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NOTICE INVITING TENDER

(Document No PS:MSX:NIT)

Bharat Heavy Electricals Limited



Ref: **BHEL/NR/SCT/UNCHAHAHAR-IV/ENABLING WORKS/949**

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NOTICE INVITING TENDER (NIT)

NOTE: BIDDER MAY DOWNLOAD FROM WEB SITES

OR

PURCHASE TENDERS FROM THIS OFFICE ALSO

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To

Dear Sir/Madam

Sub : **NOTICE INVITING TENDER**

Sealed offers in two part bid system are invited from reputed & experienced bidders (meeting PRE QUALIFICATION CRITERIA as mentioned in Annexure-I) for the subject job by the undersigned on the behalf of BHARAT HEAVY ELECTRICALS LIMITED as per the tender document. Following points relevant to the tender may please be noted and complied with.

1.0 Salient Features of NIT

SL NO	ISSUE	DESCRIPTION
i	TENDER NUMBER	<i>BHEL/NR/SCT/UNCHAHAHAR-IV/ENABLING WORKS/949</i>
ii	Broad Scope of job	“Repairing and Remoulding of Existing BHEL office (approx. size 750 SQM), Existing Closed Storage Sheds-06 nos. (approx. size 900 SQM each), Construction and Development of New Open Storage Yard (approx. area 50000 SQM) and New Approach Roads (WBM Roads: approx. 1600 SQM) around Boiler area for 1X500 MW FGUTPP (Stage-IV) at Unchahar, Distt. Rae Bareli, U.P., India.”
iii	DETAILS OF TENDER DOCUMENT	
a	Volume-IA	<i>Technical Conditions of Contract (TCC) consisting of Scope of work, Technical Specification, Drawings, Procedures, Bill of Quantities, Terms of payment, etc</i> <i>Applicable</i>
b	Volume-IB	<i>Special Conditions of Contract (SCC)</i> <i>Applicable</i>
c	Volume-IC	<i>General Conditions of Contract (GCC)</i> <i>Applicable</i>
d	Volume-ID	<i>Forms and Procedures</i> <i>Applicable</i>
e	Volume-II	<i>Price Schedule (Absolute value).</i> <i>Applicable</i>
iv	Issue of Tender Documents	<ol style="list-style-type: none"> 1. <u>Sale from BHEL PS Regional office at :</u> Start : 25/03/14 , Time : 0900 HRS Closes: 18/04/14 , Time :1200 HRS 2. From BHEL website (www.bhel.com) Tender documents will be available for downloading from website till due date of submission <i>Applicable/ Not applicable</i>
v	DUE DATE & TIME OF OFFER	Date : 18/04/ 2014 , Time : 1500 HRS Place : Noida <i>Applicable</i>

	SUBMISSION		
vi	OPENING OF TENDER	<p>Date : 18/04/ 2014 (within 2 hours of the latest due date and time of offer submission). Notes: (1) In case the due date of opening of tender becomes a non-working day, then the due date & time of offer submission and opening of tenders get extended to the next working day. (2) Bidder may depute representative to witness the opening of tender</p>	Applicable
vii	EMD AMOUNT	Rs 2,00,000/-	Applicable
viii	COST OF TENDER	Rs 2000/-.	Applicable/Not Applicable
ix	LAST DATE FOR SEEKING CLARIFICATION	<p>Date:09.04.2014 Along with soft version also, addressing to undersigned & to others as per contact address given below</p>	Applicable
x	SCHEDULE OF Pre Bid Discussion (PBD)	Date :	Applicable/Not applicable.
xi	INTEGRITY PACT & DETAILS OF INDEPENDENT EXTERNAL MONITOR (IEM)		Applicable/Not Applicable
xii	Latest updates	<p>Latest updates on the important dates, Amendments, Correspondences, Corrigenda, Clarifications, Changes, Errata, Modifications, Revisions, etc to Tender Specifications will be hosted in BHEL webpage (www.bhel.com -->Tender Notifications →View Corrigendums) and not in the newspapers. Bidders to keep themselves updated with all such information</p>	

- 2.0 The offer shall be submitted as per the instructions of tender document and as detailed in this NIT. Bidders to note specifically that all pages of tender document, including these NIT pages of this particular tender together with subsequent correspondences shall be submitted by them, duly signed & stamped on each page, as part of offer. **Rates/Price including discounts/rebates, if any, mentioned anywhere/in any form in the techno-commercial offer other than the Price Bid, shall not be entertained.**
- 3.0 Unless specifically stated otherwise, bidder shall remit cost of tender and courier charges if applicable, in the form of Demand Draft drawn in favour of Bharat Heavy Electricals Ltd, payable at Power Sector Regional HQ at Noida issuing the Tender, along with techno-commercial offer. Bidder may also choose to deposit the Tender document cost by cash at the Cash Office as stated above against sl no iv of 1, on any working day; and in such case copy of Cash receipt is to be enclosed with the Techno Commercial offer. Sale of tender Documents shall not take place on National Holidays, holidays declared by Central or State Governments and BHEL PS HQ at Noida, Sundays and second/ last Saturdays
- 4.0 Unless specifically stated otherwise, bidder shall deposit EMD through Demand Draft/Pay Order in favour of Bharat Heavy Electricals Ltd, payable at Noida. For other details and for 'One Time EMD' please refer General Conditions of Contract.
- 5.0 **Procedure for Submission of Tenders:** The Tenderers must submit their Tenders to Officer inviting Tender, as detailed below:
- PART-I consisting of 'PART-I A (Techno Commercial Bid)' & 'PART-I B (EMD/COST of TENDER)' in two separate sealed and superscribed envelopes (ENVELOPE-I & ENVELOPE-II)
 - PART-II (Price Bid) – in sealed and superscribed envelope (ENVELOPE-III)

- One set of tender documents shall be retained by the bidder for their reference

6.0 The contents for ENVELOPES and the superscription for each sealed cover/Envelope are as given below.
(All pages to be signed and stamped)

Sl no	Description	Remarks
	Part-I A	
	<p>ENVELOPE – I superscribed as : PART-I (TECHNO COMMERCIAL BID) TENDER NO : NAME OF WORK : PROJECT: DUE DATE OF SUBMISSION:</p> <p>CONTAINING THE FOLLOWING:-</p>	
i.	Covering letter/Offer forwarding letter of Tenderer.	
ii.	<p>Duly filled-in 'No Deviation Certificate' as per prescribed format to be placed after document under sl no (i) above.</p> <p>Note:</p> <p>a. In case of any deviation, the same should be submitted separately for technical & commercial parts, indicating respective clauses of tender against which deviation is taken by bidder. The list of such deviation shall be placed after document under sl no (i) above. It shall be specifically noted that deviation recorded elsewhere shall not be entertained.</p> <p>b. BHEL reserves the right to accept/reject the deviations without assigning any reasons, and BHEL decision is final and binding.</p> <p>i). In case of acceptance of the deviations, appropriate loading shall be done by BHEL</p> <p>ii). In case of unacceptable deviations, BHEL reserves the right to reject the tender</p>	
iii.	<p>Supporting documents/ annexure/ schedules/ drawing etc as required in line with Pre-Qualification criteria.</p> <p>It shall be specifically noted that all documents as per above shall be indexed properly and credential certificates issued by clients shall distinctly bear the name of organization, contact ph no, FAX no, etc.</p>	
iv.	All Amendments/Correspondences/Corrigenda/Clarifications/Changes/ Errata etc pertinent to this NIT.	
v.	Integrity Pact Agreement (Duly signed by the authorized signatory)	If applicable
vi.	Duly filled-in annexures, formats etc as required under this Tender Specification/NIT	
vii.	Notice inviting Tender (NIT)	
viii.	Volume – I A : <u>Technical</u> Conditions of Contract (TCC) consisting of Scope of work, Technical Specification, Drawings, Procedures, Bill of Quantities, Terms of payment, etc	
ix.	Volume – I B : Special Conditions of Contract (SCC)	
x.	Volume – I C : General Conditions of Contract (GCC)	
xi.	Volume – I D : Forms & Procedures	
xii.	Volume – II (UNPRICED – without disclosing rates/price, but mentioning only 'QUOTED' or 'UNQUOTED' against each item	
xiii.	Any other details preferred by bidder with proper indexing.	

PART-I B	
	<p><u>ENVELOPE – II superscribed as:</u> PART-I (EMD/COST of TENDER) TENDER NO : NAME OF WORK : PROJECT: DUE DATE OF SUBMISSION:</p> <p>CONTAINING THE FOLLOWING:-</p>
i.	<p>1. Earnest Money Deposit (EMD) in the form as indicated in this Tender OR Documentary evidence for 'One Time EMD' with the Power Sector Region of BHEL floating the Tender</p> <p>2. Cost of Tender (Demand Draft or copy of Cash Receipt as the case may be)</p>

PART-II	
	PRICE BID consisting of the following shall be enclosed
	<p><u>ENVELOPE-III</u> superscribed as: PART-II (PRICE BID) TENDER NO : NAME OF WORK : PROJECT: DUE DATE OF SUBMISSION:</p> <p>CONTAINING THE FOLLOWING</p>
i	Covering letter/Offer forwarding letter of Tenderer enclosed in Part-I
ii	Volume II – PRICE BID (Duly Filled in Schedule of Rates – rate/price to be entered in words as well as figures)

OUTER COVER	
	<p><u>ENVELOPE-IV</u> (MAIN ENVELOPE / OUTER ENVELOPE) superscribed as: TECHNO-COMMERCIAL BID, PRICE BID & EMD TENDER NO: NAME OF WORK: PROJECT: DUE DATE OF SUBMISSION:</p> <p>CONTAINING THE FOLLOWING:</p>
i	<ul style="list-style-type: none"> ○ Envelopes I ○ Envelopes II ○ Envelopes III

SPECIAL NOTE: All documents/ annexures submitted with the offer shall be properly annexed and placed in respective places of the offer as per enclosure list mentioned in the covering letter. BHEL shall not be responsible for any missing documents.

7.0 Deviation with respect to tender clauses and additional clauses/suggestions in Techno-commercial bid / Price bid shall NOT be considered by BHEL. Bidders are requested to positively comply with the same.

- 8.0 BHEL reserves the right to accept or reject any or all Offers without assigning any reasons thereof. BHEL also reserves the right to cancel the Tender wholly or partly without assigning any reason thereof. Also BHEL shall not entertain any correspondence from bidders in this matter (except for the refund of EMD).

9.0 Assessment of Capacity of Bidders:

Bidders capacity for executing the job under tender shall be assessed 'LOAD' wise and 'PERFORMANCE' wise as per the following:

- I. **LOAD:** Load takes into consideration **ALL** the contracts of the Bidder under execution with BHEL Regions, irrespective of whether they are similar to the tendered scope or not. The 'Load' is the sum of the unit wise identified packages (refer Table-1) for contracts with BHEL Regions. The cut off month for reckoning 'Load' shall be the month, two (2) months preceding the month corresponding to the 'latest date of bid submission', in the following manner:

(Note: For example if latest bid submission is in Aug 2011, then the 'load' shall be calculated upto and inclusive of June 2011)

i). Total number of Packages

Total number of Packages in hand = P

Where

- 'P' is the sum of all unit wise identified packages under execution with BHEL Regions as of the cut off month defined above, including packages yet to be commenced, excepting packages which are on HOLD due to reasons not attributable to Bidder..

- II. **PERFORMANCE:** Here 'Monthly Performance' of the bidder for all the packages (**under execution/** executed during the 'Period of Assessment' in all the Power Sector Regions of BHEL) **SIMILAR** to the packages covered under the tendered scope, excepting packages not commenced shall be taken into consideration. The 'Period of Assessment' shall be 6 months preceding the cut off month. The cut off month for reckoning 'Period of Assessment' shall be the month two (2) months preceding the month corresponding to the 'latest date of bid submission', in the following manner:

(**Note:** For example if 'latest date of bid submission' is in Aug 2011, then the 'performance' shall be assessed for a 6 month period upto and inclusive of June 2011, for all the unit wise identified packages (refer Table I)

i). Calculation of Overall 'Performance Rating' for 'similar Package/Packages' for the tendered scope under execution at Power Sector Regions for the 'Period of Assessment':

This shall be obtained by summing up the 'Monthly Performance Evaluation' scores obtained by the bidder in all Regions for all the similar Package/packages', divided by the total number of Package months for which evaluation should have been done, as per procedure below:

- P₁, P₂, P₃, P₄, P₅, P_N etc be the packages (**under execution/** executed during the 'Period of Assessment' in all Regions) **SIMILAR** to the packages covered under the tendered scope, excepting packages not commenced. Total number of similar packages for all Regions = P_T (ie P_T = P₁ + P₂ + P₃ + P₄ + .. P_N)
- Number of Months 'T₁' for which 'Monthly Performance Evaluation' as per relevant formats, should have been done in the 'Period of Assessment' for the corresponding similar package P₁. Similarly T₂ for package P₂, T₃ for package P₃, etc for the tendered scope. Now calculate cumulative total months 'T_T' for total similar Packages 'P_T' for all Regions (ie T_T = T₁ + T₂ + T₃ + T₄ + .. T_N)
- Sum 'S₁' of 'Monthly Performance Evaluation' Scores (S₁₋₁, S₁₋₂, S₁₋₃, S₁₋₄, S₁₋₅, S_{1-N}) for similar package P₁, for the 'period of assessment' 'T₁' (ie S₁ = S₁₋₁ + S₁₋₂ + S₁₋₃ + S₁₋₄ + S₁₋₅ + ... S_{1-N}). Similarly S₂ for package P₂ for period T₂, S₃ for package P₃ for period T₃, etc for the tendered scope for all Regions. Now calculate cumulative sum 'S_T' of 'Monthly Performance Evaluation' Scores for total similar Packages 'P_T' for all Regions (ie 'S_T' = S₁ + S₂ + S₃ + S₄ + S₅ + S_N.)

d) Overall Performance Rating 'R_{BHEL}' for the similar Package/Packages (under execution/ executed during the 'Period of Assessment') in all the Power Sector Regions of BHEL):

$$= \frac{\text{Aggregate of Performance scores for all similar packages in all the Regions}}{\text{Aggregate of months for each of the similar package for which performance should have been evaluated in all the Regions}}$$

$$= \frac{S_T}{T_T}$$

e) Bidders to note that the risk of non evaluation or non availability of the 'Monthly Performance Evaluation' reports as per relevant formats is to be borne by the Bidder

f) Table showing methodology for calculating 'a', 'b' and 'c' above

Sl no	Item Description	Details for all Regions							Total
(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)	(viii)	(ix)	(x)
1	Similar Packages for all Regions → (under execution/ executed during period of assessment)	P ₁	P ₂	P ₃	P ₄	P ₅	...	P _N	Total No of similar packages for all Regions = P _T ie Sum (Σ) of columns (iii) to (ix)
2	Number of Months for which 'Monthly Performance Evaluation' as per relevant formats should have been done in the 'period of assessment for corresponding similar Package (as in row 1)	T ₁	T ₂	T ₃	T ₄	T ₅	...	T _N	Sum (Σ) of columns (iii) to (ix) = T _T
3	Monthly performance scores for the corresponding period (as in Row 2)	S ₁₋₁ , S ₁₋₂ , S ₁₋₃ , S ₁₋₄ , ... S _{1-T1}	S ₂₋₁ , S ₂₋₂ , S ₂₋₃ , S ₂₋₄ , ... S _{2-T2}	S ₃₋₁ , S ₃₋₂ , S ₃₋₃ , S ₃₋₄ , ... S _{3-T3}	S ₄₋₁ , S ₄₋₂ , S ₄₋₃ , S ₄₋₄ , ... S _{4-T4}	S ₅₋₁ , S ₅₋₂ , S ₅₋₃ , S ₅₋₄ , ... S _{5-T5}	S _{N-1} , S _{N-2} , S _{N-3} , S _{N-4} , ... S _{N-TN}	-----
4	Sum of Monthly Performance scores of the corresponding Package for the corresponding period (as in row-3)	S ₁	S ₂	S ₃	S ₄	S ₅	...	S _N	Sum (Σ) of columns (iii) to (ix) = S _T

ii) Calculation of Overall 'Performance Rating' (R_{BHEL}) in case 'similar Package/Packages' for the tendered scope ARE NOT AVAILABLE, during the 'Period of Assessment':

This shall be obtained by summing up the 'Monthly Performance Evaluation' scores obtained by the bidder in all Regions for ALL the packages, divided by the total number of Package months for which evaluation should have been done. 'R_{BHEL}' shall be calculated subject to availability of 'performance scores' for at least.6 'package months' in the order of precedence below:

- a) 'Period of Assessment.
- b) 12 months preceding the cut-off month
- c) 24 months preceding the cut-off month
- d) 36 months preceding the cut-off month

In case, R_{BHEL} cannot be calculated as above, then Bidder shall be treated as 'NEW VENDOR'. Further eligibility and qualification of this bidder shall be as per definition of 'NEW VENDOR' described in 'Explanatory Notes'

iii) Factor "L" assigned based on Overall Performance Rating (R_{BHEL}) at Power Sector Regions.:

Sl no	Overall Performance Rating (R_{BHEL})	Corresponding value of 'L'
1	=60	NA
2	> 60 and \leq 65	0.4
3	> 65 and \leq 70	0.35
4	> 70 and \leq 75	0.25
5	> 75 and < 80	0.2
6	\geq 80	NA

III. **'Assessment of Capacity of Bidder':**

'Assessment of Capacity of Bidder' is based on the Maximum number of packages for which a vendor is eligible, considering the performance scores of similar packages, as below:

Max number of packages $P_{Max} = (R_{BHEL} - 60)$ divided by corresponding value of 'L'
i.e. $(R_{BHEL} - 60)/L$

Note:

- In case the value of P_{Max} results in a fraction, the value of P_{Max} is to be rounded off to next whole number
- For $R_{BHEL} = 60$, $P_{Max} = '1'$
- For $R_{BHEL} \geq 80$, there will be no upper limit on P_{Max}

The Bidder shall be considered 'Qualified' as per 'Assessment of Capacity of Bidder' for the subject Tender if $P \leq P_{Max}$
(where P is calculated as per clause 9.1)

IV. **Explanatory note:**

- Similar package means Boiler or ESP or Piping or Turbine or Civil or Structure or Electrical or CI, etc at the individual level irrespective of rating of Plant, and irrespective of whether the subject tender is a single package or as part of combined/composite packages. Normally Boiler, ESP, Piping, Turbine, Electrical, CI, Civil, Structure, etc is considered individual level of package. For example in case the tendered scope is a Boiler Vertical Package comprising of Boiler, ESP and Power Cycle Piping (i.e the 'identified packages as per Table-1 below), the 'PERFORMANCE' part against sl no II above, needs to be evaluated considering all the identified packages (ie Boiler, ESP and Power Cycle Piping) and finally the Bidder's capacity to execute the tendered scope is assessed in line with III above
- Identified Packages (Unit wise)

Table-1

	Civil	Electrical & CI	Mechanical
	i). Enabling works ii). Pile and Pile Caps iii). Civil Works including foundations iv). Structural Steel Fabrication & Erection v). Chimney vi). Cooling Tower vii). Others (Civil)	i). Electrical ii). CI iii). Others (Elec & CI)	i). Boiler & Aux (All types including CW Piping if applicable) ii). Power Cycle Piping/Critical Piping iii). LP Piping iv). ESP v). Steam Turbine Generator set & Aux vi). Gas Turbine Generator set & Aux vii). Hydro Turbine Generator set & Aux viii). Turbo Blower (including Steam Turbine) ix). Material Handling x). Material Management

			xi). Material Handling & Material Management xii). Others (Mechanical)
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- c) Bidders who have not been evaluated for at least six package months in the last 36 months in the online BHEL system for contractor performance evaluation in BHEL PS Regions, wef July'2010 shall be considered "NEW VENDOR".

A 'NEW VENDOR' shall be considered qualified subject to satisfying all other tender conditions

A 'NEW VENDOR' if awarded a job (of package/packages identified under this clause) shall be tagged as "FIRST TIMER" on the date of first LOI from BHEL.

The "FIRST TIMER" tag shall remain till execution of work for a period of not less than 09 months, from the commencement of work of first package

A Bidder shall not be eligible for the next job as long as the Bidder is tagged as "FIRST TIMER" excepting for the Tenders which have been opened on or before the date of the bidder being tagged as 'FIRST TIMER'.

After removal of 'FIRST TIMER' tag, the Bidder shall be considered 'QUALIFIED' for the future tenders subject to satisfying all other tender conditions including 'Capacity Evaluation of Bidders'.

- d) In the unlikely event of all bidders shortlisted against Technical and Financial Qualification criteria not meeting the criteria on 'Assessment of Capacity of Bidders' detailed above, OR leads to a single tender response on applying the criteria of 'Assessment of Capacity of Bidders' or due to non-approval by Customer, then BHEL at its discretion reserves the right to consider the further processing of the Tender based on the **Overall Performance Rating 'R_{BHEL}'** only, starting from the upper band.
- e) 'Under execution' shall mean works in progress as per the following:
- i. up to Boiler Steam Blowing in case of Steam Generator and Auxiliaries
 - ii. upto Synchronisation in case of all other works excepting sl no (i) and (iii)
 - iii. Upto execution of at least 90% of anticipated contract value in case of Civil & Structures (unit wise), Enabling works and upto 90% of material unloading (in tonnage) as per the original contract in case of MM Package.
- Note : BHEL at its discretion can extend (or reduce in exceptional cases in line with Contract conditions) the period defined against (i), (ii) and (iii) above, depending upon the balance scope of work to be completed.
- f) Performance evaluation in CL 9 above is applicable to Prime bidder and consortium partner (or Technical tie up partner) for their respective scope of work.

10.0 Since the job shall be executed at site, bidders must visit site/ work area and study the job content, facilities available, availability of materials, prevailing site conditions including law & order situation, applicable wage structure, wage rules, etc before quoting for this tender. They may also consult this office before submitting their offers, for any clarifications regarding scope of work, facilities available at sites or on terms and conditions.

11.0 For any clarification on the tender document, the bidder may seek the same in writing or through e-mail, as per specified format, within the scheduled date for seeking clarification, from the office of the undersigned. BHEL shall not be responsible for receipt of queries after due date of seeking clarification due to postal delay

or any other delays. Any clarification / query received after last date for seeking clarification may not be normally entertained by BHEL and no time extension will be given.

- 12.0 BHEL may decide holding of pre-bid discussion [PBD] with all intending bidders as per date indicated in the NIT. The bidder shall ensure participation for the same at the appointed time, date and place as may be decided by BHEL. Bidders shall plan their visit accordingly. The outcome of pre-bid discussion (PBD) shall also form part of tender.
- 13.0 In the event of any conflict between requirement of any clause of this specification/ documents/drawings/data sheets etc or requirements of different codes/standards specified, the same to be brought to the knowledge of BHEL in writing for clarification before due date of seeking clarification (whichever is applicable), otherwise, interpretation by BHEL shall prevail. Any typing error/missing pages/ other clerical errors in the tender documents, noticed must be pointed out before pre-bid meeting/submission of offer, else BHEL's interpretation shall prevail.
- 14.0 Unless specifically mentioned otherwise, bidder's quoted price shall deemed to be in compliance with tender including PBD.
- 15.0 Bidders shall submit Integrity Pact Agreement (Duly signed by authorized signatory who signs in the offer), **if applicable**, along with techno-commercial bid. This pact shall be considered as a preliminary qualification for further participation. **The names and other details of Independent External Monitor (IEM) for the subject tender is as given at point (1) above.**
- 16.0 The Bidder has to satisfy the Pre Qualifying Requirements stipulated for this Tender in order to be qualified. The Price Bids of only those bidders will be opened who will be qualified for the subject job on the basis of satisfying the Pre Qualification Criteria specified in this NIT as per Annexure-I (as applicable), past performance etc. and date of opening of price bids shall be intimated to only such bidders. BHEL reserves the right not to consider offers of parties under HOLD.
- 17.0 In case BHEL decides on a 'Public Opening', the date & time of opening of the sealed PRICE BID shall be intimated to the qualified bidders and in such a case, bidder may depute one authorised representative to witness the price bid opening. BHEL reserves the right to open 'in-camera' the 'PRICE BID' of any or all Unsuccessful/Disqualified bidders under intimation to the respective bidders.
- 18.0 Validity of the offer shall be for **six months** from the latest due date of offer submission (including extension, if any) unless specified otherwise.
- 19.0 BHEL reserves the right to decide the successful bidder on the basis of Reverse Auction process. In such case all qualified bidders will be intimated regarding procedure/ modality for Reverse Auction process prior to Reverse Auction and price will be decided as per the rules for Reverse Auction. .
- However, if reverse auction process is unsuccessful as defined in the RA rules/procedures, or for whatsoever reason, then the sealed 'PRICE BIDs' will be opened for deciding the successful bidder. BHEL's decision in this regard will be final and binding on bidder.
- 20.0 On submission of offer, further consideration will be subject to compliance to tender & qualifying requirement and customer's acceptance, as applicable.
- 21.0 In case the bidder is an "Indian Agent of Foreign Principals", 'Agency agreement has to be submitted along with Bid, detailing the role of the agent along with the terms of payment for agency commission in INR, along with supporting documents.
- 22.0 The bidders shall not enter into any undisclosed M.O.U. or any understanding amongst themselves with respect to tender.
- 23.0 Not used
- 24.0 The bidder shall submit documents in support of possession of 'Qualifying Requirements' duly self certified and stamped by the authorized signatory, indexed and properly linked in the format for PQR. In case BHEL requires any other documents/proofs, these shall be submitted immediately.

- 25.0 The bidder may have to produce original document for verification if so decided by BHEL.
- 26.0 The offers of the bidders who are on the banned list as also the offer of the bidders, who engage the services of the banned firms, shall be rejected. The list of banned firms is available on BHEL web site www.bhel.com.
- 27.0 BHEL reserves the right to go for Reverse Auction (RA) instead of opening the sealed envelope price bid, submitted by the bidder. This will be decided after techno-commercial evaluation. All bidders to give their acceptance for participation in RA. Non-acceptance to participate in RA may result in non-consideration of their bids, in case BHEL decides to go for RA.

In case BHEL decides to go for Reverse Auction, only those bidders who have given their acceptance to participate in RA will be allowed to participate in the Reverse Auction. Those bidders who have given their acceptance to participate in Reverse Auction will have to necessarily submit „online sealed bid“ in the Reverse Auction. Non-submission of „online sealed bid“ by the bidder will be considered as tampering of the tender process and will invite action by BHEL as per extant guidelines in vogue.”

Information and General Terms and Conditions governing RA shall form part of the RFQ/ Enquiry.

- 28.0 It may please be noted that guidelines/rules in respect of Suspension of Business dealings', 'Vendor evaluation format', 'Quality, Safety & HSE guidelines', etc may undergo change from time to time and the latest one shall be followed.

29.0 **Micro and Small Enterprises (MSE)**

Any Bidder falling under MSE category, shall furnish the following details & submit documentary evidence/ Govt. Certificate etc. in support of the same along with their techno-commercial offer

Type under MSE	SC/ST owned	Others
Micro		
Small		

Note: - If the bidder does not furnish the above, offer shall be processed construing that the bidder is not falling under MSE category.

MSE suppliers can avail the intended benefits only if they submit along with the offer, or before price bid opening, attested copies of either EM-II certificate having deemed validity (two years from the date of issue of acknowledgement in EM-II) or valid NSIC certificate or EM-II certificate along with CA certificate (format enclosed as Annexure - 3) applicable for the year, certifying quantum of investment in plant and machinery within the permissible limit as per the act for relevant status (Micro or Small) where the deemed validity of EM-II is over. Date to be reckoned for determining the deemed validity will be last date of technical bid submission. Non submission of such documents will lead to consideration of their bids at par with other bidders and MSE status of such suppliers shall be shifted to Non MSE supplier till the supplier submits these documents.

MSEs shall be exempted from payment of earnest money at the time of tender deposit. However, there is no exemption of security deposit submission

No benefits shall be applicable for that particular enquiry if the required documents are not submitted before price bid opening.

30.0 Order of Precedence

In the event of any ambiguity or conflict between the Tender Documents, the order of precedence shall be in the order below:

- a. Amendments/Clarifications/Corrigenda/Errata etc issued in respect of the tender documents by BHEL
- b. Notice Inviting Tender (NIT)
- c. Price Bid
- d. Technical Conditions of Contract (TCC)—Volume-1A

- e. Special Conditions of Contract (SCC) —Volume-1B
- f. General Conditions of Contract (GCC) —Volume-1C
- g. Forms and Procedures —Volume-1D

for BHARAT HEAVY ELECTRICALS LTD

(SCT)

Enclosure

- 01. Annexure-1: Pre Qualifying criteria.
- 02. Annexure-2: Check List.
- 03. Annexure-3: Chartered Accountant certificate for MSMED
- 04. Other Tender documents as per this NIT.

ANNEXURE - 1**PRE QUALIFYING REQUIREMENTS**

JOB	“Repairing and Remoulding of Existing BHEL office (approx. size 750 SQM), Existing Closed Storage Sheds-06 nos. (approx. size 900 SQM each), Construction and Development of New Open Storage Yard (approx. area 50000 SQM) and New Approach Roads (WBM Roads: approx. 1600 SQM) around Boiler area for 1X500 MW FGUTPP (Stage-IV) at Unchahar, Distt. Rae Bareli, U.P., India.”
TENDER NO	BHEL/NR/SCT/UNCHAHAR-IV/ENABLING WORKS/949

SL NO.	PRE QUALIFICATION CRITERIA	Bidders claim in respect of fulfilling the PQR Criteria	
		Name and Description of qualifying criteria	Page no of supporting document
A	Submission of Integrity Pact duly signed (if applicable)	Not Applicable	
B	Assessment of Capacity of Bidder to execute the work as per sl. no. 9 of NIT (if applicable)	Applicable	
C	<u>Technical</u> Bidder who wish to participate should have executed, during last seven years, as on the date of opening of Technical Bid, works of similar nature covered in this tender as per the following: One single work of valuing Rs. 328 lacs or above. “OR” Two works of valuing each of Rs. 205 lacs or above. “OR” Three works of valuing each of Rs. 164 lacs or above.	Applicable	
D 1.1 1.2	<u>Financial</u> <u>TURNOVER:</u> Bidders should have achieved an average annual financial turnover (Audited) of Rs. 123 lacs or more over the last three financial years (FY) i.e. 2010-2011, 2011-2012, 2012-2013. <u>Net worth:</u> Net worth of the bidder based on the latest audited accounts as furnished for D 1.1 above should be positive. <u>Profit:</u> Bidder should have earned cash profit in any one of the three financial years as applicable in the last three financial years defined in D 1.1 above based on latest audited accounts. (Relevant documents, meeting above requirements at C & D, shall be submitted by bidders.)	Applicable	
E	Approval of Customer (if applicable)	Not Applicable	
F	Consortium criteria (if applicable)	Not Applicable	

Explanatory Notes for QR 'C'

- For QR 'C' above the word 'Executed' means the bidder should have achieved the criteria, specified in the QR, even if the total contract has not been completed or closed.
- If the Qualifying work is executed in the last seven years period, as specified above, even if it has been started earlier, the same will also be considered meeting the qualifying requirements.
- The word "work of similar nature" means enabling works like Construction and Development of Open Storage Yards OR Covered / Semi Covered Stores OR Offices OR Buildings (Industrial / Residential)

ANNEXURE - 2**CHECK LIST****NOTE:- Tenderers are required to fill in the following details and no column should be left blank**

1	Name and Address of the Tenderer		
2	Details about type of the Firm/Company		
3.a	Details of Contact person for this Tender	Name : Mr/Ms Designation: Telephone No: Mobile No: Email ID: Fax No:	
3.b	Details of alternate Contact person for this Tender	Name : Mr/Ms Designation: Telephone No: Mobile No: Email ID: Fax No:	
4	EMD DETAILS	DD No: Date : Bank : Amount: Please tick (<input type="checkbox"/>) whichever applicable:- ONE TIME EMD / ONLY FOR THIS TENDER	
5	Validity of Offer	TO BE VALID FOR SIX MONTHS FROM DUE DATE	
		APPLICABILITY (BY BHEL)	ENCLOSED BY BIDDER
6	Whether the format for compliance with PRE QUALIFICATION CRITERIA (ANNEXURE-I) is understood and filled with proper supporting documents referenced in the specified format	Applicable	YES / NO
7	Audited profit and Loss Account for the last three years	Applicable/Not Applicable	YES/NO
8	Copy of PAN Card	Applicable/Not Applicable	YES/NO
9	Whether all pages of the Tender documents including annexures, appendices etc are read understood and signed	Applicable/Not Applicable	YES/NO
10	Integrity Pact	Applicable/Not Applicable	YES/NO
11	Declaration by Authorised Signatory	Applicable/Not Applicable	YES/NO
12	No Deviation Certificate	Applicable/Not Applicable	YES/NO
13	Declaration confirming knowledge about Site Conditions	Applicable/Not Applicable	YES/NO
14	Declaration for relation in BHEL	Applicable/Not Applicable	YES/NO
15	Non Disclosure Certificate	Applicable/Not Applicable	YES/NO
16	Bank Account Details for E-Payment	Applicable/Not Applicable	YES/NO
17	Capacity Evaluation of Bidder for current Tender	Applicable/Not Applicable	YES/NO
18	Tie Ups/Consortium Agreement are submitted as per format	Applicable/Not Applicable	YES/NO

19	Power of Attorney for Submission of Tender/Signing Contract Agreement	Applicable/Not Applicable	YES/NO
20	Analysis of Unit rates	Applicable/Not Applicable	YES/NO

NOTE : STRIKE OFF 'YES' OR 'NO', AS APPLICABLE. TENDER NOT ACCOMPANIED BY THE PRESCRIBED **ABOVE APPLICABLE DOCUMENTS** ARE LIABLE TO BE SUMMARILY REJECTED.

