

MILITARY ENGINEER SERVICE**CHIEF ENGINEER (A&N) ZONE**
BRICHGUNJ, JUNGLIGHT PO, PORT BLAIR-744 103**NAME OF WORK: DETAILED ENGINEERING CONSULTANCY SERVICES FOR PROVISION OF TECH BUILDINGS/STORAGE ACCN AND SERVICES AT PORT BLAIR****CONTENTS**

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SIGNATURE OF CONSULTANT

JT DIRECTOR (CONTRACTS)
FOR CLIENT

Tele : 03192- 286121
email: e8ceanz@nic.in

Headquarters
Chief Engineer A&N Zone,
Military Engineer Services
Birchgunj, Junglighat Post,
Port Blair - 744 103

801168/ 85 /E8

15 Jun 2018

M/s _____

**DETAILED ENGINEERING CONSULTANCY SERVICES FOR PROVISION OF TECH
BUILDINGS/STORAGE ACCN AND SERVICES AT PORT BLAIR**

Dear Sir(s),

1. Tender documents in respect of above works are forwarded herewith as uploaded on the site www.eprocuremes.gov.in.
2. Tender will be received online by ACCEPTING OFFICER upto 1500 hrs on the date mentioned on the site. No tender will be received in physical form and any tender received in such manner will be treated as non bonafide tender.
3. Tender will be opened on due date and time fixed for receipt of tender in the presence of tenderers or their authorised representatives, who have uploaded their quotation bid and who wish to be present at the time of opening the tenders. Tender received later than the due date and time of receipt will not be considered.
4. Your attention is also drawn to instruction on filling and submission of 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 **the date mentioned**. You are requested not to write piece meal points and forward your points duly consolidated before due date.
5. Unenlisted 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 alongwith EMD and tender fee on e-procurement portal and submit the physical documents in the office of HQ Chief Engineer (A&N) Zone Birchgunj, Junglighat Post, Port Blair – 744 103 within time limit specified in NIT. Inadequacy/deficiency of documents shall make the bid liable for rejection and in such event BOQ shall not be opened.
6. Tender from contractor having not executed standing security bond and standing security deposit in any MES formation shall be accompanied with EARNEST MONEY mentioned in Notice of Tender, failing which the tender will be treated as non-bonafide. Such contractor 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 and tender fee on e-procurement portal and submit physical documents in the office of CE (A&N) Zone.
8. The contractor must ensure that the tender on the proper form is uploaded in time as the Accepting Officer will take no cognizance of any quotations offer received on fax and/or email from tenderer 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 (Part –I and Part –II) be uploaded, if necessary, sufficiently in advance of the last due date and time fixed for receipt of the tender.
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 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. Tenderer is advised to cross check his quotation in the BOQ after uploading and before the Bid closing time & date. If he fails to quote his rate for any item/items, his overall quotation shall deem to include for cost of execution of these items also to the extent of quantities mentioned in BOQ. In this connection bidders' attention is drawn towards amendment No. 21 (c) (ii) to Condition 6-A(A) of IAFW-2249. No representation on this account shall be entertained.

Yours faithfully,

(Prakash S Jaiswal)
Jt Dir (Contracts)
For Accepting Officer

Signature of Consultant/Contractor

DETAILED ENGINEERING & PROJECT MANAGEMENT PRINCIPLES
FOR THE SCOPE OF SERVICE TO BE RENDERED

1. To facilitate quality construction of all buildings/structures including allied infrastructure facilities for the Armed Forces within the stipulated time, cost and conditions.
2. Scope of services of the consultant shall be Pre-Construction phase. However clarification on drawings and further amendments shall be rendered by the consultant without any extra cost during the execution stage.
3. Following aspect shall be considered and duly covered in the detailed project report (DPR) submitted by the consultant:-
 - (a) Technical Parameters covering the following keeping in view the environmental safeguards including permissions/clearances from local authorities to ensure the approval of proposed scheme/structures at each site. Any payment to local authorities in this regard shall be reimbursed by the Client on production of official receipt by the consultant.
 - (b) Detailed Survey, contour/block levels plans, soil investigation, roads, sewage, area drainage layout and network and detailed architectural and structural drawings of various structures proposed by the consultant.
 - (c) Hydraulic design details duly certified by the consultant. These design details shall be got proof checked through any of the IITs / IISc. Cost of the same shall be included in the tendered cost.
 - (d) Preparation of Rough cost estimate of proposed buildings based on SOA 2009, DWP 2007, PA rates circulated by the E-in-C's Br available with MES , Accn Satement Part-II, AEs, including Rough cost Estimate for external B/R & E/M services considering preparation & submission of proposal of proposed water, electric supply lines to obtain necessary approval of local PHED/Electricity Board for elctricity as well as water connection for proposed project from nearest tapping point to proposed substation, pump house, UG sump & OHT.
 - (e) Preparation of plans in respect of Ext water Supply, Ext Elect Supply , Sewage & area drainage system including Voltage drop, friction loss, head loss & relevant sewage calculation. Necessary clearance/approval certificate from various local Govt authorities like PHED/Electricity Board, forest department, panchayat samiti and environment ministry etc for Arch drgs in respect of Ext Elect supply, Ext Water supply & Sewage disposal systems will be taken by the consultant from local authorities without any extra amount for liasoning for obtaining permission & connection for water & electric supply and necessary certificate will be attached to the DPR.
 - (f) Detailed specifications of structures, service and finishes.
 - (g) Type of materials to be used in construction.
 - (h) Quality Assurance check lists (Job formats) for major activities.
 - (j) Yardstick for payment should be supported by Bill of Quantities.
 - (k) Estimates of all works shall be as per SSR-2010 of MES. If certain items are not available in SSR-2010 of MES then the market rates shall be taken for working out the rates.
 - (l) Any other details as deemed necessary or any such details as spelt out by the HQ Chief Engineer (A&N) Zone during currency of contract.

SIGNATURE OF CONSULTANT

Jt Director (Contracts)
FOR CLIENT

INSTRUCTIONS ON 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, alongwith their tender :-

- (a) Deposit at Call Receipt from a Scheduled Bank in favour of Garrison Engineer concerned
- (b) Receipted Treasury Challan, the amount being credited to the Revenue Deposit of Garrison Engineer.

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 wants to lodge 'EARNEST MONEY' in any other form allowed by MES, a confirmation about its acceptability will be obtained from the Accepting Officer well in advance of the date and time of receipt of the tender. Earnest Money shall be submitted in the name of concerned GE.

NOTES : Earnest Money in the form of cheque/Bank Guarantee etc will not be accepted. NON-SUBMISSION OF EARNEST MONEY WILL RENDER THE TENDER AS NON-BONAFIDE AND CONSEQUENTLY LIABLE TO BE IGNORED.

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, failing which the sum shall be recovered from the 1st RAR payment or from the Final bill (See Condition 22 of GCC (IAFW-2249)).

3. **CONTRACTORS ENLISTED WITH CHIEF ENGINEER SOUTHERN COMMAND AND WHO HAVE EXECUTED STANDING SECURITY BOND AND DEPOSITED STANDING SECURITY DEPOSIT BUT OF LOWER CLASS**

In case the tender 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 '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, 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 CE SOUTHERN COMMAND**

Contractors whose names are on the approved list of any MES formation i.e. other than CE Southern Command and who have deposited Standing Security and have executed Standing Security Bond may tender without depositing Earnest Money with the tender and if the Accepting Officer decides to accept the tender, 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, 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 tender will only be accepted in the electronic form. 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 Tender shall be forwarded on 'eprocuremes.gov.in' portal on or before the bid closing date mentioned in the tender. No tender in physical form will be considered.

5.3 Tender should be DIGITALLY signed using valid DSC . All pages of tender documents, corrections/ alterations shall be signed/initialled by the tenderer after acceptance.

5.4 Drawings must be returned duly initialled by the tenderer with tender documents in separate envelope indicating his name and address.

INSTRUCTIONS ON FILLING AND SUBMISSION OF TENDER Contd...

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. Contractor shall sign all drawings forming part of the tender. Any tender, which proposes alterations to any of the conditions whatsoever, is liable to be rejected.

5.6 The tender shall be accompanied by a scanned copy of Power of Attorney in favour of the signatory to the tender documents. In case the signatory himself is the sole proprietor, 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, 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. An 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 signing the tender on behalf of another partner(s) or on behalf of a firm or company shall attach 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 by 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 his to sign tender in pursuance of which tenders are being signed 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 submitted 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 laid down in its Memorandum & Article of Association.

5.8 Bid (cover 1 & 2) shall be submitted online well in time.

5.9 The contractor shall employ Indian Nationals after verifying their antecedents and loyalty. Attention is also drawn to special condition 3 referred hereinafter.

5.10 Tenders will be opened in the presence of tenderers on the due date and time fixed for receipt of tender. Tenderers who submit 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.

5.11 The tenderer shall quote his rate on the BOQ file only. No alteration to the format will be accepted or the bid will be disqualified.

5.12 In case the tender 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. In case a tenderer has to revise his offer, he can do so through the eprocuremes.gov.in site only before the bid closing time and date.

6. Department may issue amendments/errata in form of corrigendum to tender /revised BOQ to the tender documents before due date & time of submission of tender. The tenderer is requested to read the tender documents in conjunction with the errata/ amendments, if any, issued by the department.

7. The tenderer will not make, of the own, any alteration in tender documents issued to him by the Department. In the connection tenderers special attention is drawn to Para 10 of notice of tender. It is expressly brought to the notice of the tenderers that if he makes any alteration in tender documents and does not specifically bring out the alteration to the notice of the Accepting Officer, through a letter along with the tender and his tender is accepted by the Accepting Officer, the alteration(s) made by the tenderer shall be deemed to become null and void and the original provisions in the tender documents as originally made by the department or amended subsequently through amendments to tender documents issued by the department shall hold good and the contractor will not have any claim on this account.

INSTRUCTIONS ON FILLING AND SUBMISSION OF TENDER Contd...

8. In the event of lowest tenderer revoking his offer or revising his rates upward/ offering voluntary reduction, **after bid submission end 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 for depositing the amount through MRO. Issue of tender to such Contractors shall remain suspended till the aforesaid amount equal to the earnest money is deposited in Govt Treasury. In addition, such tenderer and his related firm shall not be issued the tender in second call or subsequent calls. Reduction offered by the tenderer on the freak high rates referred for review shall not be treated as voluntary reduction.
9. The client will not be responsible for any expenses or loss which may be incurred by any tenderer in the preparation of tender, in providing clarifications, attending discussions and conferences in connection with this tender.
10. The Tenderer shall conform to the laws of Union of India and his attention is drawn to the Laws governing Employment. All arrangements which affect the engagement, transport, paying, feeding and housing of labour and other matters connected therewith, shall be subject to the Regulations and Codes of India in force or which may be made by the competent authorities from time to time during the period of the Contract.
11. The tender shall remain open for acceptance for a period of **Ninety (90)** days from the date specified for its submission.
12. These instructions shall form part of the contract documents and shall be signed and returned along with the tender.

Signature of Contractor

Jt Dir (Contracts)
For Accepting Officer

MILITARY ENGINEER SERVICES
NOTICE OF TENDER (NOT)

1. A tender is invited for (see appendix 'A').
2. The work is estimated to cost (see Appendix 'A'). This estimate, however, is not a guarantee and is merely given as a rough guide and if the work cost more or less, a tenderer will have no claim on that account. The tender shall be based on (see Appendix 'A').
3. The work is to be completed within (see Appendix 'A') in accordance with phasing, if any, indicated in the tender) from the date of handing over the site, which will be on or after (see Appendix 'A').
4. Normally contractors whose names are on the MES approved list for the area in which the work lies, and within whose financial category the estimated amount would fall, may tender but in case of term contracts, contractors of categories SS to E may tender. In case, where the tender amount is in excess of the financial limit of the contractor and the Accepting officer decides to accept the tender, in which event the tenderer 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 without depositing Earnest money along with the tender and if the tender submitted by such a tenderer 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, 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 shall be submitted 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 for the same contract as separate competitors. A breach of this condition will render the tenders of both parties liable for rejection.
5. The Office of HQ Chief Engineer (A&N) Zone, Birchgunj, Junglighat Post Port Blair - 744 103 will be the Accepting Officer here in after referred to as such for purpose of the contract.
6. The Tenders/bids shall be uploaded on the eprocuremes.gov.in site in two packets i.e the Technical Bid and Financial Bid upto the last date & time of submission of bids indicated in **NOT** therein. Bids shall be opened at time & date mentioned on www.defproc.gov.in.
7. The bidders shall upload documents pertaining to **Cover I i.e. 'T' bid** to enable them to qualify for **Cover II ie Financial bid** . **However hard copies of documents of 'T' bid** must be submitted to HQ Chief Engineer (A&N) Zone, Birchgunj, Junglighat Post Port Blair - 744 103 so as to reach this office on or before the date mentioned in NIT uploaded on website eprocuremes.gov.in. Cognizance shall be taken of those bidders only who have applied online . DD towards cost of tender is refundable in case T bid is not accepted/admitted resulting in non-opening of 'Q' bid. The applicant contractor shall bear the cost of bank charges for procuring and encashing the DD shall and he/she will not have any claim from Government whatsoever on this account.
8. Tender form and conditions of contract and other necessary documents is available on E-tendering site for download. However General Conditions of Contract (IAFW-2249) and errata and amendments thereto, Schedule of minimum fair wages and MES SSR (Part –I and Part –II) are not uploaded with tender documents. Notwithstanding this, all such documents shall form part of contract agreement in case the tender is accepted. (See Appendix `A').

NOTICE OF TENDER (CONTD...)

9.1. In case of contractor who has not executed the Standing Security Bond, the tender/bid shall be accompanied with by Earnest Money amounting to (see appendix 'A') in the form of deposit at call receipt in favour of Garrison Engineer (see appendix 'A') by a scheduled Bank or in receipted treasury Challan the amount being credited to the revenue deposit of the Garrison Engineer (see appendix 'A'). Scanned copy of earnest money shall form part of cover/packet 1('T' bid).

9.2. 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 tender/bid without depositing earnest money along with the tender; but if the Accepting Officer accepts the tender, 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, 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.

9.3. A contractor who has executed standing security Bond but not for the appropriate category 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, 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, the amount of additional security deposit shall be recovered from such payment.

10.1. The GE will return the Earnest Money wherever applicable to all unsuccessful tenderers by endorsing an authority on the deposit receipt for its refund, on production by the tenderer a certificate of the Accepting Officer that a bonafide tender (vide condition 16 here in after) was received and all documents were returned.

10.2 The GE will either return the Earnest Money to the successful tenderer by endorsing an authority on the deposit 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.

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

12. Any tenderer 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.

13. The submission of bid by a tenderer implies that he 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.

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

15. Tenderer must be very careful to upload a bonafide tender failing which the Accepting Officer, at his absolute discretion, reserves the right of forfeiting a portion of earnest money, security deposit or security bond amount (Not exceeding the cost of tender documents) (see Appendix "A") deposited by tenderer. A bonafide tender must satisfy each and every condition laid down in this notice.

NOTICE OF TENDER (CONTD...)

16. Invitation for applications for issue of tender does not constitute any guarantee for validation of 'T' bid for downloading tender/opening of finance bid to applicant even to enlisted contractors of appropriate class and to applicants merely by virtue of enclosing DD and the Accepting Officer reserves the right to deny tender (not validating the 'T' bid) to any applicant. 'T' bid validation shall be decided by the Accepting Officer based on, eligibility criteria as stipulated in Appendix 'A' to **NOT.**, The Accepting Officer shall consider bids uploaded up to the date and time fixed for the same. No cognizance will be given to any application or request received in any form other than uploaded bids. The applicant/contractor will be informed regarding non-validation of 'T' bid assigning reasons therefore. The applicant/contractor if he so desires may appeal to the next higher Engineer authority viz CE Southern Command on email id *dydrcontceengrpl-mes@nic.in* with copy to the Accepting Officer on email id. The decision of next higher engineer authority shall be final and binding. No appeal/representation shall be entertained in respect of applications received after the due date of receipt of applications/ extended date of receipt of applications. The decision of the next higher authority shall be final and binding. No applicant/contractor shall be entitled for any compensation whatsoever for rejection of his application.

17. The Accepting Officer reserves the right to accept a tender submitted by a Public Sector Undertaking, giving a purchase preference over other tender(s) which may be lower, as are admissible under the Government Policy. No claim for any compensation or otherwise shall be admissible from such tenderers whose tenders is rejected.

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

19. This notice of tender (**NOT**) including Appendix 'A' shall form part of the contract.

Signature of contractor

Jt Director (Contracts)
For Accepting Officer

APPENDIX 'A' TO NOTICE OF TENDER

1	Para 1, Name of work	“DETAILED ENGINEERING CONSULTANCY SERVICES FOR PROVISION OF TECH BUILDINGS/STORAGE ACCN AND SERVICES AT PORT BLAIR”
2	Para 2, Estimated Cost	Rs 429.00 lakh (At Par Market)
3	Para 3, Period of completion	12 (Twelve) Months
4	Para 7, Cost of tender	Rs 2000/- in the shape of DD/Bankers cheque from any schedule Bank in favour of GE (P) North Port Blair and payable at Port Blair.
5	Website/portal address	www.defproc.gov.in and www.mes.gov.in
6	Para 2, type of contract	The tender shall be based on specifications, IAFW-1779 - A and GCC (IAFW-2249) with Schedule 'A' (list of items of work). The tenderers are required to quote their rates against each item of Schedule 'A' in BOQ.
7	Information&Issue details:	
	(a) Start date of downloading of tender	Refer critical dates
	(b) Last date of bid submission	
	(c) Date/time for opening of bids i.e online applications	
	(d) Date of handing over of site	Within 15 days from the date of acceptance of tender (AOC)
8	Eligibility Criteria	
	<p>(a) Minimum eligibility criteria shall be based on:-</p> <p>(i) Past experience of similar completed consultancy works. (ii) Financial Soundness (Solvency and working capital requirement) (iii) Minimum strength of technical manpower</p> <p>The bidder must satisfy the under mentioned minimum eligibility criteria: -</p> <p>1. <u>Past Experience of Similar Completed Consultancy Works (Form 'A') :-</u></p> <p>Experience of having successfully completed similar nature of works such as DPR and Design Engineering and during the last 5 years ending last day of the month previous to the one in which tender has been uploaded, mentioning configuration and type of building in which tender are invited which shall be either of the following:</p> <p>(a) Three similar completed works costing (Consultancy cost) not less than the amount equal to 40% of estimated project cost specified in tender including consultancy for minimum 2600 Sqm area of Ammunition/Magazine Sheds.</p> <p style="text-align: center;">or</p> <p>(b) Two similar completed works costing (Consultancy cost) not less than the amount equal to 60% of estimated project cost specified in tender including consultancy for minimum 3900 Sqm area of Ammunition/Magazine Sheds.</p> <p style="text-align: center;">or</p> <p>(c) One similar completed works costing (Consultancy cost) not less than the amount equal to 80% of estimated project cost specified in tender including consultancy for minimum 5200 Sqm area of Ammunition/Magazine Sheds.</p>	

Note:-

(i) The past experience in similar nature of consultancy work shall be supported by certificates issued by an officer not below the rank of Executive Engineer. In case the work experience is of Private sector experiences certificate shall be supported with copies of Letter of Award and copies of Corresponding TDS Certificates (Form 16A.) Value of work will be considered equivalent to the amount of TDS certificates (Form 16A).

(ii) The value of executed works shall be brought to the current level by enhancing the actual value of work done at a simple rate of 10% of per annum, calculated from the date of completion to last day of the month previous to the one in which tender has been uploaded.

(iii) The definition of similar works is as under: -

“Similar works for Building consultancy works” shall mean **consultancy services for “RCC buildings, allied services, Utilities, Infrastructures including Ammunition / Magazine / Store/Sheds ”**

(iv) The bidder shall fill up the detail in form ‘A’ attached with supporting documents for evaluation of minimum eligibility criteria referred above.

(c) Financial Soundness (Solvency and Working Capital Requirement)

(i) The bidders’ must have solvent upto Rs. 2.00 Crore or financially sound for engagement upto Rs.7.50 Crore.

(ii) The bidder shall upload a solvency certificate from his Bankers on the format as per Form ‘B’. The certificate shall indicate the code number of the Bank, Name, Designation and Personal code number of the signatory to certificate complete postal address and telephone number of branch.

(iii) The working capital of bidder shall also not be less than Rs. 30.00 Lakhs. Working capital certificate from nationalized/schedule bank shall be uploaded as per Form ‘C’ The working capital shall be judged from balance sheet/certificate of bank/bank statement for last 06 months/over draft facility from bank/fixed deposit receipts with bank.

(d) Minimum Strength of Technical Manpower

(i) The consultant shall have minimum strength of 15 Qualified Graduate/Post Graduation Architect/Engineer as defined herein after on its regular roll. The age of technical personal shall not be more than 60 years except Architects. The age of Architects and Billing Engineer shall not be more than 65 years.

Ser. No.	Qualification & Experience	Minimum Number
1	M. Arch/M. Plan/ Master in Urban Design with minimum 15 years experience	1
2	B. Arch and registered with Council of Architects and minimum 05 years experience	3
3	Civil Engineer (Degree Holder) with minimum 15 year experience	1
4	Civil Engineer (Degree Holder) with minimum 05 year experience	2
5	Structural Engineer (M Tech in Structural Engineering) with minimum 10 year experience	2
6	Degree in Electrical Engineering with minimum 08 year experience	1
7	Degree in Public Health and Environment Engineering with minimum 08 year experience	1
8	Safety and Environment Specialist	1
9	Diploma qualified with 10 to 15 years experience on Total Station and Auto Cadd	3
	Total	15

Methodology and Work Plan The firm will be required to submit an undertaking that the methodology and work plan for the project will be decided by the consultant in consultation with **user/PMG** and employer as per stipulation in the construction contract agreement for which the consultancy services are contemplated. It will be ensured that the work plan and methodology prepared is in compliance to requirement.

APPENDIX 'A' TO NOTICE OF TENDER CONTD...

