

MILITARY ENGINEER SERVICES
COMMANDER WORKS ENGINEERS (AF) BIKANER-334001

NAME OF WORK: CA NO CWE (AF) BKN/NAL-30/2018-19:
REPAIRS TO ROADS AT AF STN BIKANER

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SIGNATURE OF CONTRACTOR
DATED:

DCWE (CONTRACTS)
FOR ACCEPTING OFFICER

Telephone: 2233650

E-TENDER
Headquarters
Commander Works Engineers (AF)
Military Engineer Services
Bikaner-334001

No.81407/ 02 /E8

06 Sep 2018

M/S.

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CA NO CWE (AF) BKN/NAL-30/2018-19:
REPAIRS TO ROADS AT AF STN BIKANER

Dear Sir(s)

1. Tender documents in respect of above work are uploaded on the site **defproc.gov.in**. The tender is on single stage two cover/ two stage two cover/three cover e-tendering system. The contents of Cover I & Cover II are specified in NOTICE OF TENDER.
2. Bids will be received online by ACCEPTING OFFICER up to the date and time mentioned in the NOTICE INVITING TENDER (NIT). No tender/bid will be received in physical form and any tender/bid received in such manner will be treated as non bonafide tender/bid.
3. Bid will be opened on due date and time fixed for opening in the presence of tenders/bidders or their authorized representatives, who have uploaded their quotation bid and who wish to be present at the time of opening the bids.
4. Your attention is also drawn to instruction on filling and submission of tender attached herewith. You may forward your points on tender documents and/or depute your technical representative for discussion on tender/drawings and to clarify doubts, if any, on or before **18 Sep 2018**. You are requested not to write piece meal points and forward your points duly consolidated before due date viz **18 Sep 2018**.
5. Un-enlisted contractors are required to submit the scanned copies (in pdf file) of documents required as per eligibility criteria mentioned in instructions for filling the tender documents and Appendix 'A' to NIT along with EARNEST MONEY DEPOSIT (EMD) and tender fee on e-procurement portal and submit the physical documents in the office of CWE (AF) Bikaner within time limit specified in NIT. Inadequacy/deficiency of documents shall make the bid liable for rejection resulting in disqualification for opening of finance bid.
6. (a) Contractor having not executed standing security bond and standing security deposit in any MES formation shall upload scanned copy of EARNEST MONEY DEPOSIT(EMD) mentioned in Notice of Tender and shall ensure receipt of hard copy of EMD in the office of tender issuing authority before date & time fixed for this purpose. In case of failure to abide by any of these two requirements, the finance bid will not be opened.

(b) Contractor having not executed standing security bond and standing security deposit in any MES formation would be required to deposit individual security deposit on acceptance of tender which will be calculated with reference to the tendered cost as per scales laid down by MES for calculation of "EARNEST MONEY" enhanced by 25% subject to maximum of Rs. 1875000/- (Rupees Eighteen Lakhs seventy five thousand only).

7. Enlisted contractors of MES shall submit the scanned copies (pdf file) of enlistment letter, tender fee and such other documents as mentioned in Appx 'A' to NIT on e-procurement portal and submit physical documents in the office of CWE (AF) Bikaner before date & time fixed for this purpose.

8. The contractor must ensure that the tender/bid on the proper form is uploaded in time as the Accepting Officer will take no cognizance of any quotations/offer received in any other electronic or physical form like email/fax/by hand/ through post from tenderer/bidder even if they are received in time.

9. In view of delays due to system failure or other communication related failures, it is suggested that the tender/bid be uploaded, if necessary, sufficiently in advance of the last due date and time fixed.

10. General conditions of Contracts (IAFW-2249) (1989 Print) and errata and amendments thereto, Schedule of minimum fair wages and MES SSR (Part-I and Part-II) are not enclosed with these documents. These are available for perusal in the Office of GE concerned and to this office.

11. **ANY TENDERER, WHICH PROPOSES ALTERATIONS TO ANY OF THE CONDITION, SPECIFICATIONS LAID DOWN IN THE TENDER DOCUMENTS OR ANY NEW CONDITION, WHATSOEVER, IS LIABLE TO BE REJECTED.**

12. (a) Contractor having not executed standing security bond and standing security deposit in any MES formation shall upload scanned copy of EARNEST MONEY DEPOSIT (EMD) mentioned in Notice of tender and shall ensure receipt of hard copy of EMD in the office of tender issuing authority before date & time fixed for this purpose. In case of failure to abide by any of these two requirements, the finance bid will not be opened.

(b) Contractor having not executed standing security bond and standing security deposit in any MES formation would be required to deposit individual security deposit on acceptance of tender which will be calculated with reference to the tendered cost as per scales laid down by MES for calculation of "EARNEST MONEY" enhanced by 25% subject to maximum of Rs. 1875000/- (Rupees Eighteen lakhs seventy five thousand only).

Yours faithfully

SIGNATURE OF CONTRACTOR
DATED _____

SIGNATURE OF THE OFFICER
ISSUING TENDER
APPOINTMENT: DCWE (Contracts)
For Accepting Officer

INSTRUCTIONS OF FILLING AND SUBMISSION OF TENDER**1. EARNEST MONEY**

Contractor(s) who are not enlisted with MES/Who are enlisted but have not executed the Standing Security Bond shall submit Earnest Money Deposit as detailed in Notice of tender in one of the following forms, along with their tender/bid:-

(a) Deposit at Call Receipt from the Scheduled Bank in favour of Garrison Engineer (AF) Nal.

(b) Receipted treasury Challan, the amount being credited to the Revenue Deposit Garrison Engineer (AF) Nal.

It is advisable that Earnest Money is deposited in the form of deposit call receipt from an approved Schedule Bank for easy refund. In case the tenderer/bidder wants to lodge 'EARNEST MONEY DEPOSIT' in any other form allowed by MES, a confirmation about its acceptability will be obtained from the Accepting Officer well in advance of the bid submission end date and time. Earnest Money Deposit shall be submitted in the name of concerned GE.

Notes: Earnest Money Deposit (EMD) in the form of cheque/Bank Guarantee etc will not be accepted. NON-SUBMISSION OF EARNEST MONEY DEPOSIT (EMD) (scanned copy along with Technical Bid & hard copy before the date & time fixed for opening of BOQ) WILL RENDER THE BID DISQUALIFIED FOR OPENING OF COVER II (FINANCE BID).

2. SECURITY DEPOSIT

In case the tender submitted by such contractor who is not enlisted with MES is accepted, the contractor will be required to lodge with the Controller of Defence Accounts 'INDIVIDUAL SECURITY DEPOSIT' calculated with reference to TENDERED COST as notified by the Accepting Officer subject to a maximum of Rs 18,75,000/-. The amount is required to be lodged within 30 (Thirty) days of the receipt by the contractor of notification of acceptance of tender/bid, failing which the sum shall be recovered from the 1st RAR payment or from the Final bill (See condition 22 of IAFW-2249).

3. CONTRACTORS ENLISTED UNDER CHIEF ENGINEER WESTERN COMMAND CHANDIMANDIR AND WHO HAVE EXECUTED SECURITY BOND AND DEPOSITED STANDING SECURITY DEPOSIT BUT OF A LOWER CLASS

In case the tender/bid is accepted the amount of Additional security Deposit will be as notified by the Accepting Officer. The amount will be the difference between the 'Individual Security Deposit' calculated with reference to the "TENDERED COST" and the standing security deposit lodged. The amount is required to be lodged within 30 (Thirty) days of the receipt by the contractor of notification of acceptance of tender/bid, failing which the sum shall be recovered from the 1st RAR payment or from the Final Bill (Refer condition 22 of GCC (IAFW-2249)).

4. CONTRACTORS ENLISTED IN MES FORMATIONS OTHER THAN CHIEF ENGINEER WESTERN COMMAND, CHANDIMANDIR

Contractors whose names are on the approved list of any MES formations, i.e. other than Chief Engineer, Western Command and who have deposited Standing Security and have executed Standing Security Bond, may tender/bid without depositing Earnest Money with bid and if the Accepting Officer decides to accept their tender/bid, such tenderers will be required to lodge Security Deposit as notified by the Accepting Officer. The amount is required to be lodged within 30 (Thirty) days of the receipt by the contractor of notification of acceptance of tender/bid, failing which the sum shall be recovered from the 1st RAR payment or from the Final Bill.

5. GENERAL INSTRUCTIONS FOR COMPLIANCE

5.1 The bids received only in the electronic form will be considered. All bids shall be submitted on 'eprocuremes.gov.in' portal. Documents should be scanned and forwarded in 'pdf' form and 'xls' form as indicated.

5.2 Bids shall be uploaded on 'eprocuremes.gov.in' portal on or before the bid closing date mentioned in the tender. No tender/id in any other electronic or physical form like email/fax/by hand/through post will be considered.

5.3 Bid should be DIGITALLY signed using valid DSC. All pages of tender documents, corrections/ alterations shall be signed/ initialed by the lowest bidder after acceptance.

5.4 Drawings, if issued in physical form, must be returned duly initialed by the tenderer/bidder in separate envelope indicating his name and address.

5.5 The tender shall be signed, dated and witnessed at all places provided for in the documents after acceptance. All corrections shall be initialed. The Contractor shall initial every page of tender and shall sign all drawings forming part of the tender. Any tender/bid, which proposes alterations to any of the conditions whatsoever, is liable to be rejected.

5.6 In the technical bid, a scanned copy of Power of Attorney in favour of the person uploading the bid using his/her DSC shall be uploaded. In case the digital signatory himself is the sole proprietor, scanned copy of an affidavit on stamp paper of appropriate value to this effect stating that he has authority to bind the firm in all matters pertaining to contract including the Arbitration Clause shall be attached in 'pdf' form. In case of partnership concern or a limited company, digital signatory of the bid/tender shall ensure that he is competent to bind the contractor (through partnership deed, general power of attorney or Memorandum and Articles of Association of the Company) in all the matters pertaining to the contracts with Union of India including arbitration clause. A scanned copy of the documents confirming of such authority shall be attached with the tender/bid in 'pdf' form, if not submitted earlier. The person uploading the bid on behalf of another partner(s) or on behalf of a firm or company using his DSC shall upload with the tender/bid a scanned copy (in 'pdf' form) of Power of Attorney duly executed in his favour by such other or all of the Partner(s) or in accordance with constitution of the company in case of company, stating that he has authority to bind such other person of the firm or the Company, as the case may be, in all matters pertaining to the contract including the Arbitration Clause.

5.7 Even in case of Firms or Companies which have already given Power of Attorney to an individual authorizing him to sign tender in pursuance of which bids are being uploaded by such person as a routine, fresh Power of Attorney duly executed in his favour stating specifically that the said person has authority to bind such partners of the Firm, or the Company as the case may be , including the condition relating to Arbitration Clause, should be uploaded in 'pdf' form with the tender/bid; unless such authority has already been given to him by the firm or the company. It shall be ensured that power of attorney shall be executed in accordance with the constitution of the company as alid down in its Memorandum & Article of Association.

5.8 Hard copies of all above documents should be sent by the contractor to the Tender issuing authority well in advance to be received before the date & time fixed for the same.

5.9 Bid (Cover- 1 & 2) shall be uploaded online well in time.

5.10 The contractor shall employ only Indian Nationals after verifying their antecedents and loyalty. Attention is also drawn to conditions 3 referred hereinafter and also conditions 24 & 25 of IAFW 2249.(General Conditions of Contract)

5.11 Tenderers/bidders who uploaded their priced tenders/bids and are desirous of being present at the time of opening of the tenders/bids may do so at the appointed time.

5.12 The tenderer/bidder shall quote his rate on the BOQ file only. No alteration to the format will be accepted, else the bid will be disqualified and summarily rejected.

5.13 In case the tenderer/bidder has to revise/modify the rates quoted in the BOQ (excel sheet) he can do so only in the BOQ, through eprocuremes.gov.in site only before the bid closing time and date.

6. REVOKATION/REVISION OF OFFER UPWARD/ OFFERING VOLUNTARY REDUCTION, AFTER BID SUBMISSION END DATE AND TIME

In the event of tenderer/bidder revoking his offer or revising his rates upward/offering voluntary reduction, after closing of bid submission date & time, his offer will be treated as revoked and the Earnest Money deposited by him shall be forfeited. In case of MES enlisted Contractors, the amount equal to the Earnest Money stipulated in the Notice of tender, shall be notified to the tenderer/bidder for depositing the amount through MRO. Bids of such Contractors/bidders shall not be opened till the aforesaid amount equal to the earnest money is deposited by him in Govt Treasury. In addition, bids of such tenderer/bidder and his related firm shall not be opened in second call or subsequent calls. Reduction offered by the tenderer/bidder on the freak high rates referred for review shall not be treated as voluntary reduction.

