

Bharat Heavy Electricals Limited
High Pressure Boiler Plant
Tiruchirappalli – 620 014. India
Civil Engineering Department (Township)

TENDER DOCUMENT (PRICE BID)

Name of Work	Tender Notice No	Tender Schedule No	Estimate /Tender Value	EMD
MAINTENANCE OF ROAD WORKS AT BHEL TOWNSHIP-TRICHY-CT:TS:12/18-19 (PACKAGE-J)	CT:TN:003/18-19	CT:TS:012/18-19	₹ 80,00,000.00 (RUPEES EIGHTY LAKH ONLY)	Rs. 96,000.00 (RUPEES NINETY SIX THOUSAND ONLY)
MAINTENANCE OF WATER SUPPLY & PLUMBING WORKS AT BHEL TOWNSHIP-TRICHY -CT:TS:13/18-19 (PACKAGE-K)	CT:TN:003/18-19	CT:TS:013/18-19	₹ 64,00,000.00 (RUPEES SIXTY FOUR LAKH ONLY)	Rs. 76800.00 (RUPEES SEVENTY SIX THOUSAND EIGHT HUNDRED ONLY)
MAINTENANCE OF HORTICULTURE WORKS AT BHEL TOWNSHIP, TRICHY -CT:TS:14/18-19 (PACKAGE-L)	CT:TN:003/18-19	CT:TS:014/18-19	₹ 40,00,000.00 (RUPEES FORTY LAKH ONLY)	Rs. 48,000.00 (RUPEES FORTY EIGHT THOUSAND ONLY)
STRUCTURAL STEEL WORKS AT BHEL TOWNSHIP, TRICHY-CT:TS:15/18-19 (PACKAGE-M)	CT:TN:003/18-19	CT:TS:015/18-19	₹ 28,00,000.00 (RUPEES TWENTY EIGHT LAKH ONLY)	Rs. 33600.00 (RUPEES THIRTY THREE THOUSAND SIX HUNDRED ONLY)

IMPORTANT NOTE:

As per the Corporate Operation Management guidelines **EMD & Tender cost Exemption will not be allowed to MSME / NSIC vendors** for works contract. This tender is categorized as a works contract. Hence Tenderers are compulsorily need to remit the required EMD/EMDs & Tender cost in order to participate in the Tender. Tender without corresponding EMD /EMDs & Tender cost will be summarily rejected and will not be considered for any reasons. Split and award in the ratio of 60% : 40% respectively to L1 and L2 at the L1 quoted percentage is applicable to all these packages J,K,L&M for those Estimate / Tender Value is more than Rs.25 Lakhs.

Price Bid for Package J-Page 2 to 11 of this document
Price Bid for Package K-Page 12 to 38 of this document
Price Bid for Package L-Page 39 to 43 of this document
Price Bid for Package M-Page 44 to 60 of this document
Tenderers are required to submit the separate packages in separate covers for which they want to participate.

PART-II (PRICE BID) (PACKAGE-I)

SCHEDULE - A1

Name of Work: **MAINTENANCE OF ROAD WORKS AT BHEL TOWNSHIP. CT:TS:012/18-19 Tender Value:Rs.80 Lakhs**

I / We _____ have read the condition of tender attached hereto and agree to abide by such conditions. I/We offer to execute the works in **T.S No. CT:TS:012/18-19 for a period of 12 months** at the percentage below / at par / above the rates contained in BHEL applicable items of Schedule of Rates 2013-14 quoted in the schedule appended below:

I / We further agree to sign an Agreement Bond to abide by the General Conditions of Contract and to carryout all works according to the specifications for materials and works of Bharat Heavy Electricals Limited, Tiruchirapalli-620 014. In case of acceptance of the tender by the BHEL, I/We bind myself/ourselves to execute the contract documents within 7 days after notice that my/our tender has been accepted and this contract has been awarded to me/us and thus failing which I/We shall have no objection to the forfeiture of the Earnest Money amount to **Rs.96,000/-** lodged with Bharat Heavy Electricals Limited, Tiruchirapalli-620 014.

I / We further agree to include all tools & plants and consumables required for the work in my / our scope but required power and water will be provided at one point by BHEL at free of cost and based on this, we have quoted our percentage.

Note: Details of each item of work shown in the BILL OF QUANTITIES are only approximate and the same is appended below. They are given as a guide for the purpose of tendering only and are liable to variation and alteration of the Competent Authority. The work under each item as executed shall be measured and priced at the overall percentage quoted by the contractor **Below (100-X) % / At par (100%) / Above (100+X) %** of the rates provided in Bill of Quantities appended below from **Page 03 to 11** **Eventhough the applicable items are provided, for the operational convenience the total tender value of RS.80 Lakh will be divided as required number of Sub Work orders with required items and value.**

Sl. No.	Approx. Value of work	Common single percentage rate, Below (100-X) % / At par (100%) / Above (100+X) % to be quoted with respect to the rates provided in Bill of Quantities appended below from Page 03 to 11 (The percentage is to be quoted here is GST excluded) (Applicable GST will be extra)	
		In Figures	In Words
1.	Rs.80 Lakh		

Examples:

- 1. If the vendor needs to quote 5% below the schedule of rates then vendor need to write 95% in figure column and Ninety Five percent in words.**
- 2. If the vendor needs to quote at par the the schedule of rates then vendor need to write 100% in figure column and One Hundred percent in words.**
- 3.If the vendor needs to quote 5% above the schedule of rates then vendor need to write 105% in figure column and One Hundred Five percent in words**

Note: Applicable BHEL SR(13-14) item details are given below. Contractor has to quote Common single percentage rate, Below (100-X) % / At par (100%) / Above (100+X) % with respect to the rates provided in Bill of Quantities below at page 02 both in figures and in words

BILL OF QUANTITIES

PACKAGE-I (42 items) CT:TS:012/18-19

MAINTENANCE OF ROAD WORKS AT BHEL TOWNSHIP

Sl.No	Item No.	Description	Unit	Rate (Rs.P)	Cement
1	0901A	Supply and stacking the following to standard gauge at site of work, all as per instructions of Engineer-in-Charge. Soling stones 15 cm average thickness (measured in stacks will be reduced by 15 % for payment)	M3	298.00	
2	0901B	Supply and stacking the following to standard gauge at site of work, all as per instructions of Engineer-in-Charge. 53 mm IRC size metal (measured in stacks will be reduced by 7.5 % for payment)	M3	782.55	
3	0901C	Supply and stacking the following to standard gauge at site of work, all as per instructions of Engineer-in-Charge. 37.50 mm IRC size metal / 37.5 or 40 mm Stone metal ISS (measured in stacks will be reduced by 7.5 % for payment)	M3	1029.90	
4	0901D	Supply and stacking the following to standard gauge at site of work, all as per instructions of Engineer-in-Charge. 22.40 mm IRC size metal (No voids)	M3	1269.45	
5	0901E	Supply and stacking the following to standard gauge at site of work, all as per instructions of Engineer-in-Charge. 11.20 mm IRC size metal (No voids)	M3	837.15	
6	0901F	Supply and stacking the following to standard gauge at site of work, all as per instructions of Engineer-in-Charge. 6 mm IRC size metal (No voids)	M3	647.95	
7	0901G	Supply and stacking the following to standard gauge at site of work, all as per instructions of Engineer-in-Charge. River sand (No voids)	M3	450.55	

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Sl.No	Item No.	Description	Unit	Rate (Rs.P)	Cement
8	0901H	Supply and stacking the following to standard gauge at site of work, all as per instructions of Engineer-in-Charge. Gravel / Red earth (No voids)	M3	240.85	
9	0901I	Supply and stacking the following to standard gauge at site of work, all as per instructions of Engineer-in-Charge. Earth (measured in stacks will be reduced by 20 % for payment)	M3	207.30	
10	0901J	Supply and stacking the following to standard gauge at site of work, all as per instructions of Engineer-in-Charge. Cattle manure (measured in stacks will be reduced by 8 % for payment)	M3	371.75	
11	0901K	Supply and stacking the following to standard gauge at site of work, all as per instructions of Engineer-in-Charge. IRC graded stone aggregate of size range from 90 to 45 mm (measured in stacks will be reduced by 7.5 % for payment)	M3	539.00	
12	0901L	Supply and stacking the following to standard gauge at site of work, all as per instructions of Engineer-in-Charge. IRC graded stone aggregate of size range from 63 to 45 mm (measured in stacks will be reduced by 7.5 % for payment)	M3	680.00	
13	0901M	Supply and stacking the following to standard gauge at site of work, all as per instructions of Engineer-in-Charge. IRC graded stone aggregate of size range from 53 to 22.4 mm (measured in stacks will be reduced by 7.5 % for payment)	M3	930.00	
14	0902A	Supply RCC pipes (NP2 Class) of following sizes with collars at site of work, lowering to trench, laying to proper grade and alignment, joining the collars with stiff mixture of cement mortar 1 : 2, testing of joints etc., but excludes cost of cement which will be supplied by BHEL at stores at free of cost. 150 mm dia	RM	333.95	0.6

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CIVIL ENGINEERING DEPARTMENT,BHEL,Trichy-14

Sl.No	Item No.	Description	Unit	Rate (Rs.P)	Cement
15	0902B	Supply RCC pipes (NP2 Class) of following sizes with collars at site of work, lowering to trench, laying to proper grade and alignment, joining the collars with stiff mixture of cement mortar 1 : 2, testing of joints etc., but excludes cost of cement which will be supplied by BHEL at stores at free of cost. 250 mm dia	RM	443.20	0.9
16	0902C	Supply RCC pipes (NP2 Class) of following sizes with collars at site of work, lowering to trench, laying to proper grade and alignment, joining the collars with stiff mixture of cement mortar 1 : 2, testing of joints etc., but excludes cost of cement which will be supplied by BHEL at stores at free of cost. 300 mm dia	RM	486.20	1.1
17	0902D	Supply RCC pipes (NP2 Class) of following sizes with collars at site of work, lowering to trench, laying to proper grade and alignment, joining the collars with stiff mixture of cement mortar 1 : 2, testing of joints etc., but excludes cost of cement which will be supplied by BHEL at stores at free of cost. 450 mm dia	RM	676.05	2.4
18	0902E	Supply RCC pipes (NP2 Class) of following sizes with collars at site of work, lowering to trench, laying to proper grade and alignment, joining the collars with stiff mixture of cement mortar 1 : 2, testing of joints etc., but excludes cost of cement which will be supplied by BHEL at stores at free of cost. 600 mm dia	RM	1318.05	2.95
19	0902F	Supply RCC pipes (NP2 Class) of following sizes with collars at site of work, lowering to trench, laying to proper grade and alignment, joining the collars with stiff mixture of cement mortar 1 : 2, testing of joints etc., but excludes cost of cement which will be supplied by BHEL at stores at free of cost. 750 mm dia	RM	1602.95	3.9
20	0902G	Supply RCC pipes (NP2 Class) of following sizes with collars at site of work, lowering to trench, laying to proper grade and alignment, joining the collars with stiff mixture of cement mortar 1 : 2, testing of joints etc., but excludes cost of cement which will be supplied by BHEL at stores at free of cost. 900 mm dia	RM	1890.85	4.5

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Sl.No	Item No.	Description	Unit	Rate (Rs.P)	Cement
21	0902H	Supply RCC pipes (NP2 Class) of following sizes with collars at site of work, lowering to trench, laying to proper grade and alignment, joining the collars with stiff mixture of cement mortar 1 : 2, testing of joints etc., but excludes cost of cement which will be supplied by BHEL at stores at free of cost. 1200 mm dia	RM	2935.60	6.3
22	0903A	Providing of granular sub- base by providing close graded Material, mixing in a mechanical mix plant at OMC, carriage of mixed Material to work site, spreading in uniform layers with motor grader on prepared surface and compacting with vibratory power roller to achieve the desired density, complete as per clause 401 of MOHRT-Rev5/Latest. For Grading-V Material (Drainage/ Top Layer)	M3	1161.65	
23	0903B	Providing of granular sub- base by providing close graded Material, mixing in a mechanical mix plant at OMC, carriage of mixed Material to work site, spreading in uniform layers with motor grader on prepared surface and compacting with vibratory power roller to achieve the desired density, complete as per clause 401 of MOHRT-Rev5/Latest. For Grading-III Material (Bottom Layer if thickness more than 300 mm)	M3	1212.90	
24	0904	Providing and laying 50mm consolidated thick Dense bituminous macadam using 0.24 cum of 26.50-13.20 mm, 0.25 cum of 13.20-2.36 mm and 0.23 cum of 2.36mm and below and with 53.20 kgs of VG 30/VG 40 bitumen for premixing per 10sqm including cost and conveyance of all materials to CMP site, heating the bitumen and aggregate to required temperature and mixing them in required temperature in central hot mix plant 20-30 ton capacity, conveying the mix by tipper trucks to work site, spreading the mix to uniform thickness of 50mm with paver to the specified grades and cross sections and compacted by Vibratory / Pneumatic Roller to the required density etc., including labour for attending tipper trucks, Paver Finisher / 9m paver finisher, Vibratory / Pneumatic rollers and all other tools and plant required, including fuel and all other incidental charges etc., complete as per specification using CMP as per clause 505 MORTH Rev-5.	M3	10202.20	

Sl.No	Item No.	Description	Unit	Rate (Rs.P)	Cement
25	0905	Providing and laying 75mm consolidated thick Dense Bituminous macadam using 0.40 cum fo 37.50-13.20mm, 0.35 cum of 13.20-2.36mm and 0.36 cum of 2.36mm and below size IRC metal with 71.30 kgs of VG30/ VG40 bitumen for premixing per 10sqm including cost and conveyance of all materials to CMP site, heating the bitumen and aggregate to required temperature and mixing them in required temperature in central hot mix plant 20-30 ton capacity, conveying the mix by tipper trucks to paver site, spreading the mix to uniform thickness of 75mm with mechanical paver to the specified grades and cross sections and consolidated by 8-10 tonne Vibratory / Pneumatic Roller to the required density etc., including labour for attending to paver to site etc., including hire charges and fuel charges for 20-30 t CMP with bitumen boiler, tipper trucks, Paver Finisher / 9m paver finisher, Vibratory / Pneumatic roller and all other tools and plant required, including fuel and all other incidental charges etc., complete as per specification using CMP as per clause 505 of MORTH rev-5.	M3	9448.15	
26	0906	Providing and laying 50mm consolidated thick bituminous macadam using 0.20 cum fo 26.50-13.20mm, 0.43 cum of 13.20-2.36mm and 0.08 cum of 2.36mm and below size IRC metal with 37 Kgs of VG30/ VG40 bitumen for premixing per 10sqm including cost and conveyance of all materials to CMP site, heating the bitumen and aggregate to required temperature and mixing them in required temperature in central hot mix plant 20-30 ton capacity, conveying the mix by tipper trucks to paver site, spreading the mix to uniform thickness of 50mm with mechanical paver to the specified grades and cross sections and consolidated by 8-10 tonne Vibratory / Pneumatic Roller to the required density etc., including labour for attending to paver to site etc., including hire charges and fuel charges for 20-30 t CMP with bitumen boiler, tipper trucks, Paver Finisher / 9m paver finisher, Vibratory / Pneumatic roller and all other tools and plant required, including fuel and all other incidental charges etc., complete as per specification using CMP as per clause 504 of MORTH Rev-5	M3	8297.90	

Sl.No	Item No.	Description	Unit	Rate (Rs.P)	Cement
27	0907	Providing and laying 80mm consolidated thick bituminous macadam using 0.64 cum fo 37.5 - 13.20mm, 0.44 cum of 13.2 - 2.36mm and 0.13 cum of 2.36mm and below size IRC metal with 62 Kgs of VG30/ VG40 bitumen for premixing per 10sqm including cost and conveyance of all materials to CMP site, heating the bitumen and aggregate to required temperature and mixing them in required temperature in central hot mix plant 20-30 ton capacity, conveying the mix by tipper trucks to paver site, spreading the mix to uniform thickness of 80mm with mechanical paver to the specified grades and cross sections and consolidated by 8-10 tonne Vibratory / Pneumatic Roller to the required density etc., including labour for attending to paver to site etc., including hire charges and fuel charges for 20-30 t CMP with bitumen boiler, tipper trucks,Paver Finisher / 9m paver finisher, Vibratory / Pneumatic roller and all other tools and plant required, including fuel and all other incidental charges etc., complete as per specification using CMP as per clause 504 of MORTH Rev-5.	M3	8391.65	
28	0908	Providing and laying Premix Carpet with Seal Coat Type - A to 20 mm thick using 0.18 cum of 13.20mm,0.09 cum of 11.20mm and 0.09 cum of 6.70mm with 24.40 kgs of VG30 bitumen for premixing per 10sqm including cost and conveyance of all materials to CMP site, heating the bitumen and aggregate to required temperature and mixing them in required temperature in central hot mix plant 20-30 ton capacity, conveying the mix by tipper trucks to paver site, spreading the mix to uniform thickness of 50mm with mechanical paver to the specified grades and cross sections and consolidated by 8-10 tonne Vibratory / Pneumatic Roller to the required density etc., including labour for attending to paver to site etc., including hire charges and fuel charges for 20-30 t CMP with bitumen boiler, tipper trucks,Paver Finisher / 9m paver finisher, Vibratory / Pneumatic roller and all other tools and plant required, including fuel and all other incidental charges etc., complete as per specification using CMP as per MORTH Rev-5	M2	241.65	

