



भारत हेवी इलेक्ट्रिकल्स लिमिटेड

(भारत सरकार का उपक्रम)

BHARAT HEAVY ELECTRICALS LIMITED

(A Govt. of India Undertaking)

TCN - 02

Ref: PSER:SCT:NKP-C1723:TCN-02

Date: 07-05-2016

Sub	Tender Change Notice (TCN) - 02.	
Job	Civil, structural and architectural works of watch towers and boundary wall phase-II consisting mainly of factory manufactured precast RCC panels as well as cast-in-situ concrete boundary wall at specified locations as per drawing including all related works such as excavation, filling, formwork, reinforcement etc all complete as per specification including supply of all materials for 3 x 660 MW North Karanpura, STPP, Jharkhand.	
Ref	1.0	Tender no PSER:SCT:NKP-C1723:16.
	2.0	BHEL's NIT, vide reference no PSER:SCT: NKP-C1723:4856, dated 29-01-2016.
	3.0	BHEL's TCN-01, vide reference no PSER:SCT:NKP-C1723:TCN-01, dated 18-02-2016.
	4.0	Other References, if any.

With reference to above, following points/ documents, relevant to tender, may please be noted and complied with while submitting the offer.

- 1) Revised Pre-Qualifying criteria is attached herewith, superseding earlier PQ criteria (ANNEXURE-1) along with NIT.
- 2) The civil works of petrol roads, drains and culverts is included in the scope of work.
- 3) Revised BOQ cum price schedule, **VOLUME-III-PRICE SCHEDULE, REV-01** is attached superseding **VOLUME-III PRICE SCHEDULE, REV-00** issued earlier along with NIT. Bidder shall quote as per this revised Volume-III, Rev-01 only. Bidders are also requested to submit a declaration in techno-commercial offer that they have submitted their price bid in sealed envelope as per **REVISED price schedule format (VOLUME-III- PRICE SCHEDULE, REV-01)**.
Bidders who have already submitted offers, are required to submit their revised priced offer as per this **VOLUME-III- PRICE SCHEDULE, REV-01** along with acceptance of this TCN.
- 4) Due date of submission of offer is extended upto **16-05-2016**.
- 5) Revised 'No deviation certificate' is attached. Bidder to submit 'No deviation certificate' as per attached format only.
- 6) All other terms & conditions shall remain unchanged.

Thanking you,

Yours faithfully,
for BHARAT HEAVY ELECTRICALS LTD

Engineer (SCT)

Encl: As above.

पावर सेक्टर पूर्वी क्षेत्र (मुख्यालय)

POWER SECTOR EASTERN REGION, DJ-9/1, SALT LAKE CITY, KOLKATA - 700 091

फैक्स/Fax : (033) 23211960

फोन/Phone : बोर्ड/EPABX : (033) 23398234/ 23398000

PRE QUALIFYING CRITERIA (R-01)

JOB	Civil, structural and architectural works of watch towers and boundary wall phase-II consisting mainly of factory manufactured precast RCC panels as well as cast-in-situ concrete boundary wall at specified locations as per drawing including all related works such as excavation, filling, formwork, reinforcement etc all complete as per specification including supply of all materials for 3 x 660 MW North Karanpura, STPP, Jharkhand.
TENDER NO.	PSER:SCT:NKP-C1723:16

SL NO.	CRITERIA
A	
1.0	<p>BIDDERS SHOULD HAVE AVERAGE ANNUAL TURNOVER OF MINIMUM Rs. 7.81 CRORES DURING THE LAST 3 (THREE) FINANCIAL YEARS, ENDING ON 31-03-2015 AND SHOULD HAVE POSITIVE NET WORTH AS ON 31-03-2015.</p> <p>BIDDER MUST HAVE EARNED PROFIT IN ANY ONE OF THE LAST THREE FINANCIAL YEARS ENDING ON 31-03-2015. AUDITED BALANCE SHEET AND PROFIT & LOSS ACCOUNT OF THE COMPANY FOR LAST 3 (THREE) FINANCIAL YEARS, ENDING ON 31-03-2015 NEED TO BE SUBMITTED IN SUPPORT OF ABOVE.</p> <p>IN CASE AUDITED BALANCE SHEET AND PROFIT AND LOSS ACCOUNT HAS NOT BEEN SUBMITTED FOR ALL THREE YEARS INDICATED ABOVE THEN THE APPLICABLE FINANCIAL AUDITED STATEMENTS SUBMITTED BY THE BIDDERS AGAINST THE REQUISITE THREE YEARS WILL BE AVERAGED FOR THREE YEARS.</p> <p>IF FINANCIAL STATEMENTS ARE NOT REQUIRED TO BE AUDITED STATUTORILY, THEN INSTEAD OF AUDITED FINANCIAL STATEMENTS, FINANCIAL STATEMENTS ARE REQUIRED TO BE CERTIFIED BY CHARTERED ACCOUNTANT.</p>
2.1	<p>BIDDER SHOULD HAVE EXECUTED CIVIL WORKS IN ANY INDUSTRIAL/ POWER / INFRASTRUCTURE PROJECT(S) DURING THE LAST 7 (SEVEN) YEARS, ENDING ON THE LATEST DATE OF BID SUBMISSION, VALUE OF WHICH SHOULD NOT BE LESS THAN EITHER OF THE FOLLOWING :</p> <p>A) 1 (SINGLE) WORK OF VALUE NOT LESS THAN Rs. 20.81 CRORE OR B) 2 (TWO) WORKS OF VALUE NOT LESS THAN Rs. 13.01 CRORE EACH OR C) 3 (THREE) WORKS OF VALUE NOT LESS THAN Rs.10.40 CRORE EACH</p> <p>RELEVANT DOCUMENT IN SUPPORT OF ABOVE SHALL BE SUBMITTED.</p>
2.2	BIDDER SHOULD HAVE EXECUTED CONSTRUCTION OF AT LEAST 2.5 KM PRE-CAST/CAST IN SITU/ COMBINATION OF BRICK WALL & CAST IN SITU/ COMBINATION OF PRE-CAST & CAST IN SITU BOUNDARY WALL (IN A SINGLE OR THROUGH SEPARATE ORDER) IN ANY INDUSTRIAL/ POWER / INFRASTRUCTURE PROJECT(S) DURING THE LAST 7 (SEVEN) YEARS, ENDING ON THE LATEST DATE OF BID SUBMISSION.
3.0	<p>BIDDER SHOULD HAVE VALID PAN.</p> <p>RELEVANT DOCUMENT IN SUPPORT OF ABOVE SHALL BE SUBMITTED.</p>
4.0	CONSORTIUM/JV BIDDING IS NOT ALLOWED.
5.0	CONSIDERATION OF BIDDER IS SUBJECT TO CUSTOMER'S (NTPC) APPROVAL.
B	GENERAL
1.0	'EXECUTED' MEANS BIDDER SHOULD HAVE ACHIEVED THE CRITERIA SPECIFIED ABOVE EVEN IF THE CONTRACT HAS NOT BEEN COMPLETED OR CLOSED.
2.0	BIDDER SHOULD FURNISH INFORMATION REGARDING PROJECTS IN HAND, CURRENT LITIGATION, ORDERS REGARDING EXCLUSION/ EXPULSION OR BLACK LISTING.
3.0	AFTER SATISFACTORY FULFILLMENT OF ALL THE ABOVE CRITERIA, OFFER SHALL BE CONSIDERED FOR FURTHER EVALUATION AS PER NIT AND ALL OTHER TERMS OF THE TENDER.

पावर सेक्टर पूर्वी क्षेत्र (मुख्यालय)

POWER SECTOR EASTERN REGION, DJ-9/1, SALT LAKE CITY, SECTOR-II, KOLKATA - 700 091

फैक्स/Fax : (033) 23211960 फोन/Phone : बोर्ड/EPABX : (033) 23398234/ 23398000

Explanatory Notes for the PQR (unless otherwise specified in the PQR):

