



NAYA RAIPUR DEVELOPMENT AUTHORITY

**Tender Document for the Construction of Parking Shed at
G-2 & 5, Capitol Complex, Sector-19, Naya Raipur**

(Following Three-Envelope Tender Procedure)

TENDER DOCUMENT (PART ONE)

NIT No.: 114 /PS-S19/AEC-1 / CE (E) / NRDA / 2014-15, Raipur,

Dated: 17.11.2014

Issued by: Chief Executive Officer,
Naya Raipur Development Authority (NRDA)
1st floor, Utility block, Capitol Complex, Sector-19,
Naya Raipur 492 002, Chhattisgarh
E-mail: ceo@nayarapur.com

Tender Document Contains

- (a) Only schedule "A" and Section-I of schedule "D" are to be filled & signed by the tenderer
 (b) All the certificates as per pre qualification criteria shall be appended with relevant forms of schedule "D"

1. PART ONE (NRDA F-1)-(Attached herewith, to be submit along the tender)

Part (A)

- a) Press Notice
 b) Detailed NIT

Part (B)

- a) Schedule-A
 (i) Cost Abstract
 (ii) Bill of Quantities

- b) Schedule-B –NIL
 c) Schedule-C –NIL
 d) Schedule-D

Section-I..... Technical tender forms

- (i) Letter of Technical Tender
 (ii) Tenderer's Information Sheet
 (iii) Annual Turnover
 (iv) Specific Construction Experience
 (v) Declaration
 (vi) Check list for Technical tender evaluation

Section –IIScope of work

Section –III..... Technical specifications of work

Section –IV..... Special Conditions of Contract

Section –V..... List of approved makes.

Section –VI..... Drawings

- e) Schedule-E
 f) Schedule-F

2. PART TWO (NRDA F-2/3)-Standard form (Not Attached herewith, and not to be submitted along the tender)

Important note: - Link site [http:// nayaraipur.gov.in/documents/gcc.pdf](http://nayaraipur.gov.in/documents/gcc.pdf)

1. General Guidelines
2. Tender
3. General rules and directions
4. Conditions of contract
5. Clauses of contract
6. Model rules relating to labour, water supply and sanitation in labour camps safety code
7. Sketch of cement Godown
8. Contract forms
 - (a) Draft Format for Performance Security
 - (b) Earnest Money Deposit Form (Bank Guarantee)
 - (c) Format of Contract Agreement
 - (d) Draft Format for Performance Guarantee for Water Proofing and Anti-termite Works
 - (e) Indemnity Bond
 - (f) Indenture Bond
 - (g) Notice for Appointment of Arbitrator
9. Proforma of schedules (Schedule 'A' to Schedule 'F')



NAYA RAIPUR DEVELOPMENT AUTHORITY

Utility block, Capitol Complex, Sector- 19, Naya Raipur- 492 002, Chhattisgarh
Tel No: + 91 771 2511500; Fax No.: +91 771 2511400., Website: www.nayaraipur.gov.in

Tender Notice

NIT No.: 114 /PS-S19/AEC-1 / CE (E) / NRDA / 2014-15, Raipur,

Dated: 17.11.2014

Sealed tenders are invited from contractors registered with any Central/ state Govt. /local body or PSU in appropriate class, who fulfill the Pre-Qualification criteria, for the work of “CONSTRUCTION OF PARKING SHED AT G-2 & 5, CAPITOL COMPLEX AREA, SECTOR -19, NAYA RAIPUR”.

Registered Contractor in CGPWD or in appropriate class in other dep't.	Time allowed inc. rainy season	Estimated Cost (INR Crore)	EMD (INR Lacs)	Cost of Tender Doc. (INR)	Avg. Annual turnover in last three financial years (INR Crore)
C	8 Months	1.27	1.3	5,000	1.90

Bids are invited in three envelope system. Eligibility and qualification criteria are available in the detailed NIT. Tender documents can be downloaded from the website www.nayaraipur.gov.in While submitting the tender; the tenderer should submit documentary proof in support of eligibility and qualification. Duly completed documents shall be submitted by speed post/registered post/ courier so as to reach the office latest by **15.00hrs on 10.12.2014**. Technical Documents shall be opened thereafter on same day after **16.00hrs**. **Amendment in tender, if any, will only be uploaded on the website and shall not be published in any newspaper.**

नया रायपुर – मेरा रायपुर

Chief Executive Officer

Signature of Contractor.....

Signature of NRDA.....

NAYA RAIPUR DEVELOPMENT AUTHORITY (NRDA) RAIPUR, CHHATTISGARH

DETAILED NIT

NIT No.: 114 /PS-S19/AEC-1 / CE (E) / NRDA / 2014-15, Raipur,

Dated: 17.11.2014

Last date and time for submission of tenders: 15.00 hrs on 10.12.2014

1. Item Rate Tenders are invited in the prescribed tender documents by the Chief Executive Officer, Naya Raipur Development Authority (NRDA), Raipur Chhattisgarh from eligible contractors registered with any Central / state /semi Government of India or public sector undertaking. Who fulfill the prequalification criteria.
2. **The detailed NIT is as under:-**

Name of work	Construction of Parking Shed at G-2 & 5, Capitol Complex, Sector-19, Naya Raipur
Estimated Cost (INR in Crore)	1.27
EMD (INR in Lacs)	1.30
Time allowed including rainy season	8months
Cost of Tender (In INR)	5,000.00
Tender to be uploaded on NRDA website to enable download	17-11-2014
Last Date of submission of pre bid queries	01-12-2014
Pre tender Clarification/ amendments	Available in the NRDA Website
Last Date and time of submission of Tender	10-12-2014 at 15.00Hrs
Date and time of opening of Tender	10-12-2014 at 16.00Hrs

3. Intended eligible Tenderers may obtain further information from the office of Employer and inspect the Tender Document at, NRDA Raipur from 11 AM to 4 PM on all working days.
4. **Pre Qualification Criteria** -To be eligible under the contract, the intending tenderer should meet the following mandatory criteria **4.1 and 4.2 (A & B):**

4.1 Financial Criteria

Average Annual Turnover: Minimum average annual gross turnover of the bidder shall be INR 1.9 Crores during any three complete financial years out of FY (i.e. 2010-11, 2011-12, 2012-13 & 2013-14) can be considered. (Audited balance sheet duly signed by CA and notarized should be enclosed).

Annual turnover is total certified payments received for contracts in progress or completed during the financial year

For above, the Tenderer has to submit audited balance sheets of their financial turn over/ accounts along with profit and loss account for the last three(3) years, along with the Tender. Where necessary, the Employer can make enquiries with the Tenderer's Bankers.

Signature of Contractor.....

Signature of NRDA.....

4.2 Technical Criteria

A	Intending tenderer shall be registered contractor with any Central/ state Govt/ Local Body or PSU in class C in CG PWD or in appropriate class in any other departments/ PSU/Local body.
AND	
B	Intending tenderer should have completed satisfactorily following works during last five years i.e after 30/11/2009, in any Government / Public sector undertaking as below: - <p style="text-align: center;">(a) One Similar work costing not less than INR 1.0Crore</p> <p style="text-align: center;">OR</p> <p style="text-align: center;">(b) Two Similar works costing not less than INR 0.65Crore each.</p>

Note: -

- a) *Similar work shall mean a project consisting of Civil work in a Single Contract*
- b) *For the purpose **value of executed works and financial turnover shall be brought to current costing level by enhancing the actual value of work at the rate of 10% per annum (compounded annually), calculated from the date of completion to last date of receipt of applications for tenders.***
- c) *Ongoing project / part project experience shall not be considered for evaluation.*
- d) *For the benefit of the intending tenderers a checklist is enclosed at Schedule-D (vi), for the documents to be submitted along with tender.*
- e) *The tenderer shall be required to appoint sub vendor in respect of the following specialized work.*
 - i. *Electrical works*
 - ii. *Plumbing and Fire Fighting*

*That sub vendor should completed work in any **Central/ State Govt. / Local Body/ PSU** in respect of particular component of significant magnitude. The same shall be got approved from NRDA, before appointment.*

Certificates:

- a) All tenderers should submit the valid registration certificate. Commercial tax certificate, balance sheet with profit and loss statement for at least 3 years.
 - b) The tenderers shall also submit satisfactory completion certificates in support of each quoted experience along with work order. The satisfactory completion certificate should be signed by an officer not below the rank of Executive Engineer concerned in case of Government department or the rank of General Manager in case of public sector as the case may be.
 - c) **All the documents to be submitted shall be duly notarized.**
5. The tender document for the above work is available on NRDA's **websites: www.nayaraipur.gov.in and www.cg.gov.in** Tenderer will have to download the tender document, and shall submit the tender along with the tender cost as mentioned in the Para 2 above. For tender cost, DD drawn in favor of "CHIEF EXECUTIVE OFFICER, NRDA" should be enclosed. The tenderers shall attach the cost of tender document along with EMD as mentioned in the Para 2 above.
 6. Three envelope Tender procedures shall be followed. Tenderer has to submit three sealed envelopes containing the documents as detailed below simultaneously, enclosed in a **Fourth Envelope duly mentioned in the top the name of work, NIT No. and firm address.**

ENVELOPE-1	EMD & Cost of tender in the prescribed format
ENVELOPE-2	Technical Tender consisting of the documents/ certificate in proof of prequalification criteria PART ONE (NRDA F-1) excluding schedule-A
ENVELOPE-3	Financial Tender PART ONE (Schedule-A) (Price Bid should also be submitted as soft copy in MS Excel 2007,in CD)

All the three tenders shall be put in a fourth envelope which shall be dully sealed. **All the 4 envelopes shall be super-scribed with the Name of Work and Name of intending tenderer. Respective envelopes**

Signature of Contractor.....

Signature of NRDA.....

shall also be marked as envelope 1, envelope 2, and envelope 3 as detailed above. Tenders who do not conform to the specified requirements will be held non-responsive.

Initially, only the envelope -1 shall be opened, if found responsive then the envelope-2 (Technical tender) shall be opened at the date and time given in the Tender Document. The Price tender shall remain sealed and unopened in the custody of NRDA.

After technical evaluation, date and time of opening of price bid shall be communicated by NRDA to the successful tenderer in technical evaluation. The Price tenders of only the tenderer found qualified as per the PQ criteria shall be opened in presence of the tenderer who wish to be present. The Contract shall be awarded to the tenderer whose tender has been determined to be the lowest evaluated as per tender conditions.

7. All Tenders must be accompanied with the
 - a) **Earnest money** as mentioned in the Para 2 above. The Earnest money shall be payable in favor of *Chief Executive Officer NRDA*, in the form of a **Bank Draft payable at Raipur/ Bank Guarantee Operatable / Encashable at Raipur with their local branch address, drawn from a nationalized bank/ Scheduled Bank. Bank Draft and Bank Guarantee shall be valid for a period of 3 (three) months and 6 (Six) months respectively from the date of submission of tender**
 - b) **Cost of tender** as mentioned in the Para 2 above. The Cost of tender money shall be payable in favor of *Chief Executive Officer NRDA*, in the form of a **Bank Draft payable at Raipur drawn from a nationalized bank/ Scheduled Bank** which shall be valid for a period of **3 (Three) months** from the date of submission of tender.
8. Tenders shall be submitted at the address below on or before due date. Tenders received after the due date or time for tender submission (Late tenders) will either not be accepted or if inadvertently accepted, will not be opened and shall be rejected and returned back to the tenderer subsequently.
9. (a) NRDA reserves full rights to reject any or all the tenders without assigning any reason, and to seek any further information from the tenderers. The selection shall be at the entire discretion of NRDA and the NRDA's decision in this respect shall be final and binding. Further NRDA reserves right to split the contract in two or more parts. This shall be at the entire discretion of NRDA and NRDA's decision in this matter shall be final and without appeal.

(b) The competent authority on behalf of NRDA does not bind himself to accept the lowest or any other tender, and reserves to himself the authority to reject any or all of the tenders received without the assignment of a reason. All tenders in which any of the prescribed conditions is not fulfilled or any condition including that of conditional rebate is put forth by the tenderer, shall be summarily rejected.
10. (a) Tenders shall be valid for 90 (Ninety) days from the last date of submission of the tender. NRDA will not be responsible for any costs or expenses incurred by Tenderers in connection with the preparation or delivery of Tenders. If any tenderer withdraws his tender before the said period or issue of letter of acceptance/intent, whichever is earlier, or makes any modifications in the terms and conditions of the tender which are not acceptable to the NRDA, then the NRDA shall, without prejudice to any other right or remedy, be at liberty to forfeit entire amount of Earnest Money as aforesaid.

(b) Any bidder, who has withdrawn his proposal or have been disqualified on the basis of the above clause, shall not be eligible to submit the tender in the recall of such tender.

(c) Subletting of the contract or Joint Venture in any case shall not be allowed. In case subletting is done or proved during the contract, the work shall be closed at the stage as it is and the SD / Retention money/any other deposits available with department shall be forfeited.
11. Pre tender meeting with the tenderers will be held as mentioned above in the Office of **Chief Executive Officer**, NRDA, and Raipur. Tenderers are advised to participate in the pre-tender meeting. The intending tenderers are advised to send their queries to NRDA either by post or by email to ceo@navaraipur.com and cee@navaraipur.com upto the date mentioned in the Para 2 as above.
12. **Clarification/ amendments, if any shall be uploaded on website only.**
13. Period for completion of work as mentioned above at Para 2 is inclusive of rainy season.

Signature of Contractor.....

Signature of NRDA.....

14. Approved hard copy of the standard document is available in the office of the employer and could be seen on any working day during office hours at the following address:-

Chief Engineer (Engg), NRDA

Opp. Police Station, Near Water Tank, VIII, New Rakhi, Naya Raipur-492015, Phone: 0771-4066189

15. The intending tenderers are advised to cross check the downloaded version of the tender document with the hard copy available with NRDA.
16. In case of any discrepancy between the downloaded tender and the approved hard copy, the approved hard copy shall hold good for contractual as well as legal purposes.
17. Tenderers are advised to inspect and examine the site and its surroundings and satisfy themselves before submitting their tenders, as to the nature of the ground and sub-soil (so far as is practicable), the form and nature of the site, the means of access to the site, the accommodation they may require and in general, shall themselves at their own cost obtain all necessary information as to risks, contingencies and other circumstances which may influence or affect the execution of work and shall incorporate the cost of such effects while quoting the tender, A tenderer shall be deemed to have full knowledge of the site whether he inspects it or not and no extra charges consequent on any misunderstanding or otherwise shall be allowed, The tenderer shall be responsible for arranging and maintaining at his own cost all materials tools & plants, water, electricity, access facilities for workers and on all other services required for executing the work unless otherwise specifically provided in the contract documents. Submission of tender by a tenderer implies that he has read this notice and all other contract documents and has made himself aware of the scope and specifications of the work to be done and local conditions and other factors having a bearing on the execution of the work.
18. Canvassing whether directly or indirectly, in connection with tenders is strictly prohibited and the tenders submitted by the contractors who resort to canvassing will be liable to rejection.
19. The successful tenderer shall be required to execute an agreement on a non judicial stamp paper of appropriate value with the **Chief Engineer (Engineering), NRDA** in the Proformas annexed to the tender document, within 7 days of the issue of letter of acceptance/ award by the NRDA. The cost of non judicial stamp paper shall be borne by contractor. In the event of failure on the part of the successful tender to sign the agreement within 7 days, the entire earnest money will be forfeited and tender shall be cancelled.
20. The successful tenderer, upon issue of letter of acceptance, in addition to execution of an agreement on a non judicial stamp paper of appropriate value, shall also be required to furnish an irrevocable Performance Bank Guarantee of requisite amount to the **Chief Engineer (Engineering), NRDA** in the Performa annexed to the tender document, within 7 days of the issue of the letter of acceptance /award of Tender by the NRDA. In the event of failure on the part of the successful tenderer to furnish the Performance Bank Guarantee within 7 days, the earnest money will be forfeited and tender shall be cancelled.
21. This Notice Inviting Tender shall form a part of the contract document. In accordance with clause 1 of the contract, the letter of acceptance/ award shall be issued in favour of the successful tenderer/ contractor. After submission of the performance guarantee, by the contractor, the General arrangement drawings and other details for commencement of work shall be issued. The contract shall be deemed to have come into effect on issue of communication of letter of acceptance of the tender. On such communication of acceptance, the successful Tenderer/ Contractor shall, within 7 days from such date, formally sign the agreement consisting of:-
- PART ONE of the Tender documents along with detailed NIT as issued to the contractor at the time of invitation of tender and acceptance thereof together with any correspondence leading thereto and
 - PART TWO of the Tender document i.e. "General conditions of contract duly modified / corrected to the extent as specified under PART ONE (though not issued to the contractor but always available for inspection on written demand at the office of the officer inviting tenders specified under Schedule F of PART ONE of the Tender Document) and deemed to have been consulted, inspected, understood and considered by the tenderer before quoting and submitting his tender.

Signature of Contractor.....

Signature of NRDA.....