DATE :

AUTHORISED SIGNATORY
(With Name, Designation and Company seal)

ANNEXURE - 3**Certificate by Chartered Accountant on letter head**

This is to Certify that M/S ,
 (hereinafter referred to as 'company') having its registered office at
 is registered under MSMED Act 2006, (Entrepreneur
 Memorandum No (Part—II) dtd:..... ,
 Category: (Micro/Small)). (Copy enclosed).

Further verified from the Books of Accounts that the investment of the company as on
 date as per MSMED Act 2006 is as follows:

1. For Manufacturing Enterprises: Investment in plant and machinery (i.e. original cost
 excluding land and building and the items specified by the Ministry of Small Scale Industries vide
 its notification No. S.O.1722(E) dated October 5, 2006:
 Rs.....Lacs

2. For Service Enterprises: Investment in equipment (original cost excluding land and building
 and furniture, fittings and other items not directly related to the service rendered or as may be notified
 under the **MSMED** Act, 2006:
 Rs.....Lacs

The above investment of Rs.....Lacs is within permissible limit of
 Rs.....Lacs for Micro / Small (**Strike off which is not applicable**)
 Category under MSMED Act 2006.

Date:

(Signature)

Name -

Membership number -

Seal of Chartered Accountant

ANNEXURE - 4**GENERAL TERMS AND CONDITIONS OF REVERSE AUCTION (RA)**

Against this enquiry for the subject item/ system with detailed scope of supply as per enquiry specifications, BHEL may resort to “REVERSE AUCTION PROCEDURE” i.e., ON LINE BIDDING (THROUGH A SERVICE PROVIDER). The philosophy followed for reverse auction shall be English Reverse (No ties).

1. For the proposed reverse auction, technically and commercially acceptable bidders only shall be eligible to participate.
2. Those bidders who have given their acceptance for Reverse Auction (quoted against this tender enquiry) will have to necessarily submit “online sealed bid” in the Reverse Auction. Non submission of “online sealed bid” by the bidder for any of the eligible items for which techno commercially qualified, will be considered as tampering of the tender process and will invite action by BHEL as per extant guidelines in vogue.
3. BHEL will engage the services of a service provider who will provide all necessary training and assistance before commencement of on line bidding on internet.
4. In case of reverse auction, BHEL will inform the bidders the details of Service Provider to enable them to contact & get trained.
5. Business rules like event date, time, bid decrement, extension etc. also will be communicated through service provider for compliance.
6. Bidders have to fax the Compliance form before start of Reverse auction. Without this, the bidder will not be eligible to participate in the event.
7. In line with the NIT terms, BHEL will provide the calculation sheet (e.g., EXCEL sheet) which will help to arrive at “Total Cost to BHEL” like Packing & forwarding charges, Taxes and Duties, Freight charges, Insurance, Service Tax for Services and loading factors (for non-compliance to BHEL standard Commercial terms & conditions) for each of the bidder to enable them to fill-in the price and keep it ready for keying in during the Auction.
8. Reverse auction will be conducted on scheduled date & time.
9. At the end of Reverse Auction event, the lowest bidder value will be known on auction portal.
10. The lowest bidder has to fax/e-mail the duly signed and filled-in prescribed format for price breakup including that of line items, if required, as provided on case-to-case basis to Service provider within two working days of Auction without fail.
11. In case BHEL decides not to go for Reverse Auction procedure for this tender enquiry, the Price bids and price impacts, if any, already submitted and available with BHEL shall be opened as per BHEL’s standard practice.
12. Bidders shall be required to read the “Terms and Conditions” section of the auctions site of Service provider, using the Login IDs and passwords given to them by the service

provider before reverse auction event. Bidders should acquaint themselves of the „Business Rules of Reverse Auction“, which will be communicated before the Reverse Auction.

13. If the Bidder or any of his representatives are found to be involved in Price manipulation/ cartel formation of any kind, directly or indirectly by communicating with other bidders, action *as per extant BHEL guidelines*, shall be initiated by BHEL and the results of the RA scrapped/ aborted.
14. The Bidder shall not divulge either his Bids or any other exclusive details of BHEL to any other party.
15. In case BHEL decides to go for reverse auction, the H1(s) bidder (whose quote is highest in online sealed bid) may not be allowed to participate in further RA process.

ANNEXURE – 4**Authorization of representative who will participate in the on line Reverse Auction Process;**

1	NAME & DESIGNATION OF OFFICIAL	
2	POSTAL ADDRESS (COMPLETE)	
3	TELEPHONE NOS. (LAND LINE & MOBILE BOTH)	
4	FAX NO.	
5	E-MAIL ADDRESS	
6	NAME OF PLACE/ STATE/ COUNTRY, WHEREFROM S/HE WILL PARTICIPATE IN THE REVERSE AUCTION	

Rev 01
1st June
2012

TECHNICAL CONDITIONS OF CONTRACT (TCC)

(Document No PS:MSX:TCC)

BHARAT HEAVY ELECTRICALS
LIMITED



TECHNICAL CONDITIONS OF CONTRACT (TCC)

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TECHNICAL CONDITIONS OF CONTRACT (TCC)

Chapter- I: Project Information

PROJECT SYNOPSIS:

Name of the Owner : **National Thermal Power Corporation**

Name of Customer : **NTPC BHEL POWER PROJECTS Ltd.**

Address : 1 X 500 MW FGUTPP (Stage-IV), UNCHAHAR, District
Rae Bareli, Uttar Pradesh, India.

New Installation : 1 x 500 MW

Nearest Railway station : Unchahar Railway Station- 3 Kms from Project Site.

Nearest City / Town : Raebareli - 40 Kms.
Lucknow - 90 Kms.

Maximum Temperature : 47 deg. C.

Minimum Temperature : 1 deg. C.

Note: - The bidder is advised to visit and examine the site of WORKS and its surroundings and obtain for himself on his own responsibility all information that may be necessary for preparing the bid and entering into the CONTRACT. All costs for and associated with site visits shall be borne by the bidder.

TECHNICAL CONDITIONS OF CONTRACT (TCC)

Chapter - II: Scope of Works

2.0 GENERAL SCOPE OF WORK

- 2.1 The tender specification covers the construction of all works for “**Repairing and Remoulding of Existing BHEL Office (Approx. Size 750 SQM), Existing Closed Storage Sheds-06 Nos. (Approx. Size 900 SQM Each), Construction and Development of New Open Storage Yard (Approx. Area 50000 SQM) & New Approach Roads (WBM Roads: Approx. 1600 SQM) around Boiler Area for 1 x 500 MW FGUTPP (Stage-IV) at Unchahar, District Rae Bareli, Uttar Pradesh, India**”. Work under this tender includes supply of all required materials, labour, consumables, transportation, sample testing such as cement, TMT, Structural Steel, Permanently colour coated Galvalume /GI Sheets and false ceiling, steel / wooden door, brick work, aggregates etc. for completion of Tender Scope in all respect.
- 2.2 The complete works shall be carried out as per BOQ cum Rate schedule. If any work covered in the scope of contract cannot be executed using items available in BOQ, additional / extra items shall be made and rates for such items shall be worked out as per GCC clause 2.15.7. However contractor shall be bound to execute all the works under the scope of the contract and decision whether an extra item is applicable or not, shall be taken by BHEL Engineer which will be binding on the contractor.
- 2.3 CPWD specifications shall be the standard specifications for this Contract.
- 2.4 All the works which may not be specifically mentioned in BOQ cum Rate schedule or elsewhere in the contract but necessarily implied and required for satisfactory completion of Contract Scope / BOQ items shall be executed by the contractor and shall be deemed to be included in the BOQ cum rate schedule. No extra payment shall be made for such works.
- 2.5 Wherever description of items in BOQ cum Rate schedule is found incomplete, CPWD specifications shall be followed.

2.6 BRIEF SPECIFICATIONS

A. REPAIRING AND REMOULDING OF BHEL SITE OFFICE:

1 No. BHEL Site Office (Approx. Size 750 SQM) already exists at “NTPC- FEROZE GANDHI UNCHAHRA THERMAL POWER PROJECT”, Unchahar, District Rae Bareli. The Existing BHEL Site Office was constructed during the construction of Stage-III work at FGUTPP Unchahar. As this office is old and had been abandoned for a long period now, it is decided by BHEL to repair, remould and renew this office to make it usable during the upcoming work of 1X500 MW (Stage-IV) at FGUTPP Unchahar. The brief description of works involved for repair, rectification and remoulding of BHEL Site office are as below:

TECHNICAL CONDITIONS OF CONTRACT (TCC)

Chapter - II: Scope of Works

The premises of BHEL Site Office shall be cleared of all the grasses, bushes and vegetation, properly graded and levelled and waterlogging of any kind shall be removed completely. The damaged plaster (1.2 m from FGL or as specified by BHEL Engineer) of walls shall be completely removed such that to render the wall properly clean and ready for re-plastering and walls shall be re-plastered as per BOQ, standard specifications and as directed by BHEL Engineer. The colour wash / white wash of office building shall be completely removed by scrapping with sand paper / wire brush and repairing the scratches to render the wall surfaces smooth, ready for painting. Thus prepared outside walls surface shall be painted with Water Proofing Cement paint whereas the internal wall surfaces shall be painted with OBD / Acrylic washable distemper including application of putty / primer as per BOQ, standard specifications and as directed by BHEL Engineer In-charge. The Existing Flooring of C.C. shall be chipped to make it suitable for laying the tiled flooring with an under bed of CM 1:4 (1 Cement & 4 Coarse Sand) as per BOQ, standard specification and as directed by BHEL Engineer. The Existing false Ceiling (including frame work) of Office shall be completely dismantled, removed and replaced with new false ceiling of 12.5 mm thick tapered edge gypsum plain board including providing and fixing frame work as per BOQ and standard specifications. Existing Damaged Roofing of BHEL Office shall be completely removed, serviceable material stacked while the un-serviceable material shall be disposed of as per standard specifications. The existing old damaged roofing shall be replaced with new PPGI / CGS roofing (0.5 mm thick) including providing and fixing galvanised iron J or I hook, bolts, bituminous washers, GI cramp bolts, nuts, scaffolding etc. complete as per BOQ, standard specifications and as directed by BHEL Engineer. All structural steel works (e.g. frames & grills of windows and ventilators, MS angle posts of fencing, MS structural gates etc.) shall be properly cleaned by scrapping with sand paper/wire brushes, other scrapping tools etc. such that to make the surface clean and smooth for painting and re-painted with synthetic enamel paint of approved shade and brand over a coat of primer of approved brand to give an even shade as per BOQ, standard specifications and as directed by BHEL Engineer. The damaged wooden doors which are completely damaged and not reusable shall be completely dismantled, removed, serviceable material stacked and un-serviceable material shall be disposed of as directed by BHEL Engineer In-charge, these damaged doors shall be replaced with the new best quality country wood doors comprising of 38/40 mm thick flush shutters of solid core type and frame 90 mm X 70 mm including providing and fixing of all fittings and accessories, primer and painting of approved make, brand and shade as per BOQ, standard specifications and as directed by BHEL Engineer. All the wood work e.g. wooden doors, windows, shutters, slabs etc. which are reusable shall be completely cleaned by scrapping with sand paper and other scrapping tools etc., repaired with application of putty/ wooden filler material etc. such as to make the surface perfectly smooth and ready for painting, such prepared wooden work shall be painted with synthetic enamel paint of approved brand and make over a coat of primer. All the doors shall be fitted with door stoppers and hydraulic door closers as per BOQ, as directed by BHEL Engineer. The existing damaged barbed wire fencing wire shall be removed and

TECHNICAL CONDITIONS OF CONTRACT (TCC)

Chapter - II: Scope of Works

the fencing around the BHEL Office premises shall be renewed by providing and fixing new fencing barbed wire (10 horizontal rows and 2 interwoven vertical rows) on the existing fencing posts including repairing and straightening the fencing posts by bending / cutting and re-welding or fixing new fencing posts wherever required complete as per BOQ, standard specifications and as directed by BHEL Engineer.

BHEL office shall be provided with termite treatment on walls and under floors as per BOQ, Standard specifications and as directed by BHEL Engineer.

BHEL Office premises shall be provided with approx. 200 Sq.M. of concrete platform to create the parking facilities as per BOQ, standard specifications and as directed by BHEL Engineer. A lawn of grass shall be developed in the office premises including excavation, filling with good earth, manure, grassing with selection no.1 grass, watering, laying brick on edge flooring maintaining the same until the grass forms a thick lawn, free from weeds and fit for mowing as per BOQ, standard specifications and as directed by BHEL Engineer.

Note: All necessary precautions shall be taken before carrying out the dismantling job such that no damage occurs to the existing electrical fittings e.g. tube lights, ceiling fans, exhaust fans, switch boards etc., doors and windows, sanitary fittings, water pipes, office furniture etc. All such material shall be properly covered and made safe / dismantled and stacked at a safe place before starting the dismantling work. If any such material got damaged due to carelessness of contractor or his workmen / personnel, same has to be substituted by the contractor (with the same / higher specifications as of the damaged material) at his own cost, failing which BHEL Engineer is authorized to replace such damaged material at the risk and cost of contractor or recover the amount of new material + BHEL overheads as deemed suitable by BHEL Engineer.

SANITARY WORK:

All the existing damaged sanitary fittings shall be removed and replaced with new piping and fittings as per BOQ, standard specifications and as directed by BHEL Engineer. All sanitary works shall be completed with necessary consumables, fixtures, T&Ps, IMTEs and fittings which are required and may not be specifically mentioned in BOQ cum rate schedule, Contractor to note that complete work is in contractor's scope and BHEL shall not provide any material, labour, T&P etc. Sanitary works shall be completed in all respects such that to meet the BHEL Office functional requirement to the complete satisfaction of BHEL Engineer.

ELECTRICAL WORK:

All existing Electrical Fittings, wiring of Office Building shall be checked properly and the damaged Electrical Fittings, wiring etc. shall be removed and replaced with new fittings

TECHNICAL CONDITIONS OF CONTRACT (TCC)

Chapter - II: Scope of Works

as per BOQ, standard specifications and as directed by BHEL Engineer. All the existing damaged wiring of electrical fittings shall be completely dismantled and removed, serviceable material stacked and unserviceable materials shall be disposed of as directed by BHEL Engineer.

All fittings, existing / new shall be rewired using new / dismantled reusable wire of 2.5 sq mm / 4 sq. mm / 6 sq. mm. / 16 sq. mm FRLS PVC insulated copper conductor and earthing wire as per BOQ, standard specifications and as directed by BHEL Engineer. The wiring shall be inside the existing PVC / Steel conduits surface / recessed wherever conduits are available and where conduits are not available, PVC conduits of approved make and size shall be provided on surface / recessed (including cutting the walls and making good the same) as per BOQ , standard specifications and as directed by BHEL Engineer. All the Electrical fittings shall be of standard make as described in BOQ or elsewhere in contract, however contractor shall take approval from BHEL Engineer before using any material in works.

Providing, installing and commissioning the air conditioners with voltage stabilizer and metal clad plug and MCB (30 Amps) of approved make including complete wiring as per BOQ, standard specifications and as directed by BHEL Engineer is also in the scope of contractor, all the necessary material, works, consumables etc. required for the same shall be arranged by contractor at his own.

Checking the Common Main Panel/ Distribution Board / Lighting panel is in contractor's scope, all the damaged fittings e.g. MCB TPH 100 Amps, MCB TPH 32 Amps, RCCB DP 25/20 Amps, MCB SP (6 Amps – 32 Amps) etc. shall be replaced with new standard make fittings as approved by BHEL Engineer as per BOQ and standard specifications.

BHEL Office shall be provided with adequate nos. of Lights (wall fitted / false ceiling fitted), Ceiling Fans, Exhaust Fans, Wall mounted Fans, 5/6 Amps Switches, 2 way 5/6 Amps Switches, 15/16 Amps Switches, 3 pin 15/16 Amps Switches, 3 pin 5/6 Amps Socket Outlet, 15 / 16 Amps. Socket Outlet, Telephone Socket Outlet, Bell Push including complete wiring in PVC conduits (surface / recessed) and necessary arrangements i.e. modules, GI box along with modular base & cover plate for modular switches / sockets in recess, supplying and fixing stepped type electronic fan regulator on the existing modular plate switch box etc. such that the complete Electrical Installation shall meet the functional requirement as directed by BHEL Engineer and statutory regulations of local authorities.

1 No. Earthing Pit shall be provided with 2" dia, 2 m long GI pipes with flange & GI wires with charcoal salt as per BOQ, standard specifications and as directed by BHEL Engineer.

TECHNICAL CONDITIONS OF CONTRACT (TCC)

Chapter - II: Scope of Works

Furniture and Furnishing:

Contractor shall prepare a siting layout for the BHEL Office in consultation of BHEL Engineer. Contractor shall get this layout approved from BHEL Engineer before procuring and supplying the furniture /furnishing items to BHEL Site Office.

Furniture shall be procured from the reputed approved manufacturers only as per BOQ and as directed by BHEL Engineer. If the furniture items of approved model as per BOQ are not available / discontinued by manufacturer, the same can be substituted by another model of same brand / other approved brand after approval from BHEL Engineer.

B. REPAIRING AND REMOULDNG OF CLOSED STORAGE SHEDS:

The existing closed storage sheds (Approx. 900 Sq.M each) shall be repaired and remoulded to renew the closed storage sheds and make them functional in all respects.

Closed Shed (15M X 60M)

- 6 no.

The area around the closed storage sheds shall be made free from bushes, grass/vegetation of any kind and shall be properly levelled, graded, compacted and sloped towards the nearest outward drains to maintain the area clean, tidy and free from waterlogging of any kind.

Plaster of Closed Storage Sheds shall be renewed by removing the damaged plaster in patches wherever necessary and re-plastering the walls as per BOQ, standard specifications and as directed by BHEL Engineer. Plaster up to 1.2 m height from FGL shall be completely removed and re-plastered. The existing colour wash of the walls shall be completely removed by scrapping with sand-paper, wire brush etc. and the wall surface shall be rendered smooth and ready for repainting with necessary repairs to the scratches. Thus prepared the outside walls of Closed Storage Sheds shall be finished with water proofing cement paint whereas Inside walls shall be finished by distempering with 1st quality Acrylic washable distemper including application of primer / putty as per BOQ, standard specifications and practices and as directed by BHEL Engineer.

The closed storage sheds shutters shall be made functional by providing greasing / repairing and repainting. Damaged existing corrugated roofing shall be dismantled and disposed of appropriately; the damaged roofing shall be replaced with PPGI / CGS roofing as per BOQ cum rate schedule and as per standard specifications. The roofing shall be provided with translucent RMP/FRP sheet for natural lighting as per BOQ, standard specifications and as directed by BHEL Engineer.

100 mm thick, 1.0 metres wide RCC racks / slabs all along both store walls shall be provided at 1.0 metre & 1.8 metre heights from FFL. The slabs shall be rested on brick masonry every 1.2 metre span of size 1.8 metres high. The brickwork shall be plastered to finish and whitewashed / distempered as per drawings and BOQ.

TECHNICAL CONDITIONS OF CONTRACT (TCC)

Chapter - II: Scope of Works

IT IS PROPOSED TO ELECTRIFY THE CLOSED SHED AS FOLLOWS:

Adequate Nos. of Aluminium dispersive Luminaries shall be provided in closed shed with accessories and mounting arrangements as specified in BOQ according to standard codes and practices using best quality materials. Each storage shed shall be provided with the suitable nos. of Ordinary Tube Lights, fans, Exhaust Fans, 5A/ 15A sockets, 3 phase power sockets and switches, power sockets, MCBs, MCCBs, ELCBs, complete with cabling in PVC conduits, Earthing etc. as per the BOQ and as directed by BHEL Engineer for fulfilling functional requirements.

All the existing damaged / non-functional, 5A/15A sockets, fans, Tube Lights, power sockets, MCBs, MCCBs, ELCBs, wiring surface/recessed etc. shall be removed and replaced with new fittings as per BOQ and as directed by BHEL Engineer to make all the fittings functional / operative and to fulfil the functional requirement of Closed Storage Sheds.

The Existing common main panels / feeder panel / MCB distribution board shall be thoroughly checked and made functional by removing and replacing the all existing damaged fittings, incoming cable etc. as required and as directed by BHEL Engineer. Contractor to note that the Complete Electrification Work of Closed Storage Sheds is in the scope of this contract and all works as necessarily implied and required but may not be specifically mentioned in the contract has to be carried out by the contractor without any cost implication such as to make the Electrical Installation of Closed Storage shed completely functional, safe and in compliance with statutory regulations of local authorities

The scope of work has to be completed in all manners to meet the functional requirement by covering all the left out allied work in BOQ thereby to commission the system as a whole.

Complete Electrification along with necessary lighting-fixtures, fans, necessary cables, MCB, ELCB, Main switch, Energy meter, Junction box, switches, switch boards, Plug points etc. are in the contractor's scope so that installation is fully safe & meets local authorities statutory requirement. The necessary covers required for the MCB DBs, energy meter etc., are to be provided by the contractor. Necessary earthing along with earth pit required as per the standards is to be provided by the contractor.

All the material used to be approved by BHEL Engineer. In case of non-availability of approved make of material (as specified in clause 2.5 E of TCC and BOQ); BHEL Engineer is authorized to substitute the same.

C. STORAGE YARD AND ROADS:

The Storage yards and roads shall be developed on land given by BHEL having the built up area of Approx. 50000 Sq.M., the raised concrete platform area shall be Approx. 1600 Sq.M. and 2345 Nos. concrete sleepers shall be provided as per BOQ and as Instructed by BHEL Engineer. The yard area shall be levelled, watered and compacted with at least 10 passes of 8-12 T rollers to the entire satisfaction of BHEL.

TECHNICAL CONDITIONS OF CONTRACT (TCC)

Chapter - II: Scope of Works

Entire storage yard is to be leveled first by making good the undulations, watered, compacted and rolled with road rollers to required slope (1:300) towards the drains/periphery so that no waterlogging is present. The road area, subgrade shall be prepared after excavation, dressing to camber and consolidation with 8-12 T Road rollers, over which Murrum (properly watered and compacted), stone soling and 150 mm thick water bound macadam, is to be laid with stone aggregate 63 mm to 45 mm, stone screenings, murrum, red bajri, binding earth etc. and is to be properly compacted and rolled with road roller as shown in drawings. Appropriate approaches shall be made to open storage blocks from the roads. The internal road of storage yard is to be connected with existing approach road (this is in the contractor's scope). **Open and covered PCC/Brick drains** as **specified in drawings / BOQ** and as instructed by BHEL Engineer shall be provided and terminated at Existing drains for proper and sufficient rainwater drainage. 15% area of the open storage yard shall be developed as monsoon yard by developing the open storage blocks as directed by BHEL Engineer. Monsoon Yard Blocks shall be developed by excavation up-to 250 mm below the yard level, filling with murrum 100 mm thick (in two layers of 50 mm each properly watered and compacted) and WBM 150 mm thick (in two layers of 75 mm each properly compacted and graded with Road Roller) as per drawings, BOQ and as directed by BHEL Engineer.

Open yard shall be adequately illuminated by providing proper lighting arrangements i.e. 3 phase Metering and Power Distribution Boards, Power Feeder Pillar Boards, Flood Light Luminaries and Steel swaged tubular poles with sodium vapour lamps along with adequate earthing arrangements etc. complete with all cabling, fittings and fixtures as per BOQ / as instructed by BHEL Engineer such as the complete electrification work comply with the local statutory requirement & functional requirement as per the standard codes and practices.

Contractor to note no machinery, tools & plants, material & manpower shall be provided by BHEL.

D. FENCING:

Barbed wire fencing work: Pits of size 300x300 mm² and 450 mm deep shall be excavated for MS angle posts at 3 metres c/c. At least 2 m high **GI barbed wire** fencing with 2.35 m angle iron 50 x 50x 6 mm posts placed every 3 m c/c embedded in cement concrete block (1:3:6), every 15th post but one end post / corner post shall be strutted on both sides and end post on one side only and provided with 10 horizontal lines and two diagonals inter woven lines, with horizontal / diagonal wires of barbed wire, weighing 9.38 Kg per 100 m (min) (12.5 gauge, 2 strands) between the two posts and fixed with GI staples, turn buckles etc. complete shall be provided by the contractor.

TECHNICAL CONDITIONS OF CONTRACT (TCC)

Chapter - II: Scope of Works

E. APPROVED MAKE OF MATERIALS:

1. STRUCTURAL/REINF. STEEL : SAIL / TATA / JINDAL
2. CEMENT OPC 43/53 OR EQUIV. PPC : ACC / BIRLA / JAYPEE
3. ENAMEL PAINTS : JOHNSON & NICHOLSON /
BERGER / ICI / ASIAN PAINT /
NEROLAC
4. GI & MS PIPES : SURYA / PRAKASH / JINDAL-
HISSAR / TATA
5. ELECTRICAL ACCESSORIES
 - a) SWITCHES AND SOCKETS : ANCHOR / MK / LK
(MODULAR TYPE SWITCHES)
6. ELECTRICAL EQUIPMENT:
 - a) EXHAUST FANS : ALSTOM / CROMPTON/ GC/
NUTECH
 - b) LIGHT FITTINGS : CROMPTON/PHILIPS /WIPRO
 - c) WALL MOUNTING FANS : ORIENT/ CROMPTON/ GC/USHA
 - d) CFL & FL LAMPS : PHILIPS/ OSRAM / WIPRO / BAJAJ
 - e) KWH METERS ETC : BHEL/ GE/ L&T / HAVELS
 - f) MCBs & MCB DBs (10 KA) : MDS/ L&T-HAGGER/ RAJ.L/ HAVELS
 - g) EARTH LEAKAGE CIRCUIT : MDS/ L&T-HAGGER/ RAJ.L
 - h) BREAKER : HAVELS / EURO
7. FURNITURE : GODREJ / DELITE / DURIAN

- F.** Approval of BHEL Engineer is to be obtained before procurement of materials specified above. The make of material mentioned if not available in the market or is not suiting the site conditions or the make of material is not mentioned in the above list, equivalent make may be used after the approval from BHEL Engineer.

TECHNICAL CONDITIONS OF CONTRACT (TCC)

Chapter - II: Scope of Works

2.7 The scope of work will also include such other related works although they may not be specifically mentioned in the above paragraph and all such incidental items not specified but reasonably implied and necessary for completion of the job as a whole all as desired and as directed by the BHEL Engineer.

The detail scope of work covered above is not a comprehensive list of items of work involved. The detail scope of work may vary considerably depending on the actual construction requirements.

2.8 The work under this contract shall be carried out as per BOQ Cum Rate Schedule. In case the description / specifications as per BOQ are found to be incomplete CPWD specifications shall be followed. Quantities mentioned in the rate schedules are approximate only and liable for variation due to change of scope of work / variation in schedule of quantities, changes in design etc. The Contractor shall undertake to execute actual quantities as per advice of BHEL Engineer and accordingly the final contract price shall be worked out on the basis of quantities actually executed at site and payments will also be regulated for the same. The quantities indicated against each item may vary to any extent and no compensation will be payable in variation of Individual quantity.

2.9 **ALSO INCLUDED IN THE SCOPE**

Unless otherwise specified, the work to be provided by the contractor for the items mentioned in the "Bill of Quantities" shall include but not be limited to the following.

- a) Furnishing all labour, materials, supervision, construction plans, equipment, supplies, transport, to and from the site, fuel, electricity, compressed air, water, transit and storage insurance and all other incidental items and temporary works not shown or specified but reasonably implied or necessary for the proper completion, maintenance and handling over the works, except in accordance with the stipulations laid down in the contract documents and additional stipulations as may be provided by the BHEL Engineer during the course of works.
- b) Furnishing samples of all materials required by the BHEL Engineer for testing / inspection and approval for use in the works. The samples may be retained by the engineer for final incorporation in the works.

TECHNICAL CONDITIONS OF CONTRACT (TCC)

Chapter - II: Scope of Works

- c) Furnishing test reports for the products used or intended to be used, if called for the specifications or if so desired by the BHEL Engineer.
- d) Giving all notices, paying all fees, taxes etc., in accordance with the general conditions of contract, those are required for all works including temporary works.
- e) Arranging manufacturer's supervision for items of work done as per manufacturer's specifications when so specified.
- f) Carrying out topographic survey of the work area and establish levels and coordinates at suitable intervals from existing grid levels and coordinates furnished by the owner established bench marks, setting out the locations and levels of proposed structures, constructions and marking of reference pillars and other identification works etc., The contractor shall provide the owner/BHEL such an assistance, instruments, machines, labour and materials as are normally required for examining, measuring and testing any work and the quality, weight or quantity of any material used.
- g) Providing all incidental items not shown or specified but reasonably implied or necessary for the successful completion of the work in accordance with contract.