9	Tender issuing and Accepting Officer	HQ Chief Engineer (A&N) Zone Birchgunj, Junglighthat Post, Port Blair – 744 103
10	Executing agency	GE (P) North Port Blair
11	Earnest Money	Rs 5,04,000/- in favour of GE (P) North Port Blair in the shape of Call Deposit Receipt from any Scheduled Bank, Bank Guarantee Bond not acceptable
12	Possession of documents by contractor & SSR to be followed	MES Standard Schedule of Rates 2009 specifications (Part-I) and 2010 (Rates) (Part-II)

Notes :

- (a) Bids not accompanied by requisite DD/Bankers Cheque towards cost of tender shall not be considered.
- (b) All bidders/applicants shall submit a list of ongoing consultancy works in hand duly signed by auth rep of the firm in the format shown in Form 'A' below.
- (c) Consultants registered with MES will upload following documents for checking eligibility:-
- Approval / Registration letter of consultant.
 - Document as per note (b) above.
 - Scanned copy of DD of cost of tender and earnest money.
- (d) These consultants shall also submit scanned copy of earnest money and documents listed in note (c) (iii) above.
- (e) DD towards cost of tender and earnest money are also to be forwarded in physical form (hard copies) **to be received by this HQ within 05 days of the date & time of opening of technical bid.** In case of non-receipt of DD & earnest money in physical form, financial bid (envelope- II) shall not be opened.
- (f) In case of rejection of technical/prequalification bid, consultants may appeal to next higher Engineer authority i.e Chief Engineer Southern Command Pune on email dydrcontceengrpl-mes@nic.in against rejection, whose decision shall be final and binding. However consultants shall NOT be entitled to any compensation whatsoever for rejection of technical/prequalification bid.
- (g) The Accepting Officer reserves his right to accept a tender submitted by a public sector undertaking, giving a purchase preference over other tender(s) to the extent admissible under Govt policy. No claim for any compensation or otherwise on this account shall be admissible from such a tenderer whose tenders may be rejected on account of said policy.
- (h) In case tenderer upload quotation in pre-revised BOQ, the same shall be considered as a willful negligence by the tenderer and their quotation shall be considered ' Non-bonafide'.

Signature of contractor

(Prakash S Jaiswal)
Jt Dir (Contracts)
For Accepting Officer

File No 801168/ 85 /E8

15 Jun 2018

HQ Chief Engineer (A&N) Zone.
Birchgunj, Junglighthat PO
Port Blair – 744 103

Distribution:

- | | |
|--|--|
| (a) HQ CE Eastern Command, Kolkata | (r) GE (I) (P) North, Port Blair |
| (b) HQ CE Western Command,
Chandimandir | (s) GE (I) (P) South, Port Blair |
| (c) HQ CE Central Command, Lucknow | (t) GE (I) 866 EWS, c/o 99 APO |
| (d) HQ CE Northern Command, c/o 56 APO | (u) GE (I) Birchgunj, Port Blair |
| (e) HQ CE South Western Command,
Jaipur | (v) GE (I) Minniebay, Port Blair |
| (f) ADG (OF& DRDO) Secunderabad | (w) GE (I) Haddo, Port Blair |
| (g) CE Chennai Zone | (x) MES Builders Association of India,
Andaman & Nicobar Branch,
c/o Kakolil Trade Agencies,
Kripananda Colony,
School Lines, Port Blair |
| (h) CE Pune Zone | |
| (j) CE Bhopal Zone | |
| (k) CE (AF) Bangalore | |
| (l) CE (Navy) Kochi | (y) MES Builders Association of India
(Regd)
807-08, Sahyog 58, Nehru Place,
New Delhi – 110 019 |
| (m) CE (AF) Ahmedabad | (z) MES Builders Association of India
Plot No : Chandragiri Colony,
Trimulgherry, Secunderabad – 500 015 |
| (n) CE (AF) Nagpur | |
| (o) CE (Fy) Secunderabad | |
| (p) CWE Port Blair | |
| (q) MES Builders Association of India
Southern Region, c/o Shri K Kumar, 25,
Millers Road, Kilpauk,
Chennai – 600 010 | |

Internal

E2 Sec, E4 Sec, E5 Sec and Notice Board.

Case File No 801168/E8

FORM- "A"

DETAILS OF WORKS EXECUTED DURING LAST 05 YEARS

S No	Name of Consultancy Service/ Project & location	Owner or sponsoring <u>organisation</u>	Cost of work in crores	Configuration / Type of buildings	Date of commencement as per contract	Actual date of completion	Litigation/ Arbitration cases which are over and Litigation/ Arbitration cases pending/in progress with details #	Name & address/ telephone number of Executive Engineer/ Project manager or equivalent to whom reference shall be made	Remarks/ Reasons for delay and compensation charged if any
1	2	3	4	5	6	7	8	9	10

Note:-

The applicant shall submit the copy of commencement of work/ work order and completion certificate from owner/employer giving detail of commencement, completion and amount of work for verification.

Indicate gross amount claimed and amount awarded by the Arbitrator.

Signature of Applicant(s)

FORM-"B"

Bank Address and Code No

**FORM OF SOLVENCY CERTIFICATE FROM
NATIONALISED/SCHEDULED BANK**

This is certified that to the best of our knowledge and information M/s Shri/Smt _____ having address _____, a customer of our bank are/is respectable and can be considered solvent upto Rs _____ (Rupees _____)/ Financially sound for any engagement up to Rs _____ (Rupees _____). This certificate is issued without any guarantee or responsibility on the bank or any of the officers.

(Signature)

Name, Designation and Personal Code No of Signatory

Note: In case of partnership firm, certificate to include names of all partners as recorded with the bank

FORM-"C"

Bank Address and Code No

**FORM OF WORKING CAPITAL CERTIFICATE FROM
NATIONALISED/ SCHEDULED BANK**

This is certified that M/s Shri/ Smt _____ having address _____ has/have been maintaining a saving bank account/current account/ fixed deposit account with this branch of bank since _____ and the firm is having working capital of approximately Rs _____ and/ or the firm is enjoying overdraft/ credit facilities up to limit of Rs _____. This certificate is issued without any guarantee or responsibility on the bank of any or the officers.

(Signature)

Name, No & Seal of Bank

IN LIEU OF IAFW-2159 (REVISED-1947)**MILITARY ENGINEER SERVICES**

Tel: 03192 286148
Fax: 03192 286121
e-mail: e8ceanz@nic.in

Head Quarters
Chief Engineer (A&N) Zone,
Birchgunj, Junglighat PO,
Port Blair-744 103

801168/ 85 /E8

15 Jun 2018

**DETAILED ENGINEERING CONSULTANCY SERVICES FOR PROVISION OF TECH
BUILDINGS/STORAGE ACCN AND SERVICES AT PORT BLAIR**

1. Shri / S' Shri of is / are hereby authorised to tender for the above work. The tender is to be uploaded/forwarded on eprocuremes.gov.in portal on or before the bid closing date and time mentioned therein.
2. All documents must be uploaded while forwarding/uploading the bid on abovementioned portal.
3. Any correspondence on clarification concerning this tender shall be communicated as per information available on the e-portal mentioned above by due date.
4. THE PRESIDENT OF INDIA DOES NOT BIND HIMSELF TO ACCEPT THE LOWEST OR ANY OTHER TENDER.

Signature of contractor

Signature of Officer
Issuing the documents
Appointment
Jt Dir (Contracts)

INSTRUCTIONS TO TENDERERS

1. INTRODUCTION

President of India acting through Chief Engineer (A&N) Zone, Port Blair (hereinafter referred to as the Accepting Officer) has decided to bid for providing **“DETAILED ENGINEERING CONSULTANCY SERVICES FOR PROVISION OF TECH BUILDINGS/STORAGE ACCN AND SERVICES AT PORT BLAIR”**

2. TENDER DOCUMENT, CLARIFICATION AND ADDENDUM

(a) Tender Document. One set of above bidding document is issued and uploaded. Transfer of Tendering Document is not permissible.

(b) The tender shall be signed and dated in all places provided for in the documents after acceptance. While submitting bid, the same shall be digitally signed by the authorized representative of the firm using valid DSC.

(c) Clarification Requests by Tenderer. Although the details presented in the tendering document consisting of Conditions of Contract AND Scope of Work have been compiled with all reasonable care, it is the Tenderer's responsibility to ensure that information provided are adequate, clearly understood by him/her and it includes all documents as per Index. Tenderer shall examine the Tendering document thoroughly in all respects and if any conflicting part, discrepancy, error or omission is observed, Tenderer must request clarification within the period of clarification as mentioned in the critical dates mentioned in the online tender details on the website. Such request may be made online or offline.

(d) Confidentiality of Document. Tenderer shall treat the Tendering Document as downloaded by him and contents thereof as confidential and will in no way reproduce it or publish it on any type of domain, online or offline neither will it be copied and forwarded to any third party in any manner.

3. PREPARATION OF TENDER

(a) Applicable Language : The Tender and all correspondences incidental to and concerning the Tender shall be in the English language. For supporting documents and printed literature submitted in any other language, an equivalent English translation shall also be submitted. Responsibility for correctness in translation shall lie with the Tenderer. In case of any conflict for the purpose of interpretation of the Tender, the English translation shall govern.

(b) Financial Proposal: The Tenderer shall quote his rate in the financial proposal (envelope –II in BOQ form (to be uploaded in 'xls' file). **The rate shall include all expenditure incurred towards taxes, statutes, duties, levies, cess and GST.** It shall be also inclusive of mobilization and demobilization of manpower and T&P. All rates set forth in Tenderer's quotation shall be in Indian Rupees.

4. SUBMISSION OF TENDER

(a) One Tender per Tenderer. Tenderer shall submit only one Tender for one tender. A Tenderer who submits or participates in more than one Tender against one tender will be disqualified.

(b) Date Time & Place of submission. Tender must be submitted/UPLOADED by the due date and time mentioned in the Tender or any extension thereof through corrigendum as duly notified by HQ Chief Engineer (A&N) Zone Birchgunj, Junglighat Post, Port Blair – 744 103 on the website www.defproc.gov.in.

Note: - Tender received in physical form or uploaded after the time and date fixed for receipt of Tenders or tenders received through post or mail shall not be opened and returned back to the firm.

INSTRUCTIONS TO TENDERERS (Contd...)**5. TENDER OPENING AND EVALUATION**

(a) Opening of Price part of Tender : A team of officers appointed by Chief Engineer (A&N) Zone will open the Tenders online. If the firm so desires, he may depute his representative duly authorized in writing to attend the Tender opening process in the office mentioned in para 4(b).

(b) Tender Validity : Tender shall remain valid for acceptance for a **period of 90 days** from due date of opening of price bid/financial bid (envelope –II).

(c) Right to accept or reject a Tender: Chief Engineer (A&N) Zone Port Blair reserves the right to accept a Tender other than the lowest and to accept or reject any Tender in whole or part, to annul the Tendering process or to reject all Tenders with or without notice or assigning reasons. Such decisions by Chief Engineer (A&N) Zone Port Blair shall bear no consequent liability of whatsoever nature.

6. AUTHORITIES TO APPROVE VARIOUS ACTIVITIES

The various activities related to the project consultancy shall be completed in the manner as indicated below within the specified period of completion. Various sections of the office of **Chief Engineer (A&N) Zone Port Blair competent to approve these activities** are mentioned below :-

A) SURVEY: (Phase I) Preparation of DPR(Detailed Project Report) including topographical survey ,preparation of layout of proposed accessible and in accessible land to the scale with Total station, required as per necessary software etc. Survey of entire area of 290 Acre (Approx) of Naval Armament Depot at Dollygunj for preparing block levels plan at 2 mtr interval and plotting contours at 1.0m interval and bringing out the topographical features marked with the road,river,nallah,structures and other relevant features at site including finalization of plinth levels of proposed buildings. Land availability certificate will be provided by **Stn Cdr/NAD/DEO/Users/PMG**. Marking of available land on ground will be done by the Consultant in consultation with Nodal Officer and **Stn Cdr/NAD/DEO/ Users/PMG**. Final Survey map giving all details will be prepared by the consultant.

Srl No	Activities	Section of CE (A&N) Zone for Approval
(a)	Conducting digital survey of above mentioned areas using Total Station and preparation of block levels plan at 2 metre interval and plotting contours @ 1.0m interval to access the natural topography of the land showing plinth levels of proposed buildings including calculations for site clearance & development.	E2- (Planning Section)
(b)	Preparation of the Site Plan showing layout (including approval from HQ ANC/ Users/PMG including CFEES/Fire safety Clearance etc) of proposed buildings including position of all traverse and all External B/R and E/M services.	E2, E-4 & E-6 Section
(c)	Any other activities required for Phase-I as decided by GE .	E2, E-4 E-6 Section & GE
(d)	Marking of borehole on site plan (Nos & layout/location)	E2 (Design)

(B) SOIL INVESTIGATION (Phase II):

Srl No	Activities	Section of CE (A&N) Zone for Approval
(a)	Drilling of bore holes & trial pits as per direction of Director (Design)/ SO-I (Design) in any type of soil/ any type of rock as per IS for double/triple storey building, conducting standard penetration test (SPT) as per IS specification or at every change in strata. Conducting laboratory tests as specified in the relevant IS of sample collected and preparation and submission of report soil investigation report in quadruplicate.	E2 (Design)

6. AUTHORITIES TO APPROVE VARIOUS ACTIVITIES (Contd/-)(C) CONSULTANCY WORK FOR ALL BUILDINGS AS PER APPX 'F' : (Phase III)

Srl No	Activities	Section of CE (A&N) Zone for Approval
(a)	<p>Preparation of Rough cost estimate of proposed buildings including internal services like internal electrification/internal water supply/Flame proof fittings and fixtures etc based on SOA 2009, DWP 2007, PA rates circulated by the E-in-C's Br available with MES , Accn Statement Part-II, AEs, including Detailed Estimate for external B/R & E/M services such as Road /Path/Calverts, external sewage disposal including septic tank, soakage pits, area drainage, High security wall/Boundary wall to be constructed based on the ground profile including necessary retaining walls as required based on the land profile, watch tower and connecting perimeter roads , external water supply including including exploration for proposal of desalination plant, CGW report for availability of water, electric supply including fire alarm system/fire detection system/EOT/HOT Cranes, street light/Arboriculture design and layout of central sewage system with STP and external water supply with proposal of pump house, UG sump/OHT and substation for electric supply complete duly certified all the calculations for external services and buildings considering preparation & submission of proposal incl estimated cost of proposed water, electric supply lines to obtain necessary approval of local PHED/Electricity Board for elctricity as well as water connection for proposed project from nearest tapping point to proposed substation, pump house, UG sump & OHT.All buildings shall be designed confirming to STEC Pamphlets including all safety standards for "Blast resistant structures, provn of AC's/AC Plants subject to the different types/category of ammuniton with requirement of temp and humidity to be maintained based on the Users/PMG requirement .Cost of services to be provided for liaisoning & obtaining clearance/permission from various local Govt authorities like PHED/Electricity Board, forest department, panchayat samiti, environment ministry, Environmental clearances for EIA,EMP,CRZ,CFEES etc shall be deemed to be included in unit rates quoted by the consultants.</p>	E2(Planning), E-4 & E-6
(b)	<p>Preparation of Ext water Supply including desalination plant, Ext Elect Supply , Sewage & area drainage system plans including Voltage drop, friction loss, head loss & relevant sewage calculation. Necessary clearance/approval certificate from various local Govt authorities like PHED/Electricity Board, Building regulatory board , forest department, panchayat samiti and environment ministry Environmental clearances for EIA,EMP,CRZ etc for Arch drgs in respect of Ext Elect supply, Ext Water supply & Sewage disposal systems will be taken by the consultant from local authorities without any extra amount for liasoning for obtaining permission & connection for water & electric supply and necessary certificate will be attached to the DPR.</p>	E2 (Planning), E-4 & E-6
(c)	<p>Developing Architectural Drgs on the basis of details of building & RCE complete in all respect showing all architectural details, dimensions etc in mm based on the authorised plinth areas , preparation of Schematic diagram :-</p> <p>(i) Plans at different floors including foundation, traverse & roof in the scale of 1:100</p> <p>(ii) Elevation for all sides front & back showing position of traverse in scale of 1 : 100</p> <p>(iii) Various sections & facade sections as reqd to show all internal features & details in Scale of 1:50.</p> <p>(iv) Details of toilets & bath rooms, staircase, porch in the scale of 1 :50</p> <p>(v) Schedule of finishes showing room provision as per the details provided by E2(Planning)/E6 Section of HQ CE(A&N) Zone Port Blair.</p> <p>(vi) One set of Architectual drawings in hard & soft copy shall be submitted duly approved by Users/PMG and CFEES authorities. Submission of Architectual drawing after approval from Users/PMG and CFEES authorities on gateway tracing paper(95/100gm/Sqm).One set in soft copy & Twenty hard copies after approval from E6 Section of HQ CE(A&N) Zone Port Blair.</p> <p>(vii) Submission of structural drawing after approval and necessary vetting from IIT. Structural design of buildings including earth traverses (VIFT) and necessary vetting by IIT.</p>	E-6,E4& E2 (Planning)

6. AUTHORITIES TO APPROVE VARIOUS ACTIVITIES(contd/-)(C) CONSULTANCY WORK FOR ALL BUILDINGS AS PER APPX 'F' : (Phase III)(Contd/-)

(d)	Preparation of Costed schedule of works for Internal services i.e Electrification, Plumbing & water Supply priced over SSR & ED rate, one set of quantity calculation need to be submitted duly certified/checked by CWE/GE.	E4 & ED Rate
(e)	Any other activities related to Phase-III as decided by GE.	E2, E-6 & E4

(C) DESIGN/SURVEY/ESTIMATES FOR STP/SEWAGE SYSTEM UNDER PHASE-III

Srl No	Stage	Section of CE (A&N) Zone for Approval
(a)	Based on topographical digital survey of areas as mentioned in phase-I using Total Station, and plotting contours @ 1.0m interval to assess the natural topography of the land.	E2 Section & E-4
(b)	Preparation of the layout of existing sewer network with disposal at end point	E-4 & E-2 (Planning)
(c)	Estimation and determination of sewage discharge during peak hours with reference to population load, previous years data and anticipated futuristic load as per standard norms of Manual on Sewage system design	E-4
(d)	Taking spot levels at every 5 m intervals for proposed sewer lines upto sumps including intermediate change points/stations/treatment plants	E-2 (Planning) & E-4
(e)	Preparation of layout of network of proposed sewer lines, their inter connections, drop pits/valve pits, showing details about type of sewers with their design, gradient and self-cleansing velocities to cater a particular quantum of sewage load.	E-2 (Planning) Or E-4
(f)	Detailed calculation for design flow, peak flow and average flows etc including all supporting details and calculations for populations. Assumptions made if any shall be clearly highlighted	E-4
(g)	Recommend size, locations, RL's and average distance of the chambers to ensure no overflow from chambers during peak hours	E-4
(h)	Taking ground levels of proposed sewer lines and branch lines at 5m intervals and submission of level chart	E-2 (Planning) & E4
(j)	Fixing the RL's of junctions of proposed sewer lines with respect to the existing sewer lines	E-4/E- 2(Plg)
(k)	Recommendation on type of sewage treatment plant and technology to be used including its design	E-4
(l)	Soil testing at locations required for various purposes	E-2(Design)
(m)	Design of support block, if required, at low lying area/undulated ground	E-2 (Plg)/E-4
(n)	Preparation of soil strata chart to a depth equal to deepest manhole of 15 m depth (general soil strata in main drain at interval of 100m length and in sub drain at interval of 200m length)	E-2 (Design)
(o)	Recommend design and submit architectural and structural design details for any intermediate pumping installation as considered necessary	E-2 (Design)
(p)	Proposing pumping installations duly marked on scaled site plan with depth of sump wells and proposed pumping arrangement clearly marked	E-4

6. AUTHORITIES TO APPROVE VARIOUS ACTIVITIES(contd/-)(C) DESIGN/SURVEY/ESTIMATES FOR STP/SEWAGE SYSTEM UNDER PHASE-III

(q)	Suggest methods for treatment/ transportation of water for reuse for arboriculture and suggest alternate disposal of raw sewage as well as treated water into nearest civil source	E-4
(r)	Submitting detailed calculations for head and discharge of proposed pumps, complete technical specifications of pumps required for pumping of sewage discharged	E-4
(s)	Submission of BOQ for the proposed sewer network, sewage treatment plant and all ancillary items of work as per scope of work mentioned hereinbefore based on items of SSR duly supported with detailed drawings, calculations and estimates	E-2(Planning)

(C) LAY OUT AND DESIGN FOR RAIN WATER/STORM WATER DRAIN UNDER PH-III

Srl No	Stage	Section of CE (A&N) Zone for Approval
(a)	Initial/recce Survey of Area for RW/SWD	E6 Section
(b)	Level sheet showing ground levels of existing drains at specified interval	E-6 & E-2 (Planning)
(c)	Compilation of hydrological data of last 20 years and Estimation and determination of storm water quantity based thereon	E-2 (Planning)
(d)	Study and preparation of existing drain network and their level of efficacy in disposal of rain water/storm water	E-2 (Planning)
(e)	Calculation of design flow, peak flow and average flow	E2 (Planning)
(f)	Submission of level chart showing GLs of proposed drain and branch lines at specified interval	E-2 (Planning)
(g)	Submission of contour plans of entire area at specified contour interval (CI) and its approval	E-2 (Planning)
(h)	Preparation of proposed drain network including its layout showing main drain and sub drains, their interconnections, drop pits/valve pits, storage reservoirs and end points.	E-2 (Planning)
(j)	Soil strata chart of layout of proposed main drain and sub drains at specified intervals	E-2 (Design)
(k)	Submission of details of recommended size, locations, RLs, gradients, run off velocities and average distance of proposed main and sub drains, drop pits/valve pits, and storage reservoirs and its approval.	E-2 (Planning)
(l)	Submission of proposed method of treatment/transportation and disposal of water for reuse in arboriculture	E-2 (Planning)
(m)	Submission of architectural and structural drawings of main and sub drains, culverts, storage reservoir pits including earth traverse (VIFT) duly vetted by IIT/CFEES authorities.	E-6/ E-2(Design)
(n)	Submission of sketches, graphs and curves showing rainfall vs discharge and discharge vs filled depth in all drains at saturated/steady rainfall conditions	E-2 (Planning)
(o)	Submission of BOQ for the proposed drain network based on items of SSR duly supported with calculations and estimate	E-4 & E2(Planning)

6. **AUTHORITIES TO APPROVE VARIOUS ACTIVITIES (contd/-)****(D) STRUCTURAL EVALUATION/DESIGN AND DETAILED STRUCTURAL DRAWINGS :(Phase IV)**

Srl No	Activities	Section of CE (A&N) Zone for Approval
(a)	Structural evaluation , analysis & preparation of structural drawings as per Approved Arch Drawings : (i) Detailed structural drawings of the footing & foundation ie plan, elevation, section with dimensions in mm for columns including details of sub base for foundation & reinforcement details of pedestal (scale 1 : 50). (ii) Structural details of framed construction (Scale 1 : 50) (iii) Structural details (plan, section & reinforcement detailing) of plinth beams columns, lintel beams, roof beams, floor/roof slab. (iv) Typical reinforcement details of all structural members mentioned in para (i) to (iii) & other reinforcement details as per IS 456-2000 & SP- 34 incl structural notes relevent to IS/SP. (v) Detailed drawings for expansion/ crumple joints if required as per codal requirement.	E2 (Design)
(b)	Design & Drawings shall be got vetted from IITs/IISc.	E2 (Design)
(c)	Necessary approval/vetting from the central/state authorities/agency deptt/ministry/institutes like CRZ Clearances, Forest clearances , Environment clearances, mining/geology , EIA, CFEES , HTL , LTL ,Bathy metric and any other clearances which are required for establishment a complete armament depot as specified.	E-2 (Planning)

(E) ESTIMATION OF QUANTITIES (Phase V) :

Srl No	Activities	Section of CE (A&N) Zone for Approval
(a)	Preparation & Submission of detailed Estimate (on SSR as well as on market rate) folder comprising of Take off, Bill of Quantities (BOQ), detailed Steel calculations, Yard stick for stagewise payments, Market Rate analysis for all buildings listed in Appendix 'F' as per sample estimate available with E8 section of HQ CE(A&N) Zone Port Blair including incorporating revisions and amendments to all drawings.	E8
(b)	Submission of Estimate folder containing detailed estimates as mentioned in SI No (a) above for approval of estimates including take off sheets, steel calculations, bill of quantities (BILL OF QUANTITIES (BOQ)), yardstick for payment purpose and market analysis.	Jt Dir / Dy Dir(Contracts) /SW
(c)	Submission of Final Estimate folder containing detailed estimates as mentioned in SI No (a) above for approval	Jt Dir / Dy Dir(Contracts) /SW

7. The broad scope of consultancy services to be provided is given in Appendix 'A' of Consultancy Agreement (Terms of reference).

