

Upliftment / Upgradation of Facade of SBI LHO Building New Delhi
Bill of Quantities

PROPOSED UPLIFTMENT / UPGRADATION OF FAÇADE OF 'C' & 'D' BLOCK BUILDINGS AT STATE BANK OF INDIA, LHO, NEW DELHI COMPLEX	
BILL OF QUANTITIES- FACADE WORKS	
	PREAMBLE
	Rates shall be inclusive of the following:
	1) The servicable and unservicable materials shall be stacked separately and properly in the designated place and to be
	2) All the civil works has to be carried out with minimum 43 grade OPC cement and VSI grade crushed sand, of required fineness, which shall be free from stilt and other impurities.
	3) All the civil works must be cured for at least 7 days.
	4) For all works, water to be use must be fresh, potable and pure without any salinity and turbidity.
	5) The rates quoted for all items of the BOQ shall include the following specifications:-
	i) All the works are to be carried out at all height and locations i.e. from foundation level, ground floor of the building upto the overhead water tank, roof slab or mumty roof slab as applicable.
	ii) Providing and fixing Mild steel double scaffolding system (cup and lock type) on the exterior side, up to any height(entire height) of the building structure made out of 40mm dia. M S Tubes 1.5m centre to centre, horizontal and vertical tubes joining with cup and lock system with M.S. tubes, m. S. Tube challies, M. S. clamps and M S Stair case system including the working platforms etc. and maintaining it in a servicable condition for the entire required duration as approved and directed by SBI/APMC and removing it there after.
	iii) The scaffolding system shall be stiffened with bracing, runners connection with the building fascia etc. wherever required & including providing vertical supports which shall be sound and strong, tied together with horizontal steel /metal support pieces over which scaffolding planks shall be fixed properly & secured at required locations including the essential safety features for the workmen etc. complete as per direction and approval of SBI/APMC. Note:- Scaffolding shall not be removed without prior approval of SBI/APMC
	iv) Providing and fixing temporary support arrangement such as steel props (upto any number whenever and wherever required as directed by SBI/APMC) to support the structure provisionally during the project duration for all trades of works etc., and maintaing the props in position till required and as directed by the consultant including other safety elements such as bracings steel angles, working platforms, plates etc., which shall be provided and considered in the quoted rates for the area in the vicinity in adequate numbers as directed. All trades or work indicated herein under shall include all leads & lifts & working upto any heights, depths, and levels.
	v) Providing and fixing safety net around the work so that loose plaster/ concrete does not cause damage to the property or any humen beings, if necessary and removing the same after completion of work.
	vi) Providing and covering entire external surface with Hessian cloth curtains thruoghout the duration of the project and carefully removing the same after completion of the work.
	vii) Providing all types of PEE to the workforce such as safety shoes, safety helmets, reflective safety jackets, full body safety harness, goggles, gloves etc. complete for all types of workforce engaged on site for execution of the work.
	viii) The quoted rate should include cost of nessary scaffolding, staging, centring and shuttering etc. as required for execution of the job at any height and location including removal of the same. The scaffolding should be erected and anchored into the concrete members with the help of expandable bolts, which are to be cut as the scaffolding is removed, no wall is to be punctured, at no extra cost to the bank.
	ix) Rates shall be inclusive of all enabling works like tower cranes with all safety measures , arial lifts, man amd material lifts, Temporary lifts, scaffolding, Cup lock system, Labour camps, storages, godowns, all required permission from local governing respective authorities to carry out works, all insurances, all licenses, administration, all S.H.E. related measures, security watch and ward measures, barricades other than spcified, traffic management, tree protection, property damage repair, water, electricity, DG Set as per requirements, all tools, machineries, vehicals etc. complete.