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Sl.No	Item No.	Description	Unit	Rate (Rs.P)	Cement
29	0909	Providing and laying, spreading and compacting graded stone aggregates to Wet Mix Macadam of 250mm thick specification including premixing the materials with water at OMC in mechanical mix plant carriage of mixed material by tipper to site laying in uniform layers with pavers in Sub Base/ Base course on well prepared surface and compacting with vibratory roller to achieve the desired density including cost of material, labour charges, rentals for machinery, fuel and all other incidental charges etc., complete as per clause 406 of MORTH Rev-5	M3	1487.60	
30	0910	Providing and laying Bituminous Concrete to 40 mm thick using 0.13 cum of 19.00-9.50 mm, 0.17 cum of 9.50-2.36mm and 0.26 cum of 2.36 and below with 50.30 kgs of VG30/ VG40 bitumen for premixing per 10sqm including cost and conveyance of all materials to CMP site, heating the bitumen and aggregate to required temperature and mixing them in required temperature in central hot mix plant 20-30 ton capacity, conveying the mix by tipper trucks to paver site, spreading the mix to uniform thickness of 40mm with mechanical paver to the specified grades and cross sections and consolidated by 8-10 tonne Vibratory / Pneumatic Roller to the required density etc., including labour for attending to paver to site etc., including hire charges and fuel charges for 20-30 t CMP with bitumen boiler, tipper trucks, Paver Finisher / 9 m paver finisher, Vibratory / Pneumatic roller and all other tools and plant required, including fuel and all other incidental charges etc., complete as per specification using CMP as per clause 507 of MORTH Rev-5	M3	11230.65	
31	0911	Providing laying and rolling of close graded premix carpet of compacted 20mm thickness using 0.0162 cum of 13.20-11.20mm, 0.1404 cum of 11.2-5.6mm, 0.0729 cum of 5.60-2.80 mm, 0.0405 cum of 2.80mm and below (Type B) graded HBG metal using 19kg of VG30 bitumen for 10sqm including premixing at CMP, conveyance by tipper lorry, laying by paver finisher and rolling by Vibratory Roller including cost and conveyance of all materials, hire charges of all T and P all labour charges, fuel and and all other incidental charges etc., Complete as per specification using CMP as per clause 508 of MORTH Rev-5	M2	200.35	

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Sl.No	Item No.	Description	Unit	Rate (Rs.P)	Cement
32	0912	Providing and laying, spreading and compacting graded stone aggregates to Crusher Run Macadam specification including premixing the materials with water at OMC in mechanical mix plant carriage of mixed material by tipper to site laying in uniform layers with pavers in Sub Base, Base course on well prepared surface and compacting with vibratory roller to achieve the desired density including cost of material, labour charges, rentals for machinery, fuel and all other incidental charges etc., complete as per Clause 407 of MORTH Rev-5	M3	1410.45	
33	0913	Providing and laying Prime Coat over WBM/WMM surface using 7 Kg of Emulsion Bitumen (SS1) per 10 sqm for preparatory to another bituminous construction over it including cost of material, labour charges, rentals for machinery, fuel and all other incidental charges etc., complete as per Clause 502 of MORTH Rev-5	M2	82.55	
34	0914	Providing and laying Prime Coat over CRM/ Gravel base using 9 Kg of Emulsion Bitumen (SS1) per 10 sqm for preparatory to another bituminous construction over it including cost of material, labour charges, rentals for machinery, fuel and all other incidental charges etc., complete as per Clause 502 of MORTH Rev-5	M2	100.30	
35	0915	Providing and laying Tack Coat over Dry Lean Cement Concrete surface using 3.00 Kg of Bitumen Emulsion (RS1) per 10 sqm for preparatory to another bituminous construction over it including cost of material, labour charges, rentals for machinery, fuel and all other incidental charges etc., complete as per Clause 503 of MORTH Rev-5	M2	20.15	
36	0916	Providing and laying Tack Coat over Existing BT surface using 2 Kg of Bitumen Emulsion (RS1) per 10 sqm for preparatory to another bituminous construction over it including cost of material, labour charges, rentals for machinery, fuel and all other incidental charges etc., complete as per Clause 503 of MORTH Rev-5	M2	19.15	
37	0917	Providing and laying Tack Coat over WBM/ WMM surface (treated with primer) using 2.50 Kg of Bitumen Emulsion (RS1) per 10 sqm for preparatory to another bituminous construction over it including cost of material, labour charges, rentals for machinery, fuel and all other incidental charges etc., complete as per Clause 503 of MORTH Rev-5	M2	17.35	

Sl.No	Item No.	Description	Unit	Rate (Rs.P)	Cement
38	0918	Providing, laying and compacting Well Gravel including cost and conveyance of the same to work site with an average lead of 5 Km including stacking the same to departemental gauge for premeasurement including all labour charges for laying, spreading etc., complete and directed by the departmental engineers for making up of low berms	M3	234.10	
39	0919	Providing, laying and compacting Gravel including cost and conveyance of the same to work site with an average lead of 5 Km including stacking the same to departemental gauge for premeasurement including all labour charges for laying, spreading etc., complete and as directed by the departmental engineers for making up of low berms	M3	333.10	
40	0920	Providing and laying Bituminous Concrete to 50 mm thick using 0.22 cum of 26.5- 13.20mm, 0.24 cum of 13.20-2.36mm and 0.26cum of 2.36 and below IRC HBG metal with 62.40 kgs of VG30/ VG40 bitumen for premixing per 10sqm including cost and conveyance of all materials to CMP site heating the bitumen and aggregate to required temperature and mixing them in required temperature in central hot mix plant 20-30 ton capacity, conveying the mix by tipper trucks to paver site, spreading the mix to uniform thickness of 50mm with mechanical paver to the specified grades and cross sections and consolidated by 8-10 tonne Vibratory / Pneumatic Roller to the required density etc., including labour for attending to paver to site etc., including hire charges and fuel charges for 20-30 t CMP with bitumen boiler, tipper trucks, Paver Finisher / 9m paver finisher, Vibratory / Pneumatic roller and all other tools and plant required, including fuel and all other incidental charges etc., complete as per specification using CMP clause 507 of MORTH.	M3	10768.20	
41	0921	Formation of embankment with earth from quarrying place and compaction by power roller (100 % compaction)	M3	539.90	
42	0922	Labour charges for spreading the patchmat material for road patch work. Rate includes preparation of surface, brushing, cleaning, laying patchmat, compacting etc. complete. Patchmat will be supplied by BHEL at stores at free of cost.	M2	42.00	

IF YOU ARE NOT WILLING TO QUOTE FOR THIS PACKAGE (I) YOU CAN IGNORE THE PAGES 2 to 11 OF THIS PRICE BID.

ELSE IF YOU ARE WILLING TO QUOTE FOR THIS PACKAGE(I) PLEASE ENCLOSE THE PAGES 2 to 11 ALONE IN A SEPERATE SEALED COVER

PART-II (PRICE BID)(PACKAGE-K)

SCHEDULE - A2

Name of Work: MAINTENANCE OF WATER SUPPLY & PLUMBING WORKS AT BHEL TOWNSHIP-TRICHY
CT:TS:13/18-19 Tender Value: Rs.64 Lakh

I / We _____ have read the condition of tender attached hereto and agree to abide by such conditions. I/We offer to execute the works in **T.S No. CT:TS:013/18-19 for a period of 12 months** at the percentage below / at par / above the rates contained in BHEL applicable items of Schedule of Rates 2013-14 quoted in the schedule appended below:

I / We further agree to sign an Agreement Bond to abide by the General Conditions of Contract and to carryout all works according to the specifications for materials and works of Bharat Heavy Electricals Limited, Tiruchirapalli-620 014. In case of acceptance of the tender by the BHEL, I/We bind myself/ourselves to execute the contract documents within 7 days after notice that my/our tender has been accepted and this contract has been awarded to me/us and thus failing which I/We shall have no objection to the forfeiture of the Earnest Money amount to **Rs.76,800/-** lodged with Bharat Heavy Electricals Limited, Tiruchirapalli-620 014.

I / We further agree to include all tools & plants and consumables required for the work in my / our scope but required power and water will be provided at one point by BHEL at free of cost and based on this, we have quoted our percentage.

Note: Details of each item of work shown in the BILL OF QUANTITIES are only approximate and the same is appended below. They are given as a guide for the purpose of tendering only and are liable to variation and alteration of the Competent Authority. The work under each item as executed shall be measured and priced at the overall percentage quoted by the contractor **Below (100-X) % / At par (100%) / Above (100+X) %** of the rates provided in Bill of Quantities appended below from **Page 13 to 38**. Eventhough the applicable items are provided, for the operational convenience the total tender value of **RS.64 Lakh** will be divided as required number of Sub Work orders.

Sl. No.	Approx. Value of work	Common single percentage rate, Below (100-X) % / At par (100%) / Above (100+X) % to be quoted with respect to the rates provided in Bill of Quantities appended below from Page 13 to 38 (The percentage is to be quoted here is GST excluded) (Applicable GST will be extra)	
		In Figures	In Words
1.	Rs.64 Lakh		

Examples:

- 1. If the vendor needs to quote 5% below the schedule of rates then vendor need to write 95% in figure column and Ninety Five percent in words.**
- 2. If the vendor needs to quote at par the the schedule of rates then vendor need to write 100% in figure column and One Hundred percent in words.**
- 3.If the vendor needs to quote 5% above the schedule of rates then vendor need to write 105% in figure column and One Hundred Five percent in words**

Note: Applicable BHEL SR(13-14) item details are given below. Contractor has to quote Common single percentage rate, Below (100-X) % / At par (100%) / Above (100+X) % with respect to the rates provided in Bill of Quantities below at page 12 both in figures and in words

BILL OF QUANTITIES

PACKAGE-K (207 items) CT:TS:013/18-19

MAINTENANCE OF WATER SUPPLY & PLUMBING WORKS AT BHEL TOWNSHIP-TRICHY

Sl. No	Item No.	Description	Unit	Rate (Rs.P)	Cement
1	1101A	Providing and fixing G.I pipes and specials (B - Class) of approved brand with G.I fittings and clamps on walls and floors, including cutting and making good the walls and floors etc. complete. (Internal work - exposed on walls) 15 mm dia nominal bore.	RM	147.10	
2	1101B	Providing and fixing G.I pipes and specials (B - Class) of approved brand with G.I fittings and clamps on walls and floors, including cutting and making good the walls and floors etc. complete. (Internal work - exposed on walls) 20 mm dia nominal bore.	RM	180.00	
3	1101C	Providing and fixing G.I pipes and specials (B - Class) of approved brand with G.I fittings and clamps on walls and floors, including cutting and making good the walls and floors etc. complete. (Internal work - exposed on walls) 25 mm dia nominal bore.	RM	239.65	
4	1101D	Providing and fixing G.I pipes and specials (B - Class) of approved brand with G.I fittings and clamps on walls and floors, including cutting and making good the walls and floors etc. complete. (Internal work - exposed on walls) 32 mm dia nominal bore.	RM	290.10	
5	1101E	Providing and fixing G.I pipes and specials (B - Class) of approved brand with G.I fittings and clamps on walls and floors, including cutting and making good the walls and floors etc. complete. (Internal work - exposed on walls) 40 mm dia nominal bore.	RM	345.10	
6	1101F	Providing and fixing G.I pipes and specials (B - Class) of approved brand with G.I fittings and clamps on walls and floors, including cutting and making good the walls and floors etc. complete. (Internal work - exposed on walls) 50 mm dia nominal bore.	RM	431.55	
7	1101G	Providing and fixing G.I pipes and specials (B - Class) of approved brand with G.I fittings and clamps on walls and floors, including cutting and making good the walls and floors etc. complete. (Internal work - exposed on walls) 65 mm dia nominal bore.	RM	531.25	

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Sl. No	Item No.	Description	Unit	Rate (Rs.P)	Cement
8	1101H	Providing and fixing G.I pipes and specials (B - Class) of approved brand with G.I fittings and clamps on walls and floors, including cutting and making good the walls and floors etc. complete. (Internal work - exposed on walls) 80 mm dia nominal bore.	RM	677.65	
9	1101I	Providing and fixing G.I pipes and specials (B - Class) of approved brand with G.I fittings and clamps on walls and floors, including cutting and making good the walls and floors etc. complete. (Internal work - exposed on walls) 100 mm dia nominal bore.	RM	835.65	
10	1101J	Providing and fixing G.I pipes and specials (B - Class) of approved brand with G.I fittings and clamps on walls and floors, including cutting and making good the walls and floors etc. complete. (Internal work - exposed on walls) 125 mm dia nominal bore.	RM	1409.55	
11	1101K	Providing and fixing G.I pipes and specials (B - Class) of approved brand with G.I fittings and clamps on walls and floors, including cutting and making good the walls and floors etc. complete. (Internal work - exposed on walls) 150 mm dia nominal bore.	RM	1627.45	
12	1102	Making chases upto 7.50 x 7.50 cm in walls for concealed pipe line works etc. including making good to match with existing one after housing pipes etc. complete. Rate excludes cost of pipes.	RM	57.40	
13	1103A	Providing and laying G.I pipes and specials (B - Class) of approved brand with G.I fittings in trenches. (External work) Earth work excavation for trenches and refilling will be paid separately. 15 mm dia nominal bore.	RM	87	
14	1103B	Providing and laying G.I pipes and specials (B - Class) of approved brand with G.I fittings in trenches. (External work) Earth work excavation for trenches and refilling will be paid separately. 20 mm dia nominal bore.	RM	110.60	
15	1103C	Providing and laying G.I pipes and specials (B - Class) of approved brand with G.I fittings in trenches. (External work) Earth work excavation for trenches and refilling will be paid separately. 25 mm dia nominal bore.	RM	162.10	

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Sl. No	Item No.	Description	Unit	Rate (Rs.P)	Cement
16	1103D	Providing and laying G.I pipes and specials (B - Class) of approved brand with G.I fittings in trenches. (External work) Earth work excavation for trenches and refilling will be paid separately. 32 mm dia nominal bore.	RM	199.20	
17	1103E	Providing and laying G.I pipes and specials (B - Class) of approved brand with G.I fittings in trenches. (External work) Earth work excavation for trenches and refilling will be paid separately. 40 mm dia nominal bore.	RM	232.70	
18	1103F	Providing and laying G.I pipes and specials (B - Class) of approved brand with G.I fittings in trenches. (External work) Earth work excavation for trenches and refilling will be paid separately. 50 mm dia nominal bore.	RM	290.10	
19	1103G	Providing and laying G.I pipes and specials (B - Class) of approved brand with G.I fittings in trenches. (External work) Earth work excavation for trenches and refilling will be paid separately. 65 mm dia nominal bore.	RM	381.70	
20	1103H	Providing and laying G.I pipes and specials (B - Class) of approved brand with G.I fittings in trenches. (External work) Earth work excavation for trenches and refilling will be paid separately. 80 mm dia nominal bore.	RM	504.25	
21	1103I	Providing and laying G.I pipes and specials (B - Class) of approved brand with G.I fittings in trenches. (External work) Earth work excavation for trenches and refilling will be paid separately. 100 mm dia nominal bore.	RM	650.95	
22	1103J	Providing and laying G.I pipes and specials (B - Class) of approved brand with G.I fittings in trenches. (External work) Earth work excavation for trenches and refilling will be paid separately. 125 mm dia nominal bore.	RM	1150.25	
23	1103K	Providing and laying G.I pipes and specials (B - Class) of approved brand with G.I fittings in trenches. (External work) Earth work excavation for trenches and refilling will be paid separately. 150 mm dia nominal bore.	RM	1360.80	
24	1104A	Providing and fixing PVC water pipes and specials conforming to ISS on walls and floors with clamps at one metre spacings, joining with proper adhesive as suggested by manufacturers, cutting and making good the wall etc. complete. (internal work - exposed on walls) PVC Pipe 18/20 mm OD (10 kg/Sq.cm)	RM	62.90	

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Sl. No	Item No.	Description	Unit	Rate (Rs.P)	Cement
25	1104B	Providing and fixing PVC water pipes and specials conforming to ISS on walls and floors with clamps at one metre spacings, joining with proper adhesive as suggested by manufacturers, cutting and making good the wall etc. complete. (internal work - exposed on walls) PVC Pipe 25 mm OD (10 kg/Sq.cm)	RM	80.05	
26	1104C	Providing and fixing PVC water pipes and specials conforming to ISS on walls and floors with clamps at one metre spacings, joining with proper adhesive as suggested by manufacturers, cutting and making good the wall etc. complete. (internal work - exposed on walls) PVC Pipe 32 mm OD (10 kg/Sq.cm)	RM	96.10	
27	1104D	Providing and fixing PVC water pipes and specials conforming to ISS on walls and floors with clamps at one metre spacings, joining with proper adhesive as suggested by manufacturers, cutting and making good the wall etc. complete. (internal work - exposed on walls) PVC Pipe 40 mm OD (6 kg/Sq.cm)	RM	119.65	
28	1104E	Providing and fixing PVC water pipes and specials conforming to ISS on walls and floors with clamps at one metre spacings, joining with proper adhesive as suggested by manufacturers, cutting and making good the wall etc. complete. (internal work - exposed on walls) PVC Pipe 50 mm OD (6 kg/Sq.cm)	RM	156.80	
29	1105A	Providing and laying PVC water pipes and specials conforming to ISS in trenches, joining with proper adhesive as suggested by manufacturers etc. complete. (External work) Earth work excavation for trenches and refilling will be paid separately. PVC Pipe 18/20 mm OD (10 kg/Sq.cm)	RM	23.35	
30	1105B	Providing and laying PVC water pipes and specials conforming to ISS in trenches, joining with proper adhesive as suggested by manufacturers etc. complete. (External work) Earth work excavation for trenches and refilling will be paid separately. PVC Pipe 25 mm OD (10 kg/Sq.cm)	RM	32.35	
31	1105C	Providing and laying PVC water pipes and specials conforming to ISS in trenches, joining with proper adhesive as suggested by manufacturers etc. complete. (External work) Earth work excavation for trenches and refilling will be paid separately. PVC Pipe 32 mm OD (10 kg/Sq.cm)	RM	46.25	
32	1105D	Providing and laying PVC water pipes and specials conforming to ISS in trenches, joining with proper adhesive as suggested by manufacturers etc. complete. (External work) Earth work excavation for trenches and refilling will be paid separately. PVC Pipe 40 mm OD (6 kg/Sq.cm)	RM	51.10	
33	1105E	Providing and laying PVC water pipes and specials conforming to ISS in trenches, joining with proper adhesive as suggested by manufacturers etc. complete. (External work) Earth work excavation for trenches and refilling will be paid separately. PVC Pipe 50 mm OD (6 kg/Sq.cm)	RM	72.35	