TECHNICAL CONDITIONS OF CONTRACT (TCC)
Chapter – III: Facilities in the scope of Contractor/BHEL

Sl.No	Description	Scope / to be taken care by		Remarks
		BHEL	Bidder	
1.1.0	<u>ESTABLISHMENT</u>			
1.1.1	FOR CONSTRUCTION PURPOSE:			
A	OPEN SPACE FOR OFFICE	Yes		BHEL shall provide free of charge limited open space for office and store as and where made available by its Customer.
B	OPEN SPACE FOR STORAGE	Yes		
C	CONSTRUCTION OF BIDDER'S OFFICE, CANTEEN AND STORAGE BUILDING INCLUDING SUPPLY OF MATERIALS AND OTHER SERVICES		Yes	
D	BIDDER'S ALL OFFICE EQUIPMENT, OFFICE / STORE / CANTEEN CONSUMABLES		Yes	
E	CANTEEN FACILITIES FOR THE BIDDER'S STAFF, SUPERVISORS AND ENGINEERS ETC.		Yes	
F	FIRE FIGHTING EQUIPMENT LIKE BUCKETS, EXTINGUISHERS ETC.		Yes	
G	FENCING OF STORAGE AREA, OFFICE, CANTEEN ETC. OF THE BIDDER		Yes	

TECHNICAL CONDITIONS OF CONTRACT (TCC)
Chapter – III: Facilities in the scope of Contractor/BHEL

Sl.No	Description	Scope / to be taken care by		Remarks
		BHEL	Bidder	
1.1.2	<i>FOR LIVING PURPOSES OF THE BIDDER</i>			
A	OPEN SPACE		Yes	
B	LIVING ACCOMMODATION		Yes	
1.2.0	<u>ELECTRICITY</u>			
1.2.1	<u>ELECTRICITY FOR CONSTRUCTION PURPOSES</u>		Yes	Contractor shall deploy the DG sets for carrying out the tender works.
1.2.1.1	SINGLE POINT SOURCE			
1.2.1.2	FURTHER DISTRIBUTION FOR THE WORK TO BE DONE WHICH INCLUDE SUPPLY OF MATERIALS AND EXECUTION		Yes	
1.2.2	ELECTRICITY FOR THE OFFICE, STORES, CANTEEN ETC. OF THE BIDDER WHICH INCLUDE:		Yes	
1.2.2.1	DISTRIBUTION FROM SINGLE POINT INCLUDING SUPPLY OF MATERIALS AND SERVICE		Yes	
1.2.2.2	SUPPLY, INSTALLATION AND CONNECTION OF MATERIAL OF ENERGY METER INCLUDING OPERATION AND MAINTENANCE		Yes	

TECHNICAL CONDITIONS OF CONTRACT (TCC)
Chapter – III: Facilities in the scope of Contractor/BHEL

Sl.No	Description	Scope / to be taken care by		Remarks
		BHEL	Bidder	
1.2.2.3	<i>DUTIES AND DEPOSITS INCLUDING STATUTORY CLEARANCES FOR THE ABOVE</i>		Yes	
1.2.2.4	<i>LIVING FACILITIES FOR OFFICE USE INCLUDING CHARGES</i>		Yes	
1.2.2.5	<i>DEMOBILIZATION OF THE FACILITIES AFTER COMPLETION OF WORKS</i>		Yes	
1.2.3	<u><i>ELECTRICITY FOR LIVING ACCOMMODATION OF THE BIDDER'S STAFF, ENGINEERS, SUPERVISORS ETC ON THE ABOVE LINES.</i></u>		Yes	
1.3.0	<u><i>WATER SUPPLY</i></u>			
1.3.1	<u><i>FOR CONSTRUCTION PURPOSES:</i></u>			
1.3.1.1	<i>MAKING THE WATER AVAILABLE AT SINGLE POINT</i>		Yes	Bidder has to arrange for construction water at his own by resorting to the methods like bore well, water tankers etc.
1.3.1.2	<i>FURTHER DISTRIBUTION AS PER THE REQUIREMENT OF WORK INCLUDING SUPPLY OF MATERIALS AND EXECUTION</i>		Yes	

TECHNICAL CONDITIONS OF CONTRACT (TCC)
Chapter – III: Facilities in the scope of Contractor/BHEL

Sl.No	Description	Scope / to be taken care by		Remarks
		BHEL	Bidder	
1.3.2	<u>WATER SUPPLY FOR BIDDER'S OFFICE, STORES, CANTEEN ETC.</u>		Yes	
1.3.2.1	MAKING THE WATER AVAILABLE AT SINGLE POINT		Yes	Bidder shall arrange for safe drinking water for staff and labour at his own.
1.3.2.2	FURTHER DISTRIBUTION AS PER THE REQUIREMENT OF WORK INCLUDING SUPPLY OF MATERIALS AND EXECUTION		Yes	
1.4.0	<u>LIGHTING</u>			
1.4.1	FOR CONSTRUCTION WORK (SUPPLY OF ALL THE NECESSARY MATERIALS) 1. At office storage area 2. At the preassembly area 3. At the construction site /area		Yes	
1.4.2	FOR CONSTRUCTION WORK (EXECUTION OF THE LIGHTING WORK/ ARRANGEMENTS) 1. At office storage area 2. At the preassembly area 3. At the construction site /area		Yes	
1.4.3	PROVIDING THE NECESSARY CONSUMABLES LIKE BULBS, SWITCHES, ETC. DURING THE COURSE OF CONSTRUCTION		Yes	

TECHNICAL CONDITIONS OF CONTRACT (TCC)
Chapter – III: Facilities in the scope of Contractor/BHEL

Sl.No	Description	Scope / to be taken care by		Remarks
		BHEL	Bidder	
1.4.4	<i>LIGHTING FOR THE LIVING PURPOSES OF THE BIDDER AT THE COLONY / QUARTERS</i>		Yes	
1.5.0	<u>COMMUNICATION FACILITIES FOR SITE OPERATIONS OF THE BIDDER</u>			
1.5.1	<i>TELEPHONE, FAX, INTERNET, INTRANET, E-MAIL ETC.</i>		Yes	
1.6.0	<u>COMPRESSED AIR SUPPLY</u>			
1.6.1	<i>SUPPLY OF COMPRESSOR AND ALL OTHER EQUIPMENT REQUIRED FOR COMPRESSOR AND COMPRESSED AIR SYSTEM INCLUDING PIPES, VALVES, STORAGE SYSTEMS ETC.</i>		Yes	
1.6.2	<i>INSTALLATION OF THE ABOVE SYSTEM AND OPERATION AND MAINTENANCE OF THE SAME.</i>		Yes	
1.6.3	<i>SUPPLY OF THE ALL THE CONSUMABLES FOR THE ABOVE SYSTEM DURING THE CONTRACT PERIOD.</i>		Yes	

TECHNICAL CONDITIONS OF CONTRACT (TCC)
Chapter – III: Facilities in the scope of Contractor/BHEL

SI.No	Description	Scope / to be taken care by		Remarks
		BHEL	Bidder	
2.0	<u>CONSTRUCTION FACILITIES</u>			
2.1.0	ENGINEERING WORKS FOR CONSTRUCTION:			
2.1.1	PROVIDING THE CONSTRUCTION DRAWINGS FOR ALL THE STRUCTURES COVERED UNDER THIS SCOPE	Yes		
2.1.2	DRAWINGS FOR CONSTRUCTION METHODS		Yes	In consultation with BHEL.
2.1.3	AS-BUILT DRAWINGS – WHERE EVER DEVIATIONS OBSERVED AND EXECUTED AND ALSO BASED ON THE DECISIONS TAKEN AT SITE– ROUTING OF SMALL BORE PIPES			NA
2.1.4	SHIPPING LISTS ETC. FOR REFERENCE AND PLANNING THE ACTIVITIES			NA
2.1.5	PREPARATION OF SITE CONSTRUCTION SCHEDULES AND OTHER INPUT REQUIREMENTS		Yes	
2.1.6	REVIEW OF PERFORMANCE AND REVISION OF SITE CONSTRUCTION SCHEDULES IN ORDER TO ACHIEVE THE END DATES AND OTHER COMMITMENTS	Yes	Yes	

TECHNICAL CONDITIONS OF CONTRACT (TCC)
Chapter – III: Facilities in the scope of Contractor/BHEL

SI.No	Description	Scope / to be taken care by		Remarks
		BHEL	Bidder	
2.1.7	WEEKLY CONSTRUCTION SCHEDULES BASED ON SL. No 2.1.5		Yes	
2.1.8	DAILY CONSTRUCTION / WORK PLAN BASED ON SL. No 2.1.7		Yes	
2.1.9	PERIODIC VISIT OF THE SENIOR OFFICIAL OF THE BIDDER TO SITE, REVIEW THE PROGRESS SO THAT WORKS ARE COMPLETED AS PER SCHEDULE. IT IS SUGGESTED THIS REVIEW BY THE SENIOR OFFICIAL OF THE BIDDER SHOULD BE DONE ONCE IN EVERY TWO MONTHS.		Yes	
2.1.10	PREPARATION OF PREASSEMBLY BAY		Yes	
2.1.11	LAYING OF RACKS FOR GANTRY CRANE IF PROVIDED BY BHEL OR BROUGHT BY THE CONTRACTOR/BIDDER HIMSELF			NA

TECHNICAL CONDITIONS OF CONTRACT (TCC)
Chapter – IV: T&Ps and MMEs to be deployed by Contractor

LIST OF TOOL & PLANTS TO BE DEPLOYED BY THE CONTRACTOR -

INDICATIVE LIST OF T & P TO BE ARRANGED BY THE CONTRACTOR AT HIS OWN
COST

SI. No.	EQUIPMENT	QTY
1	CONCRETE MIXER M/C OF SUITABLE CAPACITY	AS PER WORK REQUIREMENT
2	CONCRETE VIBRATORS	AS PER WORK REQUIREMENT
3	JCB/ EXCAVATOR/ DOZER/ JACK HAMMER WITH COMPRESSOR.	AS PER WORK REQUIREMENT
4	TRUCKS/LORRIES/TRACTORS/DUMPERS	AS PER WORK REQUIREMENT
5	WATER TANKER	AS PER WORK REQUIREMENT
6	DEWATERING PUMP	AS PER WORK REQUIREMENT
7	WINCHES	AS PER WORK REQUIREMENT
8	WELDING MACHINES	AS PER WORK REQUIREMENT
9	ROAD ROLLERS	AS PER WORK REQUIREMENT

NOTES:

- 1 The above list specifies only major T&P (may not be complete to be deployed by the contractor). All additional / other tools and plants including trucks & devices, tackles, machines, measuring instruments etc. in good and safe working conditions which are required for satisfactory & timely completion of work shall also be deployed by the contractor within finally accepted rate / price. **Contractor has to mobilize / maintain adequate numbers of equipment for meeting the work schedule and intermediate milestones as notified by BHEL Engineer In-charge.**
- 2 Other terms and conditions regarding above items please also refer clause for T&P/IMTEs).

TECHNICAL CONDITIONS OF CONTRACT (TCC)

Chapter – IV: T&Ps and MMEs to be deployed by Contractor

- 3 All the tools and plants required for this scope of work, except the Tools & Plants provided by BHEL are to be arranged by the contractor within the quoted rates. The list is suggestive in nature. Any additional T & P required to be arranged by the contractor.
- 4 If work gets delayed due to non-availability of T&P, BHEL reserves the right to get the work done at the risk and cost of contractor without prejudice to rights of BHEL as in GCC.

TECHNICAL CONDITIONS OF CONTRACT (TCC)
Chapter – IV: T&Ps and MMEs to be deployed by Contractor

B: INSPECTION, MEASURING AND TESTING EQUIPMENTS (IMTE's):

INDICATIVE LIST OF IMTEs TO BE ARRANGED BY THE CONTRACTOR AT HIS
OWN COST

SL NO	EQUIPMENT	QTY
1	TOTAL STATION	AS PER WORK REQUIREMENT
2	AUTO LEVEL	AS PER WORK REQUIREMENT
3	MEASURING TAPE	AS PER WORK REQUIREMENT
4	PLUMB BOBS	AS PER WORK REQUIREMENT

NOTES:

1. The above list specifies only major IMTEs (may not be complete to be deployed by the contractor). Contractor has to set up the field laboratory with facilities required for material & concrete testing, alternatively all the materials used and proposed to be used for construction may be tested in an authorized and accredited laboratory outside and the material test reports shall be furnished to BHEL Engineer before use of material in work. All additional / other IMTEs / measuring instruments etc. in good and safe working conditions which are required for satisfactory & timely completion of work shall also be deployed by the contractor within finally accepted rate / price.
2. Other terms and conditions regarding above items please also refer clause for T&P/IMTEs.
3. All the tools and plants required for this scope of work, except the Tools & Plants provided by BHEL are to be arranged by the contractor within the quoted rates. The list is suggestive in nature. Any additional T & P required to be arranged by the contractor.

TECHNICAL CONDITIONS OF CONTRACT (TCC)

Chapter – IV: T&Ps and MMEs to be deployed by Contractor

4. If work gets delayed due to non-availability of IMTE, BHEL reserves the right to get the work done at the risk and cost of contractor without prejudice to rights of BHEL as in GCC.

NOT APPLICABLE

TECHNICAL CONDITIONS OF CONTRACT (TCC)

Chapter – VI: Time Schedule

TIME SCHEDULE

6.0 MOBILIZATION, TIME SCHEDULE, CONTRACT PERIOD AND GRACE PERIOD

6.1 INITIAL MOBILIZATION

After receipt of fax LOI, Contractor shall discuss with Project Manager / Construction Manager regarding initial mobilization. Contractor shall mobilize necessary resources within 2 weeks of issue of fax letter of intent or as per the directive of Project Manager / Construction Manager. Such resources shall be progressively augmented to match the schedule of milestones as directed by BHEL Engineer.

The scheduled date of start of work shall be the date after 2 weeks of issue of LOI; however the actual date of start of contract period shall be date of handing over of site to contractor for work and shall be certified by the BHEL Engineer.

“In case BHEL/Customer is not able to give the front for start of work within 6 months from the date of issue of L.O.I. The Contractor has the option to withdraw without any implication on either side”.

6.2 Entire work as detailed in tender specification **shall be completed within 5 months from the scheduled date of start of work.** Contractor has to mobilize adequate resources to meet BHEL’s commitments to their customer as indicated from time to time.

6.3 Detailed Work completion Schedule will be submitted for approval by the successful bidder within 2 weeks of issue of LOI.

6.4 In case due to reasons not attributable to the contractor, the work gets delayed and scheduled completion gets extended, time extension will be accordingly granted by BHEL.

6.5 The work under the scope of this contract is deemed to be completed in all respects, only when all the works are carried out as per satisfaction of BHEL. The decision of BHEL on completion date shall be final and binding on the contractor.

TECHNICAL CONDITIONS OF CONTRACT (TCC)

Chapter – VI: Time Schedule

In order to meet above schedule in general, and any other intermediate targets set, to meet customer/ project schedule requirements, contractor shall arrange & augment all necessary resources from time to time on the instructions of BHEL.

6.6 **CONTRACT PERIOD**

The contract period for completion of entire work under scope from the “**START OF CONTRACT PERIOD**” as specified earlier shall be as follows:

COMPLETE WORKS : **5 MONTHS FROM SCHEDULED DATE OF START OF WORK**

With indicative milestones as below:

Repair & Remoulding of BHEL Site Office : Within 2 months from scheduled date of start of work

Repair of BHEL Closed Storage Sheds (03 NOS): Within 2 months from scheduled date of start of work

Repair of BHEL Closed Storage Sheds (03 NOS.): Within 3 months from scheduled date of start of work

Development of Open Storage Yard (25000 SQM): Within 3 months from scheduled date of start of work

Development of Open Storage Yard (25000 SQM): Within 5 months from scheduled date of start of work

Development of Approach Roads around boiler

Area (1600 SQM) : Within 5 months from scheduled date of start of work

6.7 **CONSEQUENCE OF DELAY:**

In case of delay in completion is attributable to the contractor, BHEL may impose LD on the contractor as per GCC.

TECHNICAL CONDITIONS OF CONTRACT (TCC)

Chapter-VII: Terms of Payment

7.0 TERMS OF PAYMENT

- 7.1 The 'Engineer' will certify regarding the actual work executed in the measurement books and bills, which shall be accepted by the contractor in measurement book.
- 7.2 **The Contractor shall be paid monthly running bill as per chapter – X of SCC and Clause Nos. 2.22 & 2.23 of GCC.** The format for billing shall be approved by BHEL before raising invoices.
- 7.3 The contractor on certification of the engineer at site is entitled for payments of his running bills which shall be subject to any deduction/retention specifically under clauses 2.22 of GCC and 10.0 of SCC.
- 7.3.1 Interest bearing recoverable advance. : Not Applicable**

TECHNICAL CONDITIONS OF CONTRACT (TCC)

Chapter-VIII: Taxes and Other Duties

8.0 TAXES & DUTIES

The contractor shall pay all (save the specific exclusions as enumerated in this contract) taxes, fees, license charges, deposits, duties, tools, royalty, commissions or other charges which may be levied on the input goods & services consumed and output goods & services delivered in course of his operations in executing the contract. In case BHEL is forced to pay any of such taxes, BHEL shall have the right to recover the same from his bills or otherwise as deemed fit.

However, provisions regarding **Service Tax** and **Value Added Tax (VAT)** on output services and goods shall be as per following clauses.

8.1 Service Tax & Cess on Service Tax

Service Tax and Cess on Service Tax as applicable on output Services are included in contractor's scope; therefore contractor's price/rates shall be **inclusive** of Service Tax and Cess on Output Services.

Contractor shall obtain prior written consent of BHEL before billing the amount towards such taxes. The Service Tax Rules permit more than one option or methodology for discharging the liability of tax/levy/duty and BHEL will have the right to adopt the appropriate one considering the amount of tax liability on BHEL/Client as well as procedural simplicity with regard to assessment of the liability. The option chosen by BHEL shall be binding on the Contractor for discharging the obligation of BHEL in respect of the tax liability to the Contractor. Contractor shall submit to BHEL documentary evidence of Service Tax registration certificate specifying name of services covered under this contract.

For the purpose of claiming any Service Tax from BHEL, the following procedure shall be adopted:

Contractor shall submit serially numbered Service Tax and Cess Invoices, signed by him or a person authorized by him in respect of taxable service provided, and shall contain the following, namely:

The name, address and registration number of the contractor

The name and address of the party receiving taxable service (BHEL)

Description, classification and value of taxable service provided and

The Service Tax payable thereon.

All the four conditions shall be fulfilled in the invoice for payment of Service Tax by BHEL. Where more than one nature of Service under Service Tax Rules is involved, the invoice mentioned above shall contain the breakup of all values for each nature of Service.

TECHNICAL CONDITIONS OF CONTRACT (TCC)

Chapter-VIII: Taxes and Other Duties

VAT (Sales Tax /WCT)

Civil Works:

As regards Value Added Tax (VAT) on transfer of property in goods involved in Works Contract (previously known as Works Contract Tax) applicable as per local laws, the price quoted by the contractor shall be **inclusive** of the same. Contractor shall obtain prior written consent of BHEL before billing the amount towards such taxes. In case contractor opts for composition, it will be with the prior express consent of BHEL. The VAT Rules permit more than one option or methodology for discharging the liability of tax/levy/duty and BHEL will have the right to adopt the appropriate one considering the amount of tax liability on BHEL/Client as well as procedural simplicity with regard to assessment of the liability. The option chosen by BHEL shall be binding on the Contractor for discharging the obligation of BHEL in respect of the tax liability to the Contractor. BHEL also reserves the right to demand "Tax Invoice" under the relevant VAT Act, from the Contractor. Where such taxes are required to be paid by the contractor subject to the above, this will be reimbursed on production of proof of payment made to the authorities by the Contractor. The contractor has to take all necessary steps to **minimize tax on input goods** by purchasing the materials from any registered dealer of the concerned state only.

Works other than Civil Works:

The rates quoted by the Contractor shall be inclusive of VAT/Sales Tax and BHEL shall not reimburse any amount on this account due to any reason whatsoever.

Common to all Works (Both Civil and Other than Civil)

The Contractor shall register himself with the respective Sales Tax authorities of the state and submit proof of such registration to BHEL along with the first RA bill.

Deduction of tax at source shall be made as per the provisions of law unless otherwise found exempted. In case tax is deducted at source as per the provisions of law, this is to be construed as an advance tax paid by the contractor and no reimbursement thereof will be made unless specifically agreed to.

Contractor has to make his own arrangement at his cost for completing the formalities, if required, with Sales Tax/VAT Authorities, for bringing all their material, plant and equipment etc at site for the execution of the work, including arrangement of Road Permits if and as applicable under the relevant VAT Act.

8.2.1 Modalities of Tax Incidence on BHEL

Wherever the relevant tax laws permit more than one option or methodology for discharging the liability of tax/levy/duty, BHEL will have the right to adopt the appropriate one considering the amount of tax liability on BHEL/Client as well as procedural simplicity with regard to assessment of the liability. The option chosen by BHEL shall be binding on the Contractor for discharging the obligation of BHEL in respect of the tax liability to the Contractor.

TECHNICAL CONDITIONS OF CONTRACT (TCC)

Chapter-VIII: Taxes and Other Duties

New Taxes/Levies

In case the Government imposes any new levy/tax on the output service/ goods/work after award of the contract, the same shall be reimbursed by BHEL at actual.

In case any new tax/levy/duty etc. becomes applicable after the date of Bidder's offer, the Bidder/Contractor must convey its impact on his price duly substantiated by documentary evidence in support of the same before opening of Price Bid. Claim for any such impact after opening the Price Bid will not be considered by BHEL for reimbursement of tax or reassessment of offer.

No reimbursement/recovery on account of increase/reduction in the rate of taxes, levies, duties etc. on input goods/services/work shall be made. Such impact shall be taken care of by the Price Variation/Adjustment Clause (PVC) if any. In case PVC is not applicable for the contract, Bidder has to make his own assessment of the impact of future variation if any, in rates of taxes/duties/ levies etc. in his price bid.

TECHNICAL CONDITIONS OF CONTRACT (TCC)

Chapter-IX : Any other Special requirements

9.0 MATERIALS

- 9.1 The contractor shall, at his own expenses (Inclusive of Taxes), provide all materials required for the work.
- 9.2 All materials to be provided by the Contractor shall be of the best kind in conformity with the specifications laid down in the contract or as per relevant Indian standard and the Contractor shall, if requested by the BHEL Engineer, furnish proof to the satisfaction of BHEL Engineer that the materials so comply.
- 9.3 The Contractor shall, at his own expense and without delay, supply to the BHEL Engineer samples of materials proposed to be used in the works. The BHEL Engineer shall within seven days of supply of samples or within such further period as he may require will intimate to the Contractor in writing, whether samples are approved by him or not. If samples are not approved, the Contractor shall forthwith arrange to supply to the BHEL Engineer for his approval fresh samples complying with the specifications laid down in the Contract. Any delay in approval of samples (original or fresh ones) shall not make the contractor eligible for any compensation.
- 9.4 The BHEL Engineer shall have full powers for removal of any or all of the materials brought to site by the Contractor which are not in accordance with the Contract specifications or do not conform in character or quality to samples approved by him. In case of default on the part of the Contractor in removing rejected materials, the BHEL Engineer shall be at liberty to have them removed by other means. The BHEL Engineer shall have full powers to procure other proper material to be substituted for rejected materials and in the event of the Contractor refusing to comply; he may cause the same to be supplied by other means. All costs, which may attend upon such removal and / or substitution, shall be borne by the Contractor.
- 9.5 The Contractor shall indemnify BHEL, its representatives or employees against any action, claim or proceeding relating to infringement or use of any patent or design or any alleged patent or design rights and shall pay any royalties or other charges which may be payable in respect of any article or material or part thereof included in the Contract. In the event of any claim being made or action being brought against BHEL or any agent, servant or employee of BHEL in respect of any such matters as aforesaid, the Contractor shall immediately be notified thereof, provided that such indemnity shall not apply when such

TECHNICAL CONDITIONS OF CONTRACT (TCC)

Chapter-IX : Any other Special requirements

infringement has taken place in complying with the specific directions issued by BHEL but the Contractor shall pay any royalties or other charges payable in respect of any such use, the amount so paid being reimbursed to the Contractor only if the use was the result of any drawings / specifications issued after submission of the tender.

- 9.6 The BHEL Engineer shall be entitled to have tests carried out as specified in the Contract for any materials supplied by the Contractor other than those for which, as stated above, satisfactory proof has already been furnished, at the cost of the Contractor and the Contractor shall provide at his expense all facilities which the Engineer may require for the purpose. If no tests are specified in the Contract, and such tests are required by the Engineer, the Contractor shall provide all facilities required for the purpose and the charges for these tests shall be borne by the Contractor only. The cost of materials consumed in tests shall be borne by the Contractor in all cases except when otherwise provided.
- 9.7 In addition, the Contractor shall perform / submit at his own cost such tests / samples as may be required by the BHEL Engineer out of the materials used by the company except for the costs of materials used in such tests/ samples.
- 9.8 After acceptance of the Contract, if Contractor desires BHEL to supply any other materials, such material may be supplied by BHEL, if available, at rates to be fixed by the BHEL Engineer along with prevailing departmental charges (current rate of 30%). BHEL reserve the right not to issue any material. The non-issue of such material will not entitle the Contractor for any compensation whatsoever either in time or in cost.
- 9.9 Material required for the works, whether brought by the Contractor or supplied by BHEL, shall be stored by the Contractor only at places approved by the Engineer. Storage and safe custody of material shall be the responsibility of the contractor.
- 9.10 BHEL's officials concerned with the Contract shall be entitled at any time to inspect and examine any materials intended to be used in or on the works, either on the Site or at factory or workshop or other place(s) where such materials are assembled, fabricated, manufactured or at any place (s) where these are lying or from which these are being obtained and the Contractor shall give such facilities as may be required for such inspection and examination.

TECHNICAL CONDITIONS OF CONTRACT (TCC)

Chapter-IX : Any other Special requirements

9.11 All materials brought to the Site shall become and remain the property of BHEL and shall not be removed off the Site without the prior written approval of the BHEL Engineer. But whenever the Works are finally completed and advance, if any, in respect of any such material is fully recovered, the Contractor shall at his own expense forthwith remove from the Site all surplus material originally supplied by him and upon such removal, the same shall re-vest in and become the property of the Contractor.

TECHNICAL CONDITIONS OF CONTRACT (TCC)

Chapter-X: OTHER REQUIREMENTS

10.0 EXECUTION OF WORK

- 10.1 The work shall be executed in a workman like manner and to the entire satisfaction of the Engineer and as per technical specification issued with tender, IS codes, CPWD specifications as applicable. In case of conflict, the decision of the **BHEL** Engineer shall be final & binding.
- 10.2 The BHEL Engineer will communicate or confirm his instructions to the Contractor in respect of the execution of the work in a "Work Site Order Book" maintained at his office and the Contractor shall visit this office daily and shall confirm receipt of such instructions by signing the relevant entries in this book. Such entries will rank as order or notices in writing within the intent and meaning of these conditions.

11.0 SETTING OUT

- 11.1 All the works shall be set out to the true lines, grades and elevation indicated on the drawing. The contractor shall be responsible to locate and set out the works. Only one grid reference line and bench mark shall be made available for setting out the works under the contract. This reference lines shall be used as datum for the works under the contract and the contractor has to establish for his work area at available points horizontal and vertical control points. The contractor shall inform BHEL well in advance of the times & places at which he wishes to do work in the area allotted to him so that suitable datum points established by him are checked by BHEL / Customer to enable the contractor to proceed with the works. Any work done without being properly located may be removed and / or dismantled by BHEL / Customer at contractor's expenses.
- 11.2 The contractor shall at his own expense take all proper and responsible precautions to preserve and maintain these datum marks to its true position. In the event of these marks being disturbed or obliterated by accident or due to any other cause whatsoever, the same may be deemed necessarily placed by BHEL / Customer at contractor's expenses.

TECHNICAL CONDITIONS OF CONTRACT (TCC)

Chapter-X: OTHER REQUIREMENTS

12.0 SITE DRAINAGE

12.1 All water including sub-soil water which may accumulate on the Site during the progress of the works or in trenches and excavations, including monsoon period shall be removed by the contractor from the Site to the satisfaction of the BHEL Engineer. It will also be responsibility of the contractor to de-water all the foundation pits, trenches with suitable de-watering methods like, pumping out, well point system etc. considering the depth of water table at plant site. All such expenditure on de-watering shall be deemed to be included in quoted rates.

13.0 INSPECTION AND STAGE APPROVAL OF THE WORK

13.1 All work embracing more than one process shall be subject to examination and approval at each stage thereof and the Contractor shall give due notice in writing to the BHEL Engineer when each stage is ready. In default of such notice being received, the BHEL Engineer shall be entitled to approve the quality and extent thereof at any time he may choose and in the event of any dispute, the decision of the BHEL Engineer thereon shall be final and conclusive.

14.0 UNCOVERING AND MAKING GOOD

14.1 The Contractor shall uncover any part of the Works and/or make openings in or through the same as the Engineer may from time to time direct for his verification and shall reinstate and make good such part to the satisfaction of the BHEL Engineer. If any such part has been covered up or put out of view after being approved by the Engineer and is subsequently found on uncovering to be executed in accordance with the Contract, the expenses of uncovering and / or making opening in or through, reinstating and making good the same shall be borne by BHEL. In any other case all such expenses shall be borne by the Contractor.

14.2 If neither drawing nor specification contain any mention of minor details of construction which in the opinion of the BHEL Engineer whose decision shall be final and conclusive, are reasonable and obviously and fairly intended for satisfactory completion of work, such details shall be provided by the contractor without any extra cost, as if they were specially mentioned and shall be deemed to be included in the scope.

TECHNICAL CONDITIONS OF CONTRACT (TCC)

Chapter-X: OTHER REQUIREMENTS

15.0 NUISANCE

15.1 The Contractor shall not at any time do, cause or permit any nuisance on Site or do anything which shall cause unnecessary disturbance or inconvenience to owners, tenants or occupiers of other properties near the Site and to the public generally.

16.0 MATERIAL OBTAINED FROM EXCAVATION

16.1 Materials of any kind obtained from excavation on the Site shall remain the property of BHEL / its client and shall be disposed of as the BHEL Engineer may direct, at no extra cost.

17.0 TREASURE, TROVE, FOSSILS etc.

17.1 All fossils, coins, articles of value or antiquity and structures and other remains or things of geological or archaeological interest discovered on the site shall be the absolute property of BHEL / BHEL's client and the Contractor shall take reasonable precautions to prevent his workmen or any other person from removing or damaging any such article or thing and immediately upon discovery thereof and before removal, acquaint the BHEL Engineer with such discovery and carryout the BHEL Engineer's directions as to the disposal of the same.

18.0 PROTECTION OF WORKS

18.1 Trees designated by the Engineer shall be protected from damage during the course of the Works and earth level within 1 meter of each such tree shall not be charged. Where necessary, such trees shall be protected by providing temporary fencing.

18.2 The contractor shall provide and maintain at his own expense all lights, guards, fencing and watching when and where necessary or required by the BHEL Engineer for the protection of the Works or for the safety and convenience of those employed on the Works or the public.

18.3 The contractor shall have total responsibility for protecting his works till it is finally taken over by the BHEL. No claim will be entertained by the BHEL Engineer for any damage or loss to the contractor's works and the contractor shall be responsible for the complete restoration of the damaged works to its original condition to comply with the specifications and drawings. Should any such damage to the contractor's works

TECHNICAL CONDITIONS OF CONTRACT (TCC)

Chapter-X: OTHER REQUIREMENTS

occur because of other party not under his supervision or control, the contractor shall make his claim directly with the party concerned. The contractor shall not cause any delay in the repair of such damaged works because of any delay in the resolution of such disputes. The contractor shall proceed to repair the work immediately and no cause thereof will be assigned pending resolution of such disputes.

19.0 PROTECTION OF EMBEDMENTS BOLTS ETC.

19.1 The contractor shall ensure proper protection to the satisfaction of the BHEL Engineer, of all bolts, inserts, embedment etc. from weather etc. by greasing, rapping them with gunny bags or canvas or by any other means as directed by BHEL Engineer. Cost of such protections shall be deemed to be included in the rates quoted for the item.

20.0 CLEARANCE OF SITE AND REPAIRS.

20.1 Contractor has to clear the site / area where mechanical and electrical erection work is to be commenced / or in progress. The contractor shall remove construction materials and equipment lying in the vicinity and causing obstruction in the erection work within 24 hrs. notice, In case he fails to clear the site, this will be done at his risk & cost by BHEL.

21.0 QUALITY ASSURANCE

21.1 **The contractor has to establish / arrange at site the field testing facilities for testing of civil construction materials and concrete cubes for ensuring the proper quality, grade and strength of the materials used in the construction in line with approved field quality check list of BHEL/ its client. Contractor has to submit detailed report for testing of all material used etc. All testing shall be done as per IS code specifications/ BHEL's quality plan. If further test is required by the engineer to be carried from outside laboratory, the cost of the same shall be borne by the contractor.**

22.0 COMPLETION OF WORK

22.1 The works shall be completed to the entire satisfaction of the BHEL Engineer and in accordance with the completion schedule as specified in the Contract, and all unused stores and materials, tools, plant, equipment, temporary buildings, site office, labour

TECHNICAL CONDITIONS OF CONTRACT (TCC)

Chapter-X: OTHER REQUIREMENTS

hutments and other things shall be removed and the site and work cleared of rubbish and all waste materials and delivered up clean and tidy to the satisfaction of the BHEL Engineer at the Contractor's expenses.

22.2 BHEL shall have power to take over from the Contractor from time to time such sections of the work as have been completed to the satisfaction of the BHEL Engineer. Such work however shall not be treated as have been completed until the extra works are executed to the satisfaction of BHEL Engineer. The Guarantee period shall commence only after handing over of the entire works.

22.3 The BHEL Engineer shall certify to the contractor the date on which the work is completed and the date thereof.

23.0 METHOD OF MEASUREMENT

23.1 **Method of measurements if not specified in the tender, shall be as per relevant IS Codes / CPWD codes.**

24.0 HSE: The contractor shall comply with following towards Safety and Social Accountability;

24.1 Besides provision with regard to SAFETY under GCC & SCC, the contractor will be responsible for Health, Safety & Environment management at site for the construction activities to be carried out by him in accordance with requirements **given under this document**. The contractor shall continuously take special care to ensure the safety and prevention of human and equipment accidents and maintain good sanitary conditions in and around the site. All the construction work and plant operation must be carried out in the safest possible manner. The BHEL Engineer reserves the right to stop any process which, in the BHEL Engineer's opinion, is being performed dangerously. In this case the contractor must immediately adhere the requisite safety precautions and any delays attributed to the work stoppage on this account shall not affect the agreed contractual finishing dates.

24.2 The contractor shall appoint dedicated full-time Qualified Safety Officers who shall have full authority to ensure that all necessary safety precautions are observed by the Contractor's employees and sub-contractors. These appointees shall have full responsibility for the safety of all personnel within the contractor's area of the works.

24.3 Some of the common safety rules to be followed during working are as follows:-

- Nobody is allowed to enter at construction site without Safety Shoe.
- Never enter work area without Safety helmet & chin strap in place.

TECHNICAL CONDITIONS OF CONTRACT (TCC)

Chapter-X: OTHER REQUIREMENTS

- No climbing/working allowed without proper safety belt above 2 m. height.
- Do not exceed the speed limit 25 Kmph within premises.
- No debris obstacles allowed on the roads & passages.
- Do not walk on pipelines or false ceiling.
- Maintain good Housekeeping at work site.
- No photography/ Videography allowed without permission
- All Site supervisors & engineers (including subcontractor's) must be imparted structured training on construction safety before start of the job & record to be maintained.
- Availability of qualified & trained Site Engineer at site during all working hours.
- Site Safety training to be imparted to all workers & plan to be made to cover every worker.
- Tools box talk (5-15 minutes) by supervisor prior to commencement of any job.
- All accident / incidents(Near Miss) to be reported & investigated.(formats & procedure should be finalized)
- Daily Safety Checking by Each Site Engineer along with Safety engineer.
- Weekly co-ordination meeting of all Safety engineers with BHEL safety officer.
- Monthly safety meeting with Site In-charges.
- All Safety equipment must be ISI marked & checked by Safety officer before use.
- Tag system for erection & use of scaffoldings.
- Bamboo/wooden Scaffolding material not allowed.
- LPG cylinders not allowed for gas cutting.
- Good Housekeeping. Separate waste bins to be used for flammable & non-flammable material.
- Safety awareness programs for workers by display of boards, posters, competitions, talks etc.
- Deployment of Safety Supervisors for every 250 workers and part thereof at work site.
- Display of List of First Aid trained persons.
- Testing certificates for lifting tools & tackle.
- Provision & maintenance of fire extinguishers at construction site & material stores.
- Display of emergency telephone numbers at various locations.
- For work in confined space use 24 V lamp fitting & use tools with air motors or electric tools with max. 24 V.
- For confined space entry Gas test must be done before & at regular intervals.
- Checking & tag of equipment like grinding machine, welding machine, gas cutting set etc. by supervisors before use.

