



Tender No. SAI/NRC/SONEPAT/NIT-231225/2025-26

SPORTS AUTHORITY OF INDIA

E- TENDER DOCUMENT

Renovation of Protection Wall at the Archery Centre of Excellence.

Last date of Submission: - 13/01/2026

ISSUED BY

Administrative Office
SPORTS AUTHORITY OF INDIA
Northern Regional Centre,
Joshi Chauhan, G.T. Road,
Bhalgarh, Sonapat- 131021
Phone-0130-2981562

Email-saisonepat@gmail.com

TABLE OF CONTENTS

1. NOTICE INVITING E- TENDER
2. INSTRUCTIONS TO TENDERERS
3. TECHNICAL BID FORM
4. TENDER ACCEPTANCE LETTER
5. ARTICLES OF AGREEMENT
6. GENERAL CONDITION OF CONTRACT
7. SPECIAL CONDITION OF CONTRACT
8. Bid FORMS
 - a) PERFORMA OF BANK GUARANTEE IN LIEU OF SECURITY DEPOSIT
 - b) BID SECURITY
 - c) NEFT MANDATE FORM
 - d) LETTER OF AUTHORISATION FOR ATTENDING BID OPENING MEETING
 - e) Format for Integrity Pact
 - f) Integrity Agreement.
9. BOQ

NOTICE INVITING e-TENDER

Tender No. SAI/NRC/SONEPAT/NIT-231225/2025-26.

Name of the work: - Renovation of Protection Wall at the Archery Centre of Excellence.

Interested Firm / Individuals satisfying the Prequalification Criteria as mentioned in Technical Bid should apply in the formats available at SAI website-www.sportsauthorityofindia.nic.in & CPP Portal of Govt. of India <http://eprocure.gov.in/eprocure/app>. up to **1600hrs** on **13/01/2026**.

Bidders may download the document from the website-www.sportsauthorityofindia.nic.in & CPP Portal of Govt. of India i.e. <http://eprocure.gov.in/eprocure/app>. Bidders may ensure to upload their proposals, on CPP Portal <http://eprocure.gov.in/eprocure/app> complete in all respect, on or before the closing date and time as indicated in the critical data sheet given below.

Bidders shall not tamper / modify the document in any manner. In case the same is found to be tampered in any manner tender will be rejected completely.

CRITICAL DATA SHEET

Tender document number	SAI/NRC/SONEPAT/NIT-231225/2025-26
Estimated Cost of Work (Rs.)	Rs. 20,27,650.00 (Rupees twenty lakhs twenty seven thousand six hundred fifty only)
Completion Time	30 Days
Earnest Money	Rs. 40,553.00 (in the shape of Demand Draft , FDR, banker's cheque or Bank Guarantee favouring Executive Director SAI, NRC, Sonapat)
Publish Date	24.12.2025
NIT Download	24.12.2025
Submission Start Date	24.12.2025
Prebid meeting date & time	06.01.2026 at 3:00 PM
Bid Submission at	http://eprocure.gov.in/eprocure/app .
Proposal / Bid Submission End Date and Time	13.01.2026 By 16:00 hrs
Technical Bid Opening Date and Time	14.01.2026 at 16:00 hrs
Address for submission of hard copy of tender & venue for opening of bids.	Administrative Office, SAI, Northern Regional Centre, Joshi Chauhan, GT Road, Bhalgarh, Sonapat-131021
Contact detail	Phone-0130-2981562 Email-saisonepat@gmail.com
Date of commencement	Within 7th Calendar day from the date of Issue of work order
Time for completion of work	As per time schedule given in tender document i.e. 2 month.

Total Security Deposit / Retention Money	2.5% of Contract amount
Defect Liability Period	365 days (twelve months) from the date of virtual completion of the work.
Period of Final Measurement	1 Month
Liquidated damages	At the rate of 2% of the Contract Value per month which subject to a maximum of 10% of the accepted Contract Value.
Value of work for interim payment	Total 3 bills Minimum value of work done should be for Rs. 7 lakhs for each running bill.
Recovery towards taxes.	As per rules applicable from time to time.
Rates	Rates shall be fixed during the contract & extension period and no price variation is entertained.
Performance Guarantee	5% of the tendered amount.

Place: Sonapat

RD SAI NRC Sonapat

INSTRUCTIONS TO TENDERERS

PRE QUALIFICATION CRITERIA

TECHNICAL CRITERIA

The bidder/agency duly registered with CPWD/PWD/MES/Railway/other govt body as per departmental works will be eligible for this tender. The bidder should have in the last three years ending 31st March 2025 successfully completed as a prime contractor at least one similar work of value not less than 80%

OR Two similar work each of value not less than 40%

OR Three similar works each of value not less than 30% the estimated costs mentioned.

FINANCIAL CRITERIA

Average financial turnover of bidder during the last three years, ending 31.03.2025, should be at least 100% of the estimated cost. Audited Balance Sheet, Profit & Loss account for the last three consecutive financial years should be submitted along with the bid.

MODE OF SUBMISSION OF TENDER

Sealed Item Rates Tender under Two Bid Systems containing two Sealed covers of technical bid and financial/price bid should be submitted online. Conditional tender shall not be accepted.

OPENING OF FINANCIAL BIDS/PRICE BIDS

1. Exact date and time shall be communicated through official E- mail address given in the bid document to the qualified bidders.
2. Conditional bids would be summarily rejected.
3. In case no bid or single bid is received, or any other reason whatsoever, SAI may at its sole discretion to cancel the whole tendering process or extend the last date and time of submission of the bid.
4. Any separately submitted discount letter on the financial price shall not be considered by SAI and shall be a ground for disqualification. Evaluation of financial bid shall be considered only on the quoted price in the financial bid submitted by the bidders.

INSTRUCTIONS FOR ONLINE BID SUBMISSION:

This tender document has been published on the Central Public Procurement Portal (URL: <http://eprocure.gov.in>). 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: <https://eprocure.gov.in/eprocure/app>.

REGISTRATION

- 1) Bidders are required to enroll on the e-Procurement module of the Central Public Procurement Portal (URL: <https://eprocure.gov.in/eprocure/app>) by clicking on the link "Click **here to Enroll**" on the CPP Portal 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 / TCS / 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 / email 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 formats. Bid documents may be scanned with 100 dpi with black and white option.

- 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" 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.

Note: SAI in no way shall be responsible if the bidder fails to apply due to non-possession of Digital Signature & non registration.

General information for the Vendors / Agencies for their prequalification to carry out the above mentioned works on turnkey basis

1. The contractor should quote in the Rate and Amount column of the given price bid document only. However, if a discrepancy is found, the rate which correspond with the amount worked out by the contractor shall unless otherwise proved, be taken as correct. If the amount of an item is not worked out by the contractor or it does not correspond with the rate written either in figure or in words, then the rate quoted by the contractor in words shall be taken as correct. Where the rates quoted by the contractor in figures and in words tally but the amount is not worked out correctly, the rate quoted by the contractor will be taken as correct and not the amount.
2. Contractor must ensure to quote rate of each item. If no rate is quoted by the bidder, rate of such item shall **be treated as "0" (ZERO)**.
3. Eligible firm coating the lowest price will be selected.
4. Intending contractors / vendors are requested to read carefully before filling the particulars in the Performa.
5. Information / details furnished by selected party, if found to be false / incomplete at any time in future or any information effecting prequalification is willingly / unwillingly withheld, if come to the notice of the SAI at any point of time, the company's prequalification will be cancelled immediately.
6. Where copies are required to be furnished, these should be self-certified copies.
7. The bidder should have local office in New Delhi or within NCR of Delhi.
8. The cutoff date for calculation of past period for completion of projects shall be 31st March 2025.
9. All pages of the tender document i.e. Pre-qualification criteria, Technical bid, Price Bid should be signed and stamped by bidder.
10. Contractor shall appoint technically qualified full time site supervisor to monitoring the day to day progress of work at site on their own cost.
11. Contact 0130-2981562 for site visit / any query regarding tender.

TECHNICAL BID FORM

- 1 Name of the firm :
Address :
Telephone No. :
Office :
Residence :
Mobile No :
Fax No. :
E-Mail :
- 2 a) Whether Proprietorship/Partnership/Pvt. Ltd./
Public Ltd. Co. :
b) Names of the Proprietor, Partners, Directors :
i) :
ii) :
iii) :
c) Year of Establishment :
- 3 Registration with Registrar of Companies (No. &
Date) (For Corporation only) :
- 4 Registration with Tax Authorities
i) Income-Tax (PAN) No. :
ii) GST No. :
(Furnish copies of Income-Tax, GST certificate)
- 5 Names of the Bankers with address :
- 6 Give details if at present involved in Litigation in similar type of contracts.

Sr. No.	Name of Project	Name of Employer	Nature of work	Work order dated	Date of completion of work	Value Rs.

- 7 Details of civil suit, if any that arose during
Execution of contract in the past 03 years :
- 8 Specify maximum value of single value project
Executed during the last three years :
- 9 Name and relation, if any, with the staff member

10 Details of work executed during the last 03 years (Please mention the qualifying works as per criteria)

Type of work	Work executed for (name of the Institution / Body)	Nature of work (in brief)	Location	Value Rs.	Duration of work with dates of Completion		If work left incomplete or terminated (give reasons)
					Commence - ment	Completion	

Note: Copies of work orders along with satisfactory completion certificate mentioning value of completed work of Govt., Semi-Govt. Bodies, duly signed & seal of the client should be enclosed.

11 Details of work in hand (Photo copies of performance certificate, work orders issued by clients, **Preferably Govt., Semi-Govt. Bodies should be attached**).

Type of work	Work executed for (name of the Institution / Body)	Nature of work (in brief)	Location	Value Rs.	Duration of work, stipulated time	Present stage of work

13 Annual Turnover in last 3 years:

Sr. No.	Year	Turnover (Rs. in Lakh)	Income-tax paid

Note: Furnish copies of audited balance sheet and Profit & Loss A/C. for the last 3 years 2022-23, 2023-24, 2024-25.

14 Details of the work confirming to eligibility as per criteria details must be furnished in the column along with enclosing Xerox copies of documents / credentials to prove the claim failing which application will be rejected out rightly.

Name of the Client	Details of the work	Work Order No.	Satisfactory completion certificate	Value of work

18. LIST OF ENCLOSURES:

ANNEXURE NO.	PARTICULARS	TICK IF ENCLOSED
I	Certificate of registration of Company / partnership deed.	
II	Certificates of registration with Income Tax, GST, EPF, and ESI.	
III	Audited Balance Sheet & Profit & Loss A/c. Statement for last three years.	
V	Copies of work orders along with xerox copies of relevant TDS certificate, satisfactory completion certificate mentioning value of work issued by Govt., Semi-Govt. Bodies.	
VI	Copies of performance certificate, work orders issued by Govt., Semi-Govt. Bodies.	
VII	Copies of Income-Tax Returns / Assessment Orders for previous 03 years.	

Note: - In absence of any of the above enclosures, the application is liable to be rejected.

DECLARATION

- I / We have read the instructions appended to the Performa and I / We understand that if any false information is detected even at a later date, any future contract made between ourselves and SAI, on the basis of the information given by me / us can be treated as invalid by the SAI and I / We will be solely responsible for the consequences.
- I / We agree that the decision of SAI in selection of contractors will be final and binding on me / us.
- All the information furnished by me/ us hereunder is correct to the best of my knowledge and belief.
- I / We agree that I / we have no objection if enquiries are made about the work listed by me / us in the accompanying sheets.
- I / We agree that I / We have not applied in the name of sister concern for the subject tendering process.

Place :

SIGNATURE

Date :

NAME & DESIGNATION

SEAL OF ORGANISATION

TENDER ACCEPTANCE LETTER
(To be given on Company Letter Head)

To,
Regional Director
Sports authority of India,
Northern Regional Centre,
Joshi Chauhan, GT Road,
Bhalgarh, Sonapat-131021

Sub: - Acceptance of Terms & Conditions of Tender.

Tender No: - SAI/NRC/SONEPAT/NIT-231225/2025-26

Name of Tender / Work: - Renovation of Protection Wall at the Archery Centre of Excellence.

Dear Sir,

1. I / We have downloaded / obtained the tender document(s) for the above mentioned 'Tender / Work' from the website(s) namely: <https://eprocure.gov.in/eprocure/app> as per your advertisement, given in the above mentioned website(s).
2. I / We hereby certify that I / we have read the entire terms and conditions of the tender documents (including all documents like annexure(s), schedule(s), etc.), which form part of the contract agreement and I / we shall abide hereby by the terms / conditions / clauses contained therein.
3. The corrigendum(s) issued from time to time by your department / organization too has also been taken into consideration, while submitting this acceptance letter.
4. I / We hereby unconditionally accept the tender conditions of above mentioned tender document(s) / corrigendum(s) in its totality / entirety.
5. In case any provisions of this tender are found violated, then your department / organisation shall without prejudice to any other right or remedy be at liberty to reject this tender / bid including the forfeiture of the full said earnest money deposit absolutely.
6. I / We agree to abide by this tender for a period of 90 days from the date of opening of the financial bid. I / we also agree to pay the ISD as specified in the Tender.
7. Sports Authority of India shall also be at liberty to cancel the Work Order of tender if I / We fail to execute an agreement or to start the work as stipulated in the tender documents or fail to deposit the amount of initial security deposit as specified in the memorandum.
8. I / We agree that the Sports Authority of India reserves the right to accept the tender in whole or in part or split the works under separate contracts or accept or reject any or all the tenders without assigning any reason whatsoever thereof.
9. I / We are aware that the quantities mentioned in the tenders are indicative and the same can be increased or decreased depending on the requirement of the Institute and as per the site conditions. I / we will not seek compensation for the same and execute the additional quantities at the tender rates.

Yours Faithfully,
(Signature of the Bidder, with Official Seal)

1. Definition and Interpretation: -

In construing these conditions, the Specifications, Bill of quantities and Contract Agreement etc. the following words shall have the meaning herein assigned to them except where the subject or context otherwise requires.

i (a) The Institute: - The term Institute shall mean Sports Authority of India, Northern Regional Centre, Joshi Chauhan, GT Road, Bhalgarh, Sonapat-131021 the employer or their authorized representative to act on their behalf.

i (b) Engineer: - Engineer appointed by the Employer for the supervision of the work.

ii (a) "Contractor" shall mean: -

a) In the case of a Partnership firm: - ----- and -----
-----trading as partners in the name and style of-----and
having a place of business at --- ----- and shall include the partners for the time being
of the said firm and the legal representatives of a deceased partner.

b) In the case of individual Contractor: - Shri _____ trading in the name and style of
_____ and shall include his heirs, successors and legal
successors and legal representatives.

c) In the case of Company:- _____ a company incorporated under
_____, 19____ and having its registered office at _____ and office at
_____ and shall include its successors and assignee.

iii) The tenderers are advised to read all the instructions, term & conditions, additional & general conditions, contract clauses, nomenclature of items, additional specifications, drawings etc. contained in the tender document carefully and visit the site to see existing site conditions and services & inspect the existing building before quoting the rates & no extra claim shall be entertained by the client.

The Contractors are advised to inspect and examine the site and satisfy themselves with the nature of site, the means of access to the site, the constraints of space for stacking material / machinery, labour etc. constraints put by local regulations, if any, weather conditions at site, general ground / subsoil conditions etc. or any other circumstances which may affect or influence their tenders.

(iv) "Site" shall mean the site of the contract works including any building and erections thereon and any other land (inclusively) as aforesaid allotted by the Employer for the Contractor's use.

(v) "Contract" shall mean the following documents, all duly signed, collective in that order of precedence.

a) Articles of Agreement

b) Letter of acceptance of tender / award of work

c) Special Conditions of Contract

d) General conditions of contract including clarifications / conditions accepted after the Pre-bid Meeting.

e) Specifications

f) Bill of Quantities

(vi) "Notice in writing" or "written notice" shall mean a notice in written, typed or printed characters sent (unless delivered personally or otherwise proved to have been received) by registered post to the last known private or business address or registered office of the addressee and shall be deemed to have been received when in the ordinary course of post it would have been delivered.

- (vii) "Act of Insolvency" shall mean any Act of Insolvency as defined by the Presidency Towns Insolvency Act, or the Provincial Insolvency Act or any Act amending such original.
- (viii) "Works" means the permanent works described in the "Scope of Work" and / or to be executed in accordance with the Contract and includes materials, apparatus, equipment, temporary supports, fittings, and things of all kinds to be provided, the obligations of the Contractor hereunder and work to be done by the Contractor under the contract.
- (ix) "Bill of Quantities" means the Schedule and Quantities of items, materials & rates, summaries, etc. as finally accepted.
- (x) "Specification" means the specifications given in these documents including relevant Indian standard specification where so required and where such a specification is not available, the specification approved by the SAI.
- (xi) "Temporary Works" means all temporary works of every kind required in or about the execution, completion or maintenance of the works.
- (xii) "Materials" means the materials, apparatus, equipments, fittings, fixtures and all such other material which are incorporated in the 'work'.
- (xiii) "Virtual Completion of the Works" means the completion of the whole of the works substantially in all respects as evidenced by issuance of a Certificate of Virtual Completion by the SAI.
- xiv) "Period of Maintenance / Defect Liability Period" shall mean the period of 365. (Three hundred sixty-five) days calculated from the date of virtual completion of the works as certified by the SAI.
- (xv) "Urgent Works" means any urgent works, which in the opinion of the Employer becomes necessary at the time of execution and / or during the progress of work to obviate any risk of accident or failure or to obviate any risk of damage to the structure or services or required to accelerate the progress of work for which becomes necessary for safety and security or for any other reason, the Employer may find it necessary.
- (xvi) "Market Rate" means the rate as decided by the SAI on the basis of cost of materials at site inclusive of any tax, duty, octroi etc. at the time of execution of work.
- (xvii) "Approved" means approved in writing; "Approval" means approval in writing.
- (xviii) "Month" means calendar month.
- (xix) "Week" means seven consecutive calendar days.
- (xx) "Day" means a calendar day beginning and ending at 00 Hours and 24 hours respectively.
- (xxi) "Contract Value" means the total value of the tender as accepted by the Employer.
- (xxii) Interpretations / Marginal Note / Heading / Catch Lines.