1. Bidder to submit Audited Balance Sheet and Profit and Loss Account for the respective years as indicated along with all annexures.
2. In case audited Financial statements have not been submitted for all the three years as indicated, then the applicable audited statements submitted by the bidders against the requisite three years, will be averaged for three years i.e total divided by three.
3. NETWORTH : Shall be calculated based on the latest Audited Accounts as furnished. Net worth = Paid up share capital + Reserves. (Net worth is required to be evaluated in case of companies)
4. PROFIT : shall be NET profit (PAT + Non cash expenditure viz depreciation) earned during any one of the three financial years.
5. 'Additional' Criteria in respect of 'Technical' criteria of PQR for Civil, Electrical, CI, unless otherwise specified:
 - i) 'Similar' work means
 - a. Civil or Structures or Civil & Structures or Chimney respectively as applicable to the tendered scope in respect of 'CIVIL' Works
 - b. Electrical works in respect of 'ELECTRICAL'
 - c. CI works in respect of 'CI' Works
 - d. Material Handling and/or Management works in respect of 'MM' works
6. Time period for achievement of the 'Technical' criteria of PQR will be the last 7 years ending on the 'latest date' of Bid submission
7. 'EXECUTED' means the Vendor should have achieved the criteria specified in the Technical criteria of PQR even if the Contract has not been completed or closed
8. Unless otherwise specified, for the purpose of 'Technical' criteria of PQR, the word 'EXECUTED' means:
 - i) "BOILER LIGHT UP" in respect of Boiler & Aux and ESP
 - ii) "SYNCHRONISATION" in respect of STG/GTG and 'SPINNING' in case of HTG
 - iii) "STEAM BLOWING COMPLETION" in respect of at least Main Steam Line of Power Cycle Piping
 - iv) "HYDRAULIC TEST" of the system in respect of Structures, Pressure parts/IBR Piping
 - v) "CHARGING" in respect of power Transformers, Bus ducts, HT/LT switchgears
 - vi) "Completion of RCC Shell and liner (steel or brick as per tendered scope) up to the HEIGHT specified using slip form" in case of RCC Chimney.
 - vii) Achievement of physical Quantities as per respective PQRs in respect of Civil & Structures and Piling Works
 - viii) "Readiness for coal Filling" in respect of Bunker Structure Work.
9. Boiler means HRSG or WHRB or any other types of Steam Generator
10. Critical/Power Cycle piping means Main Steam, Hot Reheat, Cold Reheat, HP Bypass, LP Bypass lines
11. For the purpose of evaluation of the PQR, one MW shall be considered equivalent to 3.5TPH where ever rating of HRSG/BOILER is mentioned in MW. Similarly, where ever rating of Gas Turbine is mentioned in terms of Frame size, ISO rating in terms of MW shall be considered for evaluation.
12. In case the experience/PO/WO certificate enclosed by bidders do not have separate break up prices for the E&C portion of Electrical and CI Works, (i.e. the certificates enclosed are for composite order for supply and erection of Electrical & CI and other works if any), then value of Erection and Commissioning for the Electrical & CI portion shall be considered as 15% of the supply & erection of Electrical & CI, unless otherwise specifically indicated in the PQR.
13. Scope for capital overhaul of STG shall cover Bearing Inspection work and overhauling of all cylinders of the Turbine unless otherwise specifically indicated in the PQR.
14. In case the tendered scope is not a Pulverised Fuel Boiler, experience of Oil/Gas Fired Boilers also can be considered unless otherwise specifically indicated in the PQR.
15. Value of work is to be updated as per the PVC formula of GCC with indices for "ALL India Avg. consumer price index for industrial workers" with base month as date of execution and indexed upto two months prior to the opening month.

पावर सेक्टर पूर्वी क्षेत्र (मुख्यालय)

POWER SECTOR EASTERN REGION, DJ-9/1, SALT LAKE CITY, SECTOR-II, KOLKATA - 700 091

फैक्स/Fax : (033) 23211960 फोन/Phone : बोर्ड/EPABX : (033) 23398234/ 23398000

**VOLUME-III
PRICE SCHEDULE, REV-01**

JOB: CIVIL, STRUCTURAL AND ARCHITECTURAL WORKS OF WATCH TOWERS AND BOUNDARY WALL PHASE-II CONSISTING MAINLY OF FACTORY MANUFACTURED PRECAST RCC PANELS AS WELL AS CAST IN-SITU CONCRETE BOUNDARY WALL AT SPECIFIED LOCATIONS AS PER DRAWING INCLUDING ALL RELATED WORKS SUCH AS EXCAVATION, FILLING, FORMWORK, REINFORCEMENT ETC ALL COMPLETE AS PER SPECIFICATION INCLUDING SUPPLY OF ALL MATERIALS FOR 3X660 MW NORTH KARANPURA STPP, JHARKHAND.

TENDER NO - PSER:SCT:NKP-C1723:16

SL. NO.	PREAMBLE
1	This preamble forms part of tender document and schedule of items. The tenderer should read this preamble carefully before filling in rates for various items. Clauses under this preamble shall be read in conjunction with Volume-1A, IB, 1C, 1D, 1E, 1F, II and other tender sections (as applicable as per NIT) and shall have precedence over any contrary statement mentioned any where in this document. The tenderer shall sign & stamp all the pages of the tender document as a token of their acceptance. Submission of unfilled formats with sign & stamp shall be construed as acceptance of the contents of the same.
2	The work shall be carried out strictly as per specifications, description of the items in these schedule and / or engineer's instructions. Drawings enclosed with the tender are only preliminary and for guidance/tender purposes giving some idea of the work involved. The work is to be executed as per terms & conditions of the tender and actual drawings/documents, which shall be furnished during execution.
3	Items of work provided in this schedule but not covered in this specification shall be executed strictly as per instruction of the engineer.
4	Unless specifically mentioned otherwise in the tender document, the tenderer shall quote for the finished items and shall provide for the complete cost towards power, fuel, tools, tackles, equipment, constructional plants, temporary works, labour, dismantling of all temporary piping, structures, valves, pumps, tanks & other misc. equipment, strengthening of roads/culverts/bridges etc. including arranging all clearances etc. required for carrying out different activities & tests, materials, levies, taxes(except service tax), transport, layout, repairs, rectification, maintenance till handing over, supervisions, colonies, shops, establishments, overheads, profits and all incidental items not specifically mentioned but reasonably implied and necessary to complete the work according to the complete tender document and this schedule.
5	The quantities of the various items mentioned in this schedule of items are approximate, based on very preliminary information and may vary to any extent or be deleted altogether. The quoted rates of each item will remain firm throughout the period of execution including extension, for reasons whatsoever, as long as variation in the total value of work executed under any part of this contract including extra items, if any but excluding any price variation remains, within fifteen percent ($\pm 15\%$) of the awarded price as per LOI.
6	Prior written approval of BHEL shall be sought by the contractor in case quantity variation of any item crosses +50% (plus fifty percent) limit during execution and approval to be obtained before execution of further quantity for this item.
7	In case Sealed /Paper Price Bids are opened for finalisation of the tender, for any Item Rate/BOQ based service contract, possibility of variation of quantity/ addition/deletion of items can not be ruled out. Under such circumstances, after execution of work, if it is observed that standing as L-1 is changed based on actual quantity executed, the bidder shall give suitable rebate to maintain your standing as L-1. Since this aspect can be assessed at the end of execution, necessary adjustment will be effected at the end of execution in final bill. This condition shall not be applicable where the tender is finalised through Reverse Auction.
8	BHEL reserve the right to rationalize the rates, quoted by L-1 bidder against unit rate items and/ or other optional items with respect to item-wise lowest rates (amongst the participating bidders), before placement of order. The rates of unit rate/optional items shall remain valid till execution of the order, if the job/work is awarded to the bidder.
9	The rates quoted shall be inclusive of cleaning of site of any vegetation, dressing, clearing of old structures and leveling etc. including fixing of grid pillars, benchmarks etc. required for commencement of site activities. No separate payment will be made towards the same. However, if separate rate for such item is available in the rate schedule, the same shall be considered.
10	Rates shall be quoted in figures and in words in clear legible writing. No overwriting is allowed. All scoring and cancellations should be countersigned and in case of illegibility the interpretation of engineer shall be final. All entries shall be in English language.
11	All works item wise shall be measured upon completion and paid for at the rates quoted and accepted as per BHEL approved payment schedule/billing break-up.
12	The tenderer shall be deemed to have visited site and made himself aware of all the site conditions, studied the specifications and details of work to be done within the time schedule attached and to have acquainted himself of the conditions prevailing at site before submission of his bid/offer. No claim whatsoever due to lack of knowledge of site conditions shall be entertained after award of the work.
13	No splitting of the job is envisaged unless the same is specifically indicated in the TCC/Vol-1F. Decision of BHEL in this regard shall be final and binding to the bidders.
14	Bidders are not allowed to alter the Price Schedule format including item description, quantity etc. and the offer is liable for rejection if the bidders submit their prices in Price Schedules modified by them. BHEL reserves the right to reject the offers of bidders who submit offers in Price Formats which are modified/ altered by them. Also putting any comments instead of rates/price in the designated column of the rate schedule shall make the offer liable for rejection.
15	Bidders to note that for Civil &/Structural packages, against a particular item against a ST No. appearing in more than one schedule of the BOQ, same rate must be quoted in all schedules for that particular items with same descriptions. If by error, different rates are quoted in different schedules for same ST No.(i.e. item with same description), then the higher of the rates shall be considered for evaluation but awarding shall be done with the lower rate, if the bidder becomes L-1. The same modality shall be applicable for other item rate service contracts where item with same description is repeated in different schedules.
16	For Lumpsum Service Contract: The items/components indicated in the tender is indicative and may vary to any extent. No compensation shall be payable in case of any variation in the items/components listed in the bill of quantities if the executed weight remains within the variation limit. However, in case of deletion of any item or addition of new items over and above the items listed or variation of existing quantity beyond variation limit specified, adjustment (i.e. Payment or recovery as the case may be) shall be done on pro-rata basis based on the Rate per MT worked out from the quoted lump-sum Price and the total weight of components listed /indicated in price schedule plus 15% weight variation limit.
17	Engineer's decision shall be final and binding on the contractor regarding clarification of items in the schedule with respect to the other sections/volumes of the contract.
18	In case of tender for Civil and/or Structural works, if the Non-schedule items are not quoted by the bidder, it will be treated at par with rate of corresponding item of CPWD/PWD/DSR schedule as prescribed in the tender/BOQ cum Rate Schedule. PVC/escalation is not payable for these Non-scheduled items.
19	No interest, whatsoever, shall be payable by BHEL on the security deposit, any bank guarantee submitted or any amount due to successful bidder/contractor. No idling charge whatsoever (either for labour or any other resources) is payable by BHEL for any reason whatsoever.