24.4 Contractor shall ensure following:

1. Contractor has to maintain contact with local hospital having scanning & other ultra-modern medical facilities required during emergency including Ambulance.
2. Contractor has to ensure pre-employment medical check for all staff & workers.
3. Contractor has to ensure that adequate First Aid facilities with trained nurse & ambulance are available at work site for emergency purpose. This emergency set-up should include, but not limited to, following
 - Male nurse (in shifts)

TECHNICAL CONDITIONS OF CONTRACT (TCC)

Chapter-X: OTHER REQUIREMENTS

- Oxygen set up
- Breathing apparatus
- Eye wash facility
- Stretcher
- Trauma blanket
- Medicines

In addition to above, BHEL may arrange ambulance at work site for emergency purpose, which can be utilized, free of cost, by contractor in case of emergency. In case, under unavoidable circumstances, if the ambulance is not available/ being used elsewhere, the contractor will have to arrange for the same. as under clause 24.4 SI No. 1.

- 24.5 The Contractor shall be fully responsible for accidents caused due to him or his agents or workmen's negligence or carelessness in regard to the observance of the safety requirements and shall be liable to pay compensation for injuries. **It may be noted that non-compliance to HSE requirements will result in penal action. In case of violations of safety requirements, the Contractor shall be liable for a penalty of Rs. 500/- for the first violation and Rs. 1000/- for the subsequent violations. For serious lapses, as decided by BHEL Engineer, fines of Rs. 5000/- or more at a time can be imposed.**

The amount towards penalties as above will be deducted from running bills of the Contractor. The amount so collected above will be utilized for supporting the safety activities at site. The decision of BHEL on above will be final and binding on the Contractor.

- 24.6 **The contractor shall comply with following towards Social Accountability;**

- (a) The contractor shall not employ any employee less than 15 years of age in pursuant to ILO convention. If any child labour were found to have been engaged , the Contractor shall be levied with expenses of bearing his education expenditure which will include stipend to substantiate appropriate education or employ any other member of family enabling to bear the child education expenditure.
- (b) The contractor shall not engage Forced/Bonded Labour and shall abide by abolition of Bonded Labour System (Abolition) Act, 1976.
- (c) The contractor shall maintain Health & safety requirement as stipulated in the Contract and Contract Labour (Regulation & Abolition) Act 1970.
- (d) The Contractor shall abide by UN convention w.r.t Human Rights and shall be liable for Discrimination / Corporal Punishment for failure in meeting with relevant requirements.
- (e) The Contractor shall abide the requirement of Contract Labour (Regulation & Abolition) Act, 1970 for working hours.
- (f) The Contractor shall abide by the statutory requirement of Minimum Wages Act 1948, payment of Wages Act 1936.
- (g) The Contractor shall arrange potable drinking water to its employees & workers.

25.0 DISCREPANCIES AND ADJUSTMENT OF ERRORS

- 25.1 The several documents forming the Contract are to be taken as mutually explanatory of one another, detailed drawings being followed in preference to small scale drawings and

TECHNICAL CONDITIONS OF CONTRACT (TCC)

Chapter-X: OTHER REQUIREMENTS

figures dimensions in preference to scale and special conditions in preference to general conditions.

25.2 In case of discrepancies between schedules of quantities, the specification and / or the drawings, the following order of preference shall be observed.

- (a) Description in schedule of quantities.
- (b) Technical Conditions of Contract
- (c) Drawings
- (d) Technical Specifications / Standard Specifications
- (e) Special Conditions of Contract
- (f) General conditions of contract

If there are varying or conflicting provisions made in any one document forming part of the contract, the BHEL Engineer shall be the deciding authority with regard to the document.

25.3 Any error in description, quantity in schedule of quantities or any omission therefrom shall not vitiate the contract or release the contractor from the execution of the whole or any part of the works comprised therein according to the drawings and specifications or from any of his obligations under the contract.

26.0 **Modification/ deletion of GCC & SCC clauses:**

- I. Clause No. 4.1.4, 4.1.9 & 4.1.10 of SCC (Consumables & Other Items) shall not be applicable.
- II. Clause No. 4.2.2 of SCC (Obligations in respect of T&Ps and MMEs provided by BHEL) shall not be applicable.
- III. Clause No. 2.12 of GCC (ORC) shall not be applicable.
- IV. Clause No. 2.17 of GCC (PVC) shall not be applicable
- V. Clause No. 2.13 of GCC (Interest bearing recoverable advance) shall not be applicable.
- VI. Clause No. 2.14.1 of GCC modified as: The quoted rates shall remain firm irrespective of any variations in the individual quantities. No compensation becomes payable in case the variation of the final executed contract value is within the limits of Plus (+) or Minus (-) 20% of awarded contract value.

NOTE :---

- 1) WIDTH OF THE STORAGE YARD IS 32M
- 2) TWO 8M MAIN ROADS & SIX 6M BRANCH ROADS
- 3) DRAINS SHALL BE PROVIDED ALONG THE SIDE OF ONE 8M ROAD AND ALSO ALONG THE OUTER SIDES OF THE AREA AS SHOWN.
- 4) ROAD CROSSING CULVERT (RCC HUME PIPE OVER THE DRAIN)
- 5) SECURITY CABINS (3MX3M) - 2 NOS. TO BE LOCATED NEAR THE ENTRY AND EXIT GATES AS SHOWN.
- 6) RAISED CONCRETE PLATFORM (12M WIDE AND 90M LONG - APPROX. 1000 SQM.) TO BE CONSTRUCTED AT SUITABLE LOCATION.
- 7) FOR SECTIONAL DETAILS, REFER RESPECTIVE DRAWINGS.
- 8) 1000 CONCRETE SLEEPERS OF SIZE 1200MMX300MMX150MM.






THIS IS A TYPICAL DRAWING OF 60000 SQ. M. SIZE (300M X 200 M) OPEN YARD FOR REFERENCE ONLY. ACTUAL SHAPE SIZE AND NUMBERS OF OPEN STORAGE YARD MAY VARY AT SITE DEPENDING ON AREA PROVIDED. CONTRACTOR SHALL EXECUTE ALL THE WORKS AS INSTRUCTED BY BHEL ENGINEER FROM TIME TO TIME AS PER BOQ CUM RATE SCHEDULE AND AS PER TENDER SPECIFICATION.



TYPICAL PLAN OF OPEN STORAGE YARD (60,000 SQM AREA)

LAYOUT OF OPEN STORAGE YARD (60,000 SQM.)

LEGEND :

-  DRAIN
-  8M WIDE ROAD
-  CULVERT
-  STORAGE BLOCK
-  SECURITY CABIN

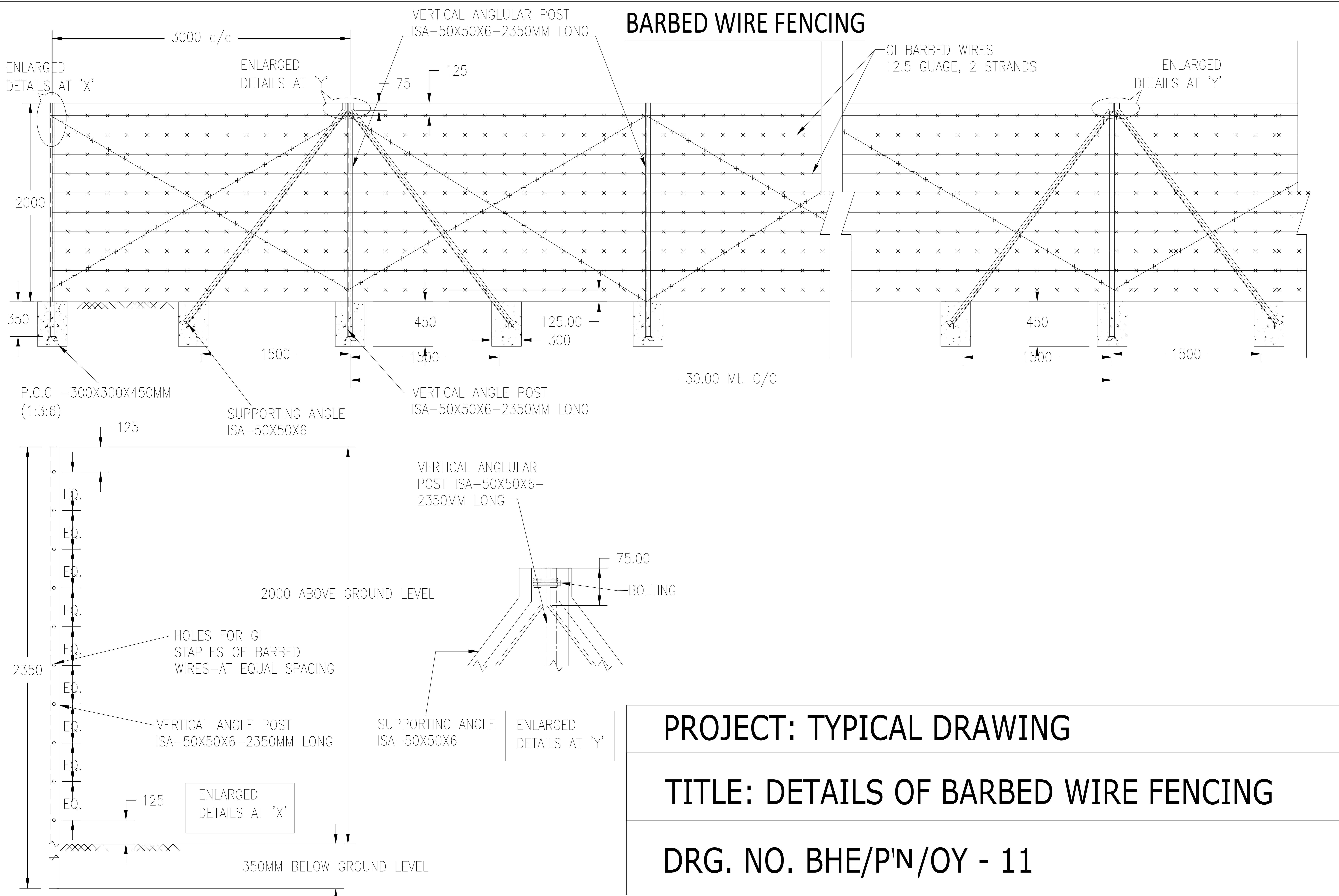
PROJECT:- 1X500 MW FGUTPP (STAGE-IV)

TITLE :- TYPICAL LAYOUT FOR OPEN STORAGE YARD - 60,000 SQM

DRG NO. :- BHE/PN/OY-01

OWNER :-  **BHEL PSNR NOIDA**

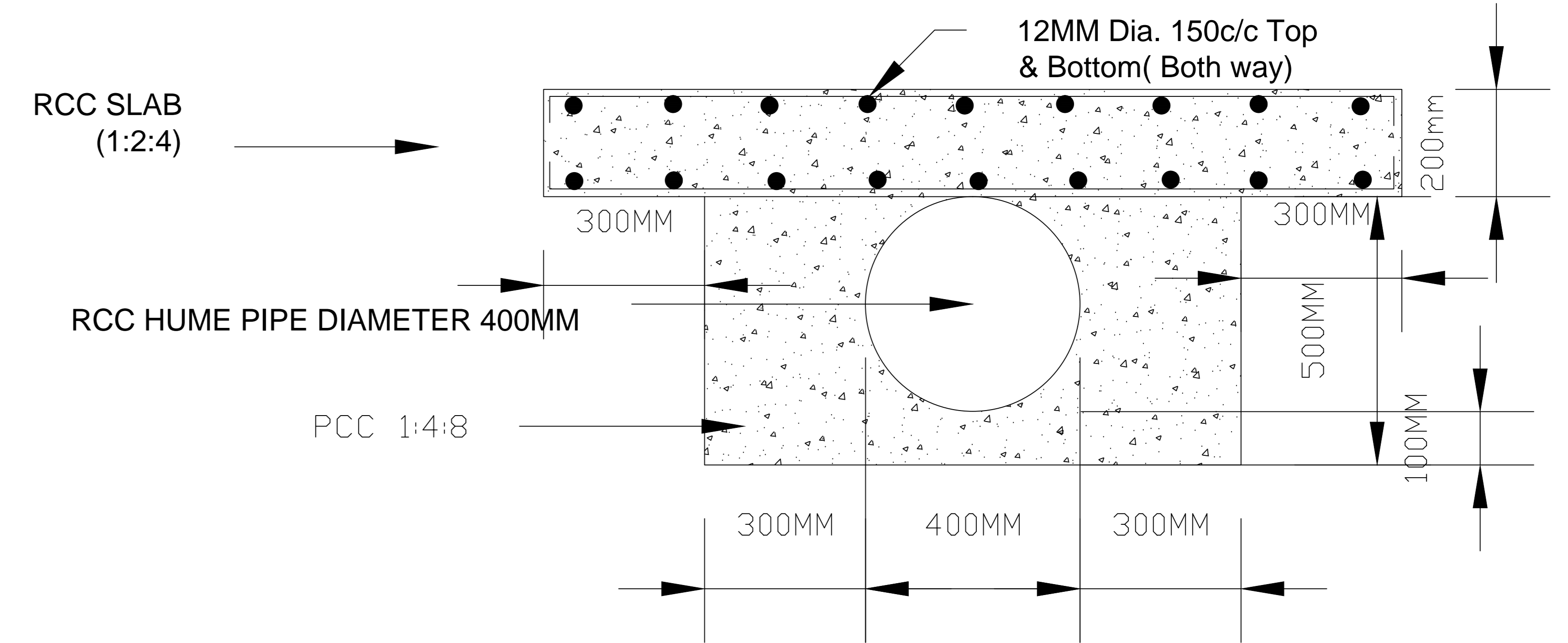
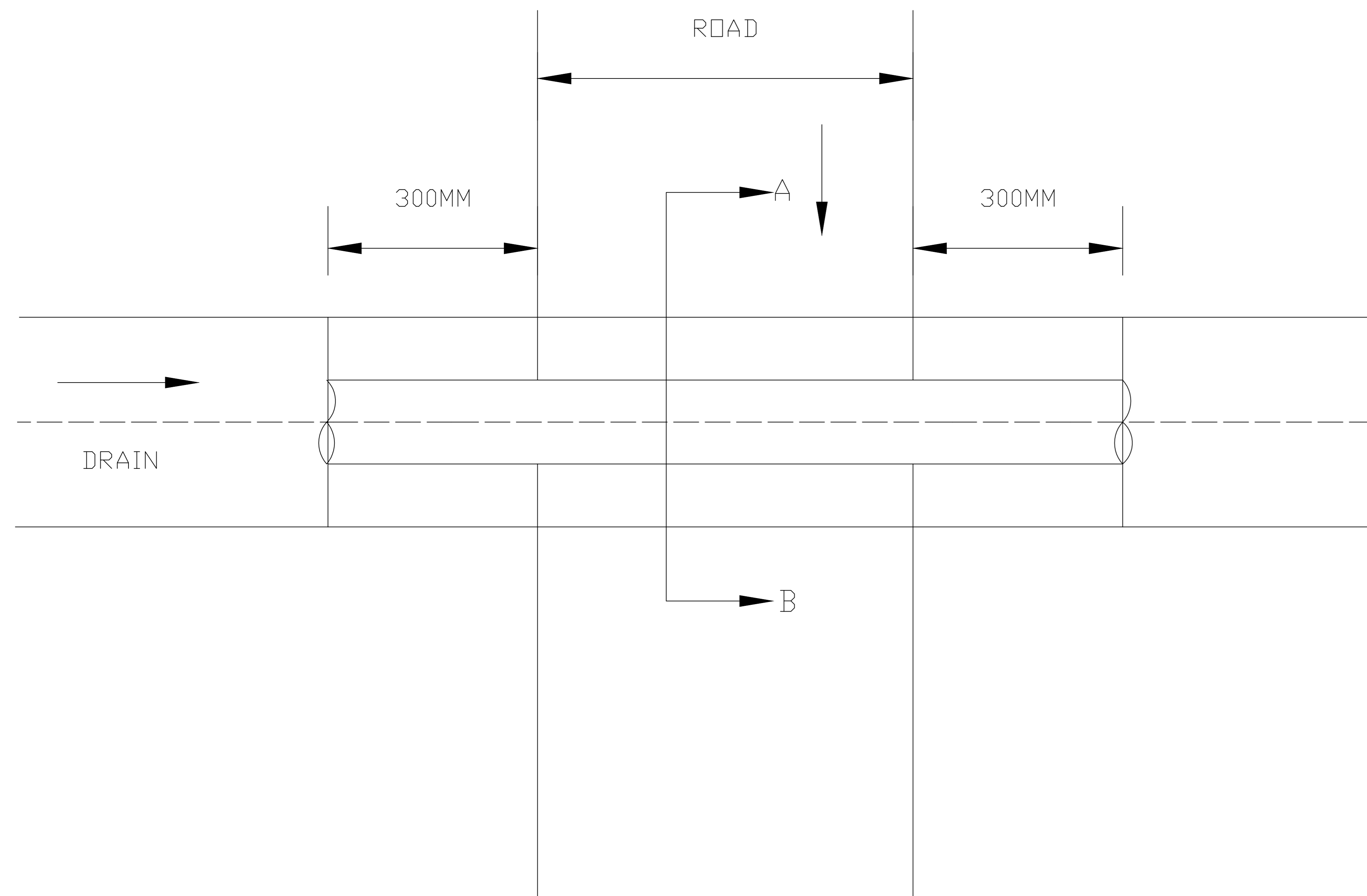
BARBED WIRE FENCING



PROJECT: TYPICAL DRAWING

TITLE: DETAILS OF BARBED WIRE FENCING

DRG. NO. BHE/P'N/OY - 11



CULVERT DETAILS ON SECTION A - B

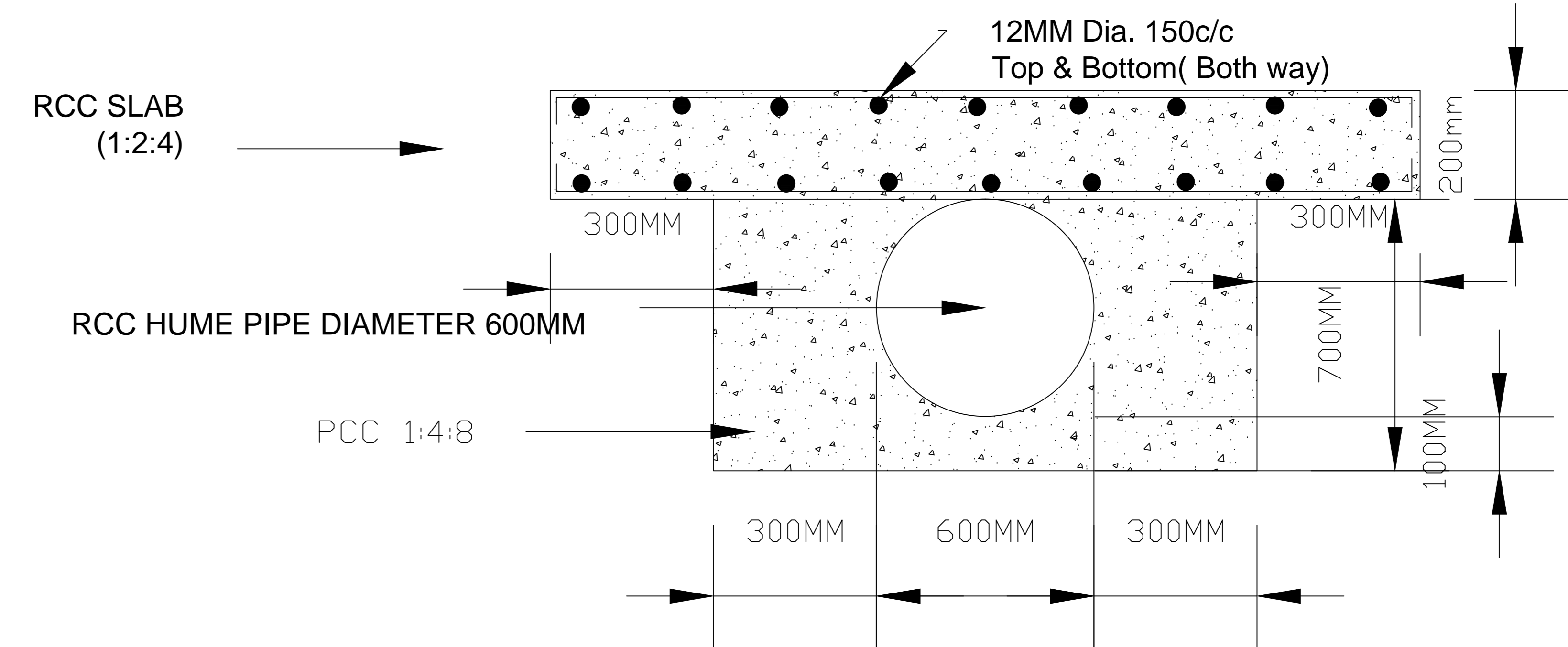
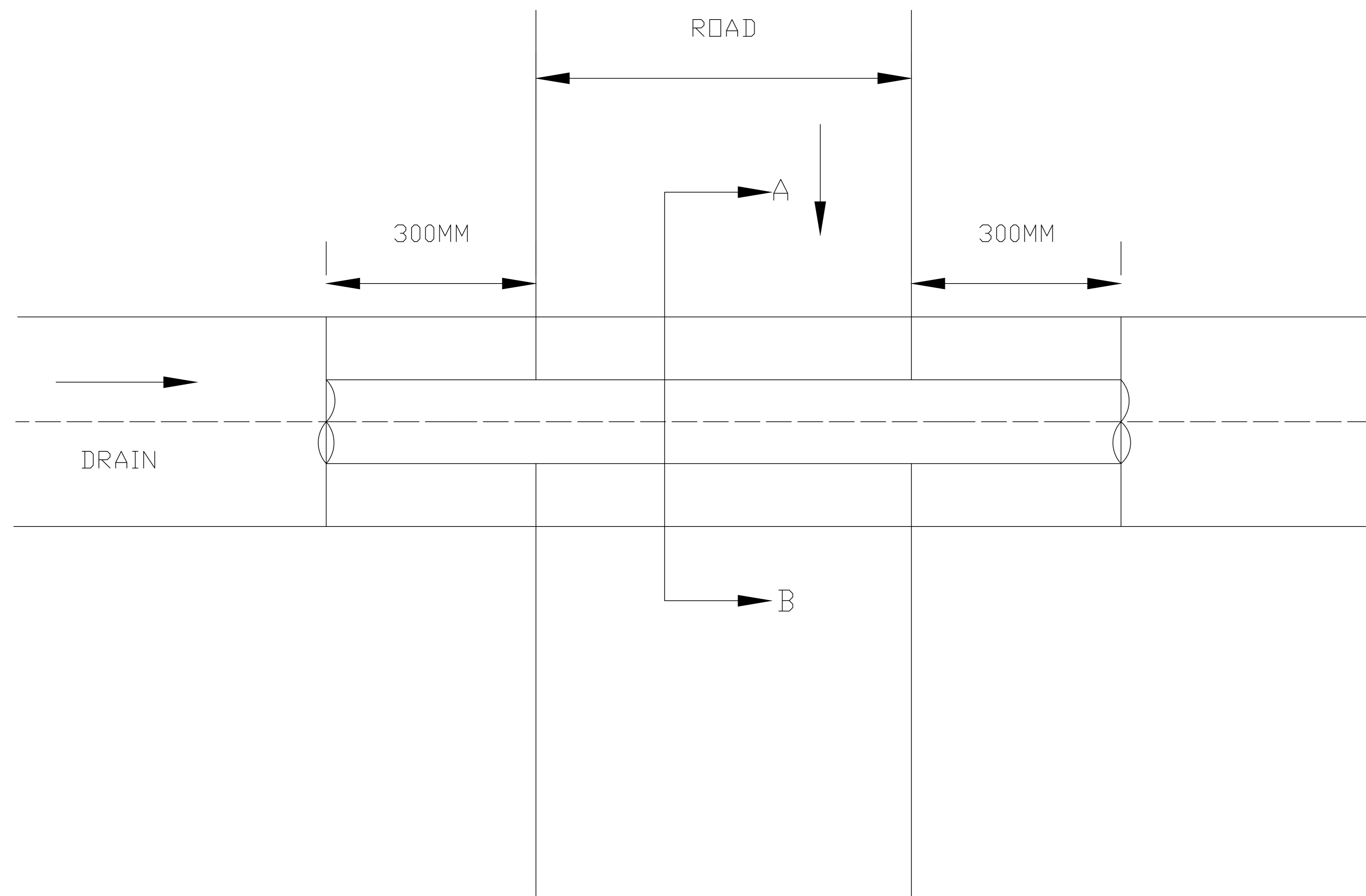
CULVERT DETAILS FOR 400 MM DIA RCC HUME PIPE

PROJECT:- TYPICAL DRAWING

TITLE :- CULVERT DETAILS FOR 400 MM DIA, RCC HUME PIPE

DRG NO. :- BHE/PN/OY-09

OWNER :-  BHEL PSNR - NOIDA



CULVERT DETAILS ON SECTION 'A - B'

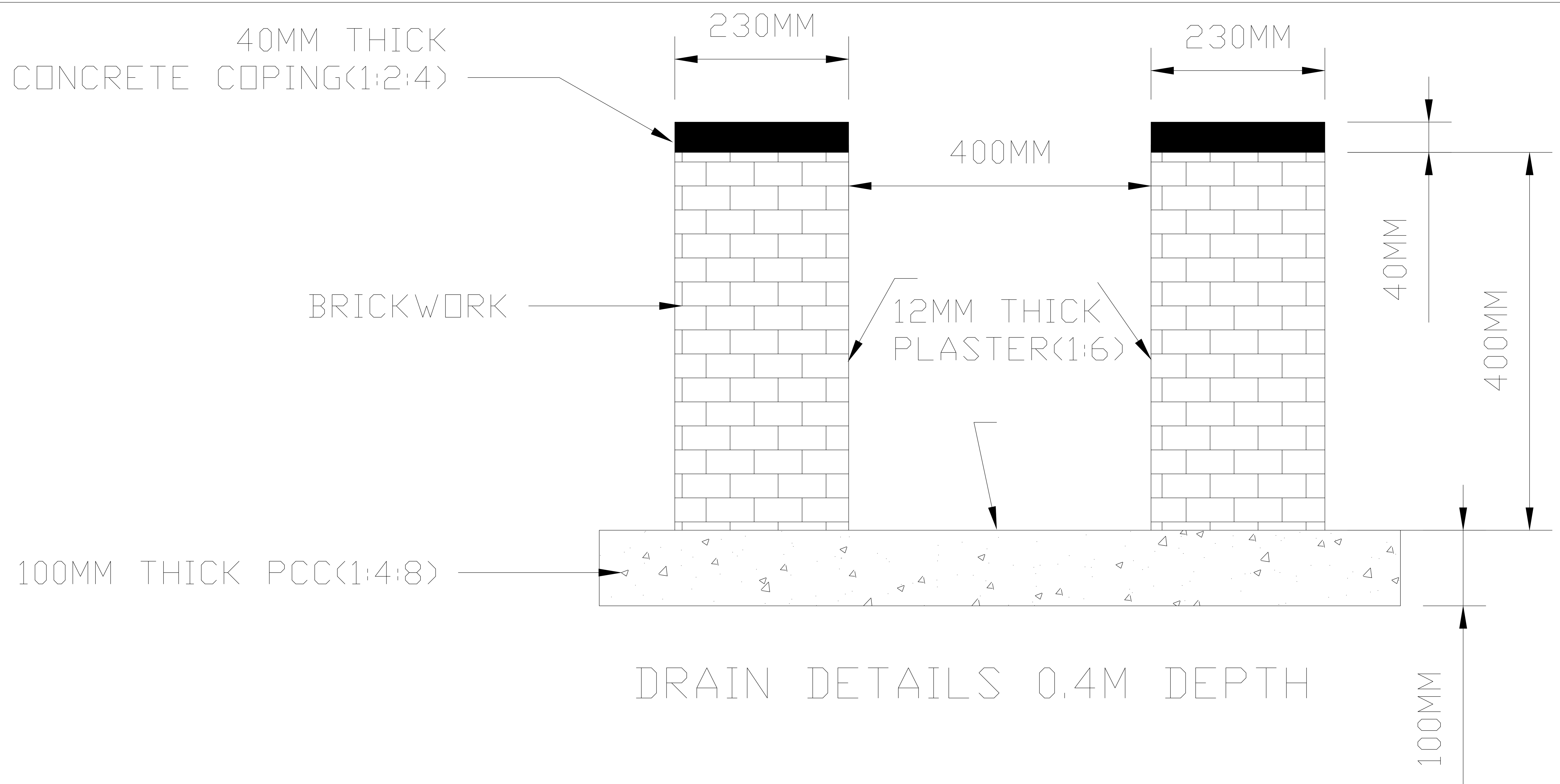
CULVERT DETAILS FOR 600 MM DIA RCC HUME PIPE