- c) Agreement signed on non-judicial stamp paper of appropriate value as per prescribed proforma of tender documents.
22. **GCC is available as a standard NRDA Publication and can also be downloaded free of cost from the NRDA web site under title “General conditions of contract” for Contractors in construction Contracts” However contractors are advised to refer to PART ONE of the tender document carefully and thoroughly for corrections/ modifications in the “General conditions of contract” Standard form NRDA F-2/3 is also available for inspection in the office of the Engineer in charge on written demand from contractors. Link site <http://navaraipur.gov.in/documents/gcc.pdf>**
23. While submitting the tender the contractor shall clearly and legibly write his full mailing address including PIN code, Telephone/ mobile no./ Fax Numbers/ e-mail address etc for communication purposes and shall inform the Engineer in Charge about any change from time to time in his postal/ mailing address. The communication shall be dispatched only at the contractor’s such latest informed address and NRDA shall in no way be responsible for non-receipt of correspondence by the contractor.
24. It is found that the contractor has misrepresented that facts or has attempted to secure or has secured the work by misrepresenting the facts or by submitting false or forged documents then the Entire Earnest Money submitted by the contractor and or the Performance Guarantee and/ or the Security Deposit as the case may be, shall be liable to be absolutely forfeited and such contractor/ individuals shall also be liable to be prosecuted for cheating/ forgery/ fraud etc as per law.
25. **Bill of quantities is enclosed with tender document, the rate shall be quoted against each item separately in figures as well as in words**
- During price Tender evaluation, the Employer will correct arithmetical errors on the following basis:
- a) if there is a discrepancy between words and figures, following procedure shall be followed:
- the unit price which correspond to the total price for the item worked out by the Tenderer shall be followed;
 - If the total price of an item is not worked out by the Tenderer or it does not correspond with the rates written either in words or figures then the rate quoted by the Tenderer in words shall be taken as correct.
- b) if there is a discrepancy between the unit price and the total price that is obtained by multiplying the unit price and quantity, the unit price shall prevail and the total price shall be corrected;
- c) If there is an error in a total corresponding to the addition or subtraction of subtotals, the subtotals shall prevail and the total shall be corrected.
- d) The unit wise amounts will be rounded to the nearest rupee
- e) The tendered rates of items against which no rate or price is entered by the tenderer will be taken as zero and the price of the same shall be deemed to have been covered by the rates/amount quoted in other items.
26. The tender document shall be written legibly and free from erasure, overwriting or conversion of figure. Any correction where unavoidable shall be made by crossing out, rewriting and attestation by the tenderer.
27. All royalties be paid by the contractor as also all tolls, duties, local and other levies including sales tax, insurances & workman compensation act etc.
28. Applicable service tax shall be reimbursed separately on production of receipt of payments of Service Tax.
29. Contractor will be bound to follow CG Model rules relating to its water supply & sanitation in labour camp.
30. The contractor shall pay not less than the minimum wages to labours engaged by him on the work.
31. Department reserves the right to take up the work departmentally or to award any work on contract in the vicinity without prejudice to the terms of contract.

Signature of Contractor.....

Signature of NRDA.....

32. If the rate quoted by the lowest (L1) of the tenderer is considered unbalanced (in relation to the Department's estimate of cost of work to be performed under the contract) by the CEO, NRDA, then tenderer shall submit detail price/rate analysis of major items of the work within 7 days of such notice so as to demonstrate the internal consistency of these price/rate(s) with his quoted price/rate(s). After evaluation by tender sanctioning authority CEO, NRDA may require the tenderer to submit additional Security upto 5% of the estimated cost put to tender for the performance of the agreement in the shape of F.D. Or a BG receipt in favor of the CEO, NRDA before signing of the agreement, which shall be refunded along with the normal S.D. after Completion of work. If he fails to complete the work or leave the work in complete, this 5% additional SD, shall also be forfeited by the department, in addition to other provision of the contract & the agreement shall be terminated and action shall be taken in accordance of relevant contract clause of the agreement.
33. **Important Instructions to Tenderers** :The tenderers who have down loaded the tender documents from the web site, should read the following important instructions carefully before actually quoting the rates & submitting their tender on the tender document downloaded from the web site:
- a) The tenderer should see carefully & ensure that all the pages of PART ONE (NRDA F-1) of the tender document including schedule of quantities of items of work (NRDA F-1 Schedule-A) has been down loaded properly & completely.
 - b) The printout of the downloaded tender document shall be taken on A-4 size plain white paper only & the printer settings shall be dept to ensure that the downloaded document is printed in the same manner and pattern/ setting as appearing on the web site & there is no change in the formatting, number of paras etc.
 - c) The tenderer should ensure that no page in the down-loaded tender document is missing and all pages in the down-loaded tender document as printed are legible & clear & are printed on a good quality paper.
 - d) The tenderer should ensure that every page of the down-loaded tender document is signed by tenderer himself.
 - e) The tenderer should ensure that the down loaded tender document is properly bound and wax sealed before submitting the same in the envelope. **Loose/ Spiral binding** shall be liable to be rejected.
 - f) In case of any correction/ addition/ alteration/ omission in the downloaded tender document Vis a Vis that in the **Standard DRAFT Tender Document** available in the office of NRDA, it shall be liable to be rejected.
 - g) The tenderer shall furnish a declaration to this effect that no addition/ deletion/ corrections have been made in the downloaded tender document being submitted by him and it is identical to the tender document appearing on the Web-site and with the **Standard DRAFT Tender Document** available in the office inviting the tenders.

Chief Executive Officer, NRDA
Utility block, Capitol Complex, Sector- 19,
Naya Raipur- 492 002, Chhattisgarh
Tel No: + 91 771 2511500;
Fax No.: +91 771 2511400.

Signature of Contractor.....

Signature of NRDA.....

SCHEDULE- D
Section-I
Technical Tender Forms

Schedule-D Section I - Tender Forms Technical

This Section contains the forms which are to be completed by the Tenderer and submitted as part of his PART ONE (NRDA F-1).

Table of Forms

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Signature of Contractor.....

Signature of NRDA.....

(i) Letter of Technical Tender

Date: _____

NIT No.: _____

To:

Chief Executive Officer,
Utility block, Capitol Complex, Sector-19,
Naya Raipur- 492 002, Chhattisgarh
Tel No: + 91 771 2511500; Fax No.: +91 771 2511400

Ref for NIT no:-----

Subject: Name of the work:- -----

Dear Sir,

I/We, the undersigned, declare that:

- (a) I/We have examined and have no reservations to the Tender Document, including Addendum if any, minutes of meeting, clarification to the queries etc.
- (b) I/We offer to execute the subjected under in conformity with the Tender Documents and the addendums.
- (c) I/We have satisfied ourselves as to the location of the site and working conditions, examined the requirements of NRDA and have obtained all the information necessary for the successful and timely completion of the work.
- (d) I/We have submitted the Earnest Money Deposit as specified in the tender document which will not bear any interest and shall be subjected to forfeiture on following defaults.
 - (i) if we withdraw our Tender during the period of tender validity as specified in Detailed NIT Para 9 or
 - (ii) if we fail to:
 - furnish a Performance Security in accordance with Detailed NIT Para 19 or
 - sign the Contract in accordance with Detailed NIT Para 18; or
 - Accept the correction of its Tender Price pursuant to Detailed NIT Para 24.
 - (iii) If we have given the false documents in support of qualification with the technical tender.
- (e) My/Our Tender shall be valid for a period of 90 days from the date fixed for the tender submission deadline in accordance with the Tender Document, and it shall remain binding upon us and may be accepted at any time before the expiration of that period;
- (f) If my/our Tender is accepted, we commit to obtain a Performance Security in the amount as specified in the tender document for the due performance of the Contract and sign the agreement;
- (g) I/We are not participating, as Tenderers, in more than one Tender in this Tendering process, in accordance with the Tender Document;
- (h) My/our firm, its affiliates or subsidiaries, including any subcontractors or suppliers for any part of the Contract, has not been declared ineligible by NRDA, Raipur;

Signature of Contractor.....

Signature of NRDA.....

- (i) I/We understand that this Tender, together with your written acceptance thereof included in your letter of acceptance, shall constitute a binding contract between us, until a formal Contract is prepared and executed;
- (j) I/We understand that you are not bound to accept the lowest evaluated tender or any other tender that you may receive.
- (k) I/We hereby pay the Earnest Money Deposit of required amount in the form of a demand draft on a nationalized bank/ Scheduled Bank (-----Bank Name and address) and operatable at Raipur in favour of the 'Chief Executive Officer, NRDA, Raipur' for the said amount and is attached.
- (l) I/We hereby declare that, the entire work including Addendum/ Corrigendum, if any, shall be completed in all respect within the time limit specified in the NIT.
- (m) I/We here by authorize the Employer to get all bank guarantee verified and got confirmed from concerned Bank.

Signature: -----

Signed by: -----(Name)

Designation: -----

For and on Behalf of -----(Name of Tenderer)

Date:

(ii) Tenderer's Information Sheet

Tenderer's Information		
Tenderer's legal name		
Tenderer's legal address		
Tenderer's authorized representative (name, address, telephone numbers, fax numbers, e-mail address)	Name:	Address:
	Telephone : Fax :	E-Mail:
Tenderer's details of Incorporation	Place of incorporation/ registration:	Year of incorporation:
<p>Attached are copies of the following original documents.</p> <p><input type="checkbox"/> 1. Articles of incorporation or constitution of the legal entity named above.</p> <p><input type="checkbox"/> 2. In the case of government-owned entity, documents establishing legal and financial autonomy and compliance with commercial law.</p>		

Details of the office closest to Raipur (if available)

1.	Address of Office	
2.	Telephone :	Contact :
3.	Fax :	E-Mail :

Signature of Tenderer

Date: _____

Signature of Contractor.....

Signature of NRDA.....

(iii) Annual Turnover

Annual Turnover Data for the Last 3 Years			
Year	Amount and Currency	Exchange Rate if any	INR Equivalent
2010-11			
2011-12			
2012-13			
2013-14			
Average Annual Turnover for any 3 years in INR			

All Tenderers are requested to complete the information in this form

The information supplied should be the Annual Turnover of the Tenderer in terms of the amounts billed to clients for each year for contract in progress or completed, converted to INR at the rate of exchange at the end of the period reported.

As a proof of the above, the contractor shall submit the copies of the balance sheet for last three years along with audited profit & loss statement duly signed by the chartered accountant.

Signature of Tenderer

Date: _____

Signature of Contractor.....

Signature of NRDA.....

(iv) Specific Construction Experience

Fill up one (1) form per contract.

Details of Contract			
Contract No of	Name of work		
Award Date		Completion Date	
Role in Contract	<input type="checkbox"/> Contractor	<input type="checkbox"/> Sub-contractor	
Total Contract Amount			INR
Employer's Name Address Telephone/Fax Number E-mail			
Description of the work executed			

Note: Attach copies of work order and satisfied completion certificates in support of each quoted experience. The completion certificate should be signed by the officer not below the rank of concerned Executive Engineer in case of Government department or in the rank of General Manager in case of public sector/private sector as the cases may be.

Signature of Tenderer
 Date: _____

Signature of Contractor.....

Signature of NRDA.....

(v)DECLARATION

**(TO BE SIGNED BY THE TENDERER SUBMITTING THE TENDR
ON DOWNLOADED TENDER DOCUMENT)**

I/We hereby declare and certify that:

1. I/We are submitting the tender in the tender document downloaded by me /us from the website & we certify that there is no change in formatting, numbering of pages etc. In the downloaded documents.
2. I/We are submitting the tender in the tender document which is exactly similar and identical to the one available on the website and also as available with the officer inviting tenders.
3. I / We have not made any modifications / corrections / additions / omissions etc in the tender documents downloaded from web by me / us.
4. I / We have checked that no page in the downloaded tender document is missing and all the pages as per web site are available & that all the pages of tender document submitted by us are clear & legible.
5. I / We have signed (with stamp) all the pages of the tender document before submitting the same.
6. I / we have wax sealed the tender documents properly before submitting the same.
7. I / We have submitted the application for issue of tender documents on the prescribed format separately along with the cost of tender documents and also the attested Xerox copies of the eligibility documents prescribed for respective work in the NIT.
8. I / We have read carefully & understood the entire Tender document including important instructions to the tenderers submitting the downloaded tender.
9. In case at any stage whatsoever at a later date it is found/ revealed that there is a difference in our downloaded tender documents from the original **Standard DRAFT Tender Document**, NRDA shall have the absolute right to take any action as deemed fit without any prior intimation to me / us.
10. In case at any stage whatsoever at a later date it is found that there is difference in our downloaded tender document from the Standard DRAFT Tender Document, we clearly understand that our work shall be liable to be cancelled and Earnest Money/ Performance Guarantee / Security deposit etc all are liable to be forfeited by NRDA and in such an eventuality I / We shall have no right or claim for any damages / compensation from NRDA on this account. Further in such case I / We may also be debarred by NRDA for further participation in the tendering in the concerned NRDA & be removed from the approved list of contractors of NRDA.

Dated.....

(TENDERER)
(SIGNATURE WITH SEAL/ STAMP)

(vi) CHECK LIST FOR TECHNICAL TENDER EVALUATION

Name of the Agency:							
S. No	Document	Details			Enclosed at annexure		
					Page No		
			From	To			
1	Tender Document Cost	Downloaded from NRDA Website					
		Details of DD					
		Amount					
		Name of the Bank & Branch					
		Date					
D.D no & Photo copy attached	Yes	No					
2	Earnest Money Deposit (EMD)	Amount					
		Form of EMD					
		Issuing Bank & Branch					
		No & Date	Yes	No			
		Photo copy attached					
	Contractor Registration Certificate	Class in which registered					
		Name of Department					
		Registration Number & Date					
		Validity					
		Notarized	Yes/No				
4	Commercial Tax Certificate	Registration Number:					
		Name of the Office					
		Notarized	Yes/No				
5	Average Annual Turnover in Lacs	2010-2011					
		2011-2012					
		2012-2013					
		2013-2014					
		Charted accountant certificate in original or photo copy duly notarized can be submitted					

Signature of Contractor.....

Signature of NRDA.....

Name of the Agency:					
S. No	Document	Details		Enclosed at annexure	
				Page No	
				From	To
6	Details of the projects/works completed as pre-qualification criteria	Name of the Work			
		Work Completed	Yes/No		
		Year of completion			
		Cost of the Project			
		Certificate Enclosed	Yes/No		
		Notarized	Yes/No		
		Name of the Work			
		Work Completed	Yes/No		
		Year of completion			
		Cost of the Project			
		Certificate Enclosed	Yes/No		
		Notarized	Yes/No		

Note: The above check list only provides for those documents which are mandatory for the tender pre-qualification criteria. Tenderers are required to append, other documents also with the technical tender as required in the detailed NIT or elsewhere in the PART ONE (NRDA F-1).

Signature of Tenderer

Date: _____

Signature of Contractor.....

Signature of NRDA.....

SCHEDULE- D
Section-II
Scope of work

Signature of Contractor.....

Signature of NRDA.....

WORKS REQUIREMENT

This section contains the brief idea of scope of work, supplementary information drawings etc. regarding the work to be executed under instant tender, may vary as per site requirement. In case of any change the decision of Engineer-in-charge will be final and binding to the contractor. The work however shall be executed as per BOQ and working drawings.

A. GENERAL REQUIREMENTS APPLICABLE FOR ALL SCOPES OF WORK

1. SURVEY , SOIL INVESTIGATION AND DRAWINGS FOR ALL WORKS.

- Though the design and drawing in the scope of NRDA. However detailed /Shop drawing due to site condition earlier shall have to be prepared by the agency & got approved for NRDA before execution .
- Survey, Soil investigation for all works shall be carried out by the contractor prior to start of work and certified by Engineer In charge.
- The Contractor will supply four hard copies & softcopy of the approved drawings on complete work.
- The cost of preparing all such items of work shall be deemed to have been included in the respective rates/ prices quoted by the Contractor in the “Bill of Quantities.”
- All permissions, approvals from relevant authorities for shifting of utilities, tree cutting, traffic and other environmental permissions, etc shall be in the scope of the bidder. NRDA will assist for the same. The trees if cut within the site area will be the property of NRDA / forest department.

2. **WORKING DRAWINGS** :The Contractor shall at all times maintain on site, in good order and condition, a complete set of all drawings duly laminated and documents necessary for the proper execution and checking of the Works. These drawings and documents shall be made available on request to the Engineer in Charge or other authorized persons on site. Any amendment shall be indicated on the drawing, dated and signed by the Authorized person in charge, with reasons stated if possible.

3. **AS-BUILT DRAWINGS**: The Contractor will supply four hard copies & a soft-copy of the approved built up drawings on completion of work. The cost of preparing all such items of work shall be deemed to have been included in the respective rates/ prices quoted by the Contractor in the “Bill of Quantities.

4. **SHOP DRAWINGS**: The contractor shall also provide shop drawings for various sub-parts of the tender for approval by the Engineer in Charge. Areas of detailing shall include (but will not be limited to) Plumbing, HVAC, Electrical, Fire-Protection, Structural Glazing, Landscaping Works. The shop drawings shall be conformance to the actual site conditions.

5. **SAMPLES**: The contractor shall submit to the Engineer in Charge samples of all materials for approval and no work shall commence before such samples are duly approved. The cost of the samples shall be borne by the contractor.

6. **TESTS**: The entire mandatory test shall be carried out at the frequency as mentioned in the specification. All materials and methods of tests shall conform to the latest rules, regulation and/or individual specifications as laid out in the technical specifications. The Engineer in Charge will have the option to have any of the materials tested and if the test results show that the materials do not conform to the specifications, such materials shall be rejected. A reasonable number of representative tests will be deemed to be included in the rates tendered.

7. **SITE CLEANING**: Upon completion of the scope of the work all the areas should be cleaned. All floors, doors, windows, surface, etc. shall be cleaned down in a manner which will render the work acceptable to the Engineer in Charge and employer. All rubbish due to any reason, shall be removed daily from the site at the cost of the contractor and all such costs are deemed to have been included in the price quoted by the contractor.

8. **MAINTENANCE IN DEFECT LIABILITY PERIOD**: The Contractor shall be obliged to remove/ repair / replace/ the defects for the entire system during defect liability period (DLP) of twenty four (24) months after the final official hand over date of the civil work/other installation, duly approved by the consultants and project managers. This period shall include maintenance

Signature of Contractor.....

Signature of NRDA.....

replacement of parts, regular periodic visit by qualified personnel of the Contractor and attending to emergency call at short notice.

9. **WARRANTEES/GAURANTEES-** The contractor shall also make available to NRDA all the warrantees/guarantees by the respective manufacturers for all material and equipment installed in the project along with the user/training manuals, test reports, contact details etc. as along with the built-up drawings of the project upon completion of project.
 10. Maintaining the work in finished condition against defects for a minimum of specified defect liability from the date of commissioning and imparting training to the workers/staff as asked for maintaining the work as per IS requirement and exercising.
 11. Items not covered under these specifications due to any ambiguity or misprints, or additional works, the work shall be carried out as per specifications or the latest N.B.C. manual up to date amendments as applicable in the work.
- **GENERAL SCOPE OF WORK : Construction of Parking Shed at G-2 & 5, Capitol Complex**

Note: -

- ❖ Surveying & Measuring Equipments: Equipments for surveying and measurement of the work shall be procured by the Contractor for his use. The same shall also be made available to the Engineer at site for any work connected with the Contract without any Charges.
- ❖ For carrying the topographic survey for establishing the levels and site layout of all the components, no payment shall be made to the contractor. The survey work shall be carried out on the approval of Engineer Incharge. All the details of survey report in soft and hard copies and profile shall be submitted to the EIC prior to start of work.
- ❖ Any additional surveys, if due to change in approved allignment because of unavoidable reasons required, shall be carried out on the approval of Engineer Incharge and shall be paid seperately. Otherwise survey is a part for prepration of working drawing and shall not be paid seperately.
- ❖ *The Water & Electricity required to be arranged by the bidder.*
- ❖ *Surplus excavated earth which is beyond the requirement of NRDA shall have to be disposed of by the contractor at his own cost beyond the NRDA boundary or at places identified by engineer in Charge. No payment shall be made by NRDA for such disposal of surplus excavated earth.*
- ❖ *Approved GFC Drawings shall be issued after award of work.*
- ❖ *Clear land in specified area for temporary structures, storage of plant & Machineries, labour camp , fabrication yard, Batching plant etc. shall be provided by NRDA at a licence fee of INR. 10000/Acre. /year during the period of contract. The same will be vacated and demolished as per instruction of Engineer in Charge after completion of project, before issue of completion certificates at the cost of contractor.*
- ❖ The successful tenderer will be expected to complete the Works within **8Months** from the date of commencement of the Works.