The Marginal Notes, Headings and in the catch lines hereto and in the annexure hereto are meant only for convenience of reference and shall not in any way be taken into account in the interpretation of these presents and the annexure hereto. The Contractor will have to carry out and complete the said work in every respect in accordance with this contract.

Words imparting the singular only also include the plural and vice versa where the context requires.

1. GENERAL CONDITIONS OF CONTRACT

- 1.1** For all items CPWD specifications with correction slips up to the date of receipt of tender shall be followed. For the items which are not covered under CPWD specifications; the special conditions / B.I.S. specifications shall apply. In this regard the decision of Engineer-in-charge shall be final.
- 1.2** Wherever any reference is made of any Indian Standard, it shall be taken as reference to the latest edition with all amendments / revision issued thereto up to the date of receipt of tenders.
- 1.3** Unless otherwise specified, the agreement rates for all items of work of the schedule of quantities are for all heights, depths, leads and lifts involved in the execution of work.
- 1.4** The contractor shall make his own arrangement of water required for the work as per the general conditions of the contract. However, 1% (one percent) water charges shall be recovered on the gross amount of bill from the contractor, if government water is used.
- 1.5** Electric connection for general purpose at the service centre already exists. Bills for the electricity consumed shall be paid by the contractor, in case additional load is required for some purpose same shall be arranged by the agency. In case of failure of power supply the contractor shall make his own arrangement of generators.
- 1.6** Other agencies working at site will also simultaneously execute the work entrusted to them and the contractor shall offer necessary co-operation wherever required to other agencies.
- 1.7** The work shall be carried out in a manner complying in all respects with the requirements of relevant bye laws of the local bodies, labour laws, minimum wages act, workmen compensation act and other statutory laws enacted by Central Govt. as well as State Govt.
- 1.8** No residential accommodation shall be provided to any of the staff engaged by the contractor. The contractor shall not be allowed to erect any temporary set up for staff in the campus.
- 1.9** No claims of the labours shall be entertained by the Department including that of providing employment, regularization of services etc.
- 1.10** The personnel and labourers engaged by the contractor under this contract shall wear neat and clean uniforms as approved by the Engineer-in-charge along with name badges. An identity card duly countersigned by Engineer-in-charge or his representative shall be issued to each personnel by the contractor to have proper identifications. The character and antecedents of the staff employed by the contractor shall be got verified from the police by the contractor.

- 1.11** The contractor shall have registration with Employee's Provident Fund commissioner and Employee's state Insurance Corporation for safe guarding interest of his workmen. He shall obtain all other necessary approvals from statutory bodies as per law in vogue.
- 1.12** All T&P, scaffoldings, instruments/meters for maintenance, consumable and Contingent Articles required for execution of the work shall be arranged by the contractor.
- 1.13** Staff employed by the contractor should be well behaved, Polite & courteous. Any complaint against staff on behavior should be taken very seriously and such staff should be removed by the contractor immediately from the site and replacement shall be provided immediately.
- 1.14** For the Purpose of categorization of staff as skilled and unskilled, the sewer man and balder shall be taken as unskilled, the Mason/Plumber/ and carpenter shall be taken as skilled.
- 1.15** All dismantled material will be removed from site by contractor after verification of measurement of the same.
- 1.16** The contractor shall make all safety arrangement required for the labour engaged by him at his own cost. All consequences due to negligence or due to lapse of security/safety or otherwise shall remain with the contractor. The department shall not be responsible for any mishap, injury, accident or death of the contractor's staff. No claim in this regard shall be entertained / accepted by the department.
- 1.17** Contractor shall be fully responsible for any damages caused to govt. property or allottee's property by his or his labour in carrying out the work and shall be rectified by the contractor at his own cost.
- 1.18** The agency shall restore back the premises and other articles provided by the department to the department at the time of closure of the contract.
- 1.19** Stores & bins as available shall be handed over to the contractor for storing the material.
- 1.20** All the malba or rubbish obtained from dismantling or otherwise during the execution of the work shall be brought down through the staircase and shall not be thrown to the ground directly from first floor or second floor etc. this shall be carried and stacked properly to the specified common disposal point on the same day and site shall be left clear as per the instructions of the Engineer-in-charge. A compensation of Rs. 100/- shall be recovered from the contractor for each complaint/default.
- 1.21** Any damage to the building structure, fittings or any other articles etc. done by the contractor or his workman during the execution of the work shall be made good by the contractor at his own cost.

1.22 The contractor shall clear the site properly after the completion of the work.

1.23 The Agency shall be solely responsible for compliance to the provisions of various Labour and industrial laws, such as, wages, allowances, compensations, EPF, Bonus, Gratuity, ESI etc. relating to personnel deployed by it at SAI NRC Sonapat site or for any accident caused to them and the SAI NRC Sonapat shall not be liable to bear any expense in this regard. The Agency shall make payment of wages to workers engaged by it by the stipulated date irrespective of any delay in settlement of its bill by the SAI NRC Sonapat for whatever reason. The Agency shall also be responsible for the insurance of its personnel. The Agency shall specifically ensure compliance of various Laws / Acts, including but not limited to with the following and their re-enactments / amendments / modifications: -

1.23.1.1 The Payment of Wages Act 1936

1.23.1.2 The Employees Provident Fund & MP Act, 1952

1.23.1.3 The Contract Labour (Regulation) Act, 1970

1.23.1.4 The Payment of Bonus Act, 1965

1.23.1.5 The Payment of Gratuity Act, 1972

1.23.1.6 The Employees State Insurance Act, 1948

1.23.1.7 The Employment of Children Act, 1938

1.23.1.8 The Motor Vehicle Act, 1988

1.23.1.9 Minimum Wages Act, 1948

2 Breach of Terms and Conditions:

Noncompliance of any terms and conditions enumerated in the contract shall be treated as breach of contract. Or In Case of breach of any terms and conditions as mentioned above, the Competent Authority, will have the right to reject the bid at any stage without assigning any reason thereof and nothing will be payable by SAI NRC Sonapat in that event the EMD shall also stands forfeited.

3 Termination of Contract:

SAI NRC Sonapat would have the right to terminate the contract by giving one month's notice before the expiry of the term, in case the work performance is not up to the standard, or in case there is any violation of SAI NRC rules & regulations, or if there is any lapse in compliance of any labour legislation, or if there is any incident of indiscipline on the part of the Tenderer or his staff and the agreement may be terminated by either party by giving one month's notice to the institution. The decision of Competent Authority of SAI NRC Sonapat in this regard would be final and binding on the Tenderer. In such an event, SAI NRC Sonapat shall have the right to engage any other tenderer to carry out the task.

4 Dispute Settlement:

It is mutually agreed that all differences and disputes arising out of or in connection with this agreement shall be settled by mutual discussions and negotiations if such disputes and differences cannot be settled and resolved by discussions and negotiations then the same shall be referred to the sole Arbitrator appointed by the Director, SAI Sonapat whose decision shall be final and binding on both the parties. The contract shall be governed by laws and procedures established by Govt. of India, within the framework of applicable legislation and enactment made from time to time concerning such commercial dealings/ processing.

5. Language(s)

The language in which the Contract documents shall be drawn up shall be English only.

6. **Scope of Contract**

The Contract comprises the Renovation of Protection Wall at the Archery Centre of Excellence, detailed description as per schedule of quantity. The work shall be done in accordance with CPWD Specifications 2019. The estimate includes provisions for the following works:

- Excavation work
- Cement concrete work below foundation
- Isolated foundation work
- Refilling of excavated earth
- RCC column work including steel reinforcement, shuttering and RCC
- Tie beams at intermediate and top levels of the wall including steel reinforcement, shuttering and RCC
- Brick masonry work

7. (i) **Work Order / Award**

Before signing of the Contract, the Employer shall issue by registered post or by otherwise depositing at the registered office of the Contractor, Work Order / Award to enter into a Contract with the Contractor for the execution of the works in accordance with the contract. Until a formal contract agreement is prepared and executed, the tender documents & set of drawings together with the relevant correspondence exchanged from receipt of the tender to acceptance and together with the Employer's Work Order / Award shall constitute a binding contract between the parties.

(ii) **Contract Agreement**

On receipt of intimation from the Employer of the acceptance of his / their tender, the successful tenderer shall be bound to implement the contract and within seven days thereof, the successful tenderer shall sign an agreement in accordance with the draft agreement.

8. **Disruption of Progress**

The Contractor shall give adequate but not less than 1 weeks' time written notice to the SAI whenever planning or progress of the Works is likely to be delayed or disrupted unless any further drawing or order, including a direction, instruction or approval, is required to be issued by the SAI. The notice shall include details of the drawing or order required explaining why and by when it is required and of any delay or disruption likely to be suffered if it is late.

9. **Compliance with Statutes, Regulations, Etc.**

The Contractor shall conform to the provisions of any Act of the legislature relating to the works, and to the regulations and bye-laws of any authority, and of any water, electric supply and other companies and / or authorities with whose systems the structure is proposed to be connected, and shall, before making any variations from the Drawings or Specifications that may be necessitated by so regulations, give to the SAI written notice, specifying the variation proposed to be made and the reason for making it and apply for instructions thereon. In case, the Contractor shall not within ten days of submission of such notice, receive such instructions, he shall proceed with the work conforming to the provisions, regulations, or bye-laws in question.

The Contractor shall bring to the attention of the SAI all notices required for execution by the said Acts, regulations or bye-laws to be given to any authority and pay to such authority, or to any public office all fees that may be properly chargeable in respect of the works, and lodge the receipts with the SAI for reimbursement at actual.

10. **Setting Out**

The Contractor shall set out the works and shall be responsible for the true and perfect setting out of the same and for the correctness of the positions, levels, dimensions, and alignment of all parts thereof. If at any time any error in this respect shall appear during the progress of the works or within the defects liability period the Contractor shall, if so required, at his own expense rectify such error to the satisfaction of the SAI.

8. (i) **Quality of Materials & Workmanship & Test**

All materials and workmanship shall be the best of the respective kinds described in the Contract and in accordance with the SAI's instructions and shall be subjected from time to time to such tests as the SAI's may direct at the place of manufacture or fabrication or on the Site or at an approved testing laboratory.

The Contractor shall upon the instruction of the SAI furnish him with documentation to prove that the materials & goods comply with the requirements of contract and for requirement stated above. The SAI may issue instruction in regard to removal of material from site or any work, if these are not in accordance with the Contract. The Contractor shall provide such assistance instruments, machinery, labour and materials as are normally required for examining, measuring, sampling and testing any material or part of work before incorporation in the works for testing as may be selected and required by the SAI.

(ii) **Samples**

All samples of adequate numbers, sizes, shades & pattern as per specification shall be supplied by the Contractor without any extra charge. Apart from adhering to any special provision made in the specifications regarding submission of samples the contractor shall within 7 days of his receipt of Work Order, provide to the Architect samples along with the detailed literature of all materials he proposes to use in the work irrespective of the fact that a specific make / material might have been stipulated. If certain items proposed to be used are of such nature that samples cannot be presented or prepared at the site, detailed literature / test certificate of the same shall be provided to the satisfaction of the SAI. Before submitting the samples / literature, the contractor shall satisfy himself that the material / equipment for which he is submitting the samples / literature meet with the requirement of the specification. The SAI shall check the samples and give his comments and / or approval to the same. Only when the samples are approved in writing by the SAI, the contractor shall proceed with the procurement and installation of the particular material / equipment. The approved samples shall be signed by the SAI for identification and shall be kept on record at site office until the completion and acceptance of the work and shall be available at the site for inspection / comparison at any time. The contractor shall keep with him a duplicate of such samples to enable him to process the matter.

For items of work where the samples are to be made at the site, the same procedure shall be followed. All such samples shall be prepared at a place where it can be left undisturbed until the completion of the project.

The SAI shall communicate their comments / approval to the Contractor to the samples at his earliest convenience. Any delay that might occur in approving of the samples for reasons of its not meeting with the specifications or other discrepancies, inadequacy in furnishing samples of best qualities from various manufacturers and such other aspects causing delay on the approval of the materials / equipments, etc. shall be to the account of the contractor. In this respect the decision of the SAI shall be final.

On delivery of the supplies of materials / equipment for permanent works at the site, the contractor shall specifically arrange to get the supply inspected by the SAI and compared with the approved sample and his specific approval obtained before using the same in the work.

(iii) **Cost of Tests**

The cost of making any test shall be borne by the Contractor if such test is intended by or provided for in the Specification or Bill of Quantities.

(iv) **Costs of Tests not provided for, etc.**

If any test is ordered by the SAI which is either

(a) not so intended by or provided for or

(b) (in the cases above mentioned) is not so particularized, or

(c) though so intended or provided for but ordered by the SAI to be carried out by an independent person at any place other than the site or the place of manufacture or fabrication of the materials tested or any Government / approved Laboratory, then the cost of such test shall be borne by the Contractor.

9. **Contractor's Superintendence**

The Contractor shall give all necessary personal superintendence during the execution of the works, and as long, thereafter, as the SAI may consider necessary until the expiry of the "Defects Liability Period" stated hereto.

10. **Access for Inspection**

The Employer and their respective representatives shall at all reasonable times have free access to the work and / or to the workshops, factories or other places where materials are lying or from which they are being obtained and the Contractor shall give to the Employer, they and their representatives every facility necessary for checking measurements, inspection and examination and test of the materials and workmanship. No person not authorized by the Employer except the representatives of public authorities shall be allowed on the works at any time.

11. **Examination of Work Before Covering Up**

No work shall be covered up or put out of view without the approval of the SAI and the Contractor shall afford full opportunity for the SAI to examine and measure any work which is about to be covered up or put out of view and to examine foundations before permanent work is placed thereon. The Contractor shall give due notice to the SAI of any such work or foundations is or are ready or about to be ready for examination and the SAI shall without unreasonable delay, unless he considers it unnecessary and advises the Contractor accordingly, attend for the purpose of examining and measuring such work or for examining such foundations.

12. **Assignment**

The whole of the works included in the contract shall be executed by the Contractor and the Contractor shall not directly or indirectly transfer, assign or sublet the contract or any part / share thereof or any interest therein without the prior written consent of the Employer / Architect and no undertaking shall relieve the Contractor from the full and entire responsibility of the contract or from active superintendence of the works during their progress.

13. **Works to be measured**

The SAI representative may from time to time intimate to the Contractor that he requires the works to be measured, and the Contractor shall forthwith attend or send a qualified Representative to assist the SAI representative in taking such measurements and calculations and to furnish all particulars or to give all assistance required by any of them.

Should the Contractor not attend or neglect or omit to send such Representative, then the measurement taken by the SAI or a person approved by him shall be taken to be correct measurements of the works. Such measurements shall be taken in accordance with the Mode of Measurements detailed in the Specifications.

The SAI shall take joint measurements with the contractor and the measurements shall be entered in the measurement book / sheet by the SAI 's representative.

The Contractor or his Representative may at the time of measurement take such notes and measurements as he may require.

14. Deviation, Extra Items and Pricing

Overall deviation limit (including cost of extra items & Deviation) shall be 25%. Deviation upto 1.25 times of contract amount shall be approved by Engineer-in-Charge with recorded reasons. All the deviated quantities shall be paid at agreement rates.

The completion cost of the agreement shall not exceed 1.25 times of the tendered amount and the contractors should keep a check and watch over the amount of work done & do not execute work beyond 1.25 times of the tendered amount.

The payment of extra/substituted items born on DSR shall be paid as per DSR rates applicable to the agreement plus prevailing cost index and plus / minus %age above or below of quoted contract amount. The payment of the non-scheduled extra items shall be paid as per the prevailing market rate.

15. Work is to be carried out to the Satisfaction of SAI

The Contractor shall carry out all the works strictly in accordance with Drawings, detailed Specifications and instructions of the SAI . If in the opinion of the Architect changes have to be made in the works, the Contractor shall carry out the same, and payment, if any, arising out of these shall be made as per the terms of the contract.

16. (i) Removal of Improper Work & Materials

The SAI shall, during the progress of the works, have power to order in writing from time to time the removal from the works within such reasonable time or times as may be specified in the order, of any materials which in the opinion of the SAI are not in accordance with the Specifications or the instructions of the SAI , the substitution of proper materials, and the removal and proper re-execution of any work executed with materials or workmanship not in accordance with the Drawings and Specifications or instructions, and the Contractor shall forthwith carry out such order at his own cost. In case of default on the part of the Contractor to carry out such order, the Employer shall have the power to employ and pay other persons to carry out the same, and all expenses consequent thereon, or incidental thereto, as certified by the SAI representative shall be borne by the Contractor, or may be deducted by the Employer from any moneys due, or that may become due, to the Contractor.