**VOLUME-III
PRICE SCHEDULE, REV-01**

JOB: CIVIL, STRUCTURAL AND ARCHITECTURAL WORKS OF WATCH TOWERS AND BOUNDARY WALL PHASE-II CONSISTING MAINLY OF FACTORY MANUFACTURED PRECAST RCC PANELS AS WELL AS CAST IN-SITU CONCRETE BOUNDARY WALL AT SPECIFIED LOCATIONS AS PER DRAWING INCLUDING ALL RELATED WORKS SUCH AS EXCAVATION, FILLING, FORMWORK, REINFORCEMENT ETC ALL COMPLETE AS PER SPECIFICATION INCLUDING SUPPLY OF ALL MATERIALS FOR 3X660 MW NORTH KARANPURA STPP, JHARKHAND.

TENDER NO - PSER:SCT:NKP-C1723:16

SL. NO.	PREAMBLE
20	Size and weights of various items are mentioned in the attached BOQ cum rate/price schedule for reference purpose only & these shall not be taken into consideration for quoting/calculating amount in the rate schedule. These shall be utilised as per relevant sections of tender. Bidders shall quote for each item in the rate column, taking unit as mentioned in the quantity column. Rates shall be filled in both figures and words. Amount shall be calculated based upon these rates multiplied by the mentioned quantity for the respective items.
21	Bidder's GRAND Total price shall be considered for evaluation unless stated otherwise.
22	In case of BOP packages, if Bidder does not quote/indicate the price for freight chages against indicated rate schedule, the same shall be considered as 2% of basic price and adjusted with the total quoated price against each item keeping the total quoted price unaltered.

**VOLUME-III
PRICE SCHEDULE, REV-01**

JOB: CIVIL, STRUCTURAL AND ARCHITECTURAL WORKS OF WATCH TOWERS AND BOUNDARY WALL PHASE-II CONSISTING MAINLY OF FACTORY MANUFACTURED PRECAST RCC PANELS AS WELL AS CAST IN-SITU CONCRETE BOUNDARY WALL AT SPECIFIED LOCATIONS AS PER DRAWING INCLUDING ALL RELATED WORKS SUCH AS EXCAVATION, FILLING, FORMWORK, REINFORCEMENT ETC ALL COMPLETE AS PER SPECIFICATION INCLUDING SUPPLY OF ALL MATERIALS FOR 3X660 MW NORTH KARANPURA STPP, JHARKHAND.

TENDER NO. PSER:SCT:NKP-C1723:16

SCH-1 - TOTAL PRICE

SL NO	DESCRIPTION	AMOUNT (INR)
1.0	TOTAL PRICE FOR BOUNDARY WALL - PHASE II (SCH-2).	
2.0	TOTAL PRICE FOR WATCH TOWERS (SCH-3).	
3.0	GRAND TOTAL PRICE	

NOTE

1.0	Bidder's quoted total price at sl no 3.0 above shall be taken into account for evaluation. However, bidder shall furnish break-up of grand total price for various systems in the respective schedules and shall be complete in all respects as per provision of tender and technical specification.
2.0	Bidder shall furnish item-wise break-up of above grand total price in the respective schedule as per following. Total of prices of various schedules shall match with above total price.
2.1	SCH-2 - BOUNDARY WALL PHASE II
2.2	SCH-3 - WATCH TOWERS
3.0	Bidder shall quote their rates/ prices against all components as per the schedules & terms & conditions of tender.
4.0	BHEL reserve the right to rationalize the rates, quoted by L-1 bidder against non schedule items (As per Sl. No. B (1a, 1b, 1c) of SCH-2 with respect to item-wise lowest rates (amongst the participating bidders), before placement of order. Item B 1a, 1b, 1c of SCH 2 shall be applicable for SCH-3 also.
5.0	Bidder to note that against a particular item against a ST No. appearing in more than one schedule of the BOQ of an individual Package, same rate must be quoted in all schedules for that particular items with same descriptions. Schedules have been classified only for the purpose of identification of the quantum of job involved in different areas of execution. Further, if by error, different rates are quoted in different schedules for same ST No. i.e. item with same description, then the higher of the rates shall be considered for evaluation but awarding shall be done with the lower rate, if the bidder becomes L-1."

VOLUME-III PRICE SCHEDULE, REV-01					
JOB: CIVIL, STRUCTURAL AND ARCHITECTURAL WORKS OF WATCH TOWERS AND BOUNDARY WALL PHASE-II CONSISTING MAINLY OF FACTORY MANUFACTURED PRECAST RCC PANELS AS WELL AS CAST IN-SITU CONCRETE BOUNDARY WALL AT SPECIFIED LOCATIONS AS PER DRAWING INCLUDING ALL RELATED WORKS SUCH AS EXCAVATION, FILLING, FORMWORK, REINFORCEMENT ETC ALL COMPLETE AS PER SPECIFICATION INCLUDING SUPPLY OF ALL MATERIALS FOR 3X660 MW NORTH KARANPURA STPP, JHARKHAND					
TENDER NO. PSER:SCT:NKP-C1723:16					
SCH-2- BOUNDARY WALL PHASEII					
ST. NO	DESCRIPTION OF ITEM	UNIT	QUANTITY for Phase II	RATE (INR)	AMOUNT (INR)
100 EARTH WORK					
Earth work In excavation, backfilling and disposal including necessary men/women, materials, equipment, loading, transportation, unloading, dewatering etc as per specification, drawing and as directed by engineer- in-charge for the following.					
101	Earth work in excavation in all types of soil including ash which can be excavated by any means including setting out, levelling, dewatering (but excluding special type of dewatering viz. well point method), shoring & strutting (wherever required), dressing the sides & bottom, all lifts, ramming/compacting the excavated bottom, stacking, disposal of surplus excavated materials within a lead upto 500 m, spreading/levelling of disposed materials etc all complete for following depths below ground level.				
a	Depth from ground level but not exceeding 2 m	CUM	65,000		
b	Depth exceeding 2 m but not exceeding 4 m	CUM	12,200		
103	Earth work in excavation in soft rock (rock without any recovery of excavated materials in the form of hard stone/boulder) including weathered rock which can be excavated by means of crow bar, pick axe, pneumatic rock breaker attachment with excavator machine etc but does not require chiselling or blasting including setting out, levelling, dewatering (wherever required), shoring & strutting (wherever required), dressing the sides & bottom, all lifts, ramming/compacting the excavated bottom, stacking, disposal of surplus excavated materials within a lead upto 500 m, spreading / levelling of disposed materials etc all complete for following depths below ground level.				
a	Depth from ground level but not exceeding 2 m	CUM	15,000		
107	Back filling upto any depth below ground level around foundations, plinths, trenches, drains etc to proper grade and level in layers not exceeding 250 mm thickness using/with selected materials from compulsorily excavated soil available within a lead upto 500m and compacted as specified including re-excavation of stacked earth, watering, ramming/compaction by manual/mechanical means, dressing etc all complete for the following.				
a	Each layer compacted so as to achieve at least 95% maximum dry density as per IS-2720 (Part-VII)	CUM	43,500		
108	Back filling upto any depth below ground level around foundations, plinths, trenches, drains etc to proper grade and level in layers not exceeding 250 mm thickness using/with selected materials directly from excavation and compacted as specified including watering, ramming/compaction by manual/mechanical means, dressing etc all complete for the following.				
a	Each layer compacted so as to achieve at least 95% maximum dry density as per IS-2720 (Part-VII)	CUM	43,500		
200 CONCRETE WORKS					
Providing and placing concrete work including cost of labour, materials and equipment for handling, transportation, batching, mixing, placing, vibrating and curing, (excluding cost of centering, shuttering and reinforcement) with mechanised equipments like batching plant, transit mixer, concrete pump etc. complete as per drawing, specifications and as per direction of engineer in charge for the following.					
201	Concrete of grade M7.5 (1 part cement, 4 part sand, 8 parts of 40 mm graded aggregate by volume) as filling course Lean concrete at any depth below finished floor level, under and around foundations/floors, mass fill etc. (CEMENT WILL BE SUPPLIED FREE OF COST BY BHEL AS PER TCC)	CUM	950		
204	Concrete in plinth protection around boundary wall, PCC below columns in boundary wall etc. complete with 20 mm nominal size graded aggregate at any depth below finished floor level for the following grades. (CEMENT WILL BE SUPPLIED FREE OF COST BY BHEL AS PER TCC)				
a	M20 Grade	CUM	1,000		
205	Providing and laying Design Mix cast in situ cement concrete of required slump, conforming to IS:456 & IS 10262-2009 for reinforced concrete works with coarse sand and graded hard stone aggregate of 20mm nominal size in boundary wall foundations at any level below finished ground/floor level, any shape, position or thickness etc complete as per specification & drawing for following grades. (CEMENT WILL BE SUPPLIED FREE OF COST BY BHEL AS PER TCC)				
a	M30 Grade	CUM	2,500		
b	M25 grade	CUM	500		