Signature of Contractor.....

Signature of NRDA.....

SCHEDULE- D

Section-III

Technical Specification of Works

Signature of Contractor.....

Signature of NRDA.....

I. Brief Specifications:

All the specification for item of works for Building works , Road works and Electrical works has been followed with reference to the CG PWD, CPWD, MOSRTH, CPHEEO and relevant IS Specifications.

Material of construction - The materials of construction to be used in the work shall be governed by the MORTH/ IRC specifications for Rural roads/ other IRC Publications and their manual/ latest CPWD specifications/ PWD specifications/ IS codes, for buildings and the relevant Indian standard specification with amendments and revisions Issued up to the date of tender notice Where ever any material has ISI mark such material alone has to be used.

Workmanship- The work shall be carried out according to the specification referred to hereinafter and according to sound engineering practice. The decision of the Executive Engineer, in respect of workmanship will be final.

Specification for Building Work: - (Including water Supply and sanitary fittings.) - The contractor shall execute the work In conformity with the standards and procedure laid down latest CPWD specifications/PWD specifications/IS codes for buildings or special specification when ever enclosed separately and in accordance with the approved drawings.

Specification of Electrical Works: The work will be carried out as per the approved drawing and as directed by the Engineer-in-charge. The work will be governed by "General specifications" for the Electrical works applicable in Chhattisgarh PWD. All electrical materials must bear 'ISI" mark. All samples of electrical accessories should be got approved from the Engineer- in- Charge to their use in work. Contractor will have to arrange and afford all facilities for their inspection and rectify the defects pointed out by them.

Signature of Contractor.....

Signature of NRDA.....

SCHEDULE– D
Section-IV
Special Conditions of Contract

Special Conditions of Contract

1. GENERAL

The Special Conditions of Contract are to be read in conjunction with General Conditions of Contract. If there are any variations or discrepancies or conflicting provisions, the provisions in Special Conditions shall take precedence over the provisions in the General Conditions of Contract.

All additional facilities/equipment/ office etc to be provided by the contractor, as mentioned in the tender, document outside the BOQ shall not be paid separately, and shall be deemed to have been included in the rates quoted by the contractor.

2. ACCESS

The Contractors are to verify the work site details including:-

- a) Access,
- b) Availability of water supply and electrical energy,
- c) Space for dumping stores and materials and
- d) Space for erection of site office,

The Contractors are deemed to have catered for all contingencies connected with the site, access, water & electricity.

3. SUPPLY OF WATER

Water will not be supplied by NRDA and the Contractor shall make his own arrangements. NRDA will give recommendatory letter to the concerned authority if so requested by the Contractor. However, NRDA shall be in no way responsible for obtaining permission and no claim on account of this will be entertained.

4. ELECTRIC SUPPLY

- (a) Electric power both for construction and lighting shall not be made available to contractor. Contractor shall arrange at his own cost power with necessary switch boards, energy meter etc. and shall be responsible for their maintenance.
- (b) Further distribution by the Contractor at his cost shall be done as per approved layout. He shall provide required clearances for overhead lines to facilitate easy movement of heavy machinery such as cranes etc. These shall be shifted and rerouted at Contractors cost during execution of work if the same are found to obstruct any other work of any agency working at site or requires shifting due to unforeseen reasons.
- (c) On completion of the work the Contractor shall remove all wiring installed by him and make good to the satisfaction of Engineer if any disturbance or damage is done.
- (d) The Contractor shall employ an Electrical Agency as approved by the Engineer for carrying out this work.
- (e) The Contractor has to keep alternative arrangement ready at his own cost for any failure/ interruption of electric power that takes place and under no circumstances can this be deemed to be reason for any consequential delay in the works.
- (f) Any disputes in sharing of power obtained directly/ indirectly from CSEB with other agencies shall be resolved by the contractor at his risk and cost. NRDA shall not be responsible or a party for such disputes.

5. DEFECT LIABILITY

The Contractor shall be responsible for rectification of defects, during the defect liability period as per clause 17 of GCC after the certified date of completion by the NRDA. This period shall be known as Defects Liability period as defined in CL. No. 17 of the General Conditions of Contract. Subsequent to the taking over of the works and after it has been in use, its removal/correction of defects would be the responsibility of the Contractor. Any defects or failures during this period shall be rectified by Contractor within one week of intimation in writing. If the same is not carried out in the stipulated

time, NRDA shall have the right to get it repaired departmentally or through any other agency, entirely at the risk and costs of the Contractor as detailed in the GCC clause. No. 17.

6. SAMPLES

6.1 Material

(a) The Contractor shall furnish to Engineer for approval, with reasonable promptness and with reasonable time for consideration, adequate numbers of samples of all the materials to be used in the work, irrespective of whether material/product is from approved list given in tender. He shall permit and account for all costs in his quotation toward supply, testing, examination at site or at any approved place by the Engineer. The choice of approval of materials rests with NRDA unless otherwise specified.

(b) All material samples shall be delivered to the Engineer's office at the Contractor's cost. Each sample shall be in duplicate and properly labelled as under-

- Name of Project
- Name of Contractor
- Name of Product
- Name of Manufacturer
- Item reference of BOQ
- Date of Submission

(c) Samples shall be accompanied with technical specifications/ catalogues/ test results of manufacturer.

(d) In case the Contractor intends to keep an approved sample in his possession, he shall submit additional set of samples for Engineer's approval.

6.2 Standards of Acceptability

(a) In order to establish the standards of acceptability for materials and finishes, the Contractor shall finish in all respect a mock up for each pro-type room. The material used in this shall be as approved and special attention shall be paid to establish the workmanship and finishing standards to be achieved for the project. Works such as form finished concrete & finishing items such as joinery, floor finishes, false ceiling, wall finishes, toilets including sanitary fittings and fixtures, electric fitting and fixtures etc. shall be provided as per drawings and specifications. All mock-ups, except for exposed concrete finish to be made within the building blocks. For exposed concrete finish a maximum of 3 (three) mock-ups (approx. 36 (thirty six) SqM each), independent of the main building block shall be prepared for approval jointly by C E & Architect.

(b) The Contractor shall give notice in writing in this respect and shall obtain approval through Engineer in Charge from the CE NRDA. Approval should be taken well in advance so as not to delay execution of work.

7. TESTING OF MATERIALS IN OTHER LABORATORY

As a valedictory measure, in addition to establishing testing a full fledged site laboratory, 10 % (ten percent) of the samples shall be sent every month for testing in one of the following laboratory:-

- i) Chief Engineer (PWD) Laboratory, Raipur
- ii) National Institute of Technology, Raipur
- iii) Govt. Engineering College, Raipur
- iv) B.I.T., Durg/ Raipur
- v) Sriram Test House N. Delhi
- vi) National Test House N. Delhi

7.1 In case, certain testing facility for typical/ special materials are not available in Chhattisgarh, then it can be tested at a recognized laboratory anywhere in India.

7.2 All testing charges for the above shall be borne by the Contractor. In case, the testing charges demanded by the testing authorities is not paid by the Contractor within 15 (fifteen) days, then the same will be paid by NRDA with due recovery from the Contractor's bill for the project.

8. CRECHE FACILITIES FOR THE CHILDREN OF CONSTRUCTION LABOURER

Contractor undertakes to provide creche facilities for the children of construction labour through a volunteer agency **within one month from start of work**. The facility is open to children of construction labourers employed by the Contractor. In case the Contractor fails to provide this facility within stipulated time, following charge shall be levied on the Contractor.

Range of Contract Amount	Amount of Creche fund
Upto Rs. 50 lacs	Nil
Above Rs. 50 lacs to Rs. 5 Crores	Rs. 50000/-
Above Rs. 5 Crores	Rs. 5 lacs.

- 8.1 The amount shall be recovered if such facility is not provided by the Contractor from running account bills in one or more instalments but not exceeding 6 (six) instalment.
- 8.2 If the facility is provide after 3 month, 50% of the amount shall be refunded to the contractor, after 6 month 25% will refunded.

9. SUBMISSION OF DETAILED BAR/ PERT CHART OF COMPLETION

The Contractor shall, within the stipulated time in Tender, submit to the Engineer for his approval a detailed programme covering-

- a) Descriptive note explaining sequence of various activities.
- b) Network (PERT/ CPM), bar chart.
- c) Quarterly programme of supply of materials by the Employer.
- d) Quarterly cash flow indicating money to be earmarked by the Employer for the purpose of the contract.
- e) Programme for supply of working drawing.
- f) Phased requirements of plant and equipment to be deployed by the Contractor.

10. Method of Working

After Contract award and before starting Work at the site, Contractor, NRDA's representative/ Engineer, and Architect shall together make a thorough survey of the grounds where Work under this Contract will occur and areas to be used as access ways to the Work areas. Contractor shall list, and photograph, if Contractor desires, existing conditions not requiring alterations, shall note discrepancies between Drawings and existing conditions, and shall designate areas of storage and routes of access agreed upon by NRDA.

The Contractor shall, within the stipulated time in Tender, submit to the Engineer for his approval the following information,

- a) A general tentative lay-out plan of construction plant and equipment for the execution of work within time period stipulated in schedule.
- b) Drawings or prints showing the location of major plants and other facilities which he propose to put up at the site, including any changes in the general layout, at least 15 (fifteen) days prior to the commencement of the respective work.

- c) Layout and details of temporary works that the Contractor wants to carry out to fulfil his obligation under the contract.
- d) Indication of shuttering system to be followed.

11. Project Monitoring

- 11.1 Within 7 (seven) days the Engineer shall give their approval to proceed with the work, with or without modification. However acceptance of programme and method of working as submitted by the Contractor or with any modification there to in the opinion of the Engineer, shall not relieve the Contractor of any of his contractual obligation.
- 11.2 All these programmes and plans submitted by the Contractor and approved by the Engineer shall become part of the contract.
- 11.3 The acceptance of programmes as submitted by the Contractor or with any modification thereto in the opinion of the Engineer, shall not relieve the Contractor of any extension of time unless delay, if any, is expressly sanctioned by the Engineer.
- 11.4 **Construction Photographs-**
- 11.5 A General: Contractor will provide construction photographs taken, developed, printed, and mounted by a recognized commercial photographic studio or reputable photographer acceptable to Owner, in the number and type and at construction stages enumerated below:-
 - (i) Before Starting Work: Have photographs taken at site from different points of view sufficient in number to show site (and conditions at existing structures) but not fewer than 30 photographs.
 - (ii) During Progress of the Work: Have not fewer than 15 photographs taken at least once a week from points of view (both inside and outside), as necessary to show progress of construction and site development for each part of the Work. Co-ordinate taking photographs with utility Work and back filling. Photograph each buried utility line before back filling. During later stages of the Work, have photographs taken from suitable locations inside the building showing the progress of various stages of the Work, such as piling, centering, reinforcement, water proofing, concreting, etc. Size of photographs will be 125 mm X 250mm. Photographs shall be supplied with negatives/ CD to the Engineer. Each photograph shall be attached with date of photograph and location of work. These photographs shall be from location as fixed by the Engineer at start of work

12. QUARRY RELATED DEDUCTIONS

The royalty for Minor minerals used in the work like murrum, stone metals, sand, rubble etc. will be levied as per prevailing practice in PWD of Chhattisgarh and shall be recovered suitably through R.A./ Final bill and will be kept in deposit. The above royalty charges kept under deposit shall be refunded as soon as the Contractor submits relevant NOC from Collector, Raipur, Chhattisgarh.

13. CONTRACTORS ALL RISK POLICY (C.A.R. POLICY)

The successful Contractor shall take out a C.A.R. policy from any approved company by IRDA India. Chhattisgarh Govt., administered by Directorate of Insurance. The policy so obtained shall cover the entire period of construction (including all extensions) and also shall cover the defects liability period. The policy shall be for the total contract amount including cost of free supply material by NRDA, if any. All amounts/ charges towards premium etc. on this account shall be borne by the Contractor.

14. INDEMNITY BOND

The Contractor shall require to execute an Indemnity Bond for satisfactory performance of the entire project on stamp paper of Rs.100/- (Rupees Hundred only) in the format approved by the NRDA Ltd. This Indemnity Bond shall remain in force for the Defect Liability period after completion of the project to be furnished in contract form E of GCC.

15. ACCIDENTS

Should any accidents, fatal or otherwise occur, a detailed report about the same shall be made promptly by the Contractor to the Engineer. The Contractor should at all times during execution of work keep the NRDA fully indemnified against all risks, claims, litigations and financial burdens arising out of all incidental operations on work and accidents.

16. TRAFFIC

The Contractor shall have to make all necessary arrangements for regulating traffic day and night during the period of construction and to the entire satisfaction of the Engineer. This includes the construction and maintenance of diversion, if necessary, at no extra cost to the NRDA. The Contractor shall provide necessary caution boards, barricades, flags and lights, watchmen etc. so as to comply with the latest Motor Vehicle Rules and Regulations and for traffic safety. The Contractor shall be responsible for all claims for the accidents which may arise due to his negligence whether in regulating traffic, in stacking materials on the road or by any other reason. The contractor must comply with the following:-

- A. General: Plan and control use of site and access to site in co-operation with Owner and other contractors working at site to minimise disruption of use of other facilities; portions of buildings and site areas affected by this Contract and to remain in use; and the work of other contractors.
- B. Temporary Access Drives: Construct on the premises as necessary, and maintain in good usable condition; remove when no longer needed. Until permanent improvements have been completed, when necessary to prevent excessive dust, periodically water temporary unpaved access roads.
- C. Construction Site Access: Use most direct route from public streets as agreed to by Owner. Construction traffic elsewhere on Owner's property is prohibited.
- D. Driveways Between and Around Combustible Storage Piles: Maintain at least 15 feet wide and free of accumulation of rubbish, equipment, and materials.
- F. Access for Fire-Fighting Equipment: Maintain.
- G. Access: Refer to other sections for requirements to keep access to site and buildings open to Owner, other contractors, and fire-fighting equipment.
- H. Use of Streets and Sidewalks on Public Property: Make arrangements with authorities having jurisdiction for use. Restrictions shall be those of the Municipal Authorities. Be solely responsible for adherence.
- J. Roadways, Driveways, and Walkways: Where outside indicated Contract limit on Owner's property and on public property, keep open to pedestrian and vehicular traffic at all times. When temporary closing of a roadway, driveway, or walkway is absolutely unavoidable, provide alternative access routes. Such temporary closings shall be approved by Owner in each case and shall be for the shortest possible time. Strictly adhere to requirements of governmental authorities having jurisdiction.
- K. Parking: Owner will issue temporary parking permits for use by construction personnel and will make available, at the location shown. Construction personnel shall not park in any other location on Owner's property, even when bearing permits. Access to allocated parking spaces shall be by most direct route from public streets. Construction personnel shall not drive vehicles elsewhere on Owner's property and shall take the most direct pedestrian way along walks and roadways (not on lawns) from parking lot to construction site.
- L. Barricades and Signs: Should barricades or directional signs for traffic control be necessary, prepare and install such signs and barricades of approved size, colour, and lettering or other markings. Remove signs when no longer needed, or at Substantial Completion, whichever is latest.

M. Restricted Use of Premises: Enforce Contract requirements, local ordinances and Owner's instructions pertaining to signs, fires, smoking, trucking, parking, and other use of premises.

N. On-Site Storage:-

1. *General:* Extent of Work and site area available limits amount of on-site material and equipment storage. Do not unnecessarily encumber job site with excess materials or equipment and means of delivery of materials, equipment, and supplies, removal of rubbish, and, hours during which deliveries may be made. Determine, and take into account in the Work, limitations on storage space and of times, rates, and means of deliveries to and removals from the job site whether such limitations are imposed by laws, rules, ordinances, or physical conditions. Owner will not pay extra amounts due to such limitations. Co-ordinate arrangements for delivery and storage of materials.

2. *Paved Areas:* Do not use paved areas on Owner's property to stockpile excavated materials or to store construction materials except where shown. Use of paved areas on public property is subject to requirements of authorities having jurisdiction, and arrangements for such use are solely Contractor's responsibility.

3. *Protection and Repair:* Protect roadways, walks, and other permanent site improvements, and access ways subject to damage. Satisfactorily repair improvements and surfaces damaged during construction operations, or remove damaged improvements or surfaces and provide new acceptable improvements or surfaces. Except where new Work is required, return areas used for temporary access to original condition.

17. ALIGNMENT AND BENCH MARKS

The alignment of the work to be carried out under the contract shall be marked on the ground as per the drawing and as per the instructions of the Engineer. For the purpose of facilitating the work, the series of temporary bench marks on masonry pillars will have to be established. These pillars will be constructed along with the alignment and such other locations as may be initiated by the Engineer. The temporary bench-marks shall be established for the work line-out and its connections to other proposed roads in Naya Raipur using the DGPS instrument and Total Station software. All expenses involved in the process of marking alignment on ground, checking the alignment, constructing masonry pillars in establishing bench marks thereon, shall be borne by the Contractor. It will be responsibility of the Contractor to ensure that the masonry pillars so constructed are not damaged during the period of work in progress.

18. PREVENTION OF MOSQUITO BREEDING AT CONSTRUCTION SITE

The Contractor shall on the respective construction site install mosquito proof and accessible water storage tanks or to cover/protect the present water storage tanks properly. The Contractor shall periodically give larvaecidal treatment to water storage tanks, sites of water stagnation, water collection.