(ii) Default of Contractor in Compliance

If the Contractor after receipt of written notice from the SAI requiring compliance within ten days fails to comply with such further drawings and / or SAI representative's instructions the Employer may employ and pay other persons to execute any such work whatsoever that may be necessary to give effect thereto, and all costs incurred in connection therewith shall be recoverable from the Contractor by the Employer on the Certificate of the SAI representative as a debt or may be deducted by him from any moneys due to the Contractor.

(iii) Inspection & Testing During Manufacture

The SAI shall be entitled during manufacture to inspect, examine and test on the Contractor's premises during working hours the materials and workmanship and check the progress of manufacture of all fabrication materials / items to be supplied under the Contract, and if part of the said materials / items are being manufactured on other premises the Contractor shall obtain for the SAI permission to inspect, examine and test as if the said Plant were manufacturing on the Contractors premises. Such inspection, examination or testing if made shall not relieve the Contractor from any obligation under the Contract.

(iv) Dates for Inspection & Testing

The Contractor shall agree with the SAI the date on and the place at which any plant / works will be ready for testing as provided in the Contract and unless the SAI shall attend at the place so named

on the date agreed the Contractor may proceed with the tests, which shall be deemed to have been made in the SAI 's presence, and shall forthwith forward to the SAI d u l y certified copies of the test readings. The SAI shall give the Contractor 24 hours' notice in writing of his intention to attend the tests. All costs of testing shall be borne by the contractor. All outstation travel expenses shall be borne by the owner but in case re-inspections are required as per clause No. 16 (ix) the travel expenses shall be on contractors account.

(v) **Facilities for Testing at Manufacturer's Works**

Where the Contract provides for tests on the premises of the Contractor or of any sub-contractor the Contractor shall provide such assistance, labour, materials, electricity, fuel, stores, apparatus and instruments as may be requisite and as may be reasonably demanded to carry out such tests efficiently.

(vi) **Certificate of Testing**

As and when fabricated materials shall pass the tests referred in this, the SAI shall furnish to the Contractor a certificate in writing to that effect.

(vii) **Rejection**

If as a result of such inspection, examination or test of the works the SAI shall decide that such material is defective or not in accordance with the Contract he shall notify the Contractor accordingly stating in writing his objection and reasons therefore. The Contractor shall with all speed make good the defect or ensure that the material complies with the Contract. Thereafter, if required by the SAI representative, the tests shall be repeated under the same terms and conditions save that all reasonable expenses to which the Employer may be put by the repetition of the tests shall be deducted from the Contract Sum.

(viii) **Delivery of Materials & Equipment**

Unless the SAI shall otherwise direct, no material shall be delivered to site until the SAI shall have issued, in respect of such material, a certificate under Clause 16 (vi) (Certificate of Testing). Likewise, Fabricated Materials or Contractor's Equipment shall be delivered to Site only upon an authorization in writing applied for and obtained by the Contractor from the SAI.

The Contractor shall be responsible for the reception on site of all Materials and Contractor's Equipment delivered for the purposes of the Contract.

(ix) **Inspection & Testing and Re-inspection & Re-testing**

All deficiencies revealed by testing and inspection shall be rectified by the Contractor at his own expense and to the satisfaction and approval of the SAI. Rectified components shall be subject to retesting and re-inspection.

(x) **Inspection Reports**

The Contractor shall provide the SAI with five copies of reports of all inspections and tests.

17. **Virtual Completion Certificate**

The SAI shall issue the virtual completion certificate when in his opinion, the works have been substantially completed in all respects and necessary approvals are obtained by the Contractor. The Defects Liability Period shall commence from the date of virtual completion as certified by the SAI.

18. **Contractor Liable for Damages, defects during defect liability Period**

If the contractor or his working people or servants shall break, deface, injure or destroy any part of building in which they may be working, or any building, road, road kerb, fence, enclosure, water pipe, cables, drains, electric or telephone post or wires, trees, grass or grassland, or cultivated ground contiguous to the premises on which the work or any part is being executed, or if any damage shall happen to the work while

in progress, from any cause whatever or if any defect, shrinkage or other faults appear in the work within twelve months (six months in the case of work costing Rs. Ten lacs and below except road work) after a certificate final or otherwise of its completion shall have been given by the Engineer in- Charge as aforesaid arising out of defect or improper materials or workmanship the contractor shall upon receipt of a notice in writing on that behalf make the same good at his own expense or in default the 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.

19. **Payment Terms**

Any payment will be released only after signing of Agreement as per the following payment terms:

Defects Liability Period	12 months after completion of work
Date of Commencement	After 7 working days from the date of acceptance of work order
Date of Completion	30 days after the due date of commencement
Value of work for interim Payment	Total 3 bills Minimum value of work done should be for Rs. 7 lakhs for each running bill.
Retention money / security deposit	2.5% on total project cost to be recovered from each running bills.

Subject to the terms of the contract, in case the contract is terminated, payment towards services will be made on pro rata basis, for the works completed, after deducting applicable penalty and TDS/other applicable.

20. **Commencement of Works**

Within 7 Calendar days from the date of issue of Work Order, the contractor shall begin the works and shall regularly proceed with and complete the same on or before the "Date of Completion" stated in the Appendix subject nevertheless to the provisions for extension of time hereinafter contained.

21. (i) **Possession of Site**

Save in so far as the Contract may prescribe the extent of portions of the Site of which the Contractor is to be given possession from time to time and the order in which such portions shall be made available to him and subject to any requirement in the Contract as to the order in which the Works shall be executed, the Employer will within 3 days from the written request to commence the Works give to the Contractor possession of so much of the Site as may be required to enable the Contractor to commence and proceed with the programme referred to in Clause 49 hereof (if any) and otherwise in accordance with such reasonable proposals of the Contractor as he shall, by notice in writing to the SAI, make & will from time to time as the Works proceed give to the Contractor possession of such further portions of the Site as may be required to enable the Contractor to proceed with the construction of the Works with due dispatch in accordance with the said programme or proposals (as the case may be).

If the Contractor suffers delay or incurs expense from failure on the part of the Employer to give possession

in accordance with the terms of this clause the SAI shall grant an extension of time for the completion of the works without any compensation for delay.

(ii) **Way leaves, etc.**

The Contractor shall bear all expenses and charges for special or temporary way leaves required by him in connection with access to the Site. The Contractor shall also provide at his own cost any additional accommodation outside the Site required by him for the purpose of the Works.

22. **Time for Completion**

30 days after the due date of commencement

23. **Extension of Time for Completion**

If the Contractor needs an extension of time for the completion of the work or if the completion of work is likely to be delayed for any reasons beyond the due date of completion stipulated in the contract, the Contractor shall apply to the Employer for extension of time in writing at least 30 days before the expiry of the scheduled time and while applying for extension of time, Contractor shall furnish the reasons in detail and his justification, if any, for the delays. While granting extension, the SAI shall notify the contractor the period of time which will not qualify for levy of liquidated damages.

For the balance period in excess of original stipulated period and authorized extension of time granted i.e. period not qualifying for levy of liquidated damages, by the Employer, the provision of liquidated damages as stated under Clause 24 will become applicable.

Further, the contract shall remain in force even for the period beyond the due date of completion irrespective whether the extension is granted or not.

24. **Compensation for Delay**

If the contractor fails to maintain the required progress to complete the work and clear the site on or before the contract or justified extended date of completion as per clause 23 (excluding any extension under Clause 23), he shall, without prejudice to any other right or remedy available under the law to the Government on account of such breach, pay as compensation the amount calculated at the rates stipulated below for every completed day/ month (as determined) that the progress remains below that the work remains incomplete. If there is no hindrance, compensation shall be levied if work is incomplete.

Compensation for delay of work

- (i) With maximum rate 1% (one percent) per month of delay to be computed on per day basis based on quantum of damage suffered due to stated delay on the part of Contractor. if scheduled completion of work is more than one year.
- (ii) With rate 1% (one percent) to 2% (two percent) (maximum) per month of delay to be computed on per day basis based on quantum of damage suffered due to stated delay on the part of Contractor. if scheduled completion of work is more than six months and up to one year.
- (iii) With rate 2% (two percent) to 5% (five percent) (maximum) per month of delay to be computed on per day basis based on quantum of damage suffered due to stated delay on the part of Contractor. if scheduled completion of work is up to six months.

Provided always that the total amount of compensation for delay to be paid under this condition shall not exceed 10 % of the accepted Tendered Value of work

25. (i) **Rate of Progress**

The whole of the materials, plant and labour to be provided by the Contractor and the mode, manner and speed of execution and maintenance of the Works are to be of a kind and conducted in a manner to the satisfaction of the SAI. Should the rate of progress of the Works or any part thereof be at any time be in the opinion of the SAI too slow to ensure the completion of the whole of the Works by the prescribed time

or extended time for completion, the SAI shall so notify the Contractor in writing and the Contractor shall thereupon take such steps as considered necessary by the SAI to expedite progress so as to complete the Works by the prescribed time or extended time for completion. Such communications from the SAI neither shall relieve the contractor from fulfilling obligations under the contract nor he will be entitled to raise claims arising out of such directions.

(ii) Work during Night or on Holidays

Subject to any provision to the contrary contained in the Contract none of the permanent work shall save as herein provided be carried on during the night or on Holidays without the permission in writing of the SAI, save when the work is unavoidable or absolutely necessary for the saving of life or property or for the safety of the Works in which case the Contractor shall immediately advise the SAI. Provided always that the provisions of this clause shall not be applicable in the case of any work, which becomes essential to carry out by rotary or double shifts in order to achieve the progress & quality of the part of the works being technically required / continued with the prior approval of the SAI.

All work at night shall be carried out without unreasonable noise & disturbance and with the approval of the SAI & in addition that of the local authority, if so applicable. The Contractor shall indemnify the Employer from and against any liability for damages on account of noise or other disturbance created while or in carrying out the work and from and against all claims, demands, proceedings, costs, charges & expenses whatsoever in regard or in relation to such liability.

26. Suspension of Work

The Contractor shall on the written order of the SAI suspend the progress of the Works or any part thereof for such time or times and in such manner as the SAI may consider necessary and shall during such suspension properly protect and secure the work so far as is necessary in the opinion of the SAI. The extra cost including all running wages to be paid on the Site, salaries, depreciation and maintenance of plant, Site on costs and overhead costs of the Contract relatable to the works done or incurred by the Contractor in giving effect to the SAI 's instructions under this Clause shall, be borne and paid by the Employer unless such suspension is:

- (a) otherwise provided for in the Contract
or
- (b) necessary by reason of inclement weather conditions affecting adversely the safety or quality of the Works.
or
- (c) necessary by reason of some default on the part of the contractor

Provided that the Contractor shall not be entitled to recover any such extra cost unless he gives notice in writing of his intention to claim to the SAI within 28 days of the SAI 's order. The SAI shall settle and determine such extra payment and / or extension of time under relevant Clause hereof to be made to the Contractor in respect of such claim as shall in the opinion of the SAI be fair and reasonable and the SAI 's decision shall be final and binding.

27. Earnest Money Deposit:

The bidder shall be required to submit the Earnest Money Deposit (EMD) for an amount of Rs. 40,553.00 /- (Rupees forty thousand five hundred fifty-three only) by way of Insurance Surety Bonds, account payee demand draft, fixed deposit receipt, banker's cheque or Bank Guarantee from any of the Commercial Banks. The demand drafts shall be drawn in favour of "Executive Director SAI, NRC, Sonapat". The EMD of the successful bidder shall be returned after the successful submission of Bank Guarantee/ Security Deposit and for unsuccessful bidder(s) it would be returned after award of the contract. Bid(s) received without demand drafts of EMD will be rejected.

28. Performance Guarantee

- 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 20 days from the date of issue of letter of acceptance. This period can be further extended by the Engineer-in-Charge up to a maximum period as specified in Special Conditions of Contract on written request of the contractor stating the reason for delays in procuring the Performance Guarantee, to the satisfaction of the Engineer-in-Charge. This Guarantee shall be in the form of Insurance Surety Bonds, Account Payee Demand Draft, Fixed Deposit Receipt or Bank Guarantee from any of the Commercial Banks. In case a fixed deposit receipt of any Bank is furnished by the contractor to the SAI as part of the performance guarantee and the Bank is unable to make payment against the said fixed deposit receipt, the loss caused thereby shall fall on the contractor and the contractor shall forthwith on demand furnish additional security to the SAI to make good the deficit.
- ii. The Performance Guarantee shall be initially valid up to the stipulated date of completion plus 1 year claim period 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 building and services/any other work after construction of same building and services/other work, then 50% of Performance Guarantee shall be retained as Security Deposit.
- iii. The Engineer-in-Charge shall make a claim under the performance guarantee except for amounts to which the SAI is entitled under the contract (not withstanding and/or without prejudice to any other provisions in the contract agreement) in the event of:
 - (a) Failure by the contractor to extend the validity of the Performance Guarantee as described h e r e i n above, in which event the Engineer-in-Charge may claim the full amount of the Performance Guarantee.
 - (b) Failure by the contractor to pay SAI 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.
- iv. 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 SAI.
- v. The performance Guarantee shall be refunded to the contractor after Completion and successful handing over of the project and issuance of Completion Certificate. However, in case of contracts involving Maintenance of building and services /any other work after construction of same building and services/ other work, then 50% of performance guarantee shall be returned to the contractor, without any interest after Completion and successful handing over of the project and issuance of Completion Certificate. The balance 50% shall be returned after Successful completion of Maintenance period.

29. Security Deposit / Retention Money

The person/persons whose tender(s) may be accepted (hereinafter called the contractor) shall permit SAI at the time of making any payment to him for work done under the contract to deduct a sum at the rate of 2.5% of the gross amount of each running and final bill till the sum deducted will amount to security deposit of 2.5% of the tendered value of the work. Such deductions will be made and held by SAI by way of Security Deposit unless he/they has/have deposited the amount of Security at the rate mentioned above in cash or in the form of Government Securities or fixed deposit receipts. In case a fixed deposit receipt of any Bank is furnished by the contractor to the SAI as part of the security deposit and the Bank is unable to make payment against the said fixed deposit receipt, the loss caused thereby shall fall on the contractor and the contractor shall forthwith on demand furnish additional security to the SAI to make good the deficit.

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 SAI 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 cash or fixed deposit receipt tendered by the State Bank of India or by Scheduled Banks endorsed in favour of SAI NRC Sonapat, any sum or sums which may have been deducted from, or raised by sale of his security deposit or any part thereof. The security deposit shall be collected from the running bills and the final bill of the contractor at the rates mentioned above. The security deposit will be released after completion of DLP.

30. **Certificates & Payment**

(i) **Final Bill**

- a) The Contractor shall submit final bill within 45 days from the date of issue of virtual completion certificate with all relevant information and details including as-built drawings, operation and maintenance manual, photographs etc. complete. The last date of submission of all relevant documents shall be reckoned as the date of final submission.
- b) The SAI representative within 45 days of submission of the final bill, shall issue a certificate of payment against the final bill to the Employer who shall thereupon, within 45 days from the date of receipt of the certificate, shall release the balance payment to the contractor after effecting all recoveries, including advances & payments against interim certificates.
- (iv) The SAI shall have power to withhold Certification if the works or any parts thereof are not being carried out to his satisfaction.
- (v) The SAI may by any Certificate make any correction in any previous Certificate, which shall have been issued by him.
- (vi) No payment shall be made to the Contractor if the Contractor fails to insure the works & keep them insured till the issue of the Virtual Completion Certificate.

31. **Arbitration**

All disputes or difference of any kind whatsoever which shall at any time arise between the parties hereto touching or concerning the works or the execution thereof of this maintenance thereof of this contract or the construction remaining operation or effect thereof or to the rights or liabilities of the parties or arising out of or in relation thereto whether during or after determination, foreclosure or breach of the contract (other than those in respect of which the decision of any person is by the contract expressed to be final and binding) shall after written notice by either party to the contract to the other of them and to the *Appointing Authority who shall be appointed for the purpose by the Employer (Sports Authority of India) be referred for adjudication to a sole Arbitrator to be appointed as hereinafter provided.

* **Appointing Authority**

The Appointing Authority will be the RD Sports Authority of India NRC Sonapat

The names of the Arbitrator will be selected from one of the following disciplines, in order of preference:

- (a) Retired High Court / Supreme Court Judges, who have experience in handling Arbitration cases.
- (b) Members of the Council of Arbitration.
- (c) Fellow of Institution of Architects.
- (d) Eminent retired Chief Architect from State / Centre / P.W.D. / Public Sector undertakings of good reputation and integrity.

For the purpose of appointing the sole Arbitrator referred to above, the Appointing Authority will send within thirty days of receipt by him of the written aforesaid notice, to the contractor a panel of three

names of persons who shall be presently unconnected with the organization for which the work is executed.

The contractor shall on receipt by him of the names as aforesaid, select any one of the persons named to be appointed as a sole Arbitrator and communicate his name to the Appointing Authority within thirty days of receipt by him of the names. The Appointing Authority shall thereupon without any delay appoint the said person as the sole Arbitrator. If the Contractor fails to communicate such selection as provided above within the period specified, the Appointing Authority shall make the selection and appoint the selected person as the Sole Arbitrator.