VOLUME-III PRICE SCHEDULE, REV-01					
JOB: CIVIL, STRUCTURAL AND ARCHITECTURAL WORKS OF WATCH TOWERS AND BOUNDARY WALL PHASE-II CONSISTING MAINLY OF FACTORY MANUFACTURED PRECAST RCC PANELS AS WELL AS CAST IN-SITU CONCRETE BOUNDARY WALL AT SPECIFIED LOCATIONS AS PER DRAWING INCLUDING ALL RELATED WORKS SUCH AS EXCAVATION, FILLING, FORMWORK, REINFORCEMENT ETC ALL COMPLETE AS PER SPECIFICATION INCLUDING SUPPLY OF ALL MATERIALS FOR 3X660 MW NORTH KARANPURA STPP, JHARKHAND					
TENDER NO. PSER:SCT:NKP-C1723:16					
SCH-2- BOUNDARY WALL PHASEII					
ST. NO	DESCRIPTION OF ITEM	UNIT	QUANTITY for Phase II	RATE (INR)	AMOUNT (INR)
212a	Engineering, Design and drawing of Prestressed precast boundary wall as per specification and general arrangement(GA) of boundary wall furnished by BHEL, submission of design calculations and drawings to BHEL/NTPC, incorporation of comments in submitted drawings/calculations to finally obtain approved design calculations/drawings from BHEL/NTPC for construction at site. Preliminary general arrangement of boundary wall is enclosed along with tender document for information only. Actual general arrangement shall be furnished to successful bidder during detail engineering and no extra claim by the bidder shall be entertained on account of variation between actual GA & GA furnished with tender.- FOR BOUNDARY WALL PHASE II.	Lumpsum	1		
213	Providing and laying factory manufactured Prestressed precast Reinforced concrete columns as per approved design and drawing submitted by bidder with design Mix cement concrete of grade M30 as per IS:456 & IS 10262-2009 using graded aggregate for Concrete in precast boundary-wall works . The work shall include cost of formwork/moulds , provision of suitable grooves/matching key/pockets for fixing of wall panels, Y shaped MS posts for cocertina etc., curing, rendering the top exposed surface with cement sand mortar (1:3), handling, storing, transpoting for all leads, erection with required T&P without damage, setting in position inside foundation collar with M30 grade cement concrete with 10 mm down stone aggregates, etc all complete with graded aggregate (20/12.5/10 mm) and as per specification and drawing.(Pockets/embedded plates for fixing of Y shaped MS posts for concertina shall be provided as per drawing, embedded plates, concertina and Y shaped MS post to be paid separately as per item no 2006). Bidder has to manufacture precast columns at factory equipped with required prstrestressing equipment and transport to site & store at location identified by BHEL/NTPC. Cost of transportaion from factory to site etc. is included in this item. ALL MATERIALS TO BE SUPPLIED BY CONTRACTOR FOR FACTORY MANUFACTURED PRE-CAST WORKS.	CuM	2,100		
213A	Providing and laying factory manufactured Precast Reinforced concrete wall panels, copings, architectural features etc. as per approved design and drawing submitted by bidder with design Mix cement concrete of grade M30 as per IS:456 & IS 10262-2009 using graded aggregate for Concrete in precast boundary-wall works . The work shall include cost of formwork/moulds , provision of suitable grooves/key for interlocking of panels after erection, curing, rendering the top exposed surface with cement sand mortar (1:3), handling, storing, transpoting for all leads, erection with required T&P without damage, setting in position with cement sand mortar (1:3), filling the gaps with cement sand mortar (1:3) , etc all complete with graded aggregate (20/12.5/10 mm) and as per specification and drawing. Bidder has to manufacture precast items at factory and transport to site & store at location identified by BHEL/NTPC. Cost of transportaion from factory to site etc. is included in this item. Logo of NTPC as per their standard design shall be inbuilt in upper wall panels as per approved design and formwork shall be made suitably to incorporate NTPC logo in mould. ALL MATERIALS TO BE SUPPLIED BY CONTRACTOR FOR FACTORY MANUFACTURED PRE-CAST WORKS.	CUM	2,950		
213B	Providing and laying Design Mix cement concrete as per IS:456 for cast in situ reinforced concrete works using graded aggregate for boundary-wall works (column, wall panels, copings, architectural features as per drawing etc. all complete) , curing, rendering the top exposed surface with cement sand mortar (1:3), etc all complete with graded aggregate (20/12.5/10 mm) and as per specification and drawing for following grades.(Pockets/embedded plates for fixing of Y shaped MS posts for concertina shall be provided as per drawing, embedded plates, concertina and Y shaped MS post to be paid separately as per item no 2006). (CEMENT WILL BE SUPPLIED FREE OF COST BY BHEL AS PER TCC)				
a	M 30 grade	CUM	1,300		
300 FORM WORKS					
Providing, fixing and removing formwork at any elevations for all structures, as per specifications and including all labour, material, scaffoldings and centering complete including pockets etc. complete as per drawing, specifications and as per direction of engineer in charge for the following.					
301	Fairface form work with good quality water proof ply wood of required thickness and smooth surface below finished ground floor level for foundations/ footings, of boundary wall all complete.	SQM	13,300		
400 REINFORCEMENT/HTS WIRE					
402	Providing, straightening, cutting, bending, placing in position at any level, binding in position of steel reinforcements of TMT steel of grade Fe-500 HYSD conforming to IS:1786 including cost of binding wire, labour, scaffolding, transportation to & from stores etc complete all as per specifications, drawings and as directed by Engineer. (REINFORCEMENT STEEL WILL BE SUPPLIED FREE OF COST BY BHEL AS PER TCC)	MT	600		

VOLUME-III PRICE SCHEDULE, REV-01					
JOB: CIVIL, STRUCTURAL AND ARCHITECTURAL WORKS OF WATCH TOWERS AND BOUNDARY WALL PHASE-II CONSISTING MAINLY OF FACTORY MANUFACTURED PRECAST RCC PANELS AS WELL AS CAST IN-SITU CONCRETE BOUNDARY WALL AT SPECIFIED LOCATIONS AS PER DRAWING INCLUDING ALL RELATED WORKS SUCH AS EXCAVATION, FILLING, FORMWORK, REINFORCEMENT ETC ALL COMPLETE AS PER SPECIFICATION INCLUDING SUPPLY OF ALL MATERIALS FOR 3X660 MW NORTH KARANPURA STPP, JHARKHAND					
TENDER NO. PSER:SCT:NKP-C1723:16					
SCH-2- BOUNDARY WALL PHASEII					
ST. NO	DESCRIPTION OF ITEM	UNIT	QUANTITY for Phase II	RATE (INR)	AMOUNT (INR)
402A	Providing, straightening, stretching, placing in position as per drawing, cutting after casting of concrete etc. of uncoated stress relieved strands (diameter, length, ply and number as per drawing) of minimum 0.2 percent proof load of 32460 N confirming to IS:6006 in precast wall panels, columns etc. complete all as per specifications, drawings and as directed by Engineer. ALL MATERIALS TO BE SUPPLIED BY CONTRACTOR	MT	30		
2006	Supplying and fixing 600mm high concertina on top of boundary wall as per specification with Y shaped MS angle (maximum loop spacing of 125mm) including GI tension wires, clips, anchors, accessories, embedded plates etc. all complete. Concertina shall be from tensile serrated galvanised wire (HTSW) made with wire diameter of 2.5 mm which will be stretched to 6m and attached on two strands of galvanised HTSSW (high tensile spring steel wire) of 2.5mm dia by means of clips at 1m interval. These two HTSSW strands will be attached to the fence posts/ angles with 12 mm security fasteners. All nuts, bolts, fasteners, clamping strips, clamps, clips etc. shall be galvanized (@610 gm/sq.m.). MS angle posts, embedded plates etc. shall be painted with chlorinated rubber paint provided over 50 micron thick chlorinated rubber based zinc phosphate primer coat. cost of galvanization/painting etc. is included in this item. ALL MATERIALS TO BE SUPPLIED BY CONTRACTOR	RM	13,000		
2304	Providing and applying 60 micron thick self curing inorganic Zinc ethyle silicate primer coat over blast cleaned MS angle posts, embedded plates etc. followed by minimum 75 micron DFT of Intermediate Coat of Polyamide Cured pigmented Micaceous Iron Oxide (MIO content minimum 30%) Epoxy based Paint (Solid by Volume Minimum 62+2%) as intermediate coat . Intermediate Coat shall be followed with the application of Finish Coat of Polyamide Cured colour pigmented Epoxy based Paint (Solid by Volume Minimum 60%) of Minimum 75 Micron DFT. Finish Coat shall be followed with the application of Final Finish Coat of Polyurethane based colour pigmented Paint of minimum 50 micron DFT. cost of primer and paint is included in this item.	MT (of steel)	40		
2304A	Providing and applying two coats of total 60 micron DFT red oxide primer coat over manually cleaned MS angle posts, embedded plates etc. followed by two coats of minimum 75 micron total DFT of synthetic enamel paint.	MT (of steel)	34		
TOTAL PRICE FOR BOUNDARY WALL PHASEII (SCH-2)					
B	NON-SCHEDULE ITEMS (For items not covered in the above schedule, quote % below/ at par/ above of DSR-2013)				
1a	Rate of complete item.			___%	
1b	Rate of supply of materials at site only.			___%	
1c	Rate for execution complete excluding supply of materials.			___%	