8. The **SO-I/Director(Planning)** is a Nodal Officer of the Chief Engineer (A&N) Zone for getting the above-mentioned drawings/details approved. Consultant will be required to approach him while submitting the drawings/details or after for any discussion/clarification as may be necessary on technical issues before according approval. The approval of drawings /details will be accorded by the E2(Des)/E6 section or in his absence the officers heading the sections mentioned above.

9. PERIOD OF COMPLETION

The entire work under this contract shall be completed within **365 Days** from the date of commencement as per WO No 1. **Approximate time period for the work mentioned in above phases is enclosed as Appendix 'G'.**

10. CLIENT'S SCOPE OF SERVICES: The detailed scope of consultant is specified as elaborated in Appendix 'A'. Client shall provide following information /details /services to the Consultant for completing the work. It is clearly understood that the Consultant shall be responsible for obtaining information/details from **Chief Engineer (A&N) Zone clearances from concerned authorities, approval from Users/PMG etc** for ensuring completion of the work in all respects within the time schedule agreed for the Project.

- (a) Land availability – its size, location.
- (b) Type of area and Services for which details are to be prepared.
- (c) Site plan/map showing area to be considered
- (d) Specification to be incorporated.
- (e) Releasing of payments (**RAR**) to the Consultants shall based on certification by **Nodal Officer after obtaining clearances from respective section heads as applicable. However final payment is only after** final certification by the Nodal Officer.
- (f) Approval to all procedures/formats required for due performance of the services by the Consultant mentioned in this agreement and any other requirement necessitated based on discussions.

Note: -

(i) Samples of detailed layout plan along with design, Bill of Quantities of all items and detailed typical drawings / working drawings are available as a guide line in HQ CE (A&N) Zone/CWE/GE offices for inspection. The Tenderers are requested to inspect the same any time during working days at these offices. The responsibility of correctness of BOQs, Estimate, Design and Drawings will however rest on the consultant only. Any changes/improvements in the drawing will be intimated and incorporated only after approval of HQ CE (A&N) Zone.

(ii) The work specified in Phases can be accomplished parallely.

SIGNATURE OF CONSULTANT**Jt Dir (Contracts)
FOR CLIENT**

CONSULTANCY AGREEMENT

This agreement made this _____ day of _____ 2018 between Chief Engineer (A&N) Zone Port Blair (On behalf of the President of India) hereinafter referred to as "The Client" and

M/s _____

having registered office at _____ hereinafter referred to as the 'The Consultant' OR 'The contractor' :

WHEREAS the client proposes to construct various types of structures/services related to buildings and services in Naval area Dollygunj at Port Blair hereinafter referred to as 'the project' and intends to obtain only consultancy services as listed in Clause 1 hereinafter, and the consultant is agreeable to render the said consultancy services on the terms and conditions stipulated hereinafter, it is hereby agreed to by both the Parties as under:-

1. Consultancy services shall be provided by the Consultant as per the Terms of Reference given at **Appendix 'A'**. The consultant shall also obtain and submit all clearances like CRZ clearances, Forest clearances, CFEEES clearances and fire safety clearances etc.
2. The data/information regarding consultancy services required are provided in **Appendix B**.
3. Chief Engineer (A&N) Zone Port Blair is the "Client" as referred to hereinafter.
4. The consultant shall provide and complete the Consultancy Services, as stipulated in **Appendix 'C'** to the entire satisfaction of the Client or his authorized representative, within a period of **365 (Three Sixty Five) days** of conclusion of this Consultancy Agreement.
5. Extension of time may be granted for delays caused which, in the opinion of the Client, were beyond the Consultant's control, provided that the Consultant applies for such extension of time in writing within seven days of the occurrence of any event which caused the delay or likely to cause delay.
6. The consultant shall provide and complete the Consultancy services, to the entire satisfaction of the Client or his nominated representatives and shall carry out the services required in terms of this consultancy Agreement, according to accepted norms of sound engineering practices and conforming to Indian Standard Codes/B.S. codes as appropriate and shall be fully responsible for the technical accuracy, safety and soundness of his design, drawings and specifications, quality assurance of structures and the best possible quality of equipments and other systems of the project, as obtainable. Checking/ approval of drawings, design by the department /any other nominated agency shall not absolve the Consultant from his total responsibility.
7. Design schemes, design calculations and structural designs proposed by Consultant shall be got checked by any Indian Institutes of Technology and other Institutes as mentioned hereinafter under the Consultant's own arrangements, before finalisation of drawings. A certificate to this effect that the designs have been checked and signed by appropriate authority of such an institution not below the rank of Professor in Civil Engineering shall be furnished to the Client by the Consultant.
8. The calculation sheets, drawings, reports and similar documents provided by the Consultant in terms of this Agreement to the Client, shall remain the property of the Client and the Client shall have full right to use them in any manner or for any other purpose, at the Client's sole discretion without the knowledge of Consultant.
9. The consultant shall use the data and other information supplied by the Client solely for the purpose of performing and carrying out his obligations under this Consultancy Agreement and shall not disclose the same to any other person, except to the extent required in performance of the agreement of the project, and shall maintain utmost secrecy.
10. The consultant shall not, without the consent in writing of the Client, publish any article or photographs relating to the project.

CONSULTANCY AGREEMENT (Contd...)

11. For providing the Consultancy Services as stipulated in this Agreement in accordance with provision of **clause 2 to 8** here in before, the Client shall pay fees to the Consultant as specified in **Appendix 'C'**.

12 If the Client requires that the consultant should provide additional consultancy services other than listed in **Appendix 'A' & 'C'** the Consultant shall provide the same at fees mutually agreed.

13. If at any time after conclusion of this Agreement, the Client decides to postpone or abandon the project he may, by giving seven days' notice in writing to the Consultant, terminate this Agreement; provided that if the project or any part thereof is postponed, the Client may in lieu of terminating this Agreement, require the Consultant in writing to suspend the carrying out of his Services under this Agreement, for the time being. If the Client does not require the Consultant to resume performance of Services in respect of any postponed work within a period of **three months** from the date of the 'Client's requirement in writing to the Consultant to suspend the carrying out of his Services', such work shall be considered to have been abandoned and this Agreement shall be deemed to be terminated.

14 If this agreement is terminated in pursuant of **clause 13** hereinbefore, the Consultant shall be eligible for payment of proportionate fees for the portion of consultancy Services already rendered, as assessed by the Client. The Client's decision in this respect shall be final and binding and no other compensation whatsoever shall be payable and admissible.

15. If the Consultant commits any breach of any of the provisions of this Agreement, the Client shall be entitled to cancel this Agreement and on such cancellation, the fees payable shall be proportionate to the Services if any, already rendered by the Consultant as assessed by the Client less 10 % (ten percent). Balance works shall be got executed by client by any means at the consultant's risk & cost. The Client's decision in this respect shall be final and binding.

16. The Consultant shall supply to the Client detailed project report (DPR) for the works as mentioned hereinafter in comprehensive manner including digital survey of complete area to achieve 100% flow of sewage without any stagnation at any pocket and satisfactory performance of the sewage treatment plant including all its components. He will include in the DPR all relevant information, documents and data required for this purpose and also for the purpose as mentioned in Appx 'A' to this agreement . The documents will be submitted in the phases as mentioned BOQ & Appendix 'A' . However consultant may, if technically required, change the staging for one or more documents as per actual sequence followed for the purpose of consultancy services.

(a) Consultant shall deploy state-of-the-art digital apparatus for land survey and topographical mapping which should be able to store data and yield the output in printed form after connecting with printer device.

(b) Consultant shall reveal the source of information on hydrological data and submit duly validated information in hard copies.

(c) Complete six sets of soft and hard copies containing all detailed level sheet, estimate, calculation and data shall be submitted by consultant to the department. The soft copy of details in the form of drawings shall be in DXF format.

Notes:-

16.1 Detailed working drawings shall include:-

- (a) Detailed Line Plan, Architectural & Structural working drawings to the scale 1:100
- (b) RCC Notes.
- (c) Any other relevant details required for construction.

16.2 The design schemes, design calculations and structural designs shall be got vetted from IITs/IISc.

CONSULTANCY AGREEMENT (Contd...)

16.3 The fees stipulated shall inter alia be inclusive of expenses incurred by consultant in getting the design checked/vetted as aforementioned.

16.4 Detailed specifications shall be based on the pattern of standard design.

16.5 Any clarifications related to plans and maps, layout, level charts, contour maps, hydraulic design, architectural design or structural design, if required during execution stage, shall be given by the consultant as and when required by the Client, regardless of the actual period of completion of the consultancy work. Modified or revised drawing(s) as applicable shall be supplied by the consultant at that stage without any extra cost to the client.

16.6 Execution of the project is not covered under the scope of consultancy.

16.7 The tender for main work is to be issued based on the drawings, estimates and BOQ as supplied by the consultant. Hence consultant shall ensure that every care is taken in showing all relevant details in drawings and considering cost of all the elements in the estimation.

17. The consultant shall render a certificate for adequacy of structural design of the buildings catered under scope of work against seismic and other design loads like wind load as per latest IS provisions and in accordance with the format mentioned in **Appendix 'D'** enclosed with tender documents.

18. **EXTENSION OF TIME & COMPENSATION FOR DELAY:-** If the Consultant fails to complete the work on or before the stipulated time as mentioned in Appendix 'A' , he shall, without prejudice to any other right or remedy of Client on account of such breach, become liable for compensation calculated at **0.5% (HALF percent)** of the Consultant's fee stipulated per week or part thereof worked out for the specific item of works. However the same shall not exceed **10% (TEN)** of the Consultant's total fee. If the delay is on account of reasons apparently not attributable to the Consultant or emanating due to a situation which could not have been foreseen by an experienced Consultant resulting in his failure to meet the agreed time schedule, the Consultant shall in writing inform the Client within one week of happening of such event and seek extension of time based on which the Client may grant extension at his sole discretion. Decision of Client shall be final and binding on the Consultant in this respect.

19. **ARBITRATION/LITIGATION:-** All disputes arising between the Client and the Consultant shall be subject to the sole arbitration of a serving Engineer Officer having degree in Engineering or equivalent or having passed Direct Final/Final examination of Sub Division II of Institution of Surveyors (India) recognised by Govt. to be appointed by Engineer-in-Chief or in his absence the Officer officiating as Engineer-in-Chief or Director General of Works if specially delegated in writing by Engineer-in-Chief, Army HQ, New Delhi, whose decision shall be final, conclusive and binding. The Arbitration proceedings shall be in accordance with provisions of the Arbitration and Conciliation Act 1996(as amended in 2015). The venue of the Arbitration shall be Port Blair when the Arbitration should come in effect. The jurisdiction of Court for the subject Contract shall be Port Blair. No dispute shall be referred to arbitration during currency of Consultancy Agreement unless agreed to by both the parties.

20. All payment to the Consultant shall be made through e- PAYMENT by **GE (P) North, Port Blair.**

IN WITNESS WHEREOF the Parties aforesaid have set their hands as shown below:-

(THE CONSULTANT)

THE CLIENT
Chief Engineer (A&N) Zone Port Blair
(On Behalf of the President of India)

Signature of Witness:-

1. _____

2. _____

APPENDIX 'A' OF CONSULTANCY AGREEMENT
(TERMS OF REFERENCE)

1. SCOPE OF WORK

1.1 The scope of work under this agreement caters for complete consultancy services as defined hereinbefore and hereinafter which broadly includes for preparation of detailed project report (DPR) for **CONSULTANCY SERVICES FOR PREPARATION OF DETAILED ENGINEERING CONSULTANCY SERVICES FOR PROVISION OF TECH BUILDINGS/STORAGE ACCN AND SERVICES AT PORT BLAIR**

1.2 The scope will cover the following services :

(A) SURVEY: (Phase I) Survey of entire area of 290 Acre (Approx) as per index plan attached for preparing **spot levels** plan at 2 mtr interval including finalization of plinth levels of proposed buildings. Land availability certificate will be provided by Stn Commander, NAD Dollygunj Port Blair. Marking of available land on ground will be done by the Consultant in consultation with Nodal Officer and NAD Dollygunj Port Blair. Final Survey map giving all details will be prepared by the consultant.

(B) SOIL INVESTIGATION (Phase II): Drilling of bore holes as per direction of **Director/SO-I (Desgin)** for 100mm dia in any type of soil/ **any type of** rock up to 6.0 m deep, conducting standard penetration test (SPT) as per IS specification at 1.5m interval up to 6.0m depth or at every change in strata. Conducting following laboratory tests as specified in the relevant IS of sample collected and preparation and submission of report soil investigation report in quadruplicate :-

(C) CONSULTANCY WORK FOR ALL BUILDINGS AS PER APPX 'A' : (Phase III)

Preparation of Rough cost estimate of **proposed buildings as per approved BPs including internal services like internal electrification/internal water supply/flame proof fitting & fixtures etc** based on SOA 2009, DWP 2007, PA rates circulated by the E-in-C's Br available with MES , Accn Satement Part-II, AEs, including Rough cost Estimate for external B/R & E/M services such as Road /Path/Calverts, external sewage disposal including septic tank, soakage pits, area drainage, **High security wall/Boundary wall to be constructed based on the ground profile including necessary retaining walls as required based on the land profile, watch tower and connecting services like road, external electrification**, external water supply, electric supply, street light/Arboriculture design and layout of sewage disposal with Septic tank, soakage pits and external water supply with proposal of pump house, **UG sump & OHT. All buildings shall be designed confirming to STEC Pamphlets including all safety standards for "Blast resistant structures, provn of AC's/AC Plants subject to the different types/category of ammunition with requirement of temp and humidity to be maintained based on the Users/PMG recommendation** and substation for electric supply complete considering preparation & submission of proposal of proposed water, electric supply lines to obtain necessary approval of local PHED/Electricity Board for electricity as well as water connection for proposed project from nearest tapping point to proposed substation, pump house, UG sump & OHT. Any payment to local authorities in this regard shall be reimbursed by the Client on production of official receipt by the consultant. However, cost of services to be provided for liaisoning & obtaining clearance/permission from various local Govt authorities like PHED/Electricity Board, forest department, panchayat samiti and environment ministry etc shall be deemed to be included in unit rates quoted by the consultants.

Preparation of Ext water Supply, **Ext Elect Supply, fire alarm system/ fire detection system/EOT/HOT Cranes** , Sewage & area drainage system plans **and various electrical and mechanical facilities/services as catered in Appx 'F'** including Voltage drop, friction loss, head loss & relevant sewage calculation. Necessary clearance/approval certificate from various local Govt authorities like PHED/Electricity Board, forest department, panchayat samiti and environment ministry etc for Arch drgs in respect of Ext Elect supply, Ext Water supply & Sewage disposal systems will be taken by the consultant from local authorities without any extra amount for liaisoning for obtaining permission & connection for water & electric supply and necessary certificate will be attached to the DPR.

Architectural Drgs on the basis of DPR & RCE complete in all respect showing all architectural details, dimensions etc in mm based on the authorised plinth areas , preparation of Schematic diagram & Costed schedule of works for Internal services ie Electrification, Plumbing & water Supply priced over SSR- 2010 :

- (i) Plans at different floors including foundation traverse & roof in the scale of 1:100
- (ii) Elevation for all sides front & back showing position of traverse in scale of 1 : 100
- (iii) Various sections & facade sections as reqd to show all internal features & details in Scale of 1:50 .
- (iv) Details of toilets & bath rooms, staircase, porch in the scale of 1 :50
- (v) Schedule of finishes showing room provision as per the details provided by E6 Section of HQ CE(A&N) Zone Port Blair.
- (vi) One set of Architectual drawings in hard & soft copy shall be submitted duly approved by **Users/PMG and local authority** Submission of Architectual drawing after approval from **Users/PMG** on gateway tracing paper(95/100gm/Sqm). One set in soft copy & Twenty hard copies after approval from E6 Section of HQ CE(A&N) Zone Port Blair.

(D) STRUCTURAL EVALUATION AND DETAILED STRUCTURAL DRAWINGS : (Phase IV)

(a) Structural evaluation , analysis & structural drawing as per Approved Arch Drawings :

(i) Detailed structural drawings of the footing & foundation ie plan, elevation, section with dimensions in mm for columns including details of sub base for foundation & reinforcement details of pedestal (scale 1 : 50).

(ii) Structural details of framed construction (Scale 1 : 50)

(iii) Structural details (plan, section & reinforcement detailing) of plinth beams columns, lintel beams, roof beams, floor/roof slab.

(iv) Typical reinforcement details of all structural members mentioned in para (i) to (iii) & other reinforcement details as per IS 456-2000 & SP- 34 incl structural notes relevent to IS/SP.

(v) Detailed drawings for expansion/ crumple joints if required as per codal requirement.

(b) Design parameters shall be as under :

(i) Grade of Concrete : M-30 for bldgs & M-35 for water retaining structure.

(ii) Grade of Steel : Fe-500 D TMT Bars conf to IS-1786.

(iii) Seismic Zone- V

(iv) Basic wind speed : 47 m/s

(v) Floor loads shall be as per codal provisions for the type of bldg.

(E) ESTIMATION OF QUANTITIES (Phase V) : Submission of Estimate on SSR & market rate, Rate analysis & Yard stick for stagewise payments details & costed schedule of works (Bill of Quantities)for all buildings with all internal & External services including incorporating revision and amendments to all drawings. Rate analysis duly supported with price list for all Internal services including preparation of tender documents Phase V will be approved by Dir (Contracts)/SSW.

NOTE : A Board of Officer will be appointed by the Chief Engineer (A&N) Zone for getting the above mentioned details approved. Consultant will be required to approach the Board of Officer while submitting the above details for any discussion/clarification as may be necessary on technical issues before according approval. The approval of details will be accorded by the Boardd of Officer. The consultancy job is divided into 5 phases. The BOO will scrutinise and approve each phase of the work separately. 25 Copies of the DPR (both hard & soft) containing all details, documents, Drgs (as specified from Phase 1 to Phase 5) duly approved by BOO will be submitted to the Chief Engineer.

1.3 The consultant shall note that all Electrical, Mechanical and Civil Engineering related aspects of the scheme shall be planned and designed by the consultant. Complete planning, design calculation, technical specifications, bills of quantities, drawing, sketches, and graphs, curves etc shall be submitted by the consultant. These documents after payment of consultancy bills, shall become property of the department who alone shall have right to make subsequent use of these documents.

1.4 The Consultant shall prepare and provide technical and design engineering service, develop final design and provide detail working drawings in four copies alongwith one soft copy.

1.5 All the works as mentioned in BOQ/scope of work shall be involved in the report submitted by the consultant for the work alongwith estimated cost as under. List given below is not exhaustive and shall be for guidance purpose only :-

(i) Design of sewer lines.

(ii) Technology used for STP including its design.

(iii) Road/path/culvert.

(iv) Fencing with gate of STP Complex.

(v) External water supply & Elect Supply to entire scheme.

(vi) External sewage line

(vii) Area Drainage.

(viii) Run-off to nearest Civil Sources with clearance from concerned Civil Authority.

- (ix) Site clearance & development.
 - (x) Design of buildings/structures by new construction.
2. Any missing details which are required for the Consultancy Services to be rendered by the Consultant shall be furnished by HQ CE(A&N) Zone Port Blair.
3. The Consultant shall submit all preliminary details of the works covered all as specified hereinbefore under Instructions to Tenderers and Consultancy Agreement as per Stages of acceptance/approval of various phases to the concerned section of HQ CE(A&N) Zone Port Blair for approval. After approval of preliminary details/design drawings, final details shall be submitted to by him to HQ CE(A&N) Zone Port Blair.
4. The entire consultancy work shall be completed in all respects within **12 (Twelve) Months** of time. However the Consultant shall be required to furnish any missing details or details of item of work or any clarification/modifications necessitated up to one year from the certified date of completion. The rates quoted by the consultant shall be inclusive of all these aspects and nothing extra shall be payable. These aspects are also deemed to be included in the Scope of Consultancy.
5. The completion certificate will be issued by GE only on satisfactory execution/completion of consultancy services mentioned under the scope of work.

