

**LADY HARDINGE MEDICAL COLLEGE &
ASOCIATED HOSPITALS
NEW DELHI**

TENDER

FOR

**PROVIDING
OPERATION & MAINTENANCE SERVICES**

For

**RESIDENTIAL BUILDINGS CONSTRUCTED
UNDER PHASE -1 FOR REDEVELOPMENT
WORKS**

OF

**LADY HARDINGE MEDICAL COLLEGE &
ASSOCIATED HOSPITALS,
AT
NEW DELHI**

FINANCIAL BID

CONSULTANT

HSCC (INDIA) LTD

(A GOVERNMENT OF INDIA ENTERPRISE)

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**BILL OF QUANTITIES FOR PROVIDING OPERATION & MAINTENANCE SERVICES FOR RESIDENTIAL BUILDINGS
CONSTRUCTED UNDER PHASE-1 FOR REDEVELOPMENTY OF LHMC**

New Delhi							
Item No	Description Of Item	Quantity	Unit	Rate in (Rs.)	Rate in Words	Amount in (Rs.)	
PART A							
A	1.0	Carrying out maintenance Works and upkeep of LHMC Residential complex at LHMC Residential Campus, Bangla Sahib Road, New Delhi . The approximate area of construction is 12517 sqm in a campus spread over a total area of approx.19 acres. There are total 5 blocks consisting of 188 dwelling units consisting of Type III, IV, RMO Quarters & RMO Dining etc. along with service buildings like UG Tank, Substation, Sewage Treatment Plant etc.					
Internal and External Works							
	i	Maintenance and repair of internal and external plaster, flooring, masonry work, repair of BB coba, RCC work upto an area of 2.5 sqm, Khurras, CC gola, sealing of leakages from roofs, floor, traps, WC/P traps and joints of pipes and fittings, gully traps and manholes and restoration of existing finishing in the affected are to the entire satisfaction and as per direction of Engineer/Client					
	ii	Carpentary work of all kinds including Maintenance, repairing and fixing of damaged doors, windows, ventilators of steel/wood/PVC/Aluminium etc. at all floors and fixing of necessary fittings wherever required to keep them in proper functional conditions works of doors/windows, providing nails on the walls etc.					
	iii	Change of glass panes, wherever required.					
	iv	Maintenance and cleaning of chajjas, roofs, expansion joints, etc. and removing cobwebs, beehives, vegetation including malba etc. to the authorized dumping ground to the entire satisfaction and as per the direction of the Engineer/Client					
	v	Welding by electrical plant including transportation of electrical welding plant at site to weld broken grills, hinges, doors, windows, gates, railings and any other steel work of dwelling units, parks, boundary walls, guest house etc. complete as per direction of the Engineer/Client.					
	vi	Comprehensive Maintenance, up-keeping, attending day to day complaints and rectification of all electrical installations in various type of flats and bungalows (as per list attached) including attached servant quarters, garages, sentry post, guard room etc. round the clock including Sundays and Holidays. Installations comprises of internal electrification, external electrification, distribution board, main board and all type of light fixtures like brass bracket, flourescent fitting, CFL fittings, gate light, lawn/compound light, street light, security light etc. and electrical appliances and gadget like geysers, ceiling fan, exhaust fan, fresh air fan and pump set etc. including repairing of these fixtures and gadget, repainting etc. as and where ever required and as per attached terms and conditions.					
	vii	Comprehensive maintainence of plumbing system including Supply and replacement/Repair of nonfunctional broken sanitary fixture or repair of the non functional part of sanitary fixtures of the entire residential complex & maintaining all the plumbing fixture & plumbing system in good functional condition including repair of leakages and making openings in walls if required and making good the same complete as per instruction of engineer incharge/client .					
	viii	Maintenance of sewerage, drainage system and desilting of gully traps etc. within the campus like opening/cleaning of choked sewer pipes, drains, manholes, gully traps, wash basins, sinks and other fittings and fixtures, etc. at all floors and vertical stacks of sewer pipes and rain water pipes of all sizes to keep sewerage and drainage system functional including disposal of silt, malba, waste, garbage etc. to the authorized dumping ground complete including Regular cleaning of Drains, pipes, sewerage & Drain Line up to Municipal disposal points Gully traps, manholes to ensure that there is no blockage including maintaining minimum requisite T & P material required for cleaning / maintenance , manpower (plumber, Sewer man, sewer/Drain cleaner, Helper, & consumables such as washer, lead, M.seal, nut, dash fastener, lubricant, tools etc. proper functioning of the plumbing system & maintaining the record for the same.					
	ix	Maintenance of water supply grid and valves in the entire campus to keep the water supply system efficient and oeparational at all times complete to the entire satisfaction and as per direction of the Engineer/Client					
	x	Changing of pipes and traps, Manholes including covers of drains/manholes etc.					
	xi	Maintenance and repair of plumbing system for the entire campus (internal and external works) including stopping leakages or overflows of water from PVC/RCC overhead tanks and water cisterns and replacement of the bib cock, stop cock, pillar cock, fittings, ball cocks etc. to keep the entire water supply system efficient and functional to the entire satisfaction and as per the direction of the Engineer/Client.					
	xii	Cleaning of RCC/PVC water storage tanks (Overhead/Underground) by adopting six stage process, i.e., dewatering, sludge removal, high pressure cleaning, vacuum cleaning, anti-bacterial spray and ultra violet radiations i/c mentioning the date of cleaning and next due date of cleaning on each tank complete to satisfaction of Engineer/Client					
	xiii	The scope also includes attending to the overflow/float valves of overhead water tanks, including replacement if required and operation of valves, pumps, etc.					
	xiv	The rate quoted shall include the cost of manpower, T&P like a welding machine, assorted screwdrivers/pliers, ladders, drills, etc., scaffolding, consumables and disposal of unservicable debris/malba outside the building compound at municipal dumping grounds and nothing extra shall be paid. Cost of tiles, plumbing & electrical fittings and fixtures, glass panes, MCB/MDB, Fan/regulators, tubelights/bulbs etc. shall be payable separately on actuals					
	xv	The quoted cost will include manpower for day-to-day maintenance and all other items/works mentioned in additional specifications of contract document.					