7. CPM (Critical Path Method)

7.1 The project planning for work covered in the scope of tender is based on CPM.

7.2 The tenderers are expected to be fully conversant with the CPM technique and employ technical staff who can use the technique in sufficient details. Sufficient books and other literature on the subject are widely available in the market, which the tenderer may make use of.

7.3 The tenderer's attention is drawn to Special Conditions of the tender regarding preparation of the detailed net work analysis and time schedules for the work and his liability for employing sufficient resources to adhere to this schedule. Any inability on the part of the tenderer/bidder in using the technique will be taken as his technical insufficiency and will affect his class of enlistment and future prospects/invitation to tenders for future work.

7.4 Department may issue amendments/errata in form of CORRIGENDUM to the tender documents/revised BOQ to the tender documents. The tenderer/bidder is required to read the tender documents in conjunction with the errata/amendments/corrigendum, if any, issued by the department.

8. These instructions shall form part of the contract documents.

**SIGNATURE OF CONTRACTOR
DATED:**

**DCWE (CONTRACTS)
FOR ACCEPTING OFFICER**

MILITARY ENGINEER SERVICES
NOTICE INVITING TENDER (NIT)

1. A tender is invited for the work as mentioned in Appendix 'A'.
2. The work is estimated to cost as indicated in the aforesaid Appx 'A'. This estimate however, is not a guarantee and is merely given as rough guide and if the work cost more or less tenderer will have no claim on this account. The tender shall be based on as indicated in the aforesaid Appx 'A'.
3. The work is to be completed within the period as indicated in the aforesaid Appx 'A' (In accordance with the Phasing, (if any) from the date of handing over site, which may be one or about two weeks after the date of Acceptance of the tender.
4. Normally contractors whose names are on the MES approved list for the areas in which the work lies and within whose financial category, the estimated amount would fall may tender/bid but in case of term contract, contractors in categories 'SS' to 'E' may tender/bid. In case, where the tender amount is in excess is in excess of the financial limit of the contractor and the Accepting Officer decides to accept the tender/bid, in which event the tenderer/bidder would be required to lodge additional security deposit as notified by the Accepting Officer in term of conditions of contract. Contractors whose names are on the MES approved list of any MES formation and who have deposited standing security and have executed standing security bond may also tender/bid without depositing Earnest money along with the tender/bid and if the tender/bid submitted by such a tenderer/bidder is accepted, the contractor will be required to lodge with the Controller of Defence Accounts concerned the amount of Individual security deposit within thirty days of the receipt by him of notification of acceptance of his tender/bid, failing which this sum will be recovered from 1st RAR payment or from the first final bill. In the case of term/running contracts, remaining sum shall be recovered from subsequent bill(s) of the contractor. Not more than one tender/bid shall be submitted/uploaded by one contractor or one firm of contractors. Under no circumstances will a father and his son(s) or other close relations who have business dealing with one another be allowed to tender/bid for the same contract as separate competitors. A breach of this condition will render the tenders/bids of both the parties liable for rejection.
5. The office of HQ CWE (AF) Bikaner-334001 will be Accepting Officer, here in after refer to as such for the purposes of this contract.
6. The Technical Bid and Financial Bid (Cover-1 and Cover-2) shall be uploaded by the tenderer/bidder on or before the date & time mentioned in NIT. A scanned copy of DD with enlistment details/documents shall be uploaded as packet 1/cover-1 ('T' bid) of the tender/bid on e-tendering portal. DD is refundable in case T bid is not accepted resulting in non-opening of 'Q' bid. The applicant contractor shall bear the cost of bank charges for procuring and encasing the DD and shall not have any claim from Government whatsoever on this account.
 - 6.1 Tender forms and conditions of contract and other necessary documents will be available on eprocuremes.gov.in/eprocure.gov.in site for download and shall form part of contract agreement in case the tender/bid is accepted.
 - 6.2 In case of contractor who has not executed the Standing Security Bond, the Cover-I shall be accompanied with by Earnest Money of amount as mentioned in Appendix 'A' in the form of deposit at call receipt in favour of concerned GE (see Appendix 'A') by a scheduled Bank or in receipted treasury Challan the amount being credited to the revenue deposit of the concerned GE (see Appendix 'A').

NOTICE INVITING TENDER (NIT) (Contd.....)

6.3 A contractor who is not enlisted for the area in which the work lies but whose name is in the MES approved list of any MES formation and who has deposited standing security and executed standing security Bond may bid without depositing earnest money along with the tender, but if the Accepting officer accepts the tender/bid, the contractor will be required to lodge with the Controller of Defence Accounts concerned the amount of 'Individual security deposit' within thirty days of the receipt by him of notification of acceptance of his tender/bid, failing which this sum will be recovered from 1st RAR payment or from the first final bill. In the case of term/running contracts, remaining sum shall be recovered from subsequent bill(s) of the contractor.

6.4 A contractor who has executed standing security Bond but not corresponding the appropriate class as mentioned above, shall lodge with the Accepting Officer, Additional Security Deposit as notified by the Accepting Officer within thirty days of the receipt of his notification of acceptance of his tender/bid, failing which this sum will be recovered from the first RAR payment or from the first final bill. In the case of term/running contracts, remaining sum shall be recovered from subsequent bill(s) of the contractor. However, in case where any payment is made to the contractor within thirty days of the receipt by him of notification of acceptance of tender/bid, the amount of additional security deposit shall be recovered from such payment.

6.5 The GE will return the Earnest Money wherever applicable to all unsuccessful tenderers/bidders by endorsing an authority on the deposit-at-call receipt for its refund, on production by the tenderer, bidder a certificate of the Accepting Officer that a bonafide tender/bid was received and all documents were returned.

6.6 The GE will either return the Earnest to the successful tenderer/bidder by endorsing an authority on the deposit-at-call receipt for its refund on receipt of an appropriate amount of Security Deposit or will retain the same in part or full on account of security deposit if such a transaction is feasible.

6.7 Copies of the drawings and other document pertaining to the work signed for the purpose of identification by the Accepting Officer or his accredited representative, sample of materials and stores to be supplied by the contractor will also be available for inspection by the tenderer/bidder at the office of Accepting Officer and concerned GE during working hours.

7. The tenderers/bidders are advised to visit the site of work by making prior appointment with GE who is also the Executing Agency of the work (see appendix 'A') . The tenderers/bidders are deemed to have full knowledge of all relevant documents, samples, site etc., whether they have inspected them or not.

8. Any tender/bid which proposes any alteration to any of the conditions laid down or which proposes any other condition or prescription whatsoever, is liable to be rejected.

9. The uploading of bid implies that bidder has read this notice and the Conditions of Contract and has made himself aware of the scope and specification of work to be done and of the conditions and rates at which stores, tools and plants etc will be issued to him and local conditions and other factors having bearing on the execution of the work.

10. Tenderers/bidders must be in possession of a copy of the MES Standard Schedule of Rates (see appendix 'A') including amendments and errata thereto.

NOTICE INVITING TENDER (NIT) (Contd.....)

11. Invitation for e-tender does not constitute any guarantee for validation of 'T' bid and subsequent opening of finance bid of any applicant/bidder, even of enlisted contractors of appropriate class, merely by virtue of enclosing DD. Accepting Officer reserves the right to reject the 'T' bid and not open the finance bid of any applicant/bidder. 'T' bid validation shall be decided by the Accepting Officer based on, inter alia, capability of the firm as per criteria given in Appx 'A' to this NIT. The applicant contractor/bidder will be informed regarding non-validation of his 'T' bid assigning reasons thereof through the www.eprocuremes.gov.in website. The applicant contractor/bidder if he so desires may appeal to the next higher Engineer authority viz HQ CE (AF) WAC Palam on email id CEZAF2- mes@nic.in with copy to the Accepting Officer on email before the scheduled date of opening of Finance Bid. The decision of the Next Higher Engineer Authority (NHEA) shall be final and binding. The contractor/bidder shall not be entitled for any compensation whatsoever for rejection of his bid.

12. The Accepting Officer reserves the right to accept a tender submitted by a Public Undertaking, giving a price preference over other Tender(s)/ bids which may be lower, as are admissible under the Government Policy. No claim for any compensation or otherwise shall be admissible from such tenderer/bidder whose tender/bid is rejected.

13. Accepting Officer does not bind himself to accept the lowest or any tender/bid or to give any reason for not doing so.

14. This Notice Inviting Tender (NIT) including Appendix 'A' shall form part of the contract.

**SIGNATURE OF CONTRACTOR
DATED:**

**DCWE (CONTRACTS)
FOR ACCEPTING OFFICER**

APPENDIX 'A' TO NOTICE INVITING TENDER

1	Name of work	REPAIRS TO ROADS AT AF STN BIKANER
2	Estimated Cost	Rs 22.00 Lakhs (At par Market)
3	Period of completion	90 Days
4	Cost of tender documents	Rs. 500 In the shape of DD / Bankers cheque from any schedule Bank in favour of GE (AF) Nal and payable at Nal
5	Website/ portal address	defproc.gov.in and www.mes.gov.in
6	Type of contract	The tender shall be item rate contract based on IAFW-1779 A (Revised-1955) and GCC (IAFW-2249) and with list of works to be quoted by the contractor.
7	Information & Details	
	(a) Bid submission start date	20 Sep 2018
	(b) Last date of bid submission	25 Sep 2018
	(c) Date of bid opening	27 Sep 2018
8	Eligibility Criteria	
	(A) For MES enlisted contractors	All contractors enlisted with MES in Class 'E' and above and category (a) (i) shall be considered qualified provided they do not carry adverse remarks in WLR of competent engineer authority.
	(B) For other contractors	(a) The firms not enlisted with MES shall meet the enlistment criteria of 'E' class MES contractors & category (a) (i) i.e. with regard to having satisfactorily completed requisite value works, Annual turnover, Solvency, working capital, immovable property/ fixed assets, T&P, Engineering establishment, no recovery outstanding in any Govt Department, Police verification/ Passport etc. Enlistment criteria may be seen in Para 1.4 of Section 1 of Part I of MES Manual on Contracts – 2007 (Reprint 2012) as available in all MES formations. (b) These firms shall also submit copy of Police verification from police authority of the area where the registered office of the firm is located/notarised copy of valid passport of proprietor / each partner/ each Director. (c) They should not carry adverse remarks in WLR/ or any other similar report of any authority.
	(C) For all contractors	Contractor will not be allowed to execute the work by subletting or through power of attorney holder on his behalf to a third party/ another firm except sons/ daughters of proprietor/ partner/Director and firms own employees, Director, Project Manager. This shall be subject to certain conditions which will be prescribed in the NOT forming part of the tender documents.
9	Tender issuing and Accepting Officer	CWE (AF) Bikaner
10	Executing agency	GE (AF) Nal
11	Earnest Money	Rs 44,000.00 in favour of GE (AF) Nal.