NOTES:-

- (i) Accepting Officer reserves the right to increase or decrease the scope of work during construction stage with mutual consultation with consultants and without prejudice to the total technical responsibility of the consultants.
- (ii) The broad specifications for items of work of the project shall be as indicated in **Appendix B** for guidance and meet the need at the **Users/PMG** end.
- (iii) The consultant shall visit site of work before submitting his bid and shall make themselves aware of all the site conditions, which are relevant to the services to be rendered. The quoted rates shall be inclusive of this aspect and no extra payment is admissible on this account.
- (iv) The work specified in Phases can be accomplished parallelly.

(SIGNATURE OF CONSULTANT)**Jt Director (Contracts)
FOR CLIENT**

6. Scope of Services of the Design Consultant :-

The Scope of Services for the CONSULTANT shall include but not be limited to the following :

- 6.1 Review and supplement, if require, existing reports, surveys, studies, investigations and other data available with the Nodal officer and User/PMGs.
- 6.2 Existing Data, studies, surveys, and investigations
- 6.3 Conduct on-site familiarization and re-validation of existing data, studies, surveys, investigations and other reports already undertaken by the Employer as relevant, and as needed, for proper and thorough design and construction of NAD, NAI and allied facilities. Existing studies, surveys and investigations include, but are not limited to, the following:
 - (a) Topography survey report
 - (b) Geotechnical investigations
 - (c) Flood Study
 - (d) Climatic data(Rainfall , Temperature, Wind ,Tide ,Wave etc)

If determined necessary by the CONSULTANT, and after review and consent of the Nodal officer and User/PMGs, additional follow-on work relating to the above listed studies, may be carried out by CONSULTANT in accordance with relevant applicable standards and codes. In this case, these shall be defined and completed by CONSULTANT at no extra cost to the Employer.

6.4 In case any other new/ additional study, survey, investigation, etc. is required to be undertaken (over and above those already provided by the Employer and/or mentioned above), the CONSULTANT shall first coordinate the requirement with the Nodal officer and User/PMGs and receive approval from the Nodal officer and User/PMGs with respect to the scope and estimated cost. Once approved, the CONSULTANT will prepare the tender documents, take the lead role in procurement of the agency, and supervise any study required to be under taken for execution of works at his own expense. The Employer shall, however, bear the cost of any such additional work.

6.5 Study the Concept Site Plan developed jointly by the Nodal officer and User/PMGs for NAD,NAI & allied works. This conceptual layout does not show all the facilities planned or required for the NAD, NAI & allied works, but is restricted to the major related facilities. The CONSULTANT will review the plan for full understanding of function, relationships, locations and configuration. The CONSULTANT shall identify any improvements or efficiencies that may be gained or may be possible beyond those contained in the concept site plan and report any recommended changes to Nodal officer and User/PMGs for discussion. Once recommendations and changes, if any, are reviewed and approved by the Nodal officer and User/PMGs, the CONSULTANT shall update the NAD,NAI & allied works master plan with respect to any changes in other packages at Site, with coordination from and through the Nodal officer and User/PMGs.

APPENDIX 'A' OF CONSULTANCY AGREEMENT Contd.../-

6.6 Update the Concept Site Plan and submit recommendations for changes in DPR. The final Site Plan shall be a scaled plan which indicates a detailed lay-out of all facilities and their relationships and proximity within the site. The Site Plan shall reflect the proposed contour for site and shall incorporate the sustainability measures, if any. The CONSULTANT shall also review the approved Site Plan on periodic basis during the course of design/ execution of the project and update it, as required, based on any changes approved by the Nodal officer and User/PMGs.

6.7 Develop possible value engineering opportunities and proposals based on a thorough review of the Concept Site Plan. Develop cost and schedule impact for various value engineering proposals for review by the Consultant and consideration by the Nodal officer and User/PMGs.

6.8 Identify and incorporate active and passive sustainability measures including renewable energy strategies to include, but not to be limited to photovoltaics and micro-turbine.

6.9 Develop comprehensive road networks, utilities and services networks including electrical distribution, sewage collection, fresh water, storm water drainage, etc. which interface and are coordinated with adjacent and nearby trunk networks (to be provided by other adjacent contractors). Develop concept grading plan (cut and fill plan) and earthwork optimization plan including ground improvement plan for soil densification works, where and if required.

6.10 Report on Sustainability and Finalization of 'Green Concepts'

6.11 Submission of Sustainability Plan

6.12 CONSULTANT shall study, analyse, and prepare a comprehensive and feasible Sustainability Plan for NAD, NAI and allied facilities, and recommend sustainability measures at overall master plan level and individual building level. The goal of the consultant in this regard is to meet or exceed all applicable industry standards for sustainability and "green" technologies. The Plan shall be developed in consultation with the Nodal officer and User/PMGs. The Plan shall clearly highlight the cost-benefit analysis of various sustainability measures, including renewable energy strategies, with technical analysis, architectural and master planning impacts, life cycle costs, maintenance costs and final recommendations. The CONSULTANT will be required to develop a sustainability plan and shall ensure its successful implementation in consultation with Nodal officer and User/PMGs. The sustainability measures should aim to achieve Indian Green Building Council (IGBC) rating equivalent to GRIHA-3 star rating certification from Govt approved rating agency.

6.13 Regarding renewable energy, the CONSULTANT shall include the measures and concepts to be installed/ constructed with the goal to produce approximately 10% of electrical power to be fed back into the grid. Sustainability measures which influence the site planning, if any, shall be included and identified in the Site

6.14 CONSULTANT shall use integrated project design concept to design all the infrastructure and building services of NAD, NAI and allied facilities. This requires planning and design be initiated with sustainability objectives considered side by side with operational and technical objectives. As the term sustainability itself suggests, the "built environment" planned and designed with this consciously in view, must consider the following:

- (a) Use minimum energy in its functioning by its shape and form

APPENDIX 'A' OF CONSULTANCY AGREEMENT Contd.../-

- (b) Generate its own energy to the extent possible

6.15 The prime consideration of CONSULTANT shall be to establish and achieve the fundamental and most important, passive concepts (a) above before applying higher technology active systems – (b) above. Climatic analysis shall be done based on the prevailing site conditions in order to analyse temperature, solar radiation, wind speed and directions, cloud cover etc. This shall form a basis to identify the best possible climate responsive strategies and integrate passive design strategies enabling the project to enhance its site microclimate and reducing building heat loads.

6.16 The key objectives to be considered for aligning the project's infrastructure design with sustainability shall include, but not be limited to, the following:

- (a) Climate responsive design by incorporating passive design strategies
- (b) Enhanced microclimate for better pedestrian circulation and comfort and reduced heat island effect
- (c) Zero waste water discharge on-site
- (d) Efficient storm water management
- (e) Infrastructure to support energy efficiency and enhanced monitoring of energy consumption (Supervisory Control and Data Acquisition, SCADA)
- (f) Transport and traffic management to ensure minimum pollution at site
- (g) Renewable energy generation
- (h) Efficient waste management
- (i) High Quality of Life for the workforce

6.17 Designs of approved 'Green Concepts'

The CONSULTANT shall undertake planning, design, specifications, estimates, Bill of Quantities of various approved sustainability measures.

6.18 Site Plan to be approved by Director/SO-I(Arch) of HQ CE(A&N) Zone after concurrence from User/PMGs.

- (a) Grass pavers
- (b) Green swales in case of large flows
- (c) Use of paver block/ grass Gird in parking area cycle track, walk ways where practical
- (d) Road side Planters-tree pits (as per Portland Drainage scheme)
- (e) Installation of a Centralised ring main for firefighting
- (f) Install efficient water fixtures to reduce water demands
- (g) Sustainable integrated water management plan for different sites and facilities to achieve water balance.
- (h) De-centralized water and Sewage Systems (where trunk network is not available)

APPENDIX 'A' OF CONSULTANCY AGREEMENT Contd.../-

- 6.19 Building Envelope
- (a) Insulation on external walls
 - (b) AAC Blocks/ Fly Ash bricks/ Siphorex
 - (c) Insulation on Roof
 - (d) Reflective tiles/ paints/ coatings on roof
- 6.20 Lighting
- (a) Efficient interior and exterior light fixtures (CFLs)
 - (b) High efficient interior and exterior light fixtures (LEDs)
 - (c) Occupancy sensors in non-regularly occupied spaces like staircases, corridors, common toilets, etc.
- 6.21 Water Conservation
- (a) Rainwater Harvesting
 - (b) Storage of Rain water where practical
 - (c) Use of recycled water for process water, fire and cooling, washing, gardening, etc.
 - (d) Use of Recycled water for Construction
 - (e) Efficient Irrigation Technology
- 6.22 HVAC controls
- (a) Heating, Ventilation and Air Conditioning (HVAC) VRF Systems and high efficiency controls, motors and HVAC pumps
- 6.23 Renewable Energy
- (a) Solar Exterior Lights
 - (b) Wind Micro-Turbine
- 6.24 Waste management infrastructure including:
- (a) Waste to Energy Systems
 - (b) Organic Waste treatment
 - (c) Recycling and segregation facilities
 - (d) Collection points
- 6.25 Base Exterior Architecture Plan (BEAP), Naval Base, Port Blair
- 6.26 NAD, NAI and allied facilities: - Layout plan architecture concepts shall be coordinated with Nodal officer and User/PMGs, and follow guidelines established for, the Port Blair region through the Base Exterior Architecture Plan (BEAP). The intent of the BEAP is to maintain a consistent architecture style, appearance and theme throughout the Naval Base, Port Blair region.

APPENDIX 'A' OF CONSULTANCY AGREEMENT Contd.../-

6.27 All siting, layout, architectural plans and details, landscaping, exterior features, exterior appearance, roadways, signage, paint, colour and layout plans, etc. shall follow general guidelines provided in the BEAP to be finalized by Director/SO-I(Arch) of HQ CE(A&N) Zone.

6.28 A Camouflage Scheme has been prepared by the Indian Navy with the aim to conceal the identities of these strategic units at Port Blair against an adversary's modern day sensors. This scheme recommends various solutions in terms of requirement of camouflage IR paints, distortion masks, arboriculture and other methods of deception to be implemented for NAD, NAI and allied facilities. CONSULTANT shall incorporate all these recommendations into the design for implementation by the respective work contractor. All the recommendation of the Camouflage scheme shall take precedence over BEAP. Contradiction and conflicts, if any, shall be brought out to the notice of Nodal officer and User/PMGs and suitable solutions shall be discussed and approved.

6.29 Project Scheduling

6.30 The CONSULTANT shall develop a detailed Master Project Schedule showing key elements of work and milestones using Primavera/MS Project software format of the latest version. The Master Project schedule will show all work, and phases of work, completed within the time allowed as contained in the contract and will be submitted to the Nodal officer and User/PMGs for review and consent.

6.31 The CONSULTANT shall maintain subordinate master schedules individually for the NAD, NAI and allied facilities. The Master Project Schedule will include critical path activities.

6.32 In addition, so as to complete NAD, NAI and allied facilities in the earliest possible time and minimize coordination conflicts, the CONSULTANT shall have scheduling expertise on staff to effectively and most efficiently manage and analyse progress, milestones, critical activities (critical path and critical chain), float and buffer. The scheduling tools to be employed shall provide mechanisms for providing reports and notices to management for timely decision making. The Master Project Schedule shall be updated regularly (minimum weekly), and whenever requested, during the project execution.

6.33 The CONSULTANT shall ensure that schedules and progress data is input accurately and at the prescribed frequency into the Project Management Information System (PMIS) system for progress monitoring and reporting in accordance with the requirements detailed. The Project will be managed using PMIS, which is based on a powerful Proliance based IT platform specifically designed to manage large construction projects. The PMIS data for NAD, NAI and allied facilities project will be maintained by CONSULTANT under guidance of Nodal officer and User/PMGs.

6.34 Environmental Management

6.35 The CONSULTANT shall carefully and thoroughly study the Environmental Impact Assessment (EIA) report, the Environment Management Plan (EMP) conditions for environmental and the Coastal Regulation Zone (CRZ) approval given by Ministry of Environment & Forest (MOEF) concerning the NAD, NAI and allied facilities site/ work packages. The CONSULTANT shall ensure compliance with all the conditions of the environmental approval, EIA and EMP and ensure that all subordinate contracts under the cognizance of the CONSULTANT also fully adhere to the same. The consultant will be responsible for the CRZ clearance, forest clearances and other clearances, will obtain the same for the complete project.

APPENDIX 'A' OF CONSULTANCY AGREEMENT Contd.../-

6.36 CONSULTANT will also ensure that all required and proper licenses, permits, and approvals are obtained to perform the full scope of work. This includes, but not limited to, permits and consents from the State Pollution Control Board, and the Ground Water Board. As such the extraction of Ground Water is not envisaged and allowed as per the environmental clearance.

6.37 BLANK.

6.38 CONSULTANT shall ensure that the required plantation, as per the environmental approval and EIA/ EMP, is carried out. If required, the plantation requirements need to be, likewise, incorporated in the respective work contract(s).

6.39 Design of NAD, NAI and allied facilities to be approved by Dir(Design)/SO-I (Design) of HQ CE(A&N) Zone.

6.40 General Requirements: Facilities to be designed.

6.41 The Concept Site Plan illustrating the arrangements and layout of key infrastructure as determined jointly by the Nodal officer, Dir/SO-I(Arch) and User/PMGs . After review by the CONSULTANT of this conceptual layout, if additional opportunities to improve the functional layout are identified then these shall be submitted to the Nodal officer and User/PMGs for review and discussion. This conceptual layout does not show all the facilities planned or required for the NAD, NAI and allied facilities, but is restricted to the major related facilities. A complete list of all facilities is to be included in the DPR.

6.42 It must be understood that with the induction of modern fleet ships, submarines, advances and improvements in shipboard systems (firefighting, fire control, weapons, propulsion, electronics, etc.), or due to change in Scales of Accommodation (SoA) or change in OEM's specification for infrastructure, there may be necessity to make facility changes and/ or adjustments to accommodate and support these advances, including possible modifications, additions to civil infrastructure, fixed equipment, Material Handling Equipment (MHE), crane, interior building layouts, services, utilities and services networks, or others. When and if necessary, the Nodal officer and User/PMGs will ensure that the CONSULTANT is aware of possible changes as soon as practicable. CONSULTANT shall ensure that all such requirements, as and when they arise, shall be incorporated in the respective designs and subsequent work packages without any additional cost.

6.43 Certain process rooms within NAD/ NAI buildings used for maintenance of sensitive components of ordnance would need to have positive pressure, clean environment and anti-static flooring. This is critical to ensure that sensitive components and ordnances are not exposed to any contamination that may cause damage or affect their operational capability. The potential requirement for over-pressure, clean rooms and anti-static flooring shall be evaluated by the Nodal officer and User/PMGs and specific guidance shall be provided to the CONSULTANT during the Design Stage to be captured and incorporated into the final designs by the CONSULTANT.

APPENDIX 'A' OF CONSULTANCY AGREEMENT Contd.../-

6.44 Specific Design Requirements: NAD

Naval Armament Depot: The facilities under NAD are planned in two distinct zones, based on the nature of the operations, functions and activities being carried out.

(a) Explosive Zone to receive, store and maintain various explosives categorized under different classes of hazard divisions in different magazines such as Igloos, Double Bunker Magazines (DBM) and Above Ground Magazines (AGM). The magazines are separated from the store/maintenance houses of armament by a statutory Outside Safety Quantity Distance (OSQD). The safety distances are specified as per STECs. Only explosive magazines have been envisaged to be within this sensitive zone, maintaining the Inside Quantity Distance (IQD) between them depending on Net Explosive Quantity (NEQ) of the explosives stored inside. The facilities which shall be constructed in the Explosive Zone are detailed in Appendix 'E'

(b) Non Explosive Zone to store and maintain non-explosives items. The non-explosive zone has been located beyond the sterile zone of explosives. This area will comprise of the following:

- (i). Storage sheds for non-explosive items.
- (ii). Storage of Petroleum, Oil, & Lubricants (POL)/ chemical, armoury for small arms.
- (iii). Garage for MT vehicles
- (iv). Other facilities not planned to be sited in explosive zone

The detailed scope for the NAD is as given at Appendix 'E'

6.45 BLANK

6.46 The NAD and allied facilities shall have the following additional facilities:

(a) Administrative Area: The administrative area includes the augmentation of the existing Administration block to include facilities including the NAI Room, Training Centre, Library / Information Centre, Gym/ Sports facility on top of the existing building, car/ scooter parking shed and a Lunch room.

(b) Logistic Area: This area gives adequate logistic support for maintenance, testing and repairs of various missiles, associated electronic test equipment, specialist and other dedicated transport etc.

6.47 The detailed scope of the NAI and allied facilities is as per Appendix 'E'

6.48 Specific Design Requirements: NAI

6.49 Naval Armament Inspectorate: The NAI Facility is proposed to be created in the vicinity to NAD so as to provide inspection coverage to armament activities at these two establishments. NAI setup would essentially require infrastructure, test/ proof facilities and man power in aid of technical professional activities like calibration, environmental testing, proof and static firing of rocket motors and missile components. The detailed design and requirement shall be finalized in consultation with the Nodal officer and User/PMGs representative.

The detailed scope of NAI is as per Appendix 'E':

6.50 Utilities and Services Infrastructure:

6.51 This section describes the scope of work for supply and reticulation of all utility services and infrastructure for the NAD, NAI and allied facilities. The utilities to support these areas have to be identified and detailed by the consultant. The CONSULTANT shall undertake a detailed review, planning and designing of the utilities network and related facilities in consultation with Dir (U)/SO-1(E/M).

6.52 The scope of CONSULTANT design efforts shall include problem free interfacing and coordination of required utilities services designs with adjacent trunk services, wherever applicable, and resolving design interface issues with the Nodal officer and User/PMGs and other designers and contractor (s). CONSULTANT shall consider scalability in the designs of all the utilities and services infrastructure for the increased demand. The demand requirements for all these services shall be finalized during the detailed design stage on discussions with Nodal officer and User/PMGs.

6.53 The concept design/ layouts/ demand calculation of services and utilities have been provided in the scope of work; however, CONSULTANT shall be required to come out with the most suitable designs/ layouts/ demand calculation based on a cost-benefit analysis. The same shall be approved by the Nodal officer and User/PMGs.

(a) Power / Electrical

(i). The scope of electrical works for the NAD, NAI and allied facilities includes all civil structures, cabling and equipment for electrical distribution and supply to, and throughout all the buildings. These shall include the 33KV switchboard, 11KV switchboards, LV Panels, Distribution transformers, HV & LV cables, control System, lighting, earthing and lightning protection and all related feeders and cabling system. The complete power/ Electrical system should be using under ground cables only, no any overhead lines to be considered.

(ii). Necessary convertors/ stabilizers/ rectifiers, if required, for stabilized and converted power needs to be installed in the respective workshops/ laboratories.

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(iii). The new Distribution Sub Station (DSS) / Compact Sub Station (CSS) shall receive power from the existing 33KV Line (Double Pole Structure) via outdoor cable trenches from the DP structure to the 33 KV indoor switchboard.

(iv). CONSULTANT shall have to take cognizance of the existing on-ground condition of the power supply system whilst designing the new DSS/ CSS and distribution network and ensure problem free interface.

(v). The CONSULTANT shall also verify the relevant detailed design parameters such as connection point location, connection level, load requirements, switching etc. The CONSULTANT shall ensure effective and thorough coordination, interface and sharing of information with adjacent works contractors to ensure problem free connectivity and joining to trunk utilities and services designed and installed by others.

(vi). The design of the power supply system has to be in sync and in accordance with the Other Works designs. The design shall follow the concept being adopted in the overall design of the Other Works Package.

(b) Fire Services

(i). The fire protection and fire services solutions planned for NAD, NAI and allied facilities shall be reviewed by CONSULTANT in detail to ensure compliance with relevant codes and standards taking into account operational procedures and constraints.

(ii). The NAD, NAI and allied facilities have an existing external fire hydrant main, with hydrant outlets and fire hose cabinets for manual firefighting purposes.

(iii). Based on the hazard category of each of the proposed facilities, the hydrants needs to be extended to the new facilities which will be served by existing fire water tanks and fire pumps as well as new fire water tanks and two new fire water pumps considered in this work from filtered water supply facilities. In addition, the proposed buildings and workshops in the NAD, NAI and allied facilities shall be protected with the suitable fire protection systems like:-

- (aa) Wet Sprinkler System (for ordinary hazard facilities).
- (ab) Deluge system for (for high hazard facilities).
- (ac) Hose Reel System / Water Hydrant (Internal & External).
- (ad) Fire / Smoke Detection System.
- (ae) Alarm / Warning system.
- (af) Portable Fire Extinguishers.
- (ag) Static Water Tanks, if required

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(iv). With the augmentation of Fire Fighting Network, the requirement for addition of fire pumps, size of fire water tanks, no. of manual hydrants and extension of hydrant main shall be evaluated by the CONSULTANT and accordingly incorporated in the Design. Also, with the augmentation of the proposed facilities additional main fire pumps, standby fire pumps, and fire water tanks are envisaged to be constructed alongwith the extension of the hydrant network.

(v) The proposed Fire Protection System (FPS) must comply in general to STEC regulations, with exception to specific hazards which are not addressed by the STEC document. In such a case, the guidelines laid down by National Fire Protection Association (NFPA) shall be followed.

(c) Potable Water

(i). The scope of potable water for NAD, NAI and allied facilities package includes all civil structures, mechanical, pipelines and equipment for the potable water distribution and supply, to, and throughout the buildings.

(ii). The potable water services cover the reticulation system within the NAD, NAI and allied facilities including connection between the new proposed and existing water pipelines.

(iii). Augmentation of Potable Water Network shall include additional potable water storage reservoirs, extension of existing reticulation system to the new buildings and facilities and additional pump sets to pump water to the new reservoirs if required. This shall also include addition of 01 new potable water reservoirs each at NAD and NAI and a new pump station at NAI.

(iv). The proposed potable water services will interface with the potable water services in Accommodation and Township Facilities at Site. The CONSULTANT shall verify the relevant detailed design parameters such as connection point location, connection level, size of pipe and pressure etc. and shall base their design and construction methodology on the same.