PROJECT:- TYPICAL DRAWING

TITLE :- CULVERT DETAILS FOR 600 MM DIA, RCC HUME PIPE

DRG NO. :- BHE/PN/OY-10

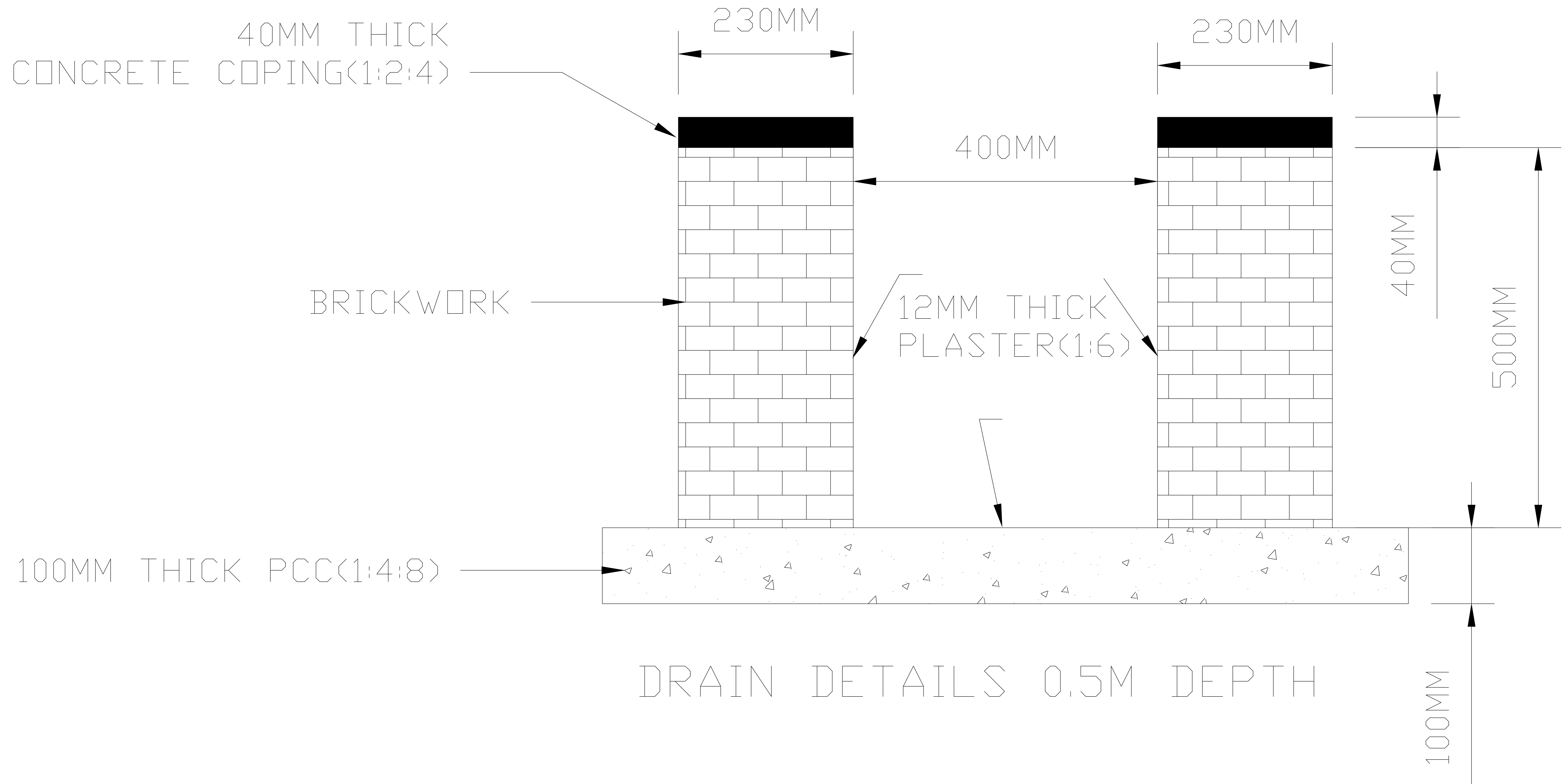
OWNER :-  BHEL PSNR - NOIDA



DRAIN DETAILS 0.4M DEPTH

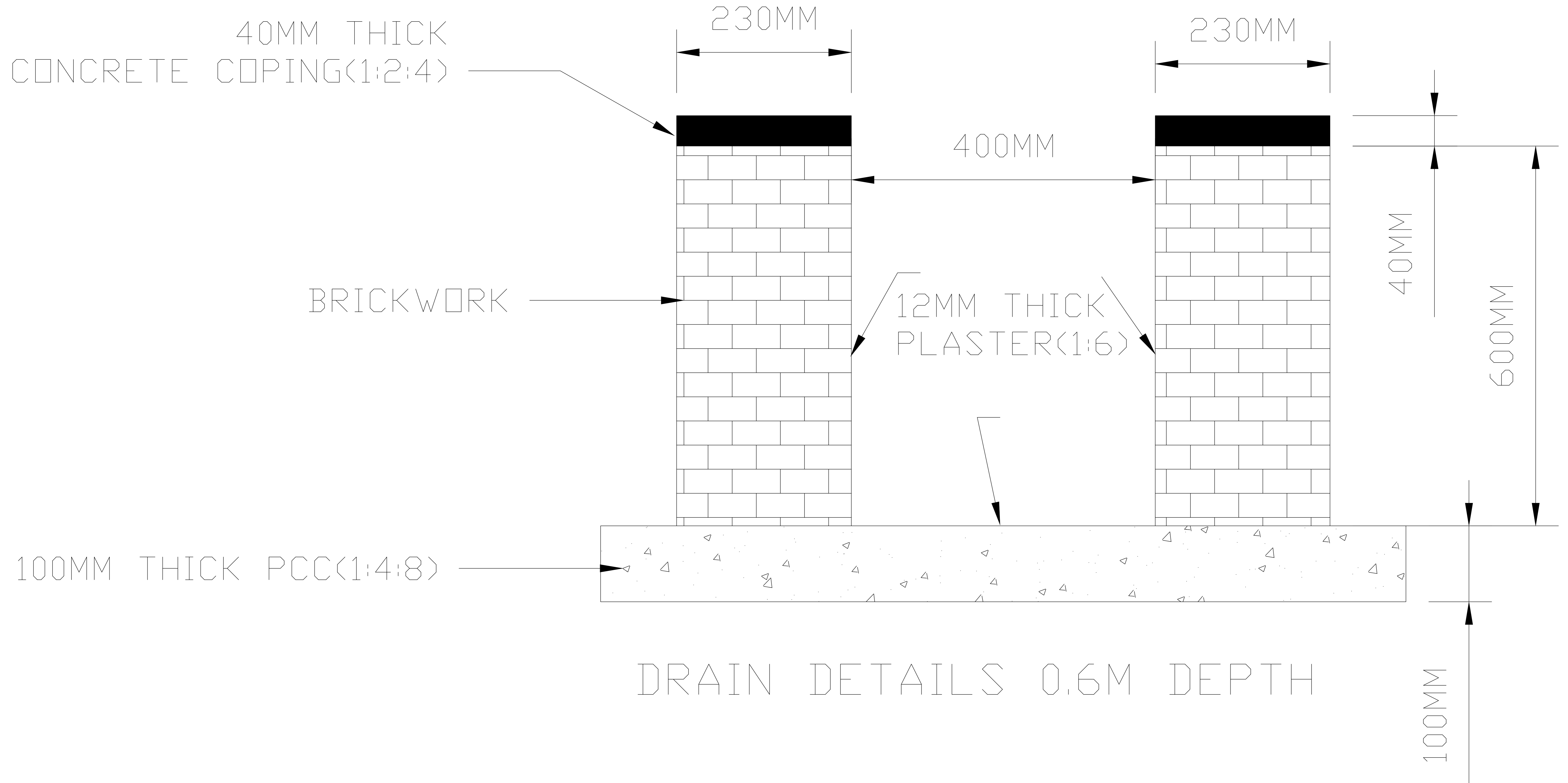
DETAILS OF 0.4M DEPTH DRAIN

PROJECT: TYPICAL DRAWING
TITLE: DETAILS OF 0.4M DEPTH DRAIN
DRG. NO. BHE/PN/OY- 03



DETAILS OF 0.5M DEPTH DRAIN

PROJECT: TYPICAL DRAWING
TITLE: DETAILS OF 0.5M DEPTH DRAIN
DRG. NO. BHE/PN/OY- 04

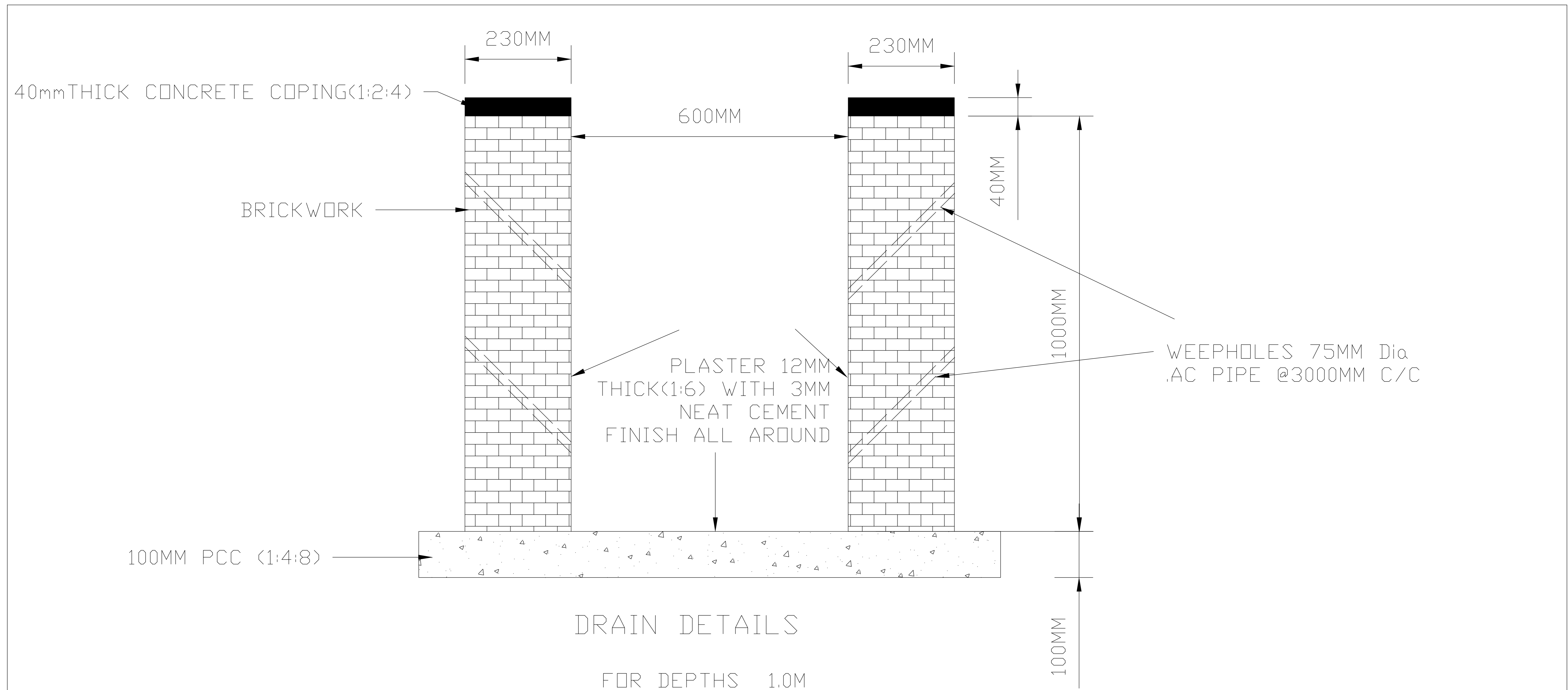


DETAILS OF 0.6M DEPTH DRAIN

PROJECT: TYPICAL DRAWING

TITLE: DETAILS OF 0.6M DEPTH DRAIN

DRG. NO. BHE/PN/OY- 05

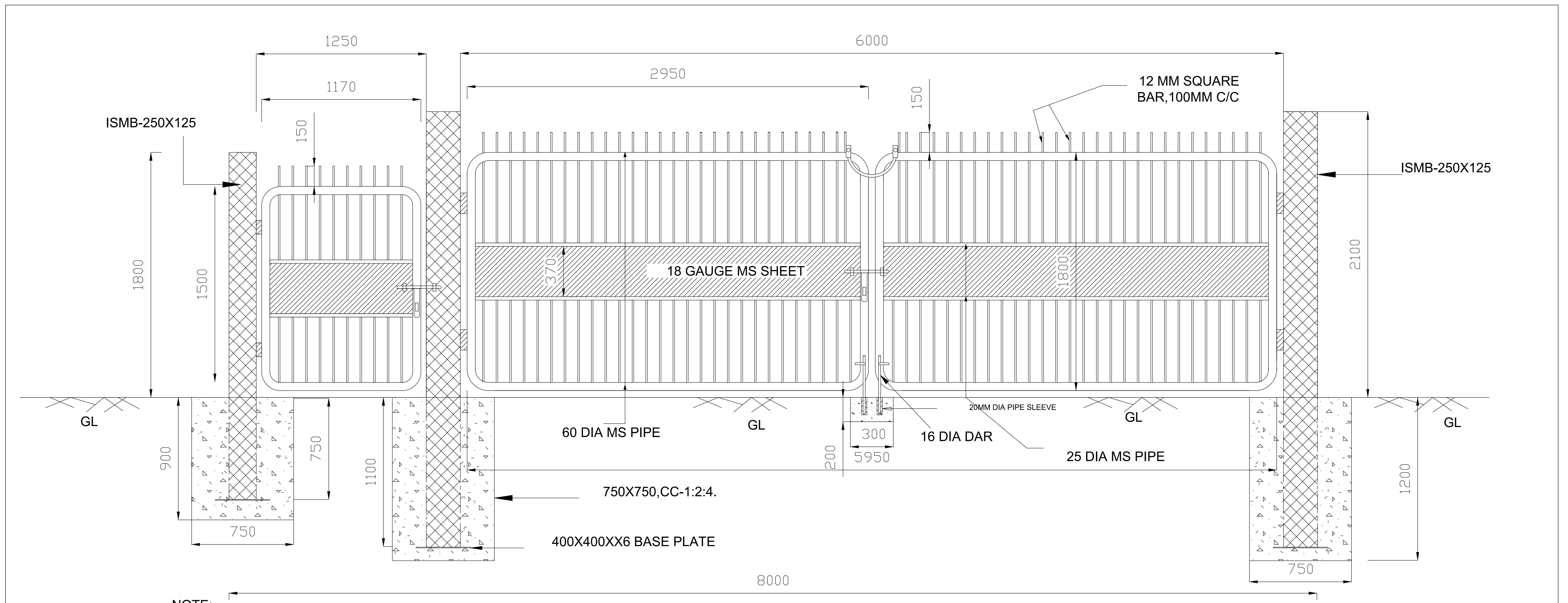


DETAILS OF 1.0M DEPTH WITH 600MM WIDE DRAIN

PROJECT: TYPICAL DRAWING


TITLE: 1.0 M DEPTH DRAIN

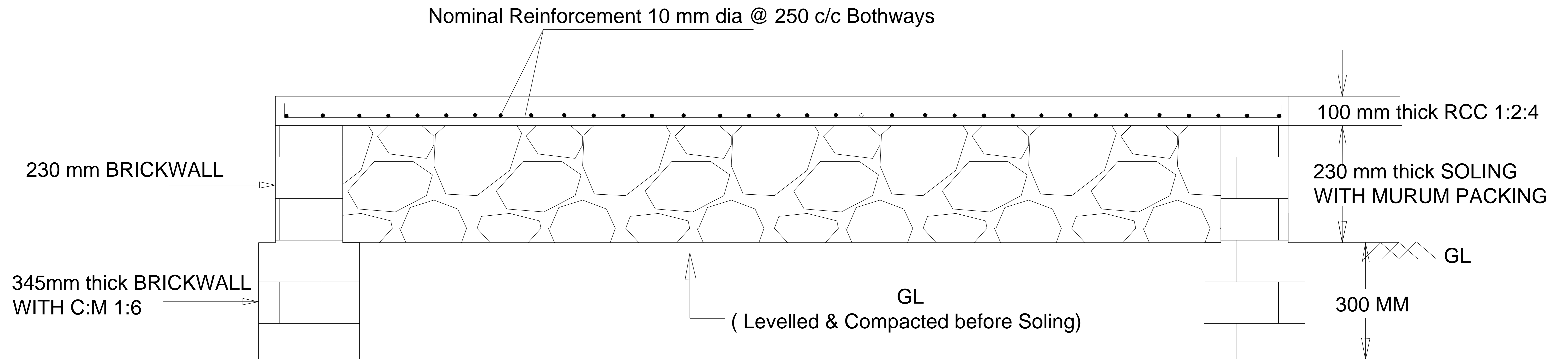
DRG. NO. : BHE/PN/OY-08



- NOTE:
- 1) ALL DIMENSIONS ARE IN 'MM'.
 - 2) CONCRETE FOR POST FOUNDATION-CC-1:2:4.
 - 3) PANEL: 2950 X 1800.
 - 4) GAP BETWEEN EARTH TO PANAL - 100MM.
 - 5) TOTAL WEIGHT OF GATE - 750 KG (APPROX)

PROPOSED MS PIPE GATE

PROJECT:-	TYPICAL DRAWING
TITLE :-	MS PIPE GATE
DRG NO. :-	BHE/PN/GATE
OWNER :-	 BHEL PSNR - NOIDA

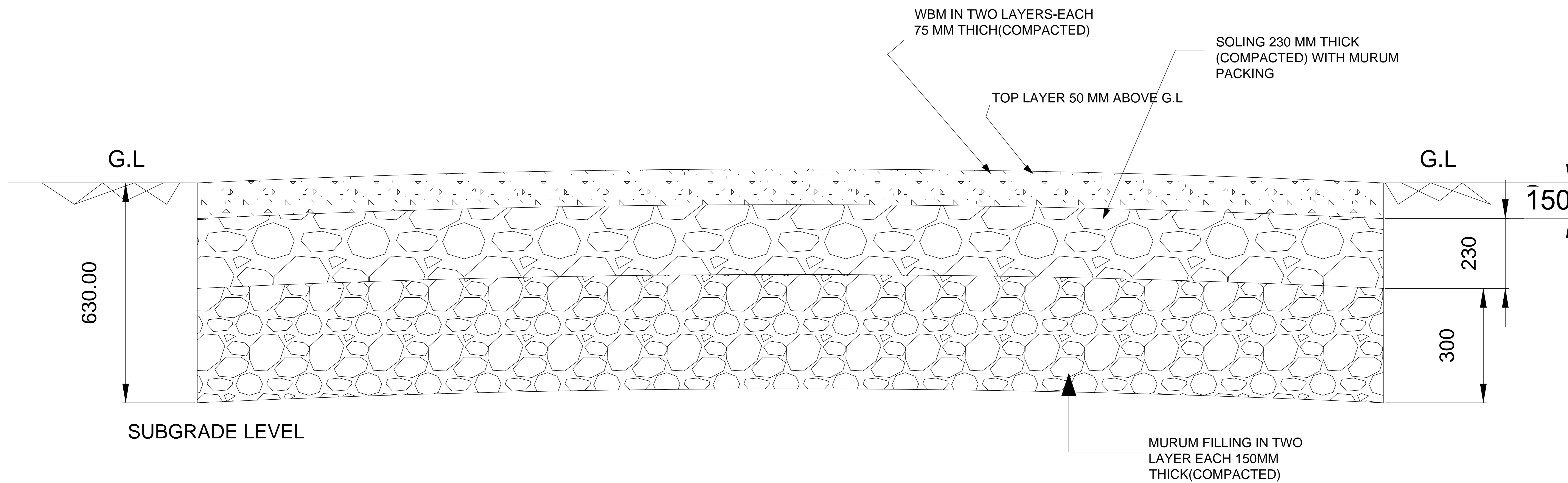


RAISED CONCRETE PLATFORM 12 M WIDE

PROJECT: TYPICAL SECTION

TITLE: RAISED CONCRETE PLATFORM 12M WIDE

DRG. NO. : BHE/PN/OY- 02



SECTIONAL DETAILS OF 6 M WIDTH WBM ROAD

ALL DIMENSIONS ARE IN MM

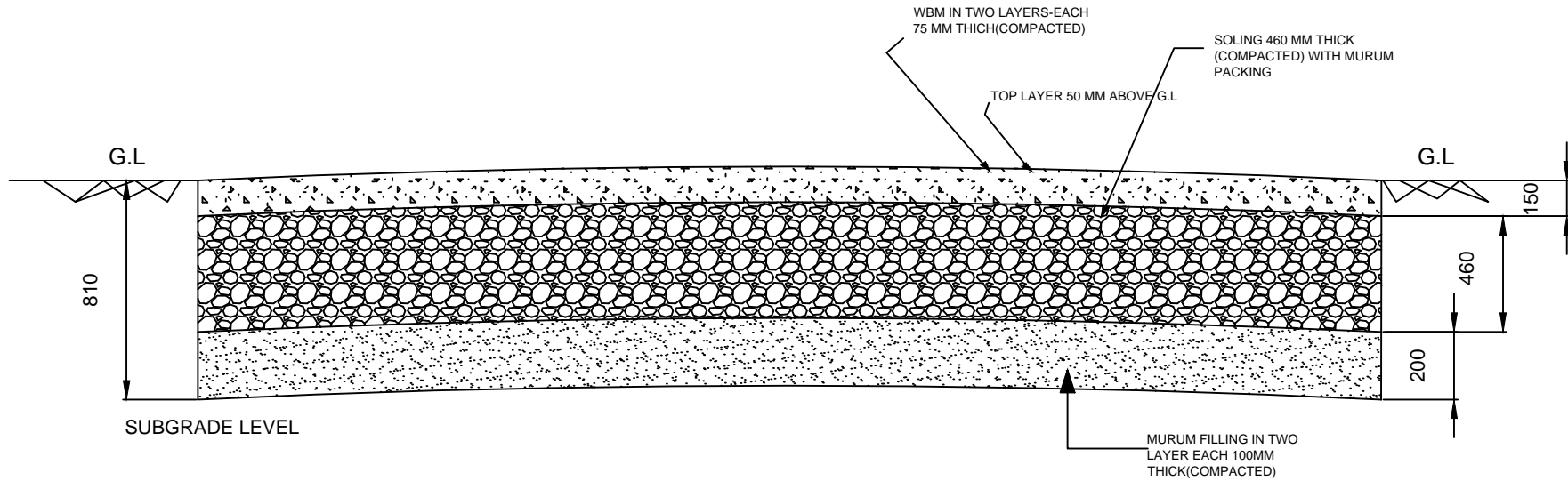
NOTE:

- 1)CAMBER SHALL BE MAINTAINED FROM THE SUBGRADE LEVEL
- 2)IN CASE SOFT/HARD ROCK MAT WITH SUBGRADE IS FOUND THEN 150MM THICK MURUM SHALL BE LAID IN PLACE OF 300 MM THICK MURUM FILLING.

PROJECT: TYPICAL SECTION

TITLE: SECTION OF 6 M WIDTH WBM ROAD

DRG. NO. : BHE/PN/OY- 06



SECTIONAL DETAILS OF 8 M WIDTH WBM ROAD

ALL DIMENSIONS ARE IN MM

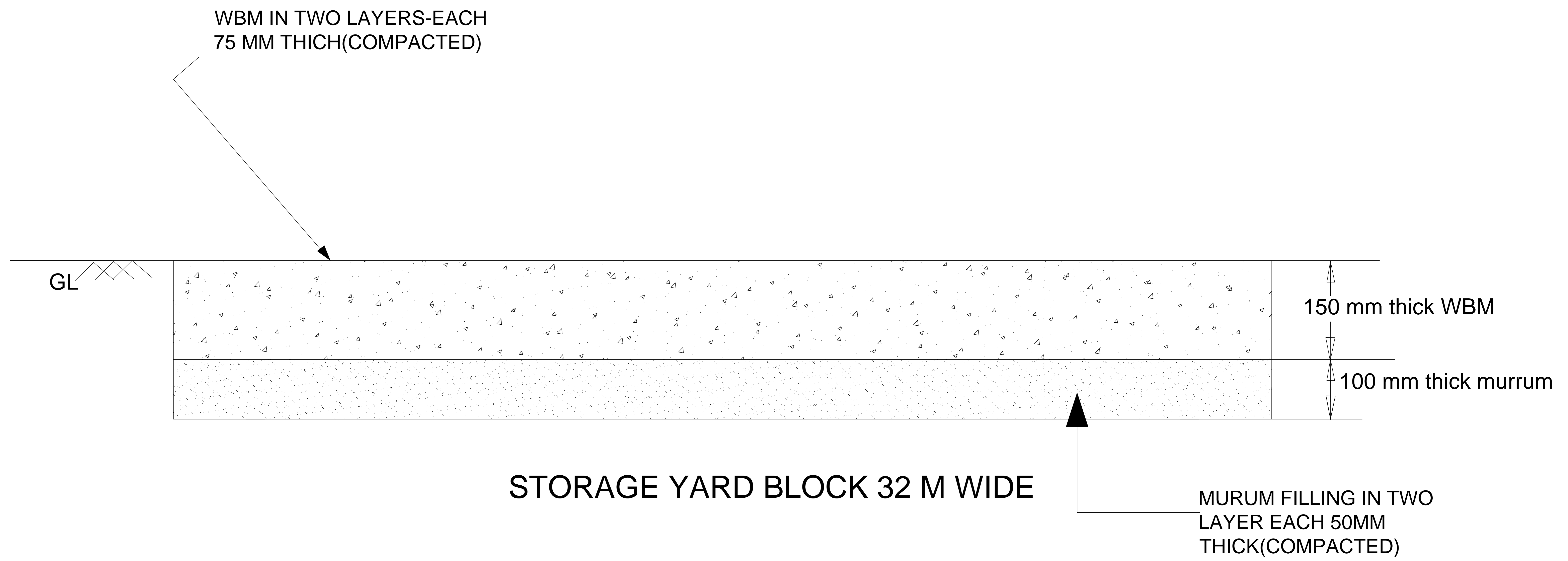
NOTE:

- 1) CAMBER SHALL BE MAINTAINED FROM THE SUBGRADE LEVEL
- 2) IN CASE SOFT/HARD ROCK MAT WITH SUBGRADE IS FOUND THEN 100MM THICK MURUM SHALL BE LAID IN PLACE OF 200 MM THICK MURUM FILLING.

PROJECT: TYPICAL SECTION

TITLE: SECTION OF 8 M WIDTH WBM ROAD

DRG. NO. : BHE/PN/OY- 07



PROJECT: TYPICAL SECTION

TITLE: SECTION OF MONSOON STORAGE YARD BLOCK

DRG. NO. : BHE/PN/OY- 02

BOQ CUM RATE SCHEDULE

SCOPE: Repairing and Remoulding of Existing BHEL Office (Approx. Size 750 SQM), Existing Closed Storage Sheds-06 Nos. (Approx. Size 900 SQM Each), Construction and Development of New Open Storage Yard (Approx. Area 50000 SQM) & New Approach Roads (WBM Roads: Approx. 1600 SQM) around Boiler Area for 1 x 500 MW FGUTPP (Stage-IV) at Unchahar, District Raebareli, Uttar Pradesh, India

PART 1: Construction and Development of New Open Storage Yard (Approx. Area 50000 SQM) & New Approach Roads (WBM Roads: Approx. 1600 SQM) around Boiler Area, Providing and Installing New Office Furniture, Furnishing, including Air Conditioners

SECTION	SL.NO	ITEM CODE	DESCRIPTION OF WORK	UNIT	QTY.	RATE (Rs.)	AMOUNT (Rs.)
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BOQ CUM RATE SCHEDULE, SECTION - A

NAME OF WORK- CIVIL WORKS FOR CONSTRUCTION AND DEVELOPMENT OF NEW OPEN STORAGE YARD (Approx. 50,000 SQM) & NEW APPROACH ROADS (WBM RADS: Approx. 1600 SQM) FOR 1X500 MW FGUTPP UNCHAHAR

Sec. A	1	C1	SUB GRADE PREPARATION: CUTTING & DISPOSAL OF GRASS, VEGETATIONS, BUSHES, TREES (GIRTH LESS 300MM), LEVELLING, WATERING AND CONSOLIDATION (90% OF PROCTOR DENSITY) BY MEANS OF 10-12 MT CAPACITY POWER/VIBRO ROLLER FOR SUB BASE PREPARATION. THIS WILL INCLUDE AVERAGE CUTTING & FILLING UP TO ± 250MM THICK, GRADING THE AREA WITH PROPER SLOPE FOR DRAINING OUT THE RAIN WATER WITH ALL T&P, LABOURS, MATERIALS, DEWATERING (IF REQUIRED) ETC. COMPLETE. FOR DEVELOPMENT OF OPEN STORAGE YARD.	SQM	50000		
Sec. A	2	C2	BACK FILLING IN LAYERS NOT EXCEEDING 15 CM THICKNESS FOR LOW LYING AREA OF OPEN STORAGE YARD WHEREVER REQUIRED TO BE DEVELOPED INCLUDING WATERING AND CONSOLIDATING, ROYALTY ETC. COMPLETE AS PER STANDARD SPECIFICATION AND INSTRUCTED BY BHEL ENGINEER.				
	3	A	WITH GOOD AVAILABLE EARTH FROM EXCAVATION WORK	CUM	5277		
Sec. A	4	C3	EXCAVATION /CUTTING OF EARTH BEYOND INITIAL 250MM THICK WHICH IS COVERED UNDER ITEM NO.(C1) ABOVE IF REQUIRED AND SPREADING THE SAME IN LOW LYING AREA, WATERING, COMPACTION BY MEANS OF 10-12 MT CAPACITY POWER/VIBRO ROLLER FOR DEVELOPMENT OF OPEN STORAGE YARD AS PER INSTRUCTION OF BHEL ENGINEER.	CUM	1250		
Sec. A	5	C4	EXCAVATION FOR ROADWAY IN ALL TYPES OF SOILS, SAND AND GRAVEL OR SOFT MURAM INCLUDING DRESSING OF SECTION TO THE REQUIRED GRADE, CAMBER & SIDE SLOPES AND SPREADING OF SURPLUS EXCAVATED EARTH UNIFORMLY OVER THE SPECIFIED AREA FOR SITE LEVELING & DEVELOPMENT OF REQUIRED DEPTH TO MAINTAIN UNIFORM GROUND LEVEL AS DIRECTED BY THE BHEL & CONSOLIDATION OF THE SURFACE INCLUDING SUB- BASE BY ROLLING THE SURFACE WITH 8 - 10 MT CAPACITY POWER/VIBRO ROLLER, DEWATERING (BOTH GROUND WATER AS WELL AS RAIN WATER) AND KEEP THE AREA DRY TILL COMPLETION OF ALL THE WORKS, LABOURS, MATERIALS AND REQUIRED T&Ps ETC. COMPLETE.AS PER DRAWINGS & SPECIFICATIONS.	CUM	10968		
Sec. A	6	C5	EXCAVATION FOR SIDE DRAIN/DRAINS AND CULVERTS IN ALL KINDS OF SOILS, TO THE SPECIFIED SECTION AS PER DRAWINGS & SPECIFICATIONS. INCLUDING SPREADING OF SURPLUS EXCAVATED EARTH UNIFORMLY OVER THE SPECIFIED AREA FOR SITE LEVELING & DEVELOPMENT OF REQUIRED DEPTH TO MAINTAIN UNIFORM GROUND LEVEL , DEWATERING (BOTH GROUND WATER AS WELL AS RAIN WATER) AND KEEP THE AREA DRY TILL COMPLETION OF ALL THE WORKS, LABOURS, MATERIALS AND REQUIRED T&Ps ETC. COMPLETE. DIRECTED BY THE BHEL ENGINEER.				
Sec. A	7	A	IN ORDINARY SOIL	CUM	1200		
Sec. A	8	C6	BACK FILLING THE SIDES OF DRAINS, CULVERTS WITH GOOD EXCAVATED SOIL AVAILABLE FROM WORK IN LAYERS NOT EXCEEDING 15 CM THICKNESS INCLUDING WATERING AND CONSOLIDATING ETC. COMPLETE AS PER STANDARD SPECIFICATION AND INSTRUCTED BY BHEL ENGINEER.	CUM	188		
Sec. A	9	C7	DISPOSAL OF EXCAVATED EARTH/ROCK (NOT SUITABLE FOR BACK FILLING) UPTO A MAXIMUM LEAD OF 3 KM OR PART THEREOF INCLUDING LOADING,UNLOADING ,CONVEYING AND SPREADING AS PER DIRECTION OF ENGINEER INCHARGE.AS PER STANDARD SPECIFICATION AND INSTRUCTED BY BHEL ENGINEER.	CUM	5277		
Sec. A	10	C8	PROVIDING & FILLING OF COMPACTED THICK GRANULAR MURUM IN LAYERS (THICKNESS OF EACH LAYER SHOULD NOT EXCEED 150MM) IN SUB-BASE OF ROAD BELOW SOLING, YARD DEVELOPMENT ETC.COMPLETE INCLUDING WATERING AND COMPACTION WITH 8-10 T POWER ROLLER COMPLETE. RATE SHALL INCLUDE TRANSPORTATION, ROYALTY, DEWATERING (BOTH GROUND WATER AS WELL AS RAIN WATER) AND KEEP THE AREA DRY TILL COMPLETION OF ALL THE WORKS, LABOURS, MATERIALS AND REQUIRED T&Ps ETC. COMPLETE	CUM	4773		
Sec. A	11	C9	PROVIDING AND LAYING SOLING 230 MM COMPACTED THICK WITH 150 -200 MM THICK BOULDER SIZE AND FILLING OF VOIDS WITH HAND BROKEN METAL OF SIZE 40-60 MM , SPREADING & PACKING MURRUM , ROLLING AND COMPACTION INCLUDING WATERING, WITH 8 - 10 MT CAPACITY ROAD ROLLER.	CUM	4675		

Sec. A	12	C10	PROVIDING COMPACTED THICK WATER BOUND MACADAM (WBM) IN TWO LAYERS OF EACH 75 MM, WITH 40MM TO 60MM METAL (STONE AGGREGATE) INCLUDING SUPPLYING AND SPREADING GRAVEL/MURRUM OVER THE SOLING/CONSOLIDATED BASE, COMPACTING THE SAME WITH POWER ROLLER INCLUDING NECESSARY LABOUR, WATERING, MATERIALS ETC. COMPLETE, ALL AS PER RELEVANT SPECIFICATIONS AND DIRECTIONS OF BHEL ENGINEER (RATE SHALL BE INCLUSIVE OF ALL LABOUR, MATERIALS ETC., COMPLETE).	CUM	3395		
Sec. A	13	C11	PROVIDING AND LAYING OF PLAIN CEMENT CONCRETE OF MIX 1:4:8 USING 20MM & DOWN SIZE HARD BROKEN GRANITE STONE JELLY FOR DRAINS, CULVERTS ETC. INCLUDING SHUTTERING, CURING, CONSOLIDATION ETC. COMPLETE AS PER STANDARD SPECIFICATIONS AND AS DIRECTED BY BHEL ENGINEER.	CUM	183		
Sec. A	14	C12	PROVIDING AND LAYING OF RCC OF MIX 1:2:4 USING 20MM DOWN SIZE HARD BROKEN GRANITE STONE AGGREGATE FOR RCC SLAB OF CULVERT, RCC COPING OVER BRICK WALL OF DRAIN INCLUDING MECHANICAL MIXING, VIBRATION, CURING, FORM WORK AND CENTERING AS PER DRAWING AND SPECIFICATION AND AS DIRECTED BY BHEL ENGINEER	CUM	33		
Sec. A	15	C13	PROVIDING AND FIXING OF REINFORCEMENT INCLUDING CUTTING, BENDING AND FABRICATION OF REINFORCEMENT USING HIGH TENSILE TOR STEEL (Fe-415) AS PER DRAWING AND SPECIFICATION AND AS DIRECTED BY BHEL ENGINEER INCLUDING COST OF ALL LEADS, LIFT AND MATERIALS, LABOUR AND MS BINDING WIRE 18/20 GAUGE ETC. COMPLETE.	MT	3		
Sec. A	16	C14	PROVIDING BRICK WORK IN CM 1:6 (1 CEMENT & 6 COARSE SAND) USING OPC GRADE 43/53 OR EQUIVALENT PPC WITH LOCALLY AVAILABLE BURNT CLAY BRICKS (MIN STRENGTH 35 KG/CM ²) AS PER DRAWING AND SPECIFICATION FOR DRAINS, CULVERTS AND WHERE REQUIRED INCLUDING COST OF ALL MATERIALS, LABOUR, SCAFFOLDING, CURING , AT ALL ELEVATIONS AND LEVELS , RAKING OUT JOINTS ETC. COMPLETE AND AS DIRECTED BY ENGINEER .	CUM	239		
Sec. A	17	C15	PROVIDING BRICK WORK IN CM 1:6 (1 CEMENT & 6 COARSE SAND) USING OPC GRADE 43/53 OR EQUIVALENT PPC WITH FLY ASH LIME BRICKS (FAL - MIN STRENGTH 35 KG/CM ²) AS PER DRAWING AND SPECIFICATION FOR DRAINS, CULVERTS AND WHERE REQUIRED INCLUDING COST OF ALL MATERIALS, LABOUR, SCAFFOLDING, CURING , AT ALL ELEVATIONS AND LEVELS , RAKING OUT JOINTS ETC. COMPLETE AND AS DIRECTED BY ENGINEER .	CUM	159		
Sec. A	18	C16	PROVIDING AND PLASTERING WITH CEMENT MORTAR 1:6 (12MM THICK) OVER BOTH INTERNAL AND EXTERNAL FACES OF BRICKWORK AND CONCRETE SURFACES ETC. OF ALL HEIGHTS INCLUDING PREPARING THE SURFACE, RAKING JOINTS, SCAFFOLDING, CURING, COST OF ALL MATERIALS, LABOUR ETC. COMPLETE.	SQM	2344		
Sec. A	19	C17	40MM THICK COPING OVER THE DRAIN WALL TOP USING MIX - 1:2:4	CUM	23		
Sec. A	20	C18	PROVIDING 2 MM THICK NEAT CEMENT FINISH OVER CONCRETE BASE FOR FLOORING PAVING AND INTERNAL SURFACE OF BRICK DRAINS ETC.	SQM	2344		
Sec. A	21	C19	PROVIDING & FIXING OF WEEP HOLES WITH 75MM DIA. uPVC / AC PIPES AT 3M C/C ON BOTH SIDES OF DRAIN WALL WITH FILTER MEDIA USING 40MM SIZE STONE GRIT OF SIZE (300X300X300MM).	RM	280		
Sec. A	22	C20	SUPPLYING & FIXING IN POSITION OF RCC HUME PIPE OF NP2 WHEREVER DRAIN CROSSES THE ROADS INCLUDING ALIGNING, LEVELLING ETC. COMPLETE AS PER THE DIRECTION OF ENGINEER. INCLUDING P.C. & INCLUDING COLLAR JOINTS, ENCASMENT WITH CONCRETE 1:3:6 OF 300 MM DIA , ENCASING SHALL BE PAID EXTRA UNDER RESPECTIVE ITEMS OF CONCRETE..				
Sec. A	23	A	400MM DIA	RM	60		
Sec. A	24	B	600MM DIA	RM	36		
Sec. A	25	C21	PROVIDING AND FIXING BARBED WIRE FENCING AROUND OPEN STORAGE YARD AS PER BHEL DRAWING. POSTS SHALL BE SPACED AT 3M CENTRES AND STRUTS AT 30M CENTRES AND AT ALL TURNINGS WITH FOUNDATIONS, SUPPLYING AND FIXING GI BARBED WIRES, 10 HORIZONTAL LINES, TWO DIAGONALS BETWEEN POSTS BY MEANS OF GI STAPLES AS PER STANDARD PRACTICE. THE BARBED WIRE SHALL CONFORM TO IS 278 AND BE MADE OF TWO STRANDS OF GALVANISED TWISTED 2.5MM DIA (12.5 GAUGE) STEEL WIRE WITH FOUR POINT BARS. RATE QUOTED SHALL BE INCLUSIVE OF EXCAVATION, DISPOSAL OF SURPLUS EARTH, CONCRETE (1:3:6), FORM WORK AND ALL MATERIALS, COST OF POSTS, BARBED WIRES, TRANSPORTING, FIXING IN POSITION ETC. INCLUDING COST OF ALL LABOUR AND TWO COATS OF ENAMEL PAINT OF APPROVED SHADE WITH A SHOP COAT OF PRIMER IN ALL STRUCTURAL MEMBERS ETC COMPLETE.	RM	875		
Sec. A	26	C22	REMOVAL OF WILD GROWTH, BUSHES VEGETATIONS AND DISPOSAL AS PER INSTRUCTION WITHIN THE PLANT BOUNDARY (SIZE OF STEM FROM 150MM TO 600MM DIA.)	NOS	83		