APPENDIX 'A' TO NOTICE INVITING TENDER ...Contd**NOTES:-**

- (a) The contractor enlisted upto one class below the eligible class may also apply. Applications from one class below eligible class applicants may be considered in the event of inadequate response from the applicants of eligible class.
- (b) (i) Applications not accompanied by scanned copies of requisite DD / Bankers Cheque towards cost of tender and earnest money (as applicable) shall not be considered for validation of 'T' bid and their finance bids will not be opened.
(ii) Tenderers/bidders to note that they should ensure that their original DDs and earnest money (as applicable) are received within 05 (Five) days of bid submission end date.
(iii) In case of applications from enlisted contractors of MES, where scanned copies of requisite DD/ Bankers Cheque towards cost of tender has been uploaded but physical copies are not received by the stipulated date, finance bids will be opened. However non-submission of physical copies of cost of tender shall be considered as willful negligence of the bidder with ulterior motives and such bidder shall be banned from bidding for a period of six months commencing from the date of opening of finance bid.
(iv) In case of applications from unenlisted contractors, where scanned copies of requisite DD/Bankers cheque towards cost of tender has been uploaded but physical copies are not received by the stipulated date, finance bids will not be opened. Name of such contractors along with complete address shall be circulated for not opening of their bids for a period of six months commencing from the date of opening of finance bid.
(v) In case of applications / bids (enlisted contractor as well as unenlisted contractor) where scanned copies of requisite Earnest money (as applicable) were uploaded but the same are not received in physical form within stipulated time, such bids shall not qualify for opening of finance bid.
- (c) Contractors enlisted with MES will upload following documents for checking eligibility:-
(i) Applications for bid in Firm's letter head.
(ii) Enlistment letter.
(iii) Scanned copy of DD of cost of tender.
(iv) Scanned copy of EPF code No
(v) GST registration No
- (d) Contractors not enlisted with MES will be required to upload necessary documents to prove their eligibility for enlistment in eligible class & category of work, including Affidavit for no recovery outstanding. List of documents required for enlistment in MES has been given in Para 1.5 of Section 1 of Part I of MES Manual on Contracts 2007 (reprint 2012). Following documents shall also be uploaded amongst others:-
(i) Details of three highest valued similar nature of works executed during last five years, financial year-wise in tabular form giving name of work, Accepting Officer's tender details, viz, Address, Telephone, FAX No., E-mail ID etc, date of acceptance of tender and actual date of completion. This shall be duly signed by proprietor/all partners/authorized director of Pvt/Public Ltd, as applicable. It should indicate whether extension was granted or compensation was levied. Attested copy of acceptance letter and completion certificate shall be enclosed of each work. In case performance report has been given by the client same shall also be submitted duly attested.
(ii) Solvency certificate and working Capital Certificate issued by Scheduled bank.
(iii) Annual turnover certificate for last 2 years issued by Chartered Accountant alongwith relevant pages of audited balance sheets in support thereof.
(iv) Affidavits for possession of movable & immovable properties by proprietor/partner owning the immovable property alongwith Valuation Certificate from Regd Valuer in support of movable & immovable properties. In case of Limited company, the immovable property is required to be in the name of the company. In addition of Limited Company, the immovable property is required to be in the name of the Company.
(v) In addition, the unenlisted contractors shall also furnish affidavit on non-Judicial stamp paper in the form of hard copy declaring their turnover for last 2 (Two) years.
(vi) Scanned copy of DD of cost of tender and earnest money.
(vii) Scanned copy of EPF code No
(viii) GST registration No

APPENDIX 'A' TO NOTICE INVITING TENDER ...Contd

(e) In case of rejection of technical/ prequalification bid, contractor may appeal to next higher Engineer authority i.e. HQ CE (AF) WAC, Palam on email id CEZAFP2-mes@nic.in with a copy to Accepting officer on email id bknraf3-mes@nic.in against rejection within 5 days of uploading of 'Technical evaluation summary'. The decision of Chief Engineer (AF) WAC, Palam shall be final and binding. However, contractor / bidder shall not be entitled to any compensation whatsoever for rejection of technical / prequalification bid..

(f) Bidders shall note that court of the place from where tender has been issued shall alone have jurisdiction to decide any dispute out of or in respect of this tender. After acceptance of tender, Condition 72-Jurisdiction of Courts of IAFW-2249 shall be applicable.

Signature of contractor

81407/ 02 /E8

Headquarter
Commander Works Engineers (AF)
Bikaner-334001
Dated : 06 Sep 2018

DCWE (Contracts)
for CWE (AF) Bikaner

IN LIEU OF IAFW-1779-A (REVISED 1955)

(To be read in conjunction with General Conditions of contracts IAFW-2249, 1989 print)

Telephone: 2233650

E-TENDER

Headquarters
Commander Works Engineers (AF)
Bikaner-334001

No. 81407/ 02 /E8

06 Sep 2018

**NAME OF WORK: CA NO CWE (AF) BKN/NAL-30/2018-19:
REPAIRS TO ROADS AT AF STN BIKANER**

1. M/s _____
of _____ is/are hereby authorized to tender for the above work.
The tender is to be **QUOTED ONLINE AT THE WEBSITE OF MES defproc.gov.in by 25 Sep 2018 up to 1800hrs.**

2. All correspondence concerning this tender shall be addressed as indicated at the top of this sheet quoting the reference as given above.

**THE PRESIDENT OF INDIA DOES NOT BIND HIMSELF
TO ACCEPT THE LOWEST OR ANY TENDER**

**SIGNATURE OF THE OFFICER
ISSUING TENDER
APPOINTMENT: DCWE (Contracts)**

**SIGNATURE OF CONTRACTOR
DATED _____**

DATED _____

SCHEDULE "A" NOTES

1. The scope of work covered under this contract is detailed as below :-

Schedule– **"REPAIRS TO ROADS AT AF STN BIKANER"**

Descriptions of works given in Schedule 'A' are in brief. These are deemed to be amplified and read in conjunction with Special Conditions, Particular Specifications, specification for material and workmanship and conditions and preambles in relevant trade sections of MES Standard Schedule of Rates Part-I (2009) & Part-II (2010) & contract drawings (including notes there on).

2. **PERIOD OF COMPLETION:** - The Entire work covered under this contract shall be completed within a period of **90 days** from the date of commencement of work.
3. Unit rate quoted against each item as described in Sch 'A' shall also include the cost of any cutting, leaving, forming, holes/chases etc in walls, as required and making good. No adjustment shall however, be made separately on this account.
4. All items and quantities are '**PROVISIONAL**' and these may be varied keeping in view actual requirements to the extent as specified in Condition 7 (c) of IAFW-2249.
5. Unit rate of all items shall be inclusive of supply & fix, material & labour, laying, jointing, testing etc. (as applicable) unless mentioned specifically as fixing only or hanging only or supply only and the like.
6. The Sch 'A' has not been pre-priced by the MES as elaborated in BOQ. The tenders shall quote/upload there rates under respective columns against various items, The total amount of whole BOQ shall be summed up automatically at the end. The total amount so summed up shall be carried forward to the General Summary/Acceptance page at the place provided for. The total amount so arrived out (**By deducting amount of Credit, where applicable**) shall not be firm but will be treated as "Contract sum" as per condition 6 (A) of IAFW-2249. Tenderers shall upload revised BOQ/revised pages of BOQ (where applicable) only. Financial bid not quoted/uploaded on revised pages of BOQ shall be treated as non bonafied and Bid of tenderer as a whole shall be rejected.
7. The old unserviceable dismantled/demolished material(as decided by the Engr-in-charge) shall become the property of the contractor and the amount of credit shall be deducted from the contractor's RAR, as shown in Schedule of Credits, when become due after demolition/dismantling of respective items and finally from the last RAR. The contractor shall not have any extra claim if the material obtained from dismantling etc are found cracked, disfigured or broken. The old unserviceable dismantled/demolished material shall not be used in the work. Any other old material, not shown in the Sch of Credits & mentioned in Sch 'A' to be reused, shall become the property of the deptt and the contractor shall deposit the same in the MES Store yard without any extra cost. While working out contract sum, the amount of Schedule of Credit shown shall be deducted from the quoted tender amount before making acceptance of tender.
8. The tenderer's quotation shall include all statutory levies/ duties, construction labour welfare tax, VAT, including sales tax and service tax on works contract as applicable. It may be noted that conditional tender regarding **SALES TAX AND SERVICE TAX ON WORKS CONTRACTS** and/or any other account will not be considered and shall be liable to be **REJECTED.**

(SIGNATURE OF CONTRACTOR)
DATED:

DCWE (CONTRACTS)
FOR ACCEPTING OFFICER

BOQ PAGES

(SRL PAGE NO 15 TO 17)

SCHEDULE OF CREDIT

Srl No	Description of Work	Unit Rate Rs. Ps.	No. of Units	Amount in Rupees Rs. Ps.
1	2	3	4	5
1	Old unserviceable Cat eye	<u>38.00</u> Each	60.00	2280.00
2.	Old unserviceable Solar stud	<u>86.00</u> Each	45.00	3870.00
TOTAL Rs				6150.00

Notes:

1. Rate of credit given in this Schedule is firm.
2. The quantities given in Col-04 of Schedule of credit is provisional and may vary and recovery will be made for the actual quantity retrieved at site. Actual quantity shall be as obtained and recorded in MB jointly by Engineer-in-Charge and contractor.
3. The retrieved material shall be removed by the contractor without any extra cost to Govt.
4. The materials not included in credit schedule, if required to be taken out/dismantle shall be Govt. property and shall be removed to MES store yard of concerned GE without any extra cost.
5. No rebate on Schedule of credit shall be accepted.
6. Amount of credit shall be recovered from RARs during execution of works as work proceeds.

SIGNATURE OF CONTRACTOR
DATED:

DCWE (CONTRACTS)
FOR ACCEPTING OFFICER

SCHEDULE 'B'
LIST OF MATERIALS TO BE ISSUED TO THE CONTRACTOR
(REFER CONDITION 10 OF IAFW-2249)

Ser. No.	Particulars	Unit	Rate at which materials etc. will be issued to Contractor Rate in Rs.	Place of issue by name	Remarks
1	2	3	4	5	6

- NIL -

SIGNATURE OF CONTRACTOR

DCWE (CONTRACTS)
FOR ACCEPTING OFFICER

DATED _____

SCHEDULE 'C'
ISSUE OF TOOLS AND PLANTS (OTHER THAN TRANSPORT) WHICH WILL BE
HIRED BY THE CONTRACTOR
(REFER CONDITION 15, 34 AND 35 OF IAFW-2249)

Ser. No.	<u>Quantit</u> y	Particulars	Details of MES Crew supplied	Hire charges per unit per working day	Stand by charges per unit per day	Place of Issue	Remarks
1	2	3	4	5	6	7	8

- NIL -

SIGNATURE OF CONTRACTOR

DCWE (CONTRACTS)
FOR ACCEPTING OFFICER

DATED _____

SCHEDULE 'D'
TRANSPORT TO BE HIRED BY THE CONTRACTOR
(REFER CONDITION 16, AND 35 OF IAFW-2249)

Sr. No.	Quantity	Particulars	Rate per unit per working day	Stand by charges per unit per day	Place of Issue	Remarks
1	2	3	4	5	6	7

- NIL -

SIGNATURE OF CONTRACTOR
DATED _____

DCWE (CONTRACTS)
FOR ACCEPTING OFFICER

TENDER
TO THE PRESIDENT OF INDIA

Having examined and perused the following: -

1. Specification signed by DCWE (CONTRACTS)
2. Drawings detailed in the list of drawings.
3. Schedule 'A', 'B', 'C' and 'D' attached hereto.
4. MES Standard Schedule of Rates Part I (Specification) 2009 together with amendment No. 1 to 3 for Part-I and Part II (Rates) 2010 together with amendment No. 1 to 59 for Part-II as applicable to above Schedule (Here-in-after and in IAFW-2249 referred to as the MES Schedule).
5. General conditions of contract IAFW-2249 (1989 Print) together with amendment No. 1 to 40 and errata No. 1 to 20.

6. **WATER (CONDITION 31 of IAFW-2249: GENERAL CONDITIONS OF CONTRACTS) :-**

Water will be supplied by MES and shall be charged at rate of Rs 3.75/- per every Rs 1000/- worth work done priced at contract rate.

7. Should this tender be accepted, I/We ** agree: -

*(a) That the sum of Rs. 44,000.00 (Rupees Forty Four Thousand only) forwarded as Earnest Money shall either be retained by the Government on account of the Security Deposit or shall be refunded by the Government on receipt of the full amount of Security Deposit within time specified in condition 22 of IAFW-2249.

(b) To execute all the works referred to in the said documents upon the terms and conditions contained or referred to therein and as detailed in General Summary here in after and to carry out such deviations as may be ordered, vide condition 7 of IAFW-2249 upto a maximum of 10% (TEN PERCENT) and further agree to refer all disputes as required by condition 70 of IAFW-2249 to the 'Sole Arbitrator', a serving officer having the degree in Engineering or equivalent or having passed final/Direct final examination of sub-division II of Institution of surveyors (India) New Delhi recognized by Govt. of India, to be appointed by Chief Engineer (AF) WAC Palam, Delhi Cantt, or in his absence, the officer officiating as Chief Engineer (AF) WAC Palam, Delhi Cantt , whose decision shall be final, conclusive and binding.

* Delete where not applicable.

** Delete whichever is not applicable.

TENDER (CONTD.)