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Sl. No	Item No.	Description	Unit	Rate (Rs.P)	Cement
34	1105F	Providing and laying PVC water pipes and specials conforming to ISS in trenches, joining with proper adhesive as suggested by manufacturers etc. complete. (External work) Earth work excavation for trenches and refilling will be paid separately. PVC Pipe 63 mm OD (6 kg/Sq.cm)	RM	108.50	
35	1105G	Providing and laying PVC water pipes and specials conforming to ISS in trenches, joining with proper adhesive as suggested by manufacturers etc. complete. (External work) Earth work excavation for trenches and refilling will be paid separately. PVC Pipe 75 mm OD (6 kg/Sq.cm)	RM	150.70	
36	1105H	Providing and laying PVC water pipes and specials conforming to ISS in trenches, joining with proper adhesive as suggested by manufacturers etc. complete. (External work) Earth work excavation for trenches and refilling will be paid separately. PVC Pipe 90 mm OD (6 kg/Sq.cm)	RM	211.45	
37	1105I	Providing and laying PVC water pipes and specials conforming to ISS in trenches, joining with proper adhesive as suggested by manufacturers etc. complete. (External work) Earth work excavation for trenches and refilling will be paid separately. PVC Pipe 110 mm OD (6 kg/Sq.cm)	RM	294.65	
38	1105J	Providing and laying PVC water pipes and specials conforming to ISS in trenches, joining with proper adhesive as suggested by manufacturers etc. complete. (External work) Earth work excavation for trenches and refilling will be paid separately. PVC Pipe 140 mm OD (6 kg/Sq.cm)	RM	464.30	
39	1105K	Providing and laying PVC water pipes and specials conforming to ISS in trenches, joining with proper adhesive as suggested by manufacturers etc. complete. (External work) Earth work excavation for trenches and refilling will be paid separately. PVC Pipe 160 mm OD (6 kg/Sq.cm)	RM	594.70	
40	1105L	Providing and laying PVC water pipes and specials conforming to ISS in trenches, joining with proper adhesive as suggested by manufacturers etc. complete. (External work) Earth work excavation for trenches and refilling will be paid separately. PVC Pipe 180 mm OD (6 kg/Sq.cm)	RM	774.35	
41	1105M	Providing and laying PVC water pipes and specials conforming to ISS in trenches, joining with proper adhesive as suggested by manufacturers etc. complete. (External work) Earth work excavation for trenches and refilling will be paid separately. PVC Pipe 200 mm OD (6 kg/Sq.cm)	RM	941.90	
42	1106A	Providing and fixing PVC pipes of 4 K.G / Sqcm conforming to ISS including joining with proper adhesive as suggested by manufacturers and suitable clamps for rain water pipes, drainage etc. Rate excludes all specials like shoe, bend, tee, tee with door etc. PVC Pipe 75 mm OD	RM	128.05	

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Sl. No	Item No.	Description	Unit	Rate (Rs.P)	Cement
43	1106B	Providing and fixing PVC pipes of 4 K.G / Sqcm conforming to ISS including joining with proper adhesive as suggested by manufacturers and suitable clamps for rain water pipes, drainage etc. Rate excludes all specials like shoe, bend, tee, tee with door etc. PVC Pipe 110 mm OD	RM	225.20	
44	1106C	Providing and fixing PVC pipes of 4 K.G / Sqcm conforming to ISS including joining with proper adhesive as suggested by manufacturers and suitable clamps for rain water pipes, drainage etc. Rate excludes all specials like shoe, bend, tee, tee with door etc. PVC Pipe 160 mm OD	RM	364.85	
45	1107A	Providing and fixing PVC moulded fittings / accessories on walls for rain water pipes conforming to IS 13592 Type A including joining with seal rings conforming to IS 5382 and proper adhesive as suggested by manufacturers etc., complete. 75 x75 x 75 mm single tee with door.	EA	134.50	
46	1107B	Providing and fixing PVC moulded fittings / accessories on walls for rain water pipes conforming to IS 13592 Type A including joining with seal rings conforming to IS 5382 and proper adhesive as suggested by manufacturers etc., complete. 110 x 110 x 110 mm single tee with door.	EA	197.90	
47	1107C	Providing and fixing PVC moulded fittings / accessories on walls for rain water pipes conforming to IS 13592 Type A including joining with seal rings conforming to IS 5382 and proper adhesive as suggested by manufacturers etc., complete. 160 x 160 x 160 mm single tee with door.	EA	335.15	
48	1107D	Providing and fixing PVC moulded fittings / accessories on walls for rain water pipes conforming to IS 13592 Type A including joining with seal rings conforming to IS 5382 and proper adhesive as suggested by manufacturers etc., complete. 75 x75 x 75 mm single tee without door.	EA	119.10	
49	1107E	Providing and fixing PVC moulded fittings / accessories on walls for rain water pipes conforming to IS 13592 Type A including joining with seal rings conforming to IS 5382 and proper adhesive as suggested by manufacturers etc., complete. 110 x110 x 110 mm single tee without door.	EA	174.80	
50	1107F	Providing and fixing PVC moulded fittings / accessories on walls for rain water pipes conforming to IS 13592 Type A including joining with seal rings conforming to IS 5382 and proper adhesive as suggested by manufacturers etc., complete. 160 x160 x 160 mm single tee without door.	EA	288.85	
51	1107G	Providing and fixing PVC moulded fittings / accessories on walls for rain water pipes conforming to IS 13592 Type A including joining with seal rings conforming to IS 5382 and proper adhesive as suggested by manufacturers etc., complete. 75 mm shoe	EA	68.60	

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Sl. No	Item No.	Description	Unit	Rate (Rs.P)	Cement
52	1107H	Providing and fixing PVC moulded fittings / accessories on walls for rain water pipes conforming to IS 13592 Type A including joining with seal rings conforming to IS 5382 and proper adhesive as suggested by manufacturers etc., complete. 110 mm shoe	EA	101.70	
53	1107I	Providing and fixing PVC moulded fittings / accessories on walls for rain water pipes conforming to IS 13592 Type A including joining with seal rings conforming to IS 5382 and proper adhesive as suggested by manufacturers etc., complete. 160 mm shoe	EA	174.90	
54	1107J	Providing and fixing PVC moulded fittings / accessories on walls for rain water pipes conforming to IS 13592 Type A including joining with seal rings conforming to IS 5382 and proper adhesive as suggested by manufacturers etc., complete. 75 mm bend	EA	81.90	
55	1107K	Providing and fixing PVC moulded fittings / accessories on walls for rain water pipes conforming to IS 13592 Type A including joining with seal rings conforming to IS 5382 and proper adhesive as suggested by manufacturers etc., complete. 110 mm bend	EA	150.25	
56	1107L	Providing and fixing PVC moulded fittings / accessories on walls for rain water pipes conforming to IS 13592 Type A including joining with seal rings conforming to IS 5382 and proper adhesive as suggested by manufacturers etc., complete. 160 mm bend	EA	191.50	
57	1108A	Providing and fixing in position of brass wheel valve / gate valve (G.M) of approved brand with C.I wheel etc. complete. (ISI marked) 15 to 25 mm nominal bore	EA	421.70	
58	1108B	Providing and fixing in position of brass wheel valve / gate valve (G.M) of approved brand with C.I wheel etc. complete. (ISI marked) 32 mm nominal bore	EA	545.35	
59	1108C	Providing and fixing in position of brass wheel valve / gate valve (G.M) of approved brand with C.I wheel etc. complete. (ISI marked) 40 mm nominal bore	EA	712.80	
60	1108D	Providing and fixing in position of brass wheel valve / gate valve (G.M) of approved brand with C.I wheel etc. complete. (ISI marked) 50 mm nominal bore	EA	962.70	
61	1108E	Providing and fixing in position of brass wheel valve / gate valve (G.M) of approved brand with C.I wheel etc. complete. (ISI marked) 80 mm nominal bore	EA	2730.25	
62	1108F	Providing and fixing in position of brass wheel valve / gate valve (G.M) of approved brand with C.I wheel etc. complete. (ISI marked) 100 mm nominal bore	EA	4972.00	

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Sl. No	Item No.	Description	Unit	Rate (Rs.P)	Cement
63	1109A	Providing and fixing in position C.P brass bib cock / stop cock (Medium Duty) of approved brand (ISI marked) 15 mm nominal bore.	EA	207.55	
64	1109B	Providing and fixing in position C.P brass bib cock / stop cock (Medium Duty) of approved brand (ISI marked) 20 mm nominal bore.	EA	265.25	
65	1109C	Providing and fixing in position C.P brass bib cock / stop cock (Medium Duty) of approved brand (ISI marked) 25 mm nominal bore.	EA	342.10	
66	1110A	Providing and fixing in position of following of approved brand (ISI marked) 15 mm nominal bore C.P brass long nose bibcock	EA	748.70	
67	1110B	Providing and fixing in position of following of approved brand (ISI marked) 15mm nominal C.P brass stop cock (concealed)	EA	585.95	
68	1110C	Providing and fixing in position of following of approved brand (ISI marked) 15 mm nominal C.P brass long body bibcock	EA	577.10	
69	1111	Providing and fixing in position 15 mm nominal bore C.P brass angle valve for basin mixer and geyser points of approved brand (ISI marked)	EA	479.85	
70	1112	Providing and fixing in position 100 mm dia C.P brass shower rose (tilting type) of approved brand with 15 or 20 mm dia inlet.	EA	67.65	
71	1113	Providing and fixing in position of white glazed earthenware wash basin of size 550 x 400 x 225 mm of approved brand with M.S or C.I brackets painted with two coats of synthetic enamel paint, single 15 mm C.P brass pillar tap and C.P brass chain with rubber plug, 32 mm C.P brass waste coupling of standard pattern, 32 mm dia PVC flexible waste pipe etc. complete, including cutting and making good the walls wherever required.	EA	1605.80	
72	1114	Providing built-in-wash basin of inner dimension 0.30 x 0.25 m with 50 mm thick bottom slab in cement concrete 1:2:4, using 12 to 20 mm size hard broken granite stone jelly and 30 mm thick side walls in cement concrete 1:2:4 using 6 mm granite stone chips applied over chickenmesh and finished with insitu gray mosaic of 10 mm thick wearing layer on both faces. Rate includes cost of all materials, labour, centering, curing and all other incidentals but excluding cost of binding wire and fabrication charges for grills.	RM	1154.50	

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Sl. No	Item No.	Description	Unit	Rate (Rs.P)	Cement
73	1115A	Providing and fixing in position of towel rail complete with brackets fixed to wooden cleats with CP brass screws with concealed fitting arrangement of approved quality and colour. (600 mm long towel rail with total length of 645 mm, width 78 mm and effective height of 88 mm, weighing not less than 190 grams) PTMT towel rail 600 mm	EA	382.05	
74	1115B	Providing and fixing in position of towel rail complete with brackets fixed to wooden cleats with CP brass screws with concealed fitting arrangement of approved quality and colour. (600 mm long towel rail with total length of 645 mm, width 78 mm and effective height of 88 mm, weighing not less than 190 grams) Brass chromium plated towel rail 600 mm and 20 mm dia	EA	399.65	
75	1115C	Providing and fixing in position of towel rail complete with brackets fixed to wooden cleats with CP brass screws with concealed fitting arrangement of approved quality and colour. (600 mm long towel rail with total length of 645 mm, width 78 mm and effective height of 88 mm, weighing not less than 190 grams) Anodised aluminium Towel rail 60cm long and 20mm dia with brackets	EA	266.55	
76	1116A	Providing and fixing 600 x 450 x 5 mm bevelled edge mirror of superior glass (approved brand) mounted on 5/6 mm thick hard board / ply wood / plastic folder sheet, fixed to wooden cleats with C.P brass screws and washers, etc. complete. 600 x 450 x 5 mm bevelled edge mirror	EA	374.00	
77	1116B	Providing and fixing 600 x 450 x 5 mm bevelled edge mirror of superior glass (approved brand) mounted on 5/6 mm thick hard board / ply wood / plastic folder sheet, fixed to wooden cleats with C.P brass screws and washers, etc. complete. Circular shape 450 mm dia Mirror with Plastic moulded frame	EA	528.00	
78	1116C	Providing and fixing 600 x 450 x 5 mm bevelled edge mirror of superior glass (approved brand) mounted on 5/6 mm thick hard board / ply wood / plastic folder sheet, fixed to wooden cleats with C.P brass screws and washers, etc. complete. Rectangular shape 453x357 mm Mirror with Plastic moulded frame	EA	363.00	
79	1116D	Providing and fixing 600 x 450 x 5 mm bevelled edge mirror of superior glass (approved brand) mounted on 5/6 mm thick hard board / ply wood / plastic folder sheet, fixed to wooden cleats with C.P brass screws and washers, etc. complete. Oval shape 450x350 mm (outer dimensions) Mirror with Plastic	EA	418.00	
80	1116E	Providing and fixing 600 x 450 x 5 mm bevelled edge mirror of superior glass (approved brand) mounted on 5/6 mm thick hard board / ply wood / plastic folder sheet, fixed to wooden cleats with C.P brass screws and washers, etc. complete. Rectangular shape 1500x450 mm Mirror with Plastic moulded frame	EA	803.00	

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Sl. No	Item No.	Description	Unit	Rate (Rs.P)	Cement
81	1117	Providing and fixing in position of 600 x 120 x 5 mm glass shelf (approved brand) with edges rounded off, supported on anodised aluminium angle frame with C.P brackets fixed with screws , rawl plugs etc. complete.	EA	308.00	
82	1118	Providing and fixing RCC precast sink of size 60 x 45 x 25 cm in cement concrete of mix 1:2:4 for 25 mm thick bottom slab and 20 mm thick side walls using 6 mm granite stone jelly, applied on chickenmesh and plastered both sides with cement mortar 1:4, 12 mm thick and finished smooth, supply and fixing PVC waste pipe 32 mm dia. with necessary coupling. etc., complete. Rate includes cost of all materials, labour, curing, carrying and fixing in position etc. but excluding cost of binding wire and fabrication charges for grills, all as per standard specifications.	EA	1244.40	
83	1119A	Providing and fixing in position of ready made sink including PVC flexible waste pipe of 32 mm dia with necessary C.P waste coupling etc. complete. Cudappa sink of size 600X450X200 or thereabouts (outer dimensions) - 12 mm thick.	EA	766.10	
84	1119B	Providing and fixing in position of ready made sink including PVC flexible waste pipe of 32 mm dia with necessary C.P waste coupling etc. complete. Cudappa sink of size 600X600X200 or thereabouts (outer dimensions) - 12 mm thick.	EA	932.15	
85	1119C	Providing and fixing in position of ready made sink including PVC flexible waste pipe of 32 mm dia with necessary C.P waste coupling etc. complete. Marble (white) sink of size 23" x 17" x 9"/10" or thereabouts (outer dimensions) - 12 mm thick.	EA	1174.80	
86	1119D	Providing and fixing in position of ready made sink including PVC flexible waste pipe of 32 mm dia with necessary C.P waste coupling etc. complete. Marble (white) sink of size 23" x 23" x 9"/10" or thereabouts (outer dimensions) - 12 mm thick.	EA	1460.80	
87	1119E	Providing and fixing in position of ready made sink including PVC flexible waste pipe of 32 mm dia with necessary C.P waste coupling etc. complete. Granite (black) sink of size 23" x 17" x 9"/10" or thereabouts (outer dimensions) - 12 mm thick.	EA	1614.80	
88	1119F	Providing and fixing in position of ready made sink including PVC flexible waste pipe of 32 mm dia with necessary C.P waste coupling etc. complete. Granite (black) sink of size 23" x 23" x 9"/10" or thereabouts (outer dimensions) - 12 mm thick.	EA	1900.80	
89	1120	Conveying RCC/ ready made sink from BHEL stores to site of work and fixing in proper position with cement mortar including supply and fixing 32 mm dia PVC waste pipe with necessary coupling etc. complete. Rate excludes cost of sink which will be supplied by BHEL at stores at free of cost.	EA	181.50	

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Sl. No	Item No.	Description	Unit	Rate (Rs.P)	Cement
90	1121	Providing and fixing in position of 100 x 75 mm Nahani trap with PVC grating, all as per standard specifications.	EA	182.70	
91	1122	Providing and fixing in position of 150 mm SW gully trap with HCI grating, all as per standard specifications.	EA	288.75	
92	1123A	Providing and fixing in position of brass ball valve of approved brand with plastic float fitted with brass rod etc. complete. 20mm nominal bore	EA	385.80	
93	1123B	Providing and fixing in position of brass ball valve of approved brand with plastic float fitted with brass rod etc. complete. 25mm nominal bore	EA	432.30	
94	1124A	Providing and fixing in position of Indian type white glazed earthenware water closet pan of approved brand with suitable P or S trap including a pair of white glazed foot rest etc. complete. 580 mm size	EA	1112.35	
95	1124B	Providing and fixing in position of Indian type white glazed earthenware water closet pan of approved brand with suitable P or S trap including a pair of white glazed foot rest etc. complete. 500 mm size	EA	1579.85	
96	1125A	Providing and fixing in position of orissa pattern water closet of approved brand with integral type foot rests,suitable P or S trap etc. complete. 580 mm size (White) (Parryware/Neycer/Cera)	EA	1815.25	
97	1125B	Providing and fixing in position of orissa pattern water closet of approved brand with integral type foot rests,suitable P or S trap etc. complete. 580 mm size (colour)	EA	2146.35	
98	1126	Providing and fixing in position of 25 mm nominal bore C.P half turn flush valve of approved brand (ISI marked) in pipe lines.	EA	1017.50	
99	1127A	Providing and fixing in position of pedestal type water closet (European type W.C pan) 400 mm high of approved brand with seat and lid, C.P brass hinges and rubber buffers, 10 litre PVC low level flushing cistern with fittings and painted C.I / M.S brackets with 15 mm PVC connection, 32/40 mm PVC flush bend with fittings and clamps, over flow arrangement with specials and mosquito proof coupling including painting of fittings and brackets, cutting and making good the walls and floors wherever required etc. complete. White glazed (white seat and lid)	EA	4530.05	