If the Appointing Authority fails to send to the Contractor the panel of three names as aforesaid within the period specified, the Contractor shall send to the Appointing Authority a panel of three names of persons who shall all be unconnected with either party. The Appointing Authority shall on receipt by him of the names as aforesaid select any one of the persons named and appoint him as sole Arbitrator. If the Appointing Authority fails to select the person and appoint him as the sole Arbitrator within 30 days of receipt by him of panel and inform the Contractor accordingly, the contractor shall be entitled to appoint one of the persons from the panel as the sole Arbitrator and communicate his name to the Appointing Authority.

If the Arbitrator so appointed is unable or unwilling to act or resigns his appointment or vacates his office due to any reason whatsoever another sole Arbitrator shall be appointed as aforesaid.

The work under the Contract shall, however, continue during the arbitration proceedings and no payment due or payable to the contractor shall be withheld on account of such proceedings.

The Arbitrator shall be deemed to have entered on the reference of the date he issues notice to both parties fixing the date of the first hearing.

The Arbitrator may from time to time, with the consent of the parties, enlarge the time for making and publishing the award.

The Arbitrator shall give a separate award in respect of each dispute or difference referred to him. The Arbitrator shall decide each dispute in accordance with the terms of the contract and give a reasoned award. The venue of arbitration shall be such place as may be fixed by the Arbitrator in his sole discretion.

The fees, if any, of the Arbitration shall, if required to be paid the award is made and published, be paid half by each of the parties. The costs of the reference and of the award including the fees, if any, of the Arbitration who may direct to and by whom and in what manner such costs or any part thereof shall be paid and may fix or settle the amount of costs be so paid.

The award of the Arbitrator shall be final and binding on both parties.

Subject to aforesaid the provision of the Arbitration Act 1996 or any statutory modification or re-enactment therefor and the rules made there under, and for the time being in force, shall apply to the arbitration proceeding under this Clause.

In all cases the arbitrator shall give reasons for the award.

It is also a term of the contract that if contractor(s) do / does not make any demand for arbitration in respect of any claim(s) within 90 days of receiving intimation from SAI that the bill after due verification is passed for payment of a lesser amount, or otherwise, the contractor's right under this agreement to refer to arbitration shall be deemed to have been forfeited and SAI shall be relieved and discharged of their liability under this agreement in respect of such claim(s). Further it is agreed that for the purpose of this clause, such notice is deemed to have been received by the contractor(s) within 2 days of posting of the letter by

SAI or when delivered by hand immediately after receipt thereof by the contractor(s), whichever is earlier. Further, letter signed by the officials of SAI that the letter was so posted to the contractor(s) shall be conclusive.

32. Safety Code

- a) First aid appliances including adequate supply of sterilized dressings and cotton wool shall be kept in a readily accessible place.
- b) An injured person shall be taken to a public hospital without loss of time, in cases where the injury necessitates hospitalization.
- c) Suitable and strong scaffolds should be provided for workmen for all works that cannot safely be done from ground.
- d) No portable single ladder shall be over 8 meters in length. The width between the side rails shall not be less than 30 cm. (clear) and the distance between two adjacent rungs shall not be more than 30 cm. When a ladder is used an extra mazdoor shall be engaged for holding the ladder.
- e) The excavated material shall not be placed within 1.5 metres of the edge of the trench or half of the depth of trench whichever is more. All trenches and excavations shall be provided with necessary fencing and lighting.
- f) Every opening in the floor of a building or in a working platform be provided with suitable means to prevent the fall of persons or materials by providing suitable fencing / railing of minimum height of one meter.
- g) All staff and workers employed in the work shall be provided with safety shoes, helmet, belt, etc.
- h) No floor, roof or other part of the structure shall be so overloaded with debris or materials as to render it unsafe.
- i) Those engaged in welding works shall be provided with welder's protective eye-shields and gloves.
- j) (i) No paint containing lead or lead products shall be used except in the form of paste or readymade paint.
(ii) Suitable facemasks should be supplied for use by the workers when the paint is applied in the form of spray or surface having lead paint dry rubbed and scrapped.
- k) Overalls shall be supplied by the Contractor to the painters and adequate facilities shall be provided to enable the working painters to wash during the periods of cessation of work.
- l) Hoisting machines and tackle used in the works, including their attachments, anchorage and supports shall be in perfect condition.
- m) The ropes used in hoisting or lowering materials or as a means of suspension shall be of durable quality and adequate strength and free from defects.
- n) Contractor shall appoint "Safety Officer" to maintain safety records to the satisfaction of the SAI.

33. Force Majeure

Conditions of Force Majeure

The terms "Force Majeure" as employed herein shall mean act of God, war, revolt, riot, fire, flood and Acts & Regulations of respective Governments of the two parties namely the Employer and the Contractor.

Note : "Typhoon" is covered under act of God".

In the event of either party being rendered unable by force majeure to perform any of obligations required to be performed by them under the Contract, the relative obligation of the party affected by such Force Majeure shall upon notification to the other party be suspended for the period of delay which is directly caused by such Force Majeure event.

Upon the occurrence of such cause and upon its termination, the party alleging that it has been rendered unable as aforesaid thereby, shall notify the other party in writing within (72) seventy two hours of the

alleged beginning and ending thereof giving full particulars and satisfactory evidence in support of its claim.

Time for performance of the relative obligation suspended by the Force Majeure shall then stand extended by the period of delay which is directly caused by Force Majeure event. The party who has given such notice shall be executed from timely performance of its obligations under the Contract, for so long as the relevant event of Force Majeure continues and to the extent that such parties performance is prevented, hindered or delayed, provided the party or parties affected by the event of Force Majeure shall use reasonable efforts to mitigate the effect thereof upon its performance of the Contract and so to fulfill its obligations under the Contract.

If works to be executed by the Contractor are suspended by Force Majeure conditions lasting for more than (2) two months, the Employer shall have the option of cancelling or terminating this Contract in whole or part thereof at Employer's discretion. Upon such termination provisions of Clause 44 shall apply.

Delay or non-performance by a party hereto caused by the occurrence of any of Force Majeure shall not:

- a) Constitute a default or breach of the Contract,
- b) Give rise to any claim for damages or additional cost or expense occasioned thereby: if such delay or non-performance is caused by the occurrence of any event of Force Majeure. Force Majeure conditions shall not be payable under any circumstances.

SPECIAL CONDITIONS OF CONTRACT

1. (a) WARNING / CAUTION BOARDS

The contractor shall take all precautions to avoid accidents. All temporary warning / caution boards / glow signages display such as "Construction Work in Progress", "Keep Away", "No Parking", Diversions & protective Barricades etc. shall be provided and displayed during day time by the Contractor, wherever required and as directed by the SAI representative. These glow signages and red lights shall be suitably illuminated during night also. The Contractor shall be solely responsible for damage and accident caused, if any, due to negligence on his part. Also he shall ensure that no hindrance, as far as possible, is caused to general traffic during execution of the work. These signages shall be dismantled & taken away by the Contractor after the completion of work, only after approval of the SAI. Nothing extra shall be payable on this account.

(b) SIGN BOARDS

The Contractor shall provide and erect a display board of size and shape as required and paint over it, in a legible and workman like manner, the details about the salient features of the project, as required by the SAI. The Contractor shall fabricate and put up a sign board in an approved location and to an approved design indicating name of the project, client / owner, architects, structural consultants, Employer etc. besides providing space for names of other Contractors, Sub-Contractors and specialized agencies. Nothing extra shall be payable on this account

2. Safety, Health and Environment

In respect of all workmen directly or indirectly employed in the work for the performance of the contractor's part of this agreement, the contractor shall at his expense arrange for the safety provisions as per Indian Standard Safety codes IS: 7969, 8989, 3696 (Part-I &II), 3764, 4081, 4138, 5121, 5916, 7293, 7969 and shall at his own expense provide for all facilities in connection there with. In case the contractor fails to make arrangement and provide necessary facilities, the SAI shall be at liberty to make arrangement and provide facilities as aforesaid and recover the cost incurred on that behalf from the contractor, and no claims what so ever shall be entertained.

Details regarding some special provisions to be followed by contractor are as follows:

3. Usage of quality Personal Protection Equipments (PPEs) through approved vendors. PPEs would include amongst others the following items:

- a) Safety Helmets.
- b) Hearing Protection.
- c) Respiratory Protection.
- d) Eye Protection.
- e) Protective Gloves.
- f) Safety Footwear.
- g) High Visibility Clothing (Jacket)

All the items should get approved before issued to the use in the work.

The contractor shall provide all the PPE (Personnel Protective Equipment) and safety appliances required to carry out the job to all the workmen deployed by the contractor and also ensure that his workmen use those PPE and safety appliances while on the job. The contractor shall not pay any cash amount in lieu of PPE to the workers/sub-contractors and expect them to buy and use during work. If the contractor fails to ensure provision of safety appliances and its workmen do not use the PPE and safety appliances as needed for safe working, the employer may ask the contractor to stop the work and comply with safety requirements first. The contractor shall at all-time maintain a minimum of 10% spare PPEs and safety appliances and properly record and show to the employer during the inspections. Failing to do so shall invite fulfilling the deficiencies by the SAI at the risk and cost of the contractor.

4. Working at Height

Contractor shall ensure that work at height is properly planned for any emergencies and rescue appropriately supervised, and carried out in a manner, which is reasonably practicable safe. Contractor shall ensure that work at height is carried out only when the weather conditions do not jeopardize the health or safety of persons involved in the work. Guardrail, Toe-board, Barrier or similar collective means of protection shall be of sufficient dimensions, of sufficient strength and rigidity for the purposes for which they are being used, and otherwise suitable.

Working Platform shall be of sufficient dimensions to permit the safe passage of persons and the safe use of any plant or materials required to be used and to provide a safe working area having regard to the work being carried out there. Possess a suitable surface and, in particular, be so constructed that the surface of the working platform has no gap through which a person, material or object could fall and injure a person. A working platform and any supporting structure shall not be loaded so as to give rise to a risk of collapse or to any deformation, which could affect its safe use. Strength and stability calculations for scaffolding shall be carried out by the contractor. The dimension's form and layout of scaffolding decks shall be appropriate to the nature of the work to be performed and suitable for the loads to be carried and permit work and passage in safety.

A personal fall protection system designed for use with an anchor shall be securely attached to at least one anchor, and each anchor and the means of attachment thereto shall be suitable and of sufficient strength and stability for the purpose of supporting any foreseeable loading. Suitable and sufficient steps shall be taken to prevent any person falling or slipping from a personal fall protection system. Any other steps in the opinion of SAI suggested will also be taken in Protection system

Only metal ladders shall be allowed. Any surface upon which a ladder rests shall be stable, firm, of sufficient strength and of suitable composition safely to support the ladder so that its rungs or steps remain horizontal, and any loading intended to be placed on it. A ladder shall be so positioned as to ensure its stability during use. A suspended ladder shall be attached in a secure manner and so that, with the exception of a flexible ladder, it cannot be displaced and swinging is prevented. No interlocking or extension ladder shall be used unless its sections are prevented from moving relative to each other while in use.

5. Welding and Cutting

Gas cylinders in use should be kept upright on a custom-built stand or trolley fitted with a bracket to accommodate the hoses and equipment or otherwise secured. The metal cap should be kept in place to protect the valve when the cylinder is not connected for use. Non-return valve and Flashback arrester shall be fixed at both end of cylinder and torch. Domestic LPG cylinders shall not be used for Gas welding and cutting purpose. DCP or CO2 type Fire Extinguisher not less than 5 kg shall be fixed at or near to welding process zone in an easily accessible location. Fire Extinguisher should confirm to IS 2190: 1992. Welding grounds and returns should be securely attached to the work by cable lugs, by clamps in the case of stranded conductors, or by bolts for strip conductors. The ground cable will not be attached to equipment or existing installations or apparatus.

6. Prevention of Nuisance and Pollution

The contractor shall take all necessary precautions to prevent any nuisance or inconvenience to the owners, tenants or occupiers of adjacent properties and to the public in general and to prevent any damage to such properties, roads and any pollution of streams, environment and waterways. He shall make good at his own cost and to the satisfaction of the SAI representative,

Any damage to roads, paths, drainage works or public or private property whatsoever caused by the execution of the work or by traffic brought thereon by the contractor. All waste or superfluous materials shall be cleaned away by the contractor without any reservations entirely to the satisfaction of the SAI at no extra cost.

The Contractor shall do proper sequencing of the various activities by suitably staggering the activities within various pockets in the plot so as to achieve early completion. The agency may deploy adequate equipment's, machinery and labour as required for the completion of the entire work within the stipulated period specified. Also ancillary facilities shall be provided commensurate with requirement to complete the entire work within the stipulated period. Nothing extra shall be payable on this account. Adequate number/sets of equipment's in working condition, along with adequate stand-by arrangements, shall be

deployed during entire construction period. It shall be ensured by the Contractor that all the equipment's, Tools & Plants, machineries etc provided by him are maintained in proper working conditions at all times during the progress of the work and till the completion of the work. Further, all the constructional tools, plants, equipment's and machineries provided by the Contractor, on site of work or his work shop for this work, shall be exclusively intended for use in the construction of this work and they shall not be shifted / removed from site without the permission of the SAI representative.

PARTICULAR SPECIFICATIONS

1.0 EARTH WORK: -

1.1 Anti-Termite Treatment: -

- 1.2.1 The work shall be executed by specialized agency to be approved by the Engineer in Charge.
- 1.2.2 The Chemical shall strictly conform to Specifications & shall be as per BIS covered by ISI marking. Chemical has to be of approved quality out of preferred make. 100% material has to be procured of approved make before start of work. The chemical shall be used only after due testing & if found conforming to the Specifications. Proper account has to be kept for day to day use of Chemical.
- 1.2.3 Ten years Guarantee bond in prescribed Performa attached shall be submitted by the contractor which shall also be signed by both the specialized agency and the contractor to meet their liability / liabilities under the guarantee bond. However, the sole responsibility about efficiency of anti-termite treatment shall rest with the building contractor. Ten per cent of the cost of anti-termite work shall be retained as Security Deposit and the amount so deducted would be released after ten years from the date of completion of the entire work under the agreement, if the performance of the treatment/work done is found satisfactory. If any defect/shortcoming is noticed during the guarantee period, the contractor shall rectify it within 15 days of receipt of intimation of such defects/shortcomings. In the event of failure to attend to the complaint within the specified period, the same will be got done from another agency at the risk and cost of contractor.

2.0 R.C.C. WORK: -

2.1 Design Mix Concrete.

- 2.1.1 The RCC work shall be done with Design Mix Concrete. Wherever letter M has been indicated, the same shall imply for the Design Mix Concrete. The Design Mix Concrete will be designated based on the principles given in IS: 456, 10262 & SP 23. The Conditions & Specifications stated herein shall have precedence over all conditions & specifications stated in relevant I.S. Codes/ C.P.W.D. Specifications. The concrete mix shall be designed for the specified target mean compressive strength in order to ensure that work test result do not fall below the acceptance criteria specified for the concrete mix. The Contractor shall design mixes for each class of concrete indicating that the concrete ingredients and proportions will result in concrete mix meeting the requirements specified.
 - (a) The contractor has to submit design mix without use of admixtures.
 - (b) Admixture may be added (by maintaining the minimum cement content as given under para- 2.1.3) in case of specific technical requirement so as to meet the workability / slump requirement or for any other reason but nothing extra is to be paid to contractor on account of adding admixtures.
- 2.1.2 The sources of coarse aggregate, fine aggregate, water, admixture & cement to be used in concrete work shall be identified by the contractor & he will satisfy himself regarding their conforming to the relevant specifications & their availability before getting the same approved from the Engineer-In-

Charge.

- (a) Coarse Aggregate: - As per CPWD Specifications
- (b) Fine Aggregate: - As per CPWD Specifications
- (c) Water: - It shall conform to requirements laid down in IS:456-2000 / Para 3.1.1 of CPWD Specifications. If on testing, water from the source is not found fit for construction, the necessary arrangement for treatment of water shall have to be made by the contractor at the site and nothing extra shall be payable for the same.

- (d) **Cement: -** OPC of grade 43 shall conform to IS: 8112 or IS: 12330 and / or Portland Pozzolona Cement (Fly ash based), required in the work from reputed manufacturers of cement as per the approved make in 50 kg. bags bearing manufacturer's name and ISI marking, along with manufacturers test certificate for each lot. Portland Pozzolona Cement is to be used for RCC works only subject to fulfillment of conditions of circular No. CDO/SE(RR)/Fly ash (MAN) 02 dated 09.04.09 shall be used for Design Mix Concrete and shall conform to IS: 1489-Part-I. However, if the contractor uses higher grade of cement nothing extra shall be paid.

- (e) **Admixture/ Plasticizer: -** The admixture shall conform to IS: 9103. Whenever required, the admixture of approved quality & approved only shall be used to attain the required workability. Nothing extra on account of use of Admixture / Plasticizer shall be payable.

2.3.1 Water Cement Ratio and Slump: -

2.1.3.1 In proportioning a particular mix, the manufacturer/ producer/ contractor shall give due consideration to the moisture content in the aggregates, and the mix shall be so designed as to restrict the maximum free water cement ratio to less than 0.5.