VOLUME-III PRICE SCHEDULE, REV-01					
JOB: CIVIL, STRUCTURAL AND ARCHITECTURAL WORKS OF WATCH TOWERS AND BOUNDARY WALL PHASE-II CONSISTING MAINLY OF FACTORY MANUFACTURED PRECAST RCC PANELS AS WELL AS CAST IN-SITU CONCRETE BOUNDARY WALL AT SPECIFIED LOCATIONS AS PER DRAWING INCLUDING ALL RELATED WORKS SUCH AS EXCAVATION, FILLING, FORMWORK, REINFORCEMENT ETC ALL COMPLETE AS PER SPECIFICATION INCLUDING SUPPLY OF ALL MATERIALS FOR 3X660 MW NORTH KARANPURA STPP, JHARKHAND.					
TENDER NO. PSER:SCT:NKP-C1723:16					
SCH-3- WATCH TOWERS					
ST. NO	DESCRIPTION OF ITEM	UNIT	QUANTITY	RATE (INR)	AMOUNT (INR)
100 EARTH WORK					
Earth work in excavation, backfilling and disposal including necessary men/women, materials, equipment, loading, transportation, unloading, dewatering etc as per specification, drawing and as directed by engineer- in-charge for the following.					
101	Earth work in excavation in all types of soil including ash which can be excavated by any means including setting out, levelling, dewatering (but excluding special type of dewatering viz. well point method), shoring & strutting (wherever required), dressing the sides & bottom, all lifts, ramming/compacting the excavated bottom, stacking, disposal of surplus excavated materials within a lead upto 500 m, spreading/levelling of disposed materials etc all complete for following depths below ground level				
a	Depth from ground level but not exceeding 2 m	CUM	3,400		
b	Depth exceeding 2 m but not exceeding 4 m	CUM	408		
107	Back filling upto any depth below ground level around foundations, plinths, trenches, drains etc to proper grade and level in layers not exceeding 250 mm thickness using/with selected materials from compulsorily excavated soil available within a lead upto 500m and compacted as specified including re-excavation of stacked earth, watering, ramming/compaction by manual/mechanical means, dressing etc all complete for the following.				
a	Each layer compacted so as to achieve at least 95% maximum dry density as per IS-2720 (Part-VII)	CUM	884		
108	Back filling upto any depth below ground level around foundations, plinths, trenches, drains etc to proper grade and level in layers not exceeding 250 mm thickness using/with selected materials directly from excavation and compacted as specified including watering, ramming/compaction by manual/mechanical means, dressing etc all complete for the following				
a	Each layer compacted so as to achieve at least 95% maximum dry density as per IS-2720 (Part-VII)	CUM	1,632		
110	Back filling upto any depth below ground level around foundations, plinths, trenches, drains etc to proper grade and level in layers not exceeding 250 mm thickness using/with approved borrowed soil (borrowed soil to be arranged by the bidder) and compacted as specified including supplying borrowed soil, royalty (if any), watering, ramming/compaction by manual/mechanical means, dressing etc all complete for the following				
a	Each layer compacted so as to achieve at least 95% maximum dry density as per IS-2720 (Part-VII)	CUM	1,156		
111	Supplying and filling sand upto any depth under floors, around foundations, plinths etc. in layers not exceeding 250 mm thickness and compacted so as to achieve at least 80% relative density as per IS-2720 (Part-XIV) including spreading, watering, ramming/compaction by manual / mechanical means, dressing, royalty (if any) etc. all complete	CUM	14		
200 CONCRETE WORKS					
Providing and placing concrete work including cost of labour, materials and equipment for handling, transportation, batching, mixing, placing, vibrating and curing, (excluding cost of centering, shuttering and reinforcement) with mechanised equipments like batching plant, transit mixer, concrete pump etc. complete as per drawing, specifications and as per direction of engineer in charge for the following. (CEMENT WILL BE SUPPLIED FREE OF COST BY BHEL AS PER TCC)					
201	Concrete of grade M7.5 (1 part cement, 4 part sand, 8 parts of 40 mm graded aggregate by volume) as filling course Lean concrete at any depth below finished floor level, under and around foundations/floors, mass fill etc.	CUM	20		
202	Concrete of grade M10 (1 part cement, 3 part sand, 6 parts of 40 mm graded aggregate by volume) as lean concrete, levelling course , mud mat under and around foundations/floors at any depth below finished floor level etc.	CUM	53		
205	Providing and laying Design Mix cement concrete conforming to IS:456 & IS 10262-2009 for reinforced concrete works with coarse sand and graded hard stone aggregate of 20mm nominal size in foundations/substructure, grade slab, paving, drains, under floors etc at any level below finished floor level, any shape, position or thickness etc complete including use of plasticizer/ superplasticizer conforming to IS:9103 (latest) to achieve required slump in concrete all complete as per specification & drawing for the following.				
b	M25 Grade	CUM	286		
206	Providing and laying Design Mix cement concrete conforming to IS:456 & IS 10262-2009 for reinforced concrete works with coarse sand and graded hard stone aggregate of 20mm nominal size in superstructure at any level above finished floor level, any shape, position or thickness etc complete including use of plasticizer/ superplasticizer conforming to IS:9103 (latest) to achieve required slump in concrete all complete as per specification & drawing for the following.				
a	M25 Grade	CUM	153		
212	Screed concrete conforming to IS 456 with coarse sand and graded hard stone aggregate 12.5mm/6 mm nominal size on the roof at any level or thickness, drains etc complete as per following				
a	1:2:4 (1 part cement, 2 part sand, 4 parts of aggregate by volume)(not less than M-10)	CUM	14		

