



MORBI MUNICIPAL CORPORATION

Tender for Design, Engineering,
Procurement, Construction, Operation &
Maintenance of Refuse Transfer Station
(RTS) in East Zone of Morbi Municipal
Corporation

Volume IV: Price Bid & BOQ

2026

Morbi Municipal Corporation (MRMC)

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Structure of the Bidding Documents

Sr.no.	Volume	Details
1	Volume – I	Instruction to Bidders (ITB)
2	Volume – II	Conditions of Contract
3	Volume – III	Employer's Requirements, Scope of Work & Technical Specifications
4	Volume – IV	Price Bid
5	Volume – V	Drawings

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SECTION 1: PRICE BID**1 Price Bid Format***(To be submitted online on n-procure portal only)*

Name of the work: Tender for Design, Engineering, Procurement, Construction, Operation & Maintenance of Refuse Transfer Station (RTS) in East Zone of Morbi Municipal Corporation

Sr. No.	Work	Bidder's Quote (in INR) (Excluding GST)
1	Part A: Capital Cost (CAPEX) Design, Engineering, Procurement, Construction, installation, testing, commissioning of complete Refuse Transfer Station (RTS) including procurement and delivery stationary compactors, containers and hook loader vehicles as per the Tender conditions	
2	Part B: Operation and Maintenance (OPEX) Comprehensive Operation and Maintenance including all activities, services, manpower, equipment, consumables, spares, and reporting to ensure continuous, safe, and compliant operation of the RTS in accordance with the Tender conditions and applicable laws. For Year-1	
3	... For Year-2	
4	... For Year-3	
5	... For Year-4	
6	... For Year-5	
7	Total Amount (INR) without GST	

2 Important instructions (Price Bid)

- a) The Bidder shall quote a single consolidated Lump-Sum price for the entire EPC scope covering Design, Engineering, Procurement, Construction, Testing and Commissioning of the RTS. The EPC Lump-Sum Price shall be inclusive of all costs, including but not limited to:
- Surveys, investigations, detailed engineering and drawings
 - Civil, electrical, mechanical and instrumentation works
 - Labour, plant & machinery, temporary works, testing, commissioning
 - Insurance, royalties, duties, fees, and compliance with Applicable Laws
- b) Operation & Maintenance (O&M) for 6 years shall be quoted separately, on a lump-sum / annual basis.
- c) **For evaluation purposes, the Employer shall compute a Derived Percentage (% Above / Below / At Par) by comparing the quoted price with the Total Estimated Cost indicated in the BOQ.**
- d) **The Derived Percentage so calculated by the Employer shall be deemed final, binding and contractually applicable, and shall be treated as equivalent to a percentage-rate tender.**
- e) **For the purpose of execution, measurement, interim payments, variations, and final settlement, the contract rate for each BOQ item shall be deemed as:**
- Contract Item Rate = BOQ Estimated Rate × (1 ± Derived Percentage)**
- f) **The Derived Percentage shall be uniformly applicable to all BOQ items, including all additions, deletions, substituted items, excess or reduced quantities, and shall remain firm and binding throughout the contract period.**
- g) Any variation, extra item, or substituted item shall be valued using the above-derived contract rates or in accordance with the variation provisions of the Contract.
- h) Prices shall be quoted exclusive of GST. Employer shall pay GST as per the government norms and applicable rate from time to time.
- i) No conditional or partial pricing shall be permitted.
- j) The rates and prices shall be quoted entirely in Indian Currency.
- k) Payments to the Contractor shall be released based on the project milestones defined in the Volume-IV of the Tender document.
- l) Payments to the Contractor shall be subject to applicable liquidated damages as defined in the Volume-IV of the Tender document.
- m) The prices shall be entered against each item in the price bid. The cost of work against which Contractor has failed to enter the price shall be deemed to be covered by other prices entered in the price bid.
- n) General direction and descriptions of work and materials are not necessarily repeated or summarized in the Price Bid. References to the relevant sections of the contract documentation shall be made before entering prices against each item in the price bid.

3 Payment Conditions

A. General Payment Conditions

- i. The Contract Price shall comprise:
 - EPC Contract Price / CAPEX (one-time, milestone-based), and
 - O&M Contract Price / OPEX (recurring, performance-linked for 5 years).
- ii. All payments shall be released only after certification by Employer or its authorised representative.
- iii. Payments shall be subject to:
 - Achievement of milestones or KPIs, as applicable.
 - Submission of required documents
 - Statutory deductions and taxes as applicable
- iv. Any Deficiency of Service shall entitle MMC to withhold, deduct, or recover payments as per the Contract.

B. EPC Phase - Milestone-Based Payment Schedule

Payment No.	Linked Milestone No.	Milestone Description	Payment Release Conditions	Payment (% of CAPEX)
P-1	M-1	Detailed Engineering & Drawings Approval	Approval of all civil, structural, mechanical, and electrical drawings and layouts	5%
	M-2	Procurement of Major Equipment (Compactors, containers & hook loader vehicles)	Submission of confirmed purchase orders	
P-2	M-3	50% Completion of Civil & Structural Works	Certification of completion of approx. 50% of civil & structural works including foundations, superstructure, tipping platforms, internal roads, RCC structures, buildings, and utilities as listed in related project milestone	15%
P-3	M-4	100% Completion of Civil & Structural Works	Certification of full completion of all civil & structural works including buildings, drainage, roads, platforms, rooms, and ancillary facilities as per the related project milestone	20%
P-4	M-5	Delivery of Mechanical	Physical delivery and inspection acceptance of compactors, containers, hook loader vehicles	30%

		Equipment & Vehicles at Site		
P-5	M-6	Installation of Mechanical & Electrical Systems	Installation completion certificate; systems ready for trial run	15%
P-6	M-7	Testing, Trial Run & Commissioning	Successful integrated trial run under load conditions	15%
		EPC Completion & Provisional Acceptance	Submission of as-built drawings, O&M manuals; issue of Provisional Acceptance Certificate	
Total				100%

C. O&M Phase Payment Schedule (5 Years)

i. Commencement of O&M Payments

O&M payments shall commence only after successful commissioning and issuance of the Provisional Acceptance Certificate for the Refuse Transfer Station (RTS).

ii. Monthly Payment Basis

O&M payments shall be made on a monthly basis, subject to certification of performance and compliance with Key Performance Indicators (KPIs).

iii. Contracted Per-Ton Rate

For each O&M Year, the Contracted Per-Ton Rate shall be derived as follows:

- **Contracted Per-Ton Rate** = (Annual O&M Contract Price for the respective year) ÷ (Estimated Annual Quantity for that O&M Year)

The estimated quantities for each O&M Year shall be as follows:

O&M Year	Estimated Quantity of Waste to be handled per day (Tons per day)	Estimated Quantity of Waste to be handled per month (Tons per month)	Estimated Quantity of Waste to be handled per year (Tons per annum)
1	100	3000	36,500
2	105	3150	38,325
3	110	3300	40,150
4	116	3480	42,340
5	122	3660	44,530

iv. Monthly Payment Calculation

For each month during the O&M Period, payment shall be calculated as follows:

Let:

A = Actual quantity handled during the month (in tons)

E = Estimated monthly quantity for the respective O&M Year (in tons)

R = Contracted Per-Ton Rate of the respective O&M Year

Then:

Case 1: If $A \geq E$

Monthly Payment shall be calculated as per the following formula:

Monthly Payment = $A \times R$

(Full per-ton rate shall be applicable for actual quantity handled.)

Case 2: If $A < E$

Monthly Payment shall be calculated as per the following formula:

Monthly Payment = $\{A \times R\} + \{(E - A) \times R \times 75\%\}$

Meaning:

- Full per-ton rate shall be payable for actual quantity handled; and
- For the shortfall quantity ($E - A$), payment shall be made at 75% of the contracted per-ton rate of respective O&M year.

v. Measurement of Waste Quantity handled

Waste quantity shall be determined based on weighbridge records maintained at the RTS and/or designated processing/disposal facility or as suggested by MRMC, as the case may be. Monthly quantity shall be verified and certified by the authorized representative of MRMC.

vi. Tampering with Weighment Records

Any tampering, manipulation, misreporting, interference, or fraudulent activity of any kind in relation to the measurement of waste quantity handled at the Refuse Transfer Station (RTS), including but not limited to:

- Alteration of weighbridge readings or data;
- Manipulation of electronic weighbridge software or hardware;
- Falsification of weighment slips, registers, or digital records;
- Collusion with drivers, operators, or third parties to mis-state quantities;
- Obstruction or interference with inspection, monitoring, or audit processes;

shall be treated as a serious default and material breach of Contract.

Upon detection or reasonable determination of such tampering by Morbi Municipal Corporation (MMC), the following actions may be taken, without prejudice to other contractual rights:

- Immediate withholding of pending payments;
- Levy of Liquidated damages as decided by the Municipal Commissioner, MRMC. This shall not be subject to the maximum limit of LD mentioned in the Tender;
- Recovery of any excess payments made to the Contractor;
- Invocation of Performance Security;

- Suspension of O&M operations;
- Termination of the Contract;
- Blacklisting / debarring of the Contractor, as applicable.

The Contractor shall ensure full transparency in weighment operations and shall provide unrestricted access to MRMC or its authorized representatives for inspection, verification, data extraction, and audit at any time during the Contract Period.

Tampering with weighment systems shall be classified as a Critical Deficiency of Service, not subject to routine cure periods, and may warrant immediate contractual action.

vii. KPI Compliance

Monthly O&M payment shall be released only after certification by the authorized representative of Morbi Municipal Corporation (MMC) confirming the achievement of applicable KPIs for the month.

viii. Deduction of Liquidated Damages for non-compliance of KPI

In case of KPI shortfall or Deficiency of Service, deductions shall be applied as per the Penalty / Liquidated Damages provisions of the Contract. Such deductions shall be made from the calculated monthly payment.

ix. Persistent Deficiency of Service

Persistent or repeated Deficiency / Default in Service by the Contractor may result in withholding of payments, invocation of Performance Security, Termination of Contract, and/or Blacklisting of the contractor, as applicable.

x. Final O&M Payment

Final O&M payment shall be released only after:

- Successful completion of the O&M period;
- Final handover of assets in acceptable working condition;
- Submission of all required reports and documentation.

xi. Adjustment of Recoveries

Any recoveries due to penalties, deficiencies, damages, or statutory liabilities shall be adjusted before final settlement of O&M payments.

4 Liquidated Damages

- Liquidated Damages (LD) shall be levied to compensate the Employer for losses and inconveniences arising from delay, non-performance, or partial performance by the Contractor in meeting contractual obligations.
- Levy of Liquidated Damages shall not relieve the Contractor of its obligation to complete the Works, rectify defects, or comply with performance standards, nor shall it prejudice any other rights or remedies available to the Employer under the Contract.

A. Liquidated Damages for Delay during EPC Phase

A.1 Liquidated Damages for Delay in Achievement of Milestones

- If the Contractor fails to achieve any milestone specified in Appendix-1 (Project Milestones) within the stipulated time, for reasons attributable to the Contractor, the Employer shall be entitled to levy Liquidated Damages.
- The rate of Liquidated Damages for delay in completion of milestone during Construction Stage shall be **Rs. 25,000.00 per week or part thereof** subject to a maximum cap of 10% (Ten Percent) of the Total EPC Contract Price (i.e. capital cost).
- Liquidated Damages shall be calculated from the day immediately following the scheduled milestone completion date up to the date the milestone is actually achieved and certified by the Employer.

A.2 Liquidated Damages for Delay in Final Completion of Construction (whole work)

- In case of delay in achieving Completion of Construction, Liquidated Damages shall be levied at the rate **0.5% (Zero Point Five Percent) of the Total EPC Contract Price (i.e. Capital cost) per week of delay, or part thereof**, subject to a maximum cap of 10% (Ten Percent) of the Total EPC Contract Price.
- Delay beyond 90 (Ninety) days from the scheduled date of final completion of construction phase shall be treated as material breach of contract, entitling the Employer to invoke additional contractual remedies, including termination, encashment of Performance Security, and blacklisting as per applicable rules.
- The “Liquidated Damages for Delay in Final Completion of Construction (whole work)” shall be over and above the “Liquidated Damages for Delay in achievement of Milestones”

A.3 Liquidated Damages for Delay in Submissions

- If the Contractor fails to submit any documents specified in Appendix-2 (Submission Schedule) within the stipulated time, for reasons attributable to the Contractor, the Employer shall be entitled to levy Liquidated Damages.
- The rate of Liquidated Damages for delay in submission of document during Construction Stage shall be **Rs. 1,000.00 per day** subject to a maximum cap of 10% (Ten Percent) of the Total EPC Contract Price (i.e. capital cost).
- Liquidated Damages shall be calculated from the day immediately following the scheduled submission date up to the date on which the submission actually done by the Contractor.

B. Performance-Linked Liquidated Damages (during O&M period)

- i. During the Five (5) year O&M period, failure to meet Performance Standards and KPIs specified in the Volume III of the Tender document, shall attract Liquidated Damages and/or deductions from monthly O&M payments.
- ii. The Employer may levy deductions **Rs. 5,000.00 per instance or per day (as applicable), unless otherwise specifically mentioned in the Tender including the KPI clause of Volume III.** The deduction of LD shall be subject to the maximum limit of 10% of the Monthly O&M Payment for each month of non-compliance.
- iii. Notwithstanding the condition of maximum limit of 10% of the Monthly O&M Payment for Performance-Linked LD, the Employer shall be authorized to levy higher deductions or suspension of payment in case of serious or repeated violations.

C. Recovery and Adjustment of Liquidated Damages

- i. Liquidated Damages shall be recoverable by the Employer through adjustment against milestone payments, deduction from O&M payments, encashment of Performance Security, or any other lawful means available under the Contract.
- ii. The Employer's determination of Liquidated Damages shall be final and binding, subject to the dispute resolution mechanism provided in the Contract.

D. Force Majeure and Exclusions

- i. No Liquidated Damages shall be levied for delays or non-performance resulting from events qualifying as Force Majeure, provided the Contractor complies with the notice and mitigation requirements stipulated in the Conditions of Contract.

E. Cumulative Effect

- i. Liquidated Damages under this Appendix shall be cumulative across phases but shall not exceed the maximum caps specified herein.
- ii. Levy of Liquidated Damages shall not limit the Employer's right to claim actual damages, invoke termination, or exercise any other contractual or statutory remedy in cases of fraud, gross negligence, or willful default.

SECTION 2: BILL OF QUANTITIES (BOQ)

5 Preamble to BOQ

- a. The Schedule of Quantities (BOQ) forms an integral part of the tender documents and has been prepared to define the indicative scope of work, facilitate bid preparation, and establish the basis for contract rate derivation, valuation of variations, and contract administration under the EPC Contract.
- b. The BOQ indicates item-wise descriptions, units of measurement, quantities, estimated rates, and estimated amounts based on preliminary designs, site investigations, and applicable standards. The quantities shown are approximate and may increase or decrease during execution without affecting the validity of the Contract.
- c. The BOQ is not a schedule for direct pricing by the Bidder. Bidders shall not quote, alter, substitute, or attach any item-wise rate, amount, or condition in the BOQ. Any such attempt shall render the bid liable to rejection.
- d. The Bidder shall quote only a single consolidated price in INR in the Price Bid (Volume–IV), covering the entire scope of work as described in the tender documents, irrespective of the quantities indicated in the BOQ.
- e. For the purposes of evaluation, execution, measurement, variations, extra items, substituted items, and final settlement, the lump sum price quoted by the Bidder in the price bid shall be deemed to correspond to a uniform percentage (% Above / Below / At Par) over the Total Estimated Cost of Works indicated in the BOQ, as calculated by the Employer.
- f. The Derived Percentage shall apply uniformly to all BOQ items, including but not limited to excess or reduced quantities, additions, deletions, substituted items, and any variations arising during execution.
- g. Any item of work not expressly included in the BOQ but required for completion of the Works in accordance with the Contract shall be deemed to be included in the quoted EPC price, unless treated as a variation under the provisions of the Contract.
- h. All works shall be executed strictly in accordance with the Scope of Work, Technical Specifications, Drawings, applicable standards, statutory requirements, and directions of the Engineer-in-Charge.
- i. The BOQ shall be read in conjunction with the Instructions to Bidders (ITB), Conditions of Contract, Employer's Requirements, Scope of Work, Technical Specifications, Drawings, and Price Bid.