2.1.3.2 Due consideration shall be given to the workability of the concrete thus produced. Slump shall be controlled on the basis of placement in different situations. For normal methods of placing concrete, maximum slump shall be restricted to 100mm when measured in accordance with IS: 1199.

Characteristic Compressive Strength Compliance Requirement

Specified Grade	Mean of the Group of 4 Non-Overlapping Consecutive Test Results in N/mm ²	Individual Test Results in N/mm ²
(1)	(2)	(3)
M20 or above	$\geq f_{ck} + 0.825 \times \text{established standard deviation (rounded off to nearest } 0.5 \text{ N/mm}^2)$ Or $f_{ck} + 4 \text{ N/mm}^2$, whichever is greater Where f_{ck} is characteristic compressive strength of CC Cube at 28 days	$f_{ck} + 4 \text{ N/mm}^2$
Note: In the absence of established value of standard deviation, the values given in Table may be assumed, and attempt should be made to obtain results of 30 samples as early as possible to establish the value of standard deviation.		

2.3.4 The Contractor shall engage one of the following approved laboratories / test house for designing the concrete mix in accordance with relevant IS Code and to conduct laboratory tests to ensure the target strength & workability criteria for a given grade of concrete: -

- i) National Institute of Technical Teacher Training & Research (NITTTR), Sector 26, Chandigarh.
- ii) Punjab Engineering College, Chandigarh.
- iii) NIT, Jalandhar. (Formerly known as REC, Jalandhar.)
- iv) IIT, New Delhi.
- v) Chandigarh Engineering College, Sector 26, Chandigarh.
- vi) NIT, Kurukshetra.

The various ingredients for mix design / laboratory tests shall be sent to the lab / test houses through the Engineer-in-charge and the samples of such aggregates sent shall be preserved at site by the department.

In the event if all the **above** laboratories are unable to carry out the requisite design / testing, the contractor may have it done from any other laboratory with prior approval of the **Engineer-Incharge**.

2.3.5 The contractor shall submit the report on design mix from any of above approved laboratories for approval of Engineer in Charge within 30 days from the date of issue of letter of acceptance of the tender. No concreting shall be done until the design mix is approved. In case of White Portland Cement and the likely use of admixtures in concrete with ordinary Portland/White Portland Cement, the contractor shall design and test the concrete mix by using trial mixes with white cement and / or admixtures also, for which nothing extra shall be payable.

2.3.6 In case of change of source or characteristic properties of the ingredients used in the concrete mix during the work, the contractor as per the directions of the Engineer-in-charge shall submit a revised laboratory mix design report conducted at laboratory established at site.

2.3.7 All cost of mix designing and testing, connected therewith, including charges payable to the laboratory shall be borne by the Contractor including redesigning of the concrete mix whenever required & as directed by Engineer- In-Charge.

2.3.8 The mix design for a specified grade of concrete shall be done for a target

mean compressive strength $T_{ck} = F_{ck} + 1.65s$

Where F_{ck} = Characteristic compressive strength at 28 days.
 s = Standard deviation which depends on degree of quality control.

The standard deviation for different grades of concrete shall be as follows: -

GRADE OF CONCRETE	STANDARD DEVIATION
M-20	4.0
M-25	4.0
M-30	5.0
M-35	5.0

2.3.9 TRIAL BATCHES

- 2.3.9.1 The designed mix proportions shall be checked for target mean compressive strength by means of trial batches.
- 2.3.9.2 Minimum three sets of separate preliminary tests shall be carried out for each trial batch of concrete mix. Each test shall comprise of six specimens and only one test-set of six specimens shall be made on any particular day.
- 2.3.9.3 The quantities of materials for each trial mix shall be sufficient for at least six specimens (cubes) and the concrete required for carrying out workability tests.
- 2.3.9.4 The workability of trial mix No.1 shall be measured and mix shall be carefully observed for freedom from segregation, bleeding and its finishing characteristics. The water content, if required, shall be adjusted corresponding to the required changes in the workability.
- 2.3.9.5 With the modified Water Content, the mix proportions shall be recalculated by keeping with water cement ratio unchanged. The mix proportion, as modified, shall form the Trial Mix No.2 and tested for the specified strength and workability.
- 2.3.9.6 In addition, trial mix No.3 and 4 shall be designed by keeping water contents same as that determined for trial mix 2 but varying the water cement ratio by ± 10 percent of the specified value and tested for their design characteristics.
- 2.3.9.7 Out of the six specimen of each set, three shall be tested at seven days and remaining three at 28 days. The preliminary tests at seven days are intended only to indicate the strength to be attained at 28 days, while the design mix shall be approved only on the basis of test strength at 28 days.

2.3.10 APPROVAL OF DESIGN MIX

The design mix shall be considered satisfactory and approved if at least three preliminary test-sets individually satisfy the following strength and workability criteria:

- 2.3.10.1 The average strength of each test-set is not less than the specified target mean compressive strength (T_{ck}).
- 2.3.10.2 The strength of any specimen cube is not less than $0.85 T_{ck}$.
- 2.3.10.3 The concrete mix is of required degree of workability and acceptable concrete finish.

2.4 BATCHING & MIXING:-

- (a) All design mix concrete shall be done using fully automatic batching plant conforming to IS: 4925 of minimum 15 cum per hour capacity. The automatic batching plant shall be charged by devices when actuated by a single starter switch, will automatically start the weighing operation of each material (i.e. stone aggregate, sand, cement, water, admixture etc.) and stop automatically when designated weight of each material has been reached and also it should have rated capacity (in terms of concrete in a single batch). It shall have control panel for operation of the batching plant complete with printing facility.
- (b) The contractor shall be free to use Ready Mix Concrete (RMC) in place of Batch mix concrete at his own cost. The contractor shall ensure that transit mixtures shall transport the concrete to site. All the precautions shall be taken during the transportation and handling of concrete to achieve the desired strength, durability, etc. as envisaged in the Mix Design. Contractor has to get the approval from Engineer-In-Charge regarding source of RMC by giving the details of such plants indicating name of owner / company, its location, technical establishment, past experience and text of Memorandum of Understanding (proposed to be entered between purchaser and supplier). The Engineer-in-Charge, after satisfying himself about quality / capability of the company shall give approval in writing (subject to drawing of MOU). The MOU shall be drawn with RMC plant owner / company and submitted to Engineer-in-Charge within a week of such approval. The contractor will not be allowed to purchase RMC without completion of above formalities for use in the project. Notwithstanding the approval granted by Engineer-in-Charge in aforesaid manner, the contractor shall be fully responsible for quality of concrete including input control, production, transportation and placement etc. The Engineer-in-Charge will reserve the right to deploy his supervisor at plant site to inspect at any such stage and reject the material / concrete etc if he is not satisfied about quality of material / product.
- (c) All measuring equipment shall be maintained in a clean and serviceable condition and their accuracy shall be checked at least once a month.
- (d) Only single sized good quality stone aggregate shall be brought to site of work from the approved source. The grading of the stone aggregate shall be controlled by blending the aggregate of different sizes in the required proportions at site of work

The aggregate of different sizes shall be stock-piled separately, preferably a day before use.

The grading of coarse and fine aggregates shall be checked as frequently as possible and as directed by the Engineer-In-Charge to ensure that the specified grading and quality of aggregate is maintained.

- (e) It is important to maintain the Water Cement Ratio constant at its specified or approved value by making adjustment for the moisture contents of both fine and coarse aggregates.

The moisture contents in the aggregate shall be determined as frequently as possible in keeping with the weather conditions and as per the provisions of IS: 2386 (Part-III).

2.5 OTHER OPERATIONS: -

All other operations in concreting work like mixing, slump, laying, placing of concrete, compaction, curing etc. not mentioned in this particular specifications for Design Mix of Concrete shall be as per CPWD Specifications.

2.6 SAMPLING:-

- (a) Samples from fresh concrete shall be taken as per IS 1199-1959 and the testcubes shall be made, cured and tested in accordance with IS: 516-1959.
- (b) Each test sample shall comprise of six test cubes (specimen), three of which shall be tested at 7 days and remaining for tests at 28 days.
- (c) FREQUENCY OF SAMPLING: -
 - (i) A random sampling procedure shall be adopted to ensure that the sampling is spread over the entire period of concreting and cover all mixing units. The concrete work shall be notionally divided into lots as under for the purpose of sampling conditions.
 - Footings, rafts etc.
 - Columns and walls at all levels.
 - Beams at all levels.
 - Slabs at all levels.
 - (ii) At least one test sample shall be taken for each lot of concrete work.
 - (iii) Each grade of concrete shall form different lot for testing.
 - (iv) The minimum frequency of sampling of concrete of each grade shall be in accordance with CPWD specification 2019, Vol I with upto date correction slips:-
 - (v) The concrete work shall be assessed on day to day basis & samples shall be taken as specified.
 - (vi) Work strength test shall be conducted in accordance with IS: 516 on random sampling.

2.6.4 TEST RESULTS OF SAMPLES: -

The test results of the sample shall be the average of the strength of three specimens. The individual variation shall not be more than $\pm 15\%$ percent of the average. If variation is more, the test results shall be treated as invalid. 90% of the total tests shall be done at the laboratory established at site by the contractor and remaining 10% in any other laboratory as directed by the Engineer-in-Charge.

2.6.5 STANDARD OF ACCEPTANCE: -

- i) In case the test results of all the samples are above the characteristic compressive strength, the concrete shall be accepted.
- ii) In case the test result of one or more samples fails to meet the requirement (i) above, it shall be accepted if it meets the requirement as laid down in CPWD Specification.
- vii) Concrete of each grade shall be assessed separately.
- viii) Concrete is liable to be rejected, if it is porous or honeycombed or its placing has been interrupted without providing a proper construction joint or the reinforcement has been displaced beyond the tolerances specified, or construction tolerances have not been met.

2.7 MEASUREMENT –

- (i) As per CPWD Specifications.
- (ii) In respect of all projected slabs at all levels including cantilever, canopy, the payment for the RCC work shall be made under the item RCC slabs. The payment for shuttering at the edges shall be made under item of centering and shuttering for RCC slabs. Nothing extra shall be paid for the side shuttering at the edge of these projected balconies / projected verandah slabs.

2.8 TOLERANCES - As per CPWD Specifications.

2.9 RATES: -

- (i) The rate includes the cost of materials, labour and T&P, including mixing, placing, transportation involved in all the operations described above except for the cost of centring, shuttering & reinforcement which will be paid for separately.
- (ii) In case of rejection of concrete on account of unacceptable compressive strength, governed by para "Standard of Acceptance" as above, the work for which samples have failed shall be redone at the cost of contractor. However, the Engineer-in-charge may order for additional tests (like cutting cores, ultrasonic pulse velocity test, load test on structure or part of structure, etc) to be carried out at the cost of contractor to ascertain if the portion of structure wherein concrete represented by the sample has been used, can be retained on the basis of results of individual or combination of these tests. The Contractor shall take remedial measures necessary to retain the structure as approved by the Engineer-in-charge without any extra cost. However, for payment, the basis of rate payable to contractor shall be governed by the 28 days cube test results and reduced rates shall be regulated in accordance with CPWD Specifications.

2.10 RCC WORK (ORDINARY)

2.10.4 The work shall be done in accordance with CPWD Specifications.

2.10.5 Water Cement ratio for Ordinary RCC work shall not be more than 0.5. Contractor shall use concrete mixture of proper design having arrangement for measuring water for mixing of concrete.

2.11 FORM WORK

- 2.11.4 The work shall be done in general as per CPWD Specifications.
- 2.11.5 Only M.S. centring / shuttering and scaffolding material unless & otherwise specified shall be used for all R.C.C. work to give an even finish of concrete surface. However, marine- ply shuttering in exceptional cases as per site requirement may be used on specific request from contractor to be approved by the **Engineer-in-Charge**.
- 2.11.6 Nothing extra shall be paid for the centring and shuttering, circular in shape whenever the formwork is having a mean radius exceeding 6m in plan.
- 2.11.7 Nothing extra shall be paid for grid beams and the corresponding slabs having clear span more than 1.20 metres.
- 2.11.8 In order to keep the floor finish as per architectural drawings and to provide required thickness of the flooring as per specifications, the level of top surface of R.C.C. shall be accordingly adjusted at the time of its centring, shuttering and casting for which nothing extra shall be paid to the Contractor.

As per general engineering practice, level of floors in toilet / bath, balconies, shall be kept 12 to 20mm or as required, lower than general floors shuttering should be adjusted accordingly. Nothing extra is payable on this account.

- 2.11.9 Steel shuttering as approved by the Engineer-in-Charge shall be used by the contractor. Minimum size of shuttering plates shall be 600mm x 900mm except for the case when closing pieces are required to complete the shuttering panels.

Dented, broken, cracked, twisted or rusted shuttering plates shall not be allowed to be used on the work.

The shuttering plates shall be cleaned properly with electrically driven sanders to remove any cement slurry or cement mortar or rust. Proper shuttering oil or de-bonding compound shall be applied on the surface of the shuttering plates in the requisite quantity before assembly of steel reinforcement.

2.12 REINFORCEMENT: -

- 2.12.4 The reinforcement shall be done as per CPWD Specifications.
- 2.12.5 The rate of item of reinforcement of RCC work includes all operations including straightening, cutting, bending, welding, binding with annealed steel or welding and placing in position at all the floors with all leads and lift complete as per CPWD Specifications.
- 2.12.6 The contractor shall provide approved type of support for maintaining the bars in position and ensuring required spacing and correct cover of concrete to reinforcement as called for in the drawings, spacer blocks of required shape and size. Chairs and spacer bars shall be used in order to ensure accurate positioning of reinforcement. **Spacer blocks shall be cast well in advance with approved proprietary pre-packed free flowing mortars (Conbextra as manufactured by M/S Fosroc Chemicals India Ltd. or approved equivalent)** of high early strength and same colour as surrounding concrete, Pre-cast cement mortar/concrete blocks/blocks of polymer shall not be used as spacer blocks unless specially approved by the Engineer-in-charge, rate of RCC items is inclusive of cost of such cover blocks.

2.13 PRE-CAST RCC WORK

- 2.13.4 The work shall be done in accordance with CPWD Specifications.
- 2.13.5 Pre-cast reinforced concrete units shall be of grade or mix as specified. Provision shall be made in the mould to accommodate fixing devices such as hooks etc. and forming of notches and holes. Each unit shall be cast in one operation. A sample of the unit shall be got approved from Engineer-in-charge before taking up the work.
- 2.13.6 Pre-cast units shall be clearly marked to indicate the top of member and its location.
- 2.13.7 Pre-cast units shall be stored, transported and placed in position in such a manner that these are not damaged.
- 2.13.8 The compaction of the concrete shall be done by vibrating, table or external vibrator, as approved by Engineer-in-charge. The rate quoted for the item shall include the element for framework and mechanical vibration.
- 2.13.9 Rate for item includes cost of all materials, labour, and all operations involved. Cost of M.S. frames, lugs including their welding, lifting hooks is also included.

3.0 BRICK WORK:-

- 3.1 The brickwork shall be carried out with good quality well common burnt clay machine moulded modular bricks of class designation 7.5 as per CPWD Specifications.
- 3.2 The rate shall also include for leaving chases / notches for dowels / cramps for all kinds of cladding to come over brick work.
- 3.3 Brick work provided around shaft or lift walls or around slab cutouts shall be measured in the brick for corresponding floor level. Nothing extra shall be paid on this account.
- 3.4 M.S. bars provided at every third course of half brick masonry shall be in single piece. If required, welding joint can be used without overlaps. Nothing extra shall be paid for welding and overlaps.

4.0 STONE / MARBLE WORK: -

- 4.1 General: - The execution of stones work shall be in general as per CPWD Specifications.

4.2 SAMPLES FOR STONE WORK: -

Samples of each item of stone work either individually or in combination shall be prepared for approval of Engineer-in-charge before commencement of work.

5.0 WOOD WORK: -

- 5.1 The wood work in general shall be carried out as per CPWD Specifications.
- 5.2 The sample of timber to be used shall be deposited by the contractor with

Engineer-in-charge before commencement of work.

- 5.3** Glazing for toilets shall be of translucent type.
- 5.4** The shape and size of beading shall be as per drawings. The joints of beading shall be mitred.
- 5.5** Timber shall be of specified species, good quality and well-seasoned. It shall have uniform colour, reasonably straight grains and shall be free from knots, cracks, shakes and sapwood. It shall be close grained. The contractor shall deposit the samples of species of timber to be used with the Engineer-in-Charge for testing before commencement of the work.
- 5.6** Wood work shall not be painted, oiled or otherwise treated before it has been approved by the Engineer-in-charge. All portion of timber including architrave abutting against masonry, concrete, stone or embedded in ground shall be painted with approved woodpreservative or with boiling coal tar.
- 5.7** The contractor(s) shall produce cash voucher and certificates from approved Kiln Seasoning Plants about the timber used on the work having been kiln seasoned and chemically treated by them, falling which it would not be so accepted as kiln seasoned and/or chemically treated.
- 5.8** Transparent sheet glass conforming to IS: 2835 – 1977 shall be used. Thickness being governed as under unless otherwise specified in the item in wood work/steel work:

Area of Glazing	Thickness
(a) For glazing area up to 0.50 sqm	4.0 mm
(b) For glazing area more than 0.50 sqm	5.5 mm

- 5.9** Factory made paneled / wire gauge door shutters
- 5.10** The work shall be executed through specialized agencies to be approved by the Engineerin Charge.
- 5.11** The shutters should be fabricated in factories & fabrication should conform to CPWDSpecifications Para 9.6.6 & IS 1003 Part-I.
- 5.12** The contractor shall propose well in advance to Engineer-in-Charge, the names and address of the factory where from the contractor intends to get the shutters manufactured along with the credential of the firm. The contractor shall place the order for manufacturing of shutters only after obtaining approval of the Engineer in Charge whose decision in this case shall be final & binding. In case the firm is not found suitable he shall propose another factory. The factory may also be inspected by a group of officers before granting approval; shutters shall however he accepted only if these meet the specified test.
- 5.13** Contractor will arrange stage wise inspection of the shutters at factory by the Engineer-in- Charge or his authorized representative. The contractor will have no claim if the shutters brought at site in part or full lot are rejected by the Engineer-in-Charge due to bad workmanship / quality. Such defective

shutters will not be measured and paid. The contractor shall remove the same from the site of work within 7 days after the written instruction in this regard are issued by the Engineer-in-Charge.