Sec. A	27	C23	SUPPLY FABRICATION, AND FIXING IN POSITION OF MS GATES WITH STRUCTURAL/TUBULAR STEEL FRAMES AS PER BHEL DRAWING INCLUDING COST OF FOUNDATION & POSTS, PAINTING TWO COATS BY SYNTHETIC ENAMEL PAINT OF APPROVED COLOUR AND QUALITY OVER ONE COAT OF RED OXIDE PRIMER, COST OF ALL MATERIALS, LABOUR, TRANSPORT ETC. COMPLETE.	MT	3		
Sec. A	28	C24	SUPPLYING AT SITE OF WORK, TRENCHING, CARRYING TO TRENCHES AND LOWERING INTO TRENCHES AND ON WALLS, FLOORS ETC., LAYING TO PROPER ALIGNMENT, GRADE, LEVEL AND JOINTING WITH ALL NECESSARY SPECIALS, TEES, ELBOWS, UNIONS AND APPURTENANCES AND INCLUDING PRESSURE TESTING OF THE FOLLOWING SIZES OF GI PIPE LINES INCLUDING REFILLING OF TRENCHES WITH EXCAVATED EARTH IN LAYERS, WATERING AND RAMMING AND RESTORATION OF GROUND, ALL COMPLETE AS PER SPECIFICATIONS. RATE TO INCLUDE EARTH WORK EXCAVATION IN ALL SOILS, EXCEPT HARD ROCK REQUIRING BLASTING, SHORING, BALLING OR PUMPING OUT OF WATER WHEREVER REQUIRED, REMOVAL OF SLUSH ETC. REMOVING AND DEPOSITING SURPLUS EARTH AS DIRECTED BY THE BHEL ENGINEER INCLUDING ALL LEADS AND LIFTS AS PER SITE CONDITIONS.				
Sec. A	29	A	40MM DIA GI PIPE LINE WITH ALL SPECIALS	RM	83		
Sec. A	30	B	25MM DIA GI PIPE LINE WITH ALL SPECIALS	RM	25		
Sec. A	31	C25	PROVIDING PRECAST REINFORCED CONCRETE SLEEPER OF SIZE 300MM WIDE X 150MM DEPTH X 1200MM LENGTH USING 1:2:4 CONCRETE MIX INCLUDING PROVIDING AND FIXING OF TRANSPORTATION HOOKS OF 10 MM DIA BARS (2 NOS. TO EACH SLEEPER, MIN. 150 MM CLEAR LENGTH), MOULDING AND REINFORCEMENT (2-10 MM DIA T&B AND 10 MM STIRRUPS @ C/C 250MM).	NOS	2345		
Sec. A	CONSTRUCTION OF RAISED CONCRETE PLATFORM OF 1600 SQM						
Sec. A	32	C26	EARTH WORK EXCAVATION FROM 0 (ZERO) TO 2 M DEPTH IN ALL KINDS OF SOIL (EXCEPT HARD ROCK AND SOFT ROCK) FOR RAISED CONCRETE PLATFORM ETC., SPREADING OF SURPLUS EXCAVATED EARTH UNIFORMLY OVER THE SPECIFIED AREA FOR SITE LEVELING & DEVELOPMENT OF REQUIRED DEPTH TO MAINTAIN UNIFORM GROUND LEVEL WITH PROPER COMPACTION AROUND THE RAISED CONCRETE PLATFORM & OTHER AREAS ETC. AS DIRECTED BY BHEL ENGINEER AND INCLUDING DEWATERING WITH ALL T&P, LABOURS, MATERIALS ETC. COMPLETE.	CUM	8		
Sec. A	33	C27	PROVIDING BRICK WORK IN CM 1:6 (1 CEMENT & 6 COARSE SAND) USING OPC GRADE 43/53 OR EQUIVALENT PPC WITH LOCALLY AVAILABLE BURNT CLAY BRICKS (MIN STRENGTH 35 KG/CM ²) AS PER DRAWING AND SPECIFICATION FOR DRAINS, CULVERTS AND WHERE REQUIRED INCLUDING COST OF ALL MATERIALS, LABOUR, SCAFFOLDING, CURING, AT ALL ELEVATIONS AND LEVELS, RAKING OUT JOINTS ETC. COMPLETE AND AS DIRECTED BY ENGINEER.	CUM	14		
Sec. A	34	C28	PROVIDING AND LAYING SOLING 250 MM COMPACTED THICK WITH 150 -200 MM THICK BOULDER SIZE AND FILLING OF VOIDS WITH HAND BROKEN METAL OF SIZE 40-60 MM, SPREADING & PACKING MURRUM, ROLLING AND COMPACTION INCLUDING WATERING, WITH 10-12 MT CAPACITY ROAD ROLLER.	CUM	274		
Sec. A	35	C29	PROVIDING AND LAYING OF RCC OF MIX 1:2:4 USING 20MM DOWN SIZE HARD BROKEN GRANITE STONE AGGREGATE FOR RCC SLAB OF CULVERT, RCC COPING OVER BRICK WALL OF DRAIN INCLUDING MECHANICAL MIXING, VIBRATION, CURING, FORM WORK AND CENTERING AS PER DRAWING AND SPECIFICATION AND AS DIRECTED BY BHEL ENGINEER	CUM	119		
Sec. A	36	C30	PROVIDING AND FIXING OF REINFORCEMENT INCLUDING CUTTING, BENDING AND FABRICATION OF REINFORCEMENT USING HIGH TENSILE TOR STEEL (Fe-415) AS PER DRAWING AND SPECIFICATION AND AS DIRECTED BY BHEL ENGINEER INCLUDING COST OF ALL LEADS, LIFT AND MATERIALS, LABOUR AND MS BINDING WIRE 18/20 GAUGE ETC. COMPLETE.	MT	6		
			TOTAL VALUE OF SECTION-A IN Rs.				
BOQ CUM RATE SCHEDULE, SECTION - B							
NAME OF WORK- ILLUMINATION OF OPEN STORAGE YARD 50,000 SQM FOR 1X500 MW FGUTPP UNCHA HAR							

Sec. B	37	E1	<p>SUPPLY & INSTALLING 3 PHASE METERING AND POWER DISTRIBUTION BOARD COMPLETE WITH :</p> <p>(1) INCOMING SFU TPN 400 AMPS- 1NO. (2) OUTGOING SFU TPN 200 AMPS -2NOS. (3) OUTGOING SFU TPN 100 AMPS -2NOS. (4) OUTGOING SFU TPN 32 AMPS -2NOS.</p> <p>3 PHASE ELECTRONIC ENERGY METER - BHEL / L&T / GEC MAKE. AMMETER, VOLTMETER AND SELECTOR SWITCHES FOR BOTH - AE AND KAYCEE MAKE.</p> <p>PHASE INDICATION LAMPS, HRC FUSES FOR IC AND OG FEEDERS, CABLE GLANDS, POWER TERMINALS FOR CABLES TERMINATION, CABLE LUGS AND PROVISION FOR DOUBLY EARTHING THE PANEL ENCLOSURE.</p> <p>PANEL ENCLOSURE SHALL BE MADE OF SHEET METAL THICKNESS NOT LESS THAN 1.6 MM AND SUITABLE FOR OUT DOOR INSTALLATION, MODULAR CONSTRUCTION, HINGED DOOR WITH LOCKING ARRANGEMENT, BASE FRAME, SHOULD HAVE SLOPPED CANOPY, DULY PAINTED WITH FIRST COAT OF PRIMER AND TWO COATS OF SYNTHETIC ENAMEL PAINT (INTERIOR WITH WHITE PAINT AND EXTERIOR WITH LIGHT GREY AS PER SHADE 5, IS 630) INTERNAL POWER DISTRIBUTION TO DEVICES SHALL BE WITH AL BUSBARS OR COPPER FLEXIBLE SINGLE CORE PVC CABLES OF 1.1 KV GRADE, CONTROL WIRING WITH 1.5 SQMM, SUITABLE STOOL MADE OUT OF MS STRUCTURE OF 1.2 METER HIGH FOR MOUNTING OF PANEL WITH ANCHORING ARRANGEMENT AT FOUNDATION, SUITABLE FOR BOTTOM ENTRY OF CABLES.</p>	NOS.	1		
Sec. B	38	E2	<p>PROVIDING SUITABLE FOUNDATION FOR MOUNTING AC DISTRIBUTION BOARD AS SPECIFIED IN SL. NO.1, INSTALLATION & COMMISSIONING OF PANEL</p>	NOS	1		
Sec. B	39	E3	<p>SUPPLY OF 415 VOLT AC , 3 PHASE /FOUR WIRE POWER FEEDER PILLAR BOARD , BOARD SHALL BE COMPRISES OF THREE NUMBER AND ONE NUMBER ALUMINIUM BUS BAR FOR PHASE & NEUTRAL RESPECTIVELY. BUS BAR RATING SHALL BE 200 AMPS AND SHALL BE MOUNTED ON EPOXY INSULATOR OF 1.1 KV GRADE, EACH BUS BAR SHALL HAVE DRILLED HOLE FOR CONNECTING INCOMING / OUT GOING CABLES, PROVISION FOR EARTHING THE PANEL ENCLOSURE. PANEL ENCLOSURE SHALL BE MADE OF SHEET METAL THICKNESS NOT LESS THAN 1.6 MM AND SUITABLE FOR OUT DOOR INSTALLATION, HINGED DOOR WITH LOCKING ARRANGEMENT , BASE FRAME , SHOULD HAVE SLOPPED CANOPY, DULY PAINTED WITH FIRST COAT WITH PRIMER AND TWO COATS OF SYNTHETIC ENAMEL PAINT (INTERIOR WITH WHITE PAINT AND EXTERIOR WITH SMOKE GREY AS PER IS), SUITABLE STOOL MADE OUT OF MS STRUCTURE OF 1.2 METER HIGH FOR MOUNTING OF PANEL WITH ANCHORING ARRANGEMENT AT FOUNDATION .</p>	NOS	3		
Sec. B	40	E4	<p>PROVIDING SUITABLE FOUNDATION FOR MOUNTING 415 VOLT AC POWER FEEDER PILLAR BOARD AS SPECIFIED IN SL. NO.3 , INSTALLATION & COMMISSIONING OF PANEL</p>	NOS	3		
Sec. B	41	E5	<p>SUPPLYING, INSTALLATION & COMMISSIONING OF SODIUM VAPOUR LAMP STREET LIGHT FITTING 150 WATT SSG-2315 IH OF CROMPTON OR SIMILAR PHILIPS MAKE, COMPLETE WITH ONE PIECE CANOPY, INTEGRAL CONTROLGEAR COMPRISING OF COPPER WOUND CHOKE , IGNITOR , HPF CAPACITOR, HPSV LAMP AND SUITABLE FOR DIRECTLY SLIPPING OVER LIGHT MOUNTING BRACKET MADE OUT OF 40 MM OD PIPE AND SUITABLE FOR LAMPS, CONTROL GEAR BOX CABLING & TERMINATION OF ITEMS SUPPLIED (TO BE MOUNTED ON 9 MTR POLE - ITEM CODE E6).</p>	NOS	56		
Sec. B	42	E6	<p>SUPPLY AND ERECTING STEEL TUBULAR SWAGED POLES, 9 MTR LONG MADE OF SHEET STEEL HAVING ULTIMATE TENSILE STRENGTH 42 KG F/SQ.MM CONFIRMING TO BIS :2713 (RPART-II) COMPLETE WITH 300X300X6 MM THICK M. S. BASE PLATE FOR WELDING AT SITE AND SIZE AS PER CONFIGURATION GIVEN IN BIS FOR 410 SP-28 (113 KG- POLE WEIGHT) WITH 1.5 MTR. DEEP EXACAVATION, CONCRETING IN 1:4:8 RATIO SIZE 45 CMS X 45 CMS X 150 CMS AND POLE PLINTH IN 1:3:6 CEMENT CONCRETING HAVING 300 MM HEIGHT AND 300 MM DIA .INCLUDING DOUBLE EARTHING OF POLE WITH SUITABLE ARRANGEMENT, DULY PAINTED WITH TWO COATS OF RED OXIDE PAINT AND ONE COAT OF ALUMINIUM PAINT TO BE APPLIED AFTER ERECTION; THE LENGTH OF POLE BELOW GROUND TO BE PAINTED WITH TWO COATS OF BLACK BITUMINUS PAINT. THE POLE SHALL BE COMPLETE WITH JB, FUSE AND MINOR FABRICATION AS BELOW :</p> <p>I) DRILING 20 MM DIA HOLE AT ABOUT 2.5 MTR FROM GROUND LEVEL FOR WIRE LEADS FROM JUNCTION BOX TO LIGHT FIXTURE .</p> <p>II) DRILING 15MM DIA HOLES AT ABOUT 0.7 AND AT 2.5 MTR FROM GROUND LEVEL AND WELDING 12 MM NUTS FOR USING A 12 MM G.I BOLT FOR FASTENING EARTH CONDUCTERS.</p> <p>III) WELDING REQUIORED HOLES FOR FIXING POLE CAP OF STREET LIGHT BRACKET.</p> <p>IV) WELDING DIAMETRALLY 10 MM M.S. ROUND 30 MM BELOW POLE TOP EDGE FOR CLIPPING WIRE LEADS .</p>	NOS	61		
Sec. B	43	E7	<p>SUPPLY, INSTALLATION & COMMISSIONING OF WEATHER PROOF FLOOD LIGHT LUMINIARIES OF CROMPTON MAKE (FBD 1425/40-WITH HIGH PRESSURE SODIUM VAPOUR LAMP 1X 400 WATT ALONG WITH NON- INTEGRAL TYPE CONTROL GEAR BOX HAVING ADEQUATE NUMBER OF TERMINAL CONNECTORS FOR TERMINATING TWO CABLE OF 3X 10 SQMM AL AND SUITABLE FOR OUT DOOR APPLICATION) OR EQUIVALENT IN BAJAJ, PHILLIPS ONLY , INCLUDING SUPPLY & FIXING CABLES BETWEEN THE CONTROL GEAR BOX AND LIGHT LUMINIARIES AND MOUNTING FIXTURE WITH HARDWARE FOR MOUNTING OF LIGHT LUMINIARIES AND CONTROL GEAR BOX ON POLE TYPE 410 SP-28.</p>	NOS	5		

Sec. B	44	E8	ENGINEERING, SUPPLY AND INSTALLATION OF LATTICE TYPE STRUCTURAL TOWER OF HEIGHT 15M . TOWER SHALL BE FABRICATED IN THREE SECTION OF EQUAL LENGHT OF 5 METER EACH.PREPARATION OF FABRICATION DRAWING & ITS APPROVAL FROM BHEL. BRIEF DETAILS ARE AS GIVEN BELOW : TOWER SHALL BE ADEQUATELY STRONG TO WITHSTAND HEAVY WIND. NO STAY/GUY ROPES SHALL BE TIED WITH IT AT TOP OF THE TOWER. ADEQUATE SIZE OF PLATEFORM SHALL BE PROVIDED WITH RAILING AROUND THE PLATFORM FOR MOUNTING OF LIGHTING LUMINIARIES (TENTATIVELY TWELVE FITTING ON EACH TOWER) AND MAINTENANCE PURPOSE , FLOOR OF PLATFORM SHALL BE COVERED WITH CHEQURED PLATE. A LADDER ALONG WITH PROTECTIVE CAGE SHALL BE PROVIDED ALONG THE HEIGHT OF TOWER. IT SHOULD BE PAINTED WITH ONE COAT RED OXIDE PRIMER AND TWO COATS OF ALUMINIUM PAINT AFTER INSTALLATION. EACH TOWER SHALL BE PROVIDED WITH POWER DISTRIBUTION BOX OUT DOOR TYPE AND SHOULD HAVE PROVISION OF TERMINATING ONE NUMBER INCOMING AND EIGHT OUT GOING CABLE .ERECTING AT SITE INCLUDING ALL CIVIL WORKS LIKE EXCAVATION, CASTING OF FOUNDATION OF REQUIRED SIZE AND DEPTH WITH CONCRETE OF GRADE 1:2:4 WITH BASE PLATES, GROUTING OF LATTICE STRUCTURE, ONE EARTH PIT AS PER BIS STANDARD IS TO BE MADE NEAR THE TOWER AND EARTHING OF THE TOWER INCLUDING SUPPLY OF MATERIAL ETC. COMPLETE. SUPPLY, INSTALLATION & COMMISSIONING OF FLOOD LIGHT LUMINIARIES OF BAJAJ MAKE TYPE BGENF 22 OR EQUIVALENT IN CROMPTON , PHILLIPS ONLY. EACH LUMINIARIES SHALL BE WITH TWO NUMBER 400 WATT HPSV LAMPS AND CONTROL GEAR BOX INTEGRAL/ NON INTEGRAL TYPE INCLUDING CABLES FOR INTERCONNECTION. (THESE FITTING SHALL BE MOUNTED ON LIGHTING MAST /TOWER , ON EACH TOWER 8 SUCH FITTING SHALL BE MOUNTED).	NOS	2		
Sec. B	45	E9	SUPPLY OF CABLES 3 -1/2 COREX 185 SQMM ALUMINIUM ARMoured PVC INSULATED CABLE (THREE AND HALF CORE) CONFIRMING TO IS 1554 (PART -I)	RM	450		
Sec. B	46	E10	INSTALLATION OF CABLES 3 -1/2 COREX 185 SQMM ALUMINIUM ARMoured PVC INSULATED CABLE CONFIRMING TO IS 1554 (PART -I) INCLUDING LAYING OF CABLE BELOW GROUND , EXCAVATION OF TRENCH OF 600 MM DEPTH IN ALL KIND OF SOIL, TERMINATION OF CABLES CORES WITH CRIMP TYPE LUGGS, PROVIDING SAND LAYER BELOW/ ABOVE THE CABLE, BRICK LAYING BOTH SIDE /ABOVE THE ABOVE THE CABLE AND BACK FILLING ETC. CABLES ARE TO BE LAID FROM TRANSFORMER SUB STATION TO 415 VOLT AC DISTRIBUTION BOARD.	RM	450		
Sec. B	47	E11	SUPPLY OF CABLES 3-1/2 CORE X 95 SQMM ALUMINIUM ARMoured PVC INSULATED CABLE (THREE AND HALF CORE) CONFIRMING TO IS 1554 (PART -I) (TO BE USED FORM SHEDS AS WELL AS OPEN STORAGE YARD WHEREVER REQUIRED)	RM	722		
Sec. B	48	E12	INSTALLATION OF CABLES 3 -1/2 CORE X 95 SQMM ALUMINIUM ARMoured PVC INSULATED CABLE CONFIRMING TO IS 1554 (PART -I) INCLUDING LAYING OF CABLE BELOW GROUND, EXCAVATION OF TRENCH OF 600 MM DEPTH IN ALL KIND OF SOIL, TERMINATION OF CABLES CORES WITH CRIMP TYPE LUGGS, PROVIDING SAND LAYER BELOW/ ABOVE THE CABLE, BRICK LAYING BOTH SIDE /ABOVE THE ABOVE THE CABLE AND BACK FILLING ETC COMPLETE. CABLES ARE TO BE LAID FROM 415 VOLT AC DISTRIBUTION BOARD TO FEEDER PILLAR BOARD .	RM	722		

Sec. B	49	E13	SUPPLY OF CABLES 3 -1/2 COREX 35 SQMM ALUMINIUM ARMoured PVC INSULATED CABLE (THREE AND HALF CORE) CONFIRMING TO IS 1554 (PART -I)	RM	541		
Sec. B	50	E14	INSTALLATION OF CABLES 3 -1/2 CORE X 35 SQMM ALUMINIUM ARMoured PVC INSULATED CABLE CONFIRMING TO IS 1554 (PART -I) INCLUDING LAYING OF CABLE BELOW GROUND , EXCAVATION OF TRENCH OF 600 MM DEPTH IN ALL KIND OF SOIL, TERMINATION OF CABLES CORES WITH CRIMP TYPE LUGGS, PROVIDING SAND LAYER BELOW/ ABOVE THE CABLE, BRICK LAYING BOTH SIDE /ABOVE THE ABOVE THE CABLE AND BACK FILLING ETC. CABLES ARE TO BE LAID FROM FEDDER PILLER TO HIGH MAST TOWER	RM	541		
Sec. B	51	E15	SUPPLY OF CABLES 2 CORE X 10 SQMM ALUMINIUM ARMoured PVC INSULATED CABLE CONFIRMING TO IS 1554 (PART -I)	RM	3070		
Sec. B	52	E16	INSTALLATION OF CABLES 2 CORE X 10 SQMM ALUMINIUM ARMoured PVC INSULATED CABLE CONFIRMING TO IS 1554 (PART -I) INCLUDING LAYING OF CABLE BELOW GROUND , EXCAVATION OF TRENCH OF 600 MM DEPTH IN ALL KIND OF SOIL, TERMINATION OF CABLES CORES WITH CRIMP TYPE LUGGS, PROVIDING SAND LAYER BELOW/ ABOVE THE CABLE, BRICK LAYING BOTH SIDE /ABOVE THE CABLE AND BACK FILLING ETC COMPLETE. CABLES ARE TO BE LAID FROM 415 VOLT AC POWER FEEDER PILLAR BOARD TO LIGHTING POLES & POLE TO POLE	RM	3070		
Sec. B	53	E17	SUPPLY AND INSTALLATION SUITABLE ELECTRICAL PUMP FOR MINIMUM HEAD OF 10M (BUT NOT LESS THAN 2 H.P.) OF REPUTED MANUFACTURER LIKE SUGUNA/ CRI/ KILOSKAR/ SHAKTI/SHARP/ CROMPTON INCLUDING ALL ACCESSORIES, STARTER, D.B., ETC. AND TO BE CONNECTED TO OVER HEAD TANK FROM WATER STORAGE TANK BELOW G.L. GURRANTY/WARRANTY CARD TO BE SUBMITTED TO BHEL. SUCTION, DISCHARGE GI PIPES SHALL BE PAID SEPERATLY UNDER RELEVANT ITEMS.	NOS	1		
Sec. B			TOTAL VALUE OF SECTION-B IN Rs.				
BOQ CUM RATE SCHEDULE, SECTION - C							
NAME OF WORK- PROVIDING AND INSTALLING OF NEW OFFICE FURNITURE, FURNISHING INCLUDING PROVIDING AND INSTALLING OF AIR CONDITIONERS.							
Sec. C	FURNITURE AND FURNISHING:						
Sec. C	54	RF1	PREPARATION OF SITTING LAYOUT, PROVIDING AND ERECTING IN POSITION STANDARD AND MODULAR FURNITURE OF GODREJ / DELITE /DURIAN OR EQUIVALENT MAKE (PREFERABLY COMPLETE FURNITURE ITEMS SHALL BE OF A SINGLE MANUFACTURER TO MAINTAIN THE AESTHETIC LOOKS OF OFFICE). BEECHWOOD/TEAKWOOD/MALNUT/MAHOGANY/OAK/MAPLE WOOD, METAL SHADES AND APPROVED UPHOLSTRY SHADES FOR OFFICE SETUP (SEATING LAYOUT SHALL BE PREAPRED BY THE CONTRACTOR AND GET APPROVED FROM BHEL BEFORE INSTALLATION) AS FOLLOWS:				
Sec. C	55	A	OFFICE DESKS:				
Sec. C	56	A1	SUPER EXECUTIVE SUITS INCLUDING 1800X900X750 EXECUTIVE DESK WITH DRAWERS, 1200X600X780 LH/RH SIDE UNIT, 2200X790X400 BOOK CASE UNIT, 400X550X550 MOBILE PEDESTAL, 1400X500X750 CREDENZA AND 1050X1200 CURVED JOINTING TOP- MAESTRO PREMIUM SUITE (GODREJ) OR EQUIVALENT AS APPROVED BY BHEL ENGINEER.	SET	2		
Sec. C	57	A2	SENIOR EXECUTIVE SUITES INCLUDING 1500X750X750 EXECUTIVE DESKS WITH DRAWERS/PEDESTALS, 1000X500X780 SIDE UNIT & CREDENZA 1200X500X750-FINESSE EXECUTIVE SERIES (GODREJ) OR EQUIVALENT, AS APPROVED BY BHEL ENGINEER.	SET	4		
Sec. C	58	A3	EXECUTIVE TABLES:- INCLUDING 1350X700X750 EXECUTIVE DESK WITH DRAWERS/PEDESTALS- ENZO/ WT SERIES (GODREJ) OR EQUIVALENT AS APPROVED BY BHEL ENGINEER.	SET	25		
Sec. C	59	A4	RECEPTION DESK WITH CHAIR-SINGLE ARC CURVILINEAR RUBBER WOOD TOPS 950 MM HIGH APPROX 1200 MM WIDE 700 MM DEPTH, PERFORATED MODESTY PANELS OF APPROVED METAL COLOUR WITH SWIVEL CHAIR WITH ADEQUATE SINGLE OR TWIN WHEEL CASTORS AND WITH TWO ARMS AND PNEUMATIC HEIGHT ADJUSTMENT- AS APPROVED BY BHEL ENGINEER.	SET	1		
Sec. C	60	A5	NORMAL DESKS- 1220X600 AND 750 MM HIGH WITH ATLEAST TWO DRAWERS AND 1 FILE CABINET AS APPROVED BY BHEL ENGINEER.	NOS	12		
Sec. C	61	B	OFFICE CHAIRS:				
Sec. C	62	B1	SUPER EXECUTIVE CHAIRS: CUSHIONED BLACK LEATHER MOBILE SWIVEL CHAIRS WITH ADEQUATE SINGLE OR TWIN WHEEL CASTORS, WITH CENTRE TILT MECHNISM AND TILT LOCKING ARRANGEMENT. THE SEAT AND THE HIGH BACKREST ARE MADE UP OF MOULDED POLYURETHANE FOAM WITH TWO CHROME POLISHED ARMS AND PNEUMATIC HEIGHT ADJUSTMENT- HALO/MONARCH (GODREJ) OR EQUIVALENT AS APPROVED BY BHEL ENGINEER.	NOS	3		

Sec. C	63	B2	PREMIUM EXECUTIVE SWIVEL CHAIRS WITH ADEQUATE SINGLE OR TWIN WHEEL CASTORS WITH CENTRE TILT MECHANISM AND TILT LOCKING ARRANGEMENT. THE SEAT AND BACKREST ARE MADEUP OF MOULDED POLYURETHANE FOAM WITH FABRIC UPHOLSTRY, TWO ARMS AND PNEUMATIC HEIGHT ADJUSTMENT- REGENCY / PREMIUM EXECUTIVE (GODREJ) OR EQUIVALENT AS APPROVED BY BHEL ENGINEER.	NOS	7		
Sec. C	64	B3	VISITOR SWIVEL CHAIRS WITH ADEQUATE SINGLE WHEEL CASTORS, WITH CENTRE TILT MECHANISM AND TILT LOCKING ARRANGEMENT. THE SEAT AND BACKREST ARE MADEUP OF MOULDED POLYURETHANE FOAM WITH FABRIC UPHOLSTRY TWO ARMS AND PNEUMATIC HEIGHT ADJUSTMENT- EII 500IT (GODREJ) OR EQUIVALENTAS APPROVED BY BHEL ENGINEER	NOS	30		
Sec. C	65	B4	VISITOR SWIVEL CHAIRS WITH ADEQUATE SINGLE WHEEL CASTORS, WITH CENTRE TILT MECHANISM AND TILT LOCKING ARRANGEMENT. THE SEAT AND BACKREST ARE MADEUP OF MOULDED POLYURETAHNE FOAM WITH FABRIC UPHOLSTRY, TWO ARMS AND PNEUMATIC HEIGHT ADJUSTMENT- 7031 (GODREJ) OR EQUIVALENT AS APPROVED BY BHEL ENGINEER.	NOS	50		
Sec. C	66	B5	TASK/ MULTIPURPOSE CHAIRS- OFFICE 1018 (GODREJ) OR EQUIVALENT AS APPROVED BY BHEL ENGINEER	NOS	5		
Sec. C	67	C	LONGUE FURNITURE:				
Sec. C	68	C1	SOOFA SETS (3+2+2)-RIVIERA F2324/5 (GODREJ) OR EQUIVALENT AS APPROVED BY BHEL ENGINEER	SET	2		
Sec. C	69	C2	CENTRE TABLES- C538 EX (GODREJ) OR EQUIVALENT AS APPROVED BY BHEL ENGINEER.	SET	2		
Sec. C	70	D	STORAGE UNITS				
Sec. C	71	D1	PLAIN CUPBOARDS- 1800 MM STOREWELL PLAIN, AS APPROVED BY BHEL ENGINEER	NOS	10		
Sec. C	72	D2	VERTICAL FILING CABINETS- 4 DRAWERS, AS APPROVED BY BHEL ENGINEER	NOS	10		
Sec. C	73	D3	LOCKER UNITS- 2 2 DOOR PLU, AS APPROVED BY BHEL ENGINEER	NOS	10		
Sec. C	74	D4	1200 MM HIGH GLASS HINGED DOOR UNITS, AS APPROVED BY BHEL ENGINEER	NOS	10		
Sec. C	75	E	COMPUTER TABLES- COMPANION C10 (GODREJ) OR EQUIVALENT AS APPROVED BY BHEL ENGINEER	NOS	18		
Sec. C	76	F	PROVIDING AND FIXING FOLLOWING TYPES OF WINDOW CURTAINS COMPLETE WITH ALL HOOKS GUIDES RODS & OTHER OPERATING ACCESSORIES				
Sec. C	77	F1	VERTICAL BLINDS OF APPROVED SHADE, MAKE AND PROFILE	SQM	15		
Sec. C	78	F2	ROLLER BLINDS OF APPROVED SHADE, MAKE AND PROFILE	SQM	15		
Sec. C	79	F3	CLOTH CURTAINS OF APPROVED TEXTURE, MATERIAL, PATTERN AND SHADE (ONLY REPUTED BRANDS)- AS DIRECTED BY BHEL ENGINEER.	SQM	40		
Sec. C	80	G	PROVIDING AND INSTALLAING AIR CONDITIONERS OF LG, SAMSUNG, GODREJ. VOLTAS MAKE WITH VOLTAGE STABLIZER OF FOLLOWING TYPES				
Sec. C	81	G1	SPLIT TYPE- 2 T	NOS	13		
Sec. C	82	G2	WINDOW TYPE- 1.5 T	NOS	15		
Sec. C	83	G3	4' DESERT COOLERS WITH MS STAND (ONLY STANDARD BRANDS)- AS DIRECTED BY BHEL ENGINEER	NOS	10		
			TOTAL VALUE OF SECTION-C in Rs.				
			TOTAL VALUE OF PART-1 (Sec. A + Sec. B + Sec. C) in Rs.				