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	x) Before starting the excavation NGL levels shall be got varified and approved by SBI/APMC and RL levels to be at the top of different layer and based on the difference levels excavation qty shall be calculated. Area of excavation shall be arrived by adding max. 0.6m on each from RCC side working space around foundation /Raft or actual area required/excavated for basment excavation all as per direction from SBI/APMC				
	xi) All rates should be inclusive all loading, unloading, shifting, all leads, lifts, sorting, transportation, lobours, tools, plants, machinery, etc. complete.				
	xii) All the above mentioned points including the requisite elements and items as mentioned shall be considered included within the quoted rates of the line items of the BOQ and nothing extra would be paid on this account.				
	xiii) Though locations of execution are mentioned for specific items, Contractor have to execute those all items at all required / necessary locations at no extra cost as per direction from SBI/APMC				
Item No.	DESCRIPTION	UNIT	Total Qty	Rate	Amount
1	Removal/Dismantling of old plaster from wall surface Dismantling old plaster or skirting raking out joints and cleaning the surface for plaster including scaffolding staging for all heigth and carting away unservicable material /debris to any place outside the premises approved by munciple corporation/NDMC .	Sqm	3,284.00	₹ 47.00	₹ 1,54,348.00
2	Dismantling Aluminium fins of 300 (L) x 50 (W) x 3000(H) from all height at different locations and levels including removing of supporting and fixing system attached with aluminium fins and cleaning and repairing of surface after removal of fins and other fixing members including shifting the fins from various floors to ground level and stacking of fins at desired location within the premises as per the instructions of architect/engineer in charge. Number of Fins removed will be counted for payment.	Each	4,820.00	₹ 90.00	₹ 4,33,800.00
3	Disposal of dismantled plaster, RCC,debris etc. outside the site/premises to any municiple approved dumping ground/NDMC approved dumping yard / unobjectionable place (within / outside Munciple limits) or to any place arranged by the contractor of his own with all lead and lift, including royalty, loading at site, Mechanical transportation, unloading, stacking, spreading, etc. complete as directed by the Engineer-in-charge. Note - item to be applicable in urban areas having directions for restricted hours for movement/ plying of load carrying motor vehicle of 2.83 cum or more.	per trip	20.00	₹ 2,500.00	₹ 50,000.00

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Item No.	DESCRIPTION	UNIT	Total Qty	Rate	Amount
4	<p>Glass Reinforced Concrete Screen jali</p> <p>Providing and fixing, Glass Fibre Reinforced Concrete (G.F.R.C) Screen Jali casted with 'Spray Mix' concrete design in approved size, pattern, Border Thickness: 40-50mm , Inner member: 25-30mm</p> <p>OR Overall 35mm thick seamless module pattern in approved shade and design. The fixing of Elements should be done using 'Dry fixing' method onto structural support members i.e. R.C.C, Brick work or Red Oxide Primer -paint or Epoxy primer -paint treated mild steel. The fixtures, fasteners and self-tapping screws to be used for dry fixing should be of HP/STEEL GRIP/ KLIMAS/ Fischer or with SS 304 Clamps. Note: GRC Screens will have 50% void and 50% solid area (approx)</p> <p>Dry Bulk Density (kg/m3) 1800-2000</p> <p>♦ Water Absorption (%) 8 - 12</p> <p>♦ LOP (N/mm2) >6</p> <p>♦ MOR (N/mm2) >12</p> <p>Front elevation area will be measured for payment</p> <p>The contractor shall submit shop drawings of the same, the drawings to be duly approved by the Engineer in charge at site. The GFRC screen jali shall be fixed with L-clamp welded to structural Steel frame (Horizontal and Vertical member) support made up of MS box pipe of minimum 50X50mm or 75X100mm and 5mm thickness or as per manufacture specifications to hold the GRC Jalli for required building height & opening to withstand wind pressure complete in all aspects including scaffolding, staging etc. as per approved drawings and directions of Engineer in charge.</p> <p>The structure steel frame work shall be paid seperatly under sepreate item (BOQ No. 12)</p> <p>Approved makes- Unistone, Eco vision , Dalal GRC, Pearl stone, Indo Art</p>	Sqm	1,424.00	₹ 5,200.00	₹ 74,04,824.96
5	<p>Luxalon Custom Perforated Secondary Triangular Screen Façade System- For Podium Area</p> <p>Providing and fixing Luxalon Custom perforated Secondary Triangular Shaped Screen Façade system made of 2 mm thick solid aluminium alloy AA3105 / 3000 Series, width-1 & width-2 up to 1200 mm and length up to 2500 mm to form a tray Triangular shaped panels with flanges of minimum 50 mm width. The perforation shall be customized as per the approved design. The Triangular perforated façade panels shall be fixed on the existing wall with the support of MS Sub-structure brackets by means of appropriate fixing methodology as per manufacturer specifications / fixing details. The MS sub-structure frame work shall be paid seperatly under sepreate item (BOQ No. 12)</p> <p>The Perforated Façade Aluminium Panel shall be pretreated with eco friendly Silane based technology. Approved Colour, Exterior grade powder applied thru Automatic Carona technology electrostatic spray guns and cured in combination with Infrared & hot air circulated oven in a certified plant by powder manufacturer. The coating thickness shall be minimum 60 microns</p> <p>Mode of Measurements: the Surface area of the Aluminium façade panels including the perforation holes and gaps between the panels without any deductions for any kind of fixtures or any other openings, etc.</p> <p>Approved Make List: Hunter douglas, SAS, Gorden, DAMPA</p>	Sqm	864.00	₹ 7,860.00	₹ 67,91,040.00