RECAPITULATION SHEET

Name of Work: Tender for Design, Engineering, Procurement, Construction, Operation & Maintenance of Refuse Transfer Station (RTS) in **EAST Zone** of Morbi Municipal Corporation

PART-A: CAPITAL EXPENDITURE (CAPEX)			
S. No.	Section	Perticular	Amount (Rs.)
A.1	SECTION - 1	CIVIL WORKS, STRUCTURAL STEEL WORKS, DRAINAGE WORKS, PLANTATIONS RECHARGE WELL, TUBE WELL, & MISC. WORKS, ETC.	6,09,23,687
A.2	SECTION - 2	FURNITURE ITEMS	3,09,482
A.3	SECTION - 3	ELECTRICAL AND LIGHTING WORKS	24,38,741
A.4	SECTION - 4	FIRE FIGHTING WORKS	24,56,460
A.5	SECTION - 5	MACHINERY AND VEHICLES	4,98,84,323
Sub Total A: Estimated Capital Cost without GST			11,60,12,693

PART-B: OPERATIONAL EXPENDITURE (OPEX)		
S. No.	Perticular	Amount (Rs.)
B.1	FIRST YEAR	1,58,91,065
B.2	SECOND YEAR	1,66,76,504
B.3	THIRD YEAR	1,75,04,405
B.4	FOURTH YEAR	1,85,07,259
B.5	FIFTH YEAR	1,94,55,967
Sub Total B: Estimated Operational Cost without GST		8,80,35,200

Total Estimated Project Cost (CAPEX+OPEX) (A+B)	20,40,47,894
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Bill of Quantities (BOQ)

Item No.	Item Description	Unit	Quantity	Rate	Amount in Rs.
(a)	(b)	(c)	(d)	(e)	(f) = (d) x (e)
SECTION-1					
CIVIL WORKS, STRUCTURAL STEEL WORKS, DRAINAGE WORKS, PLANTATIONS RECHARGE WELL, TUBE WELL, & MISC.					
1	Clearing and grubbing site/road/land including uprooting all vegetation, grass, bush shrubs, saplings and trees with girth, removal of stumps of trees of girth of all sizes including removing stumps of trees cut earlier and disposal of unserviceable materials and stacking of serviceable materials as directed by Engineer with all leads and lifts etc. complete as per specification. before commencement and after completion of the work.	Hectare	1	28173.36	28,173.36
2	Felling of the trees of the girth at any height Including cutting of trunks and branches, removing the roots and stacking of serviceable material and disposal of unserviceable material as directed by engineer incharge , including co-ordinating for the same.	Nos.	0	2011.45	0.00
3	Providing and installation of barricades including supplying, painting with fluorescent enamel paint and fixing CGI sheets 24 SWG of 1.8 m height and M.S. Posts angle 40 x 40 x6 mm at 2.0 m c/c and dismantling the same after completion of work as directed by Engineer and as per site requirements.	Sqmt	0	207.00	0.00
4	Demolition including stacking of serviceable materilas and disposal of unserviceable materials with all lead and lift. (i) R.C.C.work	Cum	50	1071.63	53,581.50
5	Demolition of Brick work and stone masonry including stacking of serviceable materilas and disposal of unserviceable materials with all lead and lift.(ii) In Cement Mortar.	Cum.	50	557.32	27,866.00
6	Excavation for foundation including sorting out and stacking of useful materials and disposing of the excavated stuff up to 50 mt lead.				
6 (a)	Excavation for foundation up to 1.5 mt. depth including sorting out and stacking of useful material & disposing of excavated stuff upto 50m Lead. (A) Loose or Soft Soil.	Cum.	3,547	121.72	4,31,740.84
6 (b)	Excavation for foundation for depth from 1.5 mt.to 3.0 mt. depth including sorting out and stacking of useful material & disposing of excavated stuff upto 50m Lead.. (A) Dense or Hard Soil.	Cum.	823	169.00	1,39,087.00
7	Excavation for foundation upto 1.5 m depth including sorting out and stacking of useful materials and disposing off the excavated stuff upto 50 Meter lead.(C) Hard Murrum	Cum.	100.00	264.44	26,444.00
8	Filling available excavated Earth (excluding rock) in trenches, plinth, sides of foundations etc. in layers not exceeding 20 cm. in depth consolidation each deposited layer by ramming and watering.	Cum.	1,120.00	135.56	1,51,827.20
9	Filling in foundation and plinth with Murrum or selected soil in layers not exceeding 20 cm. thickness including Watering , Ramming and Consolidating etc. Complete.	Cum.	3,712.00	298.79	11,09,108.48
10	Filling in plinth with sand under floors including watering ramming, consolidating and dressing etc. complete.	Cum.	2,975.00	477.03	14,19,164.25

Item No.	Item Description	Unit	Quantity	Rate	Amount in Rs.
(a)	(b)	(c)	(d)	(e)	(f) = (d) x (e)
11	Conveyance charge of earth, lime, murrum, building rubbish, manure, garbage, sludge, excavated rock, fly ash, aggregates of any kind at lead up to 3.0 km. & all Lift Including spreading & levelling etc. complete. (A) lime murrum building rubbish earth manure or sludge & excavated rock and rubbish [Earth]	Cum.	3,688.90	42.97	1,58,512.03
12	Providing & laying cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregates 20 mm nominal size) and curing complete excluding cost of form work in (A) Foundation & Plinth.	Cum.	350.00	3747.27	13,11,544.50
13	Providing and laying in position Ready Mixed M-300 grade concrete for reinforced cement concrete work , using cement content as per approved Design Mix manufactured in fully automatic batching plant and transported to site of work in transit mixer for a lead up to 10 kms having continuous agitated mixer, manufactured as per mix design of specified grade for reinforced cement concrete work including pumping of R.M.C. from transit mixer to site of laying, excluding the cost of centering shuttering finishing and reinforcement including cost of admixtures in recommended proportions as per IS:9103 to accelerate/retard setting of concrete, improve workability without impairing strength and durability as per direction of the Engineer - in - charge. Without Fly Ash (Min cement level as per latest IS 456 shall be maintained) (Cement level 475 kg)				
13 (a)	(A) Foundations, footings, base of columns and mass concrete.	Cum.	474.93	5202.05	24,70,609.61
13 (b)	(B) Slabs, landings, shelves, balconies, lintels, beams, girders and cantilever upto floor two level.	Cum.	847.33	5202.05	44,07,853.03
13 (c)	(C) Columns, pillars, posts and struts upto floor two level.	Cum.	304.69	5202.05	15,85,012.61
14	Providing formwork of ordinary timber planking so as to give a rough finish including centering, shuttering and propping etc. height of propping and centering below supporting floor to ceiling not exceeding 4.00 mt and removal of the same for in situ reinforced concrete and plain concrete work in (A) Foundations, footings, bases of columns, Beam, Water Tank, Slab etc. and mass concrete.	Sqm.	2,297.00	178.61	4,10,267.17
15	Providing formwork of ordinary timber planking so as to give a rough finish including centering shuttering strutting and propping etc. height of propping and centering below supporting floor to ceiling not exceeding 4 M. and removal of the same for in situ reinforced concrete and plain concrete work in. (H) (1) Sides and soffits of Beams Beam Haunchings cantilevers Girders Bressumers and Lintels not exceeding 1 M. in Depth.	Sqm.	3987.00	261.29	10,41,763.23
16	Providing formwork of ordinary timber planking so as to give a rough finish including centering shuttering strutting and propping etc. height of propping and centering below supporting floor to ceiling not exceeding 4 M. and removal of the same for in situ reinforced concrete and plain concrete work in. (G) Columns Pillars Posts and struts. (1) Square Rectangular Polygonal in plan.	Sqm.	1523.00	312.56	4,76,028.88

Item No.	Item Description	Unit	Quantity	Rate	Amount in Rs.
(a)	(b)	(c)	(d)	(e)	(f) = (d) x (e)
17	Providing and casting in situ controlled cement concrete M 30 for wearing coat laid as directed including tamping, vibrating, finishing, curing and fillingin joints with bitumen complete	Cum	0.00	5,366.00	0.00
18	Providing Thermo Mechanically Treated Bars Fe500D (TMT Bars) reinforcement for R.C.C. work including bending, binding and placing in position complete up to floor two level.	kg	289820.00	76.52	2,21,77,026.40
19	Steel work welded in pipe / built up sections / plate frame work including cutting, hoisting, fixing in position and applying a priming coat of red lead paint (A) In beams and joists, channels, angles,pipes tees, flats with connecting plates or angle cleats as in main & cross beamnship & jack rafters, purlins connected to common rafters and like.	qtl	100.00	9,018.30	9,01,830.00
20	Providing and fixing in Position Mild steel dowel bars/J bolts in Foundations for anchorage in fixed end as per detailed drawing including cutting, bending and welding complete.	Each	500.00	337.91	1,68,955.00
21	Providing and laying rubble for apron (each stone weighting not less than 40Kg.) including and packing and filing in the interstices with quarry-spalls.	Cum.	50.00	1,073.08	53,654.00
	Brick work				
22	Brick work using common burnt clay building bricks having crushing strength not less than 35 kg./Sq.Cm. in foundation and plinth in Cement Mortar 1:6 (1- Cement : 6 -finesand)(B) Conventional	Cum.	414.00	4,172.60	17,27,456.40
23	Half brick masonry in common brunt clay building bricks having crushing strength not less than 35 Kg/Sq.cm in Cement moratr 1:4 (1-Cement : 4 - Coarse Sand) in foundation and plinth (B) Conventional.	Sqm.	125.00	623.60	77,950.00
24	Providing and laying damp proof course 25mm thick cement concrete 1:2:4 (1- Cement : 2 coarse sand : 4 stone aggregate 10mm nominal size) and curing complete	Sqm.	50.00	318.78	15,939.00
25	Providing and laying Precast Light weight concrete hollow core wall with hollow core concrete unit of approved make & size of 120mm thick, 600mm wide and 2400mm / 2600mm / 2850mm / 3000mm / 3300mm in length made from of controlled cement concrete M20 having cube compressive strength not less than 20 MPa jointing with high strength & tensile adhesion non-shrink cementitious joint compound /P.U. Foam.(Plaster not required)	Sqm.	50.00	842.00	42,100.00
	Plaster work				
26	Providing 15 mm. thick cement plaster in single coat on rough side of single or half brick wall for interior plastering upto floor two level finished even and smooth in (a) [II] Cement mortar 1:4 (1 cement : 4 fine sand)	Sqm.	5,646.00	159.60	9,01,101.60

Item No.	Item Description	Unit	Quantity	Rate	Amount in Rs.
(a)	(b)	(c)	(d)	(e)	(f) = (d) x (e)
27	20 mm. thick sand face cement plaster on walls upto 10 meters above ground level consisting of 12 mm. thick backing coat of C.M. 1:3 (1 cement : 3 sand) and 8 mm. thick finishing coat of C.M. 1:1 (1 cement : 1 sand) etc. complete.	Sqm.	1,757.00	312.56	5,49,167.92
	Colour work				
28	White washing with lime on wall surfaces (one coats) to give an even shade including thoroughly brooming the surface to remove all dirt, dust, mortar drops & other foreign matter.	Sqm.	50.00	12.57	628.50
29	Distempering (two coats) with oil bound distemper of approved brand & manufacture and of required shade on wall surfaces to give an even shade over & including priming coat with distemper primer of approved brand after thoroughly brushing the surface free from mortar dropping & other foreign matter and also preparing the surface even and sand papered smooth.	Sqm.	5,646.00	75.92	4,28,644.32
30	Applying two coats of putty & two coats of primer of approved brand and manufacture on new wall surface to give an even shade including thoroughly brushing the surface free from mortar dropping and other foreign matter and sand papered smooth.	Sqm.	352.57	40.19	14,169.79
31	Wall painting (two coats) with plastic emulsion paint of approved brand and manufacture on undecorated wall surface to give an even shade including throughly brushingthe surface free from mortar droppings and other foreign matter and sand papered smooth.	Sqm.	1,757.00	83.53	1,46,762.21
32	Painting two coats (excluding priming coat) on new steel and other metal surface with synthetic enamel paint, brushing to give an even shade including cleaning the surface of all dirt, dust and other foreign matter.	Sqm.	400.00	67.89	27,156.00
33	Providing and casting in situ controlled cement concrete M-200 for Kerb/kerb blocks including formwork curing and finishing, complete	Cum.	80.00	4,794.92	3,83,593.60
34	Providing and fixing metal expansion joints as per drawings. Details of expansion joint 50 x 50 x 6mm size two IS and 100 x 6mm MS plate with 6 x 20 x 25mm long hold fast @ 50 cm / cc on both sides of expansion joints.	Rmt.	20.00	1,994.01	39,880.20
35	Providing and Fixing M.S post and pipe railing (medium duty of 63 mm dia) as per standard drawing including 3 coats of painting to steel work complete.	Rmt.	47.00	1,201.16	56,454.52
36	Providing and fixing premoulded compressible filler board in black colour confirming to MoRT&H Specifications (Clause 1015), having minimum density 95kg/cum. non-staining with less than 1% water absorption & compression recovery of 93% minimum as per specification for 20 mm wide expansion joint including cutting to required size and shape at all levels etc. complete as directed.	Sq.m	9.00	795.27	7,157.43
37	Providing PVC 100 mm diameter drainage waterspouts including necessary iron grating as per drawings	Each	25.00	157.79	3,944.75
	Door -Window				

Item No.	Item Description	Unit	Quantity	Rate	Amount in Rs.
(a)	(b)	(c)	(d)	(e)	(f) = (d) x (e)
38	Providing and fixing flush door shutters solid core construction with frame of first class hard wood with cross band and face veneer or plywood face panels including anodized alluminium butt hinges with necessary screws, (B) Non-decorative type & block board core anodized alluminium butt hinges in flush door shutters 35	Sqm.	56.00	1,811.62	1,01,450.72
39	Providing and fixing 30mm thickFACTORY MADE SOLID PANEL PVCDOOR SHUTTER consisting of framemade out of M.S. tubes of 19 gauge thickness and size of 19mm x 19mm forstiles and 15mm x 15 mm for top andbottom rails. M.S. frame shall have a coat ofsteel primers of approved make andmanufacture, M.S. frame shall be coveredwith 5 mm thick heat moulded PVC 'C'channel of size 30 x 50 mm forming stiles,and 5mm thick 75mm wide PVC sheets fortop rail, lock rail and bottom rail on eitherside, and 10mm (5mm x 2) thick, 20mmwide cross PVC sheet as gap insert for top rail and bottom rail, Panelling of 5 stiles andrails with 30mm wide x 5mm thick PVCsheet beading on eighter side, and joinedtogether with solvent cement adhesive,. Anadditional 5mm thick PVC strip of 20mmwidth is to be stculk on the interior side ofthe 'c' channel using PVC solvent cementadhesive etc. complete as per direction of Engineer in charge, manufacture'sspecification and drawing.	Sqm.	4.00	1,135.02	4,540.08
40	Providing and fixing extruded aluminum window having extruded aluminum Colour anodized section frame main outer size 127mm x 38.10mm x 1.35mm (of Jindal Section no: 2443, @ Wt. 1.384 Kg/mt), horizontal Four track member size 122.20mm x 31.75mm x 1.10mm (of Jindal Section no:8787, @ Wt. 1.205 Kg/mt), vertical member of size 122.20mm x 31.75mm x 1.50mm (of Jindal Section no:8935, @ Wt. 1.398 Kg/mt) with sliding shutters of horizontal member size 40mm x 18mm x 1.29mm (of Jindal Section no: 8949 @ wt.of 0.456Kg/mt), vertical member of size 40mm x 18mm x 1.29mm (of Jindal Section no: 8947 @ wt.of 0.456Kg/mt/, Section 8948, @ Wt. 0.457 Kg/mt) with 5 mm thick transparent bronze colour tinted float glass with powder coated aluminum fittings and fixtures and transparent silicon sealant glass fixing to frame as per details etc complete for window.	Sq.m	29.00	2,119.14	61,455.06
41	Providing and fixing window having extruded aluminum Colour anodized section frame main outer size63.50x38.10 x1.95mm,@Wt1.094Kg/Rmt,horizontalt wo track member size 61.85mm x 31.75mm x 1.20mm @ wt.of0.695 Kg/mt, vertical member of size 61.85mm x31.75mm x 1.30 mm @ wt.of 0.659 Kg/mt with sliding shutters of horizontal member size 40mm x 18mm x 1.29mm @ wt.of 0.456Kg/mt,vertical member of size 40mm x 18mm x 1.29mm @ wt.of0.456Kg/mt, @ Wt. 0.457 Kg/mt with 5 mm thick transparent bronze colour tinted floatglass with powdercoated aluminum fitting sandfixtures and transparent silicon sealant glass fixing to frame as per detail set complete for window.	Sq.m	15.00	1,696.73	25,450.95
42	Providing and fixing standared extruded of aluminum section of size 63mm x 38.10mm x 1.2mm (of Jindal Section no: 2434, @ Wt. 0.643Kg/mt) with colour powder Coated alluminium frame for ventilation with 5mm thick frosted glass as details etc. complete for ventilation	Sq.m	10.00	1,163.92	11,639.20
43	Providing and fixing M.S round or square bars wirh flats at required spacings in wooden frames of windows & clearstory windows.	Kg	800.00	69.80	55,840.00