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Sl. No	Item No.	Description	Unit	Rate (Rs.P)	Cement
100	1127B	Providing and fixing in position of pedestal type water closet (European type W.C pan) 400 mm high of approved brand with seat and lid, C.P brass hinges and rubber buffers, 10 litre PVC low level flushing cistern with fittings and painted C.I / M.S brackets with 15 mm PVC connection, 32/40 mm PVC flush bend with fittings and clamps, over flow arrangement with specials and mosquito proof coupling including painting of fittings and brackets, cutting and making good the walls and floors wherever required etc. complete. Colour glazed with colour seat and lid	EA	4931.55	
101	1128	Providing and fixing in position of 10 litre low level PVC flushing cistern of approved make with fittings and flush pipe etc. complete.	EA	679.95	
102	1129	Providing and fixing in position 32 mm dia G.I flush pipe with brass union for high level flushing cistern including cutting and making good the walls and floors etc. complete.	EA	543.95	
103	1130A	Providing and fixing in position of white glazed earthenware urinal of approved brand with teakwood plugs and screws/clamps, including standard PVC flush pipe and C.P. brass spreaders with brass unions and G.I clamps complete, cutting of floor and walls and making good all damages and finishing to match with the existing work etc., complete. Flat back angular lipped urinal of 430 x 260 x 350 mm or 340 x 410 x 265 mm	EA	1383.50	
104	1130B	Providing and fixing in position of white glazed earthenware urinal of approved brand with teakwood plugs and screws/clamps, including standard PVC flush pipe and C.P. brass spreaders with brass unions and G.I clamps complete, cutting of floor and walls and making good all damages and finishing to match with the existing work etc., complete. Flat back half stall urinal of size 580x380x350 mm	EA	2606.70	
105	1131A	Providing, laying in proper grade and alignment and joining glazed stoneware pipes of approved brand with stiff mixture of cement mortar 1:1 and spun yarn including testing of joints etc.complete. 100 mm dia S.W Pipes	RM	176.75	0.64
106	1131B	Providing, laying in proper grade and alignment and joining glazed stoneware pipes of approved brand with stiff mixture of cement mortar 1:1 and spun yarn including testing of joints etc.complete. 150 mm dia S.W Pipes	RM	270.45	1.2
107	1131C	Providing, laying in proper grade and alignment and joining glazed stoneware pipes of approved brand with stiff mixture of cement mortar 1:1 and spun yarn including testing of joints etc.complete. 200 mm dia S.W Pipes	RM	402.65	1.77

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Sl. No	Item No.	Description	Unit	Rate (Rs.P)	Cement
108	1131D	Providing, laying in proper grade and alignment and joining glazed stoneware pipes of approved brand with stiff mixture of cement mortar 1:1 and spun yarn including testing of joints etc.complete. 225 mm dia S.W Pipes	RM	491.75	2.17
109	1132A	Providing rectangular/circular manhole as per Drawing for the following depths. Rate includes earth work excavation in all soils (except hard rock requiring blasting) including soft disintegrated rock, watering and ramming of foundation bed, providing cement concrete 1:4:8 in foundation, including necessary slope and forming channels smoothly finished in C.M 1:2, brick work in C.M 1:5 for arch ring, etc., using standard approved bricks, plastering in cement mortar 1:4 for side walls (outside and inside), cement concrete 1:2:4 using 12 to 20 mm HBGS jelly for manhole cover fixing, providing and fixing C.I steps for ladder rungs, etc., complete. Rate includes an initial lead of 10 m and all lifts for excavation and other charges etc., complete, but excludes cost of manhole cover and frame. Upto 0.90 m depth (Rectangular)	EA	4131.75	128
110	1132B	Providing rectangular/circular manhole as per Drawing for the following depths. Rate includes earth work excavation in all soils (except hard rock requiring blasting) including soft disintegrated rock, watering and ramming of foundation bed, providing cement concrete 1:4:8 in foundation, including necessary slope and forming channels smoothly finished in C.M 1:2, brick work in C.M 1:5 for arch ring, etc., using standard approved bricks, plastering in cement mortar 1:4 for side walls (outside and inside), cement concrete 1:2:4 using 12 to 20 mm HBGS jelly for manhole cover fixing, providing and fixing C.I steps for ladder rungs, etc., complete. Rate includes an initial lead of 10 m and all lifts for excavation and other charges etc., complete, but excludes cost of manhole cover and frame. Above 0.90 and upto 1.20 m depth (Rectangular)	EA	6589.65	278.01
111	1132C	Providing rectangular/circular manhole as per Drawing for the following depths. Rate includes earth work excavation in all soils (except hard rock requiring blasting) including soft disintegrated rock, watering and ramming of foundation bed, providing cement concrete 1:4:8 in foundation, including necessary slope and forming channels smoothly finished in C.M 1:2, brick work in C.M 1:5 for arch ring, etc., using standard approved bricks, plastering in cement mortar 1:4 for side walls (outside and inside), cement concrete 1:2:4 using 12 to 20 mm HBGS jelly for manhole cover fixing, providing and fixing C.I steps for ladder rungs, etc., complete. Rate includes an initial lead of 10 m and all lifts for excavation and other charges etc., complete, but excludes cost of manhole cover and frame. Above 1.20 and upto 1.50 m depth (Rectangular)	EA	8361.35	320.31

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Sl. No	Item No.	Description	Unit	Rate (Rs.P)	Cement
112	1132D	Providing rectangular/circular manhole as per Drawing for the following depths. Rate includes earth work excavation in all soils (except hard rock requiring blasting) including soft disintegrated rock, watering and ramming of foundation bed, providing cement concrete 1:4:8 in foundation, including necessary slope and forming channels smoothly finished in C.M 1:2, brick work in C.M 1:5 for arch ring, etc., using standard approved bricks, plastering in cement mortar 1:4 for side walls (outside and inside), cement concrete 1:2:4 using 12 to 20 mm HBGS jelly for manhole cover fixing, providing and fixing C.I steps for ladder rungs, etc., complete. Rate includes an initial lead of 10 m and all lifts for excavation and other charges etc., complete, but excludes cost of manhole cover and frame. Above 1.50 and upto 1.80 m depth (Rectangular)	EA	9284.90	332.1
113	1132E	Providing rectangular/circular manhole as per Drawing for the following depths. Rate includes earth work excavation in all soils (except hard rock requiring blasting) including soft disintegrated rock, watering and ramming of foundation bed, providing cement concrete 1:4:8 in foundation, including necessary slope and forming channels smoothly finished in C.M 1:2, brick work in C.M 1:5 for arch ring, etc., using standard approved bricks, plastering in cement mortar 1:4 for side walls (outside and inside), cement concrete 1:2:4 using 12 to 20 mm HBGS jelly for manhole cover fixing, providing and fixing C.I steps for ladder rungs, etc., complete. Rate includes an initial lead of 10 m and all lifts for excavation and other charges etc., complete, but excludes cost of manhole cover and frame. Above 1.80 and upto 2.10 m depth (Rectangular)	EA	10773.80	367.94
114	1132F	Providing rectangular/circular manhole as per Drawing for the following depths. Rate includes earth work excavation in all soils (except hard rock requiring blasting) including soft disintegrated rock, watering and ramming of foundation bed, providing cement concrete 1:4:8 in foundation, including necessary slope and forming channels smoothly finished in C.M 1:2, brick work in C.M 1:5 for arch ring, etc., using standard approved bricks, plastering in cement mortar 1:4 for side walls (outside and inside), cement concrete 1:2:4 using 12 to 20 mm HBGS jelly for manhole cover fixing, providing and fixing C.I steps for ladder rungs, etc., complete. Rate includes an initial lead of 10 m and all lifts for excavation and other charges etc., complete, but excludes cost of manhole cover and frame. Above 2.10 and upto 2.40 m depth (Rectangular)	EA	12463.50	403.63

CIVIL ENGINEERING DEPARTMENT, BHEL, Trichy-14

Sl. No	Item No.	Description	Unit	Rate (Rs.P)	Cement
115	1132G	Providing rectangular/circular manhole as per Drawing for the following depths. Rate includes earth work excavation in all soils (except hard rock requiring blasting) including soft disintegrated rock, watering and ramming of foundation bed, providing cement concrete 1:4:8 in foundation, including necessary slope and forming channels smoothly finished in C.M 1:2, brick work in C.M 1:5 for arch ring, etc., using standard approved bricks, plastering in cement mortar 1:4 for side walls (outside and inside), cement concrete 1:2:4 using 12 to 20 mm HBGS jelly for manhole cover fixing, providing and fixing C.I steps for ladder rungs, etc., complete. Rate includes an initial lead of 10 m and all lifts for excavation and other charges etc., complete, but excludes cost of manhole cover and frame. Above 2.40 and upto 2.70 m depth (Rectangular)	EA	15600.85	594.62
116	1132H	Providing rectangular/circular manhole as per Drawing for the following depths. Rate includes earth work excavation in all soils (except hard rock requiring blasting) including soft disintegrated rock, watering and ramming of foundation bed, providing cement concrete 1:4:8 in foundation, including necessary slope and forming channels smoothly finished in C.M 1:2, brick work in C.M 1:5 for arch ring, etc., using standard approved bricks, plastering in cement mortar 1:4 for side walls (outside and inside), cement concrete 1:2:4 using 12 to 20 mm HBGS jelly for manhole cover fixing, providing and fixing C.I steps for ladder rungs, etc., complete. Rate includes an initial lead of 10 m and all lifts for excavation and other charges etc., complete, but excludes cost of manhole cover and frame. Above 2.70 and upto 3.00 m depth (Rectangular)	EA	16756.65	618.57
117	1132I	Providing rectangular/circular manhole as per Drawing for the following depths. Rate includes earth work excavation in all soils (except hard rock requiring blasting) including soft disintegrated rock, watering and ramming of foundation bed, providing cement concrete 1:4:8 in foundation, including necessary slope and forming channels smoothly finished in C.M 1:2, brick work in C.M 1:5 for arch ring, etc., using standard approved bricks, plastering in cement mortar 1:4 for side walls (outside and inside), cement concrete 1:2:4 using 12 to 20 mm HBGS jelly for manhole cover fixing, providing and fixing C.I steps for ladder rungs, etc., complete. Rate includes an initial lead of 10 m and all lifts for excavation and other charges etc., complete, but excludes cost of manhole cover and frame. Above 3.00 and upto 3.30 m depth (Rectangular)	EA	18619.60	654.69

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Sl. No	Item No.	Description	Unit	Rate (Rs.P)	Cement
118	1132J	Providing rectangular/circular manhole as per Drawing No.D/1016065 for the following depths. Rate includes earth work excavation in all soils (except hard rock requiring blasting) including soft disintegrated rock, watering and ramming of foundation bed, providing cement concrete 1:4:8 in foundation, including necessary slope and forming channels smoothly finished in C.M 1:2, brick work in C.M 1:5 for arch ring, etc., using standard approved bricks, plastering in cement mortar 1:4 for side walls (outside and inside), cement concrete 1:2:4 using 12 to 20 mm HBGS jelly for manhole cover fixing, providing and fixing C.I steps for ladder rungs, etc., complete. Rate includes an initial lead of 10 m and all lifts for excavation and other charges etc., complete, but excludes cost of manhole cover and frame. Above 3.30 and upto 3.60 m depth (Rectangular)	EA	20482.55	690.82
119	1133A	Supply and fixing C.I cover without frame for manholes/gully traps. 500 mm dia C.I cover only (Medium duty) Weight of the cover to be not less than 58 K.G.	EA	2587.35	
120	1133B	Supply and fixing C.I cover with frame for manholes/gully traps. 500 mm dia C.I cover (Medium duty) Total weight of cover and frame to be not less than 116 K.G (Weight of cover 58 K.G and weight of frame 58 K.G)	EA	5309.70	
121	1133C	Supply and fixing C.I cover without frame for manholes/gully traps. 560 mm dia C.I cover only. (Heavy duty) Weight of cover to be not less than 108 K.G.	EA	5562.35	
122	1133D	Supply and fixing C.I cover with frame for manholes/gully traps. 560 mm dia C.I cover . (Heavy duty) Total weight of cover and frame to be not less than 208 K.G (Weight of cover 108 K.G and weight of frame 100 K.G)	EA	10045.20	
123	1133E	Supply and fixing C.I cover without frame for manholes/gully traps. 300 x 300 mm C.I cover for gully trap (standard pattern) The weight of cover to be not less than 4.50 K.G.	EA	260.60	
124	1134	Labour charges for laying centrifugally C.I pipes (S and S or flanged pipes) in trenches to proper grade and alignment. Rate excludes cost of pipes.	MT	1020.45	
125	1135	Labour charges for laying C.I specials such as tees, bends, collars, tapers, caps etc. in trenches to proper alignment. Rate excludes cost of specials.	MT	1960.45	

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Sl. No	Item No.	Description	Unit	Rate (Rs.P)	Cement
126	1136A	Labour charges for cutting C.I pipes true to axis and filing smoothly and finishing the ends complete. 80 mm dia C.I pipe.	EA	44.65	
127	1136B	Labour charges for cutting C.I pipes true to axis and filing smoothly and finishing the ends complete. 100 mm dia C.I pipe.	EA	60.10	
128	1136C	Labour charges for cutting C.I pipes true to axis and filing smoothly and finishing the ends complete. 125 mm dia C.I pipe.	EA	83.90	
129	1136D	Labour charges for cutting C.I pipes true to axis and filing smoothly and finishing the ends complete. 150 mm dia C.I pipe.	EA	113.10	
130	1136E	Labour charges for cutting C.I pipes true to axis and filing smoothly and finishing the ends complete. 200 mm dia C.I pipe.	EA	150.85	
131	1136F	Labour charges for cutting C.I pipes true to axis and filing smoothly and finishing the ends complete. 250 mm dia C.I pipe.	EA	186.95	
132	1136G	Labour charges for cutting C.I pipes true to axis and filing smoothly and finishing the ends complete. 300 mm dia C.I pipe.	EA	224.70	
133	1136H	Labour charges for cutting C.I pipes true to axis and filing smoothly and finishing the ends complete. 350 mm dia C.I pipe.	EA	260.80	
134	1136I	Labour charges for cutting C.I pipes true to axis and filing smoothly and finishing the ends complete. 400 mm dia C.I pipe.	EA	298.30	
135	1136J	Labour charges for cutting C.I pipes true to axis and filing smoothly and finishing the ends complete. 450 mm dia C.I pipe.	EA	334.65	
136	1137A	Providing lead caulked joints to C.I pipes and specials including testing of joints but excluding cost of pig lead. 80 / 100 mm dia pipe.	EA	163.50	
137	1137B	Providing lead caulked joints to C.I pipes and specials including testing of joints but excluding cost of pig lead. 125 / 150 mm dia pipe.	EA	241.50	
138	1137C	Providing lead caulked joints to C.I pipes and specials including testing of joints but excluding cost of pig lead. 200 / 250 mm dia pipe.	EA	365.95	

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Sl. No	Item No.	Description	Unit	Rate (Rs.P)	Cement
139	1137D	Providing lead caulked joints to C.I pipes and specials including testing of joints but excluding cost of pig lead. 300 / 350 mm dia pipe.	EA	498.25	
140	1137E	Providing lead caulked joints to C.I pipes and specials including testing of joints but excluding cost of pig lead. 400 / 450 mm dia pipe.	EA	698.95	
141	1138A	Providing flanged joints to double flanged C.I pipes and specials including testing of joints, 3 mm thick rubber insertions, suitable bolts and nuts etc. complete. 100 / 125 mm dia pipe.	EA	173.25	
142	1138B	Providing flanged joints to double flanged C.I pipes and specials including testing of joints, 3 mm thick rubber insertions, suitable bolts and nuts etc. complete. 150 / 200 mm dia pipe.	EA	208.55	
143	1138C	Providing flanged joints to double flanged C.I pipes and specials including testing of joints, 3 mm thick rubber insertions, suitable bolts and nuts etc. complete. 250 / 300 mm dia pipe.	EA	323.45	
144	1138D	Providing flanged joints to double flanged C.I pipes and specials including testing of joints, 3 mm thick rubber insertions, suitable bolts and nuts etc. complete. 350 / 400 mm dia pipe.	EA	453.75	
145	1138E	Providing flanged joints to double flanged C.I pipes and specials including testing of joints, 3 mm thick rubber insertions, suitable bolts and nuts etc. complete. 450 / 500 mm dia pipe.	EA	836.75	
146	1139	Desludging and cleaning the underground equalising reservoirs by dewatering, scraping the silt deposited on floor, brushing, swabbing, cleaning, scraping side walls and floors with bleaching powder, removing dirt, moss, cleaning the reservoirs with fresh water etc. complete. Rate includes labour, scaffolding, brushes, brooms etc. complete. Bleaching powder, electrical/diesel operated pumps with power/diesel and fresh water will be supplied by BHEL at free of charges.	M2	6.00	
147	1140	Cleaning the main over head water tanks by dewatering, scouring the silt deposited on the floor of tanks, removing cobweb, brushing, scraping the side walls and floors of inner and outer compartments using cleaning powder, removal of sediment, applying cleaning powder on all interior surfaces and kept under disinfection for a minimum of 12 hour, then washing thoroughly with clean water without any residual cleaning powder or any foreign matter etc. complete. Rate includes all labour, brushes, brooms etc. Cleaning powder will be supplied by BHEL at stores at free of cost. Payment will be made for the floors and inside walls of the water tanks. (Staging height may vary from 15 to 23 M from ground level)	SQM	6.50	

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Sl. No	Item No.	Description	Unit	Rate (Rs.P)	Cement
148	1141	Cleaning of over head water tank of 500 cum capacity with a staging height of 23 to 40 M from ground level by de-watering, removing algae, fungus, scouring the silt deposited on the floors of the tank, removing cobweb, brushing, scraping the side walls of inner and outer shells, floors, columns and beams using necessary cleaning powder on all interior surfaces and kept under disinfection for a minimum of 12 hour, then washing thoroughly with clean water without any residual cleaning powder or any other foreign matter etc., complete. Necessary cleaning powder, brushes, brooms and ladder will be supplied by BHEL at stores at free of cost. Contractor has to take all safety precautions.	EACH	4880.75	
149	1142A	Replacement to the damaged water closet by providing new Orissa water closet pan of approved brand with suitable trap. Rate includes dismantling the damaged water closet with foot rests, trap, ellis/ mosaic floor finish with base concrete, sand and refilling with fresh river sand, providing new Orissa pan with trap and fixing in position, providing 20 mm thick ellis pattern finish over 75 mm thick floor concrete in PCC 1:5:10 using 40 mm size stone jelly for that area, finishing the side walls to match with the existing one etc. complete. 580 mm size (White)	EACH	1617.90	
150	1142B	Replacement to the damaged water closet by providing new Orissa water closet pan of approved brand with suitable trap. Rate includes dismantling the damaged water closet with foot rests, trap, ellis/ mosaic floor finish with base concrete, sand and refilling with fresh river sand, providing new Orissa pan with trap and fixing in position, providing 20 mm thick ellis pattern finish over 75 mm thick floor concrete in PCC 1:5:10 using 40 mm size stone jelly for that area, finishing the side walls to match with the existing one etc. complete. 580 mm size (White), but with 20 mm thick insitu mosaic floor finish as per usual practice instead of ellis pattern finish.	EACH	1788.40	
151	1143	Replacement to the damaged European water closet by providing new white glazed European water closet (white) 400 mm high of approved brand with seat and lid. Rate includes dismantling the damaged water closet, providing new EWC, fixing, all labour etc. complete.	EACH	1495.60	
152	1144	Labour charges for dismantling the trap alone without damaging the water closet and refixing with new trap supplied by BHEL at stores at free of cost and making good all damages and finishing to match with the existing one etc. complete.	EACH	211.75	
153	1145	Replacement to the damaged nahani trap by providing and fixing in position of new PVC nahani trap 100 x 75 mm with grating as per std. specs. Rate includes labour for dismantling the existing trap, refixing with new one, making good all damages and finishing to match with the existing one etc., complete.	EACH	352.00	