Any expenditure that may be incurred by NRDA to ensure that the above conditions are fulfilled by the Contractor will be debitable to Contractor's account and will be recovered from the bills of the Contractor from time to time.

19. INSPECTION OF SITE AND SUFFICIENCY OF THE TENDER

If the NRDA is not in a position to deliver to the Contractors the site of the Contract work for any reason whatsoever at the agreed time, delaying the commencement of the contract work, or part thereof not beyond 50 % (fifty percent) of contract period for completion, such omissions of the NRDA shall not be breach of any its obligations under the contractor and the Contractor shall not be entitled to claim from the NRDA for loss or damage, if any, caused thereby, but shall be entitled to a reasonable extension of the period agreed for the completion of contract work. If the contractor shall be obstructed in the execution of the work by any person other than an agent or servant of the

NRDA, the Contractor shall exclusively deal with such set by the due process of law but shall not be entitled to attribute thereby the breach of any obligation under the contract to the NRDA compensation for damage or loss, if any, thereby suffered but shall be entitled to an appropriate extension of period agreed for the completion of the contract work, provided that the contractor has reported to the NRDA every such act of obstruction with particular soon after its occurrence and the NRDA has after enquiry found the same to be substantially true and has determined the duration of such obstruction.

20. PROGRESS OF WORK

The Contractor shall carry out the work as per the programme approved by the Department from time to time. He will also not be allowed to proceed with the work in a scattered manner.

21. FIELD LABORATORY

Deleted

22. ENGINEER

22.1 Engineer for this project shall be the Engineer or the person nominated or appointed by NRDA from time to time and shall include any person duly authorised by them.

22.2 Engineer shall be responsible for the execution of the project with regards to management and supervision. Instructions issued by the Engineer to the Contractor shall be deemed to be the Employer's instructions in respect of-

1. Day to day supervision including material testing using ISO formats proforma of which should be got approved from Engineer.
2. Approval of material and workmanship using ISO formats proforma of which should be got approved from Engineer.
3. Matter of urgency involving safety or protection of person or property.
4. Monitoring progress of work using System Application of Projects (SAP). (Refer 3.5 hereunder).
5. Interpretation of drawings
6. Interpretation of specifications
7. Issue of additional drawings
8. Certification of measurements and bills and issue of certificates accordingly for interim and final bills.

22.3 Engineer shall hold fortnightly progress meetings at site for evaluation and execution of works. The Contractor shall assist in providing revised programmes, cash flow charts in the format required by Engineer/ NRDA.

22.4 The Engineer shall coordinate works at site of all agencies appointed by the Employer.

23. EXCAVATED OBJECTS

All the materials obtained during the process of excavation shall remain the property of the NRDA and shall be disposed off as instructed by the Engineer. The Contractor is supposed to use the selected materials for filling in plinth, pipe bedding, and providing embankment where required, filling the trenches and also filling low lying areas. All operations including loading, unloading, transportation of materials where required with all leads and lifts and handling them and levelling at disposal site etc., shall be included in the quoted cost and no extra payment whatsoever shall be made to the Contractor on the account.

24. AS BUILT DRAWINGS

The Contractor shall during the course of execution, prepare and keep updated a complete set of 'as- built' drawings recording all works on the blue prints, which shall be corrected daily, if necessary, to show each and every change from the Contract Drawings as a approved working

drawings, shop drawings and the exact 'as-built' location, sizes and kinds of work etc. This set of drawings shall be kept on the site and shall be used for record purposes. Changes recorded shall be countersigned by the Engineer and the Contractor. Copies of 'as-built' drawings shall be supplied to the CE), NRDA/ and the Engineer on request.

The Contractor shall submit complete 'as-built' drawings on reproducible tracings and ammonia prints 10 (ten) sets in form of hard copies and Compact Discs 2 nos. for building work and all services as directed by the Engineer within 30 (thirty) days of the completion of entire work by using AutoCAD facility. Maintenance manuals and original warranties shall be submitted at the time of submitting the As-built drawings. In case the Contractor fails to submit complete 'as-built' drawings as aforesaid [in form of hard copies [10 (ten) sets] and Compact Discs [2 (two) nos.], he shall be liable to pay a sum equivalent to 0.1 percent of the value of work subject to maximum of Rs.10 lakhs (Rupees ten lac only) or as may be fixed by NRDA and this decision shall be final and binding. Pre-final & Final Bill shall not be released until all the as-built drawings are submitted & approved.

25. ENGINEER'S SITE OFFICE

Deleted

26. PROVIDING COMPUTER & OTHER EQUIPMENTS AT SITE OFFICE

Deleted

27. TELEPHONE CONNECTION

Deleted

28. TIME SCHEDULE FOR COMPLIANCES

The tenderers should please note the following time schedule for various compliances and follow the same:

a) The Initial Security Deposit shall be paid within 15 (fifteen) days of receipt of Letter of Acceptance.

The Contractor should construct the site office within 1 (one) month of date of work order. The site office should be as per relevant clause in the tender document.

The CAR policy and Labour license shall be taken by the Contractor within 1 (one) month from the date of work order.

d) The M.S. Project formatted programme (Physical and Financial Programme) shall be submitted by the Contractor within 10 (ten) days of the date of work order and detailed breakup of quantities. The successful tenderer has to furnish Quality Assurance Manual along with programme within 15 (fifteen) days from the date of paying Initial Security Deposit.

29. APPROVAL OF ENGINEER

The foundation strata as well as steel reinforcement provided in all RCC members shall be got approved from the NRDA/ Engineer or his authorised representative. At every stage of work, approval of the Engineer shall be taken by the Contractor. Before starting any work like concreting, block masonry, water proofing, concrete, etc. detailed information of the work in the prescribed proforma shall be given to the Engineer and his approval shall be taken by the Contractor. It is the responsibility of the Contractor to get all the hidden measurements like foundation work, reinforcement, etc. recorded before covering the same. All the measurements shall be taken jointly by NRDA's representative and the Contractor's authorized representative and then only the measurements will be forwarded by the Engineer, who will forward it for payment to Chief Executive Officer, NRDA through Chief Engineer, NRDA and directions on any matter whether mentioned explicitly or otherwise.

30. PERMISSION FOR CONSTRUCTION OF SITE OFFICE/ GODOWN/ LABOUR HUTS:

The Contractor shall be permitted to construct temporary structures such as site office, godown, labour huts, Engineer site office, etc. on the land of NRDA within 1 Km radius of site.

The Contractor will have to submit requirement of land for Godown/ Labour Camp/ Batching Plant etc. with logistic layout in Technical Bid. The land shall be provided to the Contractor on Lump sum

lease rent of INR.10000 /Acre./year with Lease Agreement as per prevailing NRDA format. However the Contractor shall require permission of NRDA for erecting site office, labour huts. In the event the Contractor fail to remove site office/ godown and labour huts from the land immediately after construction is over, NRDA will charge rent as per the rules prevalent at the time. No final bill payment shall be made, unless the site is cleared by the contractor in all respects.

The Contractor shall number the structures and display name of the Company, period for which permission is granted, etc. at such approved sites.

No final bill payment shall be made unless the site is cleared in all respects by the Contractor.

31. CONDITIONAL TENDER

The Tenderer shall note that the clarifications shall be obtained in the pretender meeting and the tender should be submitted without any conditions, whatsoever. Clarifications given to the various tenderers in the pre-tender meeting would be summarized by NRDA and would be issued to every tenderer as "Minutes of Pre-Tender Meeting". The same will be binding on all the tenderers irrespective of whether they have attended the pre-tender meeting or not. The Minutes of the Pre-Tender Meeting would form part of the Contract Agreement and the Tenderers should submit the Financial Offer taking into consideration the same. The Tender submitted with conditions would be summarily rejected.

32. SITE ORDER BOOK & OTHER BOOKS REQUIRED

The Engineer will maintain Site Order Book at the site of work. The Contractor or his authorized representative shall sign all the instructions received therein, in token of having received the same and shall comply with them forthwith.

All other books of record at site shall have to be maintained as required in the CPA Code of works.

33. POURCARD SYSTEM

Pour card system/RFI system to be introduced for approval of individual activity. Format to be got approved from engineer before start of work.

34. CLEANING OF SITE

- a) All water which may accumulate on the site during the progress of the works or in trenches and excavation shall be removed from the site to the satisfaction of the Engineer at the Contractor's cost. Site shall be maintained free from rubbish. Proper stacking of scaffolding material, shuttering material bricks/ brickbats, steel pieces, etc. needed for work on day to day basis shall be organized in proper stacks. Heaps of material lying around in unplanned manner and disorderly fashion shall not be permitted. Engineer's decision in this matter shall be final.
- b) The Contractor shall not, at any time, do cause or permit any nuisance on the site or do anything which shall cause unnecessary disturbance or inconvenience to Employer, tenants or occupiers of other properties near the site and to the public in general. The Contractor shall install mosquito proof and accessible water storage tanks for construction and drinking water.
- c) The Contractor shall periodically give largasidal treatment to water storage tanks, sites of water stagnation, water collection.
- d) Prior to handing over the contractor shall appoint Professional Cleaning Agency to clean the building works prior to handing over. The Agency shall have minimum 5 (five) years prior experience in the hospitality industry and shall be appointed with the prior approval by the Engineer.
- e) Any expenditure that may be incurred by NRDA to ensure that the above conditions are fulfilled by the Contractor will be debitable to Contractor's account and will be recovered from the running bills of the Contractor from time to time.
- f) *Cleaning:* Remove staining or reactive materials from new surfaces immediately during course of the Work.

- g) *Debris*: Remove hazardous accumulations of debris promptly, at least daily.
- h) *Dust*: Confine dust producing operations during painting and finishing. Vacuum immediately after completion.
- i) TRASH DISPOSAL
- j) *General*: Keep new buildings and site free from accumulations of waste materials.
- k) *Removal*: Remove cartons, crates, wrappings, lunch trash, and other trash from each room daily. Provide trash receptacles on each floor of each building and in convenient locations on the site.
- l) *Burning*: Do not burn trash or other materials on Owner's property.
- m) EXCESS MATERIAL; *General*: Remove excess materials, including demolished materials, excess earth, and excess building materials from Owner's property and dispose of legally.
- n) *Clean*: Keep paved drives on Owner's property and public streets and alleys clean, by cleaning daily, or more often if necessary, of earth and debris spillage from trucking involved in construction operations.

35. FENCING

During the construction, care shall be taken so that, areas around are not polluted and where required Hessian cloth shall be tied around, while work is in progress.

Further, it is obligatory on the part of the Contractor to fence the area allotted and earmarked by NRDA for labour camp, batching plant of the Contractor within a month of issuance of work order. The temporary fencing shall be provided in the area as directed by Engineer using vertical blinds using corrugated GI sheets about 3m high with necessary metal frame work and staging to cordon off the view of the premises. The Contractor shall maintain the fencing properly throughout the construction period.

36. WATCH AND WARD

The Contractor shall make necessary watch and ward arrangement for a period of three months from the date of total completion of work. No claim shall be paid to the Contractor towards the watch and ward during this period.

Protection General Requirements:

- a) **Laws**: Comply with applicable laws, ordinances, rules, regulations, and orders of authorities having jurisdiction for safety of people and protection of property from damage, injury, or loss.
- b) **Responsibility**: Be solely responsible for initiating, maintaining, and supervising safety precautions and programs concerning Project security, but obtain Owner's approval of methods to be used and location of safeguards. Submit to NRDA, through Engineer, drawings and written description of methods and devices Contractor intends to use and do not begin Work at the site until such means and methods are mutually agreed on by Owner and Contractor.
- c) **On Public Property**: In addition to other means used in the interest of safety or security, comply with the requirements of governmental agencies having jurisdiction
- d) **Safeguards**: Erect and maintain, as required by conditions and progress of the Work, necessary safeguards, for safety and protection, including temporary fences, guards, railings, barricades, canopies, lighting, shoring, directional and danger signs, signals, and other warnings against hazards.
- e) **Security**: Protect and secure the site, new materials and equipment from theft and damage by whatever reasonable means are effective. Use methods such as the following, singly or together: locks, fences, signs, patrols, radio, alarms, locked storage on-site, and off-site warehousing.
- f) **Wall Closures**: Unless other acceptable means are provided, provide temporary closures

for openings in walls along adjoining to make the building and site secure. Secure temporary closures when Work is not in progress using suitable means such as dead bolts inaccessible from the public side or locks or padlocks construction master keyed in accordance with Section, "Finish Hardware."

- g) **Entrances:** Do not block entrances to premises to remain in use or in any way inhibit access to them.
- h) **Design Live Loads:** Do not permit placing materials or equipment on new to exceed design load of structure or endanger structure or people.
- i) **Trenches:** Do not permit trenches to remain open for prolonged periods without adequate board covering or fencing.
- j) **Broken Glass:** Be responsible for glass broken during construction period; at completion, replace broken glass.
- k) **Weather Protection:** During construction, provide protection against weather (rain, wind, storms, frost, or heat), and maintain work, materials, apparatus, and fixtures free from damage. At end of each workday, cover new work likely to be damaged.
- l) **Dust:** Take precautions necessary to keep Work under this Contract and adjoining property reasonably free of dust.
- m) **Protection of Construction Materials:** Refer to other specification sections for specific requirements.
- n) **Materials Hoist:** Do not permit transporting of people on materials hoisting facilities.
- o) **Removals:** Except for fences, remove temporary construction and protection specified in this section promptly when no longer needed and when removal is approved.
- p) Maintain temporary fences until date of Substantial Completion, unless approval is obtained for earlier removal; then remove the temporary fence.
- q) **Damaged Site Improvements:** Repair and restore to condition at beginning of construction, or better, existing site improvements, such as pavements, curbs, buildings, fences, lawns, plantings, and lighting which are not to be removed under this Contract but are damaged or defaced by Contractor's operations, except where new Work is required by the Contract.
- r) **First Aid Equipment:** Provide at the site. Also provide continually available trained and qualified personnel to render first aid when needed.
- s) **Emergency Signs:** Provide signs posted at telephones listing telephone numbers of emergency medical services, physicians, ambulance services, and hospitals.

37. MOBILISATION PERIOD

This clause shall be read in continuation of Clause No 10 (B) (ii) of GCC. The mobilization advance shall be limited up to 5% of value of work order. The mode of release of mobilization advance shall be as follows:-

- (i) 1% shall be released after issue of work order.
- (ii) 2% shall be released after completion of activities listed below.
- (iii) 2% shall be released after successful installation of Batching Plant.

Mobilization period for the Contractor shall be fifteen days from date of letter of intent. Contractor is obliged to adhere to these timings.

This shall be of 15 (fifteen) days and the Contractor shall carry out following:

- Compound/ Fencing to Site where required as per directives of Engineer.
- Contractor's Site Office (part). Engineer's Site Office.
- Construction of temporary hutment of labour.

- Arrangement for water supply.
- Arrangement for electric supply.
- Submission of Bar Chart programme for approval by Engineer with details of temporary works, plants, equipment and machinery list.
- Establishing full site godown for cement and steel yard.
- Establishing internal water supply for construction activities. Establishing internal electric network for construction activities.
- Submitting for approval a list & appointment of specialized sub contractors intended to be engaged at site with detailed credentials/ profile of the contractors.
- Appointment of Anti-termite sub-contractor.
- Establishing laboratory with testing equipments.
- Submitting proposal for concrete mixes and casting trial cubes.
- Approval of Bar Chart programme by Engineer with details of temporary works, plants, equipment and machinery list.
- Arrival of centering & shuttering material.
- Line out including establishing of grid lines for project and its approval by Architect through Engineer. Line-out shall include the establishing of the critical Capitol Complex line-out and its connections to other proposed roads in Naya Raipur.

38. METHOD OF CARRYING OUT THE WORKS

The Contractor shall, within 15 (fifteen) days of receipt of the Employer's order to commence work under respective clause of General Conditions of Contract submit for his approval a detailed programme and statement with drawings and diagrams showing how he proposes to carry out the works based on the tender programme. The statement shall describe the methods to be employed in carrying out the works, the Constructional Plant and temporary works which the Contractor intends to supply or use and shall include a list, classified into trades of labour force envisaged. The programme shall give the estimated dates on which the various sections of the works will commence together with the estimated date of completion and estimated output so that the whole of the works may be completed within the Contract Period.

- a) In addition, the Contractor shall submit to the Engineer drawings and full particulars of Temporary Works he intends to construct at least 8 (eights) days before he intends to commence such works. The Engineer may require modifications to be made if he considers the proposals to be insufficient and the Contractor shall give effect to such modifications at his own cost but shall not be relieved of his responsibility for the sufficiency thereof.
- b) The Contractor shall prepare a detailed survey of existing services on the site which he shall clearly mark up on a drawing for the approval by the relevant service authorities prior to commencement of the works.
- c) The Contractor is to progress the works thoroughly and to take such action as is necessary in order to ensure that the approved programme is strictly adhered to in all its stages. The Contractor shall submit detailed programmes of the various sections of the works as and when required by the Engineer, the Contractor shall take all precautions and cover all contingencies to ensure that adequate spare equipment and materials are available at all times to ensure completion of this work in accordance with the agreed programme.
- d) The acceptance of programmes as submitted by the Contractor or with any modification thereto, in the opinion of Engineer, shall not relieve the Contractor of his responsibility to complete the work within period specified in as per Annexure 'A' unless extension of time limit is expressly sanctioned under respective clause of

standard General Conditions of Contract or Special Conditions of Contract.

- e) The Contractor shall prepare the CPM programme on computer and the same to be monitored by proper installation of PC and printer facilities at the site.
- f) The bills shall be on computer and the programme will incorporate the deductions of Mobilisation Advance and other items.

39. CONTRACTOR RESPONSIBLE FOR SUFFICIENCY OF MEANS EMPLOYED

The Contractor shall take upon himself the full and entire responsibility for the sufficiency of plant, centering, scaffolding, timbering, machinery, tools or implements and generally for all means used for the fulfilment of the Contract. In the event of any of these means proving insufficient, the Contractor is still fully and entirely responsible for the sufficiency of these means notwithstanding any previous approval or recommendation that may have been given by the Engineer.

40. DRAWINGS

The Contractor will receive from the Engineer, 2 (two) prints of the tender drawings listed hereof, together or thereafter with any further drawings issued for Road, Water Supply Net Work, Sanitation Electrical, Landscaping Works, etc. Working drawings shall be progressively issued as per the approved construction schedule submitted by the contractor & approved by NRDA.