Item No.	Item Description	Unit	Quantity	Rate	Amount in Rs.
(a)	(b)	(c)	(d)	(e)	(f) = (d) x (e)
44	Providing & Fixing Door closer-arrow type with spring 12 length as approved sample (30 cms) as per direction of engineer in charge.	Each	31.00	474.58	14,711.98
	Rolling Shutter				
45	Providing & fixing rolling shutters of approved make made of 80 mm wide M.S.laths inter locked together their entire length and jointed together at the end locks mounted on specially designed pipe shaft with bracket plates, guide channels and outside locking with push-pull operation incl. the cost of Hood cover and spring etc.comp. (A) Shutters having width below 3.5mt.	Sq.m	21.00	3,519.21	73,903.41
	Flooring				
46	Providing and laying polished kota stone slab flooring over 20 mm.(average) thick base of cement mortar 1:6 (1 cement : 6 coarse sand) or L.M. 1:1.5 (1 lime putty : 1.5 coarse sand) laid over and jointed with gray cement slurry including rubbing & polishing etc. complete. (i) 25 mm. thick.	Sq.m	181.00	1,003.83	1,81,693.23
47	Providing and laying polished kota stone slab 25 mm thick in risers of steps, dedo and pillars laid on 10 mm thick cement mortar 1:3 (1 cement : 3 coarse sand) and jointed with gray cement slurry mixed with pigment to match the shade of slab including rubbing & polishing etc. complete.	Sq.m	28.00	1,132.82	31,718.96
48	Providing and Laying ceramic tiles 6mm thick in Flooring, Treads of Steps and Landing laid on a bed of 12 mm thick cement mortar 1:3 (1-cement : 3- Coarse Sand) finishing with flush pointing in white cement.	Sq.m	151.00	1,007.23	1,52,091.73
49	Providing and laying white glazed tiles 6mm thick in flooring treads of steps and landing laid on a bed of 12mm thick cement mortar 1:3 (1-cement : 3-coarse sand) finishing with flush pointing in white cement.	Sq.m	140.00	953.58	1,33,501.20
50	Providing cement vata (10 cm x 10 cm size) quarter round in cement mortar 1:1 including neat cement finishing, watering etc. completed.	Rmt.	180.00	24.04	4,327.20
51	Providing and laying Cement concrete flooring 1:2:4 (1 cement: 2 coarse sand: 4 graded stone aggregate 20 mm. nominal size) laid in one layer and finished with a floating coat of neat cement. B. 40 mm thk.	Sq.m	50.00	287.75	14,387.50
52	Providing and Laying broken china mosaic flooring for terrace using 12mm to 20 mm broken pieces of glazed tiles to be laid over cement mortar 1:3 to plain or slope and to be tempered to bring mortar cream out upto surface using white cement including rounding off junction and extending them upto 15 cm along the wall, clearing with water and oxalic acid etc. as directed.	Sq.m	178.00	771.98	1,37,412.44
	Sanitary, Drainage and Water line				
53	Providing and fixing washbasin with single hole for pillar tap with C.I.or M.S.brackets painted with including cutting holes and making good the same but excluding the fittings. (A) vitreous China (II) Flat back washbasin 550 mm x 400 mm size (I) in white colour.	Each	5.00	1,566.11	7,830.55
54	Providing and fixing kitchen sink with C.I.or M.S.brackets painted with including cutting holes and making good the same but excluding the fittings. (C) Vitreous China (I) 600 mm x 450 mm x 150 mm size	Each	2.00	2,303.62	4,607.24

Item No.	Item Description	Unit	Quantity	Rate	Amount in Rs.
(a)	(b)	(c)	(d)	(e)	(f) = (d) x (e)
55	Providing and fixing wash down water closet (European type, W.C.Pan)withintegralPorStrapincludingjointingthe trap with soil pipe in Cement Mortar 1:1 (1-Cement : 1-fine sand) (Seal and cover to be measured and paid for separately)(A) vitreous China Pattern :(i) in white colour	Each	11.00	1,343.38	14,777.18
56	Providing and fixing 100 mm size P or S trap for water closet suqting pan including jointing the trap with the pan & soil pipe incement mortar 1:1 (1 cement : 1 fine sand)(A) Vitreous China.	Each	6.00	329.10	1,974.60
57	Providing and fixing urinal of approved quality including connecting the urinal with waste pipe, trap etc. complete (A) White earthenware flat back or corner type size 430 mm x 260 mm x 350 mm	Each	7.00	1,064.22	7,449.54
58	Providing and fixing PVC SWR Nahni trap IS 14735 fordrain - 100 mm diameter with jali of the following nominal diameter of self cleansing design with C.I scread down or hinged grating including the cost of cutting and making good the walls.	Each	15.00	580.47	8,707.05
59	Providing and fixing C.P. brass towel rail complete with C.P. brass bracket fixed to wooden plungs with C.P. brass screws. (B) 600 mm X 20mm Size.	Each	2.00	597.22	1,194.44
60	Providing and fixing S.W. Gully trap with C.I. grating brick masonry chamber & water tight C.I. cover with frame of 300 mm x 300 mm.size (inside) with standard weight. [I] Square mouth trap. (a) 150 mm. x 100 mm. size P or R type.	Each	10.00	1,234.57	12,345.70
61	Constructing brick masonry chamber for underground C.I. inspection chamber and bends with bricks having crushing strength not less than 35 kg./Sqcm. in C.M. 1:5 C.I. cover with frame (Light duty) 455 mm. x 610 mm. internal dimension, total weight of cover with frame to be not less than 38 kg. (Weight of cover 23 kg. and weight of frame 15 kg.) R.C.C. top slab of cover 23 kg. and weight of frame 15 kg.) R.C.C. top slab with 1:2:4 mix (1 cement: 2 coarse sand : graded stone aggregate 20 mm. nominal size) foundation concrete 1:5:10 inside plaster 15 mm. thick with cement mortar 1:3 finished smooth with a floating coat of neat cement on walls and bed concrete etc. complete. [I] Inside dimensions 455 mm. x 610 mm. & 450 mm. deep for single pipe	Each	8.00	2,903.89	23,231.12
62	Constructing Slab type M.H. Chamber				
63	Constructing Manhole with R.C.C. top slab in 1:2:4 mix (1- cement :2-coarse sand : 4-graded stone aggregate 20mm nominal size) foundation concrete 1:3:6 mix (1-cement : 3- coarse sand :6-Brick bats 40 + 50mm size) inside plastering 15mm thick with Cement Mortar 1:3 (1-Cement : 3-coarse sand)finishedwithafloatingcoatofneatcementand making channels in cement concrete 1:2:4 mix (1-Cement :2- Coarse sand :4-stone aggregate 20mm nominal size) finished smooth complete including curing and festing (i) Inside size 900mm x 1200mm and 1.5M. deep including C.I. cover with frame size 560mm diameter total weight of cover and frame to be not less than 128 kgs. (Wt. of cover 64 Kg. and Wt. of frame 64 Kg.)(A) With 230mm thick walls of brick msonry using brick having crushing strength not less than 35Kg. / Sq.cm. in Cement Mortar 1:5 (1- Cement: 5-Coarse sand) (2)B type for following depth for 150mm diameter sewer.				

Item No.	Item Description	Unit	Quantity	Rate	Amount in Rs.
(a)	(b)	(c)	(d)	(e)	(f) = (d) x (e)
63 (a)	a.0.9 meter depth,	Nos.	25.00	10,933.41	2,73,335.25
63 (b)	b 1.5 meter depth,	Nos.	5.00	19,158.05	95,790.25
63 (c)	c 2.25 meter depth,	Nos.	1.00	23,238.10	23,238.10
63 (d)	d 5.00 to 6.00 meter depth, (Slab at below 1.00 mt. From G.L.)	Nos.	0.00	44,050.00	0.00
64	Constructing brick masonry chamber for underground C.I. Inspection chamber and bends with bricks having crushing strength not less than 35Kg/Cm ² in C.M. 1:5 C.I. cover with frame (Light duty) 455mm x 610mm internal dimensions total weight of cover with frame to be not less than 38Kg. (Wt. of cover 23Kg.) and Wt. of frame 15Kg.) (R.C.C. top slab with 1:2:4 mix (1-cement :2- coarse sand :4-graded stone aggregate 20mm size) foundation concrete 1:5:10 inside plaster 15mm thick with cement mortar 1:3 finished smooth with a floating coat of neat cement on walls and bed concrete etc. complete. (i) Inside dimensions 455mm x 610mm and 450mm deep for single pipe line.	Nos.	12.00	2,903.89	34,846.68
65	Constructing brick masonry chamber for underground C.I. Inspection chamber and bends with bricks having crushing strength not less than 35Kg/Cm ² in C.M. 1:5 C.I. cover with frame (Light duty) 455mm x 610mm internal dimensions total weight of cover with frame to be not less than 38Kg. (Wt. of cover 23Kg.) and Wt. of frame 15Kg.) (R.C.C. top slab with 1:2:4 mix (1-cement :2- coarse sand :4-graded stone aggregate 20mm size) foundation concrete 1:5:10 inside plaster 15mm thick with cement mortar 1:3 finished smooth with a floating coat of neat cement on walls and bed concrete etc. complete. (ii) Inside dimensions 500mm x 700 mm and 450mm deep for pipe line with one or two inlets.	Nos.	12.00	3,624.51	43,494.12
66	Providing and fixing screw down bib taps of following size (A) Brass screw down bib tap polished bright (I) 15 mm diameter.	Each	10.00	184.98	1,849.80
67	Providing and fixing pillar tap, capstan head, screw down high pressure with screws, shanks and back nuts. (I) 15 mm diameter.	Each	10.00	305.67	3,056.70
68	Providing and fixing chromium plate bottle trap with necessary coupling of approved quality for wash- basin.	Each	5.00	292.87	1,464.35
69	Providing and fixing brass screw down stop tap (A) 15 mm diameter.	Each	5.00	203.97	1,019.85
70	Providing and fixing gun metal check or nonreturn full way wheel valve				

Item No.	Item Description	Unit	Quantity	Rate	Amount in Rs.
(a)	(b)	(c)	(d)	(e)	(f) = (d) x (e)
70 (a)	(a) 25 mm dia	Each	12.00	416.47	4,997.64
70 (b)	(b) 32 mm dia	Each	12.00	311.61	3,739.32
71	Providing and fixing chromium plated brass half turn flush cock of approved quality including fixing in pipe line etc. complete.				
71 (a)	(a) 25 mm dia	Each	12.00	261.16	3,133.92
71 (b)	(b) 32 mm dia	Each	12.00	273.03	3,276.36
72	Providing, laying and jointing in true line and level U.P.V.C pipe (SCH - 40) of following dia. including fittings of standard make as approved by Engineer - in - charge. Pipe shall be fixed on the wall with the help of clamp at every 2000 mm centre to centre or shall be concealed as directed including necessary fittings etc. including testing of pipe and joints and fixing the same with adhesive solvent, including cost of all materials.				
72 (a)	(a) 15 mm	Rmt.	80.00	71.93	5,754.40
72 (b)	(b) 25 mm	Rmt.	80.00	90.93	7,274.40
72 (c)	(c) 32 mm	Rmt.	80.00	117.97	9,437.60
72 (d)	(d) 40 mm	Rmt.	80.00	146.65	11,732.00
72 (e)	(e) 50 mm	Rmt.	200.00	193.73	38,746.00
73	Providing and jointing stoneware pipes incl. excavation upto 2 mt. Refilling, transporting pipes to work site, unloading lowering in trnch such as cementsand, hemp bitumen as directed, incl. watering the trenches spreading and cartingaway of surplus.	Rmt.	100.00	314.33	31,433.00
73 (a)	(A) 230 mm dia	Rmt.	0.00	344.65	0.00
73 (b)	(B) 150 mm dia.	Rmt.	0.00	163.40	0.00

Item No.	Item Description	Unit	Quantity	Rate	Amount in Rs.
(a)	(b)	(c)	(d)	(e)	(f) = (d) x (e)
74	Providing and laying cement concrete 1:5:10 (1 cement : 5 fine sand : 10 graded stone aggregate 40 mm nominal size) bedding for stone ware pipes of following internal diameter with necessary formwork and curing complete. (A) 100 mm dia (112 mm avg. bed thick,)	Rmt.	440.00	125.90	55,396.00
75	Supplying, and fixing reinforced concrete heavy duty non pressure pipe with collar for culvert carrying heavy traffic as per IS 458- 1991 specification including setting the pipes in CM 1;2 watering and laying (to level and slopes) of Class NP3 of following internal diameters.				
75 (a)	(a) 300 mm diameter.	Rmt.	200.00	653.46	1,30,692.00
75 (b)	(b) 450 mm diameter.	Rmt.	300.00	1,178.27	3,53,481.00
75 (c)	(c) 600 mm diameter.	Rmt.	50.00	1,148.89	57,444.50
75 (d)	(d) 900 mm diameter.	Rmt.	50.00	3,434.91	1,71,745.50
76	Providing and fixing to wall ceiling and floor 10.0 Kg.F/Sqcm working pressure polythelene pipes of the following outside diameter, low density, complete with special flange compression type fittings, wall clips etc. making good wall ceiling and floor.				
76 (a)	(a) 75mm dia.	Rmt.	50.00	277.46	13,873.00
76 (b)	(b) 110 mm dia.	Rmt.	50.00	335.69	16,784.50
77	Providing and fixing iron steps of size 500mm x150mm x22.5mm and painting with two coats of anticorrosive paint etc. complete.	Each	60.00	205.60	12,336.00
78	Making connection of galvanised Mild steel distribution branch with galvanised mild steel main 50mm to 80mm nominal bore by providing and fixing tee including cutting and threading the pipes complete.	Each	2.00	600.08	1,200.16
79	Making connection to the ex. M.H. in running sewer incl. Dewatering and other required machinery etc. of following dia pipes at any convenient time. All damaged work shall be well repaired as per instructions. etc.complete.				
79 (a)	a. 150 mm to 300 mm dia.	Nos.	0.00	1,339.29	0.00