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xvi	The agency/bidder shall visit the LHMC Residential complex at LHMC Residential Campus, Bangla Sahib Road, New Delhi and make themselves familiar with the existing setup/system provided.						
a	Maintenance Cost. Minimum Manpower to be provided in terms of contract (Mason, Carpenter, Plumber and Helpers, Electrician and Supervisor cum Computer Operator) in the required time/ Shift. To attend the complains/work as per above scope of work agency may have to engage additional man power without any additional payment on need basis to meet out the response time.		per job per 12 month				-

Item No	Description of Item	Quantity	Unit	Rate in (Rs.)	Rate in Words	Amount in (Rs.)
	PART B : HORTICULTURE MAINTENANCE					
B.	PART-B: Horticulture Maintenance					
1	Scope of work for horticulture operation includes plantation & maintenance of any type of grass, shrubs, trees (cost of grass/shrubs/trees is payable separately) and their maintenance by deploying adequate no. of experienced Malis and one head Mali for eight working hours daily and supplying all materials in sufficient quantity required to properly maintain the horticulture like fertilizers, manure, granules, vermi-compost, bone meal, neem cake, NH3/SO4/Urea, DAP, pesticides, good earth, seasonal flower seeds, plants, grass, flower pots, all tools & plants required for the above work, shrubs, trees etc. all complete.		per job per 12 month			-
B.						
	PART C : SWEEPING AND CLEANING SERVICES					
C.	PART C: Sweeping and Cleaning Services					
1	Daily (excluding sundays) Sweeping, Cleaning & Dusting of common areas of all residential blocks i.e. staircases (Main & Fire), corridor etc., all roads, parkings, pavements, green areas, security rooms, and other locations in public areas. The agency shall be completely responsible for cleanliness of the housing complex.					
	Collection of garbage from the bins located on each block in the Housing Complex					
	All the housekeeping staff shall wear uniforms as approved by the client and have a neat and clean look and shall wear rubberised gloves, boots and overalls.					
	Minimum manpower as detailed to be provided for house keeping works, dusting, cleaning works etc including all consumables such as dusters, brooms, mops, DDT, cleaning soap/detergents and disinfectants, buckets, bins, covered handcarts etc. or any other material required for Cleaning/housekeeping to be supplied by the agency for which nothing extra shall be paid. The work shall be carried out to the entire satisfaction of Client/Engineer-in-charge.		per job per 12 month			-
	Minimum 6 Sweepers in General Shift and 2 in Morning Shift to be provided along with one Sanitary Supervisor					

Item No	Description Of Item	Quantity	Unit	Rate in (Rs.)	Rate in Words	Amount in (Rs.)
D	PART D : OPERATION SERVICES					
	I. Under Ground Tank, Pumps Rooms, etc.					
1	Daily operation of Pumps, etc. with requisite manpower for requirement of the same as per instruction of engineer-in-charge & all small consumables part, etc required for proper functioning of the system & maintaining the record for the same, complete in all respect .					
	Operation of Underground Tank Pumps etc	12	per job			-
	Minimum One Operator and One Helper each to be provided in Morning and Evening Shift					
	II. Sewage Treatment Plant					
2.00	Daily operation of STP , pumps, maintaining plumbing systems and agency will maintain minimum requisite manpower & small material such as washer, lead, M.seal, nut, dash fastener, lubricant, tools etc will be included in the cost & allied systems with requisite manpower for requirement of the same as per instruction of engineer-in-charge & all small consumables part, etc required for proper functioning of the system & maintaining the record for the same, complete in all respect .					
	Operation of Sewage Treatment Plant etc	12	per job			-
	Minimum One Operator and One Helper each to be provided in Morning, Evening Shift and Night Shift					
E	AMC Items for Residential buildings at LHMC, New Delhi					
1.01	Sewage treatment Plant					
i)	AMC of existing Sewage treatment Plant including all equipments, components and spares of Sewage treatment Plant, replacement of consumables and other necessary materials, quarterly testing charges for raw and treated effluent as per requirement of Pollution Control norms, electrical and mechanical parts & material and Labour complete					
i)	AMC of existing Sewage treatment Plant					
a)	1st year	1	per job			-
	Sub total(AMC) Pumps & STP					-

