANDS' NAMES FOR  
BROUGHTOUT ITEMS AND OTHER MATERIALS (CIVIL WORKS)**

<b><u>LIST OF APPROVED MAKES</u></b>		
<b>S.No.</b>	<b>Description of Material</b>	<b>Approved Makes / Manufacturers</b>
1.	Cement	Ultratech, ACC, Birla, Jaypee, Ambuja, J.K. Laxmi, Lafarge or equivalent as approved by Engineer-in-charge.
2.	Reinforcement Bars	SAIL, TATA Steel Ltd., RINL, JINDAL Steel & Power Ltd. And JSW Steel Ltd. as approved by the Ministry of Steel or equivalent as approved by Engineer-in-Charge.
3.	Runway marking Paint	Nerolac, Berger, Asian, Jayantior approved equivalent
4.	Glass fiber reinforcement grid	Maccaferri, Saint Gobain, Techfab (India) or equivalent

**Note**

**Contractor is authorized to use any of the makes given above without further approval . For equivalent make decision shall be obtained from Engineer-in-charge including cost adjustment bif any before the same is used in the work**

To,

**The Snior Masager (E-C)**  
**AAI, B.M. Airport, Ranchi-834002.**

**Subject: - Request for E- Payment.**

Sir,

The following particulars are given below for effecting E- Payment in respect of our Claim/Bill.

1. Name of the Company :-
2. Address :-
3. Bank A/C No. :-
4. Bank Name :-
5. Branch Address :-
6. Branch Code :-
7. IFSC Code of the Bank :-
8. Permanent A/C No. :-

We also enclosed herewith a cheque duly cancelled of our above bank A/C.

Thanking You,

Yours faithfully

(Authorized signatory)

**ACCEPTANCE LETTER**  
**(As per General Guidelines for the Bidders)**

To

**Sr. Manager (Engg.-Civil)**  
**Airports Authority of India,**  
**Birsa Munda Airport,**  
**Ranchi – 834002.**

Sir,

**ACCEPTANCE OF AAI'S TENDER CONDITIONS**

The tender documents for the work “**Development of Civil Airport at Bokaro SH Pavement works- Resurfacing & Strengthening of Existing Runway, Apron, Taxi Track including grading of operational area at Bokaro Airport**” have been sold to me/us by Airports Authority of India and I/we hereby certify that I/we have inspected the site and read the entire terms and conditions of the tender documents which shall form part of the contract agreement and I/We shall abide by the conditions/clauses contained therein.

1. I/We hereby unconditionally accept the tender conditions of AAI's tender documents in its entirety for the above work.
2. The contents of **clause 26 of General Guidelines** for the Bidders of the Tender Documents have been noted wherein it is clarified that after unconditionally accepting the tender conditions in its entirety, it is not permissible to upload any additional file or put any remark(s)/conditions(s) (except unconditional rebate on quoted rates if any) in/ along with the Tender Document and the same has been followed in the present case. In case, this provisions of the tender if found violated after opening of tender, I/We agree that the tender shall be rejected and AAI shall without prejudice to any other right or remedy be at liberty to forfeit the **10% of earnest money**.
3. **“That, 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’.**
4. The required earnest money as specified in **clause no. 12 at page no.-GGB-2** for this work has also been submitted and the scanned copy of EMD is attached herewith.

Yours Faithfully

Date:

(Signature of the tenderer)

**FORM OF BANK GUARANTEE IN LIEU OF SECURITY DEPOSIT IN INDIVIDUAL  
CONTRACT**

(On Non-Judicial Stamp Paper)

**[Refer clause No.1A & 2(B) of GCC]**

To

The Airports Authority India

1. In consideration of the Airports Authority India having its head office at New Delhi (hereinafter called the "AAI" which expression shall unless repugnant to the subject or context include its administrators, successors and assigns) having agreed under the terms and conditions 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 in lieu of the deduction to be made from the contractor's bills, for the due fulfillment by the said Contractor of the term and conditions contained in the said Contract. We, the \_\_\_\_\_ bank (hereinafter referred to as "the said

Bank" and having our registered office at do hereby undertake and agree to indemnify and keep indemnified AAI from time to time to the extent of Rs.