Item No.	Item Description	Unit	Quantity	Rate	Amount in Rs.
(a)	(b)	(c)	(d)	(e)	(f) = (d) x (e)
79 (b)	b. 400 mm to 600 mm dia.	Nos.	0.00	2,232.14	0.00
80	Cutting the pipes of following dia coming in the new M.H.in running sewer including cutting bars, including removing debris /silt from the M.H. and carting at a suitable distance etc..complete as directed. No payment for M.H. work will be made until pipe is not cut completely in all respect				
80 (a)	a. 150 mm to 300 mm dia.	Nos.	0.00	1,133.93	0.00
80 (b)	b. 400 mm to 600 mm dia.	Nos.	0.00	1,687.50	0.00
81	C.I.Cover with frame for manholes	Qtl.	40.00	5,626.27	2,25,050.80
81 (a)	[A] Providing and fixing cast iron manhole frame of weight 80 to 85 kg suitable for existing EHD-35 FRC MH cover, rate also incl. loading, unloading and fixing the frame in line and level to match exisisting road level in C.C. 1:2:4 and finishing smooth, watering and protecting for 7 days etc. complete as per instruction by engg. in charge.	Kg	0.00	71.43	0.00
81 (b)	[B] FRC heavy duty cover size 728 mm. & 100 mm thick circular cover 35 M.T. load design, 100x 2mm MS flat alround, 16mm ø plain round bar for lifting the cover & should be fitted with plastic cups.	Set	0.00	1,375.00	0.00
81 (c)	[C] FRC medium duty Chamber seat cover (FRC) cover 706 x 556 x 50 mm rectangular cover frame size 600 x 450 mm clear opening outer size 816 x 666 x 100 mm (MD-10)	Nos.	0.00	883.29	0.00
82	Providing & Fixing seamless pipe of size 1/2" dia. For car washing pump with necessary fittings, bend, tees, welding & including labour cost.	Rmt.	40.00	223.21	8,928.40
83	(B) Providing sock pit of 5.00 Cu.M. Volume including excavating and filling brickbats with dry masonry work at top for 45cm. height including covering the top with stone including providing vatas in C.M. 1:3 with finishing curing etc. complete as directed.	Each	2.00	3,167.00	6,334.00
84	Providing & erecting C.I. AND MS Ventilating Columns 15 cms dia With C.I. ornamental cap and Min. 12.00 mtr Height base fixed firm with necessary foundation with one coat of red lead oxide paint and two coat of any approved colour with 15cms. Dia 10mt in Lemngth with 0.35mt dia at x M100 CC. encasing, NP-3 RCC Pipe150mm dia connection with MH including ecxavation and jointing as required etc. Complete. As per drawing (GWSSB SOR 2022-23 page no-102)	Nos.	2.00	41,230.00	82,460.00
	Over head water tank				
85	Providing erecting and fixing double coated Syntex or equivalent PVC. (ISI) water tank of required capacity each with all necessary fittings and connection etc. complete on terrace.				
85 (a)	(a) 5000 Litre tank	Litre	5,000.00	3.91	19,550.00
85 (b)	(b) 1000 Litre tank	Litre	3,000.00	3.91	11,730.00

Item No.	Item Description	Unit	Quantity	Rate	Amount in Rs.
(a)	(b)	(c)	(d)	(e)	(f) = (d) x (e)
86	Providing and Laying of Rubber Moulded Paver Block Grey/Coloured 60 mm thick, M-35 Grade of any size ; shape (Usually Uni-Paver Blocks) using black trap good quality aggregate of 20 mm nominal size for footpath, parking areas, service lanes and other areas as mentioned in the drawing / instruction of engineer in charge. Cost includes formworks using rubber mould, Rate providing and laying paver blocks as per required grading and specification. The paver block shall be mechanically compacted. The work of paving blocks shall be executed in line and level by skill mason of flooring work only. It should be laid in such a way that the no cutting of the paver block to be necessary. if cutting of paver block necessary then it should be cut by machine only and carting. The finished surface of the paver block shall have resonably good, plain finished. Paver blocks shall be compacted and shall be relaid if necessary. Gravel or such type of materials shall not be allowed for production. Laying on 5cms thick sand beddding.	Sq.m	200.00	383.04	76,608.00
87	Providing and laying shot blasted interlocking/ Non- interlocking paver blocks of high density 80 mm thick M-40 grade machine made and blasting by automatic shot blasting machine and high density of as per approved sample of vyara, Alcock, winner conmet or equivalent for cross over, service lanes, road junctions and other areas as mentioned in the drawing. Including providing and laying 50 to 80 mm thick average bedding layer of coarse sand below paver block as per required grading and specification. Laid paver block shall be mechanically compacted. The work of the paving blocks shall be executed in line and level by skilled mason of flooring work only. It should be laid in such a way that the no cutting of the paver block to be necessary. If cutting of paver block shall be required, than cut by machine only and laying to be done by skilled flooring mason.	Sq.m	150.00	449.11	67,366.50
88	Providing and Casting in situ ordinary cement concreat M- 200 for Kerbs/ Kerb blocks including form work curing and finishing complete.	Rmt.	25.00	4,295.07	1,07,376.75
89	Providing and Fixing M.S. fan clamps type-I of 16mm diameter M.S. bar bent to shape witjh hooked ends to R.C.C. slabs during laying including painting the exposed portion of loops all as per standerd design complete.	Each	14.00	134.79	1,887.06
90	Providing & fixing precoated galvanized iron profile sheets (Size, shape and pitch of corrugation as approved by Engineer in charge) 0.50 mm(+0.05%) total coated thickness with zinc coating 120 grams per sqm as per IS: 277, in 240 mpa steel grade, 5-7 microns epoxy primer on both sides of the sheet and polyster top coat 15- 18 microns. Sheet should have protective guard film of 25 microns minimum to avoid scratches during transporation and should be supplied in single length up to 12 meter or as described by engineer in charge. The sheet shall be fixed using self drilling/ self tapping screws of size (5.5x55mm) with EPDM seal, complete up to any pitch in horizontal/vertical of curved surfaces, excluding the cost of purlins, rafetrs and trusses and including cutting and size and shape and erection wherever required.	Sq.m	364.00	625.68	2,27,747.52

Item No.	Item Description	Unit	Quantity	Rate	Amount in Rs.
(a)	(b)	(c)	(d)	(e)	(f) = (d) x (e)
91	Providing, Fixing, Installation of Proflex - Self Supported Galvalum Roofing of Proflex from M&B Engineering Ltd or Equivalent with proper overlapping and seaming between different sheets without making holes or preventing the overturning the roof by wind addition made up from superior quality, structural grade steel. Base metal width 914 mm with tolerance of +/- 4 mm, Steel Grade : Grade D Regular Modified Polyster Imported Color Coated Galvalume Steel having Profiled width of 625 mm +/-10 mm. Design, supply, & fabrication of self supported single span arch roof fabricated from mechanically seamed manufactured by American Hydraulic Machines to profiles of Imported Galvalume Cold Rolled Structural Steel coils as per standard ASTM A792, Steel Sheet, Aluminum-Zinc Alloy Coated by Hot-Dip Process. The work should be carried out by specilialize and approved agency only. The rate of item is including fitting as per standerd specification. The vendor shall give windload End Reaction before start of the work and the vendor shall be entirely responsible for the damage of the same during transport, installation and even after installation upto 1 years.	Sq.m	635.00	2,118.65	13,45,342.75
92	Providing & Fixing 3 Mm Thick F.R.P.Sheet Of Approved Quality & Color / Pattern As Per Consultants Design Also Includes Required Fabrication Structure In The Grid Of 2" 0x2" 0 Size Using Hollow Pipe Of 16 Gauge & Size 2"X1" & 1"X1", G.I. & Bitumen Washers, Silicon Paste Application For Fixing The Sheet. Rate Also Include Necessary Bending,Cutting,Labour Charges,Zinc Primer Coat & Two Coats Of Oil Painting Of Color As Approved By Consultants & Making Good The Wall.	Sq.m	325.00	1,723.21	5,60,043.25
93	Providing, Installing, Erection & Commissioning Unmanned System of 30MT/50 MT Capacity with platform size of 9 m x 3 m for Weigh bridges with all accessories including bottom work structure with supplying of standard window based weighbridge software, personal computers with laser- jet printers, keyboard, mouse, Window 10 ram : 8 GB , SSD : 512 GB Core i5 or core i3 for each weighbride all complete and Stamping & calibration from legal metrology department local concern etc. complete as Specifications. (b) 9x3 m. 50MT Weighbridge	Nos.	2.00	5,35,000.00	10,70,000.00
94	Providing panel pitching having panels of 3.0 x 3.0 m in cement concrete M-100 , 0.3 mt wide and 0.6 mt deep around panels including filling panels with 300 mm to 450mm th. pucca rubble pitching in C.M. 1:5 proportion with the surface pointed with cement mortor of 1:3 proportion including all material, labour, tools, plants, equipments, etc all complete	Sq.m	50.00	815.00	40,750.00
95	Providing and applying Coal Tar Epoxy protective paint in two coats of DFT 210 microns for foundations / concreete surfaces in contact with soil complete as per specifications and as directed by the Engineer including all leads and lifts etc. complete.	Sq.m	3,457.00	111.61	3,85,835.77
96	Providing and fixing of hangers/clamps as per manufacturers specifications for laying of cables and hanging of bulbs from truss (Galavanised MS hanger rod 6mm dia MS fully threaded up to 1000mm length)	Nos.	25.00	17.00	425.00
97	Providing and laying cement concrete 1:3:6 (1 cement : 3 sand : 6 stone aggregates 40 nominal size) and curing complete including cost of form work in: Foundation and Plinth	Cum.	50.00	2,581.11	1,29,055.50

Item No.	Item Description	Unit	Quantity	Rate	Amount in Rs.
(a)	(b)	(c)	(d)	(e)	(f) = (d) x (e)
98	RCC precast Boundry Wall, Height of Boundry wall : 6 feet, post size : 9'x 6"x 6" , panel size : 7' x 1' x 2" , foundation size : 300mm, Dia. 900 mm depth, fencing Y angle 50x50x6, 4 No. Barbed wire, 450 mm Dia. Concertina Coil, Providing and fixing G.I. chain link fabric fencing of required width in mesh size 50x50 mm including strengthening with 2 mm dia wire or nuts, bolts and washers as required complete as per the direction of Engineer-in-charge. Made of G.I. wire of dia. 4 mm, PVC coated to achieve outer dia not less than 5 mm in required colour and shade	Sq.m	445.00	2,748.00	12,22,860.00
99	Providing, fixing and Lettering Stainless steel Font " MORBI MUNICIPAL CORPORATION - REFUSE TRANSFER STATION" (height 12") on FRONT TOP beam as per drawing. at elevation portion as directed by Engineer in charge.	Nos.	50.00	780.00	39,000.00
100	Excavating pits of 60 x 60 x 60 cm size and providing wellgrown saplings of big trees (Pendula (Asopalava), Gulmohar, Peltorum, Kordia, Kadam, Saptparni, Tebubiarosea, Borsalli, Spethodia, Neem, Pride of India, Silver Ok, Parijatak, Legerstromia etc. as directed) having height of 8 to 10 ft and dia of stem is 3-6 inch, bag size is 21 inch x 21 inch and planting the same with mixing of f.y.m. at the rate of 0.06 cu.m. per pit. and maintain till well established .	Nos.	80.00	1,026.79	82,143.20
101	Excavating pits of 30 x 30 x 30 cm size and providing wellgrown saplings of shrubs (Jasud, Chameli, Ratrani, Mongra, Tikoma capensis, Tikoma gaudi chaudi, Chandni (double & single), Limonia, Galphemia, All varieties of Karen, Madhukamini, Hemalia, Jasmin, Kesia Biflora, Keliendra, Akelifa, Arellia, Erenthimum, Lilly, Baganvella (Red /Pink /White) , Hibiscus Dwarf , Palm Tree etc. as directed) having height of 1 to 4 ft and bag size is 8 inch x 10 inch and planting the same with mixing of f.y.m. at the rate of 0.06 cu.m. per pit. and maintain till well established.	Nos.	80.00	178.58	14,286.40
102	Providing ,supplying ,filling good quality farm earth / Fine River Silt of Approved Quality including Spreading /Filling the boxes ,watering, ramming consolidated and dressing ,levelling etc. complete as directed .	Cum.	100.00	286.20	28,620.00
103	Providing and planting lawn sukera of English lawn /dharo (Doob) grass roughly at 8 cm x 10 cms distance and maintain till well established incl. preparing soil for planting, necessary watering required during the process above (i.e. 45 day) etc comp as directed. including excavating soil up to 20 cm. depth Remove unwanted stuff & Leveling & supplying & mixing farm yard manure.	Sq.m	400.00	142.86	57,144.00
104	Rolling and compaction of excavated surface with watering if required including filling in depression which occur during the process, with power roller 8 tonne to 12 tonne.	Cum.	2,000.00	22.26	44,520.00
105	Collecting carting, stacking , spreading and levelling coarse sand in 150 mm thick compacted layer including watering up to OMC ,Rolling and consolidation with power Roller etc complete as directed.	Cum.	1,000.00	584.26	5,84,260.00
106	Construction of granular sub base by providing coarse graded material, spreading in uniform layers, with motor Grader on prepared surface, mixing in place method with front end loader at OMC and compacting with vibratory roller to achieve the desired density complete for All grade	Cum.	525.00	738.00	3,87,450.00

Item No.	Item Description	Unit	Quantity	Rate	Amount in Rs.
(a)	(b)	(c)	(d)	(e)	(f) = (d) x (e)
107	Providing, Laying, Spreading and compaction graded stone aggregate to wet mix macadam specification including premixing the material with water at OMC in Mechanical mix plant carriage of mixed material by tipper to site, laying in uniform layer with paver in sub base/ base course on well compacted surface and compacting with vibratory roller to achieve desired density as per MoRT specification.	Cum.	350.00	1,710.00	5,98,500.00
108	Providing and laying C.C. 1:3:6 (1 cement: 3 coarse sand: 6 hand broken stone aggregate 40 mm nominal size) and curing complete excluding cost of formwork in (A) foundation and plinth	Cum.	50.00	3,064.60	1,53,230.00
109	Providing and laying Pavement Quality Concrete-Construction (PQC) of M- 40 grade using slip form paver having electronic sensor device with 53 grade cement @ 425 kg/cum, coarse and fine aggregate conforming to IS 383 Maximum size of coarse aggregate not exceeding 25mm. mixed in a batching and mixing plant as per approved mix design, transported to site, laid with fixed/ slip form paver, spreaded , compacted and finish in a continuous operation including provision of contraction, expansion, construction and longitudinal joints, joint filler, separation membrane,(separation vapour Brether Membrane), selant primer, joint selant, debonding strip, dowel bar, tie road, admixture as approved curing compound finishing to lines and grade as per drawing and specification.	Cum.	875.00	7,784.00	68,11,000.00
110	Providing and laying precast RCC Footpath Slab in controlled cement concrete of M-25 grade (Minimum 70 mm thickness) including necessary reinforcement and providing and setting cement chequered tiles in CM 1:5 as per drawing including necessary formwork, curing and finishing complete.	Sq.m	330.00	1,089.91	3,59,670.30
111	Cat eye/Road stud/ RPM:Supplying of Twin Shanks Raised pavement markers made of polycarbonate and ABS moulded body and reflective panels with micro prismatic lens capable of providing total internal reflection of the light entering the lens face and shall support a load of 13635kgs. tested in accordance to ASTM D 4280 type H and complying to specifications of category A of MORTH circular No RW/NH/33023/10-97-DO III Dt 11.06.1997. The height, width and length shall not exceed 20 mm,130 mm and 130mm and with minimum reflective area of 13 Sqcm on each side and the slope to the base shall be 35+/-5 degree. The strength of detachment of the integrated cylindrical shanks, (of diameter not less than 19+/-2 mm and the height not less than 30+/-2 mm) from the body is to be a minimum value of 500 kgf. Fixing will be by drilling hole on the road for the shanks to go inside, without nails and using epoxy based adhesive as per manufacturers recommendation and color of the marker should be as per the IRC 35-2015 and as directed by engineer-in-charge.	Each	30.00	323.00	9,690.00

Item No.	Item Description	Unit	Quantity	Rate	Amount in Rs.
(a)	(b)	(c)	(d)	(e)	(f) = (d) x (e)
112	Road marking with hot applied thermoplastic paints with reflectorising glass beads on bitumin surface providing and laying ahot applied thermoplastic compound 2.5 mm thick including reflectorising glass beads @ 250gms per sqm area, thickness of 2.5mm is excluding of surface applied glass beads as per IRC:35-2015. the finished surface to be level , uniform and free from streaks and holes. Zebra patta/bump patta lane /center line/edge line/cut patta.The white color marking should provide liminance coefficient on cement road shall be min 130 mcd/m2/lux and asphalt road shall be min 100mcd/m2/lux during the service life during the day time. the marking should meet the performance criteria for night time reflectivity, wet reflectivity and skid resistance as mentioned in the section -15 of IRC 35-2015.warranty for retro reflectivity shall be two year	Sqm.	30.00	364.08	10,922.40
113	Providing and fixing rubber speed breakers (with polyurethane binder) of size 500mm x 350mm x 50mm lining with 8 no of cat eyes per piece Including intermediate and end members as per manufacturer's specifications or supplier's specifications and as directed by engineer in charge. Weight of speed breaker approximate 15 Kg/Rmt and weight capacity 20 Tons with high impact resistance and brutal weather condition. Speed breaker shall be fixed with grout (min 8 holes for fixing per piece) and as per manufacturer's specification. Sample shall be approved by engineer in charge.	Rmt.	20.00	3,425.00	68,500.00
114	Providing, Cutting, Fixing , erecting of M.S. plate. Rate includes all necessary equipments, tools such as welding machine, welding rods etc. complete for				
114 (a)	a) 8 mm Thick M.S. Plate	Qtl.	1.00	3,630.51	3,630.51
114 (b)	b) 12 mm Thick M.S. Plate	Qtl.	1.00	3,811.02	3,811.02
115	Providing and laying and fixing 25 mm thick expansion joint by siliflex material as directed, etc. complete.	Sq.m	100.00	982.15	98,215.00