(v). A perennial stream close to Site, to be identified for potential alternative source of potable water. A study shall be carried out by the CONSULTANT to determine the viability of using the perennial stream to supplement the existing source of potable water for Site.

6.54 Sewerage

(i). Existing buildings shall be connected to the proposed sewerage system and existing septic tanks shall be decommissioned upon completion of the sewage network.

(ii). Domestic sewage from the BNAI and other allied works shall be connected to the proposed centralized sewage system/STP and further connected to Effluent Treatment Plant (ETP). However, if necessary separate package type STP may also be considered.

6.55 Effluent Treatment Plant (ETP)

A new ETP shall be constructed in **NAD,NAI and allied works**. Industrial wastewater from the workshops and test laboratories at AMMUNITION AND GUIDED WEAPON COMPLEX shall be treated at this new Effluent Treatment Plant to the standard, Technical Specifications for Waste Water of the DPRs. The wastewater from the workshops is assumed to contain waste material(e.g. paint chips, paint thinner, rust, grease preservatives/de- preservatives, cleaning agents, grit, emulsified oil etc.) generated during normal operations of the workshops. Requirement of ETP for NAD shall be confirmed during the design stage by the CONSULTANT and accordingly incorporated in the scope of the works contract.

6.56 Treated Sewage/ Recycled Water

(i). The scope of the Treated Sewage/ Recycled Water services covers the reticulation system within the NAD, NAI and allied facilities. All infrastructure required to provide a complete and useable system (such as reticulation and communication pipelines, and related ancillaries including but not limited to valves, fittings and control equipment) to distribute treated sewage/ recycled water to **buildings, static water tanks ,gardens etc** and facilities within Site is in the scope of the CONSULTANT.

(ii). The facilities to be included in the detailed design of Treated Sewage/ Recycled Water service are outlined as follows:

- (aa) 1 new treated sewage pump station including pump sump at suitable flow rate.
- (ab) 1 new treated sewage service reservoir with suitable capacity at NAD.
- (ac) 1 new treated sewage service reservoir with suitable capacity at NAI.

6.57 Low Pressure Compressed Air (LPCA) and High Pressure Compressed Air (HPCA)

(i). The scope of works consists of providing additional compressed air system at NAD, NAI and at allied facilities with new LPCA and HPCA systems to be provided for supplying service air and instrument air to the facilities at NAD, NAI and allied facilities respectively. The service air shall also be used as make-up air to generate high quality instrument air.

(ii) The scope of work shall include LPCA and HPCA systems including filters,Air compressors, receiver tanks, control systems, gauges, piping and reticulation systems, valves and other related works.

6.58 Positive Pressure and Clean Rooms

Process rooms which are used for maintenance of sensitive components of ordnance within NAD, NAI and allied facilities shall require positive pressure and a clean environment to ensure that sensitive components and ordnances are not exposed to any contamination that may cause damage or affect their operational capability. The nos. and specification of these rooms shall be decided at the design stage with the Nodal officer and User/PMGs.

6.59 Storm Water Drainage

(i). The storm water drains in the entire Site shall be adequately designed to carry run-off from the project area to nearby discharge points. A Storm Water management Plan for the overall sites shall be developed by the CONSULTANT for which the inputs shall be taken from the Flood Study available.

(ii). Drainage infrastructure within the Site and related ancillaries shall include, but not limited to, curbs and channels discharging into gully pits, open channels (paved and unpaved), junction pits and manholes, underground pipe network, and cross drainage culverts.

(iii). The limits of the Site storm water package shall include all major and minor storm water facilities including but not limited to aprons, hardstand areas, site perimeter drainage, roadways, road verges, roofed areas, landscaped areas and undeveloped open spaces.

(iv). If required, for drainage issues, coordination with various agencies, such as NHAI, local authorities, etc. shall be undertaken by CONSULTANT with and through Nodal officer and User/PMGs and CONSULTANT shall consider the inputs/ requirements provided by various agencies in its plan and design of site drainage facilities.

(v). Storm water runoff shall be treated to reduce pollutants prior to leaving the site to achieve the applicable standards. The drainage design will include measures for capture or delay of any spills during operation, prior to reaching the receiving watercourses. Storm water within Site will be collected and treated via Gross Pollutant Traps at all major storm water outlets.

(vi). Run-off from areas where hydrocarbon products are handled or small spills routinely fall on paved surfaces exposed to rain shall be treated via oil separation devices. Oil separation devices shall be sized to contain the anticipated spill volume and will be designed to meet the American Petroleum Institute (API) requirements. The devices should be capable of treating 3-month Annual Recurrence Interval (ARI) flow and should be installed with a high flow bypass and flow balancing storage to divert excess flows away from the separator to ensure that it is not overloaded.

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6.60 Rainwater Harvesting

Rainwater harvesting should be considered for water gardening and washing purposes. Appropriate life-cycle cost analysis should be carried out to evaluate the relevant rainwater harvesting techniques to supplement the use of potable water. This should form part sustainability plan to be submitted by the CONSULTANT.

6.61 Building Services and Utilities

All the buildings to be constructed in NAD, NAI and allied facilities shall include all required fittings and fixtures internal to the buildings for water supply, plumbing, sanitation, drainage, lighting, power supply, HVAC, and also external to the buildings in the areas to be developed (parking lots, landscaped areas, hardstands, utility points, etc.) and as per the approval of the Nodal officer/Dir/SO-I(E/M) and User/PMGs

Access Roads

6.62

(i). CONSULTANT shall refer to the 'Other Works' DPR as a reference for further design guidance concerning access roads and parking. Road locations, design, configurations, capacity shall be in accordance with the approved Master Plan, the BEAP, and as per the project requirements.

(ii). As per the approved DPR review report, an alternate access has to be planned and designed to provide a redundant access to the critical ordnance/ ammunition facilities for retrieval of ammunition/ ordnance in case of contingencies. The exact location would be determined at the detail design stage. The alternate route must have the bearing capacity, required turning radii, maximum grade etc. for the planned heavily loaded vehicles.

(iii). NAD and CFA will require road network augmentation and RMSFF will require a separate road.

(iv). A 5.5m wide jeep able bituminous perimeter road is proposed around the Site periphery for patrolling along with an alternate access to Site. The design of the road, perimeter boundary/ security wall and security infrastructure shall be done by the consultant.

(v). Roads connecting Magazines, Workshops, Store rooms and other facilities of NAD, RMSFF and access road through CFA to secluded areas must be designed to cater movement of Heavy Duty Artillery Vehicles.

(vi). The roads from the various logistic stations to the movement area must be designed to facilitate rapid entry in an emergency response situation. The roads must be designed for adequate width, parking space for break down vehicles, desired turning radius and slope.

(vii). Internal road – CONSULTANT shall undertake detailed planning and design of roads (including roundabouts) to be constructed within the NAD, NAI and CFA areas. All the buildings and ancillary structures shall be suitably connected with all-weather flexible road network of appropriate width and required design.

(viii). The roads from the various logistic stations to the movement area must be designed to facilitate rapid entry in an emergency response situation. The roads must be designed for adequate width, parking space for break down vehicles, desired turning radius.

(ix). A traffic analysis shall be undertaken by the CONSULTANT to assess and finalize the design criteria for vehicular roads, roundabouts, intersections and traffic control measures, systems, and devices.

6.64 SCADA Systems

(i). CONSULTANT shall plan and design an advanced SCADA system for all utilities and services, linking to the local system for operations and monitoring at a location at Site and also linking it to the centralized system at Site, to be defined by the Nodal officer/Dir/SO-I(E/M) and User/PMGs.

(ii). The design guidelines interface and performance requirement of the SCADA system shall be defined by the Nodal officer and User/PMGs and the CONSULTANT shall base their designs of SCADA on these requirements.

6.65 Standardization

After facility hand-over and commissioning, the utilities and other facilities across various sites of Project will be maintained and operated by the Military Engineering Services (MES) organisation. To facilitate ease of maintenance across various sites, standardization in design, specifications, procurement and installation is essential and accordingly, CONSULTANT shall coordinate the same with the Nodal officer, User/PMGs and MES.

6.66 Landscaping

There is vast scope of landscaping, arboriculture in the NAD, NAI and CFA areas. An overall landscaping proposal shall be prepared by CONSULTANT, in consonance with the Camouflage and Deception Scheme to address or consider landscaping in vacant spaces, local environmental conditions, soil conditions, site suitability, and as per the project requirements which shall be reviewed and approved by Nodal officer and User/PMGs

6.67 Sustainability measures

The CONSULTANT will propose means and methods to comply with the Employers sustainability and renewable energy goals and objectives. The CONSULTANT shall include in its sustainability planning the measures and concepts to be installed and/or constructed to produce on-site a minimum of 10% of power to be fed back into the electrical grid. The CONSULTANT shall undertake planning, design, specifications, estimates, BOQ of all the sustainability measures incorporated.

6.68 Security and Communication Facilities

CONSULTANT is required to work in close coordination with Nodal officer and User/PMGs for planning, design of the Security and Communications works. As per the planned execution strategy, the electronics equipment and components of Communication and Security package (i.e. Closed-circuit television (CCTV), Optical Fiber Communication (OFC) cabling, cameras, switches, routers, hubs, amplifiers, distribution centers, sensors, detectors, mounting brackets, pedestals, etc.) would be executed/ installed across all sites of Project by a separate works contractor(s) to be appointed by the Nodal officer and User/PMGs as "Base Wide Security and Communications Contractor(s)".

The physical infrastructure and required civil construction for installation of these equipment including, but not limited to, boundary walls, fences, gates, bollards, trunk line conduits, internal building conduits and wiring, electrical outlets (power supply), etc. required for the security & communication package installation shall be constructed by respective works contractor for each site (in this case of the CONSULTANT, this will be the NAD, NAI and allied facilities and allied works contractor).

Note: For clarity, in case of physical infrastructure, typical designs, design requirements and specifications shall be provided by the Nodal officer and User/PMGs and shall be incorporated by the CONSULTANT into their designs. The construction of these physical infrastructures shall be undertaken by the NAD, NAI and allied facilities works contractor in respective package (s).

6.69 Development of designs and drawings

The purpose of this section is to provide design process guidance to the CONSULTANT. These instructions are written for the purpose of assisting the CONSULTANT in the preparation of design documents for NAD, NAI and allied facilities and for construction.

The CONSULTANT is responsible for the complete thorough, detailed and technically correct planning and development of all designs and drawings ensuring that all Employer's goals and objectives are met to produce a fully operational NAD, NAI and allied facilities and works for the Project. The CONSULTANT will also provide master plan review and update

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planning, design, tender preparation and design services during construction services, as part of their design obligations. All design actions of CONSULTANT (including those performed by sub-consultants) and the Third Party Reviewer (TPR) shall be properly and timely entered into the PMIS, as described herein before.

6.70 The Nodal officer and User/PMGs shall undertake high level technical review and vetting of structural design only of selected critical structures prepared by the CONSULTANT. The final list of these critical structures would be decided by the Nodal officer, User/PMGs and CONSULTANT and shall necessarily conform to the following definition:

“Critical Structures” are defined as those structure which:

- (a) Directly support mission critical and primary function of the Base,
- or
- (b) Are of a technical nature, from a civil engineering perspective, as to require specialized design, efforts and specialized engineering expertise beyond what would be considered routine or prevalent in the engineering/design industry.

The selected critical structures for NAD, NAI and allied facilities is as per Appendix 'E'

The CONSULTANT shall coordinate and provide to TPR all other designs/drawings related to the work packages. The Third Party Review of CONSULTANT prepared designs and drawings, shall be undertaken by an independent third party reviewer to be appointed by the Nodal officer and User/PMGs. The TPR agency shall be totally independent from the CONSULTANT core design team and will not in any way participate in the core/ base design effort other than performing the TPR. The CONSULTANT shall conduct regular design coordination meetings with the Nodal officer and User/PMGs, the third party reviewer and the Nodal officer and User/PMGs (or its representatives) where required, to ensure all Nodal officer and User/PMGs's requirements are understood and considered.

Irrespective of the role of Nodal officer and User/PMGs and TPR as mentioned above, for all designs performed by the CONSULTANT under this contract, the CONSULTANT is expected to ensure high quality design through a highly effective and thorough quality assurance and quality control program (QA/QC) as per paragraph described herein before.

6.71 The TPR shall review the CONSULTANT's design submittals for compliance with specifications and scope criteria, and reports on same to Nodal officer and User/PMGs

6.72 During the predesign, design and construction phases of a project, the CONSULTANT will interact and coordinate with a number of agencies, Navy Directorates, end- User/PMGs and other contractors, as required, to ensure full understanding of the Employer requirements, interface requirements, scheduling issues, execution planning, etc. as well as to ensure compliance with Employer and other agency regulations and constraints.

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The CONSULTANT is expected to work proactively, professionally and efficiently with these and other entities to resolve issues and problems with least impact to the project.

6.74 Commencement of Design Work: Upon acceptance of the Letter of Award, the CONSULTANT is authorized to begin execution of design tasks. These shall include:

- (a) Review, validate, supplement, conduct additional studies as discussed
Preparation of Project Management Plan (PMP) and any other required
- (b) plans, for CONSULTANT as detailed.

6.75 Design Submittal Requirements: The detailed required submittals narrative is a part of the Consultant. The Design Submittals list shows many of the requirements; however, the list is not all inclusive. The CONSULTANT shall prepare and maintain a Submittals Register as part of the PMP-(NAD).

- (a) Concept (15 percent) Design Submittal Requirements

- (i). The Design Submission at this stage shall also include a 3D Model which shall show all the important aspects of the design. The Design review shall be done by help of this model. The software tools which may be used to develop this submission may be 3D Max, Tekla, Solid Works, and Revit etc. However, the final Software to be used shall be approved by Nodal officer and User/PMGs.

- (ii). Spreadsheet showing all facilities to be constructed, both vertical and horizontal, all infrastructure and roads, numbered per MES standard. Unit of measure will be shown in area or linear quantity.

- (iii). Draft Basis of Design. Create and submit for review of Nodal officer and User/PMGs an initial list of applicable codes, specification and standards which will be applied by CONSULTANT in the execution of the design.

- (iv). Design Charrette (Workshop). The CONSULTANT will plan and conduct a Design Charrette with Nodal officer and User/PMGs and other entities and representatives, in particular end-User/PMGs, as coordinated with the Employer, Design Management Plan, for example/ guide for Design Charrette process and Report). Multiple design charrettes will be required throughout the design process.

- (v). Block Cost Estimate

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- (b) Preliminary (30 percent) Design Submittal Requirements
- (i). Detailed Required Design Submittals are described in the Nodal officer and User/PMGs's PMP.
 - (ii). The Design Submission at this stage shall also include a 3D Model which shall show all the important aspects of the design. The Design review shall be done by help of this model. The software tools which may be used to develop this submission may be 3D Max, Tekla, Solid Works, Revit etc. However, the final Software to be used shall be approved by Nodal officer and User/PMGs.
 - (iii). The preliminary design submittal is typically a narrative with design analysis and drawings presenting the design. The submittal must contain enough information for the Nodal officer and User/PMGs to understand the functional and technical approach the designer is utilizing to complete the project.
 - (iv). This should also include an updated Utilities Tabulation recapitulating the total utility system connected loads for each utility, from the DPR(s) - electrical, steam, gas, sanitary sewer, water, etc., for progressive development as the utilities design proceeds.
 - (v). Final Basis of Design
 - (vi). Draft list of drawings
 - (vii). Draft Approximate Estimates (AEs)
 - (viii). All the cut and open hill slopes within the catchment area of the project need be protected and stabilized to prevent landslides particularly in times of heavy rainfall. This is essential in the interest of the safety, durability, and sustainability of structures, facilities, human life and the environment. Hill Slope Stability analysis is to be conducted by CONSULTANT, if required, which shall identify areas at various sites that may be at risk and to determine the levels of protections required to prevent landslides or mudslides. CONSULTANT to submit report on this analysis at the 30 percent design stage and the designs shall include the measures approved by the Nodal officer and User/PMGs.
 - (ix). Checking. Prior to submitting the finished Preliminary package to the Nodal officer and User/PMGs, the CONSULTANT shall ensure that the design has been thoroughly checked and coordinated between various design specialties.
- (c) 60 percent Design Submittal Requirements.
- (i). Submittals will include:
 - (aa) Draft Bill of Quantities (BoQ)

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- (ab) Final Approximate Estimates (AEs)
 - (ac) Drawing-set for each discipline
 - (ad) Updated List of Planned Drawings
 - (ae) Design Notes for each discipline
 - (af) Sustainability designs
 - (ag) Equipment Procurement Plan
- (ii). Sixty percent submittal is a major submittal in which design is stopped until receipt of comments. The design consists of an expansion of the concept design to a detailed design with drawings and a cost estimate and matching BoQ. The submittal will represent design progress halfway from concept acceptance to the final design phase. The intent is to check for the translation/ incorporation of the Basis of Design into design calculations and graphical and tabular representations; also to check progress, cost, and layouts per Employer's and Reviewers comments.
- (iii). The Nodal officer and User/PMGs will give clear direction to the CONSULTANT to stop design or proceed during this design review phase. Normally design effort toward final design will stop at 60 percent submittal unless the schedule dictates otherwise.
- (iv). Checking. Prior to submitting the finished 60 percent package to the Nodal officer and User/PMGs, the CONSULTANT shall ensure that the design has been thoroughly checked and coordinated between various design specialties.
- (v). Utility Systems. The Sixty percent design submittal will include an updated tabulation recapitulating the total utility system loads - electrical, steam, gas, sanitary sewer, water, etc., - giving the means and point of connection into the existing utility systems. Any unusual utility system aspects of the project, especially those requiring resolution prior to final design, will be commented upon.
- (vi). Notes/ Copies of design analyses shall be submitted into PMIS as separate documents for Structural, Mechanical, Electrical, and Site Development. Each folder shall be titled to identify the project and the firm preparing the design analyses.
- (d) Ready for Tender (85 percent) Design Submittal Requirements
- (i). The RFT submittal includes copies of bid documents which should be ready for tender. See summarized table of submittal requirements at Annexure 1 and detailed description at Chapter 18, Design Management Plan of the Consultant's PMP. Submittals include:
 - (aa) Final Bill of Quantities (BoQ)
 - (ab) Updated AEs
 - (ac) Final list of drawings

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(ad) All drawings at 100% except for listed detail drawings, as specified by CONSULTANT and consented by Nodal officer and User/PMGs

(ae) Technical specifications

(ii). Checks. Prior to submission to the TPR/ Nodal officer and User/PMGs, the CONSULTANT shall make a thorough check of plans, specifications, and other required data to eliminate errors, inconsistencies, and for coordination between architectural, structural, mechanical and other applicable phases of the work. The CONSULTANT shall also review the planning and designs to determine any interface issues with other contractors' work who may be working under the Nodal officer and User/PMGs outside of the CONSULTANT works. Final reproducible specifications shall be completely proofed and corrected to eliminate typographical errors, misspelled words, etc. Copies of the checklists shall be included with the submittal in accordance with the design quality control plan.

(iii). Design Analyses. Publish design analyses similar to that required for earlier stages. Highlight major revisions made subsequent to preliminary submittal. Ensure that all pages of final design analyses are initialled by the designer and the individual checking.

Final (100 percent) Design Submittal Requirements

(i). All design work should be complete, including all detail drawings. 100 percent submittal will include:

- (e) (aa) Complete Good For Construction (GFC) set of drawings
(ab) Updated BoQ (if required)
(ac) Updated AEs (if required)
(ad) Final design - O&M Manuals

(ii). Checks. Prior to submission to the TPR/ Nodal officer and User/PMGs, the CONSULTANT shall make a thorough check of plans, specifications, and other required data to eliminate errors, inconsistencies, and for coordination between architectural, structural, mechanical and other applicable phases of the work. The CONSULTANT shall also review the planning and designs to determine any interface issues with other contractors' work who may be working under the Nodal officer and User/PMGs outside of the CONSULTANT's works. Final reproducible specifications shall be completely proofed and corrected to eliminate typographical errors, misspelled words, etc. Copies of the checklists shall be included with the submittal in accordance with the design quality control plan.

(iii). Checklist for CONSULTANT Submittal of Final Designs. The CONSULTANT shall include the agreed submittal matrix (Annexure-1) in the package of the first final submittal. Final payment for final design will be withheld

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until this checklist is received.

- (f) Corrected Final Design Submittal Requirements
- (i). The CONSULTANT will normally be allowed from 7 to 21 days to incorporate any comments resulting from the final review.
- (ii). Notice - Corrected final submittals are not considered a normal design review level and are required only when final submittals must be revised or corrected due to errors or omissions. The Nodal officer and User/PMGs will resolve any controversial comments.
- (iii). Correction, Originals, Prints - The CONSULTANT is responsible for corrections to drawings, design analyses, specifications, cost estimate, colour boards, etc., as a result of review of the final submittal. Corrected final submittal will consist of original corrected plans, specifications, design analyses, and project review comments with proper annotation of action taken on each comment. CONSULTANT shall submit the corrections into PMIS and furnish one hard copy set of the negotiated copies of plans, specifications, design analyses, etc., marked as CORRECTED FINAL SUBMITTALS. The indicated sets of prints of corrected final drawings and specifications will be submitted to the Nodal officer and User/PMGs with corrected final submittal.
- (g) Design Services during Construction Phase
- (i). CONSULTANT shall provide design services during construction including but not limited to:
- (aa) Submittals
 - (ab) Request for Information (RFI) Response
 - (ac) Design Changes
 - (ad) Clarification sketches/ designs
 - (ae) On-site technical support, as required

6.76 Technical Elements of Designs: The following major categories constitute parts of a total design. Whenever the term "design" is used it shall mean the coordinated design, including all parts.

- (a) Plans: All drawings shall be in metric format.
- (b) Specifications: Careful attention shall be given to the preparation of the specifications, and they shall be tailored to the project and checked against the drawings. Upon completion of design the designer shall review the design and correct the specifications as required to assure conformance with the latest guide specifications, codes, etc., to assure the specifications are up to date. Any changes required in the design to conform to code or other criteria changes shall be reported to the Nodal officer and User/PMGs for consideration. Such design changes may not be the basis for a contract modification if a change in the design is directed.