Signature _____ in the capacity of _____

duly authorized to sign tender for on behalf of _____ (in block capitals)

Witness _____ Postal Address _____

Signature _____

Address _____ Telegraphic Address _____

ACCEPTANCE

_____ Alterations have been made in this document and as evidence that these alterations were made before the execution of the contract agreement; the contractor and DK Jha, DCWE (Contracts) have initialed these. The said officer's is/are hereby authorized to sign and initial on my behalf all the documents forming part of the contract.

The above tender is/was accepted by me on behalf of the President of India for the contract sum of Rs. _____

(Rupees _____

_____).

on the _____ day of _____ Month of 2018

Dated this _____ day of _____ 2018.

Signature
APPOINTMENT: ACCEPTING OFFICER
Commander Works Engineers (AF) Bikaner-34001
(FOR AND ON BEHALF OF THE PRESIDENT OF INDIA)

**GENERAL CONDITIONS OF CONTRACTS (IAFW-2249 :PRINT-1989) FOR
LUMP SUM CONTRACTS (IAFW-2159)/MEASUREMENT CONTRACTS
(IAFW 1779 & 1779A)**

It is hereby agreed by * me/us that the General Conditions of contracts including condition 70 pertaining to settlement of disputes by Arbitration (IAFW-2249-1989 Print) containing 33 pages (Serial Page No 22 to 54 with errata No 1 to 20 containing two Pages (Serial Page No 55 to 56) and amendment Nos 1 to 17 containing five pages (Serial Page Nos 57 to 61) and amendment No 18 to 40 issued by MOD vide letter No PC-1 to 33487/IAFW 2249/R/01/2011/D(Works-II) dated 24th March 2015 containing thirteen pages (Serial Page Nos 62 to 74) for English version only forms part of the contract, though not enclosed with the tender documents.

This tender submitted by * me/us is subject to the aforesaid General Conditions of Contracts in IAFW-2249, a copy of which has been supplied to * me/us and is in * my/our possession and which * I/We have read and understood before submission of the tender.

*My/our signature hereunder is deemed to be * my/our having signed the aforesaid General Conditions of Contracts together with errata and amendments (IAFW-2249-1989 Print) forming part of this tender.

*To be deleted whichever is not applicable.

**SIGNATURE OF CONTRACTOR
DATED:**

**DCWE (CONTRACTS)
FOR ACCEPTING OFFICER**

SCHEDULE OF MINIMUM FAIR WAGES

It is hereby agreed that the "Schedule of Minimum Fair Wages" (SMFW) as published vide Government of India Notification dated 10 Mar 92 (Revised up to date) forms part of these tender documents.

My/Our signature hereunder amounts to my/our having read and understood the provisions contained therein and I/We agree that I/We shall abide by the same and that aforesaid documents form part of this tender.

SIGNATURE OF CONTRACTOR

**DCWE (CONTRACTS)
FOR ACCEPTING OFFICER**

DATED _____

NOTE: "Schedule of Minimum Fair Wages" referred to above is available for reference, in the Office of Accepting Officer"

SPECIAL CONDITIONS**1. GENERAL**

The following Special Conditions shall be read in conjunction with the General Conditions of Contracts, IAFW-2249 and IAFW-1779A including Errata/amendments thereto. If any provision in these Special Conditions is at variance with that of the aforesaid documents, the former shall be deemed to take precedence there over.

2. ADMISSION TO SITE BY CONTRACTOR & RESPONSIBILITY TO ASCERTAIN HIS OWN INFORMATION

(a) The tenderers shall contact the Garrison Engineer for the purpose of inspection of site(s) and relevant documents other than those sent herewith, who will give reasonable facilities for this purpose. The tenderers shall also make themselves familiar with working conditions, accessibility of site(s) availability of materials and other cogent conditions which may affect the entire completion of work under this contract.

(b) The tenderers shall be deemed to have visited the site(s) and made themselves familiar with the working conditions, whether they actually inspect the site (s) or not. No claim, what so ever may be, shall be admissible to the contractor on this account.

3. SECURITY AND PASSES

3.1 Refer Condition 25 of IAFW-2249. The contractor shall employ only Indian Nationals as his representatives, servants and workmen and verify their antecedents and loyalty before employing them for the works. He shall ensure that no person of doubtful antecedents and nationality is, in any way, associated with work. If for reasons of technical collaboration or other consideration, the employment of any foreign national is unavoidable, the contractor shall furnish full particulars to this effect to the Accepting Officer at the time of submission of his tender.

3.2 The contractor shall, on demand by the Engineer-in-Charge, submit list of his agents, employees and work people concerned and shall satisfy the Engineer-in-Charge as to the bonafides of such people.

3.3 The Engineer-in-Charge shall at his discretion have the right to issue passes as per rules and regulations of the installation/Area in force to control the admission of the contractor, his agents, and employees and work people to the site of the work or any part thereof. Passes should be returned at any time on demand by the Engineer-in-Charge or the authorities concerned and in any case on completion of work.

3.4 The contractor and his agents, employees and work people shall observe all the rules promulgated by the authority controlling the installation/area in which the work is to be carried out e.g. prohibition of smoking and lighting, fire precautions, search of persons on entry and exit, keeping to specific routes, observing specified timing etc. Nothing extra shall be admissible for any man hours etc. lost on this account.

SPECIAL CONDITIONS Contd....**4. CONDITIONS OF WORKING IN RESTRICTED AREA WORK LIES IN RESTRICTED AREA**

4.1. **Visit to site within the Restricted Area:** permission to enter the restricted area at the time of submission of tenders can be obtained through the Garrison Engineer. Tenderers are advised to send prior intimation of their agent, representative etc. if any, dates and time of their proposed visit so that necessary arrangements may be made by GE to secure admission. Whether tenderer visit the site or not he shall be deemed to have full knowledge of the restrictions of entering into/exit from and within the Restricted area and other cognate conditions which may affect the entire completion of work under this contract.

4.2 **ENTRY/EXIT:** The contractor, his agent(s), representatives, workmen etc and his materials, carts, trucks or other means of transports etc, will be allowed to enter through and leave from such gate or gates and at such times as the GE or authorities In-charge of the restricted Area may at their sole discretion permit to be used. The contractor's authorised representative is required to be present at the place of entry and exit for the purpose to identifying his carts, truck etc to the personnel in-charge of the security of Restricted Areas.

4.3 **IDENTITY CARDS OR PASSES:** The contractors, his agents and representatives are required individually to be in possession of an identity card or pass duly verified by the police department. The identity card or pass will be examined by the security staff at the time of entry into or exit from the restricted area and also at any time or number of times inside the Restricted Area.

4.3.1 **IDENTITY OF WORKMEN:** Every Workman shall be in possession of an identity card. The identity card will be issued after thorough investigation of the antecedents of the labourers by the contractors and attested by the Officer-in-Charge of the unit concerned in accordance with the standing rules and regulations of the units.

4.3.2 Contractor shall be responsible for the conduct and action of his workmen agents or representative.

4.4 **SEARCH:** Thorough search of all persons and transport shall be carried out at each gate and for as many times as a gate is used for entry or exit and may also be carried out at any time or any number of times at the work site.

4.5 WORKING HOURS.

4.5.1 The units controlling Area, usually work during six days in the week and remain closed on the 7th day. The working hours available to contractor's labour and staff are however, appreciably reduced because of the time taken in security checks observed at the time of entry, exit and during working hours.

4.5.2. The exact working hours, days and non working days observed for the restricted area, where works are to be carried out shall be deemed to have been ascertained by the contractor before submitting his tender. The tenderer's attention is invited to the fact that the total numbers of working hours for a unit are prescribed in regulations and they cannot be increased by the Garrison Engineer.

4.6. **Working on Holidays:** The contractor shall not carry out any work on gazetted holidays weekly holidays, and other non working days except when he is specially authorized in writing to do so by the GE. The GE may at his sole discretion declare any day as holiday or non working day without assigning any reason for such declaration.

SPECIAL CONDITIONS Contd....**4.7.1 Fire Precautions:**

4.7.1 The contractor, his agents, representatives, workmen etc, shall strictly observe the orders pertaining to fire precautions prevailing within the restricted area.

4.7.2 Motor transport vehicles, if any allowed by authorities to enter the area must be fitted with serviceable fire extinguishers.

4.8 **Female searcher:** If the contractor desires to employ female labours on work to be carried out inside the area and a female searcher is not born on the authorised strength at the time of submission of the tender, he shall be deemed to have allowed in his tender for pay and allowances etc, for a female searcher (Class IV servant/GP `D` servant) calculated for the period female labour is employed by him inside that area. If more than one contractor has/have to be employed in addition to the authorised strength, the salary and allowances paid on an equitable basis between the contractors employing female labour taking in to consideration the value and period of completion of their contracts. The GE's decision on regard to the amount recoverable on this account from any contractor shall be final and binding.

5. MINIMUM WAGES PAYABLE

5.1 Refer Conditions 58 of IAFW-2249. The contractor shall not pay wages lower than minimum wages for labour as fixed by the Govt. of India/State Govt. under Minimum Wages Act or Contract Labour (Abolition and Regulation Act), whichever is higher.

5.2 The fair wage referred to in condition 58 of IAFW-2249 will be deemed to be the same as the minimum wages payable as referred to above.

5.3 The contractor shall have no claim whatsoever, if on account of local factors and or regulations, he is required to pay the wages in excess of minimum wages as described above during the execution of work.

6. ROYALTIES

Refer Condition 14 of General Conditions of Contracts (IAFW-2249). No quarries on Defence land are available.

7. LAND FOR TEMPORARY WORKSHOPS, STORES ETC.

Delete the following from lines 5 to 9 of sub para 1 of condition 24 of IAFW-2249 reading "In the event of _____ allotted to him" and insert as under: -

"Separate land will be allotted to the contractor for the storage of materials, temporary workshop and offices, for which he shall pay the nominal rent of Rupee 1/- per year or part of a year as mentioned in condition 24 of IAFW 2249. The land/open space available within vicinity of site of work as directed by GE may also be used by the contractor for these purposes but free of charge. No land for accommodation of Labour will be allotted."

8. WATER

8.1 Refer condition 31 of General Conditions of Contracts IAFW-2249 and clause 1.13 of MES Schedule:-

8.2 Water will be supplied by MES at point(s) marked on site plan or as decided by GE. As the water supply by MES is likely to be intermittent/short supply, the contractor shall make his own arrangements for storing the water required for the works, labour and workmen etc. at his own expense. The contractor shall not have any claim on account of short/intermittent supply and shall make his own arrangements to supplement the requisite quantity of water.

SPECIAL CONDITIONS Contd....**9. CO-OPERATION WITH OTHER AGENCIES**

The contractor shall permit free access and generally afford reasonable facilities to other agencies or department workmen engaged by the Govt. to carry out their part of the work, if any, under separate arrangements.

10. ELECTRIC SUPPLY

10.1 Electric supply required for the work upto a maximum of 50 KW single phase shall be made available by MES from the location of existing transformer. The exact location of the electric point(s) will be shown by the GE. KWH meters to register the electric energy supplied and main switch shall be provided and installed by the MES. Contractor shall provide all necessary cables, fittings etc. from the tapping point in order to ensure a proper and suitable supply of electricity for execution of work.

10.2 The contractor will be charged for the electric energy consumed for the execution of works at Rs 6.87 per unit for lighting as well as for power.

10.3 MES do not guarantee continuity of supply and no compensation whatsoever shall be allowed for supply becoming intermittent or for breakdown in the system.

10.4 GE or his representative shall be free to inspect all the power consuming devices or any electric lines provided by the contractor. Any devices or electric lines provided by the contractor, which are not to the satisfaction of the GE, shall be disconnected from the supply, if so directed by him and no claim for compensation whatsoever may be, shall be allowed on this account.

11. CRITICAL PATH METHOD

11.1 The time and progress chart to be prepared as per condition 11 of General Conditions of Contracts (IAFW-2249) shall consist of detailed net work analysis and a time schedule. The critical path net work will be drawn jointly by the GE and the contractor soon after acceptance of tender. The time scheduling of the activities will be done by the contractor so as to finish the work within the stipulated time. On completion of the time schedule a firm calendar date Schedule will be prepared and submitted by the contractor to the GE who will approve it after due scrutiny. The schedule will be submitted in four copies within two weeks from the date of handing over the site.