Item No.	Item Description	Unit	Quantity	Rate	Amount in Rs.
(a)	(b)	(c)	(d)	(e)	(f) = (d) x (e)
116	RECHARGE WELL Providing & installation of Rainwater recharge system with 60 m deep bore well and recharge filter complete with all materials, necessary, fixtures, tools & plants and as per the direction of engineer in charge. The whole system consists of the following items to be included. (i) Drilling of 250 mm dia pilot bore in all types of strata. (ii) Reaming to 400 mm along with electro logging charged & its carting. (iii) Providing & installation of 200 mm dia uPVC pipe along with its end and air vent cowl. (iv) Supply of pea sized gravel (v) Providing of 600 CFM/150 PSI air compressor (vi) Providing & fixing precast filter system with 2.9x2.9x1.125 m pit size & necessary 75 mm thk. PCC of 1:4:8 grade (vii) Providing & laying rainwater filtration system of RCC M25 grade & 1.0x1.0x1.0 m clear inner dimension & 50 mm min. wall thickness. (viii) Providing & filling filter media (with mixture of nodular calcium carbonate and IV800 graphite). (ix) Providing & filling pre filter media (with a mixture of 20-40 mm gravels) (x) Providing & installing filter system with 200 mm dia PVC pipe (6 kg pressure) along with required accessories. (xi) Providing & installation 150 mm dia & 0.5 m high SS 304 wedge wire screen with anchor fastened at bottom.	JOB	1	2,74,618.30	2,74,618.30
117	TUBE WELL Boring/drilling bore well of required dia for casing/ strainer pipe, by suitable method prescribed in IS: 2800 (part I), including collecting samples from different strata, preparing and submitting strata chart/ bore log, including hire & running charges of all equipments, tools, plants & machineries required for the job, all complete as per direction of Engineer-in-charge, upto 90 metre depth below ground level. All types of soil 400 mm dia	Rmt	225.00	1,049.58	2,36,155.50
	SUB TOTAL OF SECTION -1				6,09,23,686.74
SECTION -02					

Item No.	Item Description	Unit	Quantity	Rate	Amount in Rs.
(a)	(b)	(c)	(d)	(e)	(f) = (d) x (e)
FURNITURE ITEMS					
118	Supplying & placing approved Color Iron Almarih of size 1855mm x 910 mm x 480 mm size including four horizontal partition Grade HR1 of IS 1079 mild steel sheet zinc alloy handle lock plain butt type hinges	Nos.	4.00	15,000.00	60,000.00
119	Supplying & placing mid back chair with fixed arm rest with padding.	Nos.	15.00	1,500.00	22,500.00
120	Supplying of revolving chair with adjustable height with weels handle made up of medium density foam and fabric.	Nos.	8.00	2,500.00	20,000.00
121	Supplying of officers revolving chair adjustable height with wheels with handle and with cushion at seat and back side made up of medium density foam and fabric.chair height 400 mm pneumatic mechanism centre tilt	Nos.	2.00	2,500.00	5,000.00
122	Supplying of computer table of size 4 x 2 x 2 and one half size with Key board and drawer cabinet	Nos.	5.00	2,231.25	11,156.25
123	Supplying of Officer table of size 6 x 3 x 2 and one half size with aminated top , two drawers and with apron .	Nos.	2.00	11,830.36	23,660.72
124	Supplying of wooden stool of 15 x 15 x 24 inch size with laminated top.	Nos.	5.00	915.18	4,575.90
125	Supplying and fixing of Notice Board of Size 4 x 2 ft size.	Nos.	1.00	937.50	937.50
126	Supplying and fixing of Notice Board of Size 3 x 2 ft size.	Nos.	1.00	937.50	937.50
127	Supplying of computer (PC) with standard window based software and configuration given by engineer and printer as directed by engineer in charge	Nos.	4.00	40,178.58	1,60,714.32
	SUB TOTAL OF SECTION - 2				3,09,482.19
SECTION -03					
ELECTRICAL AND LIGHTING WORKS					
128	Point wiring in Copper (Modular) Point wiring for Light / Bell with 2-1.5 sq.mm & earth wire of 1.5 sq.mm (Green) both are of ISI marked 1.1 KV grade FRLS PVC insulated multi strand copper wires up to 10 mtr length , in below type of pipe erected with 6A Modular type switch / bell push & accessories and earth continuity of following type, erected on PVC / Metallic/Wooden box, single mounting base frame covered with textured/metallic/white front plate modules erected on / in wall / ceiling as per pipe erected, with necessary Lamp holder/ceiling rose / H.D.Connector as directed. (f) with medium class Rigid PVC pipe and accessories erected concealed in wall/ceiling complete Cat. III	Pt.	30.00	481.00	14,430.00
129	Point wiring for Modular secondary light point with 2-1.5 sq.mm & earth wire of 1.5 sq.mm (green) both are of ISI marked 1.1 KV grade FRLS PVC insulated multi strand copper wires, in below type of pipe to be erected complete with earth continuity and necessary connection with primary light with accessories erected on Metal / PVC / wooden box covered with 3 mm thick PC(Polycarbonate) / Acrylic sheet for open / concealed wiring. with necessary Lamp holder / ceiling rose / H.D.Connector as directed. (f) with medium class Rigid PVC pipe and accessories erected concealed in wall/ceiling complete Cat. III	Pt.	10.00	166.00	1,660.00

Item No.	Item Description	Unit	Quantity	Rate	Amount in Rs.
(a)	(b)	(c)	(d)	(e)	(f) = (d) x (e)
130	Point wiring for FAN with 2-1.5 sq.mm & earth wire of 1.5 sq.mm (Green) both are of .ISI marked 1.1 KV Grade FRLS PVC insulated multi strand copper wires up to 10 mtr length, in below type of pipe erected with 6A Modular type switch and hum free EME step type electronic fan regulator mounted and accessories with earth continuity of following type erected on PVC / Metallic/Wooden box, single mounting base frame covered with textured/metallic/white front plate modules erected on / in wall / ceiling as per pipe erected. with necessary ceiling rose / H.D.Connector as directed. (f) with medium class Rigid PVC pipe and accessories erected concealed in wall/ceiling complete Cat-III	Pt.	14.00	668.00	9,352.00
131	Point wiring for Individual Plug with & earth wire of 1.5 sq.mm (Green) both are of ISI marked 1.1 KV grade FRLS PVC insulated multi strand copper wires up to 10 mtr length, in below type of pipe erected complete with Modular type switch & 5 pin Plug erected on PVC / Metallic/Wooden box covered with appropriate front plate modules erected on / in wall / ceiling as per pipe erected with following type of accessories. (f) with medium class Rigid PVC pipe and accessories erected concealed in wall/ceiling complete. Cat. III	Pt.	10.00	505.00	5,050.00
132	Point wiring for Individual Plug with & earth wire of 1.5 sq.mm (Green) both are of ISI marked 1.1 KV grade FRLS PVC insulated multi strand copper wires up to 10 mtr length, in below type of pipe erected complete with Modular type switch & 5 pin Plug erected on PVC / Metallic/Wooden box covered with appropriate front plate modules erected on / in wall / ceiling as per pipe erected with following type of accessories.- [II] For 16A Plug and 16 amp switch with 2-2.5 sq.mm Cu. Wire from mcb db board. -(f) with medium class Rigid PVC pipe and accessories erected concealed in wall/ceiling complete. CAT III	Pt.	10.00	738.00	7,380.00
133	Point wiring for Individual Plug with & earth wire of 1.5 sq.mm (Green) both are of ISI marked 1.1 KV grade FRLS PVC insulated multi strand copper wires up to 10 mtr length, in below type of pipe erected complete with Modular type switch & 5 pin Plug erected on PVC / Metallic/Wooden box covered with appropriate front plate modules erected on / in wall / ceiling as per pipe erected with following type of accessories. [III] For 16A Plug and 16 amp switch with 2-4 sq.mm Cu. Wire with 2.5 sq.mm (green) earthing wire from mcb d b board. -(f) with medium class Rigid PVC pipe and accessories erected concealed in wall/ceiling complete. CAT III	Pt.	5.00	790.00	3,950.00
134	Point wiring for on board Looped Plug with 6A Modular type switch & 5 pin socket erected on PVC / Metallic/Wooden box, single mounting base frame covered with textured / metallic/white front plate modules erected on / in wall / ceiling with following type accessories Cat-III	Pt.	2.00	255.00	510.00
135	Providing following type of Modular Type Accessories mounted with PVC / metallic/Wooden box, single mounting base frame covered with textured / metallic/white front plate , modules erected with necessary connections as per site situation directed by Engineer In charge (3) Two Pin/RJ-11 Telephone Socket [A] For One Gang Cat-III	Ea.	6.00	159.00	954.00

Item No.	Item Description	Unit	Quantity	Rate	Amount in Rs.
(a)	(b)	(c)	(d)	(e)	(f) = (d) x (e)
136	Providing following type of Modular Type Accessories mounted with PVC / metallic/Wooden box, single mounting base frame covered with textured / metallic/white front plate , modules erected with necessary connections as per site situation directed by Engineer In charge (7) Blank Plate Single Cat-III	Ea.	12.00	25.00	300.00
137	Providing following type of Modular Type Accessories mounted with PVC / metallic/Wooden box, single mounting base frame covered with textured / metallic/white front plate , modules erected with necessary connections as per site situation directed by Engineer In charge (8) Computer RJ-45 socket . cat-III	Ea.	8.00	159.00	1,272.00
138	Providing & erecting Switch board for Computer or electric apparatus consisting of following modular type accessories mounted with PVC / Metallic concealed/open box with single mounting base frame covered with textured/metallic /white front plate,modules erected with necessary connections as directed 1 no. 6A/16A universal plug-switch combined. 3 nos. 6A Switch 3 nos. 6A 5 pin Plug	Ea	10.00	1,122.00	11,220.00
139	Providing and erecting ISI mark Medium class RIGID PVC PIPES of following size complete to be erected on/in wall or ceiling erected with necessary PVC fittings & Junction boxes fixed with adhesive solution & Clamps with following dia of pipes, in approved manner as directed b) 25 mm	Mtr.	400.00	33.00	13,200.00
140	Providing and erecting ISI mark Medium class RIGID PVC PIPES of following size complete to be erected on/in wall or ceiling erected with necessary PVC fittings & Junction boxes fixed with adhesive solution & Clamps with following dia of pipes, in approved manner as directed d) 40 mm	Mtr.	100.00	67.00	6,700.00
141	Providing & erecting PVC Corrugated Flexible Conduit with required nos. of coupling, PVC bushes, Check-nuts etc. complete of following sizes. (2) 25 mm	Mtr.	400.00	21.00	8,400.00
142	Supplying and laying UPVC cable trunking system comprising unplasticised polyvinyl, chloride rigid material with ignition free and flame proof confirming BS with necessary end caps Internal and external bend, flat bends, coupler, tee etc..All necessary accessories and measuring of following sizes.. (1) 50 mm x 50 mm trunking	Mtr.	35.00	187.00	6,545.00
143	Mains & Wires--Providing and erecting Mains with 1.1 KV grade FRLS PVC insulated ISI marked stranded Copper conductor wire in following type of pipe to be erected concealed in /flushed on wall/ceiling, with 1.5 sq. mm copper conductor FRLS PVC insulated stranded wire of green colour for earth continuity of following size - (A) With medium class Rigid PVC pipe and accessories--(b) 2 wire 1.5 sq. mm	Mtr.	250.00	62.00	15,500.00

Item No.	Item Description	Unit	Quantity	Rate	Amount in Rs.
(a)	(b)	(c)	(d)	(e)	(f) = (d) x (e)
144	Providing and erecting Mains with 1.1 KV grade FRLS PVC insulated ISI marked stranded Copper conductor wire in following type of pipe to be erected concealed in /flushed on wall/ceiling, with 1.5 sq. mm copper conductor FRLS PVC insulated stranded wire of green colour for earth continuity of following size - (A) With medium class Rigid PVC pipe and accessories--(b) 2 wire 2.5 sq. mm	Mtr.	100.00	82.00	8,200.00
145	providing and erecting Mains with 1.1 KV grade FRLS PVC insulated ISI marked stranded Copper conductor wire in following type of pipe to be erected in / on wall / ceiling with 2.5 sq. mm copper conductor FRLS PVC insulated stranded wire of green colour for earth continuity of following size (A) with medium class Rigid PVC pipe and accessories-(b) 2 wire 4 sq. mm	Mtr.	120.00	110.00	13,200.00
146	providing and erecting Mains with 1.1 KV grade FRLS PVC insulated ISI marked stranded Copper conductor wire in following type of pipe to be erected in / on wall / ceiling with 2.5 sq. mm copper conductor FRLS PVC insulated stranded wire of green colour for earth continuity of following size (A) with medium class Rigid PVC pipe and accessories-(b) 2 wire 6 sq. mm	Mtr.	30.00	146.00	4,380.00
147	Providing and erecting XLPE(IS:7098)(I)-88 ISI armoured cable multistrand Aluminium conductor for 1.1 KV. to be laid on wall with necessary clamps or in existing trench / pipe of following size of cables (C) 3 1/2 core 50 Sq. mm (25 Sq.1/2 mm core)	Mtr.	100.00	282.00	28,200.00
148	Providing and erecting XLPE(IS:7098)(I)-88 ISI armoured cable multistrand Aluminium conductor for 1.1 KV. to be laid on wall with necessary clamps or in existing trench / pipe of following size of cables. (A) 3 core 2.5 Sq. mm	Mtr.	110.00	69.00	7,590.00
149	Providing and erecting XLPE (IS:7098)(I)-88 ISI armoured cable multistrand Aluminium conductor for 1.1 KV. to be laid on wall with necessary clamps or in existing trench / pipe of following size of cables (B) 4 core 6 Sq. mm	Mtr.	475.00	125.00	59,375.00
150	Providing and erecting XLPE(IS:7098)(I)-88 ISI armoured cable multistrand / Solid Copper conductor for 1.1 KV. to be laid on wall with necessary clamps or in existing trench / pipe at road crossing or floor of following size of cables.(C) 4 core 6 Sq. mm	Mtr.	300.00	505.00	1,51,500.00
151	Providing and erecting XLPE (IS:7098)(I)-88 ISI armoured cable multistrand Aluminium conductor for 1.1 KV. to be laid on wall with necessary clamps or in existing trench / pipe of following size of cables(B) 4 core 2.5 Sq. mm	Mtr.	230.00	189.00	43,470.00

Item No.	Item Description	Unit	Quantity	Rate	Amount in Rs.
(a)	(b)	(c)	(d)	(e)	(f) = (d) x (e)
152	Supplying & erecting XLPE(IS:7098)(I)-88 ISI unarmoured copper cable 1.1 KV grade to be erected as directed of following size. (E) 3 core 2.5 Sq. mm	Mtr.	250.00	136.00	34,000.00
153	Providing and erecting XLPE(IS:7098)(I)-88 ISI armoured cable multistrand Aluminium conductor for 1.1 KV. to be laid on wall with necessary clamps or in existing trench / pipe of following size of cables (G) 3 1/2 core 185 Sq. mm (95 Sq. mm 1/2 core)	Mtr.	60.00	896.00	53,760.00
154	Providing and erecting XLPE(IS:7098)(I)-88 ISI armoured cable multistrand Copper conductor for 1.1 KV. to be laid on wall with necessary clamps or in existing trench / pipe at road crossing or floor of following size of cable. (C) 3 core 6 Sq. mm	Mtr.	250.00	392.00	98,000.00
155	Providing and, fixing heavy duty flange type brass cable gland with rubber ring for PVC insulated armoured cable complete with out going tails, insulating tape etc for following size of cables. (E) 2 to 4 core 25 Sq. mm	Ea.	10.00	51.00	510.00
156	Providing and, fixing heavy duty flange type brass cable gland with rubber ring for PVC insulated armoured cable complete with out going tails, insulating tape etc for following size of cables. (B) 2 to 4 core 6 Sq. mm	Ea.	8.00	38.00	304.00
157	Providing and, fixing heavy duty flange type brass cable gland with rubber ring for PVC insulated armoured cable complete with out going tails, insulating tape etc for following size of cables. (G) 3 & 1/2 core 185 Sq. mm	Ea.	2.00	236.00	472.00
158	Solder less crimping type Aluminium lugs conforming to IS suitable for cable of following size evenly crimped with high pressure tool & connected to switchgear terminals with brass/cadmium plated nut bolts in an approved manner. (A) 1.5/ 2.5/4/6 Sq.mm	Ea.	300.00	6.00	1,800.00
159	Solderless crimping type Aluminium lugs conforming to IS suitable for cable of following size evenly crimped with high pressure tool & connected to switchgear terminals with brass/cadmium plated nut bolts in an approved manner. (C) 16/25 Sq.mm.	Ea.	50.00	15.00	750.00