41. STANDARDS

In various places throughout this specification and the bills of quantities, reference is made to the standards, specifications and byelaws issued by the Indian Standard Institutions and other similar organizations. These references shall in every case be deemed to include the latest edition or issue of such standards, specifications and byelaws including all revisions, amendments and addendum subsequently issued. Where materials are not specified and standard exists in respect of such materials, then the materials shall in all respects comply with relevant and current I.S.I. In such cases where I.S.I. do not exist, the best manufacturers' specification shall be followed; in absence of all these, Engineer's instruction shall be followed.

42. SUPERVISORY STAFF (As per clause 36 (i) of schedule F of the tender)

The Contractor shall engage on the work a qualified and experienced Engineers, Supervisor, capable of managing and guiding the work properly as detailed in Cl36(i) of schedule F of the tender Form F-1. This supervisor shall be authorized by the Contractor in writing to receive the orders issued by the Engineer from time to time. The Contractor shall be responsible for carrying out these orders promptly.

43. FIRE PRECAUTIONS

The Contractor shall comply with fire regulations of the controlling authority in force at the site of the works relating to the precautions to be taken against fire hazards.

44. USE OF SITE

The Contractor shall not use any portion of the site for purpose not connected with the works without the prior written approval of the Engineer. He shall maintain permanent and site access roads free of spillage and shall not interfere with the flow of traffic. Also same shall apply to terraces and other developed areas. This clause shall be read in conjunction with clause no. 15 of the Special Conditions of Contract.

45. SAFETY ENGINEER

The Contractor shall employ and depute at site on full time basis a fully qualified Safety Engineer(s) who shall be responsible to ensure observance of safety precautions and measure required to be taken at site. Further he shall make sure stipulations laid down in safety code as provided in GCC.

46. QUALITY ASSURANCE MANUAL AND SAFETY MANUAL

Successful tenderers will be required to submit Quality Assurance Manual and Safety manual made as per applicable specification for various items of work and get the same approved from Engineer before start of work and the adhere the same during actual execution of work.

i. Quality Assurance Manual (QAM)-

A quality assurance manual constituting a base document outlining quality policy of the agency, procedures, name of action, compliance, acceptance criteria and documentation etc. Shall be prepared by the successful tenderer and submitted to the Engineer for approval within 15 (fifteen) days from the date of receipt of work order. The QAM shall be prepared in such a way that it follows all the applicable specifications. The document shall generally cover aspects listed below, but not limited to the same.

Scope of work

- a) Planning for items to be executed including method statement and resource deployment both physical and financial.
- b) Identification of all parties involved in QA and their inter-relationship.
- c) Execution plan of Quality System giving reference - standard - frequency and acceptance criteria.
- d) Levels of cross checking/ verification in case of multiple verifications/ controls, including systems of inspection and audit, wherever applicable.
- e) Organization of personnel, responsibilities and lines reporting for QA purpose.
- f) Testing and statistical analysis.
- g) Inspection reports at the end and during defect liability period/ maintenance period.
- h) Items to be covered for maintenance manual,
- i) Check list viz. Forms and formats.

ii. Inspection of Works at Factory/ Workshop

For any visits that maybe necessary for the purpose of performance of testing, inspection of factory made goods/ equipments, at a location other than the site or Raipur, the actual cost of travel (to & fro airfare/ train A/c 1st class), boarding & lodging, local transport & per diem (per person per day) costs at the rate of Rs. 3000 (Rupees three thousand only) for any visit made by officials from NRDA/ PMC/ Architect/ Consultant (maximum 3 (three) persons per instance), shall be borne by the Contractor. Such visits may be necessary for the inspection of chillers, panels, elevators, transformers, DG sets, fabricated doors, etc. that require inspection prior to shipping from the place of its manufacture. Any other item which is required to be tested before being processed/ fabricated in the factory, such visits shall require the prior written approval from the NRDA.

47. QUALITY ASSURANCE SYSTEM

A quality assurance procedure covering all aspects of the work shall be adopted for this work to ensure the desired quality. Details of the procedure shall be decided by mutual consultation between the Engineer and the contractor at the start of the works.

- a) The contractor shall submit within the time stipulated by the Engineer in writing, the details of actual methods that would be adopted by the contractor for the execution of any item as required by the Engineer at each of the locations, supported by necessary detailed drawings and sketches including those of the equipment and machinery that would be used, their locations, arrangements for conveying and handling materials etc., and obtain prior approval of Engineer well in advance of starting of such item of work.
- b) The Engineer reserves the right to suggest modifications or make complete changes in the methods proposed by the contractor, whether accepted previously or not, at any stage of

work, to obtain the desired accuracy, quality safety and progress of work which shall be binding on the contractor and no claim on account of such change in method of execution will be entertained by the Employer so long as Specifications of the items remains unaltered.

- c) The Contractor shall furnish within the period of 15 (fifteen) days a detailed programmed schedule using PERT/ CPM technique in quadruplicate including the date of actual start, the monthly progress expected to be achieved and the anticipated completion date of each major item of work to be done by him, also indicating, plant and machinery and material procurement schedule.
- d) The schedule is to be such as is practicable of achievement towards the completion of the whole work in the time limit and of the particular items, if any, on the due date specified in the contract and shall have the approval of the Engineer. No revised schedule shall be operative without such acceptance in writing. The Engineer is further empowered to ask for more detailed schedule or schedules say weekly for any item or items, in any case of urgency of work as will be directed by him and the contractor shall supply the same as and when asked for.
- e) The contractor shall furnish sufficient plant, equipment and labour as may be necessary to maintain the progress schedule. The working and shift hours for operations to be done under.
- f) Further, the contractor shall submit the progress of work in forms and statements etc. at periodical intervals in the form of progress charts, forms, statements and/ or reports as may be approved by the Engineer.
- g) The contractor shall maintain proforma, charts, details regarding machinery, equipment, labour, materials, periodical returns thereof as may be specified by the Engineer.

48. EQUIPMENT MAINTENANCE MANUAL

The Contractor shall mention the list of machinery procured at site for the work in this manual. This manual shall also reflect the name of the manufacturer, age of machinery and the agency entrusted with the maintenance work of the machinery listed in the manual.

49. MINIMUM PLANTS, EQUIPMENTS AND SHUTTERING

Sr. No.	Particulars	Quantity (Minimum)
1	RMC concrete shall be used for all design mix concrete work	For all design mix
2	JCB	1 Nos.
3	Proclaim with Rocker Breaker	1 No.
4	Vibrators	
A	Electric with low noise	2Nos.
B	Petrol (Stand by)	2Nos.
C	Needle Vibrator - 20	2 Nos.
D	Needle Vibrator - 40	2 Nos.
E	Needle Vibrator - 65	2 No.
5	Bar Bending Machine up to 40mm dia.	1No.
6	Bar cutting Machine up to 40mm dia.	1 No.
7	Material Hoist	1 Nos.
8	Curing Pumps	2 Nos.
9	Double legged tubular scaffolding System	As per requirement
10	Pan mixer of not less than 0.5 Cum	2 Nos.
11	Plate Vibrators of 1 ton capacity	2 Nos.

Sr. No.	Particulars	Quantity (Minimum)
12	Minimum shuttering material to be provided by the contractor (Good quality steel plate's inc steel propos etc.)	As per requirement

50. SUBMITTALS

Unless otherwise specified or directed by NRDA, the Contractor shall submit to NRDA for his review and approval all Co-ordinated services drawings, shop drawings, samples, materials lists, equipment data, instruction manuals, record documents, manufacturers' equipment manuals, design calculations for proprietary items of work, technical submittals, and other information required by the Contract Documents. Submittals and their contents including deviation shall be properly prepared, identified, and transmitted as provided herein or as the Owner may otherwise direct. Except for record documents and instruction manuals for operation and maintenance, submittals including deviation shall be approved before the material or equipment covered by the submittal is delivered to the site. The contractor shall furnish an authority if required from material suppliers.

51. PLANT, MACHINERY AND SHUTTERING

The contractor is required to submit details of plants and machineries to be deployed by him in a proformas indicating all details such as make, year of manufacture, registration etc be submitted. The details are to be provided with in 30days after award of contract.

52. SUB-CONTRACTORS

All specialised works will be carried out by licensed (where applicable) sub contractors approved by NRDA.

- i. It may be noted that the contractors will have to submit credential of the selected contractors to NRDA for approval.
- ii. It may further be noted that even if the contractor has in house licensed subcontractors for these works, they will have to select and engage contractors with prior approval of NRDA.
- iii. All specialists, merchants, tradesmen and other agency executing any work or supplying and fixing any goods which items have been included in the Schedule of Quantities and/ or Specifications or for Extra/ Substituted items of works, who may be nominated or selected by the Engineer/ Contractor are hereby declared to be Sub-contractors employed by the Contractors. No nominated Sub-contractor shall be employed on or in connection with the works against whom the contractor shall make reasonable objection or (save where the Engineer and contractor shall otherwise agree) who will not enter into a contract provided:
 1. That the nominated sub-contractor shall indemnify the Contractor against the same obligations in respect of the sub-contractor as the contractor is under in respect of this contract.
 2. That the nominated sub-contractor shall indemnify the Contractor against claims in respect of any negligence by the Sub-contractor, his servants or agents or any misuse by him or them or any scaffolding or other plant, the property of the Contractor or under any Workmen's Compensation Act in force.
 3. That the nominated sub-contractor shall submit his bills to the Contractor.
 4. That the Contractor shall make payment to the nominated Sub-Contractor within 3 (three) days of the Contractor's receipt of the payment from NRDA against the Engineer certificates of payment providing that before any Certificate is issued, the Contractor shall upon request, furnish to the Engineer proof that the nominated sub-contractor's accounts included in previous certificates have been duly discharged in default whereof NRDA may pay the nominated Sub-contractors upon a certificate of the Engineer and deduct the amount thereof from any sums due to the Contractor. The exercise of this power shall not create privity of contract as between NRDA and Sub-Contractors.
 5. The Engineer in his absolute discretion may recommend payment to the nominated Sub-Contractor directly by NRDA and deduct the amount thereof from any sums due

- or which may become due to the Contractor or recover the same amounts from the Contractor.
6. No Labour contracts shall be permitted.
 7. Prior approval of the Sub-contractor by the NRDA is mandatory.
 8. Required 2 No. of contractors as choice would be of NRDA
 9. Further sub-contracting/ sub-letting of the work shall not be permitted.
 10. NRDA shall not permit under any circumstances Assigning, Transferring or Subletting of entire work or substantial part of work to be executed under this contract. If the Contractor attempts or assigns, transfers and sublets the entire or substantial work, the contract shall be terminated by the NRDA without prejudice to any right or remedy which shall have accrued or shall accrue thereafter to the NRDA.
 11. The Contractor shall not be permitted to give power of attorney for executing the work to any other agency or person on their behalf. The power of attorney for executing the work shall only be given to regular employee of the agency with prior approval of NRDA.

iv. Works to be Sub-Contracted & Prequalification criteria:-

The details of work to be subcontracted and PQ criteria shall be governed as mentioned in detailed NIT

v. ESSENTIAL CONDITIONS FOR ELETRICAL WORKS:-

1. The Sub-contractor for carrying out the electrical works under the contract should strictly be in accordance with the above criteria.
2. All above referred works will have to be carried out under the supervision of Engineer.
3. Power supply distribution scheme given in tender document is only for guideline purpose. However, successful agency will be responsible for obtaining necessary sanctions to over all power supply distribution scheme, from CSEB/ applicable local authority and Engineer before starting execution of work. No extra charges will be paid for obtaining necessary approvals/ sanctions to power supply distribution scheme sanctioned by concerned power supply authority CSEB/ applicable local authority, successful agency will have to take up and complete the work accordingly.
4. Successful agency will have to obtain the required approvals to the total electrical works such as, HT/ LT distribution, Sub-station, Meter rooms, DG sets, etc from CSEB/ applicable local authority/ concerned power supply authority, Electrical Inspector, authority or any other statutory body at their own cost before starting execution of the work and the original sanctions obtained should be submitted to NRDA's concerned Electrical Division before execution of the work. Any statutory cost for obtaining the approval will be reimbursed on production of original receipts.
5. It will be the responsibility of the agency to get the energy meters of the DG sets approved/ tested/ sealed from the necessary authorities.
6. The electrical works under the scheme should be carried out strictly in Co-ordination with the concern CSEB/ applicable local authority and necessary approvals should be obtained from time to time.
7. Activity Bar Chart and the makes of material should be submitted for electrical works for necessary approvals from the competent authority from NRDA before execution of the work and work should be started only after the approvals.
8. It will be the agency's responsibility to obtain the following listed documents from CSEB/ applicable local authority. Electrical Inspector authority and other concerned Statutory Body towards completion of the work at their own cost, without which work will not be treated as completed.

- a) Sanction papers for the total external electrification works along with BOQ of material, demand note for supervision charges, if any.
 - b) Charging permission of the installation.
 - c) Inspection report of the various equipments & material supplied under the electrification work certified by CSEB / applicable local authority and NRDA authorities.
 - d) Manufacturers test certificates and guarantee certificates in original for all the equipments and material supplied for execution of electrification work under the scheme.
 - e) As Built drawings as stated Volume I for substation, HT/LT network, meter room, etc. showing all the details and certified by CSEB, Electrical Inspector authority (along with soft copy).
 - f) As Built Drawings as stated Volume I for internal electrification work, area lighting work, water pumps, etc. (along with soft copy)
 - g) Earth test report for the total installation.
 - h) Work completion report from CSEB/ applicable local authority for the total electrification work including substation, HT/LT distribution, Meter Room etc. should be submitted.
 - i) Handing over of the total electrification work under the scheme, such as substations, including equipments, HT/LT distribution, meter room with energy meters to CSEB/ applicable local authority. The letter in writing for taking over of the installation as above addressed to Engineer should be obtained from CSEB and should be submitted along with details of scheme.
 - j) Separate guarantee, from the electrical agency should be submitted to NRDA against the electrical works carried out under the scheme, for a period of 18 (eighteen) months including defects liability period in order to avoid any inconvenience in connection with releasing and common services under the scheme and also to attend any defects in installation during this period.
 - k) Required electrician/ Helpers are to be deployed round the clock for Operation & Comprehensive Maintenance of total Utility works & installations for a period of 18 (Eighteen) months from the date of completion OR taking over of the installation whichever is later.
9. All material & equipments to be supplied under this contract shall be offered for inspection at the manufacturing place. No material shall be supplied by the agency without the clearance from the Engineer.
10. The total electrification work under the scheme will have to be carried out as per the terms & conditions mentioned in various sections of the Tender Document.
11. Electrical works under the contract will not be treated as completed unless and until above listed activities are completed by successful agency.

53. Subject work is strictly to be completed within stipulated work completion Period and in accordance with the activities listed below completely as per the directives from Engineer. The charges and the expenses for completing the following listed activities should be included in the quoted offer and no separate payments against this will be made.

1. Successful agency will have to obtain and submit the Contractor All Risk Insurance Policy (CAR) in original within 1 (one) week from date of work order from Director of Insurance, Government Insurance Fund, Raipur, Chhattisgarh. The Contractors All Risk (CAR) Policy as said above shall be inclusive of insurance coverage under workman's compensation insurance policy for all workmen employed by contractor to complete the works covered under present contract. Further the contractors All Risk Policy period completely as stated in the tender. In case of time period extension (If any), it is essential

that, premium of CAR policies should be timely paid by agency in order to ensure the continuity of CAR policy without any break in the same, suitable action will be taken against defaulters as per General Conditions of Contract unless and until the Contractors All Risk Policy as stated in above manner is submitted to the office of Engineer no payments will be released against any work executed.

2. Obtaining necessary scheme sanctions in detail towards execution and completion of subject work in all respect, from concerned CSEB/ applicable local authority. This activity includes required co-ordination and follow-up with concerned CSEB/ applicable local authority for obtaining necessary scheme sanctions. The scheme sanction should be inclusive of specifications and required layout and other drawings etc. completely as per the requirement.

The payment towards the supervision charges of CSEB/ applicable local authority shall be paid directly to CSEB/ applicable local authority on behalf and in the name of NRDA by the agency.

The original scheme sanctions along with original certified drawings, specification details, quotations, payment receipt against supervision charges etc. should be submitted to the Engineer.

The supervision charges paid in the name of NRDA as mentioned above shall be reimbursed on submission of original payment receipts.

3. If required, preparation and submission of execution drawing in co ordination with concerned planning authority of NRDA by engaging Govt. approved Surveyor for confirmation and marking of proposed cable routes, location of control pillar, existing services along the proposed route under the present contract as per the sanctioned scheme obtained from CSEB Reports and marked computerized plans duly certified by surveyor in 3 sets of should be submitted after carrying out the details survey as mentioned above.

4 Obtaining necessary road/ soil/ footpath etc. cutting permission for cable trenching from concern authorities like NRDA/ CSEB/applicable local authority/ RMNN/ PWD etc. as applicable along the approved route and submit the approval in original along with the drawings and permission to Engineer.

The charges required for obtaining the approvals and permission as mentioned above should be directly paid on behalf and in the name of NRDA by the agency.

The charges paid in the name of NRDA as mentioned above shall be reimbursed on submission of original payment receipt to the Engineer

5. Preparation and submission of shop/ execution drawing to Engineer for approvals. Submitting list of Makes of various items and material to be used under present contract for approvals.

6. The Contractor or his qualified engineer having updated technical knowledge for execution of the subject work should invariably remain present and co-ordinate during every inspection and testing programme at manufacturers works, similarly during every joint site visits and when required.

7. After supply of material at site, all the documents such as delivery challan, excise gate pass, material test report (in original), etc. should be submitted to Engineer for obtaining installation clearance.*

8. The complete work under the present contract shall be carried out with required supervision, stage-wise inspection from concerned authority of CSEB/ applicable local authority & Electrical Inspector authority in co-ordination with Engineer complete with required power shutdowns. The record of all inspection and shutdowns shall be submitted to Engineer.

9. The execution work of cable trenching/ foundation for poles/ foundation of feeder pillar/excavation and trenching in all types of surfaces rocks, soils etc. shall be carried out as per approved route plan by using appropriate tools and machines in close co-ordination with concerned authorities from NRDA, CSEB/ applicable local authority, etc. completely as per the requirement so as to avoid the damages to the existing services.