5.14 The shutters should be brought at site without primer / painting.

6.0 STEEL WORK:-

6.1 The work shall be carried out as per CPWD Specifications.

6.2 **Pressed Steel Frame / T Iron Frames:** - The work shall be done as per CPWD Specifications. The frames shall be fabricated in approved workshops. The angle and flat iron frames for cupboard shall also be fabricated from the above approved workshops.

6.3 **Steel windows / ventilators:** The work shall be done strictly as per CPWD Specifications. Flash butt-welded steel windows / ventilators only shall be provided and shall be procured from the approved manufacturers. The corners should be welded to form a solid fused welded joint conforming to the requirement given below.

- a) Weld shall be made all along the place of meeting the member.
- b) Weld should be properly grounded.
- c) Complete cross section of the corner shall form a solid joint with no cavities, free from cracks, under cutting, overlaps, gross porosity and entrapped slag.\

All sub dividing and glazing bars shall be tennoned & riveted into the frames i.e. all centre mullion section F4B and glazing section T2, T6 shall not be directly welded to the frames. For this a slot has to be cut in the frames, the F4B / T2 / T6 section inserted into it & head be hydraulically tennoned & riveted by Tennon Rivetting Machine.

The thickness of projecting type hinges shall not be less than 3.15 mm. For fixing of hinges to outer frame, slot shall be cut, hinges inserted & welded at the back. For non-projected type hinges if allowed, the wall thickness shall not be less than 3 mm & total widths not less than 40 mm. For fixing, the slot shall be cut in the fixed frames, hinge flap inserted & welded from the back.

The fixing lug shall be as per IS 1038 with adjustable slot & fixed to window frames by screws & nuts.

The fixing of unit shall be done as per IS 1081.

6.4 **M.S. Sheet Door** – M.S Sheet shall be in one piece i.e. no joint in M.S. Sheet shall be permitted.

7.0 FLOORING:-

7.1 All work in general shall be carried out as per CPWD Specifications.

7.2 Whenever flooring is to be done in patterns of tiles and stones, the contractor shall get samples of each pattern laid and approved by the Engineer-in-charge before final laying of such flooring. Nothing extra shall be payable on this account.

- 7.3** Different stones / tiles used in pattern flooring shall be measured separately as defined in the nomenclature of the item and nothing extra for laying pattern flooring shall be paid over and above the quoted rate. No additional wastage, if any, shall be accounted for any extra payment.
- 7.4** Samples of flooring stones (Kota/ Marble/ Granite etc.) shall be deposited well in advance with the Engineer-in-Charge for approval. Approved samples should be kept at site with the Engineer-in-Charge and the same shall not be removed except with the written permission of Engineer-in-Charge. No payment whatsoever shall be made for these samples.
- 7.5** The Marble/ Kota/ Granite or any other stone shall be fully supported by the details establishing the quarry and its location.
- 7.6** Full width Marble/ Kota/ Granite stone over kitchen platform shall be provided which shall not be less than 900mm long except to adjust for closing pieces. The marble / stone flooring in treads and risers of staircase shall not be less than 1500mm long except to adjust the closing pieces. Nothing extra shall be paid on these accounts

7.7 PVC & Wooden Flooring

The PVC & wooden flooring shall be procured from the approved manufacturer and work shall be carried out as per approved drawings and direction of Engineer-in-charge.

7.8 Ceramic/ Vitrified Tiles Flooring

The tiles shall be procured from the approved manufacture of the approved shade & colour.

The tile shall be conforming to IS-13755, IS-13753 and IS-15622 for floor and wall tiles respectively.

Tiles for dado shall be 200mm x 300mm (minimum size) GROUP-III as approved.

Tiles for flooring shall be 300mm x 300mm (minimum size) GROUP-V Tiles as approved. Test shall be conducted to satisfy the quality of material as per CPWD Specifications

- 7.9** Glass Mosaic Tile Flooring shall be with approved random colour mix design tiles and work shall be carried out as per direction of Engineer-in-charge.
- 7.10** The rate of items of flooring is inclusive of providing sunken flooring in bathrooms, kitchen etc. and nothing extra on this account is admissible. The proper gradient shall be given to flooring for toilets, verandah, kitchen, courtyard, etc. as per the directions of Engineer-in-charge.

8.0 WATER PROOFING FOR SUNKEN FLOORS:-

- 8.1** The work shall be got executed from the specialized agency as approved by the Engineer in Charge.

- 8.2** Total quantity of the water proofing compound required shall be arranged only after obtaining the prior approval of the make by Engineer-in-charge in writing. Materials shall be kept under double lock and key and proper account of the water proofing compound used in the work shall be maintained. It shall be ensured that the consumption of the compound is as per specified requirements.
- 8.3** The finished surface after water proofing treatment shall have adequate smooth slope as per the direction of the Engineer-in-charge.
- 8.4** Before commencement of treatment on any surface, it shall be ensured that the outlet drain pipes / spouts have been fixed and the spout openings have been chased and rounded off properly for easy flow of water.

8.5 GUARANTEE BOND:-

Ten years Guarantee bond in prescribed proforma attached shall be submitted by the contractor which shall also be signed by both the specialized agency and the contractor to meet their liability / liabilities under the guarantee bond. However, the sole responsibility about efficiency of water proofing treatment shall rest with the building contractor. **(Ten per cent) of the cost of water-proofing work shall be retained as Security Deposit and the amount so deducted would be released after ten years from the date of completion of the entire work under the agreement, if the performance of the treatment is found satisfactory.** If any defect is noticed during the guarantee period, the contractor shall rectify it within 15 days of receipt of intimation of defects in the work. If the defects pointed out are not attended to within the specified period, the same will be got done from another agency at the risk and cost of contractor.

9.0. FINISHING:-

- 9.1 The work shall be done in accordance with CPWD Specifications.
- 9.2 All painting material of approved brand and manufacturer shall be brought to the site of work in the original sealed containers. The material brought to the site of work shall be sufficient for at least 30 days of work. The material shall be kept under the joint custody of contractor and representative of the Engineer-in-charge. The empty containers shall not be removed from the site till the completion of the work without permission of the Engineer-in-charge.

10.0 SANITARY INSTALLATIONS /WATER SUPPLY / DRAINAGE:-

- 10.1 The contractor shall submit schematic drawing of water supply and sanitary installation showing details of layout, including internal water supply and drainage details, showing the detail of water supply lines including fittings diameter wise and fixtures connecting to soil waste through traps and connection of W.C. to main shaft pipe for drainage including its ventilation system for approval of Engineer-in-Charge.
- 10.2 For the work of water supply and sanitary installations, the contractor shall engage the approved licensed plumbers and submit the name of proposed plumbing agencies with their credentials for approval of the Engineer-in-Charge.
- 10.3 The work in general shall be carried out as per CPWD Specifications.
- 10.4 The tendered rates shall include the cost of cutting holes in walls, floors, RCC

- slabs etc. wherever required and making good the same for which nothing extra shall be paid.
- 10.5 The Centrifugally spun cast iron pipe IS: 3989-1984 wherever necessary shall be fixed to RCC columns, beams etc. with rawl plugs of approved quality and nothing extra shall be paid for on this account.
- 10.6 The pig lead to be used in the jointing should be as per CPWD specifications.
- 10.6(a) The Centrifugally spun cast iron pipe IS: 3989-1984 wherever necessary shall be fixed to RCC columns, beams etc. with rawl plugs of approved quality and nothing extra shall be paid for on this account.
- 10.6. (b) Nothing extra for providing and fixing CP brass caps/ extension pieces wherever required for CP brass fittings shall be paid beyond the rates payable for corresponding CP brass fittings.
- 10.7 The pig lead to be used in jointing should be as per C.P.W.D. Specifications.
- 10.8 Nothing extra for providing & fixing CP Brass caps /extension pieces wherever required for CP Brass fittings shall be paid beyond the rates payable for corresponding CP Brass fittings
- 10.9.1 The entire responsibility for the quality of work will however rest with the building contractor only and he shall submit a Guarantee Bond as per Proforma attached. 10% (ten percent) of the cost of these items would be retained as security deposit and the amount so deducted would be released after two years from the date of completion of the entire work under the agreement, if the performance of the items is found satisfactory. If any defect is noticed during the guarantee period, the contractor should rectify it within seven days and if not attended to the same will be got done from another agency at the risk and cost of contractor. However, this security deposit can be released in full if bank guarantee of equivalent amount is produced and deposited with the department.
- 11.0 **Aluminium doors, windows, ventilators etc. glazing specifications**
- 11.1 **Extent and Intent:** - The work shall be carried out through an approved Special Agency, who shall furnish all material, labour, accessories, equipment, tool and plants and incidentals required for providing and installing anodized aluminium doors, windows, claddings, louvers and other items as called for on the drawings. The drawings and specifications cover the major requirements only. The supplying of additional fastenings, accessories, fixtures and other items not mentioned specifically herein, but which are necessary to make a complete installation shall be a part of this contract.
- 11.2 **General:** - Aluminium doors, windows etc. shall be of sizes, section details as shown on the Architectural drawings. The details shown on the drawings indicate generally the sizes of the component parts and general standards. These may be varied slightly to suit the standard adopted by the manufacturers. Before proceeding with any manufacturing, the contractor shall prepare and submit complete manufacturing and installation drawings for approval of the Engineer-in-Charge and no work shall be performed until the approval of these drawings is obtained.
- 11.3 **Shop Drawings:** - The contractor shall submit the shop drawings of doors, windows, louvers, cladding and other aluminium work, based on the architectural drawings to the Engineer-in-Charge for his approval. The shop drawing shall show full size sections of doors, windows etc. thickness of metal

- (i.e. wall thickness) details of construction, sub frame/rough ground profile, anchoring details hardware as well as connection of windows, doors and other metal work to adjacent work. Samples of all joints and methods of fastening and joining shall be submitted to the Engineer-in-Charge for approval well in advance of commencing the work.
- 11.4. **Samples:** - Samples of doors, windows louvers etc. shall be fabricated, assembled and submitted to Engineer-in-Charge for his approval. They shall be of sizes, types etc. as decided by Engineer-in-Charge. All samples shall be provided at the cost of the contractor.
- 11.5. **Sections:** - Aluminium doors and windows shall be fabricated from extruded sections of profiles as detailed on drawings. The sections shall be extruded by the manufacturers approved by the Engineer-in-Charge. The aluminium extruded sections shall conform to BIS designation IIE/IIV 9 WP alloy, with chemical composition technical properties, as per IS: 733 and IS: 1285. The permissible tolerance of the extruded sections shall be such as not to impair the proper and smooth function/ operations and appearance of doors and windows.
- 11.6 **Fabrication:** - Doors, windows etc. shall be fabricated to sizes at factory and shall be of section, sizes, combinations and details as shown on the drawings. All doors, windows etc. shall have mechanical joints. The joints shall be designed to withstand a wind load of 150 Kg. Per Sqm. The design shall also incur that the maximum deflection of any member shall not exceed 1/175 of the span of the member. All members shall be accurately machined and fitted to form hairline joints prior to assembly. The joints accessories such as cleats, brackets etc. shall be of such material as not to cause any bimetallic action. The design of the joints and accessories shall be such that the accessories are fully concealed. The fabrication of doors, windows, etc. shall be done in suitable sections to facilitate easy transportation, handling and installation. Adequate provision shall be made in the door and window members for anchoring to support and fixing of hardware and other fixture as approved by the Architect.
- 11.7 **Anodizing:** - All aluminium sections shall be anodized as per IS: 7088 and to required colour as specified in the item as per IS: 1868 grading as specified in item schedule after cutting the member to requisite sizes before the final assembly. Anodizing confirming to specified grade with minimum average thickness of 15 microns when measured as per IS: 612. The anodic coating shall be properly sealed by steams or in boiling water are cold sealing process as per IS:1868/IS: 6057. Polythene tape protection shall be applied on the anodised section before they are brought to site. All care shall be taken to ensure surface protection during transportation, storage at site and installation. The tape protection shall be removed on installation. The sample will be tested in the approved laboratory and cost of samples; cost of testing etc. shall be borne by the contractor.
- 11.8 **Protection of finish:** - All aluminium members shall be wrapped with approved self- adhesive non-staining. PVC tapes.
- 11.9 **Handling and Stacking:** -
- 11.9.1 Fabricated materials shall be carried in an approved manner to protect the material against any damage during transportation. The loading and unloading shall be carried out with utmost care. On receipt of material at site, it shall be carefully examined to detect any damaged pieces. Arrangements shall be made for expeditious replacement of damaged pieces/ parts. Materials found to be acceptable on inspections shall be repacked in

crates and stored safely.

11.9.2 In the case of composite windows and doors, the different units are to be assembled first. The assembled composite units should be checked for line, level and plumb before final fixing is done. Units may be serial numbered and identified as out how to be assembled in their final locations if situation so warrants.

11.9.3 The contractor shall be responsible for assembling composite, bedding and filling the groove with polysulphide sealant inside and outside, at transoms and mullions placing the doors, windows etc. in their respective openings. After the doors/ windows have been fixed in their correct assigned position, the open hollow sections abutting masonry concrete shall be fitted with approved polysulphide sealant densely packed and finished neat.

11.9.4 The contractor shall be responsible for doors, windows, etc. being set straight, plumb, level and for their satisfactory operation after fixing is complete.

11.10 **Installation:** -

11.10.1 Just prior to installation the doors, windows, etc. shall be uncreated and stacked on edge on level bearers and supported evenly. The frame shall be fixed into position true to line and level using adequate number of expansion machine bolts, anchor fasteners, of approved size and manufacture and in an approved manner. The holes in concrete/masonry members for housing anchor bolts shall be drilled with an electric drill.

11.10.2 The door/ windows assembled as shown on drawings shall be placed in correct final position on the opening and marks made on concrete members at jambs, sills and heads against the holes provided in frames for anchoring. The frame shall then be removed from the opening and laid aside. Neat holes with parallel sides of appropriate size shall then be drilled in the concrete members with an electric drill at the marking to house the expansion bolts. The expansion bolts shall then be inserted in the holes, struck with a light hammer till the nut is forced into the anchor shell. The frame shall then be placed in final position in the opening and anchored to the support through cadmium plated machine screws of required size and anchored to the support through cadmium plated machine screws of required size threaded to expansion bolts. The frame shall be set in the opening by using wooden wedges at supports and be plumbed in position. The wedges shall invariably be placed at the meeting at points of glazing bars and frame.

11.10 **PVC/ Neoprene gaskets:** - The contractor shall provide and install PVC/ Neoprene gaskets of approved size and profile at all locations as shown and as called for to render the doors, windows etc. absolutely air tight and weather tight. The contractor shall produce samples of the gaskets for approval and shall procure the same after approval only.

11.12.1 Fittings: - Hinges, stays, handles, tower bolts, locks and other fittings shall be of quality and manufacturer as approved by the Engineer-in-Charge.

11.13 **Manufacturer's Attendance:** - The manufacturer immediately prior to the commencement of glazing shall adjust and set all windows and doors and accept responsibility for the satisfactory working of the opening frames.

11.14 **Poly-sulphide:** -The gaps between frames and supports and also any gaps in the door and windows sections shall be raked out as directed and filled with poly-sulphide of approved colour and make to ensure complete water

tightness. The poly-sulphide shall be of such colour and composition that it would not stain the masonry/concrete work, shall receive paint without bleeding, will not sag or run and shall not set hard or dry out under any conditions of weather. The sample of poly-sulphide to be used for this purpose shall be got approved from the architect before its actual use.

11.15 **Details of Test:** -

11.15.1 The various tests on aluminium sections shall be conducted in accordance with the relevant IS codes.

11.15.2 The minimum number of tests for anodizing and corrosion resistance shall be as given below: -

S.No.	Details	No. of Tests
1.	Doors, windows and ventilators	One test for every 1000 kg or part thereof.

11.15.3 The samples of major member of each unit of doors/ windows shall be selected at random by Engineer-in-Charge as such that all the aluminium section shall be got tested.