Item No.	Item Description	Unit	Quantity	Rate	Amount in Rs.
(a)	(b)	(c)	(d)	(e)	(f) = (d) x (e)
160	Solderless crimping type Aluminium lugs conforming to IS suitable for cable of following size evenly crimped with high pressure tool & connected to switchgear terminals with brass/cadmium plated nut bolts in an approved manner. (F) 95 Sq.mm.	Ea.	2.00	40.00	80.00
161	Solder less crimping type Copper lugs conforming to IS suitable for cable of following size evenly crimped with high pressure tool & connected to switchgear terminals with brass/cadmium plated nut bolts in an approved manner. (A) 1.5/2.5 to 6 Sq.mm	Ea.	200.00	8.00	1,600.00
162	Making trench in soft soil of suitable width of 90 cms deep for laying cable or locating the fault all over the run and backfilling the same and making the surface as normal ground.	Mtr.	200.00	55.00	11,000.00
163	Providing & laying approved make Double walled corrugated pipes (DWC) of polyethylene(conforming to IS 14930 II)with necessary connecting accessories of same material at required depth for laying of cable. below ground / road surface for enclosing cable and back filling the same to make ground as per original. (A)50 mm dia	Mtr.	600.00	62.00	37,200.00
164	Providing & laying approved make Double walled corrugated pipes (DWC) of polyethylene(conforming to IS 14930 II)with necessary connecting accessories of same material at required depth for laying of cable. below ground / road surface for enclosing cable and back filling the same to make ground as per original. (D)120 mm outer dia.	Mtr.	50.00	136.00	6,800.00
165	Providing & laying approved make Double walled corrugated pipes (DWC) of polyethylene(conforming to IS 14930 II)with necessary connecting accessories of same material at required depth in existing trench for laying of cable. below ground / road surface for enclosing cable (C)90 mm dia	Mtr.	70.00	95.00	6,650.00
166	Providing & erecting capacitor duty contactor 3 phase, 415 V with proper connection for following rating: (E)50 KVAR	Ea.	1.00	9,115.00	9,115.00
167	Providing & erecting weather proof, dust & vermin proof, floor mounted front operated indoor type cubical panel board necessary IP-42 and above protection as per approval from engineer incharge made from 14 SWG thick CRC M.S. sheet for outer body & doors, 16 SWG thick CRC M.S.sheet for internal partitions with necessary accesories , supporting angles/ flats channel including cutting, bending, drilling, welding, riveting with internal partitions & cable alley as per requirements & instruction of engineer-in-charge with erection of (B) The standard companies switch gear shall be used and only manufacturers at CPRI approved factory (ii) with 550 mm. Depth	Sq.Mtr	6.00	19,196.00	1,15,176.00

Item No.	Item Description	Unit	Quantity	Rate	Amount in Rs.
(a)	(b)	(c)	(d)	(e)	(f) = (d) x (e)
168	Supplying and erecting triple pole & neutral 440V/ 500V panel mounting Aluminium Busbars with four equal Nos. of bus having current density not more than 0.8 Amp. / sq.mm (Rated current / cross section area) duly wrapped with colour insulating tape for phase sequence of following current carrying capacity, erected with necessary bus bar supports /insulators, main cable socket to each busbar,erected in existing cubical panel with necessary connections. (C) Suitable for 300 Amp. Capacity	Rn.Mtr	8.00	1,455.00	11,640.00
169	Providing and erecting Approved make Earth fault Relay suitable to mount with inter connection suitable to following size of moulded case circuit breaker having CT ratio & MCCB rating as following along with shunt trip 220V AC. with all internal connections & complete erected in existing M.S.housing.. (3) 250 A -400 A , CT Ratio 1/400	Ea.	3.00	5,362.00	16,086.00
170	SECTION 3.00 SWITCHGEARS & DISTRIBUTION BOARDS MINIATURE CIRCUIT BREAKERS. Miniature circuit breaker single pole 6A to 25A suitable to operate on 240 V A.C. system and having breaking capacity 10 KA to be erected in existing box. confirming to IS 8828/1996 with ISI Mark(QTY FOR MCB OF DB AND MCB OF PANEL) Cat-III	Ea.	120.00	111.00	13,320.00
171	Providing and erecting Approved make Four pole moulded case circuit breaker having breaking capacity ICU of 35 KA. at 415 V. having normal current rating 125A. with Fixed thermal & magnetic release suitable to work on A.C.supply 50 c/s. with all internal connections, spreader tinned copper & complete erected in existing 16 G.M.S. housing. ICS=100% of ICU only Cat III	Ea.	1.00	7,976.00	7,976.00
172	Providing and erecting Approved make Four pole moulded case circuit breaker having breaking capacity ICU of 35 KA. and above at 415 V . having normal current rating 250A. with variable thermal & magnetic release suitable to work on A.C.supply 50 c/s. with all internal connections, spreader tinned copper & complete erected in existing 16 G.M.S. housing. ICS=100% of ICU only Cat III	Ea.	2.00	20,739.00	41,478.00
173	Providing and erecting Approved make Three pole moulded case circuit breaker having breaking capacity/strength ICU of 35 K.A. at 415 V. having normal current rating 125A.with Fixed thermal & magnetic release suitable to work on A.C.supply 50 c/s. with all internal connections, spreader tinned copper & complete erected in existing 16 G.M.S. housing. ICS=100% of ICU only Cat III	Ea.	2.00	6,510.00	13,020.00
174	Providing & erecting 415 V MCB Four Pole for Motor & Inductive Load (C Curve) having 10KA breaking capacity & confirms to IS :8828 in existing box having following capacity((QTY FOR MCB OF DB AND MCB OF PANEL). (B) 40 Amp Cat.III	Ea.	7.00	662.00	4,634.00

Item No.	Item Description	Unit	Quantity	Rate	Amount in Rs.
(a)	(b)	(c)	(d)	(e)	(f) = (d) x (e)
175	Providing & erecting 415 V MCB Four Pole for Motor & Inductive Load (C Curve) having 10KA breaking capacity & confirms to IS :8828 in existing box having following capacity. (c)63 Amp. Cat III	Ea.	20.00	730.00	14,600.00
176	Providing & erecting 240 V MCB double pole switch for lighting Load (B Curve) having 10 KA breaking capacity & confirms to IS : 8828 in existing box having following capacity (B) 40 Amp.	Ea.	9.00	293.00	2,637.00
177	Sheets steel powder coated enclosure suitable for incorporating One/Two nos. MCB	Ea.	5.00	175.00	875.00
178	Providing & erecting 415 V MCB three Pole for Motor & Inductive Load (C Curve) having 10KA breaking capacity & confirms to IS :8828 in existing box having following capacity (B) 40 Amp.	Ea.	6.00	641.00	3,846.00
179	Providing & erecting 415 V MCB three Pole for Motor & Inductive Load (C Curve) having 10KA breaking capacity & confirms to IS :8828 in existing box having following capacity (C) 63 Amp.	Ea.	7.00	709.00	4,963.00
180	Providing and erecting Sheet Steel powder coated MCB distribution board - flush / surface mounted fitted with busbar, neutral link, earth bar and DIN rail, Conforms to IS 8623-1 & 3, IEC 61439-1 & 3 without MCB to house appropriate nos. of MCBs.(The DBs should be used of same company of MCB to be used) suitable for (A) single phase incoming and horizontal single phase outgoing (b) sheet steel double door (IP-43) (iii)8 way	Ea.	3.00	1,141.00	3,423.00
181	Providing and erecting Sheet Steel powder coated MCB distribution board - flush / surface mounted fitted with busbar, neutral link, earth bar and DIN rail, Conforms to IS 8623-1 & 3, IEC 61439-1 & 3 without MCB to house appropriate nos. of MCBs.(The DBs should be used of same company of MCB to be used) suitable for (B) three phase incoming and single phase horizontal type outgoing Per phase isolation type (PPI) (b) sheet steel double door (ii)6 way	Ea.	5.00	2,885.00	14,425.00
182	Providing and erecting Sheet Steel powder coated MCB distribution board - flush / surface mounted fitted with busbar, neutral link, earth bar and DIN rail, Conforms to IS 8623-1 & 3, IEC 61439-1 & 3 without MCB to house appropriate nos. of MCBs.(The DBs should be used of same company of MCB to be used) suitable for (B) three phase incoming and single phase horizontal type outgoing Per phase isolation type (PPI) (b) sheet steel double door (iii)8 way	Ea.	1.00	3,379.00	3,379.00

Item No.	Item Description	Unit	Quantity	Rate	Amount in Rs.
(a)	(b)	(c)	(d)	(e)	(f) = (d) x (e)
183	Providing and erecting Sheet Steel powder coated Vertical MCB distribution board (VTPN) - flush / surface mounted double door (IP54) fitted with insulated copper busbar, isolated neutral link, earth bar and DIN rail, confirming to IS 13032 and BS 5486-1986, IP-54 suitable for 63/100 AMP TPN MCCB + RCCB as incomer and three phase outgoing as per following .(The DBs should be used of same company of MCB to be used) (B)6 way outgoing	Ea.	2.00	12,061.00	24,122.00
184	Supplying and erecting approved make suitable panel indicator LED type lamp, lens cover, complete erected with necessary connections.	Ea.	13.00	43.00	559.00
185	EARTH LEAKAGE CIRCUIT BREAKERS. providing and erecting Approved make RCCBs conforming to IS: 12640 and having sensitivity of 30 mA and Short Circuit withstand capacity of 10 KA and suitable for operation on single phase 240 V, 50Hz. having characteristic of quick action & tripping with all advance feature & do not incorporate any electronic component. for following Max. rating erected as directed (ii) 40Amps. DP Cat-III	Ea.	15.00	2,213.00	33,195.00
186	Supplying and erecting approved make panel mounting type Digital Voltmeter having 3 digits LED display, 0 to 750 AC Volts range erected on existing panel board with all connection, wiring etc .with manufacturers calibration certificate.	Ea.	1.00	1,263.00	1,263.00
187	Supplying and erecting approved make panel mounting type Digital Ammeter having 3 digits LED display, external CT operated, calibrated for 0 to 1000 Amps suitable to operate on 500 Volt AC , erected on existing panel board with all connection, wiring etc .with manufacturers calibration certificate.	Ea.	1.00	1,543.00	1,543.00
188	Supplying and erecting Ammeter / Voltmeter selector switch for 3 phase AC Supply 500 V on existing panel board with necessary connections.	Ea.	2.00	314.00	628.00
189	Supplying and erecting LED indoor fittings with LEDs of wattage 0.2 Watt to 0.5 Watt assembled on single MCPCB, with housing used as a heat sink shall be made of thick sheet Steel conforming to IS: 513/CRCA/ aluminium die cast powder coated and high U.V. & corrosion resistance with diffuser with company mark/name 160V to 270V, Power Factor more than 0.95, THD < 15%, CCT 3000 K to 6500K, Luminaire efficacy > 85 lumens/watt ,LED LED driver efficiency > 85 % (fitting required LM-79 & LM-80 Certificates)(NOTE: Below description have shown ranges of Wattage capacity of LED fittings.The Engineer incharge may select any wattage capacity between the ranges shown.) (v) 36-40 Watts, Surge-2 KV, IP-20, conventional 4 feet cat-III	Nos.	5.00	530.00	2,650.00

Item No.	Item Description	Unit	Quantity	Rate	Amount in Rs.
(a)	(b)	(c)	(d)	(e)	(f) = (d) x (e)
190	Supplying and erecting LED indoor fittings with LEDs of wattage 0.2 Watt to 0.5 Watt assembled on single MCPCB, with housing used as a heat sink shall be made of thick sheet Steel conforming to IS: 513/CRCA/aluminium pressure die cast powder coated and high U.V. & corrosion resistance with diffuser housed in aluminium casted body with company mark/name 160V to 270V, Power Factor more than 0.95, THD < 15 %, CCT 3000 K to 6500K, Luminaire efficacy > 85 lumens/watt, LED driver efficiency > 85 % (fitting required LM-79 & LM-80 Certificates)(NOTE: Below description have shown ranges of Wattage capacity of LED fittings. The Engineer incharge may select any wattage capacity between the ranges shown.) (iii) 16-20 watts, Surge-2 KV. Cat-III	Ea.	6.00	584.00	3,504.00
191	Supply of approved make frp/grp pole having following specifications : FRP/GRP pole made by centrifugal moulding process using thermoset resin polyester/epoxy resin system having minimum glass content 45.0%. The pole should be in one piece and tapered round in shape, having smooth outside surface finish and should be totally free from corrosion as well as non conductive and shock proof. Pole should be provided with FRP/GRP base bracket duly fabricated from metal (M.S) and duly clad with FRP/GRP material to avoid any metal exposure and painted with PU paint. Pole should have mechanical properties i.e 1. Specific gravity (ASTM D 792) 1.3-1.8 Kg/m ³ , 2. Glass Content % by weight (ASTM D 2584) 45.0 -55.0%, 3. Water absorption (ASTM D 570) <0.5%, 4. Tensile Strength (ASTM D 638) 200 +/-50Mpa, 5. Flexural strength (ASTM D 790) 250 +/-50Mpa, 6. Compressive Strength (ASTM D 695) 200 +/-50MPa, 7. Yield Strength (ASTM D 638) 250 +/-50MPa. (3) 'B' class (Heavy Duty) frp/grp pole suitable for base plate mounting [D] Overall Length of 6.0 meter, Average thickness : 7mm, Top/Bottom Outside Dia. 76/176mm +/-2. Weight of Pole 25.0 Kg approx. (Without base) Metal Anchor Base duly frp clad (Size : 340 Ø * 12mm thk, Mounting hole PCD 285mm * 6 nos. of 20 Ø hole)	Ea.	25.00	16,815.00	4,20,375.00
192	Providing FRP arm bracket of having 2 sets of suitable SS304 hardware for fixing the brackets & spread of 1.2 Mtr (Suitable for 89 to 114 mm pole top dia) (A) Single arm bracket	Ea.	15.00	2,526.00	37,890.00
193	Providing FRP arm bracket of having 2 sets of suitable SS304 hardware for fixing the brackets & spread of 1.2 Mtr (Suitable for 89 to 114 mm pole top dia) (B) Double arm bracket	Ea.	6.00	3,895.00	23,370.00