11.2 During the currency of the work, the contractor is expected to adhere to the time schedule and this adherence will be part of his performance under the contract. During the execution of the work, the contractor is expected to participate in the reviews and updating of the net work undertaken by the GE. These reviews may be undertaken at the discretion of the GE, either as a periodic appraisal measure or when the quantum of work ordered on the contractor is substantially changed through deviation orders or amendments. Any revision of the time schedule as a result of the review will be submitted by the contractor to the GE within a week who will approve it after due scrutiny.

11.3 The contractor shall adhere to the revised time schedule thereafter. In case of contractor disagreeing with revised schedule, the same will be referred to the Accepting Officer, whose decision shall be final, conclusive and binding. GE's approval to the revised schedule resulting in a completion date beyond the stipulated date of completion shall not automatically amount to a grant of extension of time. Extension of time shall be considered and decided by the appropriate authority mentioned in condition 11 of IAFW-2249 and separately regulated.

11.4 Contractor shall mobilize and employ sufficient resources to achieve the detailed schedule within the broad framework of the accepted method of working and safety. No additional payment will be made to contractor for any multiple shift of work or other intensive methods contemplated by him in his schedule, even though the time schedule approved by GE.

SPECIAL CONDITIONS Contd....**12. SAMPLE OF MATERIALS**

12.1 Refer condition 10 of I.A.F.W. 2249 and clause 1.6 & 1.7 of MES Schedule, Part-I.

12.2 Materials provided by the contractor for incorporation in the works shall, unless otherwise specified in the particular specifications, be ISI marked. IS means Indian Standards as issued by the Bureau of Indian Standards. Wherever in the specifications 'I.S.' is referred to, it means the edition with all amendments, current on the due date of receipt of the tender documents. The materials listed in Appendix 'B' shall be of the makes as specified therein.

12.3 The tenderer is advised to inspect other materials, which are displayed in the office of GE, before submitting his tender. The tenderer shall be deemed to have inspected the samples and satisfied himself as to the nature and quality of materials he is required to incorporate in the work irrespective of whether he has actually inspected them or not. The materials to be incorporated in the work by the contractor shall be I.S marked or shall be equal or superior in quality to sample displayed and shall comply with the specifications given hereinafter.

12.4 The contractor shall not procure materials unless the samples are first got approved from the Garrison Engineer in writing.

13. RECORD OF CONSUMPTION OF CEMENT

13.1 The contractor shall maintain a pucca bound register with serially numbered pages with all pages initialed by Engineer-in-Charge against numbering showing quantities of cement received, used in work and balance at the end of each day. The form of record shall be as approved by Engineer-in-Charge. The register shall be signed daily by representatives of MES and the contractor in token of verification of its correctness and will be checked by Engineer-in-Charge, at least once a week and on the days cement is brought by the contractor.

13.2 The register shall be kept at site in safe custody of the contractor's representative during the progress of the work and shall on demand be produced for verification to the inspecting officer(s).

13.3 On completion of the work the contractor shall deposit the cement register with the Engineer-in-Charge for record.

14. PERIOD FOR KEEPING THE TENDER OPEN

The tender shall remain open for acceptance for a period of **60 (SIXTY) days** from the date on which the tenders are due to be submitted excluding the day of submission of tender.

15. ADVANCE ON ACCOUNT OF MATERIALS WHICH DOES NOT LOSE IDENTITY (REFER CONDITION 64 OF IAFW-2249)

15.1 The contractor may be paid advance on account of the full value of the under mentioned materials only, brought on the site, on his furnishing guarantee Bonds from a Scheduled Bank for the amount of retention money which should otherwise be recoverable from his dues under the contract.

(a) All other non-perishable materials as decided by GE.

SPECIAL CONDITIONS Contd....

15.2 The Bank Guarantee Bonds shall be executed for a period and on a form as directed by the Accepting Officer. The contractor shall further arrange to extend the period of Guarantee Bond if and when necessary, as directed by the Accepting Officer or shall furnish fresh guarantee bond of similar value in lieu.

15.3 It will be noted that advance on account to the full value of materials brought on the site is permissible only in respect of fittings and fixtures and other manufactured items which do not lose their identity. Materials like bricks, aggregate, pre-cast concrete and similar items shall not be taken in the list.

16. SECURITY OF CLASSIFIED DOCUMENTS

Contractor's special attention is drawn to conditions 2-A and 3 of IAFW-2249 (General Conditions of Contracts). The contractor shall not communicate any classified information regarding the work either to subcontractors or others without the prior approval of the Engineer-in-Charge. The contractor shall also not make copies of the design/drawings and other documents furnished to him in respect of the work, and shall return all documents on completion of the works or earlier on determination of the contract. The contractor shall along-with the final bill, attach a receipt of his having returned the classified documents as per condition 3 of IAFW-2249 (General Conditions of Contracts).

17. OFFICIAL SECRET ACT

The contractor shall be bound by the Official Secrets Act - 1923.

18. RECORD OF MATERIALS

18.1 The quantity of materials such as paints, bitumen, water proofing compound, chemicals for anti termite treatment and the like, as directed by the Engineer-in-Charge (the quantity of which cannot be checked after incorporation in the works), shall be recorded in measurement books and signed by the contractor and the Engineer-in-Charge as a check to ensure that the required quantity has been brought to site for incorporation in the work.

18.2 Materials brought to site shall be stored as directed by the Engineer-in-Charge and those already recorded in measurement book shall be suitably marked for identification.

18.3 The contractor shall, on demand, produce to the GE, original receipted vouchers/ invoices in respect of the supplies. The vouchers/invoices shall be defaced and stamped by Engineer-in-Charge indicating contract number, name of work, under his dated signature. The contractor shall ensure that the materials are brought to site, in original sealed containers/packing, bearing manufacturer's marking except in the case of the requirement of material(s) being less than smallest packing.

18.4 Contractor shall produce vouchers/invoices from the manufacturers and/or their authorized agents for the full quantity of the following materials, as applicable as a pre-requisite before submitting claims for payment for advances on account of the work done and/or materials collected in accordance with Condition 64 of General Conditions of Contracts - IAFW-2249.

(a) Any other non-perishable materials as decided by GE.

SPECIAL CONDITIONS Contd....**19. SECURE AGAINST LOSS OR DAMAGE**

19.1 The contractor shall furnish to the Engineer-in-Charge every morning distribution return of his plants/equipment on the site of work stating the following particulars: -

- (i) Particulars of plants/equipment, their make, manufacturers Model No if any, Registration No if any, capacity, year of manufacture and year of purchase etc.
- (ii) Total No. (Quantity) on site of work.
- (iii) Location, indicating No., (quantity) at each location on the site of work.
- (iv) Purchase value on the date of purchase. For the purpose of the condition, plant/equipment, Vehicle No., i.e. of trucks and lorries but neither the workman's tools or any manually operated tools/equipment shall be given. The Engineer-in-Charge shall record the particulars supplied by the contractor in the works diary and send the return to the GE for record in his office.

20. RELEASE OF ADDITIONAL SECURITY DEPOSIT

20.1 Refer Conditions 22 and 68 of IAFW-2249.

20.2 The contractor, in case he has to deposit additional security for the contract, is advised to deposit the additional security in two equal parts so as to facilitate its release in accordance with condition 68 of IAFW-2249.

21. CLEANING DOWN (Refer Condition 49 of IAFW-2249, General Conditions of Contracts) :-

The contractor shall clean all floors, walls, remove cement/lime/ paint marks/drops, etc., clean the joinery, glass panes etc., touch up all painters work and carryout all other necessary items of work in connection therewith and leave the whole premises in clean and tidy condition before handing over the building(s).

22. OUTPUT OF ROAD ROLLER (REFER CONDITION 15 OF IAFW - 2249)

22.1 Where the Department hires road rollers to contractors a logbook for each road roller shall be maintained by the Department for recording hours of working of the road roller. In case, however, when the contractor procures road rollers from sources other than the Department a log book for each road roller shall be maintained by him for recording hours of working of the road roller. Entries in the log book shall be signed by the Contractor or his authorised representative and by the Engineer-in-Charge.

22.2 To ensure proper consolidation, roller must work for at least the number of days assessed, on the basis of output given here-in-after. If the roller has not worked for the number of days so assessed, recovery shall be affected from the contractor for the number of days falling short of the days assessed on the basis of output stipulated. The recovery shall be affected as under: -

(a)	Where road roller is hired by the contractor only from: - sources other than the department	Rupees 1,800/- per working day of 8 hours for 8 to 10 ton roller.
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SPECIAL CONDITIONS Contd....

22.3 The above provision shall not, however, absolve the contractor of his responsibility of properly consolidating surfaces as required under the provisions of the contract.

22.4 OUTPUT OF ROAD ROLLER PER DAY OF EIGHT HOURS

(i)	Consolidation of formation Surfaces/sub-grade.	1850 Sq. Metre
(ii)	Consolidation of stone soling 23 cm thick with 8 to 10 tonne roller.	518 Sq. Metre
(iii)	-Do- but 15 cm thick	800 Sq. Metre
(iv)	Consolidation of water-bound macadam (stone metal) 10 cm spread thickness including spreading and consolidation with binding material	146 Sq. Metre
(v)	-Do- but 7.5 cm	248 Sq. Metre
(vi)	Consolidation of 2 cm thick premixed carpet including seal coat	744 Sq. Metre
(vii)	Consolidation of 2.5 cm thick premixed carpet including seal coat	600 Sq. Metre
(viii)	Consolidation of asphaltic semi dense mix concrete 25 mm thick	500 Sq. Metre
(ix)	Single Coat surface dressing	800 Sq. Metre
(x)	Consolidation of premixed bituminous macadam 75 mm thick	300 Sq. Metre

Note : Road roller output for items other than catered above shall be ascertained through a Board of Officers which will be the basis for ensuring the required consolidation.

23. TESTING OF MATERIALS

23.1 Test shall be carried out in any of the National Test House/Engg College/SEMT Pune nominated by the GE in writing for a particular contract and test.

23.2 No material will be incorporated in the work unless it has been tested, found fit and approved by the GE.

23.3 If the contractor does not carry out these tests, the tests shall be carried out in the Zonal lab or any other lab approved by the GE and then charges for tests shall be recovered from contractor.

23.4 The Contract sum amount quoted by the contractor shall deem to include: -

[a] Expenses on account of testing in any laboratory as approved by the GE.

23.5 The Accepting officer may order independent testing for which expenditure will be borne by the Govt. The charges for the independent testing will be borne by the contractor if test fails.

24. REIMBURSEMENT/REFUND ON VARIATION IN PRICES

Refer condition 63 of IAFW -2249.

25. OCTROI SALES TAX AND OTHER DUTIES

The tenderer's rates shall be deemed to include all mandatory charges and taxes such as octroi, sales tax, VAT, excise, service tax etc. as referred in Condition 10 of IAFW-2249 and include State Govt. sales tax on works contracts payable under respective states pursuant to the constitution (Forty Sixth Amendment, Act 1982). Any other conditions stipulated by the tenderer regarding sales tax on works contracts will not be considered and such tender shall be liable for rejection.

SPECIAL CONDITIONS Contd....**26. CONSTRUCTION LABOUR WELFARE TAX**

The quoted rates in the tender by the contractor shall be deemed to inclusive in construction labour welfare tax and no extra payment shall be admissible to the contractor on this account.

27. Re-imbursement/refund on variation in "taxes directly related to Contract value"

(a) The rates quoted by the contractor shall be deemed to be inclusive of all taxes (including Sales Tax/VAT on materials, Sales Tax/VAT on Works Contracts, Turnover Tax, Service Tax, Labour Welfare Cess/tax etc).duties, Royalties, Octroi & other levies payable under the respective Statutes. No reimbursement/refund for variation in rates of taxes, duties, Royalties, Octroi & other levies, and/or imposition/abolition on any new/existing taxes, duties, Royalties, Octroi & other levies shall be made except as provided in sub para (b) here-in-below.

(b) (i) The taxes which are levied by Govt at certain percentage rates of Contract Sum/Amount shall be termed as "taxes directly related to contract value" such as Sales Tax/VAT on works Contracts, Turnover Tax, Labour welfare Cess/tax and like but excluding Income tax. The tendered rates shall be deemed to be inclusive of all "taxes directly related to contract value" with existing percentage rates as prevailing on last due date for receipt of tenders. Any increase in percentage rates of "taxes directly related to contract value" with reference to prevailing rates on last due date for receipt of tenders shall be reimbursed to the contractor and any decrease in percentage rates of "taxes directly related to contract value" with reference to prevailing rates on last due date for receipt of tenders shall be refunded by the contractor to the Govt/deducted by the Govt from any payments due to the Contractor. Similarly imposition of any new "taxes directly related to contract value" after the last due date for receipt of tenders shall be reimbursed to the contractor and abolition of any "taxes directly related to contract value" prevailing on last due date for receipt of tenders shall be refunded by the contractor to the Govt/deducted by the Govt from the payments due to the contractor.