APPENDIX 'A' OF CONSULTANCY AGREEMENT Contd..../-

6.77 Compliance to standards and codes, as applicable: The CONSULTANT shall ensure compliance to all latest applicable standards and codes related to the development of the NAD, NAI and allied facilities, Standards and Codes mentioned enumerated below. In case where appropriate standards/ codes are not available, practices adopted by Indian Navy or any other appropriate standards/ codes shall be adopted in consultation with Nodal officer and User/PMGs. However, if Indian standards/ practices are not available, international standards and codes shall be adopted.

- (a) Scales of Accommodation for Defence Services (SADS)
- (b) Naval Magazines and Explosives Regulations (NMER) , BR 862. Storage and
- (c) Transport of Explosive Committee (STEC) regulations Centre for Fire
- (d) Environment and Explosive Safety (CFEES) guidelines
- (e) Ministry of Road Transport & Highways (MORTH) and Indian Road Congress (IRC) specification and regulation
- (f) Bureau of Indian Standards (BIS) Applicable
- (g) United Facilities Criteria
- (h) Central Public Health & Environmental Engineering Organisation (CPHEEO) Manuals and guidelines
- (i) Central Public Works Department (CPWD) specifications Local
- (j) authority regulations
- (k) Bureau of energy efficiency (BEE) Indian
- (l) Electricity Act
- (m) National Building Code of India (NBCI)
- (n) Military Engineering Services guidelines
- (o) LEEDS 'Gold' standard equates to Green Rating for Integrated Habitat Assessment (GRIHA) 4 star rating
- (p) Indian Environment Act Guidelines.

6.78 Analyses: A total design analysis is an assembly of information, calculations, data, and conclusions presented coherently with narrative explanations. Any and all technical analyses required by the Detailed Submittal Requirements, Consultant's PMP, shall be included in the total design analysis.

- (a) Content: Unless otherwise specified, analyses shall include the following.
 - (i). Listing of applicable criteria and publications.
 - (ii). Narrative history of the project, including scope.
 - (iii). Statement of customer's goals and needs.
 - (iv). Calculations, research, technical analyses.
 - (v). Narrative summaries of major decisions.
 - (vi). All technical comments with resolutions explained.
 - (vii). Other items as required by pertinent technical disciplines.
 - (viii). Listing of the names and credentials of all professionals involved.

APPENDIX 'A' OF CONSULTANCY AGREEMENT Contd..../-

- (ix). All work coordinated between disciplines, checked and approved.
- (b) Format: Unless otherwise specified, analyses shall conform to the following:
 - (i). All documents shall be legible and reproducible on standard copiers.
 - (ii). Documents shall be bound, titled, dated and have a Table of Contents.
 - (iii). All pages shall be sequentially numbered.
 - (iv). Technical sections shall be tabbed and indexed.
 - (v). All pages of the technical sections shall be initialed or signed by both the designer and the checker.
- (c) Alternatives: Unless otherwise approved, all alternatives analysed, studied or included in designs must meet the following requirements.
 - (i). The overriding factor in all design decisions shall be the functional needs of the User/PMG at the Base. Alternatives must satisfy the functional use requirements within scope and authority limitations.
 - (ii). Selections between alternatives shall be based on obtaining the overall optimal design with the lowest Total Life Cycle Cost.
 - (iii). Alternatives must have at least three competitive manufacturing sources unless approved by the Nodal officer and User/PMGs.

6.79 Quality: The CONSULTANT is required to prepare a logical Design Quality Control Plan (DQCP) to accomplish design services.

6.80 The CONSULTANT will be expected to closely follow the DQCP throughout the course of the project to assure a quality end product. Should events dictate revisions to the approved DQCP, the CONSULTANT is required to notify the Nodal officer and User/PMGs in writing and submit the revised plan for approval.

6.81 Amendments: The CONSULTANT is responsible for preparation of amendments, for corrections to drawings as a result of amendments required to clarify design, for coordinating drawings with specifications, and for correcting design errors. Copies of all amendments will be submitted into PMIS by the CONSULTANT as they are issued. Drawing changes are to be incorporated by the CONSULTANT to the drawing files, noted in the revision block, re-plotted and submitted into PMIS to the Nodal officer and User/PMGs at the time of each amendment is developed. Meeting the time requirements is imperative because the drawings must be processed, reproduced, and furnished by the CONSULTANT so as not to cause a delay in the start of construction.

6.82 Packaging: Prior to submittal of the design, drawings, calculations, analyses, etc., to the TPR/ Nodal officer and User/PMGs, the CONSULTANT shall ensure that the design has been thoroughly checked and coordinated between the various design specialties. All material submitted shall be dated in an appropriate location. Whenever items are corrected or later resubmitted, they will show a revised date in order

APPENDIX 'A' OF CONSULTANCY AGREEMENT Contd..../-

to differentiate later material from the original submittal. Each page of the submittal shall be numbered consecutively by section.

6.83 CONSULTANT is required to deliver in hard copy, twenty original sets of the drawings/ designs/ reports, etc., signed and stamped and dated and to certify compliance with all applicable codes and specifications. Also, designs/ drawings/ reports, etc. shall be submitted in electronic format in 2 (Two) CDs. Also, the CONSULTANT shall submit all drawings/ designs/ reports, etc. through PMIS.

6.84 Selection of Equipment and Vehicles

6.85 The CONSULTANT shall prepare specifications, in consultation with Nodal officer and User/PMGs, for procurement, installation, testing and commissioning of all the various types of equipment required for all functions, operations, services and support for the NAD, NAI, allied facilities and allied works and shall also supervise installation, testing and commissioning of all the equipment.

6.86 The CONSULTANT shall provide a specific Equipment Procurement Plan (EPP) which shall provide detailed schedules, requirements, and interface for activities including procurement, delivery, installation and commissioning. CONSULTANT shall ensure equipment is best suited to meet the intended purpose and function and all the requirements of the Employer, Navy end-User/PMGs and directorates are identified and met. Life cycle cost and standardization of similar type of equipment should be considered before selection of equipment.

6.87 The sourcing of equipment/ machine tools/ hand tools shall be through following channel:

- (a) Navy supplied equipment: Certain items for special-to-type tools/ equipment/ repair facilities would be procured directly by the Navy from the Ships' equipment suppliers. The responsibility of procurement, installation and commissioning rests with the Navy. However, CONSULTANT shall cater for space requirement as per the footprint of the items and would also cater the services/ utilities required for this equipment in their planning and design.
- (b) Navy nominated equipment: PSB may nominate make/ model/ specification of certain equipment. CONSULTANT shall ensure that these are procured from the respective vendors and include accordingly in the Tender. The responsibility of procurement process, installation and commissioning rests with the CONSULTANT. CONSULTANT shall cater for space requirement as per the footprint of the items and would also cater the services/ utilities in their planning and design
- (c) Other equipment: All other equipment, not part of the above, are to be planned, procured, installed, commissioned by the CONSULTANT through the Works Contract(s). The CONSULTANT is to update the list of such equipment of DPR through Nodal officer and User/PMGs, draw up their detailed specifications, source of supplies and include in the work contract for procurement, installation, commissioning.

APPENDIX 'A' OF CONSULTANCY AGREEMENT Contd..../-

6.88 Prepare specifications for procurement, testing and commissioning of various types of vehicles required in consultation with Nodal officer and User/PMGs. The CONSULTANT shall develop specifications and identification of suitable OEMs for the specialist vehicles required. Though, the list of vehicles & equipment and numbers has been provided in the DPRs, the list is indicative and shall be confirmed by the Employer as per actual requirements.

Bill of Quantities (BoQ) and Cost Estimates

6.89 The CONSULTANT shall develop the Block Cost Estimates (BCE)/ Approximate Estimates (AEs) and Bill of Quantities (BoQ) as per the milestones and the requirements stated in the table below.

Milestone	Cost Estimates	Bill of Quantities
Concept (15 percent) Design Submittal	Block Cost Estimate (BCE)	NIL
Preliminary (30 percent) Design Submittal	Draft Approximate Estimates (AEs)	NIL
60 Percent Design Submittal	Final AEs	Draft BoQ
Ready for Tender (85 percent) Design Submittal	Updated AEs	Final BoQ
Final (100 percent) Design Submittal	Updated AEs (if required)	Updated BoQ (if required)
Corrected Final Design Submittal	Updated AEs (if required)	Updated BoQ (if required)
Design Services during Construction Phase	Updated AEs (if required)	Updated BoQ/updated drawings (if required)

6.90 At the Concept Design stage, the CONSULTANT will review the high level Block Cost Estimate (BCE) provided by Employer for their guidance and develop a more current and realistic Block Cost Estimate. The CONSULTANT BCE will provide costs data based on the Work Breakdown Structure (WBS) to be prepared and detailed by the CONSULTANT.

6.91 At the 30 percent design stage, draft AEs shall be developed and submitted taking into consideration all the components of works to be developed in NAD, NAI and allied works packages. The draft AEs shall be based on designs/ drawings and specifications developed and approved by Nodal officer and User/PMGs at the stage.

APPENDIX 'A' OF CONSULTANCY AGREEMENT Contd..../-

6.92 At the 60 percent design stage, draft BoQs and Final AEs shall be developed and submitted taking into consideration all the components of works to be developed in NAD, NAI and allied facilities. The CONSULTANT shall submit the supporting rate analysis of all BoQ items along with supporting market rate quotations, wherever required. The detailed estimate should contain detailed measurement sheets supporting quantity estimation of each item. Along with the detailed estimate, CONSULTANT shall submit technical specification of all the items. The submission at this stage shall enable the Employer to proceed for administrative approval for the cost of works contract tender. CONSULTANT shall be fully responsible for correctness of estimation of quantity and cost of individual items with variation up to $\pm 10\%$ of such individual items with respect to the executed quantity, and on an overall basis, variation limited up to $\pm 5\%$ based on approved drawing, barring variation for reasons or factors not foreseeable by an experienced consultant.

6.93 At Ready for Tender (85 percent) stage, final BoQs and updated AEs including detailed estimate of quantity of various items of works involved in construction of proposed structures and other features shall be submitted. The CONSULTANT shall submit the supporting rate analysis of all BoQ items along with supporting market rate quotations, wherever required. The detailed estimate should contain detailed measurement sheets supporting quantity estimation of each item. Along with the detailed estimate, CONSULTANT shall submit technical specification of all the items. The submission at this stage shall enable the Employer to proceed for works contract tender.

6.94 Update the detailed BoQs and AEs at the Final (100 percent) Design stage and later as required.

6.95 Clarify all the observations arising during scrutiny by various authorities including audit. Resubmit BoQs and AEs report as necessary.

6.96 The CONSULTANT will ensure that the project cost data and BoQ are accurately updated in the PMIS on a timely basis/ frequency (to be established) for overall monitoring and reporting.

6.97 Third Party Review of designs and drawings

6.98 All designs and drawings submitted by the CONSULTANT, shall be vetted from any IIT/ IISc Bengaluru/ any independent agency as approved by the Employer and cost thereof shall be borne by the Employer

6.99 Preparation of Models, Project Overview Presentation, and Perspective Drawings

APPENDIX 'A' OF CONSULTANCY AGREEMENT Contd..../-

7. The CONSULTANT will prepare and submit one model of suitable material for each of the NAD, NAI and allied facilities. The models shall be mounted on 1/2 inch marine ply board and will have transparent non-breakable sheet covering. The facilities shown shall be made of wood/ plastic or any other suitable material and be representative and shaped to resemble the actual proposed conditions. The representative facilities shall be affixed to the plyboard in a semi-permanent fashion so as to allow for movement and/ or adjustment to the siting if necessary. The models shall be colored in appropriate colors and scheme to best represent the architectural concept. The models should be in a scale of 1:4000 showing the final and approved Master Plan of the complete facilities. This shall include all facilities which comprise the NAD, NAI and allied facilities as well as maintenance, administrative, logistics, roadways, communications, security, personnel support, utilities and all other facilities which form part of the Master Plan.

7.1 Prepare and submit an electronic 3D walkthrough for all facilities to be developed. The walkthrough shall be a sketch-up flythrough model and shall be made available to the Nodal officer and User/PMGs on disc. The CONSULTANT shall update the walkthrough, if required, on the instructions of the Nodal officer and User/PMGs.

7.2 Prepare and submit a Power-Point project overview presentation of length between 30 to 40 minutes including the minimum contents listed below. The frequency of the presentation shall be monthly, or more frequent as directed by the Nodal officer and User/PMGs. The intent of this presentation is to keep an up to date presentation available for briefings to Employer and to/ for VIP visits. The On-site presentations and visits should be expected to entail tour/ visit of the ongoing works. The presentation shall be kept up to date and current to reflect current status and shall be made available when requested by Nodal officer and User/PMGs.

- (a) Project site and Master planning
- (b) Status of all key aspects of project
- (c) Innovations incorporated
- (d) Equipment procurements
- (e) Challenges to overcome/ resolve
- (f) Current cost status
- (g) Procurement Status
- (h) Architectural themes
- (i) Sustainability concepts and design
- (j) Organisation/ staffing
- (k) Schedule

APPENDIX 'A' OF CONSULTANCY AGREEMENT Contd..../-

7.3 Provide a minimum of six colored perspective drawing of A-1 size showing work areas and master layout (separately and/or individually). CONSULTANT to update as necessary to maintain current and provide additional copies to Nodal officer and User/PMGs if requested.

7.4 The models, 3D walkthrough, project overview presentation and perspectives drawings shall be submitted by the CONSULTANT to the Nodal officer and User/PMGs in soft and hard copies on completion of Detailed Design Stage.

7.5 Cost of models, 3D walkthrough, project overview presentation and perspectives drawings are deemed to be included in the CONSULTANT fees and no additional compensation shall be provided on this account.

7.6 Project Management

7.7 Project Management Plan (PMP)

The CONSULTANT will develop a Project Management Plan for NAD, NAI and allied facilities which shall include methodology, policies, organisation and resources to manage Scope, Schedule, Change, Security, Interface, Budget and Cost, Quality, Human Resources, Communication, Risk, Procurement, Environment, Site Management Plan (including labour camps), Labour Management Plan, Handing Over Plan, etc. The CONSULTANT shall ensure that the PMP shall adhere to the procedures defined in the Project Management Plan (PMP) for Project.

7.8 CONSULTANT shall include and submit all the plans contained in the PMP and as per the milestone given in the table below. In addition to the plans mentioned below, any other plans as determined necessary and beneficial (either by the Nodal officer and User/PMGs, to successfully execute the works shall also be developed by CONSULTANT.

7.9 The CONSULTANT will ensure compliance to various procedures and methodologies defined and approved in the PMP (NAD) and ensure that all the works are carried out in adherence to the guidance contained in the PMP (NAD) and requirements of the contract. The either case where, conflict may or confusion arise between the PMP developed by the CONSULTANT and the PMP developed by the Nodal officer and User/PMGs, this shall be brought to the attention of the Nodal officer and User/PMGs for clarification and resolution.

7.10 Of the above list, the requirements for some of the plans are further detailed as below for consideration and action by the CONSULTANT.

Quality Management Plan

(a) Quality Control Plan during Design

APPENDIX 'A' OF CONSULTANCY AGREEMENT Contd..../-

(i). The CONSULTANT shall establish and maintain a Quality Control System in accordance with BS EN ISO 9001:2008, "Quality management systems – Requirements in Planning, Design and Development" to ensure that all elements of the work carried out under the contract meets the functional and quality requirements of the contract. The QC Plan, including written procedures, shall be submitted to the Nodal officer and User/PMGs for review and consent.

(ii). The QC Plan shall clearly define the QC Organisation, policies and methodologies. Management responsibility for the QC shall be set forth on the consultant's policy and organisation chart. The Plan shall define the requirements for QC personnel, their skills and training. Records of personnel certifications shall be maintained and monitored by the QC personnel. These records shall be made available to Nodal officer and User/PMGs at any time for review.

(iii). The QC Plan shall identify, design processes that control, check and verify the accuracy, completeness and integration of the design. These QC procedures established by the CONSULTANT shall include the procedures to maintain adequate records in a readily retrievable manner to provide documented evidence of quality monitoring and accountability. These records shall be available to Nodal officer and User/PMGs at all times during the term of the Contract and during the Defects Liability Period thereafter.

Glossary

AGM	-	Above Ground Magazines
AEs	-	Approximate Estimates
BEAP	-	Base Exterior Architecture Plan
BoQ	-	Bill of Quantities
BCE	-	Block Cost Estimates
BEE	-	Bureau of energy efficiency
BIS	-	Bureau of Indian Standards
CPHEEO	-	Central Public Health & Environmental Engineering Organisation
CPWD	-	Central Public Works Department
CFEES	-	Centre for Fire, Explosive and Environment Safety
CCTV	-	Closed-circuit television
CRZ	-	Coastal Regulation Zone
CFA	-	Common Facilities Area
CMF	-	Contract Management Framework
DLP	-	Defect Liability Period
DRP	-	Defect Response Plan
DQCP	-	Design Quality Control Plan
DPR	-	Detailed Project Report
DBM	-	Double Bunker Magazines
EOT	-	Electric Overhead Traveling
EPABX	-	Electronic Private Automatic Branch Exchanges
EMP	-	Environment Management Plan

APPENDIX 'A' OF CONSULTANCY AGREEMENT Contd..../-

EIA	-	Environmental Impact Assessment
EPP	-	Equipment Procurement Plan
FPS	-	Fire Protection System
FBB	-	Fleet Base Buildings
GFC	-	Good for Construction
GRIHA	-	Green Rating for Integrated Habitat Assessment
HVAC	-	Heating, Ventilation and Air Conditioning
IGBC	-	Indian Green Building Council
IQD	-	Inside Quantity Distance
IRC	-	Indian Road Congress
ISD	-	Inside Safety Distance
KUWS & DB	-	Karnataka Urban Water Supply and Drainage Board
LRC	-	Laced Reinforced Concrete
LEED	-	Leadership in Energy and Environmental Design
MHE	-	Material Handling Equipment
MR	-	Medium Refit
MES	-	Military Engineering Services
MOEF	-	Ministry of Environment & Forest
MORTH	-	Ministry of Road Transport & Highways
NBCI	-	National Building Code of India
NFPA	-	National Fire Protection Association
NHAI	-	National Highways Authority of India
NAS	-	Naval Air Station
NAD	-	Naval Armament Depot
NAI	-	Naval Armament Inspectorate
NMER	-	Naval Magazines and Explosives Regulations
NSRY	-	Naval Ship Repair Yard
NEQ	-	Net Explosive Quantity
NOI	-	Notice for Invitation
OFC	-	Optical Fiber Communication
OEM	-	Original Equipment Manufacturer
OSQD	-	Outside Safety Quantity Distance
POL	-	Petroleum, Oil, & Lubricants
PIMT	-	Project Implementation and Management Team
PMC	-	Project Management Consultant
PMIS	-	Project Management Information System ()
PMP	-	Project Management Plan
RMSFF	-	Rocket Motor Static Firing Facility
SHE	-	Safety, Health and Environment Management
SADS	-	Scales of Accommodation for Defence Services
SCADA	-	Supervisory Control and Data Acquisition
SSHO	-	Site Safety and Health Officer
STEC	-	Storage and Transport of Explosive Committee
SAMs	-	Surface to Air Missiles
SSMs	-	Surface to Surface Missiles
TPR	-	Third Party Reviewer i.e IIT/IISc
WBS	-	Work Breakdown Structure

APPENDIX 'A' OF CONSULTANCY AGREEMENT Contd..../-

Annexure 1

SUBMITTAL MATRIX SUMMARY(Refer Para 6.75 (e)(iii))

Srl No	Description	% Progress of Phase III		
		15%	50%	100%
	SITE DEVELOPMENT			
1	Spreadsheet List of All Facilities and infrastructure to be built on the site	X	X	X
2	Site Plan sketch of the proposed project site showing the "existing" topography, scale, spot grades, etc.	X		
3	Design Analysis/Narrative General Descriptive Data Demolition/Removal Explanation c. Site Geometry Rationale d. Site Grading Features e. Storm Drainage Design f. Pavement Design g. Landscape Design h. Berm Design	X	X	
4	Site Development Drawings		X	X
5	Landscape Plans		X	X
6	Outline Specifications Both Site & Landscape		X	
7	Estimated Site work Quantities	X	X	X
8	Survey Data		X	
9	Annotated Review Comments From Previous Submittal			X
10	Drawings in Electronic Copy			X
11	Specifications (Electronic & Hard Copy)			X
12	Erosion and Sedimentation Control Plan			X
	SOILS			
13	Design Analysis		X	
14	Reproducible Site Plan Drawings		X	
15	Annotated Review Comments From Previous Submittal			X

APPENDIX 'A' OF CONSULTANCY AGREEMENT Contd.../-

Srl No	Description	% Progress of Phase III		
		15%	50%	100%
16	Specifications (Electronic & Hard Copy)			X
	STRUCTURAL			
17	Structural Narrative	X	X	X
18	Design Analysis		X	
19	Structural System Selection Analysis		X	
20	Structural Drawings			X
21	Outline Specifications		X	
22	Preliminary Specifications			X
23	Specifications (Electronic & Hard Copy)			X
24	Quality Assurance Check			X
25	Annotated Review Comments From Previous Submittal			X
26	Drawings in Electronic Copy		X	
	ARCHITECTURAL			
27	Functional Floor Plans, Major Elevations	X		
28	Detailed Floor Plans, All Elevations		X	X
29	Architectural Design Approach Narrative/ General Description of the Project	X	X	X
30	Annotated Review Comments From Previous Submittal		X	X
31	Architectural Drawings		X	X
32	Outline Specifications		X	
33	Specifications (Electronic & Hard Copy)			X
34	Hardware Schedule and Consultant Name & Credentials			X
35	Color Boards		X	X
	MECHANICAL			
36	Mechanical Narrative	X	X	X
37	Annotated Review Comments From Previous Submittal		X	X
38	Design Analysis/Standard Computation Forms		X	
39	Mechanical Drawings		X	X

APPENDIX 'A' OF CONSULTANCY AGREEMENT Contd..../-

Item	Description	% Progress of Phase III		
		15%	50%	100%
40	Field Trip Report(s)		X	
41	Outline Specifications		X	
42	Specifications (Electronic & Hard Copy)			X
43	Drawings in Electronic Copy		X	X
	ELECTRICAL POWER, LIGHTING, GROUNDING, COMMUNICATIONS AND ALARM SYSTEMS			
44	Electrical Narrative Interior Electrical System Design Narrative Exterior Electrical Distribution System Design Narrative Energy Conservation Design Narrative	X	X	X
45	Field Trip Report		X	
46	Annotated Review Comments From Previous Submittal			X
47	Design Analysis/Standard Computation Forms		X	X
48	Electrical Drawings		X	X
49	Outline Specifications		X	
50	Specifications (Electronic & Hard Copy)			X
51	Drawings in Electronic Copy		X	X
	FIRE PROTECTION			
52	Design Analysis		X	
53	Fire Prevention/Life Safety Drawing(s)		X	X
54	Fire Prevention Engineer Certification			X
55	Annotated Review Comments From Previous Submittal		X	X
56	Outline Specifications		X	
57	Final Specifications (Elec & Hard Copy)			X
58	Drawings in Electronic Form		X	X
	ENERGY ANALYSES, ECONOMIC ANALYSES, HVAC CONTROL SYSTEMS, AND EMCS			
59	HVAC Alternatives Coordination	X	X	
60	Modeling Input Data	X		

APPENDIX 'A' OF CONSULTANCY AGREEMENT Contd..../-

Item	Description	% Progress of Phase III		
		15%	50%	100%
61	Energy Analysis Narrative Printouts of I/O data for EB and LCC simulations. U-value calculations for exterior surfaces. EB breakdown for each building. Life Cycle Cost Analysis. Energy conservation methods report. List of specs to be used. I/O data diskette (when required).		X	
62	HVAC Controls Drawings & EMCS Plans		X	X
63	Annotated Review Comments		X	X
64	Outline Specifications		X	
65	Final Specifications (Elec & Hard Copy)			X
66	HVAC Controls Design Analysis			X
67	Revised energy budget calculations and report for any significant changes			X
68	Drawings in Electronic Form		X	X
	ENVIRONMENTAL			
69	Studies (If required)		X	
70	Study Plan Submittal including CRZ		X	
71	Exterior Utility Layouts Drawings		X	X
72	Fire Flow Analysis		X	
73	Design Analysis, tabulation recapitulating the total utility system loads; sanitary sewer, water			X
74	Outline Specifications		X	
75	Final Specifications (Electronic & Hard Copy)			X
76	Drawings in Electronic Copy		X	X
	MISCELLANEOUS			
77	Construction Time Estimate			X
78	Schedule			X
79	List of HQPSB-Furnished Equipment			X
80	List of special situations requiring special work restraints			X

APPENDIX 'A' OF CONSULTANCY AGREEMENT Contd..../-

Item	Description	% Progress of Phase III		
		15%	50%	100%
81	Field Trip Report(s)	X	X	X
82	Sustainable Design Spreadsheet checklist indicating what LEED points the design intends to pursue.	X	X	X

APPENDIX 'B' OF CONSULTANCY AGREEMENT**BRIEF SPECIFICATION: TENDER FOR CONSULTANCY SERVICES FOR PREPARATION OF DETAILED ENGINEERING CONSULTANCY SERVICES FOR PROVISION OF TECH BUILDINGS/STORAGE ACCN AND SERVICES AT PORT BLAIR**1. **RCC FOUNDATION:-**

- (a) Isolated/combined/raft foundation/Pile foundation in design mix concrete (RCC) of appropriate grade not less than M-30 grade.
- (b) Excavation in type of strata as found at site.
- (c) PCC (1:4:8) type D-2 in lean concrete below foundation.