8. Obtaining clearance certificate from concern authority of NRDA, RNN, PWD, CSEB/ applicable local authority, etc. As applicable, towards completion of re-surfacing work of cable trenches, excavated surfaces and removal of debris and submission of this clearance certificate in this regard obtained from concerned authorities to Engineer.

* In absence of activity No. 1 & 15 above, the payment towards cable trenches erection and installation will not be released.

10. Arranging and carrying out pre & post testing and commissioning of the completed installation in presence of Engineer, his representative and the representative of any other statutory authorities like CSEB/ applicable local authority & Electrical Inspector etc. as required.

11. Excess saving statement as per final execution of work, item wise measurement break up in detail and escalation claim as applicable along with detail calculations and copies of confirmed indices etc. to be submitted to Engineer.

It is mandatory to complete all the activities listed above from Sr. No. 1 to 11 for releasing the final payment.

54. Following conditions are the essential conditions of contract for carrying out and completing the subject work in all respect within stipulated time period. The successful agency will be responsible for completing the same as per the directives of Engineer. The charges and expenditure if any required for completing the same should be including in the quoted offer, and no separate payments against this will be made.

1. The contractor shall visit the site to access the actual quantum of work and period required for completing the same before quoting the offer.

2. Scheme specifications and quantity of the material to be used for the subject work under the contract and specified in the tender document is only for guideline purpose. However it will be the responsibility of the successful agency to obtain the measurements and specifications in detail of each and every item before starting the execution of work and complete the work in accordance with the approvals, clearances obtained for the same. All cost required for completion of work as per statutory approval, shall deemed to have included in the offer quoted.

3. The foundation and excavation for feeder pillar and control pillar, grouting of frames in wall/ ground etc, are require to be carried out by the agency, and cost for the same shall be include in the offer quoted.

4. It will be Agency's responsibility to obtain necessary sanctions and permissions by paying necessary charges towards;

a) Obtaining necessary scheme sanctions and permissions for completing the subject work in all respect from any concerned statutory authority.

5. The successful agency will be completely responsible for accidents occurred if any during the execution of work as well as during 24 (twenty four) months defect liability period under this contract. It will also be the responsibility of agency, for making police complaints against any thefts and accidents etc. under intimation to NRDA.

6. Charges against following listed activates should be included in the quoted offer itself and no separate payments will be made against same.

- a) Arranging and carrying out the material inspecting at respective manufactures unit as stated in Annexure - I.
 - b) Arrangements for performing site visits and other connected activities as and when required by Engineer or his representative.
 - c) Carrying out necessary co-ordination and follow up with concern authorities for obtaining necessary sanctions and permissions as required towards completion of work in all respects.
 - d) Appointing Govt. Approved surveyor for carrying out site survey and preparation of computerized shop drawing, Execution drawing, As built drawing etc. with soft copy.
 - e) Any other incidental charges required towards completion of work in all respect.
7. Bills submitted against the executed and completed works at site, will be processed further by Engineer, after necessary scrutiny and verification.

55. The services/ tasks/ works as referred to under clauses shall be suitably applicable to all Utility services executed by the contractor, whether specifically mentioned herein above or no.

56. Safety, Security and Protection of the Environment

The Contractor shall, throughout the execution and completion of the Works and the remedying of any defects therein:

- (a) Have full regard for the safety of all persons entitled to be upon the Site and keep the Site (so far as the same is under his control) and the Works (so far as the same are not completed or occupied by the Employer) in an orderly state appropriate to the avoidance of danger to such persons,
- (b) provide and maintain at his own cost all lights, guards, fencing, warning signs and watching, when and where necessary or required by the Engineer or by any duly constituted authority, for the protection of the Works or for the safety and convenience of the public or others, and
- (c) take all reasonable steps to protect the environment on and off the Site and to avoid damage or nuisance to persons or to property of the public or others resulting from pollution, noise or other causes arising as a consequence of his methods of operation.

57. HANDING OVER PROCESS:-

The handing over process shall be based on a performance comprising individual activities. The process shall be approved by the Engineer.

58. EROSION AND SEDIMENTATION CONTROL

- i. **General:** Prevent pollution of land, air, and water; control erosion, washout, and surface runoff of earth and stockpiled materials. Preclude sedimentation in general and especially in existing on-site and public storm-water system and public right of way.
- ii. **Procedures:** Perform erosion, sedimentation and temporary storm-water control. Follow procedures stipulated in local laws and regulations and as shown on Site work drawings.
- iii. **Maintenance:** Maintain controls in place until permanent controls are functioning. Remove when no longer needed.

59. NOISE AND VIBRATION CONTROL

Noise and Existing Building Structure Vibration Generated by Construction Procedures, Equipment, Tools, and Operations: Keep to minimum practicable during demolition and removal from building and site, including loading and removing storage containers.

Equipment generated noise levels shall not exceed the following in decibels:-

1. Concrete mixer: 85
 2. Concrete pump: 82
 3. Crane: 83
 4. Materials elevator: 85
 5. Pumps: 76
 6. Generators: 78
 7. Compressors: 81
 8. Pneumatic tools: 86
 9. Saws: 78
 10. Vibrators: 76
 11. Other tools: 85
- i. Operation of Air Hammers, Compressors, and Reciprocating Equipment: Not permitted inside existing buildings unless specifically approved in writing by Owner.
 - ii. Laws: Comply with applicable noise control laws, ordinances, and regulations.
 - iii. Acoustical Enclosures: Stationary equipment may be enclosed to produce required sound attenuation subject to continued maintenance of such enclosures to ensure that specified sound levels are not exceeded.
 - iv. Violations: Where field sound measurements reveal sound levels exceeding those specified, cease operating such equipment and repair or replace it with equipment that complies with the sound levels specified.
 - v. Cutting and Drilling Concrete: Use only rotary or core drilling for holes through concrete. Do not use impact tools to cut or otherwise remove concrete or to install inserts.
 - vi. Power-Activated Tools: Not permitted in or immediately adjacent to existing buildings, except with Owner's written approval in each specific case, except where such use is specifically specified.

60. EXISTING CONDITIONS

- i. Contractors Examination of Site:-
 1. By executing Contracts, Contractor and subcontractors represent that they have:
 - a. Visited the site and made due allowances for difficulties and contingencies;
 - b. Compared Contract documents with existing conditions and informed themselves of conditions to be encountered, including work by others, if any, being performed; and
 - c. Notified Architect of ambiguities, inconsistencies, and errors they have discovered within Contract documents or between Contract documents and existing conditions.
 2. Failure to visit the site and become familiar with conditions shall not relieve Contractor or a subcontractor from furnishing materials or equipment or completing the Work in accordance with Contract documents at no additional cost.
 3. Contractor or subcontractors will not be given extra payment for Work related to conditions they can determine by examining the site and Contract Documents.
 4. Contractor or subcontractors will not be given extra payment for work related to ambiguities, inconsistencies, or errors within Contract documents, or between Contract documents and existing conditions, when such ambiguities, inconsistencies, or errors are known to Contractor or subcontractor before Contract execution unless Contractor or subcontractor has notified Architect in writing of such condition before execution of Agreement Between Owner and Contractor.

- ii. Make use of public property and make arrangements for that use. No extra compensation will be paid due to costs associated with using public property.
- iii. Access by Contractor to portions of Owner's property beyond the actual area of Work under this contract is denied, except where necessary to perform the Work, and then only with specific written approval in each case. Refer to other sections for additional requirements.
- iv. Contractor shall accept the site in the condition in which they exist at the time Contractor is given access to begin the Work.
- v. Damage caused by Contractor to existing structures, grounds plants, pavements, utilities, work by others, fixtures, or furnishings, shall be repaired by Contractor and left in as good condition as existed before the damaging, unless such existing work is shown to be removed or replaced by new Work.
- vi. Immediately upon entering the site for purposes of beginning Work, locate general reference points and take such action as is necessary to prevent their destruction; lay out Work and be responsible for lines, elevations, and measurements, and Work executed under this Contract. Exercise proper precautions to verify figures shown on Drawings before laying out Work. See Section "Field Engineering" for additional requirements.
- vii. Contractor and each subcontractor, before starting work, shall verify governing dimensions at the premises, including floor elevations, floor-to-floor heights, and column locations and shall examine adjoining Work on which Contractor's or subcontractor's Work is in any way dependent. No "Extra" or additional compensation will be allowed on account of differences between actual measurements and dimensions shown. Submit differences discovered during the Work to Architect for interpretation before proceeding with associated Work.
- viii. Employment of local labour shall be given priority wherever possible. However,
- ix. This shall not in any way affect/ dilute the Contractors obligations listed within the Tender document.

LAMINATION OF DRAWINGS

All drawings issued to site shall be kept in lamination condition.

1. Maintenance of installed equipments, macheneries and fixtures:

The Contractor, at the time of bidding, will be responsible to ensure the completeness and adequacy of his Bid Price to fulfill the entire responsibilities for Maintaining the installation of all installed equipments, machineries and fixtures minimum for a period of 1 year from the date of commissioning and imparting training to the workers/ staff as asked for maintaining the installations as per IS requirement and exercising.

2. Handing Over:

At the time of handing over after completion of work, all the equipment, spare including standby equipment etc. must be in good working order as were taken over before commencement of defect liability period.

3. Penalties for failure to achieve the functional guarantees during Defect liability Period:

In case of failure to deliver the required quality of work, liquidated damages shall be imposed for such failure to meet the performance criteria, as described below. The Employer will be entitled to recover any such damages from the security deposits of the contractor or any other sum due to him. However, the contractor shall be allowed to take up routine/ periodical maintenance as per IS guidelines, with prior permission of the Authority.

61. ORDER OF PRECEDENCE

In case of any discrepancy between the items mentioned in the BoQs/ Specifications/ Drawing, the Order of precedence should be as follows:

- i. Item details as mentioned in the BoQs, read along with the specification shall prevail. However in case of conflict specification shall hold good.
- ii. Drawings.

62. PAYMENT

- I. The Contractor, at the time of bidding, will be responsible to ensure the completeness and adequacy of his Bid Price to fulfill the entire responsibilities as described above.
- II. On completion of work i.e. after **Defect liability Period**, the contractor shall handover all the machineries, equipments & fixtures such as bore well, pump, motor, sprinklers fountain accessories etc. in good working condition to NRDA, including plant/hedges/tree/lawn etc.

Signature of Tenderer

Date :

For
Chief Executive Officer, NRDA,
1st floor, Utility Block, Capitol Complex,
Sector-19, Naya Raipur 492 002,
Chhattisgarh.

Date :

SCHEDULE– D
Section-V
List of Approved Makes

Signature of Contractor.....

Signature of NRDA.....

For the items missing in the list/ the relevant IS Code and specification should be binding on the contractor. The contractor should take approval wrt the approved vendor list prior to any procurement from the Engineer-in-charge.

A. APPROVED MAKE LIST FOR CIVIL WORKS

Sr. No.	Item	Approved Make
1	AAC Blocks	BILT or Equivalent as approved by NRDA
2	Acoustical Ceiling tiles	Armstrong / Anutone/ Hunter Douglas
3	Adhesive For Wood Work	Fevicol/Vamicol/Dunlop
4	Aluminium Accessories	Classic/Argen/Oxford/Nulite/Crown/EBCO
5	Aluminium composite panel	ALUCOBOND/ALSTONE/Eurobond
6	Aluminium Sections	Hindalco/Jindal
7	Anti-Termite Treatment	Pest Control India Ltd/Pest Control Service of India/Pest India Corporation/ Godrej
8	Bricks and Brick tiles	Best quality available conforming to class 75
9	Calcium Silicate Boards	HILUX by RAMCO/Gypsum India/Lafarge
10	Cement PPC/OPC	Ultratech/Lafarge/Ambuja/ACC/Birla/Century India Cement. Cement from mini cement plants shall not be allowed.
11	Cement Based Paint	Super Snowcem (Killick Nixon Ltd.)/Duracem/Berger
12	Cement Board	Everest/Bison/Hyderabad Industries
13	Ceramic Tiles Adhesive	Pidilite/ (Saint Gobain)/MYK/ Latricrete/Bal-Endura/ MAPAI
14	Clear Glass	Saint Gobain/Asahi India Safety/Modiguard/Pilkington
15	Concrete Additive	Sika /STP/CICO / Fosroc/Roffe/ Pidilite
16	Compressed Chequered Tiles	Eurocon/Ultra Tiles / DURACRETE
17	Curtain Rod	Vista Levolor/Mac Décor/Aerolux/Luxelon/ Hunter Douglas
18	Dash Fasteners	Hilti/Fisher
19	Extruded Polystyrene Board	Supreme Industries/ Owens Corning/SIKA
20	Fire Doors	Shakti Met-Dor Limited/Navair/Signum
21	Flush Door	Kitply, Merino, CENTURY. Green Ply Industries/Sarda Plywood Industries Ltd (Duro Door)/Archid
22	Fly-ash Bricks	Brick Shall be as per IS 12894
23	Glass Doors (Motorised)	Autodoor Industries/DORMA/Manusa/Enox
24	Glass Fibre Acoustical Tiles	ECOPHON/Armstrong/Anutone
25	Glass mosaic tiles	Italia/Bissazza
26	Grab Bars and Disabled Hardware	DLine/ Commander/Jaguwar/Hindrance
27	GRC Screens/Louvers	Unistone/Grasim
28	Gypsum Ceiling	Lafarge/ Saint Gobain/Gypsum India
29	Heat Reflective Glass/ thermal glass	Saint Gobain/Asahi India Safety/Pilkington/ Armstrong
30	Interlocking Paving Blocks / Grass Pavers	Ultra Spectra/ Eurocon/ Duracrete
31	MDF Bords	Panelmax (Greenlam) /Anchor/Duro/Archid/Merino

Signature of Contractor.....

Signature of NRDA.....

Sr. No.	Item	Approved Make
32	Metal Ceilings	Hunter Douglas (Luxalon)
33	Mineral Fibre Grid Ceilings	Armstrong / DAIKEN/ Hunter Douglas
34	Mirrors	Modiguard/Saint Gobain/Asahi India Safety
35	Modular Toilet Partitions	BESCO by Merino/Sturdo by Greenlam
36	Night Latch	Godrej/Dorma/Heffelle/Hettich
37	Oil Bound Distemper & Dry Distemper	Nerolac Paints/Asian Paints/AkzoNobel (Dulux)
38	Panic Exit Device	Dorma/DLine/ Heffelle/Hettich
39	Ply/ Commerical board/ Block boards/ Particle Boards	ARCHID/Century/Bhutanboard/Duro/National/Kitply
40	Polyurethane insulation and waterproofing	BASF/ BAYER/Huntsman (ICI)/Lloyd Insulations
41	Polycarbonate Sheets	Lexan from Sabic/G.E./Wilson/Sunpal/Bayer
42	Polymeric APP felt	Shalimar Tar Products (STP)/ Texsa India Ltd.
43	Polysulphide Sealant	STP/CICO/Pidilite
44	Pre-Laminated Particle Board	Anchor/Merinolam/Archid/Novopan/Greenply/Kitlam
45	PVC Flooring	Tarkett Floors/LG Floors/Armstrong
46	Resin Based Cement	Killick Nixon/Berger/Nerolac/ICI/Pidilite.
47	Rolling Shutters	Shakti Met-Dor Limited/Rama Rolling Shutters&Equivalent
48	Silicone Sealant	WackerChemie/Pidilite/Dow Corning
49	Spider Fittings/ WCP profiles /Patch Fittings	Dorma/ Dline/Heifele/Hettich
50	Stainless Steel Friction Stay	Securistyle/ EBCO
51	Stainless Steel Screws	Kundan/Puja/Atul/Northfold
52	Steel: Main Producers only	SAIL/RashtriyaIspat Nigam Ltd./ISCO/ TISCO/TATA/JINDAL/ESSAR
53	Structure Steel & Hallow Section	Tata/Jindal/Sail/Bhushan
54	Synthetic Enamel Paints	AkzoNobel (Dulux)/ Kansai Nerolac Paints (Nerolac)/ Asian Paints (Apolite)
55	Tensile Fabric Roofing	ENCON/Structureflex
56	Texture Paints (Exterior)	Heritage/ AkzoNobel (Dulux)/Asian Paints
57	Texture Paints(Interior)	Heritage/Asian Paints/Dulux
58	UPVC Rain Water Pipe	Supreme/Finolex/ KML Classic
59	Veneered Particle Board	Kitply/Anchor/Archid/Century/Duro/Bhutan/ Greenply Particle Board.
60	Veneers and Laminates	Greenlam / Century/Merino/Euro/Archid
61	Vitrified Tiles/Ceramic Tiles	NITCO/ ASIAN/ KAJARIA/RAK/ /Orient Bell
62	Wall putty	Birla / JK
63	Water Proofing Materials	Shalimar Tar Products (STP)/ SIKA/IWL (India) Ltd./Lloyd Insulations India Ltd./Chemisol Adhesive Pvt. Ltd. Mumbai Chemistik) /CICO /Choksey /Fosrock /Dr. Fixit, BASF/ AkzoNobel (Dulux)/
64	White Cement	JK/Birla
65	Wooden Finish Ceilings	Armstrong / Anutone
66	Precast concrete tiles / Paver Blocks	Ultra/ Eurocon/ Duracrete

Signature of Contractor.....

Signature of NRDA.....