Item No	Description Of Item	Quantity	Unit	Rate in (Rs.)	Rate in Words	Amount in (Rs.)
2.01	Fire Fighting System					
	Wet risers, Yard hydrant (8 nos. approx.), UGT & Terrace tanks, Landing valve (50 nos. approx. of approved make), Fire Pump- Centrifugal pump of 450 LPM and 35 M head (4 no.)					
	Fire Panel including all associated switchgear, all motors & switchgear of pumps, diesel engine all parts and consumables etc complete as required for proper functioning of the system. Glowing exit sign board of fire system					
	Arranging/assisting the fire operations once in three months (atleast) and making the record of the same and getting approval from engineer-in-charge /client					
	AMC for existing complete fire fighting system					
a)	1st year	1	per job			-
	SUBTOTAL (AMC items) residential buildings at LHMC, New Delhi					-
3.00	Daily Operation of various Fire Fighting Systems					
3.01	Operation of Fire Fighting System with requisite manpower for requirement of the same as per instruction of engineer-in-charge & all small consumables part, etc required for proper functioning of the system & maintaining the record for the same, complete in all respect as per defined in various clauses of the tender document					
a)	1st year	12	per month			-
	SUBTOTAL (Daily Operation) residential buildings at LHMC, New Delhi					-
4.01	Solar Water Heating system					
	Annual Maintenance Cost (AMC) for Solar water heating system, Cleaning and maintaining Solar Water heater system and plumbing systems and agency will maintain minimum requisite manpower & small material such as washer, lead, M.seal, nut, dash fastener, lubricant, tools etc will be included in the cost & allied systems with requisite manpower for requirement of the same & all small consumables part, etc required for proper functioning of the system & maintaining the record for the same, complete in all respect as per instruction of engineer-in-charge					
	Type III					
	3 no's (400ltrs 3 Solar Collector Panels)					
	Type IV					
	3 no's (400ltrs 3 Solar Collector Panels)					
	RMO					
	4 Solar Collector Panels with 500 lit Hot water tank (6 Nos)					
	Dining					
	10 Solar Collector Panels with 500lit hot water tank					
	1st year	12	per month			-
	SUB TOTAL					-
	PART F:					
	MISCELLANEOUS ITEMS					
	(The following items may be executed at the discretion of the Client/Engineer and their quantity may vary to any extent)					
	Procurement of following building materials required on day to day basis:					
1	2406 Float glass sheet of nominal thickness 4 mm (weight not less than 10 kg/sqm)	50.00	sqm			-
2	2407 Float glass sheet of nominal thickness 5.5 mm (weight not less than 13.50 kg/sqm)	50.00	sqm			-
3	687 Anodised Aluminium butt hinges 125x75x4 mm	20.00	each			-
4	699 Anodised Aluminium tower bolt (barrel type) 250x10 mm	20.00	each			-
5	701 Anodised Aluminium tower bolt (barrel type) 150x10 mm	20.00	each			-
6	703 Anodised Aluminium handles 125 mm with plate 175 x 32 mm	20.00	each			-
7	704 Anodised Aluminium handles 100 mm with plate 150 x 32 mm	20.00	each			-
8	1168 Kota stone slab 20 mm to 25 mm thick (semi-polished)	20.00	sqm			-
9	2602 Common burnt clay F.P.S. (non modular) bricks class designation 7.5	1000.00	each			-
10	6010 Udaypur green marble slab plain 18 mm thick	20.00	sqm			-
11	7059 Aluminium hanging floor door stopper with twin rubber & stopper	20.00	each			-
12	7060 Hydraulic door closer tubular type Aluminium section body	10.00	each			-
13	7295 Granite of any colour, 18 mm thick (slab area upto 0.50 sqm)	20.00	sqm			-
14	7452 Raj nagar plain white marble (table rubbed and polished) 18 mm thick (slab area upto 0.50 sqm)	20.00	sqm			-
15	7800 Ceramic Glazed Tiles 1st quality minimum thickness 5mm in all colours shades and designs except burgundy, bottle green, black	20.00	sqm			-
16	7801 Ceramic Glazed Tiles 1st quality 300 x 300 mm in all shades and designs of White, Ivory, grey, Fume Red brown etc.	20.00	sqm			-
17	8621 Vitrified floor tile 60x60 cm	20.00	sqm			-
18	8686 Precast C.C. Kerb stone M - 25	2.00	cum			-
19	8689 Interlocking C.C. paver block (60 mm thick, M-30)	20.00	sqm			-
I	SANITARY FIXTURES					
20.1	17.3 Providing and fixing white vitreous china pedestal type water closet (European type) with seat and lid, 10 litre low level white PVC flushing cistern with manually controlled device conforming to IS 7231 with all fittings & fixture complete including a					
a)	W.C. pan with ISI white solid plastic seat & lid.	2.00	Each			-

Item No	Description of Item	Quantity	Unit	Rate in (Rs.)	Rate in Words	Amount in (Rs.)
b)	Providing & fixing white vitreous china extended wall mounting water closet of size 780X370X690mm of approved shape including providing and fixing white vitreous china cistern with dual flush fitting, of flushing capacity 3litre/6litre (adjustable to 4litre/8litre), including seat cover and cistern fitting, nuts bolts and gaskets etc. complete	2.00	Each			-
20.2	17.7 Providing and fixing wash basin with C.I. brackets, 15mm C.P. brass pillar taps, 32mm C.P. brass waste of standard pattern, including painting of fittings and brackets, cutting and making good the walls wherever required:					
a)	17.7.2 White vitreous china FLAT BACK WASH BASIN size 550x 400 mm with single 15mm C.P. brass pillar tap.	1.00	Each			-
20.3	17.10 Providing and fixing Stainless Steel A ISI 304 (18/8) kitchen sink as per IS 13983 with C.I. brackets and stainless steel plug 40 mm including painting of fittings and brackets, cutting and making good the walls wherever required:					
a)	7.10.2 510x1040 mm bowl depth 200 mm.	1.00	Each			-
20.4	NS Providing and fixing water Jet Nozzle with hose pipe and half turn CP brass angle valve to be fitted with seat cover of European water closet complete in all respect of approved quality	20.00	Each			-
20.5	NS Providing and fixing soap tray with CP brass lid and brackets fixed to wooden cleats with CP brass screws.	20.00	Each			-
20.6	NS Providing and fixing brass coat hook of approved quality and make complete with material of fixing	10.00	Each			-
20.7	NS Extra for providing and fixing white vitreous china oval shape wash basin in place of normal wash basin with CI/MS brackets painted white, 15 mm CP brass pillar taps, 32 mm CP brass waste of standard pattern, including painting of fittings and brackets cu					
a)	Counter sunk oval shape wash basin size 560x450 mm with centre tap hole, single 15 mm CP brass swan neck type pillar tap	1.00	Each			-
	TOTAL CARRIED TO SUMMARY					
21	SOIL, WASTE ,VENT AND RAIN WATER PIPES					
21.1	17.35 Providing and fixing soil, waste and vent pipes.					
a)	7.35.1 100 mm dia.					
	17.35.1 Centrifugally cast (spun) iron socketed pipe as per IS:3989	5.00	Meter			-
21.2	17.37 Providing and fixing M.S holder-bat clamps of approved design to Sand Cast iron/ cast iron (spun) pipe embedded in and including cement concrete blocks 10x10x10 cm of 1:2:4 mix (1 cement : 2 coarse sand : 4 graded stone aggregate 20mm nominal size) inc					
a)	7.37.1 for 100 mm dia. pipe	5.00	Each			-
21.3	17.4 Providing and fixing bend of required degree with access door, insertion rubber washer 3mm thick, bolts and nuts complete.					
a0	7.38.1 100 mm					
	17.38.1 Sand cast iron S&S as per IS:3989	10.00	Each			-
21.4	17.39 Providing and fixing plain bend of required degree.					
a0	7.39.1 100 mm					
	17.39.1 Sand cast iron S&S as per IS:3989	25.00	Each			-
21.5	17.43 Providing and fixing single equal plain junction of required degree with access door, insertion rubber washer 3mm thick, bolts and nuts complete.					
a)	7.43.1 100x100x100mm					
a.ii)	7.43.1 sand cast iron S&S as per IS-3989	10.00	Each			-
21.6	17.4 Providing and fixing single equal plain junction of required degree.					
a)	7.44.1 100x100x100 mm Centrifugally cast (spun) iron S & S as per IS- 3989	10.00	Each			-
21.7	17.58 Providing lead caulked joints to sand cast iron /centrifugally cast (spun) iron pipes and fittings of diameter:					
a)	NS 150 mm	2.00	Each			-
b)	7.58.1 100 mm	25.00	Each			-
21.8	17.60 Providing and fixing trap of self cleansing with screwed down or hinged grating with or without vent arm complete, including cost of cutting and making good the walls and floors:					
a)	7.60.1 100 mm inlet and 100 mm outlet					
a i)	7.60.1 Sand cast iron S&S as per IS-3989	10.00	Each			-
21.9	17.65 Painting sand cast iron / centrifugally cast (spun) iron soil, waste vent pipes and fittings with paint of any colour such as chocolate, grey, or buff etc. over a coat of primer (of approved quality) for new work:					
b)	7.65.1 100 mm diameter pipe	10.00	Meter			-
21.10	NS Providing and fixing floor drain points formed out of 50 mm dia GI elbow, including with 100mm dia Stainless Steel grating with frame, embedded in floor, all complete as directed.	5.00	Each			-
21.11	7.70.1 Providing and fixing C.P. brass bottle trap for wash basin including CP waste fittings complete 32 mm dia complete in all respect of approved quality.	5.00	Each			-
21.12	17.3 Providing & fixing PVC waste pipe for sink including PVC Waste fitting complete					
	17.28.1 Flexible pipe					