2. **SUPERSTRUCTURE :**

- (a) PCC block masonry/stone masonry as suggested.
- (b) Slabs in RCC of grade not less than M-30. However in water retaining structures, the grade of concrete shall not be less than M-35.
- (c) Filling in Approved excavated materials.

3. **FINISHES**

Type of finishes on masonry work, manholes etc shall be as suggested by consultant.

4. **Bed of sewer lines :**

It shall be as suggested by consultant.

5. **COPING :** It shall be as suggested by consultant.**NOTE:**

- (i) All latest IS code provisions shall be considered in design.
- (ii) For missing details, if any, the consultant shall obtain the same from the office of HQ CE(A&N) Zone Port Blair
- (iii) Any relevant IS codes other than those mentioned are also to be considered.
- (iv) The scope of the job also includes taking necessary CEFFIS,CRZ,HTL/LTL mapping & bathymetric studies, Environment Impact Assessment(EIA) and forest clearances from the concerned departments.
- (v) All structural design to be vetted from IIT/NIT.
- (vi) Any addition/reduction in survey area would be adjusted proportionally to the quoted rate.
- (vii) Relevant documents such as SSR,ED, Zonal specifications, design specification can be obtained from concerned GE.
- (viii) Necessary temporary site office may be erected within the proposed premises. Electricity and water arrangements to be made available under own arrangements.
- (ix) Submission of four sets of DPR alongwith soft copy duly incorporating all the relevant suggestion/recommendations from the respective sections.
- (x) Topographical survey also includes marking of RL with reference to permanent bench mark, construction of masonry pillars of size 300x300x1000mm(above GL) to at an interval of 50 metres along the periphery/boundary of the site including cleaning of bushes, vegetation to make area accessible , earth work calculations for site clearance and area development and submission of report

(SIGNATURE OF CONSULTANT)**Jt Dir (Contracts)
FOR CLIENT**

APPENDIX 'C'SCHEDULE 'A' : SCHEDULE OF FEESNAME OF WORK : TENDER FOR CONSULTANCY SERVICES FOR PREPARATION OF DETAILED ENGINEERING CONSULTANCY SERVICES FOR PROVISION OF TECH BUILDINGS/STORAGE ACCN AND SERVICES AT PORT BLAIRRefer Schedule 'A' in BOQPAYMENT TERMS:

(i) The Consultant shall be entitled to be paid fees to the extent of 90% only of the work completed during currency of consultancy services. Remaining 10% shall be paid with final bill after one year of certified date of completion of entire Consultancy Services required under this agreement. The consultant may be paid advance on account to the full value of work of his furnishing Guarantee Bond(s) or Fixed Deposit Receipt (s) from a scheduled Bank for the amount of

the retention money which should otherwise be recoverable from him under the contract till payment of final bill. The Guarantee Bond shall be executed for a period and on a form as directed by the Accepting Officer. The Consultant shall further arrange to extend the period of Guarantee Bond or shall furnish a fresh Guarantee Bond of similar value so as to cover the period till the payment of the final bill. In case of Fixed Deposit Receipt, the same shall be for a period exceeding **12 months** beyond the period of completion and shall be endorsed in accordance with the Government Securities Manual for the time being in force. If the Fixed Deposit Receipts are in the name of the contractors, they shall be transferred/endorsed to the Accepting Officer concerned in such a way that they can be encashed by the said Accepting Officer without reference to the consultant. In the event of delay in preparation of the final bill, the consultant shall make arrangements with the bank for suitable extension of the fixed deposit period.

(ii) Consultant may at intervals of not less than 30 days submit claims for 'advance on account payment' (RAR payment) against the work done/Service completed to **GE (P) North Port Blair** as certified by the Nodal Officer in the prescribed format which shall be supplied by **GE (P) North Port Blair**.

SI No	Consultany service completed	% of payment allowed on CA Value
(a)	After completion of survey and siting of building,roads,drains etc	10%
(b)	After completion and approval of site plan/layout by E-6 section.	10%
(c)	After submission of structural design duly vetted by IIT and approved by E2(Design) Section.	50%
(d)	Submission of DPR(Detailed Project Report) in 04(Four) sets alongwith soft copy duly incorporating all relevant suggestions/recommendations from respective sections.	15%
(e)	After physical completion of entire project as per DPR	10%
(f)	Balance Amount (to be released with final bill)	5%

Quantum of work done shall be certified by the Nodal Officer nominated by Chief Engineer (A&N) Zone Port Blair.

(iii) **Final Bill:** After issue of certificate of final completion of the Consultancy Services by the Nodal Officer and on completion of one year from certified date of completion, the Consultant shall submit certified final bill in duplicate. All claims and payments viz., 'Advance on account' /Final bill shall be rendered in the form and manner prescribed by the Govt.

(SIGNATURE OF CONSULTANT)

**Jt Dir (CONTRACTS)
For CLIENT**

CERTIFICATE

1. It is certified :

- (a) That the leveling and contour/block levels plan of the area covered in the services has been prepared using the state-of-the-art surveying equipments under the supervision of experienced technical staff and that the readings and details thereof are correct to the best of our knowledge and information.
- (b) That the SEWAGE data have been obtained from the most authentic source of the and the estimation and determination of sewage calculation is correct to the best of our knowledge and information.
- (c) That the basis of design for calculation of design flow, peak flow, average flow, the gradients and run off velocities considered are as per relevant Manuals of the Government Department.
- (d) That the structural design as provided and furnished to the client for the structures included in the consultancy services of this agreement have been prepared after considering all codal provisions of Indian Standards (of BIS), as amended till date of design, on the matters and issues of structural safety and are structurally safe including safety considerations from natural hazards of the accepted level.

2. It is further certified that the the design/ specification included in the DPR are in accordance with the current Govt. Policy, IS specifications, Technical Instructions (issued from time to time) and sound engineering practice including earthquake resistant design as catered for for Seismic Zone- III.

Signature of Consultant

LIST OF BUILDINGS**STATION : PORT BLAIR****Name of work : DETAILED ENGINEERING CONSULTANCY SERVICES FOR PROVISION OF TECH BUILDINGS/STORAGE ACCN AND SERVICES AT PORT BLAIR**

Ser No	Description of Accn	Area (Unit in Sqm)	Brief specification
1	2	3	4

A INFRASTRUCTURE REQUIREMENT FOR NAD

(a) Magazines 300 LT - 06 Nos.	1756.00
(b) Magazines 600 LT - 04 Nos.	2121.00
(c) Magazine office Accommodation for magazine staff	217.00
(d) Dunnage shed	24.00

B AMMUNITION WORKSHOPS

(a) HTL room with heavy traverse on four sides with AC	162.00
(b) LTL room with light VIFT and waiting position (with AC)	162.00
(c) LTL room with light VIFT and waiting position (without AC)	162.00
(d) UTL room without traverse and verandah on either side	74.00
(e) Waiting position with crane	53.00
(f) Waiting position without crane	166.00
(g) Proof House with RCC Blast walls incl working rooms	327.00
(h) Proof Area	400.00
(i) Office accn for NAI, AWS staff	66.00
(j) Broken seal examination room	135.00
(k) A-in-U (Article in use) room	137.00
(l) AWS office accn	130.00
(m) Office accn for NAI, AWS staff	66.00
(n) Ready use paint store	81.00
(o) Guage room with verandah	54.00
(p) Disfiguring machine room with verandah	81.00

C NON EXPLOSIVE STORE HOUSE

(a) Non explosive store houses -06 Nos.	8407.00
(b) POL store room	810.00
(c) Shipping office with EDP room	744.00
(d) Office accn for NE store office	120.00

Ser No	Description of Accn	Area (Unit in Sqm)	Brief specification
1	2	3	4

D FACTORY (Gen.Engg Wksp)

(a) Gun repair shop	567.00
(b) Machine Shop	1008.00
(c) Capentry/ Box repair	567.00
(d) Welding shop/ Black smith	284.00
(e) Protective treatment shop	567.00
(f) A float workshop	2520.00
(g) Office accn & Rest room	126.00
(h) Tool storage room	233.00
(j) Production/ planning office complex	324.00
(k) Laundry	378.00
(l) Bond room	26.00
(m) Armoury & small arms workshop	1680.00

E CGM SECRETARIAT & ADMIN OFFICE

(a) CGM sectt & Adm office	1586.00
(b) Telephone exchange	640.00
(c) Garage	202.00

F GUIDED WEAPON COMPLEX

(a) Guided weapon office	2964.00
(b) Mine workshop with VIFT	2510.00
(c) Torpedo preparation workshop	1215.00
(d) Office accn	2850.00

Magazine room with blast walls

(a) workshop floor area	675.00
(b) Office accn (side rooms)	1149.00

Guided weapon office

(a) Officers office accn	140.00
(b) other accn	483.00

Ser No	Description of Accn	Area (Unit in Sqm)	Brief specification
1	2	3	4
	Guided weapon non explosive store house		
	(a) Store house	1118.00	
	(b) Other facilities	84.00	
	(c) Empty container shed	1380.00	
	Magazine for preparing torpedos		
	(a) Workshop floor area	675.00	
	(b) Office accn (side rooms)	1149.00	
	Office Accomodation		
	Office Accomodation for NAI Staff	66.00	
G	<u>MI ROOM INDUSTRIAL OFFICER, MAIN GATER OFFICE</u>		
	(a) MI Room	383	
	Industrial Canteen		
	(a) Dinning Hall	297.00	
	(b) Cook House	203.00	
	(c) Main gate office	276.00	
	(d) Muster shed	125.00	
	(e) Guard officce	197.00	
H	OFFICE ACCOMODATION FOR DSC		
	(a) DSC office accn	282.00	
	(b) JCOs Mess for 10 Nos	136.00	
	(c) Living accn for JCOs-10 Nos	372.00	
	(d) Scooter shed for JCOs	60.00	
	MT office & operators		
	(a) Technical office	15.00	
	(b) Civilian drivers & Operators	20.00	
	(c) Standby Change room	16.00	
	(d) Sanitary annexure	34.00	
	(e) Living Accn for Hav - 13 Nos	320.00	
	(f) Living Accn for OR's - 57 Nos	934.00	
	(g) Living Accn for DSC personal - 106 Nos	1731.00	
	(h) Dining hall for Hav,OR's & DSC	250.00	
	(i) MT Park Garrage 3.20m height	1059.00	
	(k) Motor cycle/cycle	12.00	
	(l) Repair Bay (Height- 8.00 metre)	380.00	
	(m) Store (For 68 Vehicles)	36.00	
	(n) MT Store (For 68 Vehicles)	96.00	

Ser No	Description of Accn	Area (Unit in Sqm)	Brief specification
1	2	3	4
	(o) Petrol Store (For 68 Vehicles)	55.00	
	(p) Washing Platform with inspection pit	51.75	
	(q) Ramp - 02 Nos		
	(r) Cook House	230.00	
	(s) Storage Accn with verandah 1.50m wide and 3.2m height	144.00	
	I SECURITY		
	(a) Sentry post -03 Nos	11.00	
	(b) Security/ Watch towers	164.00	
	(c) Guard Post	455.60	
	(d) QRT/QRG	71.00	
	(e) Car Garrage	22.00	
	J FIRE FIGHTING		
	(a) Fire station	271.00	
	K MARRIED ACCOMODATION		
	MARRIED ACCN FOR CIVILIAN STAFF		
	(a) TYPE VI-01 No	189.00	
	servant quarters -01 No	26.80	
	Car Garage -01 No	21.00	
	(b) Type V-11 Nos	1707.2	
	servant quarters -11 Nos	294.80	
	Car Garage -11 No	231.00	
	(c) Type IV -10 Nos	969.00	
	Car Garage 25% -03 Nos	63.00	
	Scooter garagaes 75% -07 Nos	42.00	
	(d) Type III-46 Nos	3137.00	
	Scooter garages -46 Nos	115.00	
	(e) Type II-75 Nos	4308.75	
	Scooter garages -75 Nos	187.50	
	(f) Type I- 127 Nos	5899.15	
	Scooter garages -127 Nos	317.50	
	L MARRIED ACCN FOR SERVICE PERSONEL		
	(a) Major & above -05 Nos	776.20	
	Servant quarters -05 No	111.50	
	Car Garage -05 No	90.00	

Ser No	Description of Accn	Area (Unit in Sqm)	Brief specification
1	2	3	4

M MARRIED ACCN FOR PBORS

(a) JCOs -12 Nos	1097.64
Car Garage (50%)-06 Nos	96.00
Scooter Garage (50%) -12 Nos	36.00
(b) Havildar -10 Nos	687.70
Scooter shed - 10 Nos	60.00
(c) OR's -28 Nos	1953.60
Scooter shed - 28 Nos	168.00

N PARKING**CAR GARAGAE**

Main office- For 06 Nos	126.00
MI Room- For 01 No	21.00
Factory/Production complex- For 01 No	21.00
DSC Complex- For 01 No	21.00
Main gate office- For 01 No	21.00
Outside explosives- For 02 No	42.00

P SCOOTER SHED

Main office- For 16 Nos	32.00
MI Room- For 06 No	12.00
Factory/Production complex- For 16 No	32.00
DSC Complex- For 12 No	24.00
Main gate office- For 12 No	24.00
Outside explosives- For 32 No	64.00

Q CYCLE SHED

Main office- For 16 Nos	13.44
MI Room- For 10 No	8.40
Factory/Production complex- For 32 No	26.88
DSC Complex- For 16 No	13.44
Main gate office- For 12 No	10.08
Outside explosives- For 64 No	53.76

Ser No	Description of Accn	Area (Unit in Sqm)	Brief specification
1	2	3	4

R	<u>MOTIVATION HALL/TRAINING CELL</u>	192.00	
	(i) Guest house for 08 officers		
	(a) Guest house	322.00	
	(b) Mess	352.00	
	(c) Servant quarters	110.00	
	(d) Open garrages	42.00	
	(ii) Transit facilities for supervisory/staff		
	(a) Guest house	167.00	
	(b) Mess	190.00	
	(c) Dining hall	17.00	
S	AMENITIES		
	(a) Unit shops	320.00	
	(b) Bank	17.00	
	(c) Post office	108.00	
	(d) Community hall cum recreation centre	560.00	
	(e) School	508.00	
	(f) Garbage bins	20.00	
	(g) Incinerators	10.00	
	(h) Sentry Posts (10 Nos)	50.00	
T	NAVAL ARMANENT INSPECTORATE		
	(a) NAI AWS Office	98.00	
	(b) Static test yard	167.00	
	(c) ISAT Chamber facility & Explosive/Propellent test lab	116.00	
	(d) Office Accn for foreman and supervisor	60.00	
	(e) Main Admin building (Non explosive area of NAD)	500.00	
	(e) Main Admin building (Non explosive area of NAI)	680.00	
	(f) Parking space	97.00	
U	Boundary wall/Retaining wall /MIFT wall with earth traverse		
	(a) Blast wall with RCC M30(RM)	126.00	

Ser No	Description of Accn	Area (Unit in Sqm)	Brief specification
1	2	3	4

V	Hard Standing	5642.00	
W	Rocket Motor Static Firing Facility(RMSFF)	800.00	
X	PLAY GROUNDS (In Nos)		
	(a) Basket ball court	2.00	
	(b) Volley ball court	2.00	
	(c) Badmitton court	2.00	
	(d) Hockey/foot ball court	1.00	
Y	STATIC WATER TANKS		
	(a) 225 KL capacity, 06 Nos x 250000 Ltr capacities		
	(b) 110 KL capacity, 06 Nos x 110000 Ltr capacities		
	(c) Petrol & Diesel Pump,02 Nos x 12000 Ltr capacities		
Z	FIRE FIGHTING		
	(a) Static water tanks 225 KL Capacity, 05x225000 Ltr capacities		
	(b) Static water tanks 110 KL Capacity, 03x110000 Ltr capacities		
	(c) Over head tanks for five lakh litre capacity,01x500000 Ltr capacities		
AA	GUEST HOUSE		
	(a) Open Garrage	42.00	
	(b) Apron	42.00	

MATRIX FOR REQUIREMENT OF VARIOUS FACILITIES/SERVICES IN DIFFERENT BUILDINGS FOR ESTABLISHMENT OF NAD AT NAC, PORT BLAIR
(E/M PORTION)

Station : Port Blair

Sr. No	Description of Item	Capacity (Kg NEC)	No. of Building	Requirement of Air locking	Requirement of Crane			Type of Light Fitting	Copper Strip on Wall with Copper earthing	Lightning Protection	Fire Fighting	Static Electricity protection in floor	Compress Air Facility	Remarks
					Capacity	Hook Height	Type							
1	2	3	4	5	6	7	8	9	10	11	12	13		14
	CHAPTER II MAGAZINES													
1	Magazines 300 LT 18x12x8m LRC Box type Igloo	10000	2	_	3 Ton	6.0m	EOT & HOT with flame proof fittings	Consealed, flame proof	Yes	Yes	Yes	_	_	No fire fighting inside magazine. Area fire fighting to be provided as per relevant regulation/ STECK pamphlete.
2	Magazines 300 LT 18x12x8m LRC Box type AGM untravesed	10000	1	Yes	3 Ton	6.0m	EOT & HOT with flame proof fittings	Consealed, flame proof	Yes	Yes	Yes	_	_	
3	Magazines 300 LT 18x12x8m LRC Box type AGM untravesed	10000	1	Yes	2 Ton	6.0m	EOT & HOT with flame proof fittings	Consealed, flame proof	Yes	Yes	Yes			

4	Magazines 300 LT 18x12x8m LRC Box type AGM untravesed	20000	1	_	3Ton	6.0m	EOT & HOT with flame proof fittings	Consealed, flame proof	Yes	Yes	Yes			
5	Magazines 600 LT 18x24x8m LRC Box type AGM untravesed	20000	1	Yes	3Ton	6.0m	EOT & HOT with flame proof fittings	Consealed, flame proof	Yes	Yes	Yes			
6	Magazines 300 LT 18x12x8m LRC Box type Igloo	25000	3	Yes	5 Ton	6.0m	EOT only with flame proof	Consealed, flame proof	Yes	Yes	Yes			
7	Magazines 300 LT 18x12x8m LRC Box type Igloo	25000	1	Yes	10 Ton	6.0m	EOT only with flame proof	Consealed, flame proof	Yes	Yes	Yes			
8	Magazine 18x30x8m LRC Box type Agm with VIFT	5000	1	Yes	5 Ton	6.0m	EOT & HOT with flame proof fittings	Consealed, flame proof	Yes	Yes	Yes			
9	Magazines Office Accomadation for magazine staff 240Sqm													As per normal standard accn.

	iii) Electric/electronic component room 6x5m		Yes										
	iv) Rubber component room 6x5m		Yes										
	v) EDP room 6x4m		Yes										
7	Guided weapon non explosive store house 18x54x8m out of which 10x20m air conditioned		Yes (10x20m)	3 Ton	6m	EOT and HOT normal	Normal	_	Yes	Yes	Yes		
	a) Store house												
	b) Other facilities												
8	Empty container shed 40x30m	1	_	2 Ton	6m	EOT and HOT normal	Normal	_	Yes	Yes	Yes		
9	Magazine for preparing torpedos 18x30m		Yes	5 Ton	_	EOT and HOT normal	Normal	_	Yes	Yes	Yes		

In addition to above following services are also required to be considered.