\_\_\_\_\_ (Rupees \_\_\_\_\_ only) against any loss or damage, costs, 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 conditions 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, the \_\_\_\_\_ 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 or breaches and as to the amount or amounts of loss, damage, costs, charges and expenses caused to or suffered by or 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 have been fully paid and its claims satisfied or discharged and till the Accepting Authority of the contract certifies that the terms and conditions of the said 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 Liability Period 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 said 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 presents 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 of 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 provisions 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 change in the Constitution of the said Contractor or the said Bank shall not discharge our liability hereunder.
7. Address of Regional / Controlling branch of the issuing branch of bank Guarantee is -----

In presence of:

Dated this \_\_\_\_ Day of \_\_\_\_\_

WITNESS

1. For and on behalf of (The Bank)
2. Signature \_\_\_\_\_  
Name & Designation \_\_\_\_\_  
\_\_\_\_\_  
Authorization 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:

**\*For Proprietary Concerns**

Shri \_\_\_\_\_ son of \_\_\_\_\_ resident of \_\_\_\_\_  
\_\_\_\_\_ carrying on business under the name and style of \_\_\_\_\_ at \_\_\_\_\_ (hereinafter called "the said Contractor" which expression shall unless the context requires otherwise include his heirs, executors, administrators and legal representatives).

**For Partnership Concerns**

1. Shri \_\_\_\_\_ son of \_\_\_\_\_ resident of \_\_\_\_\_
2. Shri \_\_\_\_\_ son of \_\_\_\_\_ resident of \_\_\_\_\_ carrying on business in co-partnership under the name and style of \_\_\_\_\_ at \_\_\_\_\_ (hereinafter collectively called "the said contractor" which expression shall unless the context requires otherwise include each of them and their respective heirs, executors administrators and legal representatives).

**For Companies**

M/s \_\_\_\_\_ a Company registered under the Companies Act, 1956 and having its registered office in the State of (Hereinafter called "the said Contractor" which expression shall unless the context requires otherwise include its administrators, successors and assigns).

**FORM OF BANK GUARANTEE TO SECURE A LUMP-SUM ADVANCE**  
(On Non-Judicial Stamp Paper)

**[Refer clause No. 10B of GCC]**

To  
The Airports Authority India

1. In consideration of the Airports Authority India having its head office at New Delhi (hereinafter called "AAI" which expression shall unless repugnant to the subject or context include its administrators, successors and assigns) having agreed under the terms and conditions (Contract Agreement No. \_\_\_\_\_ dated \_\_\_\_\_ made between \_\_\_\_\_ \* \_\_\_\_\_ and AAI in connection with the work of (hereinafter called "the said contract"), to make at the request of the Contractor a lump-sum advance of Rs. \_\_\_\_\_ (Rupees \_\_\_\_\_ only) for utilizing it for the purpose of the Contract on his furnishing a guarantee acceptable for AAI we, the Bank (hereinafter referred to as "the said Bank") and having our registered office at do hereby guarantee the due recovery by AAI of the said advance with interest thereon -as provided according to the terms and conditions of the Contract. If the said Contractor fails to utilize the said advance for the purpose of the Contract and/or the said advance together with interest thereon as aforesaid is not fully recovered by AAI we, the \_\_\_\_\_ Bank hereby unconditionally and irrevocably undertake to pay to AAI on demand and without demur to the extent of the said sum of Rs \_\_\_\_\_ (Rupees \_\_\_\_\_ only) any claim made by AAI on us for the loss or damage caused to or suffered by AAI by reason of not being able to recover in full the said sum of Rs \_\_\_\_\_ (Rupees \_\_\_\_\_ only) with interest, as aforesaid.
2. We, the \_\_\_\_\_ Bank, further agree that AAI shall be the sole judge of and as to whether the said Contractor has not utilized the said advance or any part thereof for the purpose of the Contract and the extent of loss or damage caused to or suffered by AAI on account of the said advance together with interest not being recovered in full and the decision of AAI that the said Contractor has not utilized the said advance or any part thereof for the purpose of the Contract and as to the amount or amounts loss or damage caused to or suffered by AAI shall be final and binding on us.
3. We, the said Bank, further agree that the Guarantee therein contained shall remain in full force and effect during the period that would be taken for the performance of the said Contract and till the said advance with interest has been fully recovered and its claims satisfied or discharged and till the Accepting Authority of the contract certifies that the said advance with interest has been fully recovered from the said Contractor, and accordingly on discharges this guarantee subject, however, that AAI shall have no claim under this Guarantee after 90 (Ninety) days from the date of completion of 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 said 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 effecting 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 the advance 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 the terms and conditions governing the said Contract or the advance or securities available to AAI and the said Bank shall not be released from its liability under these presents by any exercise by AAI of the 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 of AAI or any indulgence by AAI to the said Contractor or of any other matter or thing whatsoever after I which under the law relating to sureties would but for this provisions 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 if and the Guarantee herein contained shall be enforceable against the Bank notwithstanding any security which AAI may have obtained or obtain from the Contractor shall at the time when proceedings are taken against the Bank hereunder be outstanding or unrealised.
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 change in the Constitution of the said Contractor or the said Bank shall not discharge our liability hereunder.
7. Address of Regional / Controlling branch of the issuing branch of bank Guarantee is -----