Item No	Description Of Item	Quantity	Unit	Rate in (Rs.)	Rate in Words	Amount in (Rs.)
17.28.2	40 mm dia	5.00	Each			-
21.13	18.1 Providing and fixing G.I.(heavy class) pipes and fittings conforming to IS: 1239 clamps and hinges including cutting chases and holes and making good the walls and ceiling for waste pipes from wash basins, urinals kitchen sink and equipment waste connect					
a)	8.10.32 mm nominal bore	10.00	Meter			-
b)	8.10.40 mm nominal bore	10.00	Meter			-
c)	8.10.50 mm nominal bore	10.00	Meter			-
21.14	12.4 Providing and fixing unplasticised-PVC pipe clips of approved design to unplasticised-PVC rain water pipes by means of 50x50x50 mm hard wood plugs, screwed with M.S screws of required length including cutting brick work and fixing in cement mortar 1:4(1					
a)	2.42.110mm	10.00	Each			-
21.15	NS Providing and fixing on wall face unplasticised-PVC (working pressure 6kg per sqm cm) rain water pipes conforming to IS: 4985 including all fitting & accessories jointing with seal ring conforming to IS:5382 leaving 10mm gap for thermal expansion.					
a)	(I) Single socketed pipes 110 mm diameter	10.00	Meter			-
21.16	12.2 Making khurras 45 X 45 cm with average minimum thickness of 5 cm cement concrete 1:2:4 (1 cement:2 coarse sand:4 graded stone aggregate of 20 mm nominal size) over PVC Sheet 1 m X 1m X 400 micron, finished with 12 mm cement plaster 1:3 and a coat of nea	43.00	Each			-
21.17	12.4 Providing & fixing to the inlet mouth of rain water pipe CI grating 15 cm dia & weighing not less them 440 gms.					
a)	For 110 OD pipe	5.00	Each			-
21.18	NS Providing and fixing cast brass clean out /Floor clean out plug with suitable insert keys for opening male threaded joint fixed to G.I.socket complete (cleanout to be flushed with floor finish)					
	100 mm dia / 150 mm dia	5.00	Each			-
21.19	NS Providing and fixing on wall face unplasticised-PVC (working pressure 4kg per sqm cm) pipes conforming to IS: 4985 including all fitting & accessories jointing with seal ring conforming to IS:5382 leaving 10mm gap for thermal expansion.(Lab drainage)					
	110 mm OD	10.00	Meter			-
21.20	NS Providing & fixing 125mm dia stainless steel cockroach trap with all accessories complete as per drawing.	5.00	Each			-
21.21	Providing and fixing dash fastner made of rust proof plated steel for holding the soil/waste supply pipes complete in all respect					
	Dash fastner for pipe more than 25 mm dia to 150 mm dia pipe of size 25 mm dia and 75 mm long minimum & shall be capable of taking 6 tonnes load and also include the supporting angles 35x35 mm/steel structures as per drawing.	25.00	Each			-
21.22	Providing and laying cement concrete 1:2:4 (1 cement:2 coarse sand:4 graded stone aggregate 20 mm nominal size) 80 mm thick all-round the SCI/centrifugally S&S pipe diameter.					
	100 mm dia	5.00	Metre			-
	TOTAL CARRIED TO SUMMARY					
22	WATER SUPPLY					
22.1	18.7 Providing and fixing Chlorinated Polyvinyl Chloride (CPVC) pipes, having thermal stability for hot & cold water supply including all CPVC plain & brass threaded fittings i/c fixing the pipe with clamps at 1.00 m spacing. This includes jointing of pipes & Internal work - Exposed on wall					
a)	18.7.1 15 mm nominal outer dia pipes	5.00	Meter			-
b)	18.7.2 20 mm nominal outer dia pipes	5.00	Meter			-
c)	18.7.3 25 mm nominal outer dia pipes	25.00	Meter			-
d)	18.7.4 32 mm nominal outer dia pipes	5.00	Meter			-
e)	18.7.5 40 mm nominal outer dia pipes	10.00	Meter			-
f)	18.7.6 50 mm nominal outer dia pipes	5.00	Meter			-
22.2	18.8 Providing and fixing Chlorinated Polyvinyl Chloride (CPVC) pipes, having thermal stability for hot & cold water supply including all CPVC plain & brass threaded fittings i/c fixing the pipe with clamps at 1.00 m spacing. This includes jointing of pipes & Concealed work including cutting chases and making good the walls etc.					
a)	18.8.1 15 mm nominal outer dia pipes	25.00	Meter			-
b)	18.8.2 20 mm nominal outer dia pipes	10.00	Meter			-
c)	18.8.3 25 mm nominal outer dia pipes	10.00	Meter			-
d)	18.8.4 32 mm nominal outer dia pipes	10.00	Meter			-
e)	NS 40 mm nominal outer dia pipes	10.00	Meter			-
f)	NS 50 mm nominal outer dia pipes	10.00	Meter			-
22.3	NS Providing & fixing Gi pipes complete with fittings & clamps including cutting & making good the wall etc					
a)	65 mm dia	5.00	Meter			-
b)	80 mm dia	5.00	Meter			-
c)	100 mm dia	5.00	Meter			-
22.4	NS Providing and fixing gun metal ball valve with of approved quality (screwed end)					
a)	15 mm nominal bore	5.00	Each			-
b)	20 mm nominal bore	5.00	Each			-