VOLUME-III PRICE SCHEDULE, REV-01					
JOB: CIVIL, STRUCTURAL AND ARCHITECTURAL WORKS OF WATCH TOWERS AND BOUNDARY WALL PHASE-II CONSISTING MAINLY OF FACTORY MANUFACTURED PRECAST RCC PANELS AS WELL AS CAST IN-SITU CONCRETE BOUNDARY WALL AT SPECIFIED LOCATIONS AS PER DRAWING INCLUDING ALL RELATED WORKS SUCH AS EXCAVATION, FILLING, FORMWORK, REINFORCEMENT ETC ALL COMPLETE AS PER SPECIFICATION INCLUDING SUPPLY OF ALL MATERIALS FOR 3X660 MW NORTH KARANPURA STPP, JHARKHAND.					
TENDER NO. PSER:SCT:NKP-C1723:16					
SCH-3- WATCH TOWERS					
ST. NO	DESCRIPTION OF ITEM	UNIT	QUANTITY	RATE (INR)	AMOUNT (INR)
213	Providing and laying Precast drain covers (perforated or non-perforated cover including hooks for lifting as per drawing & engineer's instruction) as per IS:456 & IS 10262-2009 for reinforced concrete works using graded aggregate (20/12.5/10 mm) for Concrete at all levels including formwork/moulds, curing, rendering the top exposed surface with cement sand mortar (1:3), handling, storing, transpoting, at all leads, erection without damage, setting in position with cement sand mortar (1:3), filling the gaps between adjacent precast units with M25 grade concrete or cement sand mortar (1:3) etc.complete as per specification and drawing for following grades.				
a	M 25 grade	CUM	5		
b	M 30 grade	CUM	5		
300 FORM WORKS					
Providing, fixing and removing formwork at any elevations for all structures, as per specifications and including all labour, material, scaffoldings and centering complete including pockets etc. complete as per drawing, specifications and as per direction of engineer in charge for the following.					
301A	Fairface form work with good quality water proof ply wood with film face of required thickness and smooth surface below finished ground floor level for foundations, footings, base of columns, walls, columns, pilasters, beams, trenches etc	SQM	1,976		
302A	Fairface form work with good quality water proof ply wood with film face of required thickness and smooth surface above finished ground floor level for columns, beams, suspended floors, lintels, cantilevers, staircases, landings, balconies, domes, arches, etc for all heights	SQM	1,700		
302B	Fairface form work with good quality water proof ply wood with film face of required thickness and smooth surface above finished ground floor level for sloped roof (Approx. slope of 1 in 10, sloping on two directions from middle of roof, however no extra payment shall be admissible on account of variation in this slope) for all heights of watch tower.	SQM	204		
400 REINFORCEMENT					
402	Providing, straightening, cutting, bending, placing in position at any level, binding in position of steel reinforcements of TMT steel of grade Fe-500 HYSD confirming to IS:1786 including cost of binding wire, labour, scaffolding, transportation to & from stores etc complete all as per specifications, drawings and as directed by Engineer. (REINFORCEMENT STEEL WILL BE SUPPLIED FREE OF COST BY BHEL AS PER TCC)	MT	43		
500 WATER PROOFING WORKS					
Water proofing works including all labour, material, equipment, transportation, handling, curing, sampling, testing etc at any level as per specification, drawings and as directed by engineer - in - charge.					
501	Providing and laying underbed grading plaster with cement mortar 1:4 (1 cement : 4 sand) and average thickness as specified below including preparation of surface, batching, mixing, leveling etc. all complete. (CEMENT WILL BE SUPPLIED FREE OF COST BY BHEL AS PER TCC)				
a	Average 15 mm thickness	SQM	102		
506	Providing and applying PU based water proofing treatment with one coat of polyurethane or any other equivalent material based primer with an application rate of minimum 6 sq.m per litre and two successive liquid coatings of high solids content urethane pre-polymers or equivalent material based finish coats as per relevant IS/ASTM standards to form an elastomeric membrane with overall dry film thickness 1.5 mm subject to minimum 500 gm/sqm/coat application rate. Item includes surface preparation, polyscrim cloth /fabric for edges, joints & vulnerable points etc all complete as per specifications and directions of engineer in charge	SQM	102		
507	Providing and laying wearing course consisting of 25mm thick plain cement concrete of grade M15 (1:2:4) with graded aggregate of 12.5mm size cast in panels of maximum size 1.2mx1.2m and reinforced with 0.56 mm dia. galvanised chicken wire mesh and sealing of joints (in grooves of 6mm X 6mm) using silicon /elastomeric compound etc all complete. (CEMENT WILL BE SUPPLIED FREE OF COST BY BHEL AS PER TCC)	SQM	102		
509	Providing and applying two coats of bitumen grade 85/25 as per IS 702 (@ 1.7kg/sqm) with 1% antistripping compound conforming to IS 6241 in foundation, wall, column etc on concrete surfaces exposed to soil / ash including surface preparation etc. all complete	SQM	578		
600 JOINTS AND FILLERS					
Joints & fillers including all labour, material, equipment, transportation, handling etc at any level as per specification, drawings and as directed by engineer - in - charge.					
601	Supplying & installation of bitumen impregnated fibre board confirming to IS 1838 as joint filler at joints in concrete including nailing, coating of both faces with coal tar pitch/bitumin etc. all complete				
a	12 mm wide joints.	SQM	38		
605	Providing and sealing of joints with premium grade silicon sealant (Silpruf of GE silicon or approved equivalent) including cleaning of joints, raking out groove, joint filler tapes, application of primer, curing, scaffolding etc. all complete as per manufacturer's recommendation for following size groove				
a	25mmX25mm	RM	272		
b	50mmX25mm	RM	238		

VOLUME-III PRICE SCHEDULE, REV-01					
JOB: CIVIL, STRUCTURAL AND ARCHITECTURAL WORKS OF WATCH TOWERS AND BOUNDARY WALL PHASE-II CONSISTING MAINLY OF FACTORY MANUFACTURED PRECAST RCC PANELS AS WELL AS CAST IN-SITU CONCRETE BOUNDARY WALL AT SPECIFIED LOCATIONS AS PER DRAWING INCLUDING ALL RELATED WORKS SUCH AS EXCAVATION, FILLING, FORMWORK, REINFORCEMENT ETC ALL COMPLETE AS PER SPECIFICATION INCLUDING SUPPLY OF ALL MATERIALS FOR 3X660 MW NORTH KARANPURA STPP, JHARKHAND.					
TENDER NO. PSER:SCT:NKP-C1723:16					
SCH-3- WATCH TOWERS					
ST. NO	DESCRIPTION OF ITEM	UNIT	QUANTITY	RATE (INR)	AMOUNT (INR)
700 MS EMBEDMENTS					
Embedments including all labour, material, equipment, transportation, handling etc. at any level as per specification, drawings and as directed by engineer - in - charge.					
701	Supply, fabricating and fixing of mild steel embedments, inserts, pipe sleeves, angle pieces, rungs of various diameters, plates of dimensions as required etc. including welding, bolting, cutting, drilling, scaffolding, setting etc. all complete. (ALL MATERIAL TO BE SUPPLIED BY CONTRACTOR)	Kg	602		
900 DOORS, WINDOWS, VENTILATORS, LOUVERS					
Doors, windows, ventilators, louvers, roof ventilators, rolling shutters, partitions including all labour, material, equipments, transportation, handling, preparation of working drawings etc. at any level as per specification, drawings and as directed by engineer - in - charge.					
905	Providing and fixing single or double steel door shutters with 18 gauge M.S. sheets shutter presenting a flush surface on the outside and inside stiffened with semitubular edge and central stiffening rail which shall convey the lock including fixtures, Godrej or equivalent make mortice lock with handle on both sides, shop and final painting etc all complete.	SQM	24		
906A	Providing and fixing anodized extruded aluminium doors (single or double shutter) conforming to IS:1948, IS:1949 fabricated from extruded sections of HINDALCO/JINDAL or equivalent make having minimum 2 mm wall thickness as per IS:1285, IS:733 and anodized(15 micron coating thickness) and electro color dyed of required shade as per IS 1868 (minimum anodized coating of grade AC15). fixed with rawl plugs, expansion fasteners,SS screws / fixing clips necessary filling of gaps at Junctions, at top, bottom & sides with required PVC / neoprene felt for bi-metallic protection etc., glazing/MDF board including snap fit type beading, concealed screws, fixtures, Godrej or equivalent make Mortice lock with handle on both sides, etc all complete. Aluminium section shall be smooth, free of stains, straight, mitred & jointed mechanically wherever required. (Glazing/MDF board shall be paid separately and not included in this item)	SQM	20		
908	Providing and fixing steel windows/ventilator with steel sections as per IS:1038, IS:1361 & IS:7452 latest revision.including all fittings, metal beadings, hold fasts, shop and final painting ,glazing etc. all complete. (Glazing shall be paid separately)				
a	openable type	SQM	44		
909	Providing and fixing anodised aluminium work of Jindal, Hindalco or other equivalent approved make for door frames, windows, ventilators, partitions, railing etc with extruded standard tubular and other sections including all fittings & fixtures and accessories of approved make conforming to IS733 and IS1285, anodised and electro color dyed to required shade according to IS 1868 (minimum anodic coating of grade AC15), fixed with rawl plugs, expansion fasteners, SS screws or with fixing clips, including necessary filling of gaps at junctions, at top, bottom and sides with required PVC/neoprene felt for bi-mettalic protection etc.including preperation of working drawings, aluminium cleat angle, aluminium snap-on-beading for glazing/panelling, stair case tread nosing, with all fittings and fixtures (like tower bolts, handles, door stopper with rubber shoes, 'L' drops, stays, floor springs, hydraulic door closures etc.), CP brass/stainless steel screws, providing and fixing hinges/pivots, and making provision for fixing of fitting wherever required including cost of PVC/neoprene gasket, all complete as per drawing, specification and instructions of engineer in charge (Glazing and panelling shall be paid seperately).Weight of aluminium section only shall be measured.	Kg	612		
911	Providing and fixing of door closers as per IS 3564 ,of approved make & quality all complete of following type				
a	Over head hydraulic door closures	Each	20		
b	Floor mounted Hydraulic door closers	Each	20		
912	Providing and fixing pressed steel frames fabricated from 16 gauge M.S sheet mortised, reinforced drilled and tapped for hinges and locks bolts strikes, hold fasts adjustable floor anchors, floor tiles/weather bars, paintings etc all complete as per specifications.	Kg	544		
915	Providing, fixing and fitting of glazing of first grade class in steel/aluminium frames, where ever required, cleaning after fixing including hardware, gaskets, clips, beadings etc. all complete as per Specification for the followings				
a	6 mm thick clear toughened safety glass	SQM	85		
b	8 mm thick clear toughened glass	SQM	34		
c	10 mm thick clear toughened glass	SQM	34		
c	18 mm thick mdf board of exterior grade conforming to IS 12406:2006	SQM	34		