(ii) The contractor shall, within a reasonable time of his becoming aware of variation in percentage rates and/or imposition of any further "taxes directly related to contract value", give written notice thereof to the GE stating that the same is given pursuant to this Special Condition, together with all information relating thereto which he may be in a position to supply. The contractors shall submit the other documentary proof/information as the GE may require.

(iii) The Contractor shall, for the purpose of this condition keep such books of account and other documents as are necessary and shall allow inspection of the same by a duly authorized representative of Govt, and shall further, at the request of the GE furnish, verified in such a manner as the GE may require, any documents so kept and such other information as the GE may require.

(iv) Reimbursement for increase in percentage rates/imposition of "taxes directly related to Contract value" shall be made only if the Contractor necessarily & properly pays additional "taxes directly related to Contract value" to the Govt, without getting the same adjusted against any other tax liability or without getting the same refunded from the concerned Govt Authority and submits documentary proof for the same as the GE may require.

SPECIAL CONDITIONS Contd....**28. QUALIFIED TRADESMEN:-**

In the compliance with the Condition 26 of IAFW-2249(General Conditions of Contracts), the contractor shall employ skilled/ semi skilled tradesmen who are qualified and possessing certificate in particular trade from Industrial Training Institute (ITI)/National Institute of Construction

Management and Research (NICMAR)/Similar reputed and recognized Institutes by State/Central Government to execute the works of their respective trade. The number of such qualified tradesmen shall not be less than 25% of total skilled/semi skilled tradesmen required in each trade. The contractor shall submit the list of such tradesmen along with requisite certificates to Garrison Engineer for verification and approval. Notwithstanding the approval of such tradesmen by GE, if the tradesmen are found to have inadequate skill to execute the work of their trades, leading to unsatisfactory workmanship, the contractor shall remove such tradesmen with a week after written notice to this effect by the GE and shall engage other qualified tradesmen after prior approval of GE. GE's decision whether a particular tradesmen possesses requisite qualification, skill and expertise commensurate with nature of work, shall be final and binding. No compensation whatsoever on this account shall be admissible.

29. ADVANCE ON ACCOUNT: - Refer condition 64 of IAFW-2249.**(SIGNATURE OF CONTRACTOR)****DATED _____****DCWE (CONTRACTS)
FOR ACCEPTING OFFICER**

PARTICULAR SPECIFICATIONS**GENERAL**

- 1.1 Work under this contract shall be carried out in accordance with Schedule 'A', Particular Specifications, drawings and general specifications and other provisions in MES Standard Schedule of rates (here-in-after called MES Schedule, read in conjunction with each other.
- 1.2 Term "General Specifications" referred to herein after as well as referred to in IAFW-2249 (General Conditions of Contracts) shall mean the specifications contained in the MES Schedule Part-I.
- 1.3 General rules, specifications special conditions and preambles in the MES Schedule shall be deemed to be applicable to the work under this contract, unless specifically stated otherwise in these documents in which case the provision in these documents shall take precedence over the aforesaid provisions in the MES Schedule. The terms as specified wherever appear in tender documents relates to relevant particular specifications and in its absence general specifications. All references to MES Schedule in these specifications relate to SSR-2009 part-I of MES Schedule unless otherwise mentioned. References to some paragraphs of MES Schedule have been made in these particular specifications but other paragraphs and provisions as applicable are also to be followed for all sections/parts of Schedule 'A' even though not particularly mentioned here-in-after e.g. reference to Paras pertaining to general workmanship for brick work, iron and steel work etc. have not been made but provision therein as required for work are applicable.
- 1.4 Where specifications for any item of work are not given in MES Schedule or in these particular specifications, specifications as given in relevant Indian Standard or as per code of practice shall be followed.
- 1.5 Rates quoted for a particular item by the tenderer shall be deemed to include for any minor details/items of work and/or constructions which are obviously and fairly intended and which may not have been included in these documents but which are essential for the execution and entire completion of the work. Decision of the Accepting Officer as to whether any minor details/items of work and/or construction is obviously and fairly intended to be included in the contract or not shall be final, conclusive and binding.
- 1.6 Where specification/provision given in these particular specifications are at variance with the provision/specifications given in MES Schedule, specifications/ provision given in these particular specifications shall be followed.

2. CEMENT

(a) The cement shall not be issued under Schedule 'B'. Contractor shall procure the same under his own arrangement for the entire completion of the work. Provision of condition 10 of IAFW-2249 shall be read in conjunction with this clause.

(b) The specifications and other provisions laid down vide section 4 Para 4.3 of MES Schedule Part-I shall be read in conjunction with the provisions contained in the subsequent Paras here-in-after.

PARTICULAR SPECIFICATIONS CONTD.....

- 2.1 **TYPE OF CEMENT** :- The Cement shall be ordinary Portland cement grade 43 (IS-8112-1989).
- 2.2 **SOURCE OF PROCUREMENT** :- Cement shall be procured by the contractor under his own arrangement and at his own cost from main producers of cement like ACC, L&T Ltd., Gujrat Ambuja Cement, Rajshree Cement, Birla Corp. Ltd. (Cement Division), Century Cement, Dalmia Cement (Bharat) Ltd., Orient Cement, JK Cements, Madras Cement Ltd., Rassi Cement Ltd., Vikram Cement, Andhra Cements Ltd., Jay Pee Rewa Cement, Jammu & Kashmir Cement Ltd., Mangalam cement, Modi Cement Ltd., Mysore Cement Ltd., Raymond Ltd., Cement Diva, Aditya Cement, Grasim Cement, The India Cement Ltd., DLF Cement Ltd., Lakshmi Cement, JK Shakti Cement, Shree Cement, Prism Cement and Zuari Cement. The particulars of manufacturer of cement alongwith the date of manufacture shall be submitted by the contractor separately for every consignment of cement procured. Each consignment of cement procured by the contractor shall be recorded in the measurement book as "Not to be abstracted" and shall be supported with authentic original purchase vouchers highlighting the makes, batch Nos., quantity etc.
- 2.2.1 However where estimated requirements of cement is less than 1200 bags , contractor can procure cement from the authorized distributors and dealers of the approved firms., however the contractor shall have to submit test certificate for the batch, issued by the firm.
- 2.2.2 No mixing of cement of different types shall be admissible (Refer Note 1 & 2 under para 4.3 of MES Schedule, Part-I in this connection).
- 2.3 **IDENTIFICATION** :- Marking of each cement bag shall be as per relevant IS code.
- 2.4 **SCHEDULE OF SUPPLY** :- Schedule of supply of cement shall be finalised by Contractor with the GE and shall be incorporated in CPM chart so that supply of cement is monitored in CA No : a way to avoid any delay in completion of the work. The complete requirement of cement will be worked out before making any RAR payment. Procurement of cement by the Contractor shall be completed sufficiently in advance of the date of completion. No extension of time will be considered for non-availability of cement. Every Cement godown shall be provided with two locks on each door. The key of one lock of each door shall remain with the Engineer-in-Charge or his representative and that of other lock with the Contractor or his authorised agent at site of work so that cement is removed from the godown only accordingly to the daily requirement with the knowledge of both the parties. Cement for purpose of accounting shall be on the basis of no. of bags. Minor variations in cement not more than 2% by weight of cement in a bag will be permissible for purpose of accounting of cement bags. However cement shall be incorporated in the work on actual weight basis where specified without any additional cost.
- 2.5 **TESTING OF CEMENT** :- The contractor shall submit the manufacturer's test certificate in Original along with the test sheet giving the result of each physical test as applicable and the chemical composition of the cement or authenticated copy thereof, duly signed by the manufacturer with each consignment. The Engineer-in-charge shall record these details in the Cement Acceptance Register as given at Appendix 'E' after due verification.
- The GE shall also organize independent testing of random samples of every 250 MT of cement (If batch changes within 250MT then testing of each batch has to carried out) from the National Test House, SEMT, CME, Regional Research Laboratories, Approved Laboratories by GE, Zonal Laboratories as per IS: 3535-1986 (Method of Sampling Hydraulic Cement), IS: 4019 (Method of Physical test for Hydraulic Cement) and IS:4032-1985 (Method of chemical analysis of hydraulic Cement).

PARTICULAR SPECIFICATIONS CONTD.....

- 2.6 In case cement test result does not fall with-in the acceptable limits, respective consignment of cement shall be rejected and shall be removed by the contractor within 24 hours from the site. The cost of tests shall be borne by the contractor irrespective of status of the results and no claim shall be/to be entertained on this account and clause of IAFW-2249 provisions in this regard in Para 1.7.3 of SSR-2009 Part-I (Specifications) shall deemed to be amended accordingly. Sample of cement from each consignment should be collected by the Engineer-In-Charge and GE in accordance with IS:3535-1986.
- 2.7 **STORAGE OF CEMENT** :- The cement shall be stored and stacked properly. Precautions in storage shall be observed as per para 4.3.1 of SSR Part-I. Inspection shall be carried out once a day by rep of GE associated with the work and rep of contractor. It shall be ensured that tested and untested Cement shall be segregated and stored separately with distinct identification. Not more than three months requirement should be procured and held in stock to avoid its deterioration.
- 2.8 **DOCUMENTATION** :- The Contractor shall submit original Vouchers from the manufacturer for the total quantity of Cement supplied under each consignment to be incorporated in the work. Any consignment received at the work site shall be inspected by the GE along with relevant documents before acceptance. The Original Vouchers and the Test Certificate shall be defaced by the Engineer-in-Charge showing CA No., Year and dated signature and kept on record in the office of GE duly authenticated and with cross-reference to the Control number recorded in the Cement acceptance register. The cement acceptance register will be signed by JE (Civil)/Supdt B/R Grade-I, Engineer-in-Charge, GE and the Contractor or his rep. The Accepting Officer may order Board of officers for random check of cement and verification of connected documents. The entire quantity of all type of cement shall be suitably recorded in the measurement Book (Not to be abstracted) for record purposes before incorporation in the work and shall be signed by the Engineer-in-Charge and the Contractor.
- 2.9 In case of any dispute relating to the interpretations arising out of the above-referred provisions, the decision of the Accepting Officer shall be final, conclusive and binding.
- 2.10 **RECORD OF CONSUMPTION OF CEMENT** :- For the purpose of keeping a record of cement used, the contractor shall maintain a properly bound register serially numbered (all pages initialed against the numbering by the Engineer-In-charge) in the form approved by the Engineer-In-Charge showing daily quantity used in the work and balance in hand at the end of each day. The register shall be maintained with daily entries duly authenticated by the contractor or his authorised representative and the Engineer-In-Charge.
- 2.11 The register shall be kept at site in the safe custody of the contractor's rep and Engineer-In-Charge during the progress of the work and shall on demand be produced for verification to the inspecting officer.
- 2.12 On completion of the work, the contractor shall deposit the cement register with the Engineer-In-Charge for record.
3. **ROAD WORK**
- 3.1 Refer Para 20.A.12 to 20.A.14, 20.A.18 and 20.A.19 of MES Schedule Part I. Where rolling by roller is not possible, compaction shall be done by rammers as directed by Engineer-in-Charge (EIC).
- 3.2.1 **SUBGRADE (Formation)** Preparation of sub grade includes site clearance, surface excavation, grading (cutting/filling, if any) and compaction. It is most essential to compact the sub grade adequately before placing the other layers. The sub-grade shall be compacted at optimum moisture content as determined from laboratory tests. Field check for achieving 95 % of standard proctor density shall be done by Sand Replacement Method.

PARTICULAR SPECIFICATIONS CONTD.....