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Item No.	DESCRIPTION	UNIT	Total Qty	Rate	Amount
6	<p>Design, Supply, fabricating, assembling & installing in position, for wall cladding, using 12mm thick double Skinned Aluminum Honeycomb Panel,consisting of top skin 0.7mm and bottom Aluminium skin thickness of 0.5mm of AA3105 H14 grade aluminium alloy. The top aluminium sheet shall be coated with PVDF/FEVE coat by continuous coil coating process and having a coating thickness of 25-28 microns. The bottom aluminium sheet shall have service coating of 4-7 microns. The 10.8mm thick aluminium honeycomb core shall have foil thickness of 0.076mm and cell size of 19mm.The honeycomb core shall be of alloy AA3003 grade. The honeycomb shall be high pressure pressed in controlled factory conditions with two-part high temperature cured PU adhesive to top and bottom aluminium skin by mechanized glue spreader. Coating on the panels are done by Double Coat Double Bake Continuous Coil Coating process of the approved color on the exposed side.</p> <p>The rate shall also include the following:</p> <p>(i). The 12mm thick Aluminium Honeycomb Panels shall be mounted on grid support system of 50 / 100mm M.S. (Hot Dip Galvanized- Minimum 100 microns) tubular section secured to be screwed with customized Aluminium extruded Clamps of AA 6063 Grade and with bimetallic separators. Fabricated pre- coated Aluminium Honeycomb panels with Aluminium extruded Clamps which is fixed mechanically on to the back using pop rivets and it would be fixed with same extruded aluminium profile which will be fixed to the back aluminium channel or MS profile or both as per design. Providing vertical/horizontal grooves of 12mm/20mm for expansion. The installer shall provide connections in the substructure to pass seismic zone V. Vertical /Horizontal Stiffeners (Aluminium Channel/ Aluminium Hollow Tubular section) to be provided in the Aluminium Honeycomb sheet used for giving extra intermediary support to final Aluminium Honeycomb Panel Size to prevent the panel from sagging/deflecting. The system shall be designed to withstand a wind pressure confirming IS 875-Part III 2015 at all levels, elevations and heights. The extruded section shall be of 6063 T6 alloy to withstand a wind pressure at all levels, elevations and heights. All concealed aluminium surfaces/ any extruded aluminium cleats / clamps shall be finished with chrome-free pretreatment primer/ anodized finish.</p> <p>(ii)The fastening materials Nuts, Bolts, Rivets, washers, clamps, straps etc. required for fixing the framing members to the masonry wall / RCC surface shall be of stainless steel 316 grade and corrosion resistant of approved make as per Architects/Consultant Specifications.</p> <p>(iii)Providing Non-Staining & Non-Bleeding High Performance weather silicone medium modulus elastomeric sealant to minimize streaking on metal panels-Dowsil 991/GE-SCS9000, shade as per architect's requirement. Weather seals must be neutral cure, one- part, high performance silicone sealant, capable of sustaining dynamic movements.</p> <p>(iv) Necessary scaffolding / staging for all heights & levels, providing openings, cut outs for installation of MEPF, IT, Media, Signage fixtures, providing grooves, required additional / extra frameworks for the installation of the fixtures with provision of the frame along perimeter of the cut outs/ opening with channels / ply to support the cladding system adequately, all complete.</p> <p><i>Approved Make List: Aludecor,Alucore,Alucoband, Hunter douglas,</i></p>	Sqm	10.00	₹ 7,820.00	₹ 78,200.00