11.16 **Acceptance Criteria:** - The aluminium work shall carry two years guarantee after completion of work against unsound material, workmanship and defective anodizing/ powder coating as per guarantee bond. Two years guarantee in prescribed Performa attached must be given by the specified firm, which shall be counter signed by the contractor, in token of his overall responsibility. 10% (ten percent) of the cost of these items would be retained as security deposit and the amount so deducted would be released after two years from the date of completion of the entire work under the agreement, if the performance of the items is found satisfactory. If any defect is noticed during the guarantee period, the contractor should rectify it within seven days and if not attended to the same will be got done from another agency at the risk and cost of contractor. However, this security deposit can be released in full if bank guarantee of equivalent amount is produced and deposited with the department.

11.17 **Rates:** -

11.17.1 The rates of the item shall include the cost of materials, labour required in all the above operations.

11.17.2 The rates include the cost of hinges/ pivots and rest of the fittings shall be paid separately.

12.0 **SPECIFICATIONS FOR SOLID POLY VINYL CHLORIDE (PVC) DOOR SHUTTERS:** -

12.1.0 **SCOPE:**

12.1.1 This specification lays down requirement regarding types, sizes, material, construction, workmanship, finish, performance evaluation, sampling and testing of solid Poly Vinyl Chloride (PVC) Panelled door shutters for use in residential buildings, non-residential buildings such as offices, schools, hospitals, etc.

12.1.2 This specification does not cover large size door shutters for industrial and special buildings such as workshops, garages, godowns etc.

12.1.3 PVC door shutters shall be used in internal locations only.

REFERENCES:

12.2.0 The Indian Standards and other Standards listed in Annexure-I are necessary adjuncts to this standard. The products bearing BIS certification i.e. ISI Mark with code number shall have precedence over those not bearing ISI Mark.

12.3.0 **TERMINOLOGY:**

12.3.1 For the purpose of this specification, the definitions given below in addition to those given in IS 707-1976 shall apply:

12.3.1.1

- (i) Blistering: Air or solvent entrapped during moulding.
- (ii) Colour blots: Colour blots occurring on account of uneven distribution of pigment.
- (iii) Crazing: Fine hair cracks on the surface.
- (iv) Defective Impregnation: Imperfect impregnation of PVC resin with other additives.
- (v) Colour Fading: Fading of colour on exposure to sunlight.
- (vi) Impurities: Presence of matter other than those specified.
- (vii) Pin holes: Pores of size less than 1mm appearing on the surface.
- (viii) Small Pores: Pores of size more than 1mm but less than 2mm appearing on the surface.
- (ix) Wrinkling: A slight ridge or furrow on surface.
- (x) Aggregate Defects: Presence of defects such as pin holes, impurities and traces of mending 5 or more in aggregate for defects at localized place.

12.4.0 **HANDLING:**

12.4.1 Handling and direction of closing of shutters shall be designated in accordance with IS: 4043:1969.

12.5.0 **MATERIAL:**

12.5.1 Poly Vinyl Chloride Resin (suspension grade) is the basic raw material of PVC compound. PVC resin is mixed with chemicals like calcium searate, hydrocarbon Wax, Titanium dioxide, calcium carbonate Acrylic base etc. Further additives like UV stabilizers, impact modifiers, pigments, epoxy plasticizer, lubricants, acrylic processing aid etc. are also added. The purpose of adding the chemicals and additives is to impart strength, surface finish, colour and resistance to fading by light rays. These chemicals are mixed in the desired proportion and shall be used in the formulation of PVC material and for free and smooth extrusion of PVC cellular sheets.

12.6.0 **PROCESS:**

12.6.1 MIXING: The PVC material so formulated with the addition of chemicals, fillers & additives shall be mixed dry powder form in a high speed hot mixer at a temperature of 110° C to 125° C. The heated dry blend is then to be cooled at room temperature. However, the temperature has to be determined keeping in view the climatic conditions and the process requirements.

12.6.2 EXTRUSION: The cooled dry blend is off loaded into the hopper of the extruder, and then is fed to the screw & barrel of the extruder, where it is melted and kneaded at

varying temperatures upto 205⁰ C by rotating screws. The thick paste of PVC material is then passed through a hot die to make the sheet of required thickness.

12.6.3 POLISHING: The basic shape of the sheet so acquired is then polished with the help of a three-roll calendar. At the same time the sheet is cooled by circulating water in the rolls of the calendar and there after on a roller table by atmospheric air.

12.6.4 CUTTING: The final finished product coming out of the haul-off is cut as per the required size.

BID SECURITY (BANK GUARANTEE)

WHEREAS, _____ [name of Bidder] (hereinafter called "the Bidder") has submitted his Bid dated _____ [date] for the construction of _____ [name of Contract] (hereinafter called "the Bid").

KNOW ALL PEOPLE by these presents that We _____ [name of bank] of _____ [name of country] having our registered office at _____ (hereinafter called "the Bank") are bound unto _____ [name of Employer] (hereinafter called "the Employer") in the sum of _____ for which payment well and truly to be made to the said Employer the Bank binds itself, his successors and assigns by these presents.

SEALED with the Common Seal of the said Bank this _____ day of _____ 2025.

THE CONDITIONS of this obligation are:

- (1) If after Bid opening the Bidder withdraws his bid during the period of Bid validity specified in the Form of Bid;
- or
- (2) If the Bidder having been notified of the acceptance of his bid by the Employer during the period of Bid validity:
 - (a) Fails or refuses to execute the Form of Agreement in accordance with the Instructions to Bidders, if required; or
 - (b) Fails or refuses to furnish the Performance Security, in accordance with the Instruction to Bidders; or
 - (c) Does not accept the correction of the Bid Price;

we undertake to pay to the Employer up to the above amount upon receipt of his first written demand, without the Employer having to substantiate his demand, provided that in his demand the Employer will note that the amount claimed by him is due to him owing to the occurrence of one or any of the three conditions, specifying the occurred condition or conditions.

This Guarantee will remain in force up to and including the date _____ days after the deadline for submission of Bids as such deadline is stated in the Instructions to Bidders or as it may be extended by the Employer, 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]

NEFT MANDATE FORM

From:M/s.

Date:

To

Sub: NEFT PAYMENTS

We refer to the NEFT being set up by SAI. For remittance of our payments using RBI's NEFT scheme, our payments may be made through the above scheme to our under noted account.

NATIONAL ELECTRONIC FUNDS TRANSFER MANDATAE FORM

Name of City	
Bank Code No.	
Bank 's name	
Branch Address	
Branch Telephone / Fax no.	
Supplier's Account No.	
Type of Account	
IFSC code for NEFT	
IFSC code for RTGS	
Supplier's name as per Account	
Telephone no. of supplier	
Supplier's E-mail ID	

[Signature with date, name and designation]

For and on behalf of Messrs _____

[Name & address of the bidder]

Confirmed by Bank

Enclosed a copy of Crossed Cheque

LETTER OF AUTHORISATION FOR ATTENDING BID OPENING MEETING

Tender No. _____

Subject: - Authorization for attending bid opening on _____ (date) in the tender of _____.

Following persons are hereby authorized to attend the bid opening for the tender mentioned above on behalf of (bidder) in order of preference given below.

Order of Preference	Name	Specimen Signature
---------------------	------	--------------------

1.

2.

Alternate Representative

Signatures of bidder

Or

Officer authorized to sign the bid documents on behalf of the bidder.

Note:

1. Maximum of two representatives will be permitted to attend bid **opening. In case where it is restricted to one, first preference** will be allowed. Alternate representatives will be permitted when regular representative are not able to attend.
2. Permission for entry to the hall where bids are opened may be refused in case authorization as prescribed above is not furnished.

Bid Securing Declaration Form

Date: _____

Tender No. _____

To

Regional Director

Sports Authority of India

Northern Regional Centre, Sonapat

I/We understand that, according to your conditions, bids must be supported by a bid securing Declaration.

I/ We accept that I/We may be disqualified from bidding for any contract with you for a period of one year from the date of notification if I am/we are in a breach of any obligation under the bid condition as below:

- A) Withdraws/modification/amends the submitted bid against this tender, impairs or derogates from the tender, during the period of bid validity specified in this tender.; or
- B) Having been notified of the acceptance of our bid by the purchaser during the period of bid validity
 - a. Fail or refuse to execute the contract, or
 - b. Fail or refuse to furnish the performance security, in accordance with the term of this tender document.

I/We understand this bid securing declaration shall cease to be valid if I am/ we are not the successful bidder or upon

- (a) The receipt of your notification of the name of the successful bidder and submission of required performance security, in accordance with the terms of this tender document; or
- (b) Thirty days after the expiration of the validity of my/our bid.

Signed: (insert signature of person whose name and capacity are shown) in the capacity of: (insert legal capacity of person signing the bid securing declaration) Dated on day of (insert date of signing)

Corporate seal (where appropriate)

FORMAT FOR INTEGRITY PACT
[To be submitted on Bidder's **Original** Letter Head]

To,
Regional Director
SAI, NRC Sonapat

Sub: Integrity Pact for -----(Name of Work / Project)

Dear Sir,

I/We acknowledge that SAI NRC is committed to follow the principles thereof as enumerated in the Integrity Agreement enclosed with the tender/bid document at **Enclosure-I**.

I/We agree that the Notice Inviting Tender (NIT) is an invitation to offer made on the condition that I/We will sign the enclosed integrity Agreement, which is an integral part of tender documents, failing which I/We will stand disqualified from the tendering process. I/We acknowledge that THE MAKING OF THE BID SHALL BE REGARDED AS AN UNCONDITIONAL AND ABSOLUTE ACCEPTANCE of this condition of the NIT.

I/We confirm acceptance and compliance with the Integrity Agreement in letter and spirit and further agree that execution of the said Integrity Agreement shall be separate and distinct from the main contract, which will come into existence when tender/bid is finally accepted by SAI NRC. I/We acknowledge and accept the duration of the Integrity Agreement, which shall be in the line with Article 1 of the enclosed Integrity Agreement.

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

Yours faithfully,

Date:

(Signature, name and designation
of the Authorized signatory)

Place:

Name and seal of Bidder

INTEGRITY AGREEMENT
[To be submitted on Stamp paper of At least Rs.100]

This Integrity Agreement is made at on this day of 20.....

BETWEEN

SAI NRC, Sonapat (Hereinafter referred as the ‘**EMPLOYER**’, which expression shall unless repugnant to the meaning or context hereof include its successors and permitted assigns)

AND

.....
 (Name and Address of the Individual/firm/Company)

through (Hereinafter referred to as the

(Details of duly authorized signatory)

“**Bidder/Contractor**” and which expression shall unless repugnant to the meaning or context hereof include its successors and permitted assigns)

Preamble

WHEREAS the Employer has floated the Tender (NIT No.) (hereinafter referred to as “Tender/Bid”) and intends to award, under laid down organizational procedure, contract for..... (Name of work) hereinafter referred to as the “Contract”.

AND WHEREAS the Employer values full compliance with all relevant laws of the land, rules, regulations, economic use of resources and of fairness/transparency in its relation with its Bidder(s) and Contractor(s).

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

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

Article 1: Commitment of the Employer

- (1) The employer commits itself to take all measures necessary to prevent corruption and to observe the following principles:
 - (a) No employee of the Employer, personally or through any of his/her family members, will in connection with the Tender, or the execution of the Contract, demand, take a promise for or accept, for self or third person, any material or immaterial benefit which the person is not legally entitled to.
 - (b) The Employer will, during the Tender process, treat all Bidder(s) with equity and reason. The Employer will, in particular, before and during the Tender process, provide to all Bidder(s) the same information and will not provide to any Bidder(s) confidential / additional information through which the Bidder(s) could obtain an advantage in relation to the Tender process or the Contract execution.
 - (c) The Employer shall endeavor to exclude from the Tender process any person, whose conduct in the past has been of biased nature.

- (2) If the Employer obtains information on the conduct of any of its employees which is a criminal offence under the Indian Penal code (IPC)/Prevention of Corruption Act, 1988 (PC Act) or is in violation of the principles herein mentioned or if there be a substantive suspicion in this regard, the Employer will inform the Chief Vigilance Officer and in addition can also initiate disciplinary actions as per its internal laid down policies and procedures.

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

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

threat or the use of force directly or indirectly, where potential or actual injury may befall upon a person, his/her reputation or property to influence their participation in the tendering process).

Article 3: Consequences of Breach

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

- (1) If the Bidder(s)/Contractor(s), either before award or during execution of Contract has committed a transgression through a violation of Article 2 above or in any other form, such as to put his reliability or credibility in question, the Employer after giving 14 days notice to the contractor shall have powers to disqualify the Bidder(s)/Contractor(s) from the Tender process or terminate/determine the Contract, if already executed or exclude the Bidder/Contractor from future contract award processes. The imposition and duration of the exclusion will be determined by the severity of transgression and determined by the Employer. Such exclusion may be forever or for a limited period as decided by the Employer.
- (2) Forfeiture of EMD/Performance Guarantee/Security Deposit: If the Employer has disqualified the Bidder(s) from the Tender process prior to the award of the Contract or terminated/determined the Contract or has accrued the right to terminate/determine the Contract according to Article 3(1), the Employer apart from exercising any legal rights that may have accrued to the Employer, may in its considered opinion forfeit the entire amount of Earnest Money Deposit, Performance Guarantee and Security Deposit of the Bidder/Contractor.
- (3) Criminal Liability: If the Employer obtains knowledge of conduct of a Bidder or Contractor, or of an employee or a representative or an associate of a Bidder or Contractor which constitutes corruption within the meaning of IPC Act, or if the Employer has substantive suspicion in this regard, the Employer will inform the same to law enforcing agencies for further investigation.

Article 4: Previous Transgression

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

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

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

Article 6: Duration of the Pact

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

Article 7: Other Provisions

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

Article 8 : LEGAL AND PRIOR RIGHTS

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

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

.....
(For and on behalf of Employer)

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

WITNESSES:

1.
(signature, name and address)

2.
(signature, name and address)

Place:

Dated :

SCHEDULE OF QUANTITIES

SPORTS AUTHORITY OF INDIA, NRC SONEAT

BOQ FOR - Renovation of Protection Wall at the Archery Centre of Excellence.

Sr. No.	ITEM	UNIT	QTY	RATE (Rs.)	AMOUNT (Rs.)
1.	Earth work in excavation by mechanical means (Hydraulic excavator)/ manual means over areas (exceeding 30 cm in depth, 1.5 m in width as well as 10 sqm on plan) including getting out and disposal of excavated earth lead upto 50 m and lift upto 1.5 m, as directed by Engineer-in- charge.				
1.1	All Kind of soils	Cum	200		
2	Filling available excavated earth (excluding rock) in trenches, plinth, sides of foundations etc. in layers not exceeding 20cm in depth, consolidating each deposited layer by ramming and watering, lead up to 50 m and lift upto 1.5 m.	Cum	200		
3	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work up to plinth level :				
3.1	1:3:6 (1 Cement : 3 coarse sand (zone-III) derived from natural sources : 6 graded stone aggregate 20 mm nominal size derived from natural sources)	Cum	7		
4	Brick work with common burnt clay F.P.S. (non modular) bricks of class designation 7.5 in superstructure above plinth level up to floor V level in all shapes and sizes in				
4.1	Cement mortar 1:6 (1 cement : 6 coarse sand)	Cum	46		
5	Providing and laying in position specified grade of reinforced cement concrete, excluding the cost of centering, shuttering, finishing and reinforcement - All work up to plinth level :				
5.1	1:1.5:3 (1 cement : 1.5 coarse sand (zone-III) derived from natural sources : 3 graded stone aggregate 20 mm nominal size derived from natural sources)	Cum	29		
6	Reinforced cement concrete work in walls (any thickness), including attached pilasters, buttresses, plinth and string courses, fillets, columns, pillars, piers, abutments, posts and struts etc. above plinth level up to floor five level, excluding cost of centering, shuttering, finishing and reinforcement :				
6.1	1:1.5:3 (1 cement : 1.5 coarse sand(zone-III) derived from natural sources : 3 graded stone aggregate 20 mm nominal size derived from natural sources)	Cum	38		
7	Centering and shuttering including strutting, propping etc. and removal of form for				
7.1	Foundations, footings, bases of columns, etc. for mass concrete	Sqm	100		
7.2	Lintels, beams, plinth beams, girders, bressumers and cantilevers	Sqm	150		
7.3	Columns, Pillars, Piers, Abutments, Posts and Struts	Sqm	250		

8	Steel reinforcement for R.C.C. work including straightening, cutting, bending, placing in position and binding all complete upto plinth level.				
8.1	Thermo-Mechanically Treated bars of grade Fe-500D or more.	Kg	2950		
9	Steel reinforcement for R.C.C. work including straightening, cutting, bending, placing in position and binding all complete above plinth level.				
9.1	Thermo-Mechanically Treated bars of grade Fe-500D or more.	Kg	1450		
TOTAL AMOUNT (Rs.)					