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Sl. No	Item No.	Description	Unit	Rate (Rs.P)	Cement
154	1146	Providing 32 mm dia PVC waste pipe to sink with necessary coupling etc complete.	EACH	49.50	
155	1147A	Cleaning and complete removal of all the obstructions/blockage accumulated such as silt, sand, debris, all other wastes etc. from manhole and disposing the same in the near by low level areas. Scope includes opening the manhole cover, removing all the blockage such as silt, sand, debris, all other wastes etc., lifting, disposing the same in the near by low level areas, all labour, tools, repositioning the manhole cover after finishing the job etc.complete. Manhole upto 1.50 metre depth	EACH	168.50	
156	1147B	Cleaning and complete removal of all the obstructions/blockage accumulated such as silt, sand, debris, all other wastes etc. from manhole and disposing the same in the near by low level areas. Scope includes opening the manhole cover, removing all the blockage such as silt, sand, debris, all other wastes etc., lifting, disposing the same in the near by low level areas, all labour, tools, repositioning the manhole cover after finishing the job etc.complete. Manhole beyond 1.50 but upto 3.30 metre depth	EACH	378.40	
157	1148	Cleaning the sewer line in all depths between manhole to manhole and complete removal of all the obstructions/blockage accumulated such as silt, sand, debris, all other wastes etc. by means of blockage removal machine attached with sewer cleaning rod etc. and disposing the same in the near by low level areas. Scope includes opening the manhole cover, removing all the blockage such as silt, sand, debris, all other wastes etc., lifting, disposing the same in the near by low level areas, all labour, tools, repositioning the manhole cover after finishing the job etc.complete. Blockage removal machine attached with sewer cleaning rod for the job will be issued by BHEL at stores at free of cost.	R.M	16.80	
158	1149A	Labour charges for conveying, laying and fixing G.I pipes and specials with G.I fittings and clamps on walls and floors, including cutting and making good the walls and floors etc. complete. Rate includes cost of white lead, hemp, oil, sand etc. but excludes cost of G.I pipes, specials and clamps which will be supplied by BHEL at stores at free of cost. 15 mm dia nominal bore.	RM	58.55	
159	1149B	Labour charges for conveying, laying and fixing G.I pipes and specials with G.I fittings and clamps on walls and floors, including cutting and making good the walls and floors etc. complete. Rate includes cost of white lead, hemp, oil, sand etc. but excludes cost of G.I pipes, specials and clamps which will be supplied by BHEL at stores at free of cost. 20 mm dia nominal bore.	RM	64.85	

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Sl. No	Item No.	Description	Unit	Rate (Rs.P)	Cement
160	1149C	Labour charges for conveying, laying and fixing G.I pipes and specials with G.I fittings and clamps on walls and floors, including cutting and making good the walls and floors etc. complete. Rate includes cost of white lead, hemp, oil, sand etc. but excludes cost of G.I pipes, specials and clamps which will be supplied by BHEL at stores at free of cost. 25 mm dia nominal bore.	RM	71.4	
161	1149D	Labour charges for conveying, laying and fixing G.I pipes and specials with G.I fittings and clamps on walls and floors, including cutting and making good the walls and floors etc. complete. Rate includes cost of white lead, hemp, oil, sand etc. but excludes cost of G.I pipes, specials and clamps which will be supplied by BHEL at stores at free of cost. 32 mm dia nominal bore.	RM	80.05	
162	1149E	Labour charges for conveying, laying and fixing G.I pipes and specials with G.I fittings and clamps on walls and floors, including cutting and making good the walls and floors etc. complete. Rate includes cost of white lead, hemp, oil, sand etc. but excludes cost of G.I pipes, specials and clamps which will be supplied by BHEL at stores at free of cost. 40 mm dia nominal bore.	RM	102.15	
163	1149F	Labour charges for conveying, laying and fixing G.I pipes and specials with G.I fittings and clamps on walls and floors, including cutting and making good the walls and floors etc. complete. Rate includes cost of white lead, hemp, oil, sand etc. but excludes cost of G.I pipes, specials and clamps which will be supplied by BHEL at stores at free of cost. 50 mm dia nominal bore.	RM	124.10	
164	1149G	Labour charges for conveying, laying and fixing G.I pipes and specials with G.I fittings and clamps on walls and floors, including cutting and making good the walls and floors etc. complete. Rate includes cost of white lead, hemp, oil, sand etc. but excludes cost of G.I pipes, specials and clamps which will be supplied by BHEL at stores at free of cost. 65 mm dia nominal bore.	RM	135.20	
165	1149H	Labour charges for conveying, laying and fixing G.I pipes and specials with G.I fittings and clamps on walls and floors, including cutting and making good the walls and floors etc. complete. Rate includes cost of white lead, hemp, oil, sand etc. but excludes cost of G.I pipes, specials and clamps which will be supplied by BHEL at stores at free of cost. 80 mm dia nominal bore.	RM	143.70	
166	1149I	Labour charges for conveying, laying and fixing G.I pipes and specials with G.I fittings and clamps on walls and floors, including cutting and making good the walls and floors etc. complete. Rate includes cost of white lead, hemp, oil, sand etc. but excludes cost of G.I pipes, specials and clamps which will be supplied by BHEL at stores at free of cost. 100 mm dia nominal bore.	RM	229.75	

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Sl. No	Item No.	Description	Unit	Rate (Rs.P)	Cement
167	1149J	Labour charges for conveying, laying and fixing G.I pipes and specials with G.I fittings and clamps on walls and floors, including cutting and making good the walls and floors etc. complete. Rate includes cost of white lead, hemp, oil, sand etc. but excludes cost of G.I pipes, specials and clamps which will be supplied by BHEL at stores at free of cost. 125 mm dia nominal bore.	RM	163.35	
168	1149K	Labour charges for conveying, laying and fixing G.I pipes and specials with G.I fittings and clamps on walls and floors, including cutting and making good the walls and floors etc. complete. Rate includes cost of white lead, hemp, oil, sand etc. but excludes cost of G.I pipes, specials and clamps which will be supplied by BHEL at stores at free of cost. 150 mm dia nominal bore.	RM	172.40	
169	1150A	Painting G.I pipes and fittings with synthetic enamel paint of two coats over a ready mixed priming coat, both of approved quality for new work. 15 mm diameter pipe	RM	8.45	
170	1150B	Painting G.I pipes and fittings with synthetic enamel paint of two coats over a ready mixed priming coat, both of approved quality for new work. 20 mm diameter pipe	RM	9.95	
171	1150C	Painting G.I pipes and fittings with synthetic enamel paint of two coats over a ready mixed priming coat, both of approved quality for new work. 25 mm diameter pipe	RM	13.10	
172	1150D	Painting G.I pipes and fittings with synthetic enamel paint of two coats over a ready mixed priming coat, both of approved quality for new work. 32 mm diameter pipe	RM	15.50	
173	1150E	Painting G.I pipes and fittings with synthetic enamel paint of two coats over a ready mixed priming coat, both of approved quality for new work. 40 mm diameter pipe	RM	18.40	
174	1150F	Painting G.I pipes and fittings with synthetic enamel paint of two coats over a ready mixed priming coat, both of approved quality for new work. 50 mm diameter pipe	RM	21.70	
175	1151A	Conveying polyethylene cylindrical moulded water storage tank of following capacity from BHEL stores to site of work and placing it in proper position in buildings at required levels/floors. All as per instructions of Engineer in charge. Rate includes conveyance, placing it in position at required level, fixing the specials like barrel nipples etc. complete. PVC tank ans all specials will be issued by BHEL at stores at free of cost. Upto 500 litre	EA	99.00	

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Sl. No	Item No.	Description	Unit	Rate (Rs.P)	Cement
176	1151B	Conveying polyethylene cylindrical moulded water storage tank of following capacity from BHEL stores to site of work and placing it in proper position in buildings at required levels/floors. All as per instructions of Engineer in charge. Rate includes conveyance, placing it in position at required level, fixing the specials like barrel nipples etc. complete. PVC tank ans all specials will be issued by BHEL at stores at free of cost. Above 500 but up to 1000 litre	EA	123.20	
177	1151C	Conveying polyethylene cylindrical moulded water storage tank of following capacity from BHEL stores to site of work and placing it in proper position in buildings at required levels/floors. All as per instructions of Engineer in charge. Rate includes conveyance, placing it in position at required level, fixing the specials like barrel nipples etc. complete. PVC tank ans all specials will be issued by BHEL at stores at free of cost. Above 1000 but up to 2000 litre	EA	198.00	
178	1152A	Labour charges for conveying, laying and fixing G.I pipes and specials (B - Class) of approved brand with G.I fittings in trenches. Rate includes cost of white lead, hemp, oil, sand etc. but excludes cost of G.I pipes, specials and clamps which will be supplied by BHEL at stores at free of cost. 15 mm dia nominal bore.	RM	8.45	
179	1152B	Labour charges for conveying, laying and fixing G.I pipes and specials (B - Class) of approved brand with G.I fittings in trenches. Rate includes cost of white lead, hemp, oil, sand etc. but excludes cost of G.I pipes, specials and clamps which will be supplied by BHEL at stores at free of cost. 20 mm dia nominal bore.	RM	8.45	
180	1152C	Labour charges for conveying, laying and fixing G.I pipes and specials (B - Class) of approved brand with G.I fittings in trenches. Rate includes cost of white lead, hemp, oil, sand etc. but excludes cost of G.I pipes, specials and clamps which will be supplied by BHEL at stores at free of cost. 25 mm dia nominal bore.	RM	12.90	
181	1152D	Labour charges for conveying, laying and fixing G.I pipes and specials (B - Class) of approved brand with G.I fittings in trenches. Rate includes cost of white lead, hemp, oil, sand etc. but excludes cost of G.I pipes, specials and clamps which will be supplied by BHEL at stores at free of cost. 32 mm dia nominal bore.	RM	12.95	
182	1152E	Labour charges for conveying, laying and fixing G.I pipes and specials (B - Class) of approved brand with G.I fittings in trenches. Rate includes cost of white lead, hemp, oil, sand etc. but excludes cost of G.I pipes, specials and clamps which will be supplied by BHEL at stores at free of cost. 40 mm dia nominal bore.	RM	17.25	

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Sl. No	Item No.	Description	Unit	Rate (Rs.P)	Cement
183	1152F	Labour charges for conveying, laying and fixing G.I pipes and specials (B - Class) of approved brand with G.I fittings in trenches.Rate includes cost of white lead, hemp, oil, sand etc. but excludes cost of G.I pipes, specials and clamps which will be supplied by BHEL at stores at free of cost. 50 mm dia nominal bore.	RM	17.45	
184	1152G	Labour charges for conveying, laying and fixing G.I pipes and specials (B - Class) of approved brand with G.I fittings in trenches.Rate includes cost of white lead, hemp, oil, sand etc. but excludes cost of G.I pipes, specials and clamps which will be supplied by BHEL at stores at free of cost. 65 mm dia nominal bore.	RM	30.55	
185	1152H	Labour charges for conveying, laying and fixing G.I pipes and specials (B - Class) of approved brand with G.I fittings in trenches.Rate includes cost of white lead, hemp, oil, sand etc. but excludes cost of G.I pipes, specials and clamps which will be supplied by BHEL at stores at free of cost. 80 mm dia nominal bore.	RM	30.75	
186	1152I	Labour charges for conveying, laying and fixing G.I pipes and specials (B - Class) of approved brand with G.I fittings in trenches.Rate includes cost of white lead, hemp, oil, sand etc. but excludes cost of G.I pipes, specials and clamps which will be supplied by BHEL at stores at free of cost. 100 mm dia nominal bore.	RM	45.10	
187	1152J	Labour charges for conveying, laying and fixing G.I pipes and specials (B - Class) of approved brand with G.I fittings in trenches.Rate includes cost of white lead, hemp, oil, sand etc. but excludes cost of G.I pipes, specials and clamps which will be supplied by BHEL at stores at free of cost. 125 mm dia nominal bore.	RM	45.10	
188	1152K	Labour charges for conveying, laying and fixing G.I pipes and specials (B - Class) of approved brand with G.I fittings in trenches.Rate includes cost of white lead, hemp, oil, sand etc. but excludes cost of G.I pipes, specials and clamps which will be supplied by BHEL at stores at free of cost. 150 mm dia nominal bore.	RM	70.50	
189	1153A	Providing and fixing gun metal non- return valve of approved quality(screwed end) 25 mm nominal bore (Horizontal)	EA	388.30	
190	1153B	Providing and fixing gun metal non- return valve of approved quality(screwed end) 25 mm nominal bore (Vertical)	EA	421.30	
191	1153C	Providing and fixing gun metal non- return valve of approved quality(screwed end) 32 mm nominal bore (Horizontal)	EA	522.70	

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ACCEPTING OFFICER

CIVIL ENGINEERING DEPARTMENT,BHEL,Trichy-14

Sl. No	Item No.	Description	Unit	Rate (Rs.P)	Cement
192	1153D	Providing and fixing gun metal non- return valve of approved quality(screwed end) 32 mm nominal bore (Vertical)	EA	599.70	
193	1153E	Providing and fixing gun metal non- return valve of approved quality(screwed end) 40 mm nominal bore (Horizontal)	EA	646.15	
194	1153F	Providing and fixing gun metal non- return valve of approved quality(screwed end) 40 mm nominal bore (Vertical)	EA	855.15	
195	1153G	Providing and fixing gun metal non- return valve of approved quality(screwed end) 50 mm nominal bore (Horizontal)	EA	934.80	
196	1153H	Providing and fixing gun metal non- return valve of approved quality(screwed end) 50 mm nominal bore (Vertical)	EA	1143.80	
197	1153I	Providing and fixing gun metal non- return valve of approved quality(screwed end) 65 mm nominal bore (Horizontal)	EA	1674.25	
198	1153J	Providing and fixing gun metal non- return valve of approved quality(screwed end) 65 mm nominal bore (Vertical)	EA	1916.25	
199	1153K	Providing and fixing gun metal non- return valve of approved quality(screwed end) 80 mm nominal bore (Horizontal)	EA	2369.90	
200	1153L	Providing and fixing gun metal non- return valve of approved quality(screwed end) 80 mm nominal bore (Vertical)	EA	3216.90	
201	1154	Supply at site of work and fixing in position of 32mm dia. CP bottle trap for water line connection in wash basin / urinals of approved brand and quality. All as per standard specifications and instructions of Engineer-in-charge.	EA	625.75	
202	1155	Supplying and placing in proper position of Polyethylene cylindrical moulded vertical storage tank of 500 litres capacity of approved quality in buildings at required levels / floors as per the instruction of Engineer in charge. Rate shall include cost of the tank, taxes, duties, loading unloading transportation charges delivery to BHEL conveying to site of work and placing in position at required level, fixing the barrel nipple to the tank etc., and all other incidental charges etc., complete. Rate will exclude the cost of all special like barrel nipple etc., which will be issued by BHEL at free of cost	EA	3759.30	

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ACCEPTING OFFICER

CIVIL ENGINEERING DEPARTMENT,BHEL,Trichy-14

Sl. No	Item No.	Description	Unit	Rate (Rs.P)	Cement
203	1156	Providing and fixing in position of fire clay laboratory sink (white) of size 610 mm x 460 mm x 205 mm or thereabouts of approved make and quality Neycer or equivalent with 32 mm waste coupling, waste hose and 250 mm clamps with necessary fixing arrangements. Rate includes cost of sink, waste coupling, waste hose, clamps, labour for fixing and all other incidental charges etc., complete. All as per standard specifications and instructions of Engineer in charge.	EA	9211.70	
204	1157	Providing and fixing in position of white glazed earthen ware wash hand basin of oval shape size 540 mm x 460 mm or thereabouts of approved make and quality (Parry ware or equivalent) with 32 mm CP Waste coupling and necessary fixing arrangements. Rate includes cost of wash basin, waste coupling, labour for fixing and all other incidental charges, etc., complete. All as per standard specifications and instructions of Engineer in charge	EA	2066.00	
205	1158	Providing and fixing in position of Float valve- PTMT (Poly Tetra- Methylene Terephthalate) Ball Cock-20 mm nominal bore of PRAYAG (India) make with Epoxy coated Aluminium rod and HD Ball etc. complete(Full Set)	EA	302.00	
206	1159	Labour charges for removing the blockage in the gully trap and cleaning it completely, all as per the instructions of Engineer-in-charge.	NO	32.25	
207	1537	Cleaning of Septic tanks including removal of all sludge/waste material with septic tank cleaning vehicle of tank capacity of 7000 litres and conveying the waste to all leads and disposal off.Rate includes hire and running charges for the septic tank cleaning vehicle with driver and labour for cleaning the septic tank, cost of tools and plants, all incidental charges, leading disposing off the sewage and wastages etc as per the instructions of Engineer in Charge. Payment will be made for one trip up to a maximum of 7000 litres quantity of sewage	EA trip	2687.50	

IF YOU ARE NOT WILLING TO QUOTE FOR THIS PACKAGE (K) YOU CAN IGNORE THE PAGES 12 to 38 OF THIS PRICE BID.

ELSE IF YOU ARE WILLING TO QUOTE FOR THIS PACKAGE(K) PLEASE ENCLOSE THE PAGES 12 to 38 ALONE IN A SEPERATE SEALED COVER

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ACCEPTING OFFICER

PART-II (PRICE BID) (PACKAGE-L)

SCHEDULE - A3

Name of Work: **MAINTENANCE OF HORTICULTURE WORKS AT BHEL TOWNSHIP, TRICHY CT:TS:14/18-19 Tender Value: Rs.40 Lakh**

I / We _____ have read the condition of tender attached hereto and agree to abide by such conditions. I/We offer to execute the works in **T.S No. CT:TS:014/18-19 for a period of 12 months** at the percentage below / at par / above the rates contained in BHEL applicable items of Schedule of Rates 2013-14 quoted in the schedule appended below:

I / We further agree to sign an Agreement Bond to abide by the General Conditions of Contract and to carryout all works according to the specifications for materials and works of Bharat Heavy Electricals Limited, Tiruchirapalli-620 014. In case of acceptance of the tender by the BHEL, I/We bind myself/ourselves to execute the contract documents within 7 days after notice that my/our tender has been accepted and this contract has been awarded to me/us and thus failing which I/We shall have no objection to the forfeiture of the Earnest Money amount to **Rs.48,000/-** lodged with Bharat Heavy Electricals Limited, Tiruchirapalli-620 014.