- 3.2.1.1 Refer Para 20.A.15 and 20.A.16 of MES Schedule Part I.
- 3.2.1.2 All excavation, earth filling and embankments shall be executed as ordered in accordance with Section 3, Earthwork of SSR Part I.
- 3.2.1.3 Rolling of formation shall be done with 8-10 T power roller under optimum moisture conditions, so as to obtain at least 95 percent of standard proctor density. Laboratory determination of optimum moisture content and dry density shall be done in accordance with IS:2720 (Pt-VII)-1980. Field check for achieving the required compaction shall be done by sand replacement method as specified in IS:2720 (Pt XXVIII)-1980.
- 3.2.1.4 In case of filling the test specified in the above clause shall be done for each layer of the filling.
- 3.2.2 **SUB-BASE (Soling)** :- This shall consist of clean, quarried stones or broken boulders mechanically interlocked by rolling. The thickness of sub-base (soling) layer shall be 150 mm spread thickness.
- 3.2.2.1 **AGGREGATE** :- Stones for soling shall be sandstone-kankar or any other hard rock. Stones shall be obtained from approved quarries. The grading shall be as given below (Size 90 to 45 mm) :-

IS Sieve designation	Percent by weight passing
125mm	100
90mm	90 - 100
63mm	25 - 60
45mm	0 - 15
22.4mm	0 - 5

- 3.2.2.2 **AGGREGATE CHARACTERISTICS** :- Crushed or broken stone shall be hard, durable and generally free from flat, elongated, soft and disintegrated particles. It shall not have excess of dirt or other objectionable matter. It shall conform to the following physical properties: -

PROPERTY	TEST METHOD	MAX VALUE
Los Angeles Abrasion Value	IS:2386 (Part – IV)	35 %
Combined Flakiness and Elongation Indices	IS:2386 (Part – I)	25 %

- 3.2.2.3 **WORKMANSHIP** :- For workmanship, refer Para 20.A.20.1 of MES Schedule Part-I.
- 3.3 **BASE (Water Bound Macadam)** :- This shall consist of clean, crushed aggregates, mechanically interlocked by rolling and bonding together with screenings, binding material and water. The thickness of WBM layer shall be 150 mm (in two layers 75 mm each) compacted thickness.

PARTICULAR SPECIFICATIONS CONTD.....

- 3.3.1 **AGGREGATE** :- Aggregate for water bound macadam shall be crushed stone. It shall conform to physical and qualitative properties as that specified for aggregates for soling. The grading shall be as given below (size 63 mm to 45 mm): -

<u>IS Sieve Designation</u>	<u>Percent by weight passing</u>
90mm	100
63mm	90 – 100
53mm	25 - 75
45mm	0 - 15
22.4mm	0 - 5

- 3.3.2 **SCREENINGS** :- Screenings to fill voids in the coarse aggregates shall be of the same material as coarse aggregates. Screenings shall conform to grading as given below (size 11.2mm): -

<u>IS Sieve Designation</u>	<u>Percent by weight passing</u>
11.2mm	100
5.6mm	90 – 100
180 Micron	10 – 30

- 3.3.3 **BINDING MATERIAL** :- Binding material to be used for water bound macadam as a filler material meant for preventing ravelling shall comprise of moorum/stone dust as approved by Engineer-in-Charge/GE having plasticity index (PI) value of 4 to 6 as determined in accordance with IS:2720 (Part-5).

- 3.3.4 **QUANTITIES OF MATERIALS** :- Approximate quantities of coarse aggregates, screenings and binding material required for 75mm compacted thickness of water bound macadam for 10 Sq.m area are as given below: -

- (a) Aggregates – loose qty 0.91 cum –1.07 cum
 (b) Screening – loose qty 0.30 - 0.33 cum
 (c) Binding Material – 0.06 – 0.09 cum

(d) For each work, minimum quantities required shall be arrived at and approved by Engineer-in-Charge/GE in writing. Quantities of coarse aggregates, screenings and binding material actually incorporated in the work shall be adequate to provide the WBM of adequate thickness but in no case those shall be less than the minimum quantities approved by the Engineer-in-Charge/GE.

- 3.3.5 **WORKMANSHIP** :- Refer Para 20.A.21.2 to 20.A.21.12 of MES Schedule Part I.

3.4 **PRIME COAT OVER GRANULAR BASE**

3.4.1 The bituminous material to be used as primer shall be cationic bitumen emulsion VG-30 grade conforming to relevant IS. The quantity of VG-30 grade bitumen emulsion to be used in the work/item shall be all as specified in Schedule 'A'.

PARTICULAR SPECIFICATIONS CONTD.....

- 3.4.2 The base course surface to be primed shall be swept clean and made free from dust. All loose material and other foreign material on the surface shall be removed completely using power brooms or mechanical sweepers. The surface to be primed shall be kept dry. The WBM surface shall be brushed and removed upto depth of 2mm so as to provide good bond.
- 3.4.3 The dilution of VG-30 bitumen emulsion is not permitted. No heating of VG-30 bitumen emulsion is permitted at site. The temperature of the product at the time of position should be more than 10 degree centigrade.
- 3.4.4 **Air curing and opening of traffic.** The primed surface shall be allowed to cure for at least 24 hours to allow all the moisture or volatiles to evaporate before any subsequent bituminous surface treatment or mix is laid. Excessive and unabsorbed primer if any, shall be blotted with a light application of sand using the minimum quantity possible. A primed surface shall not be opened for traffic other than that necessary construction vehicles to lay the next bituminous course.

3.4 A TACK COAT.

- 3.4A.1 The bituminous material to be used as tack coat shall be cationic bitumen emulsion VG-10 grade conforming to relevant IS. The quantity of VG-10 grade bitumen emulsion to be used in the work/item shall be all as specified in Schedule 'A'.
- 3.4A.2 The surface on which the tack coat is to be applied shall be clean and free from dust, dirt and any extraneous material. Immediately before the application of tack coat, the surface shall be swept clean with a mechanical broom and high-pressure air jet.
- 3.4 A.3 Bituminous material shall not be applied during rainy season, dust storm or when the weather is foggy, rainy or windy or when the ambient temperature is less than 10 degree centigrade. The surface should be slightly damp but shall not be wet while applying bitumen emulsion as tack coat.
- 3.4 A.4 The tack coat shall be applied by a self-propelled or towed bitumen pressure sprayer equipped for spraying the material uniformly at a specified rate. Hand spraying is not permitted.
- 3.4 A.5 The dilution of VG-30 bitumen emulsion is not permitted. No heating of RS-1 bitumen emulsion is permitted at site. The rate of application for tack coat on various types of surfaces shall be as specified in Schedule 'A' and shall be applied uniformly. The quantity of tack coat shall be checked periodically using tray coating test.
- 3.4 A.6 After application of the emulsion as tack coat, allow the bitumen emulsion to break i.e. turn black before placing the bituminous mixture or overlay. Traffic should be kept off of the area where tack coat is being sprayed. No plant or vehicles shall be allowed on the tack coat other than those essential for construction.

3.4 B METHOD FOR TEST FOR MEASUREMENT OF SPREAD OF BINDER FOR PRIME COAT AND TACK COAT

Aluminum metal tray of 200mm x 200mm size and 20mm depth are to be used. A set of three plates is essential for one test. All the plates are to be weighed and numbered. These are placed at intervals of 10m along the road in path between wheels of bitumen distributor. After the distributor crosses a length of 50m, tray are to be removed and wrapped in weighed polyethylene bags so that these can be handled, stocked safely for further weighing in laboratory. The trays shall be weighing in laboratory. The trays shall be weighed to first place of decimal. Similarly, transverse distribution of liquid bituminous material can be checked by placing three numbers of plates at interval of 50cm in the path of binder spraying equipment.

PARTICULAR SPECIFICATIONS CONTD.....**3.5 BINDER :-**

The binder shall be cationic bitumen emulsion for prime/tack coat. The grade of cationic bitumen emulsion shall be VG 10 and VG-30 conforming to relevant IS-. The cationic bitumen emulsion shall be procured by the contractor direct from the Govt refinery and in support of it the contractor shall produce the following documents :-

- (a) Purchase voucher
- (b) Gate pass
- (c) Transport Receipt

The defaced copies of these documents shall form part of the final bill.

4 SEMI DENSE ASPHALTIC CONCRETE USING HOT MIX PLANT AND PAVER FINISHER**4.1 COARSE AGGREGATE**

The aggregates shall consist of crushed hard stone.. They shall be clean, strong, durable, of fairly cubical shape and free from disintegrated pieces, organic or other deleterious matter and adherent coating. The aggregates shall preferably be hydrophobic and of low porosity. These shall conform to the physical requirement as per clause 20.B.2.5.2 of SSR -2009 Part-I

4.2. FINE AGGREGATES

The fine aggregates shall be the fraction passing 2.36 mm sieve and retained on 75 micron sieve, consisting of crusher run screenings, natural sand or a mixture of both . These shall be clean, hard, durable, uncoated dry and free from any injurious , soft or flaky pieces and organic or deleterious substances. The aggregates shall also be free from sulphates, chlorides and materials (including products of decomposition), which may be liable to break down during drying or subsequently when exposed to weather.

4.2.1 FILLER :-

Filler shall be an inert material whole of which passes 710 micron sieve, atleast 90 % passing 180 micron sieve and not less than 70% 90 micron sieve. Unless otherwise indicated, filler shall be cement (OPC 43 grade).

4.3 GRADING FOR COMBINED AGGREGATES

Combined grading of aggregate i,e coarse aggregate, fine aggregate and filler shall conform to the contents as specified in Table under Para (d) of clause 20.B.2.5.4 of SSR-2009 (Part-I).

4.4 MIX DESIGN CRITERIA

Mix design criteria shall be as specified in clause 20.B.2.11 of MES Schedule Part-I (2009). The contractor shall submit design mix calculations to GE therein specifying the binder contents worked out for preparation of semi dense asphaltic concrete. GE shall approve the design mix calculation & work shall be commenced by the contractor only after approval of the design mix. The bitumen content shall be determined in an approved Govt, laboratory as directed by the GE by the Marshall design method. The quantity of binder has been indicated in schedule 'A' and contractor shall quote his rate considering the binder quantity for asphaltic semi dense concrete accordingly.

PARTICULAR SPECIFICATIONS CONTD.....**4.5. JOB MIX FORMULA**

- 4.5.1 Prior to the start of work , the job mix formula shall be determined in a Govt approved laboratory as approved by GE by Marshall design method satisfying the criterion enumerated in clause 20.B.4.3 of SSR 2009 Part-I
- 4.5.2 In the event of change in materials available at site due to unforeseen exigencies a fresh job mix formula shall be arrived at within the specified limits in the Government approved laboratory as approved by the GE
- 4.5.3 The gradation of combined aggregates as given in Table under clause 20.B2.5.4 of SSR 2009 Part-I is tentative. It may be noted by the contractor that the primary requirement is to satisfy the design criteria laid down in clause 20.B.2.11 of MES Schedule Part-I (2009). The rates quoted by the contractor shall be considered to be the rate satisfying the design criteria fully. For the purpose, contractor is advised to get the mix design done before hand to satisfy the design requirements regarding Marshall stability, percentage of voids in mix, percentage of voids in combined aggregates filled with bitumen etc.
- 4.5.4 Any deviation in the laboratory gradation of combined aggregates from that indicated in clause 20.B2.5.4 (d) of SSR 2009 Part-I to satisfy the design requirement, shall not be a cause of extra claim. No claim on this account shall be entertained.
- 4.5.5 The design shall be got approved from the GE well in time before actual execution of work.

4.6 LABORATORY DENSITY

Design laboratory density of the mix shall be that density of the laboratory sample on which the design mix shall be decided by the approved Govt. laboratory.

4.7 MIXING**4.7.1 WEATHER AND SEASONAL LIMITATIONS :**

Semi Dense asphaltic concrete shall not be laid during rainy weather or when the surface is damp or wet or when the temperature is less than 16 degree centigrade under shade.

4.7.2 HOT MIX PLANT

Hot mix plant of adequate capacity not less than 30 tonne/hour , capacity and capable of producing a proper and uniform quality mix shall be used to preparing the mix. The plant may be either a batch type or continuous one, having a coordinated set of essential units such as a dryer for heating the aggregates, device for grading and batching/feeding by weight or volume the required quantities of aggregates, a binder heating and control unit for metering out the correct quantity of heated binder together with a mechanical mixer for thorough mixing of the binder and aggregates.

4.8 TEMPERATURE

The temperature of the binder at the time of mixing shall be in the range of 150 degree Centigrade to 177 degree Centigrade and of aggregates in the range of 155 degree Centigrade to 163 degree Centigrade. At no time, however, shall the difference in temperature between the aggregates and the binder exceed 14 degree centigrade. At no time shall bitumen or aggregates be over heated.

The hot graded aggregates and bitumen shall be measured separately and as accurately as practicable in the proportions in which they are to be mixed.