L1 Criteria – The firm quoting the lowest price in total will be selected

Authorized Signatories (Name & Designation, seal of the company)

Date:

LIST OF APPROVED MAKES OF MATERIALS FOR CIVIL WORKS

Sr. No.	Name of Product/ Material	Preferred Brand Names
1	ORDINARY PORTLAND CEMENT (GREY) (43 GRADE)	ACC, ULTRATECH, VIKRAM, SHREE CEMENT, AMBUJA, JAYPEE CEMENT, CENTURY CEMENT & J.K. CEMENT.
2	PORTLAND POZZOLONA CEMENT (GREY) (43 GRADE)	ACC, ULTRATECH, VIKRAM, SHREE CEMENT, AMBUJA, JAYPEE CEMENT, CENTURY CEMENT & J.K. CEMENT.
3	WHITE CEMENT	J.K. WHITE, JAIPUR SUPREME PACKAGING PVT. LTD., ULTRATECH CEMENT LIMITED.
4	REINFORCEMENT STEEL	SAIL, TATA STEEL LTD., RINL, JINDAL STEEL & POWER LTD. AND JSW STEEL LTD.
5	ADMIXTURES	CICO, FAIRMATE, HIND PLAST SUPER, SUPAPLAST, SIKKA, RHEOPLAST
6	WATER PROOFING COMPOUND	FOSROC, CICO, KRYTON, BUILDMATE, PIDLITE, PRIYA ENTERPRISES, FAIRMATE, SIKKA, RHEOPLAST
7	AUTOCLAVED AERATED BLOCKS	BILTECH, ECO GREEN, FINECRETE, J.K. LAKSHMI CEMENT LTD.
8	POLYMER MODIFIED ADHESIVE FOR AAC BLOCKS	MYK LATICRETE, FERROUS CRETE, ARDEX ENDURA, ULTRATECH, SIKKA, RHEOPLAST
9	FACTORY MADE PANELLED & WIRE GAUGE WOODEN DOOR/ WINDOW SHUTTERS.	M/S JAIN WOOD INDUSTRIES, KUTTY DOORS, SAMRAT PLYWOOD, NEW JAGDAMBA DOORS, MERINO, KITPLY, AS TIMBER, A-1 TEAK PRODUCTS
10	FLUSH DOOR SHUTTERS	KUTTY FLUSH DOOR, SAMRAT LAMINATE, NATIONAL PLYWOODS, JAIN WOOD INDUSTRIES, MERINO, MINIMAX, CENTURY, AS TIMBER.
11	BLOCK BOARD	MERINO, MINIMAX, NATIONAL, ARCHIDPLY, CENT PLY, JAYNA, CENTURY.
12	LAMINATES	SAMRAT, VIRGO, MERINO, ARCHIDPLY, CENTURY LAMINATES, GREENLAM
13	PRE-LAMINATED PARTICLE BOARD	ARCHIDPLY, CENTURY PLY BOARDS, BALAJI ACTION BUILDWELL, ECOBOARD
14	PARTICLE BOARD (MEDIUM DENSITY)/ VENEERED PARTICLE BOARD	CENTURY PLY BOARDS (INDIAN) LTD. , BALAJI ACTION BUILDWELL, EVERGREEN BOARDLAM, ECOBOARD INDUSTRIES LTD.
15	PRE-LAMINATED MEDIUM DENSITY FIBRE BOARD	CENTURY PLYBOARDS, GREEN PLY, BALAJI ACTION BUILDWELL
16	OMS/ MS DOOR FITTINGS	ASHISH, AGGARWAL STEELS, DOOR DEVICES MANUFACTURING COMPANY, MANU ENGINEERING COMPANY, M.C. MOWJEE & CO., SHRI GANPATI DOORS, AUTOINGRESS
17	ANODISED/ ZINC ALLOY/ ALUMINIUM HARDWARE DOOR/ WINDOW FITTINGS	PULSE, SAVIO, HOPPE, ALUTECH
18	FRP DOOR FRAMES & SHUTTERS	ASHISH INDUSTRIES, JAYNA, SAINIK (CENTURY PLYWOOD), SELECTED PRODUCTS CO.
19	WIDOWS BLINDS	VISTA, MAC, HUNTER, DOUGLAS, DE-DECOR
20	STRUCTURAL STEEL SUCH AS MS FLATS, SQ. BARS ANGLES ETC.	SAIL, TATA STEEL, RINL, JINDAL STEEL & POWER LTD. AND JSW STEEL LTD.
21	MILD STEEL DOOR, WINDOWS & VENTILATORS MANUFACTURERS	FRIENDS MANUFACTURING COMPANY, KOTKAPURA, PD INDUSTRIES, SHAKTI INDUSTRIES, STEELMAN INDUSTRIES, SKS STEEL INDUSTRIES, SHIVAM
22	PRESSED STEEL DOOR FRAMES MANUFACTURERS	KRISHNA STEEL FABRICATOR SIRSA, LAXMI STEEL WORKS BAHADURGARH, ASHISH INDUSTRIES GHAZIABAD, ASHWANI &

		SONS.
23	HOLLOW STEEL SECTIONS	JINDAL INDUSTRIES HISAR, TATA STEEL, STEEL & METAL TUBES (INDIA) PVT. LTD.
24	STEEL TUBES FOR STRUCTURAL STEEL	JINDAL INDUSTRIES HISAR, TATA STEEL, STEEL & METAL TUBES (INDIA) PVT. LTD.
25	DASH/ ANCHORING FASTENERS, BOLTS, SCREWS AND NUTS.	HILTI , FISCHER, CKW, ATUL, PRIYA
26	STAINLESS STEEL RAILING	DORMA, KICH, OM STEEL , D-LINE.
27	CHEQUERRED PRE-CAST CC TILES	NTC, SWASTIK TILE, POOJA CONCRETE FABRICATORS, GTC.
28	CERAMIC TILES	SOMANY, KAJARIA, ORIENTBELL, RAK, ASIAN GRANITO INDIA LTD.
29	VITRIFIED TILES	SOMANY, KAJARIA, ORIENTBELL, RAK, ASIAN GRANITO INDIA LTD.
30	ADHESIVE/ GROUTING FOR USE WITH TILES	FERROUS CRETE, MYK LATICRETE, ARDEX EDURA, FAIRMATE, DURA BUILD CARE, SIKKA, BASEX
31	UNPLASTICISED RIGID PVC PIPE & FITTINGS	SUPREME, FINOLEX, PRINCE, KISAN, DIPLAST, SENTINI.
32	FALSE CEILING- GYPSUM	SAINT GOBAIN, VANS GYPSUM, USG BORAL, LLYOD, HI-STEEL
33	FALSE CEILING- METAL	ARMSTRONG, DEXUNE, SAINT GOBAIN, HUNTER DOUGLAS, GYPTECH, HI-STEEL
34	FALSE CEILING- CALCIUM SILICATE	HILUX, AEROLITE, ARMSTRONG
35	FALSE CEILING-MINERAL FIBRE	ARMSTRONG, DEIKEN, DEXUNE, SAINT GOBAIN.
36	ACCOUSTIC: GLASS / WOODEN FIBRE FALSE CEILING AND WOODEN/ FABRIC WALL LINING	ARMSTRONG, DEXUNE, ACCOUSTIBLOK, HIMALYAN ACOUSTICS, ANUTONE, GYPTECH
37	FALSE CEILING-ALUMINIUM POWDER COATED	ARMSTRONG, DEXUNE, SAINT GOBAIN, HUNTER DOUGLAS, HI-STEEL
38	OIL BOUND DISTEMPER/ ACRYLIC DISTEMPER	NEROLAC ACRYLIC DISTEMPER, TRACTOR ACRYLIC DISTEMPER (ASIAN PAINTS) , MAXILITE ACRYLIC DISTEMPER (ICI), BISON ACRYLIC DISTEMPER (BERGER).
39	INTERIOR EMULSION/ PLASTIC EMULSION	DULUX ACRYLIC EMULSION/ SOLITAIRE A-1000 (ICI), APCOLITE PREMIUM EMULSION (ASIAN), BEAUTY GOLD (NEROLAC), SILK (BERGER)
40	ACRYLIC SMOOTH EXTERIOR PAINT	APEX ULTIMA (ASIAN), DULUX WEATHERSHEILD MAX (ICI), EXCEL (NEROLAC), WEATHERCOAT ALL GUARD (BERGER)
41	DRY DISTEMPER	NEROLAC, BERGER, ASIAN PAINTS, ICI, JENSON & NICHOLSON (J&N)
42	SYNTHETIC ENAMEL PAINTS	DULUX HI-GLOSS (ICI), APCOLITE PREMIUM GLOSS (ASIAN), NEROLAC HIGH GLOSS (NEROLAC), LUXOL HI-GLOSS (BERGER)
43	WOOD PRIMER	NEROLAC, BERGER, ASIAN PAINTS, ICI
44	STEEL PRIMER	NEROLAC, BERGER, ASIAN PAINTS, ICI
45	EXTERIOR WALL PRIMER	EXTERIOR NEROLAC PRIMER, EXTERIOR BERGER PRIMER, EXTERIOR ASIAN PAINTS PRIMER, EXTERIOR ICI PRIMER
46	WALL PUTTY (WHITE CEMENT BASED)	BIRLA WALL CARE, JK WHITE, BASEX
47	POLYMER MODIFIED SELF CURING PLASTER	MYK LATICRETE, FERROUS CRETE, ARDEX ENDURA, ULTRATECH, RHEOPLAST
48	PAVER/ GRASS PAVER BLOCKS & KERB STONES/RCC MANHOLE COVER/DRAIN COVER	NATIONAL TILES CORPORATION, SARAL IMPEX, BALAJI TILES, METRO PAVERS, MGM INFRA, KRISHNA TILES, POOJA CONCRETE FABRICATORS, A-1 TILES, DALAL TILES, Bharat Tiles (BT)

49	VITREOUS CHINA SANITARY WARE	HINDWARE, CERA, PARRYWARE, JOHNSON PEDDER, SOMANY.
50	PLASTIC FLUSHING CISTERN FOR WC AND URINALS	JINDAL, STEEL BIRD, SEEMLINE, VIKRAM PLASTIC, PRAYAG POLYMERS (P) LTD.
51	PLASTIC SEAT COVER OF W.C.	AJANTA POLYMERS, JINDAL MALPINE, JAIN POLYMERS
52	STAINLESS STEEL SINK	ALLEX, JAYNA, JMD INTERNATIONAL, STEEL CRAFT, KINGSTON, SILVER SHINE (BLUE STAR)
53	MIRROR GLASS	ATUL, MODIGUARD, GOLDEN FISH
54	CENTRIFUGALLY CAST (SPUN) IRON PIPES	NECO, RAJ PATTERN MAKERS & FOUNDERS, BENGAL IRON, DURGAPUR ISPAT UDYOG, SINGHAL IRON FOUNDRY (SKF), KAPILANSH DHATU UDYOG PVT. LTD., RPMF, HIF.
55	HUBLESS CENTRIFUGALLY CAST (SPUN) IRON PIPES	NECO, RAJ PATTERN MAKERS & FOUNDERS, SINGHAL IRON FOUNDRY (SKF).
56	CP FITTINGS & ACCESSORIES	JAQUAR, HINDWARE, PRIMA, JAINKO, CERA, KINGSTON
57	BRASS STOP & BIB COCK	DHAWAN SANITARY UDYOG, JAINKO, SHAKTI, VARDHMAN INDIA PRODUCTS
58	FERRULES FOR WATER SUPPLY	HIND METAL WORKS, KRITIKA, DRP, SHAKTI
59	BALL COCK WITH ROD	RESP FAUCET INDUSTRIES, DHAWAN SANITARY UDYOG, NEW METAL WORKS, KPR, PRAYAG.
60	POLYETHYLENE WATER STORAGE TANK	SINTEX, VECTUS, KAVERI
61	STONEWARE PIPES & GULLY TRAPS	SORKHI INDUSTRIES, RK INDUSTRIES, NAVNEET, MOLI CERAMICS, OCR, ANAND, SENTINI
62	PRE-CAST CONCRETE PIPES (NON-PRESSURE)	KAMNIK, BFSP, JAGDAMBAY SPUN PIPE, GURKIRPA SPUN PIPES
63	GI PIPE	JINDAL (HISSAR), TATA, BST, BHUSHAN POWER STEEL
64	GI FITTINGS	UNIK, AVR, ZOLOTO, SANT, HBI, C-BRAND, NVR
65	C-PVC PIPE/ PVC PIPE	PRINCE, JINDAL (FLOWKEM), ASTRAL, AJAY POLYMERS, SUPREME, FINOLEX, SENTINI.
66	GUN METAL GATE, GLOBE, CHECK VALVES & NON-RETURN VALVES	LEADER, ZOLOTO, SANT, RAJAN METAL INDUSTRIES, H.B. METALS, HVI, NVR.
67	CENTRIFUGALLY CAST (SPUN) IRON PIPES (CLASS LA).	TRU FORM ENGINEERS, KAPILANSH, ELECTROSTEEL, HITECH METAL CASTINGS.
68	C.I. SLUICE VALVES & REFLEX VALVES	ZOLOTO INDUSTRIES, SANT VALVES, AMCO INDUSTRIES, KIRLOSKAR, RATAN INDUSTRIAL CORPORATION, HVI, NVR.
69	STAINLESS STEEL PIPES & FITTINGS	JINDAL STAINLESS STEEL, OM STEEL GROUP, V STEEL, VIEGA, RAMPART INDIA PVT. LTD.,
70	DUCTILE IRON PIPES & FITTINGS	JINDAL SAW LTD, ELECTRO STEEL, CHANDRANCHAL INFRA, ELECTROTHERAM
71	C.I./ D.I. MANHOLE COVERS & FRAMES	SWASTIKA ENTERPRISES, BENGAL IRON CORPORATION, NECO, BINAY UDYOG, CHANDERANCHAL, RAJ PATTERN MAKERS & FOUNDERS
72	WATER REPELLANT SILANE CHEMICAL	PIDILITE, FERROUS CRETE, ARDEX ENDURA
73	ALUMINIUM SECTIONS	HINDALCO, JINDAL, INDIAN ALUMINIUM CO.
74	BASIC/ TOUGHENED ETC. GLASS	SAINT GOBAIN, ASAHI, MODI, GOLD PLUS GLASS, PILINGTON.
75	APPROVED PROCESSORS FOR PERFORMANCE GLASS/ TOUGHENED GLASS/ HERMETICALLY SEALED/ LACQUERED GLASS etc.	ART & GLASS, MIRAGE TOUGHENED GLASSES (P) LTD., AAR PAR GLASS, VERMA GLASS.
76	Plywood/ Veneer	Green Ply, Century, Merino, Duro, Durian.

77	Melamine Polish	Asian Paints Melamine Gold, Wudfin of Pidilite, Timbertone of ICI Dulux.
78	Floor Spring	Godrej, Dorma, Dorset, Kich.
	(a) Aluminium section	Hindalco, Jindal, Indian Aluminium Co.
	(b) Anodised Aluminium Hardware (Heavy Duty)	Kilong, Alualpha, Ebco, Classic.
79	Ployster Powder Coating Shades	NEROLAC, BERGER, J&N
80	Clear/ Float/ Frosted/ Refractive/ Coated Glass	Saint Gobain, Modiguard, Ashai Float.
81	Aluminium composite Panels	Reynobond, Alpolica, Aluco Bond
82	Friction Stay Hinges	Earl-Bihari, Ebco, Roto or approved equivalent
83	EPDM Gasket	Hanu/ Anand ,Raven,Zero.
84	Silicon Based water repellent/ weather sealant	G.E. Plastics, Dow Corning, Wacker, BASF, Pidilite (Dr. Fixit/Roff), Rheoplast
85	EPS	Snow pack Polymers, Reliable Insupacks , Fairmate
86	Cement Based wall putty	Birla Wall care, JK white
87	1 st Quality Acrylic Distemper (washable/Ready mix/Low VOC)	Asian Paints (Tractor Aqua Lock Paint) Berger: Commando Or Equivalent paints of Nerolac or ICI-Dulux.
88	Premium Acrylic Emulsion Paints (Interior)	Asian Paints (Royale Luxury Emulsion) Nerolac: Impression Berger: Silk ICI-Dulux: Velvet touch.
89	Premium Acrylic Smooth Exterior Paints with Silicon Additive.	Asian Paints (Apex Ultima) Nerolac: XL Total Berger: Weather Coat all guard ICI-Dulux: Weather Shield Max
90	Cement Primer	Nerolac, Berger, BP White (Beger), Decoprime WT (Asian), White primer (ICI).
91	Epoxy Paint	Asian, Nerolac, Berger, ICI, Kansai Akzo Nobel.
92	G.I. Fittings	Unik, AVR, Zoloto, KS, AMCO
93	Float Valve	IVC, Leader, Prayag, Kalsi Pump Pvt. Ltd., Dhawan Sanitary Udyog (Prima)
94	Gun metal Valves, globes	Leader, Zoloto, Kilburn, CIM Valves, Sant, ANNAPURANA
95	Brass stop & Bib Cock	Zoloto, Sant, L&K, Leader, JAINKO, Kalsi Pump Pvt. Ltd., Dhawan Sanitary (PRIMA)
96	Non Return valve (Check valve) 1/2" to 1 1/4"	Kalsi Pumps Pvt. Ltd. Zoloto,Annapurna
97	Stainless steel sliding door bolts	Dorma or Geze or Hareie, Autoingress, Bhawani Fire
98	White vitreous china Wall Mounted type water closet (European Type W C. pan)	Jaquar , Hindware, Cera
99	3/6 litre slim wall mounted concealed cistern with dual flushing cistern	Jaquar , Hindware, Cera
100	Flushing plate of with flush pipe	Jaquar , Hindware, Cera
101	White vitreous china flat back wall stall urinal.	Jaquar , Hindware, Cera
102	GALVANISED STEEL SHEETS (UNCOATED & PRE-COATED)	SAIL, TATA, BHUSHAN POWER STEELS, JINDAL