In presence of:

Dated this \_\_\_\_ Day of \_\_\_\_\_ 200\_

WITNESS

1. For and on behalf of (The Bank)  
Signature \_\_\_\_\_
2. Name & Designation \_\_\_\_\_  
\_\_\_\_\_  
Authorization 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:

**\*For Proprietary Concerns**

Shri \_\_\_\_\_ son of \_\_\_\_\_ resident of \_\_\_\_\_ of \_\_\_\_\_ carrying on business under the name and style of \_\_\_\_\_ at \_\_\_\_\_ (hereinafter called "the said Contractor" which expression shall unless the context requires otherwise include his heirs, executors, administrators and legal representatives).

**For Partnership Concerns**

1. Shri \_\_\_\_\_ son of \_\_\_\_\_ resident of \_\_\_\_\_

2. Shri \_\_\_\_\_ son of \_\_\_\_\_ resident of \_\_\_\_\_ carrying on business in co-partnership under the name and style of \_\_\_\_\_ at \_\_\_\_\_ (hereinafter collectively called "the said contractor" which expression shall unless the context requires otherwise include each of them and their respective heirs, executors administrators and legal representatives).

**For Companies**

M/s \_\_\_\_\_ a Company registered under the Companies Act, 1956 and having its registered office in the State of (Hereinafter called "the said Contractor" which expression shall unless the context requires otherwise include its administrators, successors and assigns).

**FORM OF EARNEST MONEY (BANK GUARANTEE)**

WHEREAS, contractor ..... (Name of contractor) (hereinafter called "the contractor") has submitted his tender dated ..... (date) for the "Strengthening of Existing Runway at Bokaro Airport." 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 Airport Authority of India (hereinafter called "the Engineer-In-Charge") in sum of Rs. .... (Rs. In words ..... ) for which payment well and 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 said 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 up to the above amount upon receipt of his first written 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 his is due to him owing to the occurrence 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 hereby waived. Any demand in respect of this Guarantee should reach the Bank not later than the above date.

DATE .....

SIGNATURE OF THE BANK

WITNESS.....

SEAL

(SIGNATURE, NAME AND ADDRESS)

**\* Date to be worked out on the basis of validity period of 6 months from the initial scheduled last date of receipt of tender.**

WORK DIARY

PART - A

1. Name of Work.....
2. Contract Agreement No .....
3. Date of Acceptance .....
4. Name and Registered address of Contractor.....
5. Contract Sum and /or percentage on Schedule of Rate.....
6. Period of Contract.....
7. Name and local address of Contractor/ Contractor's Agent .....
8. Date of First Works order.....
9. Date of handing over the site to contractor .....
10. Date of Commencement of work .....
11. Stipulated date of completion of Contract.....
12. Suspension orders showing duration and authority.....
13. Extended date of completion with authority .....
14. Date of actual completion of work .....
15. Date of work taken over.....
16. Date of expiry of Maintenance Period .....