Item No	Description Of Item	Quantity	Unit	Rate in (Rs.)	Rate in Words	Amount in (Rs.)
22.5	18.17 providing and fixing gun metal gate valve with C.I. wheel of approved quality (screwed end)					
a)	8.17.1 25 mm nominal bore	5.00	Each			-
b)	8.17.2 32 mm nominal bore	5.00	Each			-
c)	8.17.3 40 mm nominal bore	5.00	Each			-
d)	8.17.4 50 mm nominal bore	5.00	Each			-
e)	8.17.5 65 mm nominal bore	5.00	Each			-
f)	8.17.6 80 mm	2.00	Each			-
22.6	NS Providing and fixing C.I. butterfly valve complete bolts, nuts rubber insertions etc.					
a)	100 mm	1.00	Each			-
b)	150 mm	1.00	Each			-
22.7	18.21 Providing and fixing unplasticised PVC connection pipe with brass unions:					
	18.21.1 45 cm length					
	18.21.2 15 mm nominal bore	25.00	Each			-
22.8	18.22 Providing and fixing C.P. brass shower rose with 15 or 20 mm inlet					
a)	8.22.1 15 mm diameter	10.00	Each			-
22.9	18.38 Painting CPVC/G.I. pipes and fittings with synthetic enamel white paint over a ready mixed priming coat, both of approved quality for new work					
a)	8.38.1 15 mm nominal outer dia pipes	10.00	Meter			-
b)	8.38.2 20 mm nominal outer dia pipes	10.00	Meter			-
c)	8.38.3 25 mm nominal outer dia pipes	10.00	Meter			-
d)	8.38.4 32 mm nominal outer dia pipes	5.00	Meter			-
e)	8.38.5 40 mm nominal outer dia pipes	50.00	Meter			-
f)	8.38.6 50 mm nominal outer dia pipes	20.00	Meter			-
22.10	18.4 Painting CPVC/G.I. pipes and fittings with two coats of anti-corrosive bitumastic paint of approved quality:					
a)	8.40.1 65 mm dia	10.00	Meter			-
b)	NS 100 mm dia	10.00	Meter			-
c)	NS 150 mm dia	10.00	Meter			-
22.11	18.49 Providing and fixing C.P brass bib cock of approved quality.					
a)	8.49.1 15 mm nominal bore	10.00	Each			-
22.12	18.50 Providing and fixing C.P. brass long nose bib cock of approved quality conforming to IS standards and weighing not less than 810 gms.					
a)	8.50.1 15 mm nominal bore	10.00	Each			-
22.13	18.52 Providing and fixing C.P. brass stop cock (concealed) of standard design and of approved make conforming to IS:8931					
a)	8.52.1 15 mm nominal bore	10.00	Each			-
22.14	18.53 Providing and fixing C.P. brass angle valve for basin mixer and geyser points of approved quality conforming to IS:8931.					
a)	8.53.1 15 mm nominal bore	10.00	Each			-
22.15	18.62 Providing and fixing PTMT ball cock of approved quality, colour and make complete with Epoxy coated aluminium rod with L.P./H.P.H.D. plastic ball.					
a)	8.62.1 50 mm nominal bore, 242 mm long weighing not less than 1240 gms	1.00	Each			-
22.16	NS Extra for providing wash basin mixer with braided hose in place of normal pillar tap	5.00	Each			-
22.17	NS Providing & fixing sink mixer with swivel casted spout complete in all respect	5.00	Each			-
22.18	NS Providing & fixing non telephonic wall mixer with all fittings complete in all respect	10.00	Each			-
22.19	18.1 Providing & fixing GI Pipes complete with GI fittings including trenching & refilling Etc.					
a)	8.12.1 80 mm dia nominal bore	10.00	Meter			-
22.20	NS Providing and fixing garden hydrant of approved quality and make complete in all respect	5.00	Each			-
22.21	18.1 Making connection of G.I. distribution branch with G.I. main of following sizes by providing and fixing tee, including, cutting and threading the pipe etc. complete including obtaining approval of drainage and for connection from DJB/Municipal corporatio					
a)	50 to 150 mm nominal bore	1.00	Each			-
22.22	NS Providing and fixing mosquito proof coupling of approved Municipal design for scour and vent pipes for RCC overhead tanks complete in all respects	5.00	Each			-
	65 mm dia					
22.23	NS Providing and fixing double seal type D.I. Manhole cover of 560 mm clear internal diameter of over all heavy duty with locking arrangement complete in all respects.	2.00	Each			-
	TOTAL CARRIED TO SUMMARY					
23	SEWORAGE & DRAINAGE					
23.1	19.1 Providing laying and jointing glazed stoneware pipes grade 'A' with stiff mixture of cement mortar in the pro-portion of 1:1 (1 cement : 1 fine sand) including testing of joints etc. complete.					
a)	19.1.1 200 mm diameter	25.00	Meter			-
23.2	19.6 Providing and laying non-pressure NP2class (light duty) R.C.C. pipes with collars jointed with stiff mixture of cement mortar in the proportion of 1:2 (1 cement : 2 fine sand) including testing of joints etc. complete.					