- 1 All remaining buildings as per list of building Appx "E".
- 2 Centralized fire fighting system with fire hydrant near all magazines/stores as per STEC pamphalet.
- 3 Centralized fire alarm system with manual call point type addressable atomic fire alarm system with call point near each workshop/store/magazine including 4 Nos master control points and 4 Nos electrical operated hooters of 5 Km range.
- 4 CCTV servilance system with vission control at security office with sufficient screen.
- 5 A wall mounted type power fencing with very short duration high voltage pulses with battery backup.
- 6 Automatic/manual road barrier 3 Nos.
- 7 Fire range/ baffle range 1 No.
- 8 External electric supply system.
- 9 External water supply system.
- 10 Sewage treatment plant.

Notes:

- 1 All magazines/stores/workshop to be constructed as specified in STEC pamphalets.
- 2 Layout, orientation and distance between magazines and stores should be as per STEC pamphalets
- 3 While calculating the requirement of electric supply load the specific equipment load to be taken from user/PMG in addition to the requirement of normal load like lighting, ventilation, air conditioning, EOT cranes etc.
- 4 All external electric work should be using underground cabling only.
- 5 While calculating the requirement of water all aspects like requiremnet for fire fighting, arboriculture, drinking, workshops/washing plants and requirement for persons considered. The strenght of persons may be obtained from the user/PMG
- 6 Capacity and type of sewage treatment plant should be designed considering the sewage received from both, domestic use and workshop/factory use. This scheme also be calculated/designed for re-use of treated water for various buildings/arboriculture.

APPENDIX 'G'**APPROXIMATE TIME CHART FOR PERIODS IN WEEKS REQUIRED FOR COMPLETION OF THE WORK**

SI No	Activity	Period of completion in weeks	Total Period
1.	Mobilization of equipments/materials/manpowers to establish site office	2 Weeks	2 weeks
2.	Topographical survey incl preparation of site plant,fixing plinth levels of bldgs etc	6 weeks	8 weeks
3.	Plotting contour plans with site plan, earthwork, calculation, marking of bore holes on plant etc	6 weeks	14 week
4. (a)	Initiation of CRZ clearance with hydro graphic survey reports	3 weeks	17 week
(b)	Initiation for forest clearance		
(c)	Initiation of CFEES clearness with site plan duly approved by ANC/NAD authorities		
5	Soil investigation and submission of report	8 weeks	25 weeks
6	Preparation of Architectural drawings and duly approved by users/MES nodal officers/CFEES	8 weeks	33 week
7	Preparation of RIC/External services scheme incl firefighting/fire safety requirement. Duly approved by Dir/SO-I (Plg)	4 weeks	37 weeks
8	Preparation of structural drawing for bldgs and all external services like static/overhead reservoir etc duly approved by E2 (Des)	7 weeks	44 weeks
9	Obtaining concurrence of IIT	4 weeks	48 weeks
10	Preparation of BOQ for all bdlgs and external services etc	4 weeks	52 weeks
	Total period	52 weeks	52 weeks

(SIGNATURE OF CONSULTANT)**Jt Dir (CONTRACTS)
For CLIENT**

SPECIAL CONDITION**1 DEFINITIONS**

- 1.1 For the purpose of this CONTRACT, unless otherwise specified or repugnant to or inconsistent with subject, context or meaning thereof, the following terms shall be deemed to have the following meanings:
- 1.2 "CONTRACT" shall mean this CONTRACT including all sections, annexures and appendices hereto and all documents herein attached and amendments to be made to this CONTRACT, if any, which the PARTIES may hereafter mutually agree in writing.
- 1.3 "CLIENT" shall mean President of India represented by HQ Chief Engineer (A&N) Zone Birchgunj, Junglighat Post, Port Blair – 744 103.
- 1.4 "CONSULTANT" or "CONTRACTOR" shall mean the firm whose bid is accepted by the Client and having its registered office at the location as mentioned in the registration document of the firm with Commercial Tax Deptt/Registrar of Firms/Income Tax Department/ Service Tax Department and shall include all other known offices.
- 1.5 "ACCEPTING OFFICER" shall mean Chief Engineer (A&N) Zone having his office at HQ Chief Engineer (A&N) Zone Birchgunj, Junglighat Post, Port Blair – 744 103. and for all purposes shall also be referred as "CLIENT".
- 1.6 "PARTIES" shall mean CLIENT and CONSULTANT, one individually referred to as PARTY.
- 1.7 "SERVICES" shall mean all the responsibilities to be discharged by consultant for fulfilling its obligations under this contract.
- 1.8 "AUTHORISED REPRESENTATIVE(S)" shall mean the representatives of "CLIENT" and/or "CONSULTANT" as the case may be, who are duly empowered and authorized by their respective organization to act for and on their behalf.
- 1.9 "DATE OF ACCEPTANCE" shall mean the date on which CLIENT confirms written acceptance of consultants SERVICES.
- 1.10 "PROJECT" shall mean the Structures/ Building at location (s) for which consultant is to provide SERVICES under this CONTRACT.
- 1.11 "PROJECT COST" shall mean summation of costs of contracts concluded with lowest tenderers adjusted with cost of variations/deviations during execution or DPR cost of work contracted, whichever is less.
(Note: -It is expressly mentioned that Project Cost shall not include cost of land and escalation, if any and percentage quoted by consultant of project cost shall not be paid on cost of land, escalation, if any.)
- 1.12 "CONSULTANCY CHARGES/FEE" shall mean the amount as quoted by Consultant in online bidding in BOQ as mentioned in **Appendix 'C'**.
- 1.13 "CDA" shall mean Controller of Defence Accounts.
- 1.14 "PCDA" shall mean Principal Controller of Defence Accounts.

2. LANGUAGES

This Contract has been executed in English, which shall be the binding and controlling language for all matters relating to the meaning or interpretation of this Contract.

3. HEADINGS

The headings shall not limit, alter or affect the meaning of this Contract.

SPECIAL CONDITION (CONTD)**4. OFFICIAL SECRETS ACT AND SECURITY OF CLASSIFIED INFORMATION AND DOCUMENTS**

The Consultant shall not disclose to any third person or party any information, data, tender documents and contents thereof, design, drawings, plans, specifications etc. received from the client or collected during their site visits to various military stations at any time either in whole or in part and shall ensure to preserve the secrecy of the above information and shall not use the same for any purpose other than construction, maintenance and operation of the resultant Project/Plant. Officers, staff, employees of the Consultant handling all such information shall be subject to the provisions of the OFFICAL SECRETS ACT and violations, if any, shall be dealt with accordingly.

5. CLIENTSHIP OF INFORMATION / DATA/DESIGNS / DRAWINGS/ DEVELOPED BY THE CONSULTANT UNDER THE CONTRACT.

Clientship of all data, documents, drawing, designs developed by the Consultant at client cost under this contract shall rest with the client. The consultant shall hand over all such materials (in print as well as in electronic media) to Chief Engineer (A&N) Zone before the payment of that material/document is claimed. Authority for future use of these materials shall solely rest with the client. Accordingly a certificate to this effect that these documents will not be utilized by them for any other project without the permission of CE (A&N) Zone shall be rendered at the time of submission of tender.

6. INDEMNITY

- 6.1 The consultant shall hold harmless and indemnify the client, against any claims or liability because of personal injury including death of any employees of consultant arising out of or in consequence of the performance of this CONTRACT.
- 6.2 CLIENT shall not be responsible for any loss or damage to property of any kind belonging to consultant or his employees, servants or agents during execution of the contract.

7. ASSIGNABILITY

The contract and benefits and obligations thereof shall be strictly personal to the parties.

8. GOVERNMENT LEVIES

The Consultant remuneration shall be inclusive of all statutory taxes and levies imposed by Government of India for the time being in force, such as Income Tax, Education Cess, Labour welfare cess, GST etc. as applicable from time-to-time. Any change in such levies/taxes after the date of opening of Priced Tender shall be adjustable.

9. PERFORMANCE SECURITY

- 9.1 The consultant shall furnish within 30 days of issue of the letter of acceptance by client, a bank Guarantee from any nationalized bank on the prescribed format (**given at Annexure 'A'**) for an amount equivalent to 5% (Five percent) of the total consultancy fee to be received by him towards performance Security valid for a period till payment of final bill or completion of defect liability period of the project. Any amount as and when due against consultant on account of liquidated damages, unsatisfactory performance and failure of schemes or any part of schemes be recovered from his dues and by encashing the bank guarantee.
- 9.2 The total consultancy fee for this purpose shall be as quoted by the Consultant under in BOQ.

SPECIAL CONDITION (CONTD)**10. NOTICES**

Any notice, request or consent required or permitted to be given or made pursuant to this Contract shall be in writing. Any such notice, request or consent shall be deemed to have been given or made when delivered in person to an authorized representative of the Party to whom the communication is addressed, or when sent by registered mail, email or facsimile to such Party at the address specified below:-

Client : - Chief Engineer (A&N) Zone, Port Blair
Consultant : - Name of the firm whose bid is accepted by the Client.

11. EFFECTIVENESS OF CONTRACT

This Contract shall come into force and effect on the date (the "Effective Date") of Acceptance.

12. COMMENCEMENT OF SERVICES

The Consultants shall begin carrying out the Services at the end of maximum 15 days period after the date of acceptance.

13. FORCE MAJEURE

13.1 Definition : For the purpose of this contract, "Force Majeure" means an event which is beyond the reasonable control of a party, and which makes a Party's performance of its obligations under this contract impossible or so impractical as reasonably to be considered impossible in the circumstances, and includes but not limited to, war, riots, civil disorder, earthquake, fire explosion, storm, flood, strikes, lockouts, or other industrial action (except where such strikes, lockouts or other industrial action are within the power of the Party invoking Force Majeure to prevent), confiscation or any other action by government agencies.

13.2 Force Majeure shall not include:-

- (a) Any event which is caused by the negligence or intentional action/inaction of a Party
- (b) Any event, which a diligent Party could reasonably have been expected to both;
 - (i) Take into account at the time of conclusion of this contract and;
 - (ii) Avoid or overcome in the carrying out of its obligations under this contract.

13.3 The failure of a Party to fulfill any of its obligations under this contract shall not be considered to be a breach of, or default under, this contract in so far as such inability arises from an event of Force Majeure; provided that the party affected by such an event has taken all reasonable precautions, due care and reasonable alternative measures with the objective of carrying out the work under the terms and conditions of this contract.

13.4 Measures to be taken

- (a) A Party affected by an event of Force Majeure shall take all reasonable measures to remove such Party's inability to fulfill its obligations under this contract with minimum of delay.
- (b) A Party affected by an event of Force Majeure shall notify the other Party of such events as soon as possible, and in any event not later than **fourteen (14) days** following the occurrence of such event, providing evidence of the nature and cause of such event, and shall similarly give notice of the restoration of normal conditions as soon as possible.
- (c) The Parties shall take all reasonable measures to minimize the consequences of any event of Force Majeure.

SPECIAL CONDITION (CONTD)**13.5 Extension of Time**

The Consultant shall keep a record of the circumstances referred to above information, which are responsible for causing delays in the execution of the project and shall intimate to Chief Engineer (A&N) Zone within seven days of the happening causing delay requesting for extension of time for entire completion of his services. Such extension of time shall be granted by Chief Engineer (A&N) Zone after due consideration of circumstances intimated by the consultant. In case of any difference of opinion, the decision of client shall be final and binding.

14. SUSPENSION

The client may, by written notice of suspension to the Consultant, suspend all payments to the Consultant hereunder if the Consultant fails to perform any of their obligations under this Contract, including the carrying out of the Services; provided that such notice of suspension :

(a) Shall specify the nature of the failure and

(b) Shall request the Consultants to remedy such failure within the period not exceeding fourteen (14) days after receipt by the Consultants of such notice of suspension.

15. TERMINATION

15.1 If at any time in spite of reasonable notices, the client considers that the consultant is making default or is not progressing diligently or that the quality of services rendered by the consultant is not satisfactory, or that the consultant is not effectively cooperative in achieving the targets of the scheme in one way or other or that the consultant is lacking in professional ethics or misconducts himself, then client may at his discretion terminate this contract in whole or in part as he deems fit without assigning any reason. In the event of such termination, the consultant shall be entitled to be paid only for those stages of work/services which have been fully completed by the consultant less 10 % (ten percent) . Drawings, design data etc for any incomplete stage(s) received by the client however shall become the property of the client.

15.2 Whenever the client exercises his authority to terminate the contract as a whole or in part due to above said reason (s), he may complete the consultancy services by any means at the consultant's risk and cost provided always that in the event of cost of completion or after alternative arrangements have been finalized by the client to get the consultancy services completed, estimated cost of completion (as certified by the client) being less than the contract cost, the advantage shall accrue to the client. If the cost of completion or after alternative arrangements have been finalized by the client to get the consultancy services completed, estimated cost of completion (as certified by client) exceeds the moneys due to the consultant under this contract, the consultant shall either pay the excess amount ordered by client or the same shall be recovered from the consultant by other means.

16. FORECLOSURE

At any time before his services and obligations under the contract is completed by the consultant, the client shall have right to foreclose this agreement without assigning any reason to the consultant. In case of such foreclosure, the consultant shall be entitled to be paid for the stages of work already completed by him at applicable rates and a reasonable compensation as decided by Employer (which shall be final and binding) for any part or any stage of services of the consultant already completed by the consultant before he was served with the notice of foreclosure.

17. FAIRNESS AND GOOD FAITH

17.1 The Parties undertake to act in good faith with respect to each other's rights under this Contract and to adopt all reasonable measures to ensure the realization of the objectives of this Contract.

SPECIAL CONDITION (CONTD)**17.2 OPERATION OF THE CONTRACT**

The Parties recognize that it is impractical in this Contract to provide for every contingency which may arise during the life of the Contract, and the Parties hereby agree that it is their intention that this Contract shall operate fairly as between them, and without detriment to the interest of either of them, and that, if during the term of this Contract either Party believes that this Contract is operating unfairly, the Parties will use their best efforts to agree on such action as may be necessary to remove the cause or causes of such unfairness, but on failure to agree on any action pursuant to this clause shall give rise to a dispute subject to arbitration in accordance with Clause thereof.

18. SETTLEMENTS OF DISPUTES

18.1 All disputes, between the parties to the contract (other than those for which the decision of the Chief Engineer (A&N) Zone or any other person is by the contract expressed to be final and binding) shall, after written notice by either party to the Contract to the other of item, be referred to the sole arbitration of serving officer having degree in Engineering or equivalent or having passed Final / Direct Final Examination of Sub Division II of Institution of Surveyors (India) recognized by the Government of India to be appointed by the Engineer-in-Chief, E-in-C's Branch, Kashmir House, New Delhi-11 or Director General of Works, if specifically delegated in writing by Engineer-in-Chief, Army Headquarters, New Delhi whose decision shall be final, conclusive and binding. The Arbitration shall be governed by Arbitration and Conciliation Act, 1996.

18.2 Unless both parties agree in writing, such reference shall not take place until after the completion or alleged completion of the Works or termination or determination of the Contract under conditions of this contract. Provided that in the event of abandonment of the works or cancellation of the Contract under conditions of this contract, such reference shall not take place until alternative arrangements have been finalized by the client to get the works completed by or through any other consultant or consultants or Agency or agencies.

18.3 Provided always that commencement or continuance of any arbitration proceeding hereunder or otherwise shall not in any manner militate against the client's right of recovery from the consultant as provided in conditions of this contract.

18.4 Notwithstanding the fact that the stations of work are anywhere in India, only the courts at Port Blair shall have the jurisdiction as court of first cause, to adjudicate and settle any disputes between client and the consultant. No other court outside Port Blair shall have any jurisdiction on any matter requiring reference to Civil Court as first cause court.

19. CONSULTANTS NOT TO BENEFIT FROM COMMISSIONS, DISCOUNTS ETC

The remuneration of the Consultant pursuant to 'Consultant Price' hereof shall constitute the Consultant's sole remuneration in connection with this Contract or the Services and, the Consultant shall not accept for own benefit any trade commission, discount or similar payment in connection with activities pursuant to this Contract or to the Service or in the discharge of their obligations hereunder, and the Consultant shall use their best efforts to ensure that any sub-consultants, as well as the Personnel and agents of either of them, similarly shall not receive any such additional remuneration.

20. CONSULTANTS AND AFFILIATES NOT TO ENGAGE IN CERTAIN ACTIVITIES

The Consultant agree that, during the term of this Contract and after its termination, the Consultant and any entity affiliated with the Consultant, as well as any sub-consultant and any entity affiliated with such sub-consultant shall not indulge in any type of unlawful, illegal or other activities detrimental to the interest of the Govt and in the event of failure to comply with such instructions, they shall be disqualified from providing goods, works or services (other than the Services and any continuation thereof for any project resulting from or closely related to the Services).

21. PROHIBITIONS OF CONFLICTING ACTIVITIES

Neither the Consultant nor their sub-consultants or the Personnel of either of them shall engage, either directly or indirectly, in any of the following activities:-

SPECIAL CONDITION (CONTD)

(a) During the terms of this Contract, any business or professional activities in the Government's country which would conflict with the activities assigned to them under this Contractor.

(b) After the termination of this Contract, such other activities as may be specified in the contract.

22. LIABILITY OF THE CONSULTANT

Subject to additional provisions, if any, set forth in the contract, the Consultant's liability under this Contract shall be as provided by the Applicable Law.

23. PATENTS

The consultant shall indemnify and hold client harmless from all costs, damages, and expenses arising out of any claim, action or suit brought against client by third parties in respect of any infringement of any patent or registered design or similar rights resulting from the use of any technical information, data or process or design belonging to the Consultant and furnished to CLIENT.

24. TAXES, LEVIES ETC :

Consultants quoted amount of fee shall be inclusive of all types of taxes, levies, surcharges, GST, sales tax/VAT etc including local levies as applicable. Quoted rate shall also be inclusive of all expenditure to be incurred in getting all requisite vetting, approvals and clearance from Agencies like Engineering Colleges and Central/State Pollution Control Boards.

SIGNATURE OF CONSULTANT

**JT DIRECTOR (CONTRACTS)
FOR CLIENT**

Annexure 'A' to Special Condition

(ON A STAMP PAPER OF APPROPRIATE VALUE AS PER LAW OF STATE WHERE THE WORK LIES)

TO :

**Chief Engineer (A&N) Zone
Birchgunj, Junglighat PO
Port Blair – 744 103**

Bank Guarantee Bond

1. In consideration of President of India represented by Chief Engineer (A&N) Zone, having his office at HQ Chief Engineer (A&N) Zone Birchgunj, Junglighat Post, Port Blair – 744 103 (herein after referred to as the "Government") having awarded to M/s.....(*Name of Consultant with address*).... (hereinafter referred to as the "Consultant") which expression shall, unless repugnant to the context or meaning thereof, include its successors, administrators, executors and assigns), an agreement for **tender for Detailed Engineering Consultancy services for provision of buildings and services at Port Blair** (Hereinafter called the 'agreement' or 'scope of work') and in terms of clause 9 of 'Special Condition' of the Contract, as per which the Consultant is required to submit a Bank Guarantee of Rs. ...(*to be calculated on quoted rate*).... (Rupees only) as "Performance Guarantee" of the agreement to be furnished by the Consultant; We, (*Name of bank with address*).... hereby undertake to pay to the Government an amount not exceeding Rs against any loss or damage caused to or suffered or would be caused or suffered by the Government by reason of any breach by the said consultant of any of the terms and conditions contained in the said Agreement.

2. We, (*Name of bank with address*)....., do hereby undertake to pay the amounts due and payable under this guarantee without any demur, merely on a demand from the Government stating that the amount claimed is due by way of loss or damage caused to or would be caused to or suffered by the Government by reason of any breach by the said Consultant of any of the terms or condition contained in the said Agreement or by reason of the consultant's failure to perform the said Agreement. Any such demand made on the Bank shall be conclusive as regards the amount due and payable by the Bank under this guarantee. However, our liability under this guarantee shall be restricted to an amount not exceeding Rs..... (Rupees.....only) .

3. We, (*Name of bank with address*).... , further agree that guarantee herein contained shall remain in full force and effect during the period that would be taken for the performance of the said Agreement and that it shall continue to be enforceable till all the dues of the Government under or by virtue of the said Agreement have been fully paid and its claims satisfied or discharged or till HQ Chief Engineer (A&N) Zone, Port Blair certifies that the terms and condition of the said Agreement have been fully and properly carried out by the said consultant and accordingly discharges the guarantee. Unless a demand or claim under this guarantee is made to us in writing on or before the we shall be discharged from all liability under this guarantee thereafter.

4. We, (*Name of bank with address*).... , further agree with the Government that the Government shall have the fullest liberty without our consent and without affecting in any manner our obligations hereunder to vary any of the terms and conditions of the said Agreement or to extend time of performance by the said consultant from time to time or to postpone for any time or from time to time any of the powers exercisable by the Government against said consultant and to forbear or enforce any of the terms and conditions relating to the said agreement and we shall not be relieved from our liability by reason of any search variation, or extension being granted to the said consultant for any forbearance, act or omission on the part of the Government or any indulgence by the Government to the said consultant or any search matter or thing whatsoever which under the law relating sureties would for the provision have effect of so relieving us.

5. We, (*Name of bank with address*)....., lastly undertake not to revoke this guarantee during its currency except with the previous consent of the Government in the writing.

Dated the Day of 2018

Signatory
For

(*Name of bank with address*)....

ACCEPTANCE

_____ alterations have been made in these documents and as evidence that these alterations were made before the execution of the Contract Agreement these have been initialed by the contractor and S'Shri/Shri _____

The said officer/officers is/are hereby authorized to sign and initial on my behalf the documents forming part of this contract. The above tender was accepted by me on behalf of the President of India for the **lump sum** of Rs _____

(Rupees _____

_____) _____ day of _____
2018.

Signature _____ dated this _____ day of _____ 2018.

(FOR AND ON BEHALF OF THE PRESIDENT OF INDIA)

**Appointment:Chief Engineer (A&N) Zone.
Birchgunj, Junglighat PO
Port Blair – 744 103
(ACCEPTING OFFICER)**