Item No.	Item Description	Unit	Quantity	Rate	Amount in Rs.
(a)	(b)	(c)	(d)	(e)	(f) = (d) x (e)
194	Supplying and erecting LED street light fittings with High power White LEDs wattage of 3 Watt and above assembled on single MCPCB, efficiency more than 130 lm/w and corrosion free High pressure die cast aluminum housing with smooth finish powder coated and heat sink extruded aluminium with diffuser and Polycarbonate optics/ lenses, with toughened glass with company mark/name engraved or embossed 160 to 270 V,Power Factor more than 0.95, THD < 10 %, CCT 3000 K to 5700K,Uniformity ratio >0.45, Luminaire efficacy> 100 lumens/watt . LED driver efficiency > 85 %.(fittings required LM-79 & LM-80 certificates)(NOTE: Below description have shown ranges of Wattage capacity of LED fittings.The Engineer incharge may select any wattage capacity between the ranges shown.)(A) Street Light (IP-65), Surge protection - 4KV integral and ,Light must have 440VAC line supply with over-voltage protection. (iii) Above 60 to 90 watts Cat-III	Ea.	25.00	5,917.00	1,47,925.00
195	Supplying and erecting LED street light fittings with High power White LEDs wattage of 3 Watt and above assembled on single MCPCB, efficiency more than 130 lm/w and corrosion free High pressure die cast aluminum housing with smooth finish powder coated and heat sink extruded aluminium with diffuser and Polycarbonate optics/ lenses, with toughened glass with company mark/name engraved or embossed 160 to 270 V,Power Factor more than 0.95, THD < 10 %, CCT 3000 K to 5700K,Uniformity ratio >0.45, Luminaire efficacy> 100 lumens/watt . LED driver efficiency > 85 %.(fittings required LM-79 & LM-80 certificates)(NOTE: Below description have shown ranges of Wattage capacity of LED fittings.The Engineer incharge may select any wattage capacity between the ranges shown.) (B) Flood Light (IP-65), Surge protection -4KV integral and ,Light must have 440VAC line supply with over-voltage protection.(iv) above 90 to 120 watts	Ea.	14.00	7,195.00	1,00,730.00
196	Supplying & erecting approved make IP 55 grade Company fabricated Timer Panel of following capacity for switch On-Off street lights on time scheduling basis made from 16G CRCA sheet duly epoxy power painted inside and outside with hinged doors and locking arrangement consisting of suitable size of 4 Pole MCB and 4 pole contactor (cat-III)with analog time switch, auto manual switch of same make and suitable input and output Bakelite terminals and with door earthing approved by Engineer in charge.(B) 40 Amp	Ea.	2.00	13,218.00	26,436.00
197	Supplying and Erecting Of L.E.D. type High bay fixture having Power Consumption of following watts with, Input Voltage 110 - 290 V.AC with full efficiency, Power Factor > 0.9 with 50/60 HZ, CCVC LED Driver used for maximum power saving, Best Quality Aluminium alloy housing and aluminium Dome for better heat dissipation, CCT Cool white (6000K), CRI 80, Beam angle > 120 degrees, working temperature -20 deg c to +55 deg c, Body IP 65 (B) 90 to 150 watts	Ea.	15.00	5,696.00	85,440.00
198	Supplying & erecting approved make SMC press moulded composite FRP. loop-in, loop-out approx. 2mm thick box complete with Bakelite connector strip 5way(3P+N+E),DIN rail for mounting mob & hinged doors as per requirement having locking arrangements with mounting clamp with nuts, bolts & washers suitable for erection on pole with cable clamps& earth bolt of following size of box.(c)150mm x 125mm x 100mm [deep]	Ea.	3.00	472.00	1,416.00

Item No.	Item Description	Unit	Quantity	Rate	Amount in Rs.
(a)	(b)	(c)	(d)	(e)	(f) = (d) x (e)
199	FANS & ACCESSORIS. Providing & erecting Approved make Power Saving 50 Watt Ceiling Fan with double ball bearing ISI mark with Condenser 230 volt A.C. 50 Hz 1200 mm sweep complete having 3blades with aluminium blades with , canopy & 30 cm. down rod erected with earthing.(Make shall be approved by Engineer in charge)	Ea.	12.00	1,929.00	23,148.00
200	Supplying & erecting fan hook box of 10 mm M.S. round bar bounded to the RCC bars up to 50mm length each side and pierced through a 16 Gauge M.S. box / Heavy Duty PVC box complete erected concealed in Ceiling with necessary finishing.	Ea.	12.00	107.00	1,284.00
201	Providing 2.5mm.thick laminated acrylic sheet to cover the fan hook or Fan box.	Ea.	12.00	18.00	216.00
202	EXHAUST FANS. Supplying & erecting approved make low noise decorative exhaust fan having square frame ABS body with inbuilt lowers & square frame. 200mm with 1350RPM. Cat-II	Ea.	4.00	1,687.00	6,748.00
203	Providing and erecting required size HOT deep Galvanised iron strip for earthing of H.T. , OCB/ ACB/ Transformer LT panel board, Motors etc. using proper clamp.	Kg.	100.00	77.00	7,700.00
204	Providing and erecting required size Copper strip for earthing of H.T. OCB / ACB/ Transformer, LT panel board, Motors etc. using copper clamp.	Kg.	50.00	787.00	39,350.00
205	Providing and erecting HOT deep Galvanised iron strip wire 8 to 16 SWG.Using for DB earthing wire 8 to 16 SWG.	Kg.	200.00	77.00	15,400.00
206	Supplying & erecting in earthpit of minimum bore dia. 225mm size ASH or approved make Safe Earthing Electrode consisting Pipe-in-Pipe Technology as per IS 3043-1987 made of corrosion free G.I.Pipes having Outer pipe dia of 80 mm having 80-200 Micron galvanising, Inner pipe dia of 40 mm having 200-250 Micron galvanising, connection terminal dia of 14 mm with constant ohmic value surrounded by highly conductive compound with high charge dissipation suitable for panel earthing.[A] For electrical installation up to 440 V(c) For Electrical Installation covering Transformer Neutrals, Lightning arrester Earthing, A.C.Plant & Sensitive Computer System(like Automation, SCADA) i.e independent Earthing in normal soil. [B] For Electrical installation up to 11 KV located in other than normal soil i.e. Soft Rock, Marshy Soil etc. -Length of Pipe : 2 mtr -Back filling Compound :1 no. Bag of 25 Kg.	Ea.	5.00	7,025.00	35,125.00

Item No.	Item Description	Unit	Quantity	Rate	Amount in Rs.
(a)	(b)	(c)	(d)	(e)	(f) = (d) x (e)
207	Supplying & erecting in earthpit of minimum bore dia. 225mm size ASH or approved make Safe Earthing Electrode consisting Pipe-in-Pipe Technology as per IS 3043-1987 made of corrosion free G.I.Pipes having Outer pipe dia of 80 mm having 80-200 Micron galvanising, Inner pipe dia of 40 mm having 200-250 Micron galvanising, connection terminal dia of 14 mm with constant ohmic value surrounded by highly conductive compound with high charge dissipation suitable for panel earthing.[A] For electrical installation up to 440 V(c) For Electrical Installation covering Transformer Neutrals, Lightning arrester Earthing, A.C.Plant & Sensitive Computer System(like Automation, SCADA) i.e independent Earthing in normal soil. Length of Pipe : 3.00 mtrs Back filling Compound :2 nos Bags of 25 Kg.	Ea.	2.00	10,489.00	20,978.00
208	Supplying & erecting approved make Telephone Cable electrolytic copper conductor PE insulation twisted in two pairs, & wrapped with FRLS PVC tape & sheathed with FRLS PVC or HFFR outer Jacket suitable for telephone wiring & confirming to C-DOT erected in existing pipe. of following size of conductors & nos.of pairs. With necessary connections. (b) Armoured [Jelly Filled] 1) Ten Pairs	RMT	150.00	124.00	18,600.00
209	SITC of Digital / PCM / TDM EPABX System having SMT design, system with flexible universal slots. Inbuilt Auto attendant facility, Minimum 15 Nos. conference, Analog extension line, Calling GSM, E&M line, PRI / EI & VOIP program me through Analog telephone digital key from Ethernet, public address cord, shall have unrestricted simultaneous dialing facility, QSIG protocol on PRI, 95 / STD / ISD / Local-Locking, Class of Service, Quick Dial Single Digit dialing of any two external number, Once only ring device, Boss/Secretary-Do not disturb Facility, Power Down Mode, Hot Line, Hot Outward Dialing, Day Night Mode, Auto Call Back, Barge-in, Call Pick Up & Call Transfer, Call transfer while Ringing with Voice Guide System, (DISA), Caller ID (CLI), CLI Base ECF, CLI Base routing Internet Ready Port, External Music Port, Call Budgeting, Call Most Calculation (ASMDR), DID Direct Inverse Dialing, External Music Input, Fax Homing, Global Directory Printing with following capacities [A] No of Extension 16, No of Junctions 6, 8 Port IP Resource in-built, 4 Port Web base Video Conferencing, No of expandable ports : 48, Operators Console - 01 Compatible : ISDN	NO	1.00	44,949.00	44,949.00
210	Supplying & erecting approved make LAN cable of following size in existing pipe as per direction. [D] CAT - 6 e	RMT	800.00	76.00	60,800.00
211	Providing & erecting water cooler having storage capacity 150 Ltr. & cooling capacity 150 Ltr.per hour @ an ambient temp of 45° C. The outlet temp. of the water should drop by 15°C within a hour, The water cooler should be comprising of hermetically sealed compressor, fan motor, condensing unit, water tank surrounded by evaporating, coil, thermostats, relay etc.complete with necessary inlet & outlet connection. The body of water cooler will be made from Stainless Steel.	Ea.	2.00	55,340.00	1,10,680.00

Item No.	Item Description	Unit	Quantity	Rate	Amount in Rs.
(a)	(b)	(c)	(d)	(e)	(f) = (d) x (e)
212	Supplying and erecting water filter cum purifier with ultra violate technology. (Aquaguard / waterdoc model or equivalent symphony/ crystal/videocon model)	Ea.	2.00	5,371.00	10,742.00
213	Supply, Installation, Testing and Comissioning of 4MP Fixed Lens Dome Type Camera, H.265 4MP IR Vandal Proof Dome N/W Camera, 2.8mm/3.6mm, 30M IR, Micro SD, DC12V/PoE, IP67/IK10, Basic IVA, 1 / 2.7" CMOS, 2560 × 1440, 0.01 Lux, F1.2, AGC ON; Defog, True day/night, Digital WDR, 3D DNR, HLC & BLC, Triple streams, Smart codec by ROI, Cyber Security, Basic intelligent video analytics, NDAA Compliance, UL, CE, FCC Certified (Including Five year free maintenance with guarantee)	Nos	0.00	6,015.00	0.00
214	Supply, Installation, Testing and Comissioning of 32 Channel Network Video Recorder (NVR), Support 8CH@2MP, H.264 Video Compression, HDMI, VGA output, up to 4 SATA interface each with max 6 TB support, bandwidth 200 mbps, CE FCC, BIS, Operating Temp -10 deg to 50 deg C, USB and serial Interface (Including Five year free maintenance with guarantee)	Nos	0.00	27,345.00	0.00
215	Supply Installation Testing & Commissioning of 8TB Surveillance Harddisk	Nos	0.00	19,706.00	0.00
216	SITC of 24 x 10/100/1000BASE-T ports 4 x Gigabit RJ45/SFP Combo ports Advanced L2 switching and security features L2+ Static Routing Optional "standard mode" or "surveillance mode" management user interface [Approved by Competent Authority i.e. not Below the rank of Executive Engineer]	Nos	0.00	15,247.00	0.00
217	SITC of LIU 12 PORT Rack Mount - Loaded (LC) SM [Approved by Competent Authority i.e. not Below the rank of Executive Engineer]	Nos	0.00	6,833.00	0.00
218	SITC of SCREEN SIZE 80 cm diagonal (32" INCH), RESOLUTION HD (1366*768), USB INPUT (2.0 SUPPORT) 2*Side(USB2.0), HDMI INPUT 3*Side(HDMI 1.4), USB DEVICE SUPPORT USB Supported HDD, HOTEL MODE Yes, Basic, BLUETOOTH Yes (Ver. 4), WIFI TYPE(STANDARD) 802.11a/b/g/n 2.4G 2T2R, Built-in, WIFI BAND TYPE 2.4GHz, OS & VERSION INFO Android 'P' - 9.0, MEMORY FLASH 8GB EMMC, RAM 1.5GB , DDR3 2133 Mhz. (Including Five year free maintenance with guarantee)	Nos	0.00	17,860.00	0.00
219	Providing and erecting approved make split air-conditioning unit consisting of copper condensing unit with fan motor, hermetically sealed rotary compressor with accessories etc. duly connected separately erected evaporating unit and blower motor with its accessories by means of extra supplied proper insulated copper tubing,drain PVC pipes suitable for (cost includes powder coated Stand, Eco Friendly green gas charging, 15A plug top & Remote Control) with necessary core cutting.For 4/5 star Rating of current year (2)For ISEER Range (KWH/KWH)(4.0 to 4.49) (c) for 2 ton capacity	Each	3.00	58,706.00	1,76,118.00
220	Liaisoning work for additional load for requirement, electrical power connection charges and inspector approval for power(to be paid to concern electrical power supplier company)	Each	0.00	25,000.00	0.00
	SUB TOTAL OF SECTION - 3				24,38,741.00

Item No.	Item Description	Unit	Quantity	Rate	Amount in Rs.
(a)	(b)	(c)	(d)	(e)	(f) = (d) x (e)
SECTION-4					
FIRE FIGHTING WORKS					
221	Providing and laying disinfectant spraying machine suitable for spraying, (1) near weighbridge and (2) at upper platform with necessary piping with nozzle, this should be of rugged design capable enough to work for sixteen hours a day continuously with storage tank.	JOB	1.00	1,50,000.00	1,50,000.00
222	MS / GI Heavy 'C' Class, as per IS: 1239 pipes with pressure gauge, siphon cock, Flanges, Nut-bolts, gaskets, fittings, Supports, Welding, painting. ISI Mark.				
222.1	(A) 100 mm (G.I.'C' class, Under ground)	Mtr.	500.00	1,850.00	9,25,000.00
222.2	(B) 100mm (MS, black, 'C' class above grd)	Mtr.	80.00	1,280.00	1,02,400.00
222.3	(C) 80 mm (MS, black,'C' class above grd)	Mtr.	300.00	1,050.00	3,15,000.00
222.4	(D) 65mm (MS, black,'C' class above grd)	Mtr.	100.00	799.70	79,970.00
222.5	(E) 50 mm (MS, black,'C' class above grd)	Mtr.	100.00	671.00	67,100.00
222.6	(F) 40mm (MS, black,'C' class above grd)	Mtr.	100.00	478.50	47,850.00
222.7	(G)32mm (MS, black,'C' class above grd)	Mtr.	100.00	416.90	41,690.00
222.8	(H)25mm (MS, black,'C' class above grd)	Mtr.	250.00	314.60	78,650.00
223	Hydrant Valves ISI Mark (IS: 5290) Gun Metal Body.	Nos.	4.00	8,000.00	32,000.00
224	To provide 63mm dia RRL, IS-636 Hose pipe-15M long ends binded with GM instantaneous male female Coupling with GM Branch Pipe, IS: 903 complete set: Hose Box with above 63mm x 15mtr	Nos.	3.00	11,000.00	33,000.00
225	Hose Reel Drum with 1" x 40M PVC double Braided Pipe tested at 15kg/cm2, SS- shut off nozzle, SS Ball valve complete set.	Nos.	3.00	8,000.00	24,000.00
226	2 way Fire Brigade inlet CI Body GM Parts	Nos.	1.00	7,500.00	7,500.00
227	Fire Pump set 900LPM jacketed (Submersible) with set of 10 mtr of flat cable laid up to starter panel in heavy duty PVC Pipe.	Set	2.00	60,000.00	1,20,000.00
228	Starter Panel wall mounting using L&T make Switch, contactors, relay, Timer, SPP, its Selector Voltmeter, VSS, Ammeter, ASS, Control fuse, Power Fuse HRC, lamps, start-stop PBS with Remote start-Stop facility wired & terminated.	Nos.	2.00	30,000.00	60,000.00
229	Butterfly Valves : Sandwich, wafer seal, Quick opening, hand lever operated, Body C.I., Disc SS: 316,seat EPDM IS: 13095 Rating PN: 1.0 / PN: 1.6 suitable for RF/FF companion flange sandwiching and flange drillings as per Is/BS/DIN.				
229.1	(A) 100 mm	Nos.	5.00	6,000.00	30,000.00
229.2	(B) 80 mm	Nos.	5.00	4,000.00	20,000.00
230	Non return Valves: Swing one way horizontal threaded or (F) Ends, class 150 lbs body bronze B62 IS: 778.				
230.1	(A) 100 mm	Nos.	5.00	6,000.00	30,000.00