Item No	Description Of Item	Quantity	Unit	Rate in (Rs.)	Rate in Words	Amount in (Rs.)
b) 19.6.4	300 mm diameter	25.00	Meter			-
	TOTAL CARRIED TO SUMMARY					
24	FIRE FIGHTING SYSTEM					
24.1	NS Supply,Installation, Testing & Commissioning of: Gun-metal ISI marked oblique pattern hydrant landing valve with 80 mm dia flanged inlet and 63 mm dia instantaneous type female outlet complete with gunmetal cap and G.I. chain, twist release typ					
a	Single headed landing valve	1.00	Each			-
24.2	NS Supply,Installation, Testing & Commissioning of First-Aid Fire Hose Reel wall mounting swinging type complete with drum,bracket, 25 mm dia. Ball valve and 20 mm dia.x 36.5 M long high pressure Hose Reel tubing as per IS:444 with Gun-Metal shut-o	1.00	Each			-
24.3	NS Supply,Installation, Testing & Commissioning of Non-percolating flexible hose (RRL type-'A') ISI marked (IS:636) 63 mm dia x 15 M long complete with instantaneous type gunmetal 63 mm dia. IS marked Male and female couplings (IS:903) bound and r	6.00	Each			-
24.4	NS Supply,Installation, Testing & Commissioning of Controlled Percolating (CP) Hose ISI marked (IS:8423) 63 mm dia x 15 m long complete with instantaneous type gunmetal 63 mm dia, ISI marked Male & Female couplings (IS:903) bound and rivetted to hose pipe wi	5.00	Each			-
24.5	NS Supply,Installation, Testing & Commissioning of Gun-metal 63mm dia short size branch pipes with 20 mm dia nozzles with 63mm instantaneous coupling ISI marked (IS: 903).	5.00	Each			-
24.6	NS Providing and fixing Fire hose cabinet with glazed door shutter and frame with hold fasts (frame fabricated from 40 x 40 x 5mm and shutter from angle) 2100 mm high x 1200 mm wide x 600mm deep with locking arrangement, 4mm thick glass with M.S. flats inc	5.00	Each			-
24.7	NS Supplying and Fixing of Weather Proof Hose Cabinet suitable for external yard hydrant / FBIC fabricated out of 2 mm thick M.S. sheet with 6 mm thick glazed glass door in front having locking arrangements, suitable to accommodate external hydrant with butterfly valve, 2 nos 15 Mtr. long hose reels, branch pipe / FBIC with all the necessary pipes, accessories, fittings etc., mounted on wall or raised brick platform and duly painted with PO Red externally and white internally with synthetic enamel paint, sign writing etc. complete in all respects as required at site and having minimum following dimensions. 900 mm x 600 mm x 500 mm deep	11.00	Each			-
24.8	NS Supply,Installation, Testing & Commissioning of Gun-Metal Fire Brigade connection (Suction collecting head) consisting of 4/3 nos. 63 mm dia instantaneous type male coupling with built-in check valves and 150 mm dia.flanged outlet complete with bolts, n					
	Two way 63 mm fire brigade connection	1.00	Each			-
24.9	NS Supply,Installation, Testing & Commissioning of Air release valve with all accessories as required	1.00	Each			-
24.10	NS Providing, fixing joiting and testing of Heavy (class -C) G.I. pipes as per relevant IS :1239/4736 with special accessories like tees, elbow, gesket, flanges, flanged joints, rubber insertion nuts and bolts including earth work excavatin and trenching, wr					
a	100 mm dia(FLANGED JOINT)	5.00	Metre			-
24.11	NS Providing and fixing Forged Ball valve with hard chrome plated ball inside PTFE (Teflon) seat & ring with chrome plated centre handle with female BSP threads complete: in all respects suitable for 15 kg/sqcm.					
a	25 mm dia nominal bore	45.00	Each			-
24.12	NS Providing and fixing dial type pressure gauge with ball valve and pipe at hydrant station.					
	Dial diameter 150 mm, calibration 0-15 kg/sqcm	1.00	Each			-
	Sub Head Total					-
	TOTAL SPECIAL REPAIRS					-

BILL OF QUANTITIES FOR PROVIDING OPERATION & MAINTENANCE SERVICES FOR ELECTRICAL WORKS AT RESIDENTIAL BUILDINGS CONSTRUCTED UNDER PHASE-1 FOR REDEVELOPMENTY OF LHMC

S. No.	Description of Items	Quantity	Unit	Rate (Rs.)	Rate in words	Amount (Rs.)
1	<p>Comprehensive Maintenance, up-keeping, attending day to day complaints and rectification of all electrical installations in various type of flats(as per list attached) including attached servant quarters, garages, sentry post, guard room etc. round the clock including Sundays and Holidays with minimum one electrician and one helper will be provided for the above work. Installations comprises of internal electrification, external electrification, distribution board, main board and all type of light fixtures like brass bracket, flourescent fitting, CFL fittings, gate light, lawn/compound light, streat light, security light etc. and electrical appliances and gadget like geysers, ceiling fan, exhaust fan, fresh air fan and pump set etc. including repairing of these fixtures and gadget, repainting etc. as and where ever required and as per attached terms and conditions.</p>					

	NOTE:- All complaints and work executed shall be properly recorded in the complaint register and documented. This register shall be kept at site office/service centre and abstract of daily complaint received/attended shall be recorded in the register and compiled list of monthly complaint shall be submitted on first day of every succeeding month. Attendance register of staff deputed shall be maintained and kept at site office and duty chart of worker shall be displayed at site office/service centre. One Supervisor/ site Engineer should be available at site office for overall supervision of the work under this agreement.	12	Per Months			
	TOTAL					
B	SPECIAL REPAIR					
1	Supplying of following size of FRLS PVC insulated copper conductor, single /flexible core cable .					
a	1.5 Sq. mm	200	Metres			
b	2.5 Sq. mm	200	Metres			
c	4.0 Sq. mm	100	Metres			
d	6.0 Sq. mm	100	Metres			
e	10.0 Sq. mm	100	Metres			
f	16.0 Sq. mm	100	Metres			

2	Supply of telephone wiring of un armoured 2 pair 0.5 mm dia copper PVC conductor wiring of following sizes in the existing conduit. The replaced wire will be FR cable of reputed make.					
	2 pair	100	Metre			
3	Supplying of following sizes of steel conduit along with accessories .					
a	20 mm	50	Metres			
b	25 mm	50	Metres			
c	32 mm	50	Metres			
4	Supplying of following sizes of PVC conduit along with accessories .					
a	20 mm	50	Metres			
b	25 mm	50	Metres			
c	32 mm	50	Metres			
5	Supplying metal box of following sizes (nominal size) on surface or in recess with suitable size of phenolic laminated sheet cover in the front including painting etc. as reqd.					
a	180 mm x 100 mm x 60 mm deep	10	Nos.			
6	Supplying 3mm thick phenolic laminated sheet cover in the existing metal switch board alongwith screws, washer i/c dismantling the existing sheet etc. as required.	2	Sq mtrs.			