I / We further agree to include all tools & plants and consumables required for the work in my / our scope but required power and water will be provided at one point by BHEL at free of cost and based on this, we have quoted our percentage.

Note: Details of each item of work shown in the BILL OF QUANTITIES are only approximate and the same is appended below. They are given as a guide for the purpose of tendering only and are liable to variation and alteration of the Competent Authority. The work under each item as executed shall be measured and priced at the overall percentage quoted by the contractor **Below (100-X) % / At par (100%) / Above (100+X) %** of the rates provided in Bill of Quantities appended below from Page **40 to 43**. Eventhough the applicable items are provided, for the operational convenience the total tender value of **RS.40 Lakh** will be divided as required number of Sub Work orders with required items.

Sl. No.	Approx. Value of work	Common single percentage rate, Below (100-X) % / At par (100%) / Above (100+X) % to be quoted with respect to the rates provided in Bill of Quantities appended below from Pages 40 to 43 (The percentage is to be quoted here is GST excluded) (Applicable GST will be extra)	
		In Figures	In Words
1.	Rs.40 Lakh		

Examples:

- 1. If the vendor needs to quote 5% below the schedule of rates then vendor need to write 95% in figure column and Ninety Five percent in words.**
- 2. If the vendor needs to quote at par the the schedule of rates then vendor need to write 100% in figure column and One Hundred percent in words.**
- 3.If the vendor needs to quote 5% above the schedule of rates then vendor need to write 105% in figure column and One Hundred Five percent in words**

Note: Applicable BHEL SR(13-14) item details are given below. Contractor has to quote Common single percentage rate, Below (100-X) % / At par (100%) / Above (100+X) % with respect to the rates provided in Bill of Quantities below at page 39 both in figures and in words

BILL OF QUANTITIES

PACKAGE-L (13items) CT:TS:014/18-19

MAINTENANCE OF HORTICULTURE WORKS AT BHEL TOWNSHIP, TRICHY

Sl.No.	Item No.	Description	Unit	Rate (Rs.P)	Cement
1	1401A	Labour charges for carrying out the following. Scope includes all labour, relevant tools and plants required for the work, disposing off all the wastes, cut leaves etc. in the nearby areas within a lead of 100 metre etc. complete. All as per instructions of Engineer-in-charge. Mowing of lawns neatly to uniform levels. (By means of blade/ mower)	M2	2.30	
2	1401B	Labour charges for carrying out the following. Scope includes all labour, relevant tools and plants required for the work, disposing off all the wastes, cut leaves etc. in the nearby areas within a lead of 100 metre etc. complete. All as per instructions of Engineer-in-charge. Cutting all types of hedges to the required and uniform height and width.	RM	3.85	
3	1401C	Labour charges for carrying out the following. Scope includes all labour, relevant tools and plants required for the work, disposing off all the wastes, cut leaves etc. in the nearby areas within a lead of 100 metre etc. complete. All as per instructions of Engineer-in-charge. Cutting and trimming topiary work for various shrubs, domes etc. to the required sizes, shapes etc. complete.	EA	15.05	
4	1402	Conveying tree saplings / plants from BHEL and planting the same in the pits excavated (in the premises of BHEL), initial watering, forming bed etc., all as per instructions of Engineer-in-charge. Tree saplings / plants will be supplied at BHEL Nursery at free of cost. Rate includes conveyance,loading, unloading, lifting and planting, initial watering etc., complete.	EA	3.65	

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ACCEPTING OFFICER

CIVIL ENGINEERING DEPARTMENT,BHEL,Trichy-14

Sl.No.	Item No.	Description	Unit	Rate (Rs.P)	Cement
5	1403	Maintaining the shrub plants available at various locations in BHEL. Maintenance covers watering once in two days, weeding, mulching the top soil to a depth of 15 cm once in three months, making basin to proper size, manuring, cutting and trimming whenever necessary, cleaning the areas etc.complete. Replanting is also to be done as and when necessary. Rate includes all labour, tools, hose pipes, water carts, all incidentals etc.complete. All as per instructions of Engineer-in-charge. Required manure and plants will be issued by BHEL at Stores or Nursery at free of cost. Contractor has to transport the same to site of works. (Payment will be made for every month).	EA	2.70	
6	1404	Maintaining the domes available at various locations in BHEL. Maintenance covers watering once in two days, weeding, mulching the top soil to a depth of 15 cm once in three months, making the basin to proper size, manuring, pruning/trimming topiary work once in a month, cleaning the areas, disposing off all wastes, cut branches, leaves etc. in the nearby areas within a lead of 50 metre etc.complete. Replanting is also to be done as and when necessary. Rate includes all labour, tools, hose pipes, water carts, all incidentals etc.complete. All as per instructions of Engineer-in-charge. Required manure and plants will be issued by BHEL at Stores or Nursery at free of cost. Contractor has to transport the same to site of works. (Payment will be made for every month).	EA	27.00	
7	1405	Maintaining the hedges (upto a height of 1.50 m) available at various locations in BHEL. Maintenance covers watering once in two days, weeding, mulching the top soil to a depth of 15 cm once in three months, making basin along the hedges, manuring and cutting, pruning, trimming the hedges once in a month, cleaning the areas, disposing off all wastes, cut branches, leaves etc. in the nearby areas within a lead of 100 metre etc. complete. Replanting is also to be done as and when necessary. Rate includes all labour, tools, hose pipes, water carts, all incidentals etc.complete. All as per instructions of Engineer-in-charge. Required manure, hedge plants will be issued by BHEL at Stores or Nursery at free of cost. Contractor has to transport the same to site of works. (Payment will be made for every month).	RM	1.65	
8	1406	Maintaining rose beds at various locations in BHEL. Maintenance covers watering once in two days, weeding, mulching the top soil to a depth of 15 cm once in 15 days, making basin for rose plants, manuring, cutting and trimming whenever necessary, clearing the jungle, leveling the areas once in 15 days etc.complete. Replanting is also to be done as and when necessary. Rate includes all labour, tools, hose pipes, water carts, all incidentals etc.complete. All as per instructions of Engineer-in-charge. Required manure and plants will be issued by BHEL at Stores or Nursery at free of cost. Contractor has to transport the same to site of works. (Payment will be made for every month).	M2	2.25	

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CIVIL ENGINEERING DEPARTMENT,BHEL,Trichy-14

Sl.No.	Item No.	Description	Unit	Rate (Rs.P)	Cement
9	1407	Maintaining and safeguarding the lawns including flower beds available at various locations in BHEL. Maintenance covers watering once in two days, periodical weeding, mowing, scraping, raking, replacing flower beds, mulching the top soil and forming basins etc.all once in 45 days, manuring, cleaning the areas, disposing off all wastes, dried leaves etc. in the nearby areas within a lead of 100 metre etc.complete. Re-lawn is also to be done as and when necessary. Rate includes all labour, tools, hose pipes, water carts, all incidentals etc.complete. All as per instructions of Engineer-in-charge. Required manure, plants and grass will be issued by BHEL at Stores or Nursery at free of cost. Contractor has to transport the same to site of works. (Payment will be made for every month).	M2	1.65	
10	1408	Maintenance and protection of avenue tree plants/coconut tree seedlings etc. available at various locations in BHEL. Maintenance covers watering once in two days, protecting the plants from cattle menace and theft by providing thorny fencing, periodical weeding, maintaining the area free from other vegetation growth, mulching the top soil and forming basin, manuring, cleaning the area etc.complete. Rate includes all labour, tools, hose pipes, water carts, all incidentals etc.complete. All as per instructions of Engineer-in-charge. Required manure and plants will be issued by BHEL at Stores or Nursery at free of cost. Contractor has to transport the same to site of works. (Payment will be made for every month).	EA	6.75	
11	1409	Maintaining the potted plants available at Nursery and other locations by watering once in two days, mulching and weeding the soil once in a fortnight, application of manure/fertilizer/pesticides as and when required (normally three times in an year) pruning and shaping as and when required, repotting the plant once in a year, replacement of broken pots (pots and plants will be supplied by BHEL), propogation of different species of pots as directed etc.complete. Rate includes all labour, tools, hose pipes, water carts, all incidentals etc.complete. All as per instructions of Engineer-in-charge. Required manure / fertilizer / pesticides, pots and plants will be issued by BHEL at Stores or Nursery at free of cost. (Payment will be made for every month).	EA	2.70	

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ACCEPTING OFFICER

CIVIL ENGINEERING DEPARTMENT,BHEL,Trichy-14

Sl.No.	Item No.	Description	Unit	Rate (Rs.P)	Cement
12	1510	Transporting the garbage, horticulture waste etc., collected from houses, dustbins and other places by lorry having a capacity of minimum 300 cft covering with suitable net to avoid spilling during transport and unloading at the earmarked place on the eastern side of MHD. (Nearly 5 KM from the centre point of Kailasapuram) Rate also includes topping the dust bins, segregation of bio-degradable and non-bio-degradable waste at respective dust bins itself, collection, loading, all lead, unloading, hire and running charges of lorry, tools required, all labour and all other incidentals etc.complete and as directed by the department. Trip sheet is to be maintained for each load that will be certified by the concerned official and by the security at the gate which will form the basis for making payment. Each load would exit only through the main entrance of Township or as directed by the Engineer in charge. Rate to be quoted for one trip of lorry load of 300 cft garbage.	Each	1014.05	
13	1512	Sweeping roads, drains, platforms, open spaces, surrounding areas of buildings, shops, parks, gardens, sides and back spaces in between bolcks, roof terrace of buildings at a maximum elevated level of 6 metre and other areas as identified and instructed by Engineer in charge. Rate includes labour, tools, brooms, malard, baskets etc., sweeping, hand picking of debris, collecting and dumping the debris in the near by dust bins/earmarked areas etc.complete. Sweeping has to be done only as and when necessary. Payment will be made only for the areas where sweeping was done.	Hundred M2	13.00	

IF YOU ARE NOT WILLING TO QUOTE FOR THIS PACKAGE (L) YOU CAN IGNORE THE PAGES 39 to 43 OF THIS PRICE BID. ELSE IF YOU ARE WILLING TO QUOTE FOR THIS PACKAGE(L) PLEASE ENCLOSE THE PAGES 39 to 43 ONLY IN A SEALED COVER

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ACCEPTING OFFICER

PART-II (PRICE BID) (PACKAGE-M)

SCHEDULE - A4

Name of Work: **STRUCTURAL STEEL WORKS AT BHEL TOWNSHIP, TRICHY**
CT:TS:15/18-19 Tender Value: Rs.28 Lakh

I / We _____ have read the condition of tender attached hereto and agree to abide by such conditions. I/We offer to execute the works in **T.S No. CT:TS:015/18-19 for a period of 12 months** at the percentage below / at par / above the rates contained in BHEL applicable items of Schedule of Rates 2013-14 quoted in the schedule appended below:

I / We further agree to sign an Agreement Bond to abide by the General Conditions of Contract and to carryout all works according to the specifications for materials and works of Bharat Heavy Electricals Limited, Tiruchirapalli-620 014. In case of acceptance of the tender by the BHEL, I/We bind myself/ourselves to execute the contract documents within 7 days after notice that my/our tender has been accepted and this contract has been awarded to me/us and thus failing which I/We shall have no objection to the forfeiture of the Earnest Money amount to **Rs.33,600/-** lodged with Bharat Heavy Electricals Limited, Tiruchirapalli-620 014.

I / We further agree to include all tools & plants and consumables required for the work in my / our scope but required power and water will be provided at one point by BHEL at free of cost and based on this, we have quoted our percentage.

Note: Details of each item of work shown in the BILL OF QUANTITIES are only approximate and the same is appended below. They are given as a guide for the purpose of tendering only and are liable to variation and alteration of the Competent Authority. The work under each item as executed shall be measured and priced at the overall percentage quoted by the contractor **Below (100-X) % / At par (100%) / Above (100+X) %** of the rates provided in Bill of Quantities appended below from **Page 45 to 60**. **Eventhough the applicable items are provided, for the operational convenience the total tender value of RS.28 Lakh will be divided as required number of Sub Work orders with required items.**

Sl. No.	Approx. Value of work	Common single percentage rate, Below (100-X) % / At par (100%) / Above (100+X) % to be quoted with respect to the rates provided in Bill of Quantities appended below from Page 45 to 60 (The percentage is to be quoted here is GST excluded) (Applicable GST will be extra)	
		In Figures	In Words
1.	Rs.28 Lakh		

Examples:

- 1. If the vendor needs to quote 5% below the schedule of rates then vendor need to write 95% in figure column and Ninety Five percent in words.**
- 2. If the vendor needs to quote at par the the schedule of rates then vendor need to write 100% in figure column and One Hundred percent in words.**
- 3.If the vendor needs to quote 5% above the schedule of rates then vendor need to write 105% in figure column and One Hundred Five percent in words**

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Note: Applicable BHEL SR(13-14) item details are given below. Contractor has to quote Common single percentage rate, Below (100-X) % / At par (100%) / Above (100+X) % with respect to the rates provided in Bill of Quantities below at page 44 both in figures and in words

BILL OF QUANTITIES

PACKAGE-M (88 items) CT:TS:015/18-19

STRUCTURAL STEEL WORKS AT BHEL TOWNSHIP, TRICHY

SI.No.	Item No.	Description	Unit	Rate (Rs.P)	Cement in KG
1	0501	Collection from BHEL stores and transporting the raw structural steel sections to the contractor's site fabrication shop, fabrication of steel work including all materials going into the process of fabrication and forming an integral part of the steel work together with all shop welding including using low hydrogen electrode wherever necessary, all as per drawings and standard specifications. Rate includes delivery of fabricated steel work at erection site ready for erection, including preparation and supply of drawing office despatch list for BHEL's approval, all charges for packing (wherever called for) handling, conveying, stacking and all other incidental charges both for raw materials and fabricated steel works. Rate excludes raw structural steel sections which will be supplied by BHEL at stores at free of cost.	MT	12371.75	
2	0502	Collection from BHEL stores and transporting the raw structural steel sections to the contractor's site fabrication shop, fabrication of steel work including all materials going into the process of fabrication and forming an integral part of the steel work together with all shop welding including using low hydrogen electrode wherever necessary, all as per drawings and standard specifications. Rate includes delivery of fabricated steel work at erection site ready for erection, including preparation and supply of drawing office despatch list for BHEL's approval, all charges for packing (wherever called for) handling, conveying, stacking and all other incidental charges both for raw materials and fabricated steel works. Rate excludes raw structural steel sections and all consumables which will be supplied by BHEL at stores at free of cost.	MT	9505.75	
3	0503	Collection from BHEL stores and transporting ERW/seamless steel tubes with necessary plates to the contractor's site fabrication shop, fabrication of ERW/seamless steel tubes with necessary plates etc. instead of structural steel sections for columns, trusses, purlins, tie runners etc. (all tubular) including all materials going into the process of fabrication and forming an integral part of the steel work together with all shop welding including using low hydrogen electrode wherever necessary, all as per drawings and standard specifications. Rate includes delivery of fabricated steel work at erection site ready for erection, including preparation and supply of drawing office despatch list for BHEL's approval, all charges for packing (wherever called for) handling, conveying, stacking and all other incidental charges both for raw materials and fabricated steel works. Rate excludes ERW/seamless steel tubes, plates etc. which will be supplied by BHEL at stores at free of cost.	MT	13608.90	

CIVIL ENGINEERING DEPARTMENT,BHEL,Trichy-14

Sl.No.	Item No.	Description	Unit	Rate (Rs.P)	Cement in KG
4	0504	Collection from BHEL stores and transporting ERW/seamless steel tubes with necessary plates to the contractor's site fabrication shop, fabrication of ERW/seamless steel tubes with necessary plates etc. instead of structural steel sections for columns, trusses, purlins, tie runners etc. (all tubular) including all materials going into the process of fabrication and forming an integral part of the steel work together with all shop welding including using low hydrogen electrode wherever necessary, all as per drawings and standard specifications. Rate includes delivery of fabricated steel work at erection site ready for erection, including preparation and supply of drawing office despatch list for BHEL's approval, all charges for packing (wherever called for) handling, conveying, stacking and all other incidental charges both for raw materials and fabricated steel works. Rate excludes ERW/seamless steel tubes, plates etc. and all consumables which will be supplied by BHEL at stores at free of cost.	MT	10456.30	
5	0505	Carrying from stacks at erection site to erection positions and erection of fabricated steel work including all handling, conveying, assembling, hoisting, erecting in position and site welding and or bolting, alignment of structures, all as per drawings and standard specifications. Rate includes bolts and nuts, hire for welding tools and plants, labour etc., but excluding cost of fabricated components. If required, power will be given free of cost by BHEL. Weight of fasteners will not be accounted for payment.	MT	6667.90	
6	0506	Carrying from stacks at erection site to erection positions and erection of fabricated steel work including all handling, conveying, assembling, hoisting, erecting in position and site welding and or bolting, alignment of structures, all as per drawings and standard specifications. Rate includes hire for welding tools and plants, labour etc., but excluding all consumables such as electrodes, bolts, nuts, washers etc. which will be supplied by BHEL at Stores at free of cost and cost of fabricated components. If required, power will be given free of cost by BHEL. Weight of fasteners will not be accounted for payment.	MT	6364.10	
7	0507	Fabrication and fixing in position of M.S frames for cable trench cover slabs in required sizes using M.S angles, plates, flats etc., which will be supplied by BHEL at Stores at free of cost, all as per drawings and instructions of Engineer-in-charge. Rate includes conveyance of raw materials from BHEL stores to contractors fabrication shop, fabrication charges including cutting, welding, preparing and supplying DODL's for BHEL's approval, supply of fabricated frames at site of work, fixing in proper position etc., complete.	MT	7550.25	
8	0508	Fabrication and fixing in position of M.S frames for cable trench cover slabs in required sizes using M.S angles, plates, flats etc., which will be supplied by BHEL at Stores at free of cost, all as per drawings and instructions of Engineer-in-charge. Rate includes conveyance of raw materials from BHEL stores to contractors fabrication shop, fabrication charges including cutting, welding, preparing and supplying DODL's for BHEL's approval, supply of fabricated frames at site of work, fixing in proper position etc., complete but excludes all consumables such as electrodes which will be supplied by BHEL at Stores at free of cost.	MT	6910.30	