Item No.	Item Description	Unit	Quantity	Rate	Amount in Rs.
(a)	(b)	(c)	(d)	(e)	(f) = (d) x (e)
230.2	(B) 80 mm	Nos.	5.00	4,000.00	20,000.00
231	Remote Start / Stop Push button stations: (Dust,Shock & Weather proof enclosure) Front transparent cover plate inscribed in P.O red bold letters as: FIRE PUMP ON- OFF SWITCH., INCASE OF FIRE, BREAK GLASS AND PRESS GREEN PUSH BUTTON. Using Technic/Airon Push buttons 1.5sqmm x 3core copper flexible wire (500mtr length) in heavy duty PVC Pipe laid in ground & on wall. Monitronic systems / Equivalent.	Set	1.00	5,000.00	5,000.00
232	Fire Alarm System comprising of: Main Fire Alarm Control Panel completely wired, tested, Certified as per IS: 2189 by Govt, of India Lab. Located at Ground floor along with Manual call points with chain & Hammer, High intensity Hooters, Flashers on each floor & 1.5sqmm copper wiring in heavy duty PVC pipe. Monitronic systems / Equivalent.	Set	1.00	35,000.00	35,000.00
233	Fire Extinguishers: ISI Mark. (With co-related test certificates				
233.1	(A) 4.5 Kg. Capacity Co2 type	Nos.	12.00	5,100.00	61,200.00
233.2	(B) 5.0 Kg. Capacity DCP type	Nos.	12.00	5,100.00	61,200.00
234	Erection & Testing of the System	JOB	1.00	25,000.00	25,000.00
235	Supplying ,Installing,testing and commisioning of 15mm inlet,80 k-factor following type sprinkler heads including required reducer and Pipe length with quartzoid bulb of LFB approved Make and quality to operate at 58 degrees c.etc. complete.				
235.1	(1) Conventional Pendent type Sprinkler(with rossete) 58 degree temp.	Nos.	80.00	330.00	26,400.00
235.2	(2) Upright Sprinklers having 58 degree temp. rating	Nos.	30.00	460.00	13,800.00
235.3	(3) Side wall Sprinklers having 58 degree temp. rating	Nos.	30.00	315.00	9,450.00
235.4	(4) Concealed pendent sprinklers with 58 deg. Rating	Nos.	30.00	1,175.00	35,250.00
	SUB TOTAL OF SECTION - 4				24,56,460
SECTION-5					
MACHINERY AND VEHICLES					
236	Portable generator Portable generator type: Diesel start, diesel run; Rated output at unity power factor at STP (VA): 7500; Starting type: Electric self-start, Rated output voltage: 230 V AC, Fuel tank capacity: 60 litres, Period for which the generator is capable of delivering declared output: 15 hours	Nos.	1.00	5,00,000.00	5,00,000.00

Item No.	Item Description	Unit	Quantity	Rate	Amount in Rs.
(a)	(b)	(c)	(d)	(e)	(f) = (d) x (e)
237	<p>Static compactor</p> <p>Hopper The hopper is a large container wherein incoming MSW will be unloaded directly by vehicles. This should be firmly fixed to the charge box body & supported ensure adequate stability. It would be made of 6mm thick ms sheets the capacity should not be less then 10 CMT. The hopper opening area at the top should be designed in such a way that unloading of minimum two vehicles is possible at a time. The hopper would be well supported by MS structure of appropriate size to take self-weigh & Garbage.</p> <p>Charge box: The unloaded MSW collected in Hopper will be pushed through charge box to compatible with HL containers by to & fro movements of the compactor head, which is attached to charge box. The charge box volume should be minimum 3.0 CMT. The construction of charge box should be with 6mm MS construction with necessary stiffeners. There should be provision for grouting the stationary compactor on the foundation. The charge box must have the provision for mechanically locking the Hook Loader container to it to ensure trouble free operation during the compacting cycle. It shall posses all required safety arrangements.</p> <p>Control panel: Heavy-duty electrical control panel with IS approved electrical items and wires, switch gears etc. shall be provided and shall be suitable to run minimum 10 KW electric motor with all the required overload protection & alarms.</p> <p>Hydraulic compacting Mechanism: Entire stationary compactor mechanism must be imported and of reputed manufacturer whose products are well run in country of origin as well as in globe. This will consist of a hydraulic ram that will travel through the charge box length and push the MSW into the container. The ram of hydraulic compacting mechanism should be of suitable size & capable to generate a density of 0.7 to 0.8 T/M3 compacting garbage. The compaction time of one container shall not be more than 24 – 26 minutes. The hydraulic ram shall be of standard make with standard dimensions having heavy-duty raw materials and capable enough to run for continuous operation of about 16 hr/day. Necessary oil cooler with required mechanism shall also be given for cooling of hydraulic oil.</p>	Nos.	2.00	1,06,66,738.00	2,13,33,476.00

Item No.	Item Description	Unit	Quantity	Rate	Amount in Rs.
(a)	(b)	(c)	(d)	(e)	(f) = (d) x (e)
238..1	Hook loader Fully built Hook loader with chassis. The chassis shall be rugged and durable, shall incorporate the latest technological features offered by the manufacturer/supplier. The vehicle should have minimum 25 ton pay load (GVW) capacity and 6 X 4, must be suitable for fixing of Hook lifter equipment as detailed below. Below mentioned are minimum requirements; Specifications. Any HCV- 6 x 4 chassis with full forward driver cabin and load should meet the flowing specification: A) Gross vehicle weight: minimum 25000 Kg. B) Engine: Fuel efficient, Turbo charged 4- stroke, 6- cylinder water-cooled, direct injection diesel engine delivering not less than 130 HP at rated RPM & manufacturer's duty point. It must have minimum EURO- III/EURO- IV emission norms as may applicable to MRMC, Morbi. C) Clutch: Single plate dry friction type. D) Gear Box Type: Synchromesh. E) No. Of gears: 5 forward and 1 reverse or as per CMVR / ARAI approval. F) Front Axle: Heavy duty forged I- reverse. (Or as per approval of ARAI/CMVR). G) Rear Axle: Two live rear axles, single speed fully floating spiral bevel gears. (Or as per approval of ARAI/CMVR). H) Steering: Power steering. Brakes: I) Service Brakes: Dual circuit full air S-Cam brakes, or as per CMVR / ARAI approval. Parking Brakes: Spring actuated on rear wheels, or as per CMVR / ARAI approval. Engine Exhaust Brake: Pneumatically operated with foot control valve or as per CMVR / ARAI approval. J) Frame: Ladder type heavy duty frame with riveted/bolted cross members. Side members of channel sections, or as per CMVR / ARAI approval. K) Suspension: Semi elliptical leaf spring at front and rear with auxiliary springs at rear only or as per CMVR / ARAI approval. L) Shock absorber: Hydraulic double acting telescopic type at front or as per CMVR / ARAI approval. M) Wheels & tyres wheel base: minimum 4600 mm; Tyres: 10.00*20-16PR with diagonal ply. (Or as per approval of ARAI/ CMVR). No. Of wheels: Front: 2, Rear: 8, Spare: 1 (Lockable) N) Fuel Tank Capacity: Minimum 180 liters approximately. O) Cab: All steel fully forward control drivers' Cabin with adjustable seats having seats belts. Cab should have all standard accessories like open able side windows, rear view door mirrors, laminated windscreen. Minimum Two speed windshield wipers, fuel gauge multiple warning lamps and buzzer low oil pressure coolant level etc. P) Electric system: Voltage: 12/24 volts. Q) Battery Capacity: 12 volts-180 amps/hr 24 volts-80amps/hr. (Or as per approval of ARAI/CMVR) R) Alternator Capacity: minimum 65 amps. (Or as per approval of ARAI/CMVR) Head lights: 2 nos. with Head light protection frame. Turn Signal: Front and rear. S) Painting: Paint & painting process shall be superior quality to ensure long lasting structure resistant to rust, weathering and breakage.	Nos.	3.00	77,96,610.17	2,33,89,830.51

Item No.	Item Description	Unit	Quantity	Rate	Amount in Rs.
(a)	(b)	(c)	(d)	(e)	(f) = (d) x (e)
238.2	<p>T) Color shade: Purchaser choice from standard colors offered by suppliers. Hook loader equipment over truck chassis</p> <p>The Hook Loader Equipment mounted on a Truck chassis (HLE) shall be used for lifting, loading the closed containers of various capacities (General 20 cum vol. Capacity) and discharging the contents (solid waste materials like garbage, garden waste, debris and other like refuse materials) by tilting the container at the desired location.</p> <p>The hydraulically operated HLE shall be capable of loading/ unloading the steel container on/from chassis having, by hooking and rolling on/off principle. HLE shall be capable enough to handle the load of 20 MT with at least 10% safety factor. Minimum requirements are as under:</p> <p>HLE shall be provided with an arm type hook mechanism for loading and unloading the container.</p> <p>The HLE will have a central frame assembly located with an outer structure to handle and to tip the container. It shall have telescope jib with heavy-duty hook, 2 main rams for lifting/ tipping, standard containers locking arrangement, hydraulic pump, stabilizers and other by hydraulic elements as per functional need.</p> <p>The hydraulic pump will be driven by the vehicle engine gearbox through the power takes off (PTO) unit.</p> <p>A pair of roller assembly located at the rear end of the HLE will facilitate and guide the main beam sections of container during loading/unloading of the container.</p> <p>Necessary safety locking arrangement (Mechanical /hydraulic) shall be provided to lock the container with the HLE. Tipping operation of the container shall be done after effective locking.</p> <p>All safety control like holding valves, check valves/relief valves, Electric Hydraulic/ Pneumatic functional interlocking arrangements will be provided for operational reliability. It shall have all required hydraulic connections for loading-unloading-locking-emptying of the container.</p> <p>All control levers shall be provided at a convenient location in/near driver cabin for easy operation.</p> <p>HLE Capacity: min 20 ton; Container length that can be accommodated: min 4000 mm</p> <p>Hydraulic pump capacity: as per requirement; Operating pressure: min 200 bar; Hydraulic tank capacity: min 100 litres</p> <p>The hook loader equipment on chassis shall be as per rules & regulation prescribed by local transport authorities</p> <p>These specifications only show the requirement in brief. Each tenderer shall attach descriptive literature and specifications along with a detailed description of the machine covering all the salient features.</p> <p>Providing nipples etc to all moving parts with adequate means of lubrication.</p> <p>All reciprocating parts shall be suitably guarded</p> <p>The equipment shall be capable of being operated under average conditions for at least 16 hrs.</p>				

Item No.	Item Description	Unit	Quantity	Rate	Amount in Rs.
(a)	(b)	(c)	(d)	(e)	(f) = (d) x (e)
238.3	<p>Continuously without any ill effects on its component</p> <p>However imported components shall be approved by principals and international organisation with certificates.</p> <p>The rear body shall be painted from outside with Asian/ Nerolac / Berger / ICI /Shalimar/Dulux. The colour scheme will be intimated later.</p> <p>The under-chassis parts and the portion shall be painted with anticorrosive black. Complete unit including cross and super structure member shall be painted with superior quality anti-rust paint. All the paint material shall confirm to ISI specifications and shall be of specified makes. The cabin shall be painted with Asian/ Nerolac / Berger / ICI /Shalimar/Dulux paint externally and internally. The colour scheme will be informed at the time of fabrication</p> <p>All welding work must be MIG welding only. All necessary finishing shall be carried out prior painting.</p> <p>Welding wire shall be of ESAB/ADOR/L&T only.</p> <p>All angle and channels and other raw materials are as per Indian standard.</p> <p>All MS material shall be of Tata / SAIL / Jindal / Vishakhapatnam steel/ Essar /Ispat/Hardox/as suggested in the tender (for angle/ channel if not available of above brand, then it shall be of IS/ISO approved make) only.</p> <p>Contractor has to submit necessary test report and/or invoice copies. Paint must be of standard brand only like Asian, Nerolac, Berger, ICI, Dulux and Shalimar only.</p>				

Item No.	Item Description	Unit	Quantity	Rate	Amount in Rs.
(a)	(b)	(c)	(d)	(e)	(f) = (d) x (e)
289.1	<p>Container</p> <p>Fabrication of 20 cum container</p> <p>The closed top, rear loading type containers will be compatible with Hook loader as well as stationary compactor to be installed at transfer stations. The container will have rear door opening by ratcheting arrangement for loading refuge at processing site. It shall also have mechanical locking arrangements to lock them with stationary compactor while loading the refuge.</p> <p>Technical specifications:</p> <p>Volumetric capacity: min 20 cum</p> <p>Base/floor: 6 mm</p> <p>Floor plate: as per ISMB 200</p> <p>Side panels: 4 mm</p> <p>Rollers with heavy duty bearing: 2 no. rear side</p> <p>Materials: as per BIS 2062</p> <p>Weight: not less than 3000 kg</p> <p>Dimensions: L 4000 mm, W 2000 mm, H 2300 mm</p> <p>However, these dimensions shall be approx. and actual dimensions shall be as per the design of the manufacturer which tenderer has to submit with tender. Further it should match with offered chassis, HLE and Local RTO norms.</p> <p>The container would be used for storage and transportation of compacted of municipal solid wastes. Container should be of 20 cubic meter volumetric capacities. The lifting hook shall be integrated within the frame and be capable of taking the specified load.</p> <p>Container should be of 20 CMT. Volumetric capacity and should be strengthen enough to handle the garbage of its maximum capacity. It shall be capable enough to take care the compaction pressure of the Stationary compactor during the compaction process. Material should not deform.</p> <p>Container shall have its bottom plate (i.e. floor) of 6 mm thick M.S. plate. Sides, front and top portion of 4 mm thick M.S. sheet.</p> <p>There should be optimum number of. cross stiffener / cross members. Along the Width of the container with end to end.</p> <p>There must be. Longitudinal MS Section beneath the floor to strengthen the floor and for roll on roll off operation.</p>	Nos.	4.00	11,65,254.24	46,61,016.96

Item No.	Item Description	Unit	Quantity	Rate	Amount in Rs.
(a)	(b)	(c)	(d)	(e)	(f) = (d) x (e)
239.2	<p>Hooks for container lifting: The hook for lifting the container would be integral to the framework of the container. It shall be provided with the necessary reinforcement to handle the design weight for lifting with adequate factor of safety. The shape and size would be as per the design of the lifting tackle (Hook lifter). Locking of container shall be given so that it cannot move out from the hook during any operation. Necessary safety provision shall be provided so that container should not slide from the hook lifter during transportation. The design of the container shall be suitable for hook lift vehicle for transportation and have arrangement to lock to the hook lift vehicle during transportation. Further container shall have heavy duty rear door opening arrangement by ratchet and lifting cylinder for unloading of refuse at treatment/disposal site.</p> <p>All the Plate / Sheet Joints at container edge / border must be supported properly should be fully welded by means of proper MIG welding method. All welding work must be finished properly for better look and strength purpose.</p> <p>Container rear door shall have ratcheted arrangement lock and should be strong enough to handle the rigorous working operation.</p> <p>Container shall have 2 Nos. of rollers with required pin and bracket arrangement at the rear side of heavy-duty material for roll on and roll off operation.</p> <p>Container shall have arrangement to collect leachate formed during compaction and smooth valve & related mechanism to empty it.</p> <p>Container shall have upward sliding door (Guillotine) arrangement. It shall be having proper sealing also. For fabrication of container normal engineering standards and practice will have to be used by the contractor. Container should have minimum weight of 3000 Kgs.</p> <p>12.Container outer sides shall be colored with Green as per our S.W.M. Scheme. Painting: The inside of the containers to be coated with two-coat black colour fiber reinforced plastic resin or equivalent polyurethane resin. Bottom of the container shall also be painted with black anti-corrosive colour. The outside shall be painted "GREEN" (or as per MRMC requirement) with minimum 1 coat of first quality synthetic paint to ensure long lasting structure suitable for use of handling raw garbage under corrosive conditions. Prior to painting coat of anti corrosive zinc riched primer shall be applied as per the paint manufacturing standard. The supplier should paint number on container and messages on the body.</p> <p>Contractor shall provide MRMC Logo and Numbering as per our instruction.</p> <p>Contractor has to first provide the sample container and on approval of the same balance quantity should be manufactured.</p> <p>If any suggestion / instruction given by MC and / or his authorized representative during inspection, it shall be implemented by contractor.</p>				

Item No.	Item Description	Unit	Quantity	Rate	Amount in Rs.
(a)	(b)	(c)	(d)	(e)	(f) = (d) x (e)
239.3	<p>All welding work must be MIG welding only. All necessary finishing shall be carried out prior painting.</p> <p>Welding wire shall be of ESAB/ADOR/L&T only.</p> <p>All angle and channels and other raw materials are as per Indian standard IS-2062.</p> <p>All MS material shall be of Tata / SAIL / Jindal / Vishakhapatnam steel/ Essar / Ispat / (for angle/ channel if not available of above brand, then it shall be of IS/ISO approved make) only. Contractor has to submit necessary test report and/or invoice copies.</p> <p>Paint must be of standard brand only like Asian, Nerolac, Berger, ICI, and Shalimar only.</p>				
	SUB TOTAL OF SECTION - 5				4,98,84,323.47