7	Supplying of following modular switch, socket & accessories on the existing modular plate and switch box including connections but excluding modular plate etc. as reqd.					
a	5/6 amps switch	50	Nos.			
b	2 way 5/6 amps switch	10	Nos.			
c	15/16 amps switch	10	Nos.			
d	3 pin 5/6 amp socket outlet	20	Nos.			
e	6 pin 15/16 amp socket outlet	10	Nos.			
f	20 amp switch/ SP MCB	5	Nos.			
g	20 amp socket	5	Nos.			
h	Telephone socket outlet (RJ-11)	10	Nos.			
i	Stepped type electronic fan regulator	10	Nos.			
j	Blanking plate (modular)	50	Nos.			
k	Bell push	10	Nos.			
l	TV Antenna Socket Outlet	10	Nos.			
m	RJ-45 Socket Outlet	10	Nos.			
8	Supplying call bell/buzzer suitable for D.C/ A.C.single phase,230 volts, complete as reqd.	5	Nos.			
9	Rewinding of 1200 mm ceiling fan including removing and further installation. Rewinding will carry 6 months gurantee	10	Nos.			

i	Change of bearing of 1200 mm ceiling fan including removing and further installation	10	Nos.			
ii	Replacement of capacitor for 1200 mm ceiling fan	10	Nos.			
10	Rewinding of 900 mm ceiling fan including removing and further installation. Rewinding will carry 6 months gurantee	10	Nos			
i	Change of bearing of 900 mm ceiling fan including removing and further installation	10	Nos			
ii	Replacement of capacitor for 900 mm ceiling fan	10	Nos			
11	Rewinding of 225 mm exhaust fan including removing and further installation Rewinding will carry 6 month guarantee	8	Nos			
i	Change of bearing of 225 mm exhaust fan including removing and further installation	8	Nos			
ii	Replacement of louver of 225 mm exhaust fan	8	Nos			
iii	Change of capacitor for exhaust fan	8	Nos			
12	Painting of ceiling fan in installed position with one or more coats of spray painting with synthetic enamel paint of approved brand and manufacture to give an even shade, i/c cleaning of surface with detergent etc. as reqd.	50	Nos			
13	Supplying following rating / series 240 volts miniatre circuit breaker suitable for lighting and other loads / inductive load of following poles in the existing MCB DB complete with connections, testing and commissioning etc. as reqd.					
a	6 to 32 amp Single Pole 'C' Series	50	Nos.			
b	25 Amps Double pole C- series.	5	Nos			

c	32 Amps Double pole C- series.	5	Nos			
d	32 Amps Double pole C- series (Modular)	5	Nos.			
e	40 Amps Double pole C- series.	5	Nos			
f	25 A Four Pole C- series.	5	Nos.			
g	32 A Four Pole C- series.	5	Nos.			
h	40 A Four Pole C- series.	5	Nos.			
i	63 A Four Pole C- series.	5	Nos.			
14	Supply following ELCB/ RCCB in the existing MCB DB of 30/ 100 mA rating					
a	25 A DP	5	Nos.			
b	32 A DP	5	Nos.			
c	40 A DP	5	Nos.			
d	25 A Four Pole	5	Nos.			
e	32 A Four Pole	5	Nos.			
f	40 A Four Pole	5	Nos.			
g	63 A Four Pole	5	Nos.			
15	Supply of following thermal magnetic MCCB / components in the existing panels . The MCCB/components will be of same make as installed or approved equivalent. 25 ka /35 ka /50 ka rating					

i	FP MCCB 63 Amp ,	1	Nos.			
ii	FP MCCB 100 Amp	1	Nos.			
iii	FP MCCB 125 Amp	1	Nos.			
iv	FP MCCB 160 Amp	1	Nos.			
v	FP MCCB 200 Amp	1	Nos.			
vi	FP MCCB 250 Amp	1	Nos.			
vii	FP MCCB 320 Amp	1	Nos.			
viii	FP MCCB 400 Amp	1	Nos.			
ix	FP MCCB 500 Amp	1	Nos.			
x	FP MCCB 630 Amp	1	Nos.			
16	Supply of following components in existing electrical panels/ air circuit breakers/ starters/APFC etc. The components will be of same make and model as installed or approved equivalent.					
i	Fixed contacts 630- 1600 Amp ACB	1	Set			
ii	Moving contacts 630- 1600 Amp ACB	1	Set			
iii	Arc Chutes 630- 1600 Amp ACB	1	Nos			
iv	Differet type of coils each used in ACB like closing, tripping etc	1	Nos			
v	Rack-in rack-out handle for ACB	1	Nos			
vi	Spare contact kit for 32 amp TP contactor similar to existing kit.	1	Nos			
vii	Spare contact kit for 60 amp TP contactor similar to existing kit.	1	Nos			
viii	Spare contact kit for 100 amp TP contactor similar to existing kit.	1	Nos			
ix	Auto/ Manual selector switch	1	Nos			
	5 KVAR capacitor bank, Extra heavy duty	1	Nos			
x	10 KVAR capacitor bank, Extra heavy duty	1	Nos			
x	12.5 KVAR capacitor bank, Extra heavy duty	1	Nos			
xi	25 KVAR capacitor bank, Extra heavy duty	1	Nos			
xiii	Off delay timer similar to existing timer	1	Nos			