The hot aggregate and binder shall be thoroughly and intimately mixed together in the correct proportion for at least 1.5 minute and until every particle of aggregates is completely coated and homogeneous mixture is obtained.

PARTICULAR SPECIFICATIONS CONTD.....

- 4.9 **TRANSPORTING MIXED MATERIALS** :- The mixed materials shall be transported from mixing plant to the point of use in clean vehicles. Every precaution shall be taken to avoid segregation of mixed materials and to ensure that they do not become contaminated with dust or foreign matter. In order to maintain satisfactory temperature of materials in transit, particularly in cold weather, and to prevent undue loss of heat, adequate precautions shall be taken by covering the materials in transit, particularly in cold weather, and to prevent undue loss of heat, adequate precautions shall be taken by covering the materials to ensure that the materials are properly protected during transportation.

The temperature of the mix in every transporting vehicle shall be checked immediately prior to discharge into the spreader, If the temperature of any batch is below the laying temperature specified in clause 5.10 the mix shall be rejected and shall be removed from site immediately.

- 4.10. **LAYING**. The mix transported from the hot mix plant to the site shall be spread by means of a self propelled mechanical paver with suitable screeds capable of spreading tamping and finishing the mix true to specified width and profile without causing segregation , dragging, burning, irregularities or other surface defects. The paver shall be capable of being operated at a speed consistent with the character of the mix and the thickness of the course being laid, so as to produce a surface having a uniform density and surface texture Where not operated on side forms, the spreader shall employ equalizing runner, evener arms or other devices to adjust the profiles and confine the edges of the course to true lines. The temperature of the mix at the time of laying shall be in the range of 121 degree centigrade to 163 degree centigrade

- 4.10.1 **HAND SPREADING IS PROHIBITED.**

- 4.11 **ROLLING**

After being spread, consolidation shall be carried out as specified in MES Schedule Part-I 2009 .

The minimum number of roller passes required for maximum attainable density shall be found out at site by laying experimental strips before commencement of work. The maximum break down temperature at which rolling can commence shall be determined by field trials.

The line of rolling shall not be suddenly changed or the direction of rolling suddenly reversed thereby displacing the mix. Roller shall not be left standing on the newly laid surface.

The surface shall be carefully examined for residual marks which shall be cleanly rolled out and neat finished surface obtained.

- 4.12 **ROLLING TEMPERATURE** :

The range of temperature during rolling shall be 80 degree centigrade to 120 degree centigrade and no rolling shall be allowed below 80 degree centigrade.

- 4.13 **JOINTS**

For longitudinal joints, transverse joints and pavement joints clauses 20B.7.10 shall apply.

PARTICULAR SPECIFICATIONS CONTD.....**4.14 SURFACE ACCURACY**

Surface accuracy shall be checked immediately after rolling is complete. Except crown of camber or change of grade, the finished surface shall be such that when tested with profilograph /roughness indicator or a 3 metre straight edge or an equivalent mechanical unevenness indicator placed anywhere in any direction on the surface, there shall not be a gap greater than 3 mm between the bottom of straight edge and surface of pavement anywhere along the straight edge. It is essential that the riding surface of the pavement is free from waves.

4.15 RECTIFICATION

The work shall be accepted as of quality, measured and paid in full if the field density does not work out to be less than 98% of designed laboratory density. The work, where the field density achieved is between 95% and 98% of the design lab density, shall be accepted as not up to the standard and paid at reduced rate on prorata basis of design mix density with full rate for 98% density as base.

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

Where the surface irregularities fall outside the limits specified in clause 5.14 above, full depth of the layer shall be removed and replaced with fresh material and compacted to specifications. The area so removed and replaced shall not be less than 5 metre long and not less than 3 metre wide. Edges of such relaid surface shall be merged with the existing surface at junction points. Nothing extra shall be paid on this account.

4.16 MEASUREMENTS

4.16.1 Before commencement of laying of semi dense asphaltic concrete, levels shall be taken jointly by the Engineer-in-Charge or his representative and the contractor at 3 metre intervals both ways or closer as directed by the Engineer-in-Charge. These levels shall be recorded in the level register and plotted on the plan and the same be signed by the contractor. Proposed formation levels of the finished semi dense asphaltic concrete shall be marked at corresponding points. Levels of the consolidated bituminous surface shall be taken at grid points at which levels were recorded earlier and recorded in the level register and also plotted on the plan. Level register as well as the plan shall be signed by the contractor as token of acceptance of the levels.

4.16.2 The area of consolidated mix shall be worked out in Sqm to two places of a decimal as measured surface area. Average thickness shall be worked out on the basis of levels. Length and breadth shall be measured correct to a centimeter.

PARTICULAR SPECIFICATIONS CONTD.....**4.17 QUALITY CONTROL**

Following quality control tests shall be carried out at frequencies specified against each:-

Ser No.	Test		Frequency
(i)	Coarse Aggregate		
	(a)	Flakiness Index	Before approval of the quarry and at every subsequent change in the source of supply and one test for every 100 cubic meter of aggregate.
	(b)	Impact Value	-Do-
	(c)	Los angles abrasion value	-Do-
	(d)	Stripping value	-Do-
	(e)	Water absorption	-Do-
	(f)	(i) Sieve analysis for filler	1 test for each consignment subject to a min. of 1 test per 5 cum of filler.
		(ii) Mix Grading	One test for each 100 tonnes of mix subject to a min. of two tests per day per plant on mixed aggregates from dryer.
		(iii) Temperature at Mixing	
	(a)	Aggregates	Regularly
	(b)	Bitumen	Regularly
	(iv)	Temperature of mix at laying	Regularly
	(v)	Temperature at rolling	Regularly
	(vi)	Bitumen content and gradation in mix	One test of 3 samples for each 100 tonnes of mix subject to min. of 2 tests per day per plant.
	(vii)	Marshall stability of mix, flow value, density & void content	For each 100 tonnes of mix produced, a set of 3 marshall specimen shall be prepared and tested subject to a min. of 2 sets being tested per plant per day.
	(viii)	Density of compacted layer	One test of 3 samples for 500 sqm or one day's work if it is less than 500 sqm.
	(ix)	Surface Accuracy	Regularly.

4.17.1 In addition to the above test on mixes, the contractor shall satisfy the department regarding the quality of aggregates used in the mix through various test to the frequency stipulated at his own cost.

4.17.2 In the absence of clear indications about method/frequency tests for any item, the instruction of Engineer-in-Charge shall be followed. The agency carrying out the tests shall be approved by the GE before commencement of supply of mix.

PARTICULAR SPECIFICATIONS CONTD.....

4.17.3 For testing of samples of aggregates, mixes etc samples in the required quantity and form shall be supplied to the Engineer-in-Charge by the contractor at his own cost and under his own arrangements.

4.18 **PERMISSIBLE VARIATIONS FROM THE JOB MIX FORMULA** :-

The contractor shall be responsible for ensuring proper proportioning of materials in accordance with the approved job mix formula and producing uniform mix. The permissible values of individual percentage of various ingredients in the actual mix from the job mix formula being within the limit as specified in the under mentioned table. These variations are intended to apply to individual specimen taken for quality control tests vide clause 6.17 here-in-above.

Srl No.	Description of ingredients	Permissible variations by weight of total mix in percent
1	2	3
I	Aggregate passing 13.2 mm sieve and larger sieves	± 8 %
II	Aggregate passing 11.2 mm sieve and 5.6 mm sieve	± 7 %
III	Aggregate passing 2.8 mm sieve and 1.4 mm sieve	± 6 %
IV	Aggregate passing 710 micron sieve & 355 micron sieve	± 5 %
V	Aggregate passing 180 micron sieve	± 4 %
VI	Aggregate passing 90 micron sieve	± 2 %
VII	Binder	± 0.3 %
VIII	Mixture temperature	± 10 degree 'C'

4.19 **RATE.** The rate shall include the cost of all materials, Plant, machinery and testing required in all operations described above including all cartage and lifts involved.

4.20 **OPENING OF TRAFFIC** :- Traffic may be allowed immediately after completion of the final rolling when mix has cooled down to the surrounding temperature.

5. **REPAIR TO POT POLE**

Repair to pot poles shall be carried out all as per clause No 20A.34.2 of SSR Part-I (2009).

6. **PREMIXED BITUMINOUS MACADAM**

Refer clause No 20.B.3 to 20.B.3.13 of SSR Part-I (2009).

7. **THERMOPLASTIC PAINT**:- Thermoplastic painting shall be carried out as per manufacture instructions with the following specifications. 250 gm of glass bits shall be mixed with 5 to 5.25 Kg of thermoplastic powder. The mix of glass bits and thermoplastic powder shall be heated in a boiler to form a uniform paste and then the material shall be applied on the road in straight line. Care shall be taken that edges of the line do not get deformed. The surface of the paint shall be truly solid and shall give a uniform appearance.

PARTICULAR SPECIFICATIONS CONTD.....**8. DEMOLITION AND DISMANTLING**

8.1 Contractor shall take all precautions during execution work without damage to the existing article/ surface/structure which shall be made good by the contractor at his own expense so as to match the existing structure /surface and finishes to entire satisfaction of Engineer in Charge without any extra cost to Govt. The unserviceable materials shall be disposed off as directed and the site is left clean land tidy.

8.2 Contractor shall take all precautions regarding safety of workmen during execution. The contractor shall take permission while on work for disconnection all electric connections if required before execution. Nothing extra shall be admissible in the event of miss- happening/causality.

8.3 Any serviceable materials other than those listed in the Credit Schedule retrieved from demolition /dismantling shall be the property of the department and contractor shall be responsible for the return of the same to store yard of the GE. The contractor shall not be allowed to take away credit materials until and unless full recovery is made.

(SIGNATURE OF CONTRACTOR)

DATED _____

**DCWE (CONTRACTS)
FOR ACCEPTING OFFICER**

SOURCES OF MATERIALS**Appendix 'A'****(LIST OF MATERIALS FOR LOCAL ORIGIN TO BE INCORPORATED
IN WORKS, FOR GUIDANCE ONLY)**

S/NO	NAME OF MATERIALS	SOURCES OF MATERIALS
1.	Coarse Aggregate for all RCC and plain cement concrete works.	Chandigarh/Pathankot/Randhisar
2.	Sand for all RCC and PCC work	Chandigarh/Kolayat/ Pathankot/ Randhisar
3	Sand for plastering, pointing and Brick work	Ghaggar sand near Chandigarh/ Kolayat
4	Bricks and brick tiles	Best quality locally available
5	Stone for soling	Randhisar/Chandigarh/Jhunjhunu/ Pathankot
6	WBM/crushed stone aggregate	Randhisar/Chandigarh/Jhunjhunu

Notes :-

- (a) Sources of materials shall be as given Serial 1 to 6 above or in the vicinity thereof. The tenderer shall enquire the actual location of source before submitting his tender and no additional payment shall be made on account of any misunderstanding of its distance from site of work.
- (b) Materials from source listed above, shall only be used. In the event of non availability, use of alternatives shall be decided by the Accepting Officer.

Signature of Contractor**DCWE (Contracts)
For Accepting Officer**

APPENDIX 'B'

MAKES OF PRODUCTS TO BE INCORPORATED IN WORK

Ser. No.	DESCRIPTION OF ITEM	<u>NAME OF FIRMS</u>	BRAND
1	2	3	4
1.	Bitumen	IOC, BPCL, HPCL	
2.	Hot applied thermo-plastic road marking paint	(a) M/s Shivalik Prismo India Pvt Ltd 409, ITL Twin Tower B-9, Netaji Subhash Place Ring Road, Pitampura New Delhi- 110035 (b) M/s Asian Paint (India) Ltd A-1/By 1 st Floor Main Mathur Road Mohan Co. Op. Industrial Area Badalpur, New Delhi - 110044	

Notes:

- (i) Makes specified in Schedule 'A' (BOQ) shall be provided when makes are mentioned in Schedule 'A' (BOQ).
- (ii) Makes specified in Particular Specifications shall be provided when no makes are specified in the Schedule 'A' (BOQ).
- (iii) Makes/brands/manufacturers of materials/items not mentioned here-in-before but required in the work shall be of 1st quality /ISI marked/shall be in HQ E-in-C Branch/ HQ CEWC latest approved list of makes & shall be approved by GE.

SIGNATURE OF CONTRACTOR
DATED _____

**DCWE (CONTRACTS)
FOR ACCEPTING OFFICER**