B. APPROVED MAKE LIST FOR PLUMBING WORKS

Sr. No.	Item	Approved Make
1	Automatic variable temperature control/ fixed temperature control faucets	Jaguar/Kohler/Hindware
2	Ball Valves /Globe valves	ITAP (Italy)/TBS Engineers Ltd./Zoloto/RB (Italy)/Leader/Surya/ DRP -M
3	Battery operated Autosensor Urinal flushing system	Parry/UTech Systems/AOS Systems/Jaguar/Kohler/Hindware
4	Brass stop & Bib Cock	Jaquar/Hindware/Kohler
5	Ball valve with floats	Zoloto/ Leader/ Sant/ Jayco
6	C.I. Spun Pipe (IS 8329)	Electro Steel/ IISCO/Lanco / HAPCO
7	Centrifugally Cast CI Soil Waste Pipe And Vent Pipes (IS 3989)	Neco/Anand/ HAPCO /Ashutosh Casting
8	CPVC Valves up to 50 mm Dia	ASTRAL /Finolex/KML Classic
9	CPVC Pipes & Fittings above 50 mm dia	ASTRAL /Finolex/KML Classic
10	CPVC Pipes & Fittings up to 50 mm dia	ASTRAL /Finolex/KML Classic
11	Chlorinator	Ion Exchange/Thermax Limited.
12	C.I. Rainwater inlet fitting/Bronze gratings etc.	Sage Metals/GMGR
13	Copper Fittings (Capillary)	Yorkshire Imperial/ U.K./Rajco Metal Works/ Mumbai/IBP Conex Ltd.
14	Copper Pipes	Rajco Metal Works/ Mumbai/IBP Conex Ltd.
15	C.I. Sluice Valve (Fully Way Checked And Globe Valve)	Leader/Kirloskar/Upadhyay
16	C.P. Fitting And Accessories	Jaquar/Parry/GEM/Kohler/Hindware / Artize
17	Cockroach Trap	Chilly/Player/Jayna
18	Centrifugal Pump	Crompton/Kirloskar/KSB/Grundfose
19	C.I. Fitting	Unik/Neco/Hepco
20	C.I. Sluice Valve& Non- Return Valve	Kirloskar/IVC/Leader/Electrostal
21	C.I. Spun Pipe (IS 8329)	Electro Steel/Kesoram/IISCO/Lanco/Neco/Hepco
22	Centrifugally Cast CI Soil Waste Pipe And Vent Pipes (IS 3989)	Neco/Anand/HEPCO/Ashutosh Casting
23	D.I. Pipe Fitting	Electro Steel Casting Limited/Lanco Industries Ltd./Jindal
24	Ductile Iron(DI) pipe	Electro steel casting ltd./Jindal saw ltd.
25	FRP/GRP	EVERLAST /TECHNOCRATS /THERMOSET /BAJAJ
26	Flush Valves	Jaquar/Kohlar/Hindware
27	Filtration Plant / Softening Plant	Thermax Limited./Ion Exchange
28	G.I. Pipe With Anti Corrosive Coating	Jindal/Zenith/Hissar/Tata
29	G.I. Fitting	R Brand/Zoloto/Unik/Surya/KC
30	Gun Metal Valves (Fully Checked And	Zoloto/Leader/Surya Gold

Signature of Contractor.....

Signature of NRDA.....

Sr. No.	Item	Approved Make
	Globe Valve)	
31	G.I. Pipes	Jindal-Hissar/ Tata/Zenith
32	G.I. Fittings	Unik/ K.C./ Zoloto/Leader/Surya
33	Gunmetal Valves	Zoloto/ Leader/ Sant/ Kilburn
34	Hand Dryer	Kopal/UTech Systems , Blue Circle (India) Pvt. Ltd./Kohler
35	Hydro Pneumatic System	HBDGM/ Grundfoss /Salmson /Nocchi
36	HDPE pipe	Duraline/ Jain/Time Tech/KML Clasic/Supreme
37	Liquid Soap Container	UTech Systems/Blue Circle (India) Pvt. Ltd. Kimberly Clark/Jaguar/Hindware/ Kohler
38	Level Controller	21st Century/Advance Auto/Sridhan International
39	Motor	Crompton/Kirloskar/Siemens/Jyoti
40	Manhole Covers & Frame SFRC	K.K/ PERGITY/Neco/SRIF/Pratibha/Bajaj
41	Non Clog Centrifugal Pump	Crompton/Kirloskar/KSB
42	PVC Flushing Cistern	Johnson Pedder/Parryware/Hindware
43	Plastic Seat And Cover (Solid Heavy Duty)	Hindware/Johnson/Pedder/ Parryware / Juquar / Kohler
44	PVC Pipes & fittings SWR Soil/ Waste & Vent Pipes and Fittings/ Type B PVC Casing & Screen Pipes	Supreme /Finolex//KML Classic
45	Polyethylene Water Storage Tank	Sintex /Rotex /Fusion /Storex/Plasto/Ocean (ISI)
46	PVC Insulated Tank 3-layer	Frontier/Euro/Diplast
47	P.T.M.T. Fitting	Prince/India /Symet
48	PP-R pipes (PN - 16)	Amitex polymers Pvt. Ltd./Prince/Supreme
49	PVC Flushing Cistern	Johnson Pedder/Parryware / HINDWARE
50	Plastic Seat And Cover (Solid Heavy Duty)	Hindware/Johnson/Pedder/Parryae
51	RCC Hume Pipe	Indian Hume Pipe/Pragati Concrete Udyog/Equivalent/(ISI Mark) /Jain Spun /Dewan spun
52	R.O. System	Ion Exchange/Sterling India Ltd/Pentair Water
53	Stainless Steel Sinks	Jayna/Neelkanth/Nirali/Franke
54	SFRC Manhole Cover And Frame, Gully Trap covers & SFRC Casings	K.K. Manhole/Pratibha/Everlast
55	Submersible Water Pump	Raindrop/KSB/Grundfos/Kirloskar
56	Submersible Drainage Pump	Mody/Grundfos/HBDGM/Zenit
57	Stone Ware Pipes And Gully Traps (ISI Marked)	Perfect/Burn/R.K.&Equivalent, approved as per Engineer Incharge /pragati
58	Self-Closing Taps/Pillar cocks	Italy/Kohlar/Hindware/Jaguar
59	Self-Closing Mixers	Italy/Kohlar/Hindware/Jaguar
60	Solar Hot Water System	Tata BP Solar/EPL INDIA LIMITED/Solahart (India)
61	Specification for EPDM Gasket	AnandReddiplex/ Enviro Seals
62	S.S. Sink (SS-304)	Franke / Jayna / Nirali

Signature of Contractor.....

Signature of NRDA.....

Sr. No.	Item	Approved Make
63	Turbine Pump	Jyoti/Kirloskar/KSB/Crompton/ Grundfos
64	Thermal insulation	K-flex/Vidoflex
65	Vitreous China Sanitary Ware	Parryware /Hindware/Kohlar/ROCA
66	Water level controller	Elegant controls/Active Controls
67	WC connections	Multi KWik (U.K) / Prince/Supreme
68	uPVC Pipes and fittings	Prince/Supreme / jain/KML Classic
69	Pipe clamp and support	Chill / euro clamping / Hi-tech/ KML Classic
70	Concealed PVC Flushing Cistern	Kohler/Hindware/Geberit/Parryware

Signature of Contractor.....

Signature of NRDA.....

C. APPROVED MAKE LIST FOR FIRE FIGHTING WORKS

Sr. No.	Item	Approved Make
1	Air Release Valve / Pressure release Valve	Sukan/Leader/ZOLOTTO/TBS/Arco
2	Anti Vibration Pads	Kanwal/Dunlop/Kiloskar
3	Air Curtains.	Almonard / Becon / Technomech / Russel / Aerodynamics
4	Balancing Valve	Advance / Sant / Castle / HBD/Esseti
5	Ball Valve (Gunmetal/White Metal)	Leader/ Zoloto
6	Battery	Exide / Amco-yuasa/AMAR RAJA
7	Canvas Rrl Fire Hose	Jayshree/ Newage/ Crc /Exflame/Safeguard/ Life Guard
8	C.I. Butterfly valves	Audco/ Zoloto/ KSB Conforming To IS-13095/ Kirlosker
9	C.I. Double flanged sluice valve	Kirloskar/ Indian Valve Company Conforming To IS-780 / Exflame/Safeguard/ Life Guard
10	C.I. Double flanged non-return valves	Kirloskar/ Indian Valve Company Conforming To IS-5312
11	Diesel Engine	Kirloskar Oil/ Cummins/Ashoka Leyland / Greever/Loel
12	Dual Plat types non-return valves	Audco/ C & R/ KSB
13	Fire Hydrant Landing Valves/ Fire Brigade Connection (Isi Marked).	Minimax / Safex / Newage / Vijay / Safe Guard / Exflame/ Life Guard
14	Filters	Dyna / Kirloskar / Puromatic / Purafill / Aitech /Thermodyne / Aerosol / Smil / Pure Air
15	Fire Damper Motors	Balemo /Juvanto / Siemens
16	Fire Alarm	Honeywell/Ias Morley/Notifier
17	Forged Steel Fitting	Vs/Sant / Jk forging/Jainson industries
18	Fire Hydrant Valves And Branch Pipe	Minimax/ Newage/ Safex Conforming To Is-5290
19	First Aid Hose Reels Drum	Minimax/ Newage/ Safex Conforming To Is-884/ Exflame
20	Fire Pumps	Mather & Platt/ Kirloskar/ Crompton Greaves
21	Fire Extinguishers	Minimax/ Newage/ Nitin / Exflame/Safeguard/ Crease Fire.
22	Flow Switch	System Sensor/ Potter / Johnson control / Potter
23	Factory Mutual (F.M) U.S.A. Approved	Globe
24	Grilles /Diffusers.	Carryaire / Airmaster / Vinayaga / Matasys Corporation / Ajanta / Ravi Star
25	G.I. Fittings (Malleable Cast Iron)	R' / Zoloto/ Unik. Conforming To Is-1879(Part I To X)
26	Hose Box/Hose Reel Drum	Geetach/Safegard
27	Hp /Lp /Off Switch Thermostats /Humidistats Strip Heaters.	Penn / Honey Well / Indfoss / Escorts / Dasspass.
28	Hp /Lp /Off Switch Thermostats /Humidistats Strip Heaters.	Penn / Honey Well / Indfoss / Escorts / Dasspass.
29	Insulation Material.	Fgp / Up Twiga / Pilkington / Beardsell / Lloyds / Kimmco

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Sr. No.	Item	Approved Make
30	Indicating lamps/ push buttons	Siemens/ L&t/ Ge power
31	Installation valve	HD/ Spraysafe/ Mather & Platt / Tyco/ Viking
32	Loss Prevention (F.O.C) Council Approved	Globe
33	Mechanical Seal	Dunlop /Duramat / seald
34	Modulating Motor	Honey Well / Johnson / Stefa Control / Rapid Cool.
35	Modulating Valve/ Solenoid Valve For AHU	Rapid Cool / Honeywell / Johnson
36	Mixing Valve With Motor	Siemens / Johnson Control / Honeywell / Rapid Cool
37	Motors	Kirloskar/ Siemens/ Crompton Greaves
38	Pressure Guage.	Japsin / Fiebig / Guru / Dwyer /
39	Proportional Thermostate	Honey Well / Johnsons / Landis &Steaeafa
40	Pressure Switch	Indfoss/ Switzer/ Resistoflex/ Kanwal /Potter
41	Protective tape	IWL (Pypkote)/ Rustech Products (Coatek)
42	Rubber Tube For Hose Reel	Jyoti/Newage/
43	Refrigerant Valve	Brasmatic / Sant
44	Rubber Hose(20mm)	Deep Jyoti/ Maruti Conforming To Is-5132
45	Sprinklers	Spray Safe / Hd/Newage.
46	Sluice Valve	Kirloskar/Ivc
47	Selector switch	Kaycee/ Salzer
48	Sprinklers	Tyco / Viking / HD
49	Standpost hydrant	Minimax/ Safex/ Newage Conforming To IS-908
50	Terminal Block	Elmex/ Wago/ Fiebeg/ H. Guru
51	Under Writers Laboratories (U.L) U.S.A Approved	Globe
52	VVVF Drive For AHU/ Cooling Tower Motor	Danfoss / Alan Bradley./ Siemens /Abb
53	Welding rods	Adani/ Oerlikon/ ESAB/Superweld/Modi/DNH
54	Y-Stainer	Leader/ Zoloto / Aip valve /Audco / Advance

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D. Approved Make for Electrical Works

Sr. No	Items	Approved Makes
1	Distribution Transformer	EMCO/VIJAY/VOLT AMP/KIRLOSKAR/APPROVED VENDER OF CSPDCL
2	HT PANEL	SCHNEIDER/L&T/SIEMENS/ABB/CG
3	Timers	L&T/SCHNEIDER/LEGRAND/SIEMENS
4	ACB	L&T/SCHNEIDER/SIEMENS/ABB/C&S
5	CHANGE OVER SWITCH	
i	ON LOAD	GE/L&T/C&S/ABB
II	OFF LOAD	STANDARD/C&S/ABB/L&T
6	VOLT METER, AMPERE METER	
I	ANALOG TYPE	MECON/ESSVEE/AE
II	DIGITAL TYPE	MECON/ESSVEE/AE/C&S
7	CURRENT TRANSFORMER	C&S/AE/KAPPA
8	SELECTOR SWITCH	GE/L&T/C&S/ABB/SIEMENS
9	STATIC WATT HOUR METER	L&T/SEMS/GENIUS/APPROVED VENDOR OF CSPDCL
10	STARTER/CONTACTORS	GE/L&T/SCHNIEDER
11	RELAY	SIEMENS/ABB/SCHNEIDER
12	MCCB	L&T/ABB/SCHNEIDER/LEGRAND/C&S
13	CONNECTORS	ELMEX/CONNECTWELL/RAYCHEM/
14	MCB/RCCB/DBs	L&T/ABB/SCHNEIDER/LEGRAND/C&S
15	METAL CLAD INDUSTRIES PLUG & TOP	
i	PIN & SLEEVE TYPE	HAVELLS/LEGRAND/SCHNEIDER/ABB
II	BUTT TYPE	BCH/MILLBORN
III	SELF EXTINGUISHABLE POLYMER TYPE	HAVELLS/LEGRAND/SCHNEIDER/ABB
16	CAPACITOR	EPCOS/DUCATI/SCHNEIDER/UNISTAR
17	POWER SWITCH (UPTO 32A)	L&T/SCHNEIDER/SIEMENS/ABB/HAVELLS
18	EXHAUST FAN	GE/CROMPTON/BAJAJ/ORIENT/USHA/HAVEELLS / KHETAN/ ALMONARD
19	CEILLING FAN/WALL FAN	GE/CROMPTON/BAJAJ/ORIENT/USHA/HAVEELLS
20	SWITCH & SOCKET	NORTHWEST/LEGRAND(MYRUS)/CRABTREE(ATHEN A)
21	LIGHT FITTING (OUTDOOR)	PHILIPS/WIPRO/BAJAJ/SCHREDER/GE
22	LIGHT FITTING (INDOOR)	PHILIPS/WIPRO/BAJAJ/CG/GE
23	LAMPS	PHILIPS/OSRAM/GE
24	LED	PHILIPS/OSRAM/CREE/NISHIA
25	STORAGE WATER HEATER AND ACCESSORIES	BAJAJ/CG/RACOLD/JVENUS
26	SOLAR HEATING SYSTEM	TATA/BP/BHEL
27	AIR CONDITIONER	LG/VOLTAS/SAMSUNG / O-GENERAL / HITACHI /

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Sr. No	Items	Approved Makes
		DIAKIN
28	WIRES	FINOLEX/POLYCAB/RR KABEL/GLOSTER/HAVELLS
29	LT CABLES	FINOLEX/POLYCAB/GLOSTER/HAVELLS/RAVIN/CCI/UNIVERSAL
30	BRASS GLAND	COMET/METAL CRAFT INDUSTRIES/RAYCHAM
31	ALUMINIUM LUG	DOWELLS/METAL CRAFT INDUSTRIES/RAYCHAM
32	TELEPHONE CABLE	DELTON/FINOLEX/ NATIONAL/HAVELLS
33	HT CABLES	UNIVERSAL/GLOSTER/CCI/POLYCAB/RAVIN
34	CABLE JOINTS	DENSON/RAYCHEM/3-M
35	MS CABLE TRAY	VENUS/PASCO/DOLPHIN/METALEM/ASIAN ANCILLARIES
36	COPPER BUS TRUNKING ARRANGEMENT	L&T/SCHNEIDER/LEGRAND
37	PVC PIPES	PRECISION/BEC PLAST/Thermoplast /KML Classic
38	POWER TRANSFORMER 33/11 KV	CROMPTON/BHEL/EMCO/VIJAI/VOLT AMP
39	RING MAIN UNIT 11&33 KV	CROMPTON/SIEMENS/ABB/SCHNEIDER
40	OCTAGONAL POLES	BAJAJ/TRANSRAIL/VALMONT
41	TUBULAR POLES	AS PER IS CODE & SPECIFICATION
42	DG SET	JACKSON/ CUMMINS/ CATERPILLAR/STERLING WILLSON/KIRLOSKAR
43	LIFT	OTIS/JHONSON/THYSSEN KRUPP/KONE
44	PACKAGE SUBSTATION	SCHNEIDER/ABB/SIEMENS/CROMPTON
45	BATTERY&BATTERY CHARGER	AMARRAJA/EXIDE/TEJA
46	UPS	EMERSON/SUKAM/APC/HIREN
47	DWC PIPES	TIRUPATI/C-REX/RELIANCE
48	RACE WAY	LEGRAND/M&K/UNITECH
49	LT Panel	SCHNEIDER/L&T/SIEMENS/ABB/CG/C&S
50	ELECTRICAL MOTOR	SIEMENS/ABB/CG/BHARAT BIJLEE/KIRLOSKAR/ALSTOM
51	SOFT STARTER	SCHNIEDER/L&T/SIEMENS/ABB/T ELEMCHANIQUE

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E. APPROVED MAKE LIST FOR HVAC WORKS