17	Supply of light fixtures. The makes and model should be same as installed or approved equivalent.					
i	18 watt tube light	5	Nos			
ii	36 watt fluorescent light lamp (tube)	50	Nos			
iii	28 watt tube light TL-5	25	Nos			
iv	Starter for fluorescent fixture	50	Nos			
v	Electronic balast for fluorescent fixture	50	Nos			
vi	Copper bound ballast for fluorescent fixture	50	Nos			
vii	Copper bound ballast for CFL	20	Nos			
viii	9 watt CFL	50	Nos			
ix	11 watt CFL	50	Nos			
x	13 watt CFL	10	Nos			
xi	18 watt CFL	50	Nos			
xii	36 watt CFL	5	Nos			
xii	70 watt CFL	5	Nos			
xii	80 watt CFL	5	Nos			
xiii	50 watt halogen lamp	10	Nos			
xiv	150 watt HPSV lamp	10	Nos			
xiv	400 watt HPSV lamp	5	Nos			
xv	Ignitor for 150 watt HPSV Lamp	10	Nos			
xv	Ignitor for 400 watt HPSV Lamp	4	Nos			
xvi	Complete gear box for 150 watt HPSV Lamp	2	Nos			
xvi	Complete gear box for 400 watt HPSV Lamp	2	Nos			
xvii	Housing for post top light fixture Philips HPS 360, Sonara or approved equivalent	5	Nos			
xviii	12 volt transformer for halozen lamp	5	Nos			
18	Painting of streat light pole with silver grey or as approved by site incharge. Including paint and labour.	50	Nos.			
19	Supply of heat shrinkable straight through joints of the following LT calbles of 1.1 Kv					

a	3.5 C x 25 Sq mm	2	set			
b	3.5 C x 50 Sq mm	2	set			
c	3.5 C x 70 Sq mm	2	set			
d	3.5 C x 95 Sq mm	2	set			
e	3.5 C x 120 Sq mm	2	set			
f	3.5 C x 185 Sq mm	2	set			
f	3.5 C x 240 Sq mm	2	set			
g	3.5 C x 300 Sq mm	2	set			
h	4 C x 35 Sq mm	2	set			
h	4 C x 25 Sq mm	2	set			
h	4 C x 16 Sq mm	2	set			
20	Supply of 11 kV grade hand gloves	4	Nos.			
21	Supply of 440 V grade hand gloves	4	Nos.			
22	Supply of First aid box as per Indian Red Cross Society details.	2	Nos.			
23	Replacement of existing 12 V battery for starting of DG set with new against buy back of the old battery	4	Nos.			
	TOTAL					
C	AMC					

1	Annual comprehensive maintenance charges for the following items installed at site. The CAMC will be done by OEM or his authorised service provider. The bidder is required to quote the annual cost of the CAMC inclusive of his professional charges for arranging the same. The detailed break-up of CAMC chages for each equipment / system to be enclosed separately					
1.1	Charges for the first year of CAMC					
	Lifts					
	Comprehensive Annual Maintenance including all material and labour for 8 passenger lifts having speed of 1.0 MPS, VVVF, Microprocessor based automatic power operated doors etc complete as installed in the residential block and having follwing stopes and landings: , etc.(Make: Kone) complete as installed and having follwing stopes and landings:					
	4 stops and 4 landings	4 Nos				
	DG Set Charges for annual maintenance					
	Annual Maintenance including all material and labour for 82.5 KVA DG set (Make: Kirlosker) including AMF panel, day tank and associated pumps pipe lines etc, power & control cable, accoustics enclosure, heat exchanger etc complete including 'B' checks as per the	1 Lot				
	Annual Maintenance including all material and labour for 62.5 KVA DG set (Make: Kirlosker) including AMF panel, day tank and associated pumps pipe lines etc, power & control cable, accoustics enclosure, heat exchanger etc complete including 'B' checks as per the manufacturer's recommendations/ requirements.	1 Lot				

	TOTAL					
D	ONE TIME MAINTENANCE					
1.00	Providing one time repair of the following systems installed at the site. Repair will be done by OEM or his authorised service provider. The cost will be all inclusive. The bidder will mention the details of the work to be done in order to make the system functional in the technical bid and its cost in financial bid. The payment will be made against the actual work done on the accepted rates.					
	Lifts:					
	One time maintenance including all material and labour for 8 passenger lift, 1.0 Mps, for existing passenger lift (Make Kone) complete as installed in the hospital and having following stops and landings:					
	Ground Floor +3 (4 stops & 4 landings)	4 Nos				
	DG Set:					
	One time maintenance including all material and labour for 82.5 KVA DG set (Make: Kirlosker) including AMF panel, day tank and associated pumps pipe lines etc, power & control cable, accoustics enclosure, heat exchanger etc complete including 'B' checks as per the manufacturer's recommendations/ requirements.	1 Nos.				

	One time maintenance including all material and labour for 62.5 KVA DG set (Make: Kirlosker) including AMF panel, day tank and associated pumps pipe lines etc, power & control cable, accoustics enclosure, heat exchanger etc complete including 'B' checks as per the manufacturer's recommendations/ requirements.					
		1 Nos.				
	TOTAL					
E	Operation charges for following system through deployment of qualified manpower as per suggested minimum manpower chart. The charges will be all inclusive. Contractor has to follow all maintenance requirement as per tender conditions					
	Operation charges for one year					
	Round the clock operation of electrical sub-station & DG set through minimum defined manpower in SCC	12	Per Month			
	Operation of lift round the clock through minimum defined manpower in SCC					
	TOTAL					

SUMMARY OF COST ESTIMATES

S.No.	Description	Total Estimated Cost (Rs)
A (1)	Comprehensive Maintenance (Civil Works)	-
B (1)	Horticulture & Maintenance	-
C (1)	Sweeping & Cleaning	-
D (1)	Underground Tank	-
D (2)	Operation cost-Sewage Treatment Plant	-
E (1)	AMC of Pumps & STP	-
E (2)	Operation Fire fighting work	-
E(3)	AMC Fire fighting work	-
E(4)	AMC Solar Water Heating system	-
F	Special Repairs	
	Miscellaneous Item civil workks	-
	TOTAL COST	-
	ELECTRICAL WORKS	
A	Comprehensive Maintenance (Electrical Works)	
B	Special Repairs Electrical Works	
C	AMC (Lifts + DG Sets)	
D	One time repairs (Electrical works)	
E	Operation Charges Electrical Substation & Lifts	-
	TOTAL COST	-

**OPERATION & MAINTENANCE SERVICES FOR RESIDENTIAL
BUILDINGS CONSTRUCTED UNDER PHASE-1 FOR REDEVELOPMENTY
OF LHMC**

SUMMARY		Rupees
1	Cost of Civil Works & Services(Part1)	-
2	Cost of Electrical Works(Part2)	
	Total cost	-