PART 2: REPAIRING AND REMOULDING WORK FOR BHEL OFFICE (APPROX AREA: 750 SQM) AND CLOSED STORAGE SHEDS-06 NOS (APPROX SIZE: 900 SQM EACH)

BOQ CUM RATE SCHEDULE, SECTION - D							
SECTION	SL.NO	ITEM CODE	DESCRIPTION OF WORK	UNIT	QTY.	RATE (Rs.)	AMOUNT (Rs.)
Sec. D	84	RC1	REPAIRS TO PLASTER OF THICKNESS 12 MM TO 20 MM IN PATCHES INCLUDING CUTTING THE PATCH IN PROPER SHAPE, RAKING OUT JOINTS AND PREPARING AND PLASTERING THE SURFACE OF THE WALLS COMPLETE, INCLUDING DISPOSAL OF RUBBISH TO THE DUMPING GROUND WITHIN 50 METRES LEAD :				
Sec. D	85	A	WITH CEMENT MORTAR 1:4 (1CEMENT: 4 COARSE SAND)	SQM	5934		
Sec. D	86	RC2	REMOVING WHITE OR COLOUR WASH BY SCRAPPING AND SAND PAPERING AND PREPARING THE SURFACE SMOOTH INCLUDING NECESSARY REPAIRS TO SCRATCHES ETC. COMPLETE				
Sec. D	87	A	OUTSIDE WALLS & INSIDE WALLS	SQM	11408		
Sec. D	88	RC3	FINISHING OUTSIDE WALLS WITH WATER PROOFING CEMENT PAINT OF REQUIRED SHADE:				
Sec. D	89	A	OLD WORK (ONE OR MORE COATS APPLIED @ 2.20 KG/10 SQM) OVER PRIMING COAT OF PRIMER APPLIED @ 0.80 LITRS/10 SQM COMPLETE INCLUDING COST OF PRIMING COAT.	SQM	5150		
Sec. D	90	RC4	DISTEMPERING INSIDE WALLS WITH 1ST QUALITY ACRYLIC WASHABLE DISTEMPER (READY MADE) OF APPROVED MANUFACTURER AND OF REQUIRED SHADE AND COLOUR COMPLETE. AS PER MANUFACTURER'S SPECIFICATION.				
Sec. D	91	A	ONE OR MORE COATS ON OLD WORK	SQM	4500		
Sec. D	92	RC5	PROVIDING & APPLYING TO INTERIOR SURFACES OF OFFICE BUILDING , TOILET AND PANTRY BLOCK BY TWO COATS OF OIL BOUND DISTEMPER (OBD) OF APPROVED SHADE ,COLOR AND MAKE CONFIRMING TO IS : 428 TO OBTAIN A EVEN FINISH AND UNIFORM COLOR OVER A COAT OF PRIMER AS PER MANUFACTURE RECOMMENDATION INCLUDING COST OF PAINT, SURFACE PREPARATION LIKE CLEANING AND BRUSHING & BROOMING OF WALLS , SCAFFOLDING AT ALL LEVEL ETC, COMPLETE. SURFACE PREPARATION SHALL BE DONE BY APPLYING PUTTY/PLASTER OF PARISH (POP) INCLUDING COST OF MATERIAL, LABOUR ETC. COMPLETE.	SQM	1758		
Sec. D	93	RC6	PROVIDING BRICK WORK IN CM 1:6 (1 CEMENT & 6 COARSE SAND) USING OPC GRADE 43/53 OR EQUIVALENT PPC AND LOCALLY AVAILABLE BURNT CLAY BRICKS (MIN STRENGTH 35 KG/CM2) AS PER DRAWING AND SPECIFICATION FOR FOUNDATION, SUPER STRUCTURE, SEPTIC TANK ETC. INCLUDING COST OF ALL MATERIALS, LABOUR, SCAFFOLDING, CURING , AT ALL ELEVATIONS AND LEVELS , RAKING OUT JOINTS ETC. COMPLETE AND AS DIRECTED BY ENGINEER . EXCLUDING PLASTERING & PAINTING.	CUM	96		
Sec. D	94	RC7	PROVIDING BRICK WORK IN CM 1:6 (1 CEMENT & 6 COARSE SAND) USING OPC GRADE 43/53 OR EQUIVALENT PPC AND FLY ASH LIME BRICKS (FAL - MIN STRENGTH 35 KG/CM2) AS PER DRAWING AND SPECIFICATION FOR FOUNDATION, WALL, SEPTIC TANK ETC. INCLUDING COST OF ALL MATERIALS, LABOUR, SCAFFOLDING, CURING , AT ALL ELEVATIONS AND LEVELS , RAKING OUT JOINTS ETC. COMPLETE AND AS DIRECTED BY ENGINEER . EXCLUDING PLASTERING & PAINTING.	CUM	15		
Sec. D	95	RC8	PROVIDING AND LAYING OF RCC MIX 1:2:4 USING OPC GRADE 43/53 OR EQUIVALENT PPC, 20MM DOWN SIZE HARD BROKEN GRANITE STONE AGGREGATE INCLUDING MECHANICAL MIXING, VIBRATION, CURING, FORM WORK & CENTERING AS PER DRAWING AND SPECIFICATION AND DIRECTED BY BHEL ENGINEER BUT EXCLUDING COST OF REINFORCEMENTS.	CUM	30		
Sec. D	96	RC9	PROVIDING, CUTTING, BENDING AND FIXING IN POSITION REINFORCEMENT OF VARIOUS DIA. USING HIGH TENSILE TOR STEEL (Fe - 415/500) FOR FOUNDATIONS, COLUMNS, BEAMS, FLOORS, SUNSHED, SLAB FOR CLOSED STORAGE SHEDS ETC. AS PER DRAWING AND SPECIFICATION AND AS DIRECTED BY BHEL ENGINEER INCLUDING COST OF ALL MATERIALS, LEADS, LIFT, LABOURS, MS BINDING WIRE 18/20 GAUGE, TACK WELDING AND SUPPORTING IF REQUIRED COMPLETE.	MT	2		
Sec. D	97	RC10	DESIGN, SUPPLY, FABRICATING AND ERECTION OF STRUCTURAL STEEL STAGING (APPROX. Ht. 4.0M) FOR INSTALLATION OF PVC OVER HEAD WATER TANK (OHT) OF CAPACITY- 1000 LITRES AS PER BHEL DRAWING. RATE IS INCLUSIVE OF ALL MATERIALS, LOADING & UNLOADING, FABRICATION, FIXING IN POSITION, LABOUR CHARGES , T&Ps AND COST OF RED OXIDE PRIMER AT FACTORY AND TWO COATS OF SYNTHETIC ENAMEL PAINTS (OVER PRIMER COAT OF RED OXIDE) OF APPROVED COLOUR AND QUALITY AT SITE	MT	1		
Sec. D	98	RC11	DISMANTLING BARBED WIRE OR FLEXIBLE WIRE ROPE IN FENCING INCLUDING MAKING ROLLS AND STACKING WITHIN 50 METRES LEAD.	RM	3000		
Sec. D	99	RC12	FENCING WITH ANGLE IRON POST PLACED AT REQUIRED DISTANCE EMBEDDED IN CEMENT CONCRETE BLOCKS, EVERY 15TH POST, LAST BUT ONE END POST AND CORNER POST SHALL BE STRUTTED ON BOTH SIDES AND END POST ON ONE SIDE ONLY AND PROVIDED WITH HORIZONTAL LINES AND TWO DIAGONALS INTERWOVEN WITH HORIZONTAL WIRES. OF BARBED WIRE WEIGHING 9.38 KG PER 100 M (MINIMUM), BETWEEN THE TWO POSTS FITTED AND FIXED WITH G.I. STAPLES, TURN BUCKLES ETC. COMPLETE. (COST OF POSTS, STRUTS, EARTH WORK AND CONCRETE WORK TO BE PAID FOR SEPARATELY). PAYMENT TO BE MADE PER METRE COST OF TOTAL LENGTH OF BARBED WIRE USED. THIS INCLUDES STRAIGHTENING THE EXISITING ANGLE IRON POSTS / STRUTS BY BENDING, CUTTING & REWELDING ETC. AS REQUIRED COMPLETE AS PER DIRECTION OF BHEL ENGINEER IN-CHARGE.				

PART 2: REPAIRING AND REMOULDING WORK FOR BHEL OFFICE (APPROX AREA: 750 SQM) AND CLOSED STORAGE SHEDS-06 NOS (APPROX SIZE: 900 SQM EACH)

BOQ CUM RATE SCHEDULE, SECTION - D							
SECTION	SL.NO	ITEM CODE	DESCRIPTION OF WORK	UNIT	QTY.	RATE (Rs.)	AMOUNT (Rs.)
Sec. D	100	A	WITH G.I. BARBED WIRE	RM	3000		
Sec. D	101	RC13	CLEANING OF STRUCTURAL STEEL WORK E.G. FRAME & GRILLS OF WINDOWS AND VENTILATORS, STEEL DOORS, FENCING POSTS ETC.BY SCRAPPING WITH WIRE BRUSHES AND SAND PAPER TO RENDER THE SURFACE CLEAN AND SMOOTH, READY FOR PAINTING & PAINTING WITH SYNTHETIC ENAMEL PAINT OF APPROVED BRAND AND MANUFACTURE INCLUDING INITIAL PRIMER COAT TO GIVE AN EVEN SHADE :				
Sec. D	102	A	ONE OR MORE COATS ON OLD WORK	SQM	687		
Sec. D	103	RC14	DISMANTLING DOORS, WINDOWS AND CLERESTORY WINDOWS (STEEL OR WOOD) SHUTTER INCLUDING CHOWKHATS, ARCHITRAVE, HOLDFASTS ETC. COMPLETE AND STACKING WITHIN 50 METRES LEAD :				
Sec. D	104	A	OF AREA 4 SQM AND BELOW	NOS	12		
Sec. D	105	RC15	PROVIDING AND FIXING OF BEST QUALITY COUNTRY WOOD DOORS COMPRISING OF FRAME 95 X 70MM AND 38/40MM THICK FLUSH SHUTTERS OF SOLID CORE TYPE USING COMMERCIAL PLY INCLUDING HOLD FASTS, WIND APPLIANCES, HANDLES, TOWER BOLTS AND ALDROPS, MORTISE OR SUITABLE LOCKS ETC. AS PER THE STANDARD PRACTICE AND APPLYING TWO COATS OF SYNTHETIC ENAMEL PAINT OF APPROVED SHADE &COLOR OVER A COAT OF PRIMER AS DIRECTED BY BHEL ENGINEER.	SQM	65		
Sec. D	106	RC16	PROVIDING AND FIXING OF BEST QUALITY PVC PANELLED DOORS OF THICKNSS 29MM, SINTEX/BAJAJ MAKE OR APPROVED EQUIVALENT FOR TOILETS INCLUDING ALL FITTINGS AND FIXTURES, MS ANGLE FRAME OF SIZE 40x40x6MM ETC. ALL COMPLETE AS PER DRAWINGS AND SPECIFICATIONS.	SQM	2		
Sec. D	107	RC17	PROVIDING & FIXING OF WOODEN FRAME OF BEST QUALITY COUNTRY WOOD (2.5"x3.0") FOR INSTALLING PORTABLE 1.5T AIR CONDITIONER ON THE WALL OPENING (31"x22") INCLUDING BREAKING THE BRICK WORK FOR MAKING OPENING, SO AS TO MAKE A FRAME OF INSIDE CLEAR DIMENSION 26"x17" WITH COMPLETE FINISHING, PAINTING, HOLD FAST ETC. RATE TO INCLUDE ALL NECESSARY FITTING & FIXTURE, LABOUR, MAKING GOOD THE DAMAGED SURFACE ETC. COMPLETE. AS APPROVED BY BHEL ENGINEER.	NOS	20		
Sec. D	108	RC18	PROVIDING AND FIXING 150 MM BRIGHT FINISHED FLOOR BRASS DOOR STOPPER WITH RUBBER CUSHION, NECESSARY BRASS SCREWS ETC. TO SUIT SHUTTER THICKNESS COMPLETE	NOS	25		
Sec. D	109	RC19	PROVIDING AND FIXING OVER HEAD HYDRAULIC DOOR CLOSER (HEAVY DUTY) OF APPROVED BRAND AND SIZE ON NECESSARY DOORS INCLUDING REMOVING THE EXISTING DAMAGED DOOR CLOUSERS AS DIRECTED BY BHEL ENGINEER.	NOS	20		
Sec. D	110	RC20	RENEWING GLASS PANES, WITH PUTTY AND NAILS WHEREVER NECESSARY INCLUDING RACKING OUT THE OLD PUTTY:				
Sec. D	111	A	FLOAT GLASS PANES OF THICKNESS 4 MM	SQM	45		
Sec. D	112	B	FLOAT GLASS PANES OF THICKNESS 5.5 MM	SQM	10		
Sec. D	113	RC21	PAINTING (ONE OR MORE COATS) ON RAIN WATER, SOIL, WASTE AND VENT PIPES AND FITTINGS WITH BLACK ANTICORROSIVE BITUMASTIC PAINT OF APPROVED BRAND AND MANUFACTURE ON OLD WORK :				
Sec. D	114	A	75 MM DIA PIPES	RM	75		
Sec. D	115	B	100 MM DIA PIPES	RM	25		
Sec. D	116	RC22	CLEANING OF WOOD WORK BY SCRAPPING WITH WIRE BRUSHES AND SAND PAPER AND REPAIRING OF DAMAED SURFACE WITH APPLICATION OF PUTTY TO RENDER THE SURFACE CLEAN AND SMOOTH FOR PAINTING & PAINTING WITH TWO COATS OF SYNTHETIC ENAMEL PAINT OF APPROVED SHADE & COLOR OVER A COAT OF PRIMER AS DIRECTED BY BHEL ENGINEER.:	SQM	65		
Sec. D	117	RC23	DISMANTLING ALUMINIUM/ GYPSUM PARTITIONS, DOORS, WINDOWS, FIXED GLAZING AND FALSE CEILING INCLUDING DISPOSAL OF UNSERVICEABLE SURPLUS MATERIAL AND STACKING OF SERVICEABLE MATERIAL WITH IN 50 METERS LEAD AS DIRECTED BY ENGINEER-IN-CHARGE.	SQM	450		
Sec. D	118	RC24	DISMANTLING EXISTING DAMAGED HARD BOARD CEILING OR PARTITION WALLS, ROOFING INCLUDING STACKING OF SERVICEABLE MATERIALS AND DISPOSAL OF UNSERVICEABLE MATERIALS WITHIN 50 METRES LEAD.	SQM	1600		
Sec. D	119	RC 25	PROVIDING AND FIXING OF FALSE CEILING OF 12.5 MM THICK TAPERED EDGE GYPSUM PLAIN BOARD CONFIRMING TO IS:2095 PART I WITH 4MM THICK PANELS OF APPROVED QUALITY AND DESIGN OF SIZE 600x600 MM WITH SQUARE EDGES SUPPORTED BY ANODISED ALUMINIUM FRAMES OF TEES 35x23.5x1.5 MM THICK AS MAIN MEMBER AND 19x23.5x1.5 MM TEES AS CROSS SUPPORTING MEMBERS AND WALL ANGLES OF 23.5x23.5x1.5MM. THE MAIN RUNNERS SHALL BE SUSPENDED FROM ROOF AT 1200 MM CENTRE TO CENTRE BY MEANS OF MS RODS WITH GI 'J' THREADED HOOK FOR ADJUSTMENTS. THE CROSS RUNNERS SHALL BE FIXED TO MAIN RUNNER TO FORM 'A' GRID PATTERN OF 600x600MM AND PROVIDING 25 MM WIDE ALUMINIUM STRIP TEES OR MOULDED SECTIONS AT ALL JOINTS. THE RATE SHALL BE INCLUSIVE OF TWO COATS OF APPROVED OBD ON GYPSUM BOARD, SUPPLY & FIXING OF ALUMINIUM FRAME AND SCAFFOLDING ETC. COMPLETE.	SQM	750		

PART 2: REPAIRING AND REMOULDING WORK FOR BHEL OFFICE (APPROX AREA: 750 SQM) AND CLOSED STORAGE SHEDS-06 NOS (APPROX SIZE: 900 SQM EACH)

BOQ CUM RATE SCHEDULE, SECTION - D							
SECTION	SL.NO	ITEM CODE	DESCRIPTION OF WORK	UNIT	QTY.	RATE (Rs.)	AMOUNT (Rs.)
Sec. D	120	RC26	DILUTING AND INJECTING CHEMICAL EMULSION FOR POST-CONSTRUCTIONAL ANTI-TERMITE TREATMENT (INCLUDING THE COST OF CHEMICAL EMULSION) :				
Sec. D	121	A	TREATMENT OF EXISTING MASONRY USING CHEMICAL EMULSION @ ONE LITRE PER HOLE AT 300 MM INTERVAL INCLUDING DRILLING HOLES AT 45 DEGREE AND PLUGGING THEM WITH CEMENT MORTAR 1:2 (1 CEMENT : 2 COARSE SAND) TO THE FULL DEPTH OF THE HOLE : WITH CHLORPYRIPHOS/LINDANE E.C. 20% WITH 1% CONCENTRATION	RM	150		
Sec. D	122	B	TREATMENT OF SOIL UNDER EXISTING FLOORS USING CHEMICAL EMULSION @ ONE LITRE PER HOLE, 300 MM APART INCLUDING DRILLING 12 MM DIAMETER HOLES AND PLUGGING WITH CEMENT MORTAR 1:2 (1 CEMENT: 2 COARSE SAND) TO MATCH THE EXISTING FLOOR : WITH CHLORPYRIPHOS/LINDANE E.C. 20% WITH 1% CONCENTRATION	SQM	125		
Sec. D	123	RC27	PROVIDING AND FIXING 0.5MM THICK PPGI SHEETS OVER THE ROOF OF CLOSED STORAGE SHEDS & OFFICE TO REPLACE THE EXISTING DAMAGED ROOFING INCLUDING GALVANISED IRON J OR L HOOK, BOLTS, BITUMINOUS WASHERS, GI CRAMP BOLTS, NUTS, SCAFFOLDING ETC. COMPLETE, ALL AS PER LATEST IS 459, 3307 AND 730.	SQM	3350		
Sec. D	124	RC28	PROVIDING AND FIXING OF TRANSLUCENT RMP/FRP (FIBRE GLASS REINFORCED PLASTIC) SHEETS - 2.00 MM THICK OF APPROVED MAKE INCLUDING CUTTING THE PPGI SHEETS/ AC ROOFING IN PROPER SIZE AND SHAPE, COST OF GI J OR L HOOKS, BOLTS, NUTS, WASHERS, BITUMEN WASHERS,SCAFFOLDING ETC. COMPLETE SO AS TO MATCH WITH PPGI SHEETS FOR NATURAL LIGHTING.	SQM	350		
Sec. D	125	RC29	RE-LETTERING WITH BLACK JAPAN PAINT OF APPROVED BRAND AND MANUFACTURE. LETTER HEIGHT SHALL BE AS DIRECTED BY BHEL ENGINEER	PER LETTER	300		
Sec. D	CONSTRUCTION OF RAISED CONCRETE PARKING PLATFORM OF 200 SQM:						
Sec. D	126	RC30	EARTH WORK EXCAVATION FROM 0 (ZERO) TO 2 M DEPTH IN ALL KINDS OF SOIL (EXCEPT HARD ROCK AND SOFT ROCK) FOR RAISED CONCRETE PLATFORM ETC., SPREADING OF SURPLUS EXCAVATED EARTH UNIFORMLY OVER THE SPECIFIED AREA FOR SITE LEVELING & DEVELOPMENT OF REQUIRED DEPTH TO MAINTAIN UNIFORM GROUND LEVEL WITH PROPER COMPACTION AROUND THE RAISED CONCRETE PLATFORM & OTHER AREAS ETC. AS DIRECTED BY BHEL ENGINEER AND INCLUDING DEWATERING WITH ALL T&P, LABOURS, MATERIALS ETC. COMPLETE.	CUM	1		
Sec. D	127	RC31	PROVIDING BRICK WORK IN CM 1:6 (1 CEMENT & 6 COARSE SAND) USING OPC GRADE 43/53 OR EQUIVALENT PPC WITH LOCALLY AVAILABLE BURNT CLAY BRICKS (MIN STRENGTH 35 KG/CM ²) AS PER DRAWING AND SPECIFICATION FOR DRAINS, CULVERTS AND WHERE REQUIRED INCLUDING COST OF ALL MATERIALS, LABOUR, SCAFFOLDING, CURING , AT ALL ELEVATIONS AND LEVELS , RAKING OUT JOINTS ETC. COMPLETE AND AS DIRECTED BY ENGINEER .	CUM	2		
Sec. D	128	RC32	PROVIDING AND LAYING SOLING 250 MM COMPACTED THICK WITH 150 -200 MM THICK BOULDER SIZE AND FILLING OF VOIDS WITH HAND BROKEN METAL OF SIZE 40-60 MM , SPREADING & PACKING MURRUM , ROLLING AND COMPACTION INCLUDING WATERING, WITH 10-12 MT CAPACITY ROAD ROLLER.	CUM	34		
Sec. D	129	RC33	PROVIDING AND LAYING OF RCC OF MIX 1:2:4 USING 20MM DOWN SIZE HARD BROKEN GRANITE STONE AGGREGATE FOR RCC SLAB OF PLATFORM, CULVERT, RCC COPING OVER BRICK WALL OF DRAIN INCLUDING MECHANICAL MIXING, VIBRATION, CURING, FORM WORK AND CENTERING AS PER DRAWING AND SPECIFICATION AND AS DIRECTED BY BHEL ENGINEER	CUM	15		
Sec. D	130	RC34	PROVIDING AND FIXING OF REINFORCEMENT INCLUDING CUTTING, BENDING AND FABRICATION OF REINFORCEMENT USING HIGH TENSILE TOR STEEL (Fe-415) AS PER DRAWING AND SPECIFICATION AND AS DIRECTED BY BHEL ENGINEER INCLUDING COST OF ALL LEADS, LIFT AND MATERIALS, LABOUR AND MS BINDING WIRE 18/20 GAUGE ETC. COMPLETE.	MT	1		
Sec. D	FLOORING:						
Sec. D	131	RC30	CHIPPING OF EXISTING CC FLOORING TO MAKE IT SUITABLE FOR LAYING CERAMIC TILE FLOORING INCLUDING DISPOSAL OF DEBRIS WITHIN A LEAD OF 50 M	CUM	24		
Sec. D	132	RC31	PROVIDING AND LAYING OF 5.5 MM THICK CERAMIC TILES OF REQUIRED SIZE LAID OVER THE BED OF CM - 1:4 (1 CEMENT & 4 COARSE SAND) USING OPC GRADE 43/53 OR EQUIVALENT PPC.TILES FROM REPUTED MANUFACTURER LIKE JONSON OR EQUIVALENT INCLUDING ALL MATERIALS COMPLETE AS PER STANDARD PRACTICE AND SPECIFICATION.				
Sec. D	133	A	FLOORING -600MM X600MM	SQM	550		
Sec. D	134	B	FLOORING -300MM X300MM	SQM	250		
Sec. D	135	C	SKIRTING - 300MM X 150MM	SQM	45		
Sec. D	136	RC32	SUPPLYING AND FIXING OF WHITE GLAZED TILES OF REQUIRED SIZES LAID OVER THE BED OF CM - 1:4 (1 CEMENT & 4 COARSE SAND) USING OPC GRADE 43/53 OR EQUIVALENT PPC. DADO IN TOILET & PANTRY ROOM UP TO 1.5 M ELEVATIONS INCLUDING PEREPARATION OF BASE LAYING UNDERBED, FINISHING AND ROUNDING CORNERS AND JUNCTIONS, CURING ETC. COMPLETE AS PER DRAWINGS AND SPECIFICATIONS.				
Sec. D	137	A	FLOORING (5.0 MM TO 6.0MM THICK OF SIZE 300MM X 300MM)	SQM	100		

PART 2: REPAIRING AND REMOULDING WORK FOR BHEL OFFICE (APPROX AREA: 750 SQM) AND CLOSED STORAGE SHEDS-06 NOS (APPROX SIZE: 900 SQM EACH)

BOQ CUM RATE SCHEDULE, SECTION - D							
SECTION	SL.NO	ITEM CODE	DESCRIPTION OF WORK	UNIT	QTY.	RATE (Rs.)	AMOUNT (Rs.)
Sec. D	138	B	DADO (5MM TO 6MM THICK OF SIZE 150MM X 150MM) - 1.5M HEIGHT FROM FINISHED FLOOR LEVEL	SQM	67		
Sec. D	SANITARY WORKS:						
Sec. D	139	RS1	DISMANTLING OF FLUSHING CISTERN / HAND WASH BASIN / URINALS OF ALL TYPES (C.I. /PVC/VITROUS CHINA) INCLUDING STACKING OF USEFUL MATERIALS NEAR THE SITE AND DISPOSAL OF UNSERVICEABLE MATERIALS WITHIN 50 METRES LEAD.	NOS	9		
Sec. D	140	RS2	PROVIDING AND FIXING VITREOUS CHINA TYPE 10 LITRES LOW LEVEL CISTERN WITH COMPLETE FITTINGS INCLUDING MAKING ALL NECESSARY ARRANGEMENTS E.G. PROVIDING AND FIXING ANCHOR BOLTS, HOLD FASTS, MAKING OPENING IN WALLS AND REPAIRING THE DAMAGED WALLS WITH FILLING OF C.C. PLASTERING AND PAINTING COMPLETE AS PER STANDARD SPECIFICATIONS, DIRECTION OF BHEL ENGINEER.	NOS	3		
Sec. D	141	RS3	PROVIDING AND FIXING WHITE GLAZED VITREOUS CHINA WASH HAND BASIN OF 55 CM X 40 CM SIZE INCLUDING COLD WATER PILLER TAP, BRACKETS, STOP TAP, CHROMIUM PLATED BOTTLE TRAP AND NECESSARY PIPE CONNECTIONS INCLUDING UPVC WASTE PIPE AND TRAP UP TO THE OUT SIDE FACE OF THE WALL, MAKING GOOD THE DAMAGED SURFACE, TESTING ETC. COMPLETE. PRIOR APPROVAL OF SAMPLE AND BRAND BY BHEL ENGINEER IS NECESSARY BEFORE USE.	NOS	3		
Sec. D	142	RS4	PROVIDING AND FIXING EUROPEAN TYPE WHITE GLAZED VITREOUS CHINA W.C.PAN WITH UPVC SEAT AND LID WITH CHROMIUM PLATED BRASS HINGES AND RUBBER BUFFERS INCLUDING UPVC VENT PIPE (APPROX. 2M. HT. WITH COWL) ON THE OUTSIDE FACE OF WALL, 10 LITRE PVC LOW LEVEL FLUSHING CISTERN WITH ALL FITTINGS, PIPE AND STOP COCK, BRACKETS FOR FIXING CISTERN, 32 MM DIA. UPVC FLUSH PIPE WITH FITTINGS AND CLAMPS, 20 MM DIA. UPVC OVERFLOW PIPE, FLOAT VALVES, CUTTING AND MAKING GOOD TO THE WALLS AND FLOORS, TESTING, DISMANTLING AND REMOVING THE EXISTING INDIAN W.C. PAN AND DISPOSING THE UNSERVICABLE MATERIAL WITHIN 50 M LEAD ETC. COMPLETE. PRIOR APPROVAL OF SAMPLE AND BRAND BY BHEL ENGINEER IS NECESSARY BEFORE USE	NOS	3		
Sec. D	143	RS5	PROVIDING AND FIXING IN POSITION OF WHITE GLAZED EARTHENWARE FLAT BACK/CORNER TYPE LIPPED FRONT URINALS OF 430MM X 260MM X 350MM / 340X460X265 MM OF APPROVED MAKE AND QUALITY WITHOUT FLUSHING CISTERN, GI FLUSH PIPE AND SPREADERS WITH BRASS UNIONS, GI CLAMPS, CUTTING OF WALLS AND MAKING GOOD OF ALL DAMAGES AND FINISHING TO MATCH THE EXISTING WORK ETC. COMPLETE. RATE QUOTED SHALL INCLUDE COST OF ALL MATERIALS AND LABOUR FOR CARRYING, LAYING & FIXING AND ALL OTHER INCIDENTAL CHARGES ETC. COMPLETE.	NOS	4		
Sec. D	144	RS6	PROVIDING AND FIXING IN POSITION OF 15 MM DIA CONCUSSION PUSH BUTTON TYPE BRASS/ GUN METAL SELF CLOSING TAP INCLUDING NECESSARY SOCKET, TESTING ETC COMPLETE FOR URINALS AS PER DIRECTION OF BHEL ENGINEER.	NOS	4		
Sec. D	145	RS7	DISMANTLING OF EXISTING DAMAGED GI PIPES AND FITTINGS AND DISPOSAL OF THE UNSERVICABLE MATERIALS WITHIN 50 M LEAD. PROVIDING & FIXING GI PIPES COMPLETE WITH GI FITTINGS AND CLAMPS INCLUDING MAKING GOOD THE WALLS ETC. CONCEALED PIPE INCLUDING PAINTING WITH ANTI CORROSIVE BITUMASTIC PAINT, CUTTING CHASES AND MAKING GOOD THE WALL. (20 MM DIA NOMINAL BORE.)	RM	25		
Sec. D	146	RS8	REMOVING THE EXISTING DAMAGED KITCHEN SINK AND DISPOING THE UNSERVISABLE MATERIAL WITHIN A LEAD OF 50 M. PROVIDING AND FIXING OF 1 No. 18"X24" SIZE STAINLESS STEEL SINK WITH ALL FITTINGS LIKE DRAIN PIPE, STOP VALVE ETC.RATE TO INCLUDE ALL NECESSARY FITTING & FIXTURE, LABOUR ETC.AS APPROVED & DIRECTED BY BHEL ENGINEER.	NOS	1		
Sec. D	147	RS9	PROVIDING AND FIXING C.P. BRASS CHAIN AND RUBBER PLUG COMPLETE FOR SINK OR WASH BASIN :				
Sec. D	148	A	32 MM DIA	NOS	4		
Sec. D	149	B	40 MM DIA	NOS	3		
Sec. D	150	RS10	PROVIDING AND FIXING CHROMIUM PLATED TOWEL ROD 16 MM DIA. AND 75CM. IN LENGTH INCLUDING ALL ACCESSORIES COMPLETE. (PRIOR APPROVAL OF SAMPLE AND BRAND BY BHEL ENGINEER IS NECESSARY BEFORE USE).	NOS	4		
Sec. D	151	RS11	PROVIDING & FIXING OF LIQUID SOAP DISPENSER AT ALL WASH BASIN	NOS	4		
Sec. D	152	RS12	PROVIDING AND FIXING IN POSITION OF HIGH CLASS BELGIUM OR SUPERIOR MAKE BEVELLED EDGE MIRROR OF SIZE 450MM X 550MM X 6MM WITH 16 MM DIA & 550MM LENGTH NICKEL PLATED TOWEL ROD MOUNTED ON 6 MM THICK PLYWOOD OR PLASTIC FOLDER SHEET. RATE TO INCLUDE COST OF ALL MATERIALS, LABOUR FOR FIXING THE WOODEN PLUGS WITH CP BRASS SCREWS AND WASHERS ETC. COMPLETE.	NOS	3		
Sec. D	153	RS13	PROVIDING AND FIXING OF METALLIC DECORATIVE TYPE HEAVY DUTY PELMET ROD FOR DOORS AND WINDOWS. RATE TO INCLUDE ALL NECESSARY FITTING & FIXTURE, LABOUR ETC. AS APPROVED BY BHEL ENGINEER.	RM	15		

PART 2: REPAIRING AND REMOULDING WORK FOR BHEL OFFICE (APPROX AREA: 750 SQM) AND CLOSED STORAGE SHEDS-06 NOS (APPROX SIZE: 900 SQM EACH)