WORK DIARY

PART - B

DAILY RECORD

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1. Weather

---

2. Labour engaged by Contractor

Skilled						Unskilled	
Category	No	Category	No	Category	No	Category	No
Concreter		Paviour		Glazier		Mate	
Bricklayer		Tiller		Plumber		Bhisty	
Mason		Painter				Mazdur (man)	
Carpentar		Polisher				Mazdur	
Joiner						(women)	
						Mazdur (boy)	

3. Important materials brought on site with approximate quantities (rejection, if any, to be stated).

Schedule 'B' materials		Contractor's materials		Rejections	
Materials	Quantity	Materials	Quantity	Materials	Quantity

4. Details of plant, equipment and transport and transport working on site.

	T & P Hired under Schedule 'C'		Contractor's T&P equipment & transport	
T & P	Quantity	Remarks regarding breakdown maintenance etc	Quantity	Remarks regarding breakdown maintenance etc
Road Roller Concrete Mixer Tar Roller Transport				

5. Brief particulars of work in progress

---

6. Important stages completed and passed

---

7. Remarks of Visiting Officer

---

Dated signature of Engineer-in-charge  
or representative

Date of signature of contractor  
or his authorized agent

**GUARANTEE TO BE EXECUTED BY CONTRACTOR FOR REMOVAL OF DEFECTS AFTER COMPLETION IN RESPECT OF SPECIALIZED WORKS**

**(SAMPLE COPY)**

**(Separate Warranty / Guarantee Agreements shall be made for different specialized jobs based on descriptions provided in the Technical/CPWD Specifications)**

The Agreement made this -----day of -----  
--- one thousand nine hundred and -----between-----  
son of -----of----- (hereinafter called the Guarantor of  
the one part) and the Chairman, AAI (hereinafter called the Authority of other part).

WHEREAS THIS agreement is supplementary to a contract (hereinafter called the Contract) dated-----and made between the GUARANTORY OF THE ONE PART and the Chairman, AAI, whereby the Contractor, inter-alia undertook to render the buildings and structures in the said contract recited completely water and leak proof /.

AND WHEREAS THE GURANTOR agreed to give a guarantee to the effects that the said structures will remain water and leak proof for five years from the date of giving of water proofing treatment.

NOW THE GUARANTOR herby guarantees that water proofing treatment given by him will render the structures completely leak proof and minimum life of such water proofing treatment shall be five years to be reckoned from the date after the maintenance period prescribed in the contract.

Provided that the guarantor will not be responsible for leakage caused by earthquake or structural defects or misuse of roof or alteration and for such purpose.

- a) Misuse of roof shall mean any operation which will damage proofing treatment, like chopping of firewood and things of the same nature which might cause damage to the roof.
- b) Alteration shall mean construction of an additional storey or a part of the roof or construction adjoining to existing roof whereby proofing treatment is removed in parts.
- c) The decision of the Engineer-in-charge with regard to cause of leakage shall be final.

During this period of guarantee the guarantor shall make good all defects and in case of any defect being found render the building water proof to the satisfaction of the Engineer-in-charge at his cost and shall commence the work such rectification within 7days from the date of issue of the notice from the Engineer-in-charge calling upon him to rectify the defects failing which the work shall be got done by the department by some other contractor at the GUARANTOR's cost and risk. The decision of the Engineer-in-charge as to the cost, payable by the Guarantor should be final and binding.

That if Guarantor fails to execute the water proofing or commits breach there under then the Guarantor will indemnify the Principal and the successors against all loss, damage, cost, expense or otherwise which may be incurred by him by reasons of any default on the part of the GUARANTOR in performance and observance of this supplementary agreement. As to the amount of loss and / or damage and / or cost incurred by the Government the decision of the Engineer-in-charge will be final and binding on the parties.

IN WITNESS WHEREOF these presents have been executed by the Obligator -----  
-- -----and by -----and for an on behalf of the Chairman, AAI on the day,  
month and year first above written.

SIGNED, SEALED AND delivered by OBLIGATOR IN THE PRESENCE OF:-

1.

2.

SIGNED FOR AND ON BEHALF OF CHAIRMAN, AAI ----- IN THE  
PRESENCE OF:-

1.

2.