Sr. No.	Item	Approved Make
1	Accessories	
A	Automatic Air Vent	Rapid Control/Spirotech /Emerald
B	Flow Switch	Rapid Control/Anergy
C	Pressure Gauge	H.Guru/Fiebig/ Emerald
D	Pot Strainer	Vaishno/ Flowell/ Emerald
E	Suction Guide	Anergy/ Rapid Control/ Emerald
F	Thermometer	Emerald/ Fiebig/Japsin/Guru/H.Guru//Bestobell
G	Y-strainer	Flowell/ Emerald
2	Air Filters	
A	Filters	Airtech/ Purolator/ Mechmark
3	Air Handling Units	
A	Air Handling Units (High Static)	VTS/Crystal/EdgeTech/Zeco/Waves/FeddersLlyod
B	Air Handling Units (Sectional /Unitary)	VTS/ Crystal / EdgeTech /Zeco/ Waves/ FeddersLlyod
C	Air washer/Scrubber	Crystal /EdgeTech /Zeco/ Airflow/Roots Air/Humidin
D	Fan Coil Units	VTS/ Crystal / EdgeTech /Zeco/ Waves/ FeddersLlyod
E	Ozone	RUKS / Trimed
F	Second Stage Air washer	Ambassador/Roots
4	Air Ozone	RUKS/ Trimed
5	Axial Flow Fans	
A	Axial Flow Fans	Kruger/Comefri/Airflow/Humidin
B	Centrifugal Blowers	Kruger/Comefri/Airflow/Humidin
6	Building Automation System	
A	Airflow Switch (Air & water)	Johnson Control/Anergy/ Honeywell/Siemens
B	DDC Controllers	Johnson Control/Anergy/Honeywell/Siemens
C	Sensors(Pressure/Temperature)	Johnson Control/Anergy/ Honeywell/Siemens
D	VAV	Johnson Control/Anergy Honeywell/Siemens
7	Cables	
A	Control Cables	Ford/Glostor/ Finolex
B	Power Cables	Gloster Finolex/ Cap cab/ KEI
8	Controls	
A	2/3-Way motorized valve for AHU	Honeywell/Belimo
B	2/3-Way motorized valve for FCU	Honeywell/Belimo
C	Thermostats	Belimo/ Honeywell/ Siemens
9	Ducting & Grilles	
A	Factory Fabricated	Ductofab/Zeco
B	Fire Dampers motors	Belimo/Seimens/Conaire
C	G.I. Sheet Metal Duct	Jindal/National/ Tata
D	Grilles/Fire Dampers/Diffusers	Airflow/Tristar/ Dynamic/Conaire/Caryaire
E	G.I. Sheets	Jindal/ SAIL/ Nippon
F	PUF/PIR Board or Panel	PAL / P3
G	Self-adhesive gaskets	“Prima Seal”.Phone: (011-6179614/ 6160850)

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Sr. No.	Item	Approved Make
H	Stick Pins	Prima Seal/Air flow
10	Electrical Equipment	
A	Auxiliary Relays/Contactors	Siemens/Cutler Hammer
B	Change Over Switch	Siemens/L&T/HH Elcon/ Socomech/ HPL
C	Electric Panel Board	System Power Control/ Electra Power /EAP/Nitya Electrical Controls/EPC
D	Electric Motors	ABB/Siemens/Crompton/Kirloskar/Alstom/Jyothi
E	Earthing	JMV or as per IS Code.
F	Indicating lamps	Siemens/L&T/Cutler Hammer/Covered modular/Vaishno
G	Line Type Fuse	GEC Alsthom/Siemens
H	MCB	Siemens/MDS Lexic Schneider MG L&T
I	MCCB/ACB	Siemens/L&T/EE Schneider
J	Push button starter	Siemens/Cutler Hammer/ L&T
K	Selector Switches	Siemens/L&T/Kaycee/GE
L	Starters/Switchgear	Cutler Hammer/Siemens/English Electric/ L&T
M	Timer	Siemens/Cutler Hammer/ GEC Alsthom
N	Terminal Block	Elmex/ Comex/ HMI
O	Voltmeter/Ammeter	Siemens/AE/KAPPA/Rishabh (L&T) Automatic Electric
11	High Side Equipment	
A	Cooling Towers	Paharpur/Coron/Flowtech/Mihir
B	Electric hot water generator	Rapid cool/ KEPL/Emerald
C	Pumps Coupled	Kirloskar/Maxflow/ Beacon/Mather & Platt./ Gundfoss
D	Pumps Monoblock	Kirloskar/Beacon/Siemens/Gundfoss
E	Pumps Coupled with VFD	ITT/Bell & Goset/ Gundfoss
F	VFD with controls	ABB/Danfoss
G	Water Cooled Screw Chilling Units	Carrier/Trane/York/BlueBox/Clivet /Dan hum bush /Daikin Mcqway
12	Insulation	
A	Aluminium Tape	Johnson/Birla 3M/Garware
B	Crossed linked Polyethylene Foam	Trocellene / Paramount/Supreme
C	Closed Cell Elastomeric Insulation	K-flex /Vedoflex
D	Expanded Polystyrene	Thermolloyd/ R.P. Packaging
E	Glass Wool	Owens Corning /U.P. Twiga
F	Non woven fibre material	Mikron/ Du pont
G	Polyurethane Foam	Malanpur /Superurethane
H	Premoulded PUF section for pipe & pipe supports	Malanpur/ Lloyd
13	Microprocessor based systems	Siemens/Johnson Controls/Honeywell/ Belimo
14	Miscellaneous	
A	Anchor fastners	Cannon/ Hilti/Fisher
B	Vibration isolator	Resistoflex/Dunlup/Kanwal
15	On-line non-chemical water treatment system	Scale Guard of Aqua Treat Pvt. Ltd./ Crystallo of D- Borne Engineers/ Scaloid of TBI System
16	Paints	
A	Bituminus	Shalimar/ICI / Dulux

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Sr. No.	Item	Approved Make
B	Enamel	AkzoNobel/ Asian/ Nerolac/ Berger/ICI
C	Plant Audit & Certification Works	Energy Management Consultants
D	Tarfelt (for underground chilled water pipe insulation)	Shalimar
17	Valves	
A	Butterfly Valves	Audco/Advance/Castle/Honeywell /C & R/AIP Valve
B	Balancing Valves	Advance/Audco/ Honeywell/ C & R
C	Gate/Globe Valves	Sant/ Zoloto/Emerald
D	Non Return Valve	Advance /Audco/ Castle/Honeywell/AIP Valve

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SCHEDULE– D

Section – VI

Drawings

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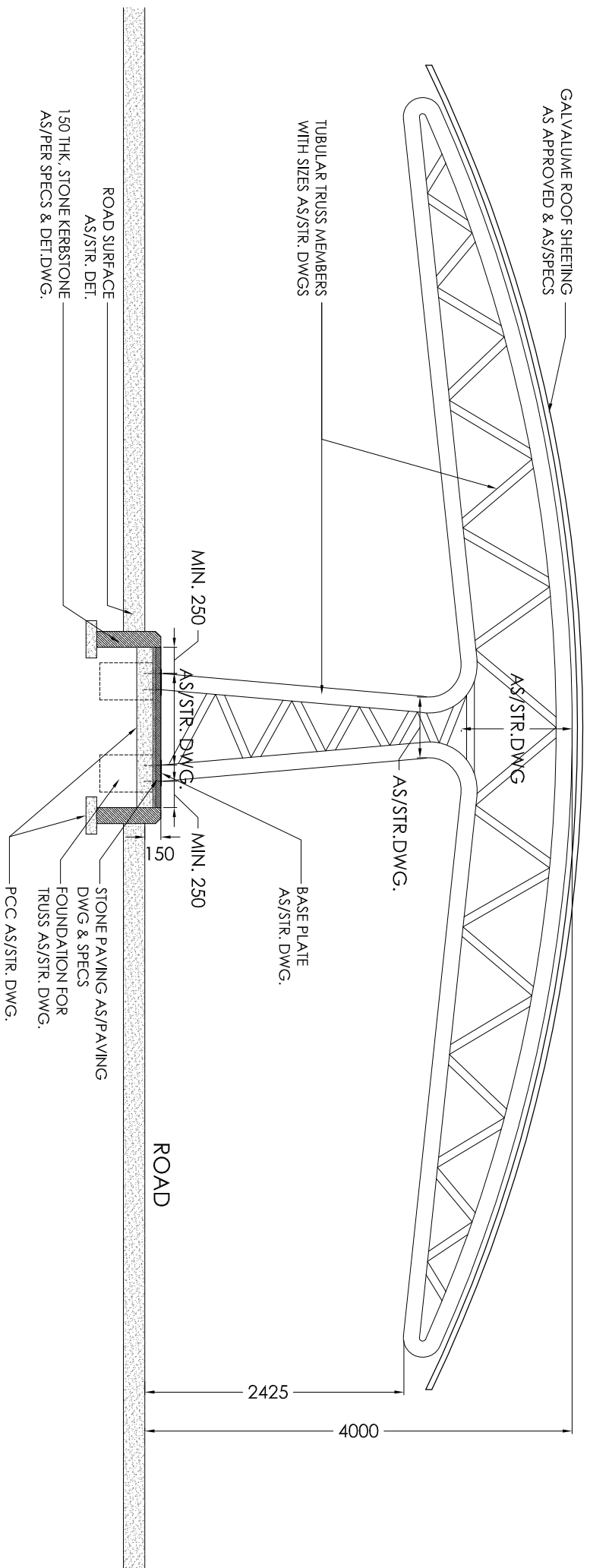
Signature of NRDA.....

LIST OF DRAWINGS

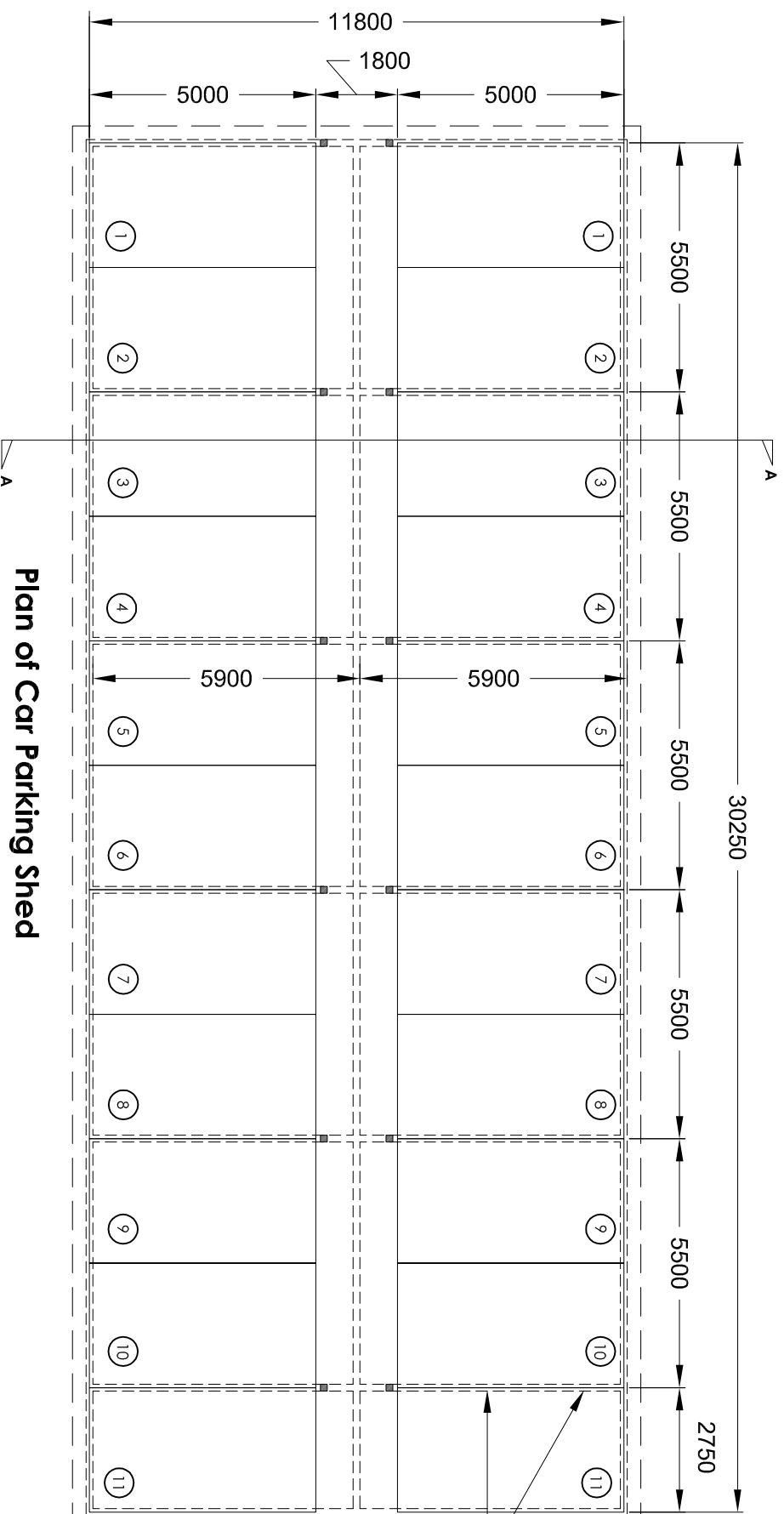
SL. NO.	DRAWING TITLE
1	Layout Plan & Sectional Elevation of Parking Shed

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Section A - A
SCALE - 1:50




Plan of Car Parking Shed

FOR TENDER PURPOSE ONLY

NOTES:

01. This drawing should be read in conjunction with architectural drawings.
02. Clear cover to main steel shall be 50MM for footings and 40MM for columns & 25MM for plinth beams.
03. Y denotes TOR40 steel as per IS 1786
04. SBC of soil is taken as 150KN/SQM at a depth of 1.5m from NGL
05. Building is designed for SINGLE floor only.
06. Concrete grade shall be M25 with minimum cement content of 410kg/Cum.
07. Water Cement ratio should not exceed 0.5
08. Lap length shall be 47times the dia of bar.

AUTHORITY:  NAYA RAIPUR DEVELOPMENT AUTHORITY Infront of Mahanadi Dwar of Mantralaya, Raipur, Chhattisgarh. Prepared By: INFRA PSC		PROJECT: CONSTRUCTION OF CAR PARKING SHED AT NAYA RAIPUR, CHHATTISGARH		Drawing No.: NRDA-PSC-ST-TD-XXXX		Rev. No. 0	
DRAWING TITLE: PLAN AND SECTIONAL DETAILS CAR PARKING SHED				Date: 27-11-2014		Scale: N.T.S	
Designed: SMS		Checked: A.K.SAHOO		Approved:			

SCHEDULE- E

Reference to General Conditions of contract.

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SCHEDULE-E

Reference to General Conditions of contract

Name of Work: "Construction of Parking Shed at G-2 & 5, Capitol Complex, Sector-19, Naya Raipur".

- Estimated cost of work : Rs. 1.27Crore
- (i) Earnest Money : Rs. 1.3Lakh
- (ii) Performance : 5% of tendered value
Guarantee
- (iii) Security Deposit : 5% of tendered value

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SCHEDULE- F

General Rules & Directions

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SCHEDULE-F

GENERAL RULES & DIRECTIONS: Officer inviting tender

Maximum percentage for quantity of items of work to be executed beyond which rates are to be determined in accordance with Clauses 12.2 & 12.3:

See below

Definitions:

2(v)	Engineer-in-Charge	AE C1 , NRDA or Any Officer Appointed by CEO, NRDA
2(viii)	Accepting Authority	Chief Executive Officer, NRDA
2(x)	Percentage on cost of materials and Labour to cover all overheads and profits:	15 %
2(xi)	Standard Schedule of Rates	CG SoR with Updated Amendments
2(xii)	Department	Naya Raipur Development Authority

Clause 1

- | | | |
|------|---|---------------|
| (i) | Time allowed for submission of Performance Guarantee from the date of issue of letter of acceptance | 7 days |
| (ii) | Maximum allowable extension beyond the period provided in (i) above | 7 days |

Clause 2

Authority for fixing compensation under clause 2 **CEO, NRDA**

Clause 2A

Whether Clause 2A shall be applicable **No**

Clause 5

Number of days from the date of issue of letter of acceptance for reckoning date of start **15 days**

Mile stone(s) as per table given below:-

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To be submitted by the tendered on award of work

Sl. No.	Description of Milestone (Physical)	Time allowed in days(from date of start)	Amount to be with-held in case of non achievement of mile stone
1.		NA	
2.		NA	
3.		NA	
4.		NA	
5.		NA	

Time allowed for execution of work **8 months including Rainy Season**

Authority to decide:

- (i) Extension of time **CEO, NRDA** (Engineer in Charge or Engineer in Charge of Major Component in case of Composite Contracts, as the case may be)
- (ii) Rescheduling of mile stones **Chief Engineer (Engineering)**

Clause 6, 6A

Clause applicable - (6 or 6A) **6A**

Clause 7

Gross work to be done together with net **Rs 10 Lakhs** payment /adjustment of advances for material collected, if any, since the last such payment for being eligible to interim payment

Clause 10A **All the materials as per contract**

Clause 10B(ii)

Whether Clause 10B (ii) shall be applicable **Applicable subjected to Clause as per Special conditions of contract**

Clause 10C

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Component of labour expressed as percent of value of work

**Not
Applicable**

Clause 10CA

Not Applicable

SI. No.	Material covered under this clause	Nearest Materials (other than cement, reinforcement bars and the structural steel) for which All India Wholesale Price Index to be followed	Base Price of all Materials covered under clause 10 CA*
1	POL	HSD	-

Clause 11

Specifications to be followed for execution of work

Tender specification attached with Tender document, CPWD, MORTH, CPHEEO and relevant IS Specifications.

Clause 12

- 12.2. & 12.3 Deviation Limit beyond which clauses 12.2 & 12.3 shall apply for building and allied infrastructure work..... **25%**
- 12.5 Deviation Limit beyond which clauses 12.2 & 12.3 shall apply for foundation work..... **25%**

Clause 16

Competent Authority for deciding reduced rates. **Chief Engineer (Engineering), NRDA**

Clause 18

List of mandatory machinery, tools & plants to be deployed by the contractor at site:-
As per relevant Clause of Special Conditions of Contract

Clause 36 (i): Minimum Technical Representative(s) and recovery Rate

SI. No.	Designation (Principal Technical/ Technical Representative)	Number	Educational and Relevant Experience	Rate at which recovery shall be made from the contractor in the event of not fulfilling provision of clause 36(i)
1	Site Engineer	01	Graduate in Civil Engg. With Experience of at least 5years/ Dip. In Civil Engg. With 8 years of experience in site supervision of construction projects.	1000/day/head

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Clause 42

- (i) (a) Schedule/statement for determining theoretical quantity of cement & bitumen on the basis of C.G.S.O.R Not Applicable
- (ii) Variations permissible on theoretical quantities:
- (a) Cement
For works with estimated cost put to tender not more than Rs. 5 lakh. 3% plus/minus.
For works with estimated cost put to tender more than Rs.5 lakh. 2% plus/minus.
- (b) Bitumen All Works 2.5% plus & only & nil on minus side.
- (c) Steel Reinforcement and structural steel sections for each diameter, section and category 2% plus/minus
- (d) All other materials. Nil

RECOVERY RATES FOR QUANTITIES BEYOND PERMISSIBLE VARIATION

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

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