BOQ CUM RATE SCHEDULE, SECTION - D							
SECTION	SL.NO	ITEM CODE	DESCRIPTION OF WORK	UNIT	QTY.	RATE (Rs.)	AMOUNT (Rs.)
Sec. D	154	RS14	PROVIDING AND FIXING IN POSITION OF 25 MM DIA GATE VALVE.INCLUDING ALL NECESSARY FITTING & FIXTURE ETC. COMPLETE AS PER STANDARD SPECIFICATION.	NOS	10		
Sec. D	155	RS15	PROVIDING AND FIXING IN POSITION OF 40 MM DIA GATE VALVE. INCLUDING ALL NECESSARY FITTING & FIXTURE ETC. COMPLETE AS PER STANDARD SPECIFICATION.	NOS	7		
Sec. D	156	RS16	PROVIDING AND FIXING IN POSITION OF 15 MM DIA NOMINAL SIZE SCREW DOWN TYPE CHROMIUM PLATES BRASS BIB COCKS OF STANDARD TYPE OF APPROVED MAKE AND QUALITY (LEADER MAKE OR EQUIVALENT) AS PER STANDARD SPECIFICATION.RATE INCLUDES JOINTING MATERIALS,SOCKETS,UNION NUT,TESTING, LABOURS FOR CARRYING AND FIXING ETC. COMPLETE	NOS	11		
Sec. D	157	RS17	PROVIDING AND FIXING IN POSITION OF 15 MM DIA NOMINAL SIZE SCREW DOWN TYPE CHROMIUM PLATES BRASS STOP COCKS OF APPROVED MAKE AND QUALITY (LEADER MAKE OR EQUIVALENT) AS PER STANDARD SPECIFICATION.RATE INCLUDES COST OF JOINTING MATERIALS, SOCKETS,UNION NUT,TESTING, LABOURS FOR CARRYING AND FIXING ETC. COMPLETE	NOS	11		
Sec. D	158	RS18	PROVIDING AND FIXING IN POSITION OF 100MM X 50MM HCI "NAHANT" TRAP WITH HCI GRATINGS, BENDS, CONNECTING PIECES OF CI PIPE UPTO OUTSIDE FACE OF THE WALL. MAKING GOOD THE DAMAGED SURFACE,TESTING ETC COMPLETE AS PER STANDARD SPECIFICATIONS. RATE TO BE ALL INCLUSIVES.	NOS	14		
Sec. D	159	RS19	PROVIDING AND FIXING IN POSITION OF 150MM SALT GLAZED STONE WARE GULLY TRAP WITH HCI GRATINGS AND CI COVER OF SIZE 300X300 MM OF APPROVED MAKE (WEIGHT NOT LESS THAN 2 KG) AND QUALITY AS PER STANDARD SPECIFICATIONS. RATE TO BE ALL INCLUSIVE.	NOS	7		
Sec. D	160	RS20	PROVIDING AND LAYING WITH REQUIRED GRADING & LEVELING IN TRENCHES MEDIUM GRADE (TYPE) GALVANISED IRON (G I) PIPE HAVING EMBOSSED ISI MARK ON IT, OF REQUIRED DIAMETER WITH SCREWED, SOCKETS, JOINTS, NECESSARY GALVANISED IRON FITTINGS SUCH AS SOCKETS, BACK NUTS, ELBOWS, BENDS, TEES, REDUCERS, ENLARGERS, PLUGS, CLAMPS ETC. INCLUDING ALL NECESSARY EXCAVATION, BACK FILLING, FIXING WITH CLAMPS, TESTING ETC. COMPLETE. (PRIOR APPROVAL OF SAMPLE AND BRAND BY BHEL ENGINEER IS NECESSARY BEFORE USE.) RATE TO INCLUDE EARTH WORK EXCAVATION IN ALL SOILS, EXCEPT HARD ROCK REQUIRING BLASTING , SHORING, BALLING OR PUMPING OUT OF WATER WHEREVER REQUIRED, REMOVAL OF SLUSH ETC. REMOVING AND DEPOSITING SURPLUS EARTH AS DIRECTED BY THE BHEL ENGINEER INCLUDING ALL LEADS AND LIFTS AS PER SITE CONDITIONS.				
Sec. D	161	A	40MM DIA	RM	100		
Sec. D	162	B	25MM DIA	RM	100		
Sec. D	163	C	20MM DIA	RM	125		
Sec. D	164	D	15MM DIA	RM	150		
Sec. D	165	RS21	PROVIDING AT WORKING SITE, CARRYING AND LOWERING INTO TRENCHES, LAYING TO PROPER ALIGNMENT, LEVEL AND GRADE, JOINTING WITH CM (1:1) AND TESTING OF JOINTS ETC. OF THE FOLLOWING SIZE OF SALT GLAZED STONWARE PIPE INCLUSIVE OF ALL NECESSARY SPECIALS TARRER HEMP YARN AND ALL JOINTING MATERIALS COMPLETE AS PER STANDARD SPECIFICATIONS INCLUDING ALL NECESSARY EXCAVATION ,BACKFILLING,DISPOSAL OF SURPLUS EARTH ,LEAD AND LIFT AS PER SITE CONDITIONS. RATE SHALL INCLUDE COST OF ALL MATERIALS, LABOUR CHARGES AND INCIDENTAL CHARGES ETC. COMPLETE.				
Sec. D	166	A	100MM DIA STONWARE PIPELINE INCLUDING ALL SPECIALS COMPLETE.	RM	100		
Sec. D	167	RS22	PROVIDING AND FIXING IN POSITION OF PVC OVERHEAD WATER TANK OF SYNTAX OR ANY APPROVED MAKE OF 1000 LITRE CAPACITY WITH PROVISION FOR OVERFLOW ARRANGEMENT VALVES, INLET AND OUTLET ETC. COMPLETE. SUPPORTING STEEL STRUCTURE FOR FIXING THE TANK SHELL BE PAID IN THE RELEVANT ITEM.	NOS	2		
Sec. D	168	RS23	CONSTRUCTION OF 230MM THICK BURNT CLAY / FLY ASH LIME BRICK CHAMBER (USING OPC GRADE 43/53) OF THE FOLLOWING DIMENSIONS (INNER DIMENSION) WITH 20MM THICK INTERNAL & EXTERNAL CEMENT PLASTER OF MIX CM 1:5 (1 CEMENT & 5 COARSE SAND) , NEAT CEMENT FINISH , TOP CI - COVER AND CONNECTORS FOR SEWER LINES. RATE SHALL BE INCLUSIVE OF ALL NECESSARY EXCAVATION & FILLING, PCC-100 MM THICK OF 1:3:6 FOR BEDDING ON 100MM THICK OVERSIZER SOLING WITH 80 MM METALETC. COMPLETE.				
Sec. D	169	A	600X450X450 WITH C.I COVER	NOS	4		
Sec. D	170	B	900X600X450 WITH C.I. COVER	NOS	2		
Sec. D	171	RS24	PROVIDING AND FIXING OF PRECAST 80 MM THICK RCC COVER OF MIX 1:1.5:3 FOR MAN HOLES OF VARIOUS SIZES WITH REINFORCEMENT OF 10 MM DIA BOTH WAY TIED WITH TACK WELDING @ 150 MM C/C WITH 2 HOOKS OF 12 MM DIA BARS ETC.COMPLETE.				
Sec. D	172	A	750MM x 600MM	NOS	4		
Sec. D	173	B	1050MM x 750MM	NOS	2		

PART 2: REPAIRING AND REMOULDING WORK FOR BHEL OFFICE (APPROX AREA: 750 SQM) AND CLOSED STORAGE SHEDS-06 NOS (APPROX SIZE: 900 SQM EACH)

BOQ CUM RATE SCHEDULE, SECTION - D							
SECTION	SL.NO	ITEM CODE	DESCRIPTION OF WORK	UNIT	QTY.	RATE (Rs.)	AMOUNT (Rs.)
Sec. D	174	RS25	PROVIDING AND FIXING OF AQUA-GUARD OR EQUIVALENT WATER PURIFIER, ALONG WITH ALL FITTINGS. RATE TO INCLUDE ALL NECESSARY FITTINGS & FIXTURES, LABOUR ETC.AS APPROVED & DIRECTED BY BHEL ENGINEER.	NOS	2		
Sec. D	175	RS26	PROVIDING AND FIXING 40MM THICK BEST QUALITY 18 MM THICK GANG SAW CUT, MIRROR POLISHED, PREMOULDED AND PREPOLISHED, MACHINE CUT GRANITE SLAB FOR KITCHEN PLATFORMS OF REQUIRED SIZE, APPROVED SHADE, COLOUR AND TEXTURE LAID OVER 20 MM THICK BASE CM 1:4 (1 CEMENT : 4 COARSE SAND), JOINTS TREATED WITH WHITE CEMENT, MIXED WITH MATCHING PIGMENT, EPOXY TOUCHUPS, INCLUDING RUBBING, CURING, MOULDING AND POLISHING TO EDGES TO GIVE HIGH GLOSS FINISH etc.. COMPLETE OF REQUIRED SHAPE FOR FIXING SS SINK FOR KITCHEN COUNTER AND RACKS FOR KITCHEN STORE AREA ETC.COST INCLUSIVE OF MAKING OPENING AND FINISHING COMPLETE.	SQM	15		
Sec. D	176	RS27	PROVIDING & FIXING IN POSITION OF CI VENT PIPE OF DIA. 100MM (APPROX. HT. 3M) IN SEPTIC TANK INCLUDING DISMANTLING AND DISPOSING THE EXISTING DAMAGED VENT PIPES. RATE TO INCLUDE ALL NECESSARY FITTING & FIXTURE, LABOUR ETC.	RM	15		
Sec. D	177	RS28	DISPOSAL OF BUILDING RUBBISH / MALBA / SIMILAR UNSERVICEABLE, DISMANTLED OR WASTE MATERIALS (CIVIL & SANITARY WORK) BY MECHANICAL MEANS, INCLUDING LOADING, TRANSPORTING, UNLOADING TO APPROVED DUMPING GROUND OR AS APPROVED BY ENGINEER-IN-CHARGE, BEYOND 50 M INITIAL LEAD, FOR ALL LEADS (Max. 5 Kms) INCLUDING ALL LIFTS INVOLVED.	CUM	20		
Sec. D	HOTRICULTURE WORKS :						
Sec. D	178	RH1	GRASSING WITH SELECTION NO. 1 GRASS INCLUDING PREPARING THE GROUND SUITABLE FOR GRASSING BY EXCAVATION, PLOUGHING, WATERING ETC. AND MAINTENANCE OF THE LAWN FOR 30 DAYS OR MORE TILL THE GRASS FORMS A THICK LAWN, FREE FROM WEEDS AND FIT FOR MOWING INCLUDING SUPPLYING GOOD EARTH & MANURE AS DIRECTED BY BHEL ENGINEER.				
Sec. D	179	A	WITH GRASS TURF	100SQM	30		
Sec. D	180	RH2	PROVIDING AND LAYING BRICK ON EDGE FLOORING WITH BRICKS OF CLASS DESIGNATION 7.5 ON A BED OF 12MM CEMENT MORTAR, INCLUDING FILLING THE JOINTS WITH SAME MORTAR WITH COMMON BURNT CLAY NON MODULAR BRICKS:				
Sec. D	181	A	1:4 (1 CEMENT:4 COARSE SAND)	SQM	140		
Sec. D	ELECTRICAL WORKS:						
Sec. D	182	RE1	CHECKING COMPLETELY THE EXISTING COMMON MAIN DISTRIBUTIONS BOARDS/ LIGHTING PANELS AND REPLACING THE EXISTING DAMAGED FITTINGS AS REQUIRED AND AS DIRECTED BY BHEL ENGINEER ALL RCCBs, MCBs SHALL BE MDS/INDO KOPP OR EQUIVALENT MAKE. "DISTRIBUTION BOARDS SHALL BE PROVIDED WITH INTERNAL BUSBARS, INTERNAL WIRING, 2 NOS EARTHING TERMINALS, EARTH CONNECTIONS, INCLUDING GLANDS, LUGS Etc."				
Sec. D	183	A	INCOMING MCB TPH 100 AMPS.	NOS	2		
Sec. D	184	B	MCB TPH 32 AMPS.	NOS	7		
Sec. D	185	C	RCCB DP 25/20 AMPS.	NOS	6		
Sec. D	186	D	MCB SP 5 AMPS TO 32 AMPS	NOS	72		
Sec. D	187	E	32 AMP TPN WITH HRC FUSE	NOS	10		
Sec. D	188	F	125 AMP TP&N SFU WITH ISI MARKED HRC FUSES	NOS	1		
Sec. D	189	RE2	REWIRING FOR CIRCUIT / SUBMAIN, LIGHT POINT/ FAN POINT/ EXHAUST FAN POINT/ CALL BELL POINT WITH 2.5 SQ.MM FRLS PVC INSULATED COPPER CONDUCTOR SINGLE CORE CABLE AND 2.5 SQ.MM. FRLS PVC INSULATED COPPER CONDUCTOR SINGLE CORE CABLE AS EARTH WIRE IN EXISTING SURFACE/ RECESSED STEEL/PVC CONDUIT INCLUDING DISMANTLING, PROVIDING AND FIXING PVC CONDUITS (SURFACE / RECESSED) AS PER TECHNICAL SPECIFICATIONS AND AS DIRECTED BY BHEL ENGINEER. THE MAKE OF THE WIRE SHALL BE ONLY FROM KEI / POLY CAP/ HAVELLS/ FINOLEX/L&T/STANDARD.	RM	350		
Sec. D	190	RE3	REWIRING FOR CIRCUIT / SUBMAIN, LIGHT POINT/ FAN POINT/ EXHAUST FAN POINT/ CALL BELL POINT WITH 2.5 SQ.MM FRLS PVC INSULATED COPPER CONDUCTOR SINGLE CORE CABLE AND 2.5 SQ.MM. FRLS PVC INSULATED COPPER CONDUCTOR SINGLE CORE CABLE AS EARTH WIRE IN EXISTING SURFACE/ RECESSED STEEL/PVC CONDUIT INCLUDING DISMANTLING, REUSING DISMANTLED WIRE, PROVIDING AND FIXING PVC CONDUITS (SURFACE / RECESSED) AS PER TECHNICAL SPECIFICATIONS AND AS DIRECTED BY ENGINEER-IN-CHARGE. THE MAKE OF THE WIRE SHALL BE ONLY FROM KEI / POLY CAP/ HAVELLS/ FINOLEX/L&T/STANDARD.	RM	400		
Sec. D	191	RE4	REWIRING FOR CIRCUIT / SUBMAIN, LIGHT & POWER PLUG WITH 4 SQ.MM FRLS PVC INSULATED COPPER CONDUCTOR SINGLE CORE CABLE AND 4 SQ.MM. FRLS PVC INSULATED COPPER CONDUCTOR SINGLE CORE CABLE AS EARTH WIRE IN EXISTING SURFACE/ RECESSED STEEL/PVC CONDUIT INCLUDING DISMANTLING, PROVIDING AND FIXING PVC CONDUITS (SURFACE / RECESSED) AS PER TECHNICAL SPECIFICATIONS AND AS DIRECTED BY BHEL ENGINEER. THE MAKE OF THE WIRE SHALL BE ONLY FROM KEI / POLY CAP/ HAVELLS/ FINOLEX/L&T/STANDARD.	RM	250		

PART 2: REPAIRING AND REMOULDING WORK FOR BHEL OFFICE (APPROX AREA: 750 SQM) AND CLOSED STORAGE SHEDS-06 NOS (APPROX SIZE: 900 SQM EACH)

BOQ CUM RATE SCHEDULE, SECTION - D							
SECTION	SL.NO	ITEM CODE	DESCRIPTION OF WORK	UNIT	QTY.	RATE (Rs.)	AMOUNT (Rs.)
Sec. D	192	RE5	REWIRING FOR CIRCUIT / SUBMAIN, LIGHT & POWER PLUG WITH 4 SQ.MM FRLS PVC INSULATED COPPER CONDUCTOR SINGLE CORE CABLE AND 4 SQ.MM. FRLS PVC INSULATED COPPER CONDUCTOR SINGLE CORE CABLE AS EARTH WIRE IN EXISTING SURFACE/ RECESSED STEEL/PVC CONDUIT INCLUDING DISMANTLING, REUSING THE DIMANTLED WIRE, PROVIDING AND FIXING PVC CONDUITS (SURFACE / RECESSED) AS PER TECHNICAL SPECIFICATIONS AND AS DIRECTED BY BHEL ENGINEER. THE MAKE OF THE WIRE SHALL BE ONLY FROM KEI / POLY CAP/ HAVELLS/ FINOLEX/L&T/STANDARD.	RM	250		
Sec. D	193	RE6	REWIRING FOR CIRCUIT / SUB MAIN, POWER POINTS 5 AMP SOCKETS/ POWER SOCKETS Etc. WITH 6 SQ.MM FRLS PVC INSULATED COPPER CONDUCTOR SINGLE CORE CABLE AND 6 SQ.MM. FRLS PVC INSULATED COPPER CONDUCTOR SINGLE CORE CABLE AS EARTH WIRE IN EXISTING SURFACE/ RECESSED STEEL/PVC CONDUIT INCLUDING DISMANTLING, PROVIDING AND FIXING PVC CONDUITS (SURFACE / RECESSED) AS PER TECHNICAL SPECIFICATIONS AND AS DIRECTED BY BHEL ENGINEER. THE MAKE OF THE WIRE SHALL BE ONLY FROM KEI / POLY CAP/ HAVELLS/ FINOLEX/L&T/STANDARD.	RM	300		
Sec. D	194	RE7	REWIRING FOR CIRCUIT / SUB MAIN, POWER POINTS / 5 AMP SOCKETS/ POWER SOCKETS Etc. WITH 6 SQ.MM FRLS PVC INSULATED COPPER CONDUCTOR SINGLE CORE CABLE AND 6 SQ.MM. FRLS PVC INSULATED COPPER CONDUCTOR SINGLE CORE CABLE AS EARTH WIRE IN EXISTING SURFACE/ RECESSED STEEL/PVC CONDUIT INCLUDING DISMANTLING, REUSING THE DISMANTLED WIRE, PROVIDING AND FIXING PVC CONDUITS (SURFACE / RECESSED) AS PER TECHNICAL SPECIFICATIONS AND AS DIRECTED BY BHEL ENGINEER. THE MAKE OF THE WIRE SHALL BE ONLY FROM KEI / POLY CAP/ HAVELLS/ FINOLEX/L&T/STANDARD	RM	300		
Sec. D	195	RE8	REWIRING FOR CIRCUIT / SUB MAIN, 15 AMP SOCKETS/ AIR CONDITIONER POINTS WITH 16 SQ.MM FRLS PVC INSULATED COPPER CONDUCTOR SINGLE CORE CABLE AND 16 SQ.MM. FRLS PVC INSULATED COPPER CONDUCTOR SINGLE CORE CABLE AS EARTH WIRE IN EXISTING SURFACE/ RECESSED STEEL/PVC CONDUIT INCLUDING DISMANTLING, PROVIDING AND FIXING PVC CONDUITS SURFACE / RECESSED AS PER TECHNICAL SPECIFICATIONS AND AS DIRECTED BY ENGINEER-IN-CHARGE. THE MAKE OF THE WIRE SHALL BE ONLY FROM KEI / POLY CAP/ HAVELLS/ FINOLEX/L&T/STANDARD.	RM	50		
Sec. D	196	RE9	REWIRING FOR CIRCUIT / SUB MAIN, 15 AMP SOCKETS/ AIR CONDITIONER POINTS WITH 16 SQ.MM FRLS PVC INSULATED COPPER CONDUCTOR SINGLE CORE CABLE AND 16 SQ.MM. FRLS PVC INSULATED COPPER CONDUCTOR SINGLE CORE CABLE AS EARTH WIRE IN EXISTING SURFACE/ RECESSED STEEL/PVC CONDUIT INCLUDING DISMANTLING, REUSING DISMANTLED WIRE, PROVIDING AND FIXING PVC CONDUITS (SURFACE / RECESSED) AS PER TECHNICAL SPECIFICATIONS AND AS DIRECTED BY ENGINEER-IN-CHARGE. THE MAKE OF THE WIRE SHALL BE ONLY FROM KEI / POLY CAP/ HAVELLS/ FINOLEX/L&T/STANDARD	RM	50		
Sec. D	197	RE10	SUPPLYING AND DRAWING FOLLOWING PAIR 0.5 MM DIA FRLS PVC INSULATED ANNEALED COPPER CONDUCTOR, UNARMORED TELEPHONE CABLE IN THE EXISTING SURFACE/ RECESSED STEEL/ PVC CONDUIT AS REQUIRED INCLUDING DISMANTLING, PROVIDING AND FIXING PVC CONDUITS SURFACE / RECESSED AS PER TECHNICAL SPECIFICATIONS AND AS DIRECTED BY BHEL ENGINEER. THE MAKE OF THE WIRE SHALL BE ONLY FROM KEI / POLY CAP/ HAVELLS/ FINOLEX/L&T/STANDARD.	RM	500		
Sec. D	198	RE11	SUPPLY AND FIXING ALUMINIUM DISPERSIVE LUMINAIRE ENAMELED GREEN AND WHITE WITH CAST ALUMINIUM FLANGE AND NIPPLE SUITABLE FOR USE WITH GLS LAMP, DOME 12" DIAMETER, WITH HANGING BRACKET AND 200W GLS LAMP OF CROMPTON OR EQUIVALENT BAJAJ/PHILIPS MAKE, COMPLETE.	NOS	210		
Sec. D	199	RE12	WIRING WITH 2.5 SQ MM ISI MARK COPPER WIRE FOR ABOVE IN PVC CONDUIT ALONG WITH GI EARTH WIRE INCLUSIVE OF ALL MATERIAL, LABOUR ETC. COMPLETE	NOS	210		
Sec. D	200	RE13	DIMANTLING AND REMOVING EXISTING DAMAGED SWITCHES, SOCKETS/ OUTELTS & SUPPLYING AND FIXING FOLLOWING MODULAR SWITCH/ SOCKET (ANCHOR OR EQUIV) ON THE EXISTING MODULAR PLATE & SWITCH BOX INCLUDING CONNECTIONS BUT EXCLUDING MODULAR PLATE ETC. THE DIMANTLED UNSERVISABLE MATERIAL SHALL BE DISPOSED WITHIN 50 M LEAD.				
Sec. D	201	A	5/6 AMPS SWITCH	NOS	75		
Sec. D	202	B	2 WAY 5/6 AMPS SWITCH	NOS	15		
Sec. D	203	C	15/16 AMP SWITCH	NOS	35		
Sec. D	204	D	3 PIN 5/6 AMP SOCKET OUTLET	NOS	30		
Sec. D	205	E	6 PIN 15/16 AMP SOCKET OUTLET	NOS	35		
Sec. D	206	F	TELEPHONE SOCKET OUTLET	NOS	30		
Sec. D	207	G	BELL PUSH	NOS	30		
Sec. D	208	RE 14	SUPPLYING AND FIXING FOLLOWING SIZE MODULES, GI BOX ALONGWITH MODULAR BASE & COVER PLATE FOR MODULAR SWITCHES IN RECESS ETC AS REQUIRED.				
Sec. D	209	A	1 OR 2 MODULE (75MMX75MM)	NOS	15		
Sec. D	210	B	3 MODULE (100MMX75MM)	NOS	10		
Sec. D	211	C	4 MODULE (125MMX75MM)	NOS	10		
Sec. D	212	D	6 MODULE (200MMX75MM)	NOS	30		

PART 2: REPAIRING AND REMOULDING WORK FOR BHEL OFFICE (APPROX AREA: 750 SQM) AND CLOSED STORAGE SHEDS-06 NOS (APPROX SIZE: 900 SQM EACH)

BOQ CUM RATE SCHEDULE, SECTION - D							
SECTION	SL.NO	ITEM CODE	DESCRIPTION OF WORK	UNIT	QTY.	RATE (Rs.)	AMOUNT (Rs.)
Sec. D	213	RE15	SUPPLYING AND FIXING CALL BELL/ BUZZER SUITABLE FOR SINGLE PHASE, 230 VOLTS, COMPLETE AS REQUIRED.	NOS	10		
Sec. D	214	RE16	SUPPLYING AND FIXING OF FOLLOWING SIZES OF MEDIUM CLASS PVC CONDUIT ALONG WITH ACCESSORIES IN SURFACE/RECESS INCLUDING CUTTING THE WALL AND MAKING GOOD THE SAME IN CASE OF RECESSED CONDUIT AS REQUIRED.				
Sec. D	215	A	20 / 25 MM	RM	250		
Sec. D	216	RE17	SUPPLYING AND FIXING STEPPED TYPE ELECTRONIC FAN REGULATOR ON THE EXISTING MODULAR PLATE SWITCH BOX INCLUDING CONNECTIONS BUT EXCLUDING MODULAR PLATE ETC. AS REQUIRED.	NOS	20		
Sec. D	217	RE 18	REMOVING AND REINSTALLATION, TESTING AND COMMISSIONING OF EXISTING CEILING FAN REGULATOR, IN EXISTING SWITCH BOX INCLUDING CONNECTION WITH 1.5 SQ. MM FR PVC INSULATED, COPPER CONDUCTOR, SINGLE CORE CABLE, EARTHING THE REGULATOR ETC. AS REQUIRED. (EXISTING FAN REGULATORS SHALL BE REMOVED AND STACKED AT SAFE PLACE BEFORE START OF DISMANTLING WORK AS DIRECTED BY BHEL ENGINEER.)	NOS.	15		
Sec. D	218	RE19	PAINTING OF CEILING FAN /EXHAUST FAN IN INSTALLED POSITION WITH ONE OR MORE COATS OF SPRAY PAINTING WITH SYNTHETIC ENAMEL PAINT OF APPROVED BRAND AND MANUFACTURE TO GIVE AN EVEN SHADE, INCLUDING CLEANING OF SURFACE WITH DETERGENT ETC AS REQUIRED.	EACH	25		
Sec. D	219	RE20	SUPPLYING AND FIXING EXHAUST FANS 12" DIAMETER WITH FRAME OF STANDARD MANUFACTURER LIKE CROMPTAN GREEVES OR EQUIVALENT AS APPROVED BY BHEL ENGINEER. THIS INCLUDES LIGHT FITTINGS ETC., DISMANTLING THE EXISTING NON-FUNCTIONING/ DAMAGED EXHAUST FANS WHEREVER REQUIRED, STACKING THE SERVICABLE MATERIAL AND DISPOSING THE UNSERVICABLE MATERIAL WITHIN A LEAD OF 50 M. COMPLETE	NOS	5		
Sec. D	220	RE21	SUPPLYING AND FIXING METAL CLAD PLUG AND MCB OF 30AMPS. (CROMPTON/MDS MAKE) FOR AIR CONDITIONER WITH BOARD ETC COMPLETE.	NOS	35		
Sec. D	221	RE22	SUPPLYING AND FIXING CEILING FAN 48" DIAMETER OF APPROVED COMPANY SUCH AS CROMPTAN GREEVES OR ANY OTHER STANDARD MANUFACTURER AS DIRECTED BY BHEL ENGINEER. THIS INCLUDES LIGHT FITTINGS ETC., DISMANTLING THE EXISTING NON-FUNCTIONING/ DAMAGED CEILING FANS WHEREVER REQUIRED, STACKING THE SERVICABLE MATERIAL AND DISPOSING THE UNSERVICABLE MATERIAL WITHIN A LEAD OF 50 M. COMPLETE	NOS	20		
Sec. D	222	RE23	REMOVING AND REINSTALLATION, TESTING AND COMMISSIONING OF EXISTING CEILING FAN, INCLUDING WIRING THE DOWN RODS OF STANDARD LENGTH (UPTO 30 CM) WITH 1.5 SQ. MM FR PVC INSULATED, COPPER CONDUCTOR, SINGLE CORE CABLE, INCLUDING PROVIDING AND FIXING PHENOLIC LAMINATED SHEET COVER ON THE FAN BOX ETC. AS REQUIRED. EXISTING CEILING FANS SHALL BE REMOVED AND SATCKED AT SAFE PLACE BEFORE START OF DISMANTLING WORK IN OFFICE.	NOS	8		
Sec. D	223	RE24	PROVIDING, FIXING AND COMMISSIONING DECORATIVE TUBELIGHT (ON WALLS/FALSE CEILING) WITH FRAME OF STANDARD MANUFACTURER LIKE PHILIPS/BAJAJ OR EQUIVALENT AS APPROVED BY BHEL ENGINEER. THIS INCLUDES TUBE LIGHT FITTINGS ETC. COMPLETE. THE SCOPE ALSO INCLUDES DISMANTLING THE EXISTING DAMAGED FITTINGS STACKING THE SERVICABLE MATERIAL AND DISPOSING THE UNSERVICABLE MATERIAL WITHIN A LEAD OF 50 M.	NOS	100		
Sec. D	224	RE25	INSTALLATION, TESTING AND COMMISSIONING OF PRE-WIRED, FLUORESCENT FITTING / COMPACT FLUORESCENT FITTING OF ALL TYPES, WITH ALL ACCESSORIES AND TUBE ETC. DIRECTLY ON CEILING/ WALL, INCLUDING CONNECTION WITH 1.5 SQ. MM FR PVC INSULATED, COPPER CONDUCTOR, SINGLE CORE CABLE AND EARTHING ETC. AS REQUIRED. THIS INCLUDES DISMANTLING THE FLUORESCENT/ COMPACT FLUORESCENT FITTINGS BEFORE REMOVING THE OFFICE/ STORE PLASTER AND FALSE CEILING, STACKING THEM SAFELY AND REUSING THEM AS PER DIRECTION OF BHEL ENGINEER.	NOS	40		
Sec. D	225	RE26	INSTALLATION, TESTING AND COMMISSIONING OF PRE-WIRED, FLUORESCENT FITTING/ COMPACT FLUORESCENT FITTING OF ALL TYPES, WITH ALL ACCESSORIES AND TUBE ETC., INCLUDING SUPPLYING AND FIXING BALL AND SOCKET ARRANGEMENT, 2 NO. DOWN RODS OF 20 MM DIA X 1.6 MM THICK STEEL CONDUIT UPTO 30 CM LENGTH, PAINTING AND WIRING THE DOWN RODS AND CONNECTION WITH 1.5 SQ. MM FR PVC INSULATED, COPPER CONDUCTOR, SINGLE CORE CABLE AND EARTHING ETC AS REQUIRED. THIS INCLUDES DISMANTLING THE FLUORESCENT/ COMPACT FLUORESCENT FITTINGS BEFORE REMOVING THE OFFICE/ STORE PLASTER AND FALSE CEILING, STACKING THEM SAFELY AND REUSING THEM AS PER DIRECTION OF BHEL ENGINEER.	NOS	40		
Sec. D	226	RE27	PROVIDING EARTHING PITS WITH 2" DIA, 2 M LONG GI PIPES WITH FLANGE & GI WIRES WITH CHARCOL SALT AND AS PER STANDARD PRACTICE FOR ELECTRICAL CONNECTION. RATE SHALL BE INCLUSIVE OF ALL MATERIALS, LABOUR ETC. COMPLETE.	NOS	7		

PART 2: REPAIRING AND REMOULDING WORK FOR BHEL OFFICE (APPROX AREA: 750 SQM) AND CLOSED STORAGE SHEDS-06 NOS (APPROX SIZE: 900 SQM EACH)

BOQ CUM RATE SCHEDULE, SECTION - D							
SECTION	SL.NO	ITEM CODE	DESCRIPTION OF WORK	UNIT	QTY.	RATE (Rs.)	AMOUNT (Rs.)
Sec. D	227	RE28	DISPOSAL OF BUILDING RUBBISH / MALBA / SIMILAR UNSERVICEABLE, DISMANTLED OR WASTE MATERIALS (ELECTRICAL WORKS) BY MECHANICAL MEANS, INCLUDING LOADING, TRANSPORTING, UNLOADING TO APPROVED DUMPING GROUND OR AS APPROVED BY ENGINEER-IN-CHARGE, BEYOND 50 M INITIAL LEAD, FOR ALL LEADS (Max 5 Kms) INCLUDING ALL LIFTS INVOLVED.	CUM	10		
			TOTAL VALUE OF PART-2 (SECTION-D) In Rs.				
			TOTAL VALUE OF ALL ABOVE WORKS (Part 1 + Part 2) In Rs.				

Notes:

1	Contractor shall fully understand description and Specifications of items mentioned in BOQ.
2	Conditional price bids or price bids with any deviation / clarification etc. are liable to be rejected. No cutting / erasing / over writing shall be done.
3	Quantities mentioned in rate schedules are approximate only and liable for variation on either side depending upon site / design requirements. The tentative contract value (CV) of entire scope of work shall be calculated as per finally quoted / accepted rates & the Quantities indicated in Rate Schedule cum BOQ.
4	Contractor's total quoted price as per rate schedule will be taken as tentative only. The contractor undertakes to execute actual quantities as per advice of BHEL Engineer and accordingly the final contract price shall be worked out on the basis of quantities actually executed at site and payments will also be regulated for the same.
5	Evaluation of bids shall be done on total price (Part 1 + Part 2) against this rate schedule / BOQ.
6	In case of any mismatch in rate and amount on price discrepancy, the same will be dealt as per clause no. 1.4 of GCC.
7	Premises of Existing BHEL Office and Closed Storage Sheds shall be cleared of all grass, vegetations, rubbish and properly levelled such as to make the area properly clean and tidy without any waterlogging. No extra payment shall be made for such works.
8	Checking the existing reusable electrical fittings / sanitary fittings, cleaning and reinstalling them such as to make them reusable and functional is also in scope of this contract. All such works may not be specifically mentioned in this BOQ cum Rate schedule but shall be deemed to be included in scope of contract and has to be carried out by contractor as directed by BHEL Engineer. No extra payment shall be made for such works.
9	All the existing material of BHEL Office and Closed Storage Shed shall be properly preserved and safeguarded or dismantled and stacked at safe place before start of dismantling / rectification work as directed by BHEL Engineer. All such materials which are covered or removed before start of dismantling shall be resituated, re-installed and re-commissioned to their original position after completion of dismantling /rectification and replacement work. All such works which may not be specifically mentioned in BOQ, shall be deemed to be included in the scope of this contract and has to be carried out by contractor as directed by BHEL Engineer. No extra payment shall be made for such works.

(Signature Date and Seal of Authorized Representative of Bidder)