**UNDERTAKING FOR DEPLOYMENT OF T&P**

**Name of work:** \_\_\_\_\_

**Name of Contractor / Firm:**

I / we have applied for issue of tender for the work of “\_\_\_\_\_

\_\_\_\_\_” and hereby undertake that:-

- ❖ I / we have gone through the tender documents and drawings in its entirety, visited the site and have understood the nature of work to be executed.
- ❖ I / we will deploy adequate T&P in working condition with adequate standby arrangement for efficient / timely execution of the work.
- ❖ I / we have submitted the details of T&P owned by us and undertake to procure or take on lease the balance T&P for the work as per requirement of the work matching with the work programme.
- ❖ I / we will abide by any instructions by AAI for such procurement / arrangement of T&P on lease as is considered necessary for efficient / timely execution of work.

Date:

Signature of Contractor

Witness:

**Declaration by the Contractor / Tenderer**  
**(TO BE SUBMITTED IN COVER NO.-I)**

I / We, the undersigned do hereby declare that:-

- a) I / We am /are registered under GST and Compliant of GST provision.
- b) In case of non-compliance of GST provisions and blockage of any input credit availed by me/us shall be the responsibility of me /us to indemnify AAI.
- c) All input credit has been duly passed on to AAI by me/us.

In the event of any such information pertaining to the aforesaid matter found incorrect at any given point of time either during the course of the contract or at the bidding stage, my bid /contract shall be liable for truncation /cancellation/termination without any notice at the sole discretion of AAI.

Signature of Tenderer : \_\_\_\_\_

Name: \_\_\_\_\_

Date \_\_\_\_\_

Seal \_\_\_\_\_

E-mail address \_\_\_\_\_

**AFFIDAVIT**

I..... (Name), aged ..... years, s/o ..... (Name),  
Proprietor/ Managing Partner/Managing Director of ..... (Name of the  
Agency) do hereby solemnly affirm and state as follows:

I am competent to swear this affidavit on behalf of ..... (Name of  
agency). I state that, in the event of work is awarded to our agency; the wages to be paid to the  
workers engaged shall not be less than the minimum wages determined by appropriate Govt.  
Authorities from time to time.

Dated this, the ..... day of ..... month ..... Year.

**DEPONENT**

Place:

Date:

Note: This affidavit is to be attested by a First Class Magistrate / Notary Public on non- judicial  
stamp paper of Rs. 100/-.

**UNDERTAKING FOR ON GOING WORKS IN AAI**

**(To be executed on Non Judicial stamp paper of minimum  
Rs. 10/-)**

**Name of work:**

**Name of Agency/ Firm/ Company:** \_\_\_\_\_

1. This is to certify that our Agency/ Firm/ Company are having following works in hand with AAI (works in hand are the works for which completion certificate is yet to be issued by the Engineer-in-Charge.)

<b>SL. No</b>	<b>Name of work</b>	<b>Region/Airport</b>
1.		
2.		
3.		
4.		
5.		

2. Since the number of works in hand is less than 3 (three) therefore our agency/firm/company is eligible for participating in the subject tender.
3. This is also to certify that we are aware that if above information is found to be false or incomplete, AAI may take suitable action against our agency/firm/company

Date

Signature of Authorized Signatory of Agency/Firm/Company with seal

Witness

## BILLS OF QUANTITIES

Name of Work : **Development of Civil Airport at Bokaro. SH: Pavement Works- Resurfacing & Strengthening of Existing Runway, Apron, Taxi Track including Grading of Operational Area at Bokaro Airport.**

Sl. No.	Description of Items	Unit	Qty.	Rate in Figure to be Entered by the Bidder	Total Amount (in Rs.)	Total Amount (In Words)
1	2	3	4	5	6	7
1	Providing and applying tack coat using hot straight run bitumen of Viscosity grade VG-30 (60/70) including heating the bitumen, spraying the bitumen with mechanically operated spray unit fitted on bitumen boiler, cleaning the preparing the existing road surface as per specifications. 0.50 kg on bituminous surface	sqm	248657.20			
2	Providing and laying of Hot Mix Dense Asphaltic Concrete (DAC) using crushed stone aggregate of quality, size and grading as specified and 2% cement by weight of aggregates as filler of quality as specified and Viscosity Grade Bitumen (supplied in bulk) in proportions as per job mix formula and laid to specified levels, grade and camber as per specification, drawings and as directed by the Engineer-in-charge i/c compacting with 8-10 tonne, preferably vibratory road roller of adequate capacity to achieve the specified values of compaction, strength, surface accuracy complete (for tendering purpose VG bitumen of grade (VG-30) content shall be taken as 135 kg/m <sup>3</sup> of mix supplied in bulk produced by Govt. refineries and 2% cement by weight of aggregates as filler material).	cum	3108.22			
3	Providing and laying of Hot Mix Semi Dense Asphaltic Concrete (SDAC) using crushed stone aggregate of quality, size and grading as specified and 2% cement by weight of aggregates as filler of quality as specified and Viscosity Grade Bitumen (supplied in bulk) in proportions as per job mix formula and laid to specified levels, grade and camber as per specification, drawings and as directed by the Engineer-in-charge i/c compacting with 8-10 tonne, preferably vibratory road roller of adequate	cum	3108.22			