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Item No.	DESCRIPTION	UNIT	Total Qty	Rate	Amount
7	<p>Designing,providing, fabricating, testing,supplying, installing and fixing in position Aluminium Composite Panel Cladding, in any shape in metallic colour of approved shades and size,made out of Aluminium Composite Panels of 4mm Total Thickness with top and bottom coil of 0.5mm thick AA3105 alloy grade following EN 485-2. The top aluminium coil should be with lead-free PVDF (Polyvinyl diene Fluoride) paint of 70:30 ratio (PVDF: Acrylic) with 15year warranty, with open grooves for linear as well as curvilinear portions of the building ,fixed to structural steel frame work and/ or with the help of cramps, pins etc. including providing necessary frame work of mild steel / Aluminium box section made out of 25x50mm tubes at spacing of 600mm centre to centre in horizontal and vertical position or as required, stainless steel cramps and pins etc., including scaffolding, staging, necessary supports etc. and sealing the joints with approved weather sealant as per Architectural drawing and direction of Engineer-in-charge complete in all aspects,for all heights and all levels etc.</p>	Sqm	3,300.00	₹ 3,110.00	₹ 1,02,63,000.00
	<p>The fastening brackets of Aluminium alloy 6005 T5 / MS with Hot Dip Galvanised with serrations and serrated washers to arrest the wind load movement, fasteners, SS 316 Pins and anchor bolts of approved make in SS 316, Nylon separators to prevent bi-metallic contacts all complete required to perform as per specification and drawing The item includes cost of all material & labour component, the cost of all mock ups at site, cost of all samples of the individual components for testing in an approved laboratory, field tests on the assembled working curtain wall with aluminium composite panel cladding, cleaning and protection of the curtain wall with aluminium composite panel cladding till the handing over of the building for occupation.</p> <p>The Contractor shall provide curtain wall with aluminium composite panel cladding, having all the performance characteristics all complete , as per the Architectural drawings, as per item description, as specified, as per the approved shop drawings and as directed by the Engineer-in-Charge. However, for the purpose of payment, only the actual area on the external face of the curtain wall with Aluminum Composite Panel Cladding (including width of groove) shall be measured in sqm. up to two decimal places.</p> <p>(Approved makes- Alstrong, Aludecor, Alucobond, Reynobond or equivalent)</p>				
8	<p>Luxalon Custom Perforated Secondary Screen Façade System (2 mm thk)</p> <p>Providing and fixing Luxalon Custom perforated Secondary Screen Façade system made of 2mm thick solid aluminium alloy AA3105 / 3000 Series, width up to 1200 mm and height up to 3500 mm to form a tray shaped rectangular panels with flanges of 50 mm width. The Façade panels shall be manufactured on a continuous automatic CAD/CAM integrated Pivatic Coil to Flat panel line with inline Notching & Customised Perforation. The line shall have ARKU Six Hi configuration roller levelling process to ensure flatness of the panels. The perforation shall be customized as per the approved design. The two rectangular perforated façade panels shall be joined together vertically at site at an angle to create a V-shaped Architectural Façade Design Intent, with the center support of continuous vertical U-shaped Aluminium Luxalon channel profile & end support of L shaped brackets through SS M10 Bolt & Nut.</p>	Sqm	3,528.00	₹ 9,865.00	₹ 3,48,03,720.00

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	<p>The above Luxalon façade system shall be secured to steel substructure support system by means of appropriate fixing methodology as per manufacturers specifications/ shop drawings.</p> <p>The structure steel frame work shall be paid seperatly under sepreate item (BOQ No. 12)</p> <p>The above façade system manufacturer should meet the required standards for Green Pro certification as per CII green products and services council. The manufacturer should also be ISO 9001:2015 Quality Management System Certification compliant with in house testing facility, powder coating facility and have their own manufacturing plant in India.</p> <p>The Perforated Façade Aluminium Panel shall be pretreated with eco friendly Silan based technology. Approved Colour, Exterior grade powder applied thru Automatic Carona technology electrostatic spray guns and cured in combination with Infrared & hot air circulated oven in a certified plant by powder manufacturer. The coating thickness shall be average 60 microns and Salt Spray resistance compliant for 1500 hrs exposure.</p> <p>Mode of Measurements: Measurements shall be the Surface area of the Aluminium façade panels including perforation holes and gaps between the panels without any deductions for fixtures or any other openings, etc.</p> <p>Approved Make List: Hunter Douglas, SAS, Gorden, Dampa</p>				
9	<p><u>® Luxalon Aeroscreen 450 mm Perforated & Roll-formed Louver Manual Operable Vertical System</u></p> <p>Supply & Installation of ® Luxalon Aeroscreen 450 Louver FIN System with manual movable System consists of aluminium extrusion with a wall thickness of min 1.8 mm fin and a 0.9 mm thickness Pre-Roll-formed Aluminium skin made up of high corrosion resistant Aluminum alloy AA 3150 / 3000 Series. The louver Roll-formed Skin is fixed on aluminium extruded tube with aluminium extruded wing shaped brackets in an off-centered configuration, of Alloy Al-Mg-Si 0.5 with fixing system accessories. The customized perforation pattern dully approved shall be done on CAD/ CAM auto index to achieve flatness of the panel without any undulation. The Aeroscreen 450 mm Fin System is consist of fin bearing block, axle, axle lock, nylon end cap & driving end cap, end cap screws, and end cap connector & accessories for adjustable system consists of actuator, driving control consists of driving rod connector, Aluminium /steel driving rod in standard length up to 3000mm</p>	RMT	2,812.00	₹ 10,610.00	₹ 2,98,35,320.00