VOLUME-III PRICE SCHEDULE, REV-01					
JOB: CIVIL, STRUCTURAL AND ARCHITECTURAL WORKS OF WATCH TOWERS AND BOUNDARY WALL PHASE-II CONSISTING MAINLY OF FACTORY MANUFACTURED PRECAST RCC PANELS AS WELL AS CAST IN-SITU CONCRETE BOUNDARY WALL AT SPECIFIED LOCATIONS AS PER DRAWING INCLUDING ALL RELATED WORKS SUCH AS EXCAVATION, FILLING, FORMWORK, REINFORCEMENT ETC ALL COMPLETE AS PER SPECIFICATION INCLUDING SUPPLY OF ALL MATERIALS FOR 3X660 MW NORTH KARANPURA STPP, JHARKHAND.					
TENDER NO. PSER:SCT:NKP-C1723:16					
SCH-3- WATCH TOWERS					
ST. NO	DESCRIPTION OF ITEM	UNIT	QUANTITY	RATE (INR)	AMOUNT (INR)
1000 BRICKWORK					
Brickwork masonry including all labour, material, equipment, transportation, handling, scaffolding etc. at all levels as per specification, drawings and as directed by engineer - in - charge. (CEMENT WILL BE SUPPLIED FREE OF COST BY BHEL AS PER TCC)					
1002	Providing brick work in cement mortar 1:6 (1 cement 6 coarse sand) in walls, chambers etc. in thickness 230mm at all heights, places and position above plinth including raking out joints, curing, scaffolding etc complete excluding plastering and painting.				
a	Using fly ash lime bricks conforming to IS 12894 with crushing strength of 50 kg/cm ²	CUM	52		
d	Using burnt clay bricks of class designation 5.0 of nominal dimension	CUM	52		
1200 CEMENT MORTAR PLASTER					
Cement mortar plaster including making grooves wherever required including all labour, material, scaffolding, curing etc at any level as per specification, drawings and as directed by engineer - in - charge. (CEMENT WILL BE SUPPLIED FREE OF COST BY BHEL AS PER TCC)					
1201	Providing 18mm thick plaster in two layers outside the building/boundary wall in cement mortar 1:6 on walls, finished to a smooth finish including providing 3mmx3mm size grooves at junctions of two dissimilar materials all complete.	SQM	490		
1202	Providing 12mm thick plaster inside the building/boundary wall in cement mortar 1:6 on walls finished to a smooth finish as per specification all complete.	SQM	476		
1204	Providing 6mm thick plaster on ceiling in cement mortar 1:4 finished to a smooth all complete.	SQM	408		
1300 FINISHES TO CONCRETE / PLASTERED SURFACES					
Finishes, painting to concrete, plastered surfaces including all labour, material, equipment, surface preparation, scaffolding etc. at any level as per specification, drawings and as directed by engineer - in - charge.					
1304	Two or more coats of acrylic distemper of approved brand and manufacture to give an even shade including a priming coat with distemper primer complete as per IS 428.	SQM	476		
1305	Providing and applying two or more coats of premium acrylic smooth exterior paint as per IS 5411 of approved brand, shade and manufacture to give smooth, hard, durable & glossy finish over a coat of primer over prepared plaster surface as per manufacturers guideline.	SQM	340		
1400 FLOORING AND SKIRTING					
Flooring and skirting at any level including base layer, labour, material, equipments, transportation, handling, curing, polishing etc. at any level as per specification, drawings and as directed by engineer - in - charge. (CEMENT WILL BE SUPPLIED FREE OF COST BY BHEL AS PER TCC)					
1401	Providing and laying 50 mm thick heavy duty cement concrete in flooring with metallic hardener pigmented topping 12mm thick uniform graded treated iron particles in flooring. Under layer of 38mm thick cement concrete mix 1:2:4 (1 cement: 2 sand : 4 stone aggregates 12.5mm well graded) and top layer of 12mm thick metallic concrete of mix 1:2 (1 cement hardner mix with approved quality metallic hardening compound :2 stone aggregate 6mm nominal size) by volume including cement slurry, rounding off edges, aluminium strips etc. all complete (Quoted item rate shall be inclusive of providing glass joint strips)	SQM	238		
1402	Providing and laying 25 mm thick heavy duty cement concrete mix 1:2:4 (1 cement: 2 sand : 4 stone aggregates) flooring with metallic hardener pigmented topping of 10 mm thick uniform graded treated iron particles in skirting and dado complete as per specification.	SQM	37		
1700 RAIN WATER DOWN TAKE PIPES					
Rain water down take pipes including all labour, material, transportation, 2 coats of approved paint over one primary coat, fixtures, accessories etc at any level as per specification, drawings and as directed by engineer - in - charge.					
1704	Providing and fixing galvanised MS down take pipes of 150 mm dia- Medium quality as per IS:1239(part-I) all complete	RM	374		
1800 MISCELLANEOUS WORKS					
Miscellaneous works including all labour, material, equipment etc. at any level unless otherwise specified as per specification, drawings and as directed by engineer - in - charge.					
1801	Providing and Filling in trenches, plinths, area paving and other underground structures with graded stone aggregate of size range 63 mm to 45 mm in layers not exceeding below mentioned thickness including breaking of stone boulders to required sizes, filling the interstices with selected sand and compacting to 85 % of original volume of stone stack for all lifts etc. all complete. Payment shall be made for the measurement of the volume of the compacted fill.				
a	275 mm	CUM	68		
b	400 mm	CUM	68		
2200 SANITARY WORKS					
2208	Providing, laying light duty non pressure NP3 class RCC pipes in pipe culverts at all levels including lowering to required depth as per drawing, jointing of collars with stiff mixture of cement mortar 1:2, making the joint leakage proof, testing of joints etc all complete for following				
a	200mm dia	RM	20		