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CIVIL ENGINEERING DEPARTMENT, BHEL, Trichy-14

Sl.No.	Item No.	Description	Unit	Rate (Rs.P)	Cement in KG
9	0509	Conveying from BHEL stores to site of work cutting to size and fixing in position of 75 x 75 x 6 mm or other size M.S angles in required lengths for forming the rebates in cable trench (for fixing the cable trench cover slabs) including welding in position of dowel bars to the angles and embedding the angle iron frame in the flooring concrete in proper line and level, all as per drawings and instructions of Engineer-in-charge. Rate includes loading, unloading, handling, welding and other incidental charges, preparing and supplying of DODL's for approval etc. complete, but excluding cost of M.S angles and dowel bars which will be supplied by BHEL at Stores at free of cost.	MT	8041.55	
10	0510	Conveying from BHEL stores to site of work cutting to size and fixing in position of 75 x 75 x 6 mm or other size M.S angles in required lengths for forming the rebates in cable trench (for fixing the cable trench cover slabs) including welding in position of dowel bars to the angles and embedding the angle iron frame in the flooring concrete in proper line and level, all as per drawings and instructions of Engineer-in-charge. Rate includes loading, unloading, handling, welding and other incidental charges, preparing and supplying of DODL's for approval etc. complete, but excluding cost of M.S angles, dowel bars and all consumables which will be supplied by BHEL at Stores at free of cost.	MT	7397.25	
11	0511	Fabrication and fixing in position of M.S inserts out of M.S plates, flats, rounds, angles etc., including necessary lugs made of rounds or flats, sizing and cutting to required lengths, threading, bolting and welding as required and placing the same in position in both plain and reinforced cement concrete members, including adjusting the shuttering if necessary, tying and holding to correct level and line. Rate includes cost of all materials, labour etc., complete but excluding raw steel sections which will be supplied by BHEL at Stores at free of cost.	KG	28.20	
12	0512	Fabrication and fixing in position of M.S inserts out of M.S plates, flats, rounds, angles etc., including necessary lugs made of rounds or flats, sizing and cutting to required lengths, threading, bolting and welding as required and placing the same in position in both plain and reinforced cement concrete members, including adjusting the shuttering if necessary, tying and holding to correct level and line. Rate includes cost of all materials, labour etc., complete but excluding raw steel sections and all consumables which will be supplied by BHEL at Stores at free of cost.	KG	26.80	
13	0513	Fabrication of various sizes steel partitions (not exceeding 4.00 x 2.40 m) using M.S angles for outer frame work and flats for vertical and horizontal stiffeners etc. Bottom panels are to be welded with M.S sheets for a height of one metre (approx.) and top panels with BRC fabric (75 x 25 mm) All as per drawings and as directed by the Engineer-in-charge. Rate includes providing necessary holes for inter connections and also base plates for fixing on the floor, all labour, electrodes, conveyance of raw materials from stores to fabrication site, etc. complete, but excluding cost of steel sections and BRC fabrics which will be supplied by BHEL at Stores at free of cost.	M2	247.95	

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Sl.No.	Item No.	Description	Unit	Rate (Rs.P)	Cement in KG
14	0514	Fabrication of various sizes steel partitions (not exceeding 4.00 x 2.40 m) using M.S angles for outer frame work and flats for vertical and horizontal stiffeners etc. Bottom panels are to be welded with M.S sheets for a height of one metre (approx.) and top panels with BRC fabric (75 x 25 mm) All as per drawings and as directed by the Engineer-in-charge. Rate includes providing necessary holes for inter connections and also base plates for fixing on the floor, all labour, electrodes, conveyance of raw materials from stores to fabrication site, etc. complete, but excluding cost of steel sections, BRC fabrics and all consumables which will be supplied by BHEL at Stores at free of cost.	M2	216.65	
15	0515	Erection of fabricated steel partitions including handling, leading, assembling, erecting in position, site bolting, revetting, site welding etc., wherever required including cost of drilling holes in concrete floor and grouting bolts for fixing the base plates of steel partitions wherever necessary, all as per instructions of Engineer in charge. Rate includes all labour, incidentals etc., complete.	SQM	131.60	
16	0516	Erection of fabricated steel partitions including handling, leading, assembling, erecting in position, site bolting, revetting, site welding etc., wherever required including cost of drilling holes in concrete floor and grouting bolts for fixing the base plates of steel partitions wherever necessary, all as per instructions of Engineer in charge. Rate includes all labour, incidentals etc., complete but excluding all consumables which will be supplied by BHEL at Stores at free of cost.	M2	124.55	
17	0517	Fabrication of S.S tubes / ERW tubes to the design specified for railing. Rate includes conveyance of raw materials and fabricated railings, fabrication charges, preparation of DODLs, incidentals etc., complete. Tubes and other steel materials required for the work will be supplied by BHEL at Stores at free of cost.	MT	12371.75	
18	0518	Carrying from stacks to site of work and fixing in position in line, level and alignment of fabricated railings at places as directed by the Engineer-in-charge. Excavation for pits and concrete bed will be paid separately under relevant items.	MT	4857.50	
19	0519A	Providing holding down bolts of required sizes with nuts, washers etc. and fixing in proper level, line, alignment etc., all as per drawings and instructions of Engineer-in-charge. Rate includes cost of steel materials, bolts, nuts, washers, fabrication and machining charges, fixing, all labour etc. complete. In M.S rounds including washer plates.	KG	65.80	
20	0519B	Providing holding down bolts of required sizes with nuts, washers etc. and fixing in proper level, line, alignment etc., all as per drawings and instructions of Engineer-in-charge. Rate includes cost of steel materials, bolts, nuts, washers, fabrication and machining charges, fixing, all labour etc. complete. Bolts including nuts and washers etc. complete in all sizes and lengths.	KG	85.15	

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Sl.No.	Item No.	Description	Unit	Rate (Rs.P)	Cement in KG
21	0520	Conveying all types and sizes of holding down bolts, nuts, washers etc. from BHEL Stores to site of work and fixing in proper level, line, alignment etc., all as per drawings and instructions of Engineer-in-charge. Rate excludes cost of bolts, nuts, washers etc.	KG	23.55	
22	0521	Providing and fixing in position of M.S rivets of required sizes at site of work.	KG	116.55	
23	0522	Welding by gas plant or electric plant including transportation of plant to site of work, cost of consumables, labour charges etc. complete.	CM	2.65	
24	0523	Tightening of loosened bolts and nuts of all connections of steel structures such as columns, truss girders, trusses, crane girders, bracings, purlins etc. of buildings at all heights. Rate includes drilling holes wherever required, providing/replacement of bolts and nuts, (excluding cost of bolts and nuts), labour etc. Payment will be made based on the corresponding floor area of the buildings.	M2	12.60	
25	0524	Labour charges for making and fixing M.S fan hook of standard shape using M.S bar bent to shape with hooked ends in RCC slabs during laying including painting the exposed portion etc. complete. M.S bar will be supplied by BHEL at Stores at free of cost.	EA	26.60	
26	0525	Labour charges for making and fixing M.S fan hook of standard shape using M.S bar bent to shape with hooked ends in existing RCC slabs including cutting chase and making good to match with the existing one and painting the exposed portion of the hook etc. complete. M.S bar will be supplied by BHEL at Stores at free of cost.	EA	172.70	
27	0526	Removing cobwebs from the structures of buildings at all heights including cleaning of roof walls, undersurface of A.C sheets etc, complete. Rate includes providing working platforms, ladder, safety nets, labour etc, complete. Payment will be made based on the floor area of the buildings.	M2	5.20	
28	0527	Supply and fixing rolling shutters of approved make, made of 80 x1.25 mm M.S laths with 1.25 mm thick top cover interlocked together through their entire length and joined together at end by end locks mounted on specially designed pipe shaft with brackets, side guides and arrangements for inside and outside locking with push and pull operation etc.complete including cost of providing and fixing necessary 27.5 cm long wire springs grade No.2 and M.S top cover of required thickness for rolling shutter.	M2	1912.65	
29	0528	Providing and fixing ball bearing for rolling shutters.	EACH	413.30	
30	0529A	Extra for providing mechanical device chain and crank operation for operating rolling shutters. Exceeding 10.00 SQM and upto 16.80 SQM in area.	M2	630.25	
31	0529B	Extra for providing mechanical device chain and crank operation for operating rolling shutters. Exceeding 16.80 SQM in area.	M2	663.25	

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Sl.No.	Item No.	Description	Unit	Rate (Rs.P)	Cement in KG
32	0530	Conveying from BHEL stores to site of work and fixing rolling shutters in proper position, all as directed by the Engineer-in-charge. Rate includes loading, leading, unloading and fixing of roller shutter including side brackets, gear box, lubricating the bearings etc., complete and making it fit for operation. Labour charges only.	M2	276.60	
33	0531	Providing and fixing in position of collapsible steel shutters with vertical channels 20 x 10 x 2 mm and braced with flat iron diagonals 20 x 5 mm size with top and bottom rail of T-iron 40 x 40 x 6 mm with 40 mm dia steel pulleys complete with bolts, nuts, locking arrangements, stoppers, handles, including applying a priming coat of approved steel primer.	M2	4344.00	
34	0532	Providing and fixing factory made ISI marked steel glazed doors, windows and ventilators, side / top / centre hung, with beading and all members such as F7D, F4B, K11 B and K12 B etc. complete of standard rolled steel sections, joints mitred and flash butt welded and sash bars tenoned and riveted, including providing and fixing of hinges, pivots, including priming coat of approved steel primer, but excluding the cost of other fittings, complete all as per approved design. Fixing with 15x3 mm lugs 10 cm long embedded in cement concrete block 15x10x10 cm of C.C. 1:3:6 (1 Cement : 3 coarse sand : 6 graded stone aggregate 40 mm nominal size).	M2	1154.70	
35	0533	Fixing standard steel glazed doors, windows and ventilators in walls with 15 x 3 mm lugs 10 cm long embedded in cement concrete blocks 15 x10 x10 cm of 1:3:6 or with wooden plugs and screws or rawl plugs and screws or with fixing clips or with bolts and nuts as required, including fixing of glass panes with glazing clips and special metal-sash putty or metal beading with screws. (Only steel doors, windows and ventilators with lugs, glass panes cut to size and glazing clips or metal beading with screws shall be supplied by BHEL at Stores at free of cost)	M2	271.25	
36	0534A	Supply and fixing of glass panes with putty, glazing clips etc. for steel doors, windows, ventilators etc. Rate includes removal of broken glasses and old putty. 3 mm pin headed glass panes.	M2	600.75	
37	0534B	Supply and fixing of glass panes with putty, glazing clips etc. for steel doors, windows, ventilators etc. Rate includes removal of broken glasses and old putty. 4 mm plain glass panes.	M2	665.80	
38	0535	Providing putty for glass panes. Rate includes removal of old putty, supply and applying new putty in a proper manner and required quantity at site of work, all as per instructions of Engineer in charge.	RM	19.30	
39	0536	Providing and fixing in proper position of fan hook using 10 mm FSICHER SLM-N heavy duty ANCHOR fastener with clamp and bolts in the existing RCC roof slab. Rate includes cost of fan hook (fastener), drilling with power drilling machine to the required dia and depth in the RCC roof slab, inserting and fixing the fan hook in proper position, all labour and all other incidentals etc. complete.	EA	390.50	
40	0537A	Providing and fixing oxidised M.S handle with necessary screws etc.complete. 100 mm size	EA	22.45	

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Sl.No.	Item No.	Description	Unit	Rate (Rs.P)	Cement in KG
41	0537B	Providing and fixing oxidised M.S handle with necessary screws etc.complete. 125 mm size	EA	25.95	
42	0538A	Providing polyester sun control film of approved brand (GARWARE or equivalent) and shade to glazed panels in doors / windows / ventilators / partitions etc.with proper adhesive, all after removing the existing damaged film if available etc. complete. All as per instructions of Engineer in charge. Rate includes cost of all materials, scaffolding charges, labour, all other incidentals etc., complete. Non reflective Type - Regular grade	M2	420.15	
43	0538B	Providing polyester sun control film of approved brand (GARWARE or equivalent) and shade to glazed panels in doors / windows / ventilators / partitions etc.with proper adhesive, all after removing the existing damaged film if available etc. complete. All as per instructions of Engineer in charge. Rate includes cost of all materials, scaffolding charges, labour, all other incidentals etc., complete. Non reflective Type - Premium Grade with Scratch Resisting Coating	M2	1011.95	
44	0539	Supply of Mild Steel sections such as channels, angles, T sections, flats, sheets, square bars, rods, tubes etc.at site of work and fabrication of steel work for gates, Y angles, purlins, trusses, any other small structures etc., all as per required design and drawing and erecting/fixing the same in proper alignment/position, level including site welding and or bolting/rivetting with necessary accessories such as keelmulai, keelpattai, hinges, tower bolts, aldrops etc.complete. Rate also includes providing two coats of synthetic enamel paint over one coat of red oxide primer. Payment will be made for the entire finished item of work.	MT	72332.55	
45	0540	Providing and fixing factory made ISI marked steel Paneled doors, windows and ventilators, side / top / centre hung, with beading and all members such as F7D, F4B, K11 B and K12 B etc. complete of standard rolled steel sections, joints mitred and flash butt welded and sash bars tenoned and riveted, including providing and fixing of hinges, pivots, including priming coat of approved steel primer , but excluding the cost of other fittings, complete all as per approved design.,and providing and fixing 18 gauge MS sheets for panes, handles, peg stays, friction throw hinges etc., complete including a priming coat of approved steel primer. Rate includes dismantling the masonry and making good all damages etc., complete.	M2	2139.95	
46	0541	Conveying the Gantrail MKVII 122 mm wide steel reinforced vulcanized rubber pad from BHEL stores to site of work and lifting the same to EOT crane girder level, laying, aligning and fixing in proper position along the top of crane girder at 8.00 m from floor level including sizing and correct to alignment by using chisel and filing the edges to match with the adjoining pad. Rate includes all labour, tools and plants and all other incidentals etc., complete.	RM	91.50	

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Sl.No.	Item No.	Description	Unit	Rate (Rs.P)	Cement in KG
47	0542	Conveying the Gantrail weldable base type 9116/10/32 adjustable crane rail clip including captive bolts, nuts, washers and integral vulcanized rubber nose from BHEL stores to site of work, lifting to EOT crane girder level and fixing them by welding using special electrodes to hold the EOT crane rail in correct level and alignment. Rate includes all labour, scaffolding, tools and plants, tightening the clamps after rail erection etc., complete and all other incidentals. Special electrodes and power will be supplied by BHEL at free of cost.	SET	137.25	
48	0543	Supply, drilling and driving 10/12 mm dia anchor fasteners of length not exceeding 125 mm at 500 mm both sides of crane rail having tensile and shear capacity of minimum 1.50 MT into the RCC crane girder as indicated in the drawing to secure cover plate rigidly with the crane girder. Rate includes cost of fasteners, labour for drilling holes, etc., complete, all as per the instructions of Engineer-in-charge. Rate also includes provision for wastage of fasteners or repeat work in driving of fasteners due to infringement of reinforcement if any and also filling up the unwanted holes drilled on concrete girder due to repeat work with suitable high strength non-shrink cement.	SET	186.90	
49	0544	Removing the old rigidly welded rail clamp and bolt by gauging the welded joint without damaging the bolt. Rate includes labour, consumables, tools and plants and making good all damages by welding and grinding the top surfaces of girder.	SET	52.15	
50	0545	Lifting the gantry rails up to 200 mm and packing the rails/sleepers with ballast metal /shim. Plates true to span, alignment and level including oiling and tightening the fish bolts and sleepers, fasteners and fixing new fasteners for the missing and sectioning the formation to the required profile, all as per the instructions of Engineer-in-charge. (Ballast metal, shim, oil, new fasteners etc. will be supplied by BHEL at stores at free of cost) Payment will be made per metre length of single rail.	RM	40.05	
51	0546	Providing fibre glass reinforcement with UV resistant polyurethane compound lining, to a minimum thickness of 3 mm on newly fabricated M.S gutters at floor level and jointing and filling the gap finishing etc., after erection at a height ranging from 12-24m from FFL, and making the gutters leak proof as per instructions of Engineer-in-charge. The work consists of thoroughly cleaning the surface of the gutters and applying an undercoat of resin over which the alternate layers(min. three layers) of fibre strand and resin to the required thickness before applying polyurethane compound coating at top with one coat of Gel coat with surface mat and polish to provide even surface, preparation of surface with fibre reinforced plastic with 50 microns thick polyurethane lining, testing, etc., complete all as per instruction of Engineer-in-charge. Rate quoted shall also include cost of labour, material with all taxes, scaffolding charges, if any and all other incidental charges etc., complete.	M2	956.40	

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SI.No.	Item No.	Description	Unit	Rate (Rs.P)	Cement in KG
52	0547	Providing fibre glass reinforcement with UV resistant polyurethane compound lining, to a minimum thickness of 3 mm on M.S gutters of factory buildings at a height ranging from 12-24m from FFL, and making the gutters leak proof as per instructions of Engineer-in-charge. The work consists of removing the adjoining North light Glazing, Roofing Sheets and existing paint in the gutter completely and thoroughly cleaning the surface including the damaged portion of the gutters and applying an undercoat of resin over which the alternate layers(min. three layers) of fibre strand & resin to the required thickness before applying polyurethane compound coating at top with one coat of Gel coat with surface mat and polish to provide even surface, preparation of surface with fibre reinforced plastic with 50 microns thick polyurethane lining, testing, refixing the removed north light glazing and Roofing sheets and also filling with fibre reinforcement prior to lining in areas badly worn out both in the bottom as well as sides of gutters etc., complete all as per instructions of Engineer- in –charge. Rate quoted shall also include cost of labour, material with all taxes, scaffolding charges, if any and all other incidental charges etc., complete (The Contractor is required to take all safety precautions during working and obtain work permit from the concerned departments. Working hour is restricted as it depends on shutdown by production department that may not be more than 4 hours at a stretch and only intermittent).	M2	1259.20	
53	0548	Supplying and laying rubberized and coloured (for 5mm thick layer) inter locking paver block of 50mm thickness M25 grade in flooring / pavement to take care of vehicular movements with proper line, level, alignment etc., all as per standard specification and instruction of Engineer-in-charge. The rate included cost of material, transportation, loading, unloading at site, labour for spreading and laying of paver block etc., complete over the sand bed of required thickness which will be paid under separate item.	M2	894.40	
54	0549	Welding of 90 Lbs/CR 80 rail joints erected already in alignment in crane girders/gantry girder upto +14.00 meter including edge preparation, preheating welding using special type electrode (Elec grade 11018). The rate includes all labour charges, electrodes and incidental charges for dismantling the rail from its original position, edge preparation, preheating, welding, post heating as per the instructions of BHEL Engineer in charge. Also include cost of consumables for pre heating and post heating and labour charges for re fixing the 90 Lbs/CR 80 rail to alignment, level after welding etc., complete.	JOINT	2170.30	
55	0550	Renewing the bottom rail and/or top rubber of collapsible gate including making good all damages and applying priming coat of zinc chromate yellow primer of approved brand and manufacturer. Rate includes removing the collapsible gate from its position including the frames, replacing the wornout portions wherever necessary with suitable new M.S Tee sections etc. and refixing the collapsible gate and making good the damages in floor, wall etc.with cement concrete etc.complete. Payment will be made only on weight basis for the replaced new M.S sections.	K.G	116.50	