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	<p>The module of fin for adjustable system is as per the drawing based on the architect's requirement and the length of fin shall be determined based on the wind load calculation and deflection, subject to a up to a maximum length of 3.5M(for Vertical Application). The Aeroscreen System should be perforated fins. While ideally controlling heat gain and light, the fins also preserve views to the outside and broaden the occupants' visual space. The elegant and transparent Aeroscreen System acts perfectly well with the sedate appearance of a building, creating a beautiful look with unique charm. The factory made Luxalon Aeroscreen 450 mm fin will be fixed on both ends to suitable Installation frames of MS sections (MS Sub-structure and Anchor Fasteners shall be additionally paid in a separated Item) provided by Client. The installation frame shall be fixed mechanically to concrete structure with MS brackets. The erected substructure shall be aligned within the tolerances of \pm span/1000 of plumb line and level with a non-cumulative tolerance of a maximum of 2 mm</p> <p>The louver Fin skin Surface Coating: Front side Skin: Exterior Coil or Powder Coated in approved standard RAL colour and Back side Skin: With standard Primer. Alum. Extrusions: All extrusions are Natural anodized. Any kind of MS / Al sub-structure, if required at site shall be Client's Scope. The above louver system manufacturer should meet the required standards for Green Pro certification as per CII green products and services council. The manufacturer should also be ISO 9001:2015 Quality Management System Certification compliant with in house testing facility, powder coating facility and have their own manufacturing plant in India.</p> <p>Mode of Measurements: Measurements shall be the Running Meter of the Aeroscreen Fin Louver Panel including perforation holes and gaps between the panels without any deductions for fixtures, brackets or any other openings, etc.</p> <p>Approved Make List: Hunter Douglas , SAS, Gorden, Dampa</p>				
10	<p><u>Luxalon Custom Perforated Secondary Triangular Screen Façade System - for SBI Logo</u></p> <p>Providing and fixing Luxalon Custom perforated Secondary Triangular Shaped Screen Façade system made of 3mm thick solid aluminium alloy AA3105 / 3000 Series, width-1 & width-2 up to 1200 mm and length up to 2500 mm to form a tray Triangular shaped panels with flanges of minimum 50 mm width. The perforation shall be customized as per the approved design. The Triangular perforated façade panels shall be fixed on the existing wall with the support of MS Sub-structure brackets by means of appropriate fixing methodology as per manufacturer's specifications / shop drawings.</p> <p>The structure steel frame work shall be paid seperatly under sepreate item (BOQ No. 12)</p> <p>The Perforated Façade Aluminium Panel shall be pretreated with eco friendly Silan based technology. Approved Colour, Exterior grade powder applied thru Automatic Carona technology electrostatic spray guns and cured in combination with Infrared & hot air circulated oven by powder manufacturer. The coating thickness shall be average 60 microns and Salt Spray resistance complaint for 1500 hrs exposure.</p>	Sqm	122.00	₹ 7,825.00	₹ 9,54,650.00