	capacity to achieve the specified values of compaction, strength, surface accuracy complete (for tendering purpose VG bitumen of grade (VG-30) content shall be taken as 114 kg/m <sup>3</sup> of mix supplied in bulk produced by Govt. refineries and 2% cement by weight of aggregates as filler material).					
4	Providing & laying hot mix dense bituminous macadam (DBM) using crushed stone aggregate of quality, size and grading as specified and 2% cement by weight of aggregate as filler of quality as specified and viscosity grade bitumen (supplied in bulk) in proportions as per job mix formula and laid to specified levels, grade and camber as per specification, drawings and as directed by the Engineer-in-charge with 8-10 tonne, preferably vibratory road roller of adequate capacity to achieved the specified value of compaction, strength, surface accuracy complete [for tendering purpose VG bitumen of grade *(VG-30) shall be taken as 95 kg/m <sup>3</sup> of mix supplied in bulk produced by Govt. Refineries and 2% cement by weight of aggregate as filler material].	cum	6216.43			
5	Painting runway/taxi track/apron marking with adequate nos of coats to give uniform finish with road marking paint of superior make as approved by the Engineer-in-charge, i/c cleaning the surface of all dirt, scales, oil, grease and other foreign material etc. and lining out complete. New work (Two or more coats)	sqm	6806.00			
6	Providing, laying & fixing of self adhesive glass Fibre reinforcement grid of High Modulus Fibre Glass of Mesh size not exceeding 12.5mm x12.5mm manufactured by Maccaferri, Saint Gobain, Techfab ( India ) or equivalent. The self adhesive glass Fibre reinforcement after laying over the Runway Pavement shall be pressed fully with a rubber tired roller and glued to pavement surface . The grid being self adhesive does not require tack coat. The longitudinal overlap should not be less than 250mm and transverse overlap i.e. at the end of the roll should not be less than 150mm. The items should be completed in all respect, to the satisfaction of Engineer-In-Charge.	sqm	21492.00			

7	Providing ,spreading & compacting good earth in layers not exceeding 20 cm in depth, breaking clods, watering, rolling each layer with power roller of minimum 8 tones and dressing up, side strips of runway/ taxiways Complete.	cum	23445.00			
8	Providing and filling in position bitumen mix filler of Proportion 80 kg of hot bitumen, 1 kg of cement and 0.25 cubic metre of coarse sand for expansion joints.	cum	2.25			
9	Supplying highly skilled Technical supervisor (minimum Civil Engg. Diploma qualification) to do day to day supervision of civil maintenance works and other office works as directed by Engineer-in-Charge (Rate mentioned shall be fixe. %age above or below quoted by the contractor shall not be applicable on this item.)	per day	180.00			
10	Supplying Skilled Computer Operator for day- to-day office work as directed by Engineer-in-Charge (Rate mentioned shall be fixed. %age above or below quoted by the contractor shall not be applicable on this item.)	each per month	6.00			
11	Providing a suitable new passenger vehicle on hire for cylinder capacity of minimum 1800 cc, either petrol or diesel driven including driver, fuel and maintenance during the progress of work. The Engineer-in-Charge will be controlling officer for movement of vehicle. (Limiting to 2500 Kms. per month).	each per month	6.00			

Total Amount in Word (Rupees .....)

- **The tender rate should be inclusive of all tax i/c. GST, duties, cess, fee and charges levied under any statute including GST. [Applicable GST@18%] [Service Code- 995421]**