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Sl.No.	Item No.	Description	Unit	Rate (Rs.P)	Cement in KG
56	0551A	Renewing wrought iron or M.S wheel or roller of steel door or gate and fitting and fixing the same with necessary clamps, nuts and bolts/welding and erection etc.complete. Wheel 50 mm dia and below	Each	113.65	
57	0551B	Renewing wrought iron or M.S wheel or roller of steel door or gate and fitting and fixing the same with necessary clamps, nuts and bolts/welding and erection etc.complete. Wheel above 50 mm dia	Each	171.60	
58	0552	Supply and fixing cup type rail clamp with fittings over the insert plate which is embeded in the concrete. Rate includes welding including cost of consumables, all labour and other incidentals etc. complete, all as per instructions of Engineer-in-charge.	Each	252.45	
59	0553	Collection from BHEL stores and transporting of rails CR 80/R 45 etc to the contractor's site fabrication shop, straitening the rails using Gim screw or any other equipments, preparation of edge for welding the rail joints as per drawing and erecting in position at all elevations (i.e, in floor or over the girders) using cup type rail clamps with fittings. The scope includes rail alignment after erection, fixing in position, welding the joints by using approved electrode (E 11018 for CR 80 & E7018 for R 45 rails), pre heating & post heating the joints, grinding the joints neatly etc as per drawings and instruction of Engineer in charge.Rate shall include cost of providing one coat of red oxide primer as per IS specification and supply of DODL's for BHEL approval in compact disc with two copies of print outs. Quoted rate shall also include cost of consumables, hire charges for tools and plants, labour and incidentals etc complete but exclude cost of rails which will be supplied by BHEL at free of cost.	MT	11500	
60	701	Carrying , hoisting and fixing in position of 0.47 to 0.50mm thick colour coated Aluminium zinc alloy coated high tensile steel rib profile sheets with accessories such as ridge pieces, barge boards, North light curves, end curves, etc., for roofing at all heights with necessary xylon coated self tapping / self drilling screws with EPDM washers at every ribs etc., complete. All as per drawings, manufacturers specifications and instructions of Engineer-in-charge .Rate includes cost of self tapping/ self drilling screws with EPDM washers etc., and labour charges for fixing, hire charges for tools and plants like drilling machines, cost of providing life line and other provisions for safety, scaffolding and all other incidental charges etc., complete but excluding cost of Aluminium zinc alloy coated high tensile steel sheets and its accessories such as ridge pieces, barge boards, curves, etc., which will be supplied by BHEL at Stores at free of cost. The payment will be made for the actual laid area only.	M2	88.60	

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Sl.No.	Item No.	Description	Unit	Rate (Rs.P)	Cement in KG
61	702	Carrying , hoisting and fixing in position of 0.47 to 0.50mm thick colour coated Aluminium zinc alloy coated high tensile steel rib profile sheets with accessories such as ridge pieces, barge boards, curves, etc., for side sheeting at all heights with necessary xylon coated self tapping / self drilling screws with EPDM washers at every valleys, etc., complete .All as per drawings, manufacturers specifications and instructions of Engineer-in-charge ..Rate includes cost of self tapping/ self drilling screws with EPDM washers etc., and labour charges for fixing, hire charges for tools and plants like drilling machines, cost of providing life line and other provisions for safety, scaffolding and all other incidental charges etc., complete but excluding cost of Aluminium zinc alloy coated high tensile steel sheets and its accessories such as ridge pieces, barge boards, curves, etc., which will be supplied by BHEL at Stores at free of cost. The payment will be made for the actual laid area only.	M2	114.35	
62	703	Supplying at site of work , hoisting and fixing in position of 0.47 to 0.50mm thick colour coated Aluminium zinc alloy coated high tensile steel rib profile sheets with accessories such as ridge pieces, barge boards, North light curves, end curves, etc., as per technical specifications given in note below for roofing at all heights with necessary xylon coated self tapping / self drilling screws with EPDM washers at every ribs etc., complete. All as per drawings, manufacturers specifications and instructions of Engineer-in-charge .Rate includes cost of all materials like colour coated Aluminium zinc alloy coated high tensile steel rib profile sheets with accessories such as ridge pieces, barge boards, curves, etc., wherever required self tapping / self drilling screws with EPDM washers at every ribs etc., and labour charges for fixing, hire charges for tools and plants like drilling machines, providing lifeline and other provisions for safety, and all other incidental charges etc., complete. The payment will be made for the actual laid area only.Note: (1)The Aluminium zinc alloy coated high tensile steel sheets and specials shall be 0.47 to 0.50mm thick (TCT) (Aluminium around 55%, Zinc around 43%) alloy coated high tensile steel (Yield strength 550 MPA) colour coated rib profile sheets as per ASTM A792M, coating standard as per AS 1397-1933 Conforming to AZM 150 (Min Coating mass of 150 gsm) having cover width of 1000 plus or minus 10mm and over all width of 1060mm of any length to suit site conditions (2) About 90% area of the Aluminium zinc alloy coated high tensile steel sheets shall be colour coated with Light Blue RAL 5012 and 10% of the covered area is of with white. All ridge pieces and barge boards are of white.(3) The Aluminium zinc alloy coated high tensile steel sheets shall be Pre-Primed with a Primer of 5µm and finished with a final paint coat of 17-20 µm on top surface. A single backing coat of 7-10µm should be applied on reverse side	M2	559.80	

Sl.No.	Item No.	Description	Unit	Rate (Rs.P)	Cement in KG
63	704	Supplying at site of work , hoisting and fixing in position of 0.47 to 0.50mm thick colour coated Aluminium zinc alloy coated high tensile steel rib profile sheets with accessories such as ridge pieces, barge boards, curves, etc., as per technical specifications given in note below for side sheeting at all heights with necessary xylon coated self tapping / self drilling screws with EPDM washers at every valleys, etc., complete .All as per drawings, manufacturers specifications and instructions of Engineer-in-charge .Rate includes cost of all materials like colour coated Aluminium zinc alloy coated high tensile steel rib profile sheets with accessories such as ridge pieces, barge boards, curves, self tapping / self drilling screws with EPDM washers at every valleys, etc., and labour charges for fixing, hire charges for tools and plants like drilling machines, providing lifeline and other provisions for safety, and all other incidental charges etc., complete. The payment will be made for the actual laid area only.Note: (1)The Aluminium zinc alloy coated high tensile steel sheets and specials shall be 0.47 to 0.50mm thick (TCT) (Aluminium around 55%, Zinc around 43%) alloy coated high tensile steel (Yield strength 550 MPA) colour coated rib profile sheets as per ASTM A792M, coating standard as per AS 1397-1933 Conforming to AZM 150 (Min Coating mass of 150 gsm) having cover width of 1000 plus or minus 10mm and over all width of 1060mm of any length to suit site conditions (2) About 90% area of the Aluminium zinc alloy coated high tensile steel sheets shall be colour coated with Light Blue RAL 5012 and 10% of the covered area is of with white. All ridge pieces and barge boards are of white.(3) The Aluminium zinc alloy coated high tensile steel sheets shall be Pre-Primed with a Primer of 5µm and finished with a final paint coat of 17-20 µm on top surface. A single backing coat of 7-10µm should be applied on reverse side	M2	585.6	
64	705	Supplying at site of work, hoisting and fixing in position of 2mm thick embossed clear poly carbonate roof light sheets in specified locations and at all heights with necessary xylon coated self tapping / self drilling screws with EPDM washers at every ribs, etc., complete to match the profile of Aluminium zinc alloy coated high tensile steel roof sheets, as per instructions of Engineerin- charge. The rate includes cost of poly carbonate sheets ,self tapping / self drilling screws with EPDM washer, at every ribs, and labour charges, all scaffolding charges, tools and plants and all other incidental charges etc., complete.	M2	1540.90	
65	706	Supplying roof extractors (Turbo Air Ventilators) of dia 600mm or thereabouts, fixing in position on AC / Aluminium zinc alloy coated high tensile steel sheet roofs at all heights with necessary screws,, bolts etc., and finishing to match with existing roof. Rate to include cost of all labour charges for fixing the roof extractors with necessary cutting of sheets to the required size ,drilling to suit the screws/ bolts, and finishing to match the existing profile including cost of roof extractors / ventilators. All as per manufacturers specifications and as directed by the Engineer in charge	EACH	8800.00	

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Sl.No.	Item No.	Description	Unit	Rate (Rs.P)	Cement in KG
66	0707A	Supply and fixing corrugated fibre glass reinforced polyester translucent roof light sheets of all colours including white of following thickness to match with the existing A.C. sheet roofing including cost of G.I. bolts, nuts, washers and bitumen washers etc., complete. Payment will be based on the laid area. FRP Sheet 1 mm thick	M2	474.60	
67	0707B	Supply and fixing corrugated fibre glass reinforced polyester translucent roof light sheets of all colours including white of following thickness to match with the existing A.C. sheet roofing including cost of G.I. bolts, nuts, washers and bitumen washers etc., complete. Payment will be based on the laid area. FRP Sheet 2 mm thick	M2	791.80	
68	0708	Supply and fixing in position of galvanised iron plain sheets of 1.60 mm thick for flashing using G.I bolts, nuts, limpet washers etc. complete bent to shape and fixed in walls with cement mortar 1:3, all as per drawings and specifications.	M2	824.75	
69	0709	Conveying G.I sheets from BHEL stores to site of work, bent to shape and fixing in proper position for flashing fixed with G.I bolts, nuts, limpet washers etc., complete and fixed in walls with cement mortar 1 : 3, all as per drawings and specifications. G.I sheet alone will be supplied by BHEL at Stores at free of cost.	M2	445.05	
70	0710	Supply and fixing in position of 6 mm thick wired glass in roof north light glazing including straightening the aluminium astrangle as required. Rate includes cost of glass, labour etc. complete.	M2	988.70	
71	0711	Conveying from BHEL stores to site of work 6 mm thick wired glass and fixing in position for roof north light glazing including straightening the aluminium astrangle as required. Rate includes labour, conveyance and other incidentals, removing the broken glasses from its position etc.complete.	M2	102.25	
72	0723	Conveying from BHEL stores to site of work, hoisting and fixing in position of 4 mm / 6 mm thick multi walled clear (UV coated) polycarbonate sheet for north light glazing runner (inclined and vertical) as per drawing including provision of suitable aluminium frames as required. The scope of work includes supply of aluminium frames (top and bottom) in required profiles fitted with EPDM rubber gaskets and fixing in the glazing runner using SDST screws of approved make and polycarbonate sheets are suitably placed between the aluminium frames before driving the top frame screws all as per Drg.no and as per the instructions of Engineer in Charge. The top and bottom portion of polycarbonate sheets shall be closed with aluminium U channels to prevent dust and insects. Rate shall include cost of aluminium frames, U channels, EPDM rubber gaskets, SDST screws required labour, tools and plants, etc., except polycarbonate sheets which will be supplied by BHEL at free of cost	M2	1179.50	

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CIVIL ENGINEERING DEPARTMENT,BHEL,Trichy-14

Sl.No.	Item No.	Description	Unit	Rate (Rs.P)	Cement in KG
73	0724	To collect and cleaning of all the damaged north light glazing materials (polycarbonate sheets) at roof top for all heights and removing/repairing the north light glazing bars (aluminium beading) wherever required in line, level and alignment as per the instructions of Engineer in charge. The aluminium beadings and polycarbonate sheets shall be re fixed using 2 nos of 50mm X 6mm MS Hexagonal bolts, nuts and washers at top horizontal 8 nos of 35mm X 12mm Self drilling fasteners with EPDM washers at both the vertical sides and 2 nos of 50mm X 12mm self drilling screws with EPDM washers at bottom horizontal in each panel. The rate shall include cost of all labour charges, incidental charges for removing repairing and cost of all required fasteners for re fixing work but excludes cost of polycarbonate sheets and aluminium beading which will be supplied at free of cost. Payment will be made only for the actual area of repair work executed.	M2	116.00	
74	0725	Supplying at site of work, hoisting and fixing in position of 4 / 6mm thick multiwalled clear (UV coated) Polycarbonate sheet for north light glazing / glazing in monitor type roof to suit the rows of glazing runner (inclined and vertical) as per drawing including provision of suitable aluminium frames as required. The scope of work includes supply of polycarbonate sheets, aluminium frames (top & bottom) in required profile fitted with EPDM rubber gaskets and fixing in the glazing runner using SDST screws of approved make and the polycarbonate sheets are suitably placed between the aluminium frames before driving the top frame screws all as per std specification , instructions of Engineer-in-charge. The top and bottom portion of polycarbonate sheets shall be closed with aluminium U channels to prevent dust and insects. Rate shall include cost of polycarbonate sheets, aluminium frames, U channels, EPDM rubber gaskets, SDST screws, required labour, tools and plants etc.,complete.	M2	1800.00	
75	0829A	Painting with aluminium paint of approved brand and manufacture on surfaces to give an even shade, all as per standard specifications. Two coats.	M2	61.45	
76	0829B	Painting with aluminium paint of approved brand and manufacture on surfaces to give an even shade, all as per standard specifications. One coat	M2	39.15	
77	0833A	Painting one priming coat with approved primer on surfaces including preparing the surfaces by thoroughly cleaning oil, grease, dirt and other foreign matters and scoured with wire brushes, fine steel wool scrapers and sand paper, all as per standard specifications. Zinc Chromate primer	M2	28.35	
78	0833B	Painting one priming coat with approved primer on surfaces including preparing the surfaces by thoroughly cleaning oil, grease, dirt and other foreign matters and scoured with wire brushes, fine steel wool scrapers and sand paper, all as per standard specifications. Red oxide primer	M2	20.40	

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CIVIL ENGINEERING DEPARTMENT,BHEL,Trichy-14

Sl.No.	Item No.	Description	Unit	Rate (Rs.P)	Cement in KG
79	0834A	Painting one priming coat with approved primer over structural steel works in roof structures, columns etc., including preparing the surfaces by thoroughly cleaning oil, grease, dirt and other foreign matters and scoured with wire brushes, fine steel wool scrapers and sand paper, all as per standard specifications. Zinc Chromate primer	MT	955.35	
80	0834B	Painting one priming coat with approved primer over structural steel works in roof structures, columns etc., including preparing the surfaces by thoroughly cleaning oil, grease, dirt and other foreign matters and scoured with wire brushes, fine steel wool scrapers and sand paper, all as per standard specifications. Red oxide primer	MT	562.35	
81	0835A	Painting (excluding priming coat) on structural steel works in roof structures, columns etc.with synthetic enamel paint of approved brand and shade, brushing to give an even shade including cleaning the surfaces of all dirt, dust and other foreign matters, scaffolding charges etc.complete. All as per standard specifications. Two coats	MT	1580.50	
82	0835B	Painting (excluding priming coat) on structural steel works in roof structures, columns etc.with synthetic enamel paint of approved brand and shade, brushing to give an even shade including cleaning the surfaces of all dirt, dust and other foreign matters, scaffolding charges etc.complete. All as per standard specifications. One coat	MT	937.20	
83	0836A	Painting (excluding priming coat) on structural steel works in roof structures, columns etc.with aluminium paint of approved brand, brushing to give an even shade including cleaning the surfaces of all dirt, dust and other foreign matters, scaffolding charges etc.complete. All as per standard specifications. Two coats	M.T	1461.85	
84	0836B	Painting (excluding priming coat) on structural steel works in roof structures, columns etc.with aluminium paint of approved brand, brushing to give an even shade including cleaning the surfaces of all dirt, dust and other foreign matters, scaffolding charges etc.complete. All as per standard specifications. One coat	M.T	859.35	
85	0842A	Painting with Epoxy paint (two or more coats) at all locations, prepared and applied as per manufacturer's specifications including appropriate priming coat, preparation of surfaces etc.complete. On steel work	M2	95.15	
86	1501	Grouting the H.D bolts, underneath the base plates etc., after alignment with wet cement grout (1:1), all as per standard specifications. Rate includes cleaning the sleeves/pockets, tools and plants required for the work etc., complete except cement which will be supplied by BHEL at stores at free of cost.	M3	16000.65	1020

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CIVIL ENGINEERING DEPARTMENT,BHEL,Trichy-14

Sl.No.	Item No.	Description	Unit	Rate (Rs.P)	Cement in KG
87	1502	Grouting the H.D bolts, underneath the base plates etc., after alignment with non-shrink high strength cementitious grout of such as Tec. Grout 40 or Pidigrout 10M or Flogrout 60 or Conbextra GP2 or any other equivalent grout, all as per instructions of Engineer in charge and as per standard specifications. Rate includes cost of non-shrink grout, cleaning the sleeves/pockets, tools, labour etc., complete.	M3	53487.40	
88	1531	Cleaning and removing all the unwanted things from the rain water gutters available at an elevation of 12 to 20 m from FFL and making the gutter free from all accumulations, all as per instructions of Engineer-in-charge. Scope includes thorough cleaning off all dirt, dust, silt, leaves, other foreign matters etc. complete from the gutters using wire brush without damaging to the existing treatment given in the gutters, collecting the wastes in bags, lowering and conveying the same to the floor and dumping in the low lying areas. Rate includes all labour, tools, other incidentals etc. complete. Since the work is to be carried out at elevated levels/DSL EOT crane areas, the contractor is required to take all safety precautions during working and obtain work permit from the concerned departments. Working hour is restricted as it depends on shut down by the Production department that may not be more than 4 hour at a stretch and only intermittent.	M2	11.30	

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