VOLUME-III PRICE SCHEDULE, REV-01					
JOB: CIVIL, STRUCTURAL AND ARCHITECTURAL WORKS OF WATCH TOWERS AND BOUNDARY WALL PHASE-II CONSISTING MAINLY OF FACTORY MANUFACTURED PRECAST RCC PANELS AS WELL AS CAST IN-SITU CONCRETE BOUNDARY WALL AT SPECIFIED LOCATIONS AS PER DRAWING INCLUDING ALL RELATED WORKS SUCH AS EXCAVATION, FILLING, FORMWORK, REINFORCEMENT ETC ALL COMPLETE AS PER SPECIFICATION INCLUDING SUPPLY OF ALL MATERIALS FOR 3X660 MW NORTH KARANPURA STPP, JHARKHAND.					
TENDER NO. PSER:SCT:NKP-C1723:16					
SCH-3- WATCH TOWERS					
ST. NO	DESCRIPTION OF ITEM	UNIT	QUANTITY	RATE (INR)	AMOUNT (INR)
b	450mm dia	RM	50		
2300 STRUCTURAL STEEL					
Structural steel works including all labour, material, equipments, transportation, handling etc. at any level as per specification, drawings and as directed by engineer - in - charge.					
2301	Supply, fabrication and erection of caged mild steel ladder , min. 600mm wide, including post, rung, cage hoops, fixing brackets, nuts and bolts , other accessories etc. as per drawing supplied by bidder and approved by BHEL/NTPC and specification all complete. The cage ladder will be used to climb from ground to watch tower platform at min. 6 m height at an inclination shown in watch tower drawing issued by BHEL. The ladder, rungs, posts, hoops etc. shall be galvanised at a rate of 610 gms / SqM. as per IS : 4736. The top of the ladder shall extend at least 1 M above the end of the ladder to provide protection at the top rung. Bottom of the cage shall start at a distance of at least 2 M from ground. (ALL MATERIAL TO BE SUPPLIED BY CONTRACTOR)	kg	2,720		
2302	Supply, Fabrication & erection of Mild steel cover with frame over slab opening in RCC platform of watch tower including fixing to floor with hinges, lugs, provision of latches, fixtures, handle etc., manual cleaning of steel structure, providing and applying two coats of self curing inorganic zinc ethyle silicate primer (Min. 60 micron DFT), providing and applying intermediate coat of polyamide cured pigmented micaceous Iron Oxide (min. 75 micron total DFT), providing and applying polyamide cured epoxy based paint as finish coat (min. 75 micron total DFT) and providing and applying polyurethane based color pigment paint as final finish coat (min. total DFT 50 micron) as per approved drawing, specification and engineer incharge all complete. (ALL MATERIAL TO BE SUPPLIED BY CONTRACTOR)	Kg	340		
2400 ROAD WORKS					
Providing Road Work including necessary material, labour, machinery, transportation etc as per specification, drawing, relevant IRC & IS codes and as directed by the Engineer-in-charge for the following.					
2401	Preparation of sub grade by excavating earth to required depth for all types of soil/ rock, dressing to camber and consolidating the base including making good the undulation etc and disposal of surplus earth within a lead upto 1 km etc. all complete	CUM	2,500		
2402	Supplying and filling with selected good earth of approved quality in layers not exceeding 300 mm loose thickness using borrowed soil (borrowed soil to be arranged by the bidder) and compacted so as to achieve at least 95 % maximum dry density as per IS-2720 (Part-VII) including royalty/seignorage fee (if any), sorting, spreading, breaking clods, watering, ramming/compaction by manual/mechanical means, dressing, finishing to required lines, grades and slopes, tesing etc all complete	CUM	450		
2405	Providing & laying water bound macadam base course in layers of required thickness with stone aggregate 63mm to 45mm size, stone screening and blinding material including screening sorting, spreading to template and consolidation with road roller including carriage, spreading and consolidation of blinding material moorum etc all complete	CUM	575		
2406	providing & Laying water bound macadam base course with stone aggregate 53mm to 22.4mm size stone screening & binding material including screening, sorting, spreading to template & consolidation with road roller including carriage spreading & consolidation of blinding material moorum etc all complete.	CUM	125		
2412A	Supplying and laying 450mmx250mmx500mm deep precast concrete kerb stone of grade M-25 with 20 mm nominal size stone aggregate and of shape as per detailed drawing including fixing with cement mortar (1:6) in 13mm thick joints, finishing of joints with neat cement paste, making drainage opening where required etc all complete.	RM	5		
2412B	Supplying and laying 300mmx250mmx150mm deep precast concrete kerb stone of grade M-25 with 20 mm nominal size stone aggregate and of shape as per detailed drawing including fixing with cement mortar (1:6) in 13mm thick joints, finishing of joints with neat cement paste, making drainage opening where required etc all complete.	RM	1,100		
2415	Dismantling of existing bituminous road consisting of premix carpet, kerb stone/ brick on edge, bitumen macadem course, WBM etc. upto depth as per drawing/instruction of engineer-in-charge, including disposal of debris within a lead of 1 km, cost of labour, required T&P to complete the work as per specifications/instructions of engineer in charge etc. all complete	CuM	3		
Providing and placing concrete work including cost of labour, materials and equipment for handling, transportation, batching, mixing, placing, vibrating, shuttering, formwork and curing (excluding cost of reinforcement), with mechanised equipments like batching plant, transit mixer, concrete pump etc. complete as per drawing, specification and as per direction of engineer in charge for the following.					
2417	Providing and laying of plain cement concrete of grade M15 using 40 mm graded stone aggregate including providing and fixing formwork, compaction etc. all complete (Cement will be provided free of cost by BHEL)	CUM	1		

VOLUME-III PRICE SCHEDULE, REV-01					
JOB: CIVIL, STRUCTURAL AND ARCHITECTURAL WORKS OF WATCH TOWERS AND BOUNDARY WALL PHASE-II CONSISTING MAINLY OF FACTORY MANUFACTURED PRECAST RCC PANELS AS WELL AS CAST IN-SITU CONCRETE BOUNDARY WALL AT SPECIFIED LOCATIONS AS PER DRAWING INCLUDING ALL RELATED WORKS SUCH AS EXCAVATION, FILLING, FORMWORK, REINFORCEMENT ETC ALL COMPLETE AS PER SPECIFICATION INCLUDING SUPPLY OF ALL MATERIALS FOR 3X660 MW NORTH KARANPURA STPP, JHARKHAND.					
TENDER NO. PSER:SCT:NKP-C1723:16					
SCH-3- WATCH TOWERS					
ST. NO	DESCRIPTION OF ITEM	UNIT	QUANTITY	RATE (INR)	AMOUNT (INR)
2417A	Providing and laying of plain cement concrete of grade M20 using 40 mm graded stone aggregate including providing and fixing formwork, compaction etc. all complete (Cement will be provided free of cost by BHEL)	CUM	1		
2418	Providing and laying cement concrete of grade M35 using 20 mm nominal size stone aggregate with approved admixture (if required), in road pavement using fully mechanized paver fitted with electronic sensors , provision for necessary joints including compaction, finishing to lines and grades, curing and providing & fixing forwork etc. all complete. (Excluding the cost of reinforcement and dowel bar & Cement will be provided free of cost by BHEL)	CUM	475		
2419	Providing & laying dry lean cement concrete of grade M10 (in pavement/shoulders) with 20 mm nominal size graded stone aggregate with mechanical paver over granular sub-base including compaction by vibratory roller, finishing, curing etc all complete. (Cement will be provided free of cost by BHEL)	CUM	413		
REINFORCEMENT					
2420	Providing and fixing in position MS dowel bar reinforcement including surface painted with bitumen and greasing, dowel end caps with cotton fills etc all complete as per specification, drawing and as directed by Engineer. (Steel to be supplied by the vendor after written clearance from BHEL)	MT	6		
MISCELLANEOUS					
2423	Providing & installation of 25 mm thk. bitumen impregnated fibre board conforming to IS 1838 at all levels as joint filler including nailing, coating of both faces with coal tar pitch/bitumin etc. all complete as per specification, drawing and as directed by engineer.	SQM	28		
2424	Providing and filling in position hot applied bitumen sealing compound (Grade A) of specified thick confirming to IS 1834 including cleaning, mixing, heating, pouring/injecting sealing compound in gaps in joints, sealant primer etc all complete as per specification, drawing and as directed by Engineer.	kg	525		
2425	Providing and laying debonding strip/tape , 25 mm wide & 5 mm thk. before applying sealant including cleaning etc all complete as per specification, drawing and as directed by Engineer.	RM	5		
2425A	Providing & laying polythene sheet of specified thickness (min. 125 micron), above dry lean concrete sub base, before laying of concrete slab pavement.	SQM	2,000		
2426	Providing & laying 75 mm thick precast interlocking designer concrete blocks (of M35 grade concrete) of approved colour and pattern as per <u>specification and recommendation of manufacturer</u>	SQM	750		
2427	Providing and laying 20mm thick sand layer below concrete blocks including compaction etc all complete as per specification, drawing and as directed by Engineer.	SQM	750		
TOTAL PRICE FOR WATCH TOWER (SCH-3)					

FORMAT FOR NO DEVIATION CERTIFICATE
(To be submitted in the bidder's letter head)

BHARAT HEAVY ELECTRICALS LIMITED,
 Power Sector - Eastern Region,
 Plot no 9/1, DJ Block, Sector – II, Salt Lake City,
 Kolkata – 700 091

Sub	No Deviation Certificate.	
Job	Civil, structural and architectural works of watch towers and boundary wall phase-II consisting mainly of factory manufactured precast RCC panels as well as cast-in-situ concrete boundary wall at specified locations as per drawing including all related works such as excavation, filling, formwork, reinforcement etc all complete as per specification including supply of all materials for 3 x 660 MW North Karanpura, STPP, Jharkhand.	
Ref	1.0	Tender No. PSER:SCT:NKP-C1723:16.
	2.0	BHEL's NIT, vide reference no PSER:SCT: NKP-C1723:4856 Date: 29-01-2016.
	3.0	BHEL's TCN-01, vide reference no PSER:SCT:NKP-C1723:TCN-01, dated 18-02-2016.
	4.0	BHEL's TCN-02, vide reference no PSER:SCT:NKP-C1723:TCN-02, dated 07-05-2016.
	5.0	All other pertinent issues till date.

Dear Sirs,

With reference to above, this is to confirm that as per tender conditions, we have visited site before submission of our offer and noted the job content & site conditions etc. We also confirm that we have not changed/ modified the tender documents as appeared in the website/ issued by you and in case of such observance at any stage, it shall be treated as null and void.

We hereby confirm that we have not taken any deviation from tender clauses together with other references as enumerated in the above referred NIT. We hereby confirm our unqualified acceptance to all terms & conditions, unqualified compliance to technical specification, integrity pact (if applicable) and acceptance to reverse auctioning process.

In the event of observance of any deviation in any part of our offer at a later date whether implicit or explicit, the deviations shall stand null & void.

We confirm to have submitted offer in accordance with tender instructions and as per aforesaid references.

Thanking you,

Yours faithfully,

(Signature, date & seal of authorized representative of the bidder)