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Item No.	DESCRIPTION	UNIT	Total Qty	Rate	Amount
	<p>Mode of Measurements: Measurements shall be the Surface area of the Aluminium façade panels including the perforation holes and gaps between the panels without any deductions for any kind of fixtures or any other openings, etc.</p> <p><i>Approved Make List: , Hunter Douglas,SAS, Gorden, DAMPA</i></p>				
11	<p><u>Vertical Louver System:</u> Supply & Installation of vertical Louver system of approved colour consisting of aluminium channel profile 84 mm wide x 16mm deep x 0.6mm thick with round edges panel length up to 6mtrs coil coated on a continuous paint line double baked and roll formed from enameled corrosion Resistance Aluminum Alloy AA3105 / 3000 SERIES for higher strength and good Roll forming characteristics. Combination of 2 vertical Panels making V shape design together shall be clipped at a distance of 261 mm & there will be one vertical panel between 2 V shape design panel module at a distance of 261 mm to baked enameled Aluminium V-8A Stringer, 49mm wide and 92mm deep x 0.95 mm thick in a standard length of 5mtrs made of double baked enameled Aluminium Alloy AA3000 / 5000 Series to hold the panel in a module of 261 mm centre to centre. Stringers shall be fixed at 150 mm from panel ends and at a distance of maximum 1000 mm center to center across the panel span. The carrier shall be fixed to a suitable MS Sub-structure by means of rigid fixing details as per manufacturer's specifications / shop drawings. The structure steel sub-structure / frame work shall be paid seperatly under sepreate item (BOQ No. 12)</p> <p>The above Louver system manufacturer should meet the required standards for Green Pro certification as per CII green products and services council. The manufacturer should also be ISO 9001:2015 Quality Management System Certification compliant with in house testing facility, powder coating facility and have their own manufacturing plant in India.</p> <p>Mode of Measurements: Measurements shall be the wall to wall elevation area including gaps between panels without any deductions for fixtures or any other openings, etc.</p> <p><i>Approved Make List: Hunter Douglas Luxalon V8A,84R Vrtical louver system or equivalent design of SAS, Gorden, Dampa</i></p>	Sqm	359.00	₹ 8,770.00	₹ 31,48,430.00

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Item No.	DESCRIPTION	UNIT	Total Qty	Rate	Amount
12.1	<p>Providing and fixing structural steel frame (for dry cladding with 30 mm thick gang saw cut with machine cut edges sand stone/GRC Jali/perfolated aluminium panels etc.) on walls / windows/ facade at all heights using M.S. square/ rectangular tube in the required pattern as per architectural drawing/manufactured shop drawings including cost of cutting, bending, welding etc. The frame work shall be fixed to the wall with the help of M.S. brackets/ lugs of angle iron/ flats etc. which shall be welded to the frame and embedded in brick wall with cement concrete 1:2:4 (1 cement :2 coarse sand :4 graded stone aggregate 20 mm nominal size) including cost of necessary centring and shuttering and with approved expansion hold fasteners on CC/RCC surface, including drilling necessary holes. Approved cramps/ pins etc. shall be welded to the frame work to support stone cladding, the steel work will be given a priming coat of Zinc primer as approved by Engineer-in-charge and painted with two or more coats of epoxy paint (Shop drawings shall be submitted by the contractor to the Engineer-in-charge for approval before execution). The frame work shall be fixed in true horizontal & vertical lines/planes. for all levels complete in all aspects as per approved drawings & as per instructions of Engineer in Charge. (Only structural steel frame work shall be measured for the purpose of payment and nothing extra shall be paid).</p>	Kg	29,192.00	₹ 236.00	₹ 68,89,312.00
12.2	<p>Providing and fixing structural steel frame (for facade cladding with perfolated aluminium panels etc.) on windows/ facade at all heights using M.S. square/ rectangular tube in the required pattern as per architectural drawing/manufactured shop drawings including cost of cutting, bending, welding etc. The frame work shall be fixed to the wall with the help of M.S. brackets/ lugs of angle iron/ flats etc. which shall be welded to the frame and with approved expansion hold fasteners on CC/RCC surface, including drilling necessary holes. The steel work will be given a priming coat of Zinc primer as approved by Engineer-in-charge and painted with two or more coats of epoxy paint (Shop drawings shall be submitted by the contractor to the Engineer-in-charge for approval before execution). The frame work shall be fixed in true horizontal & vertical lines/planes. for all levels complete in all aspects as per approved drawings & as per instructions of Engineer in Charge. (Only structural steel frame work shall be measured for the purpose of payment and nothing extra shall be paid).</p> <p><i>Approved brand: TATA / APOLLO / JINDAL</i></p>	Kg	78,936.00	₹ 181.00	₹ 1,42,87,416.00

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13	EXTERNAL CEMENT PLASTER (IN COARSE SAND) - New Work Providing and applying single coat average 15 mm thick smooth face finish cement plaster in cement mortar (1 cement : 4 coarse sand) including approved waterproofing compound (Sikka / DrFixit or equivalent) in the proportion approved by the manufacturer of the said waterproofing compound and in proper line, level, plumb with grooves, bands, drip moulds, curing, scaffolding etc as required at all heights and locations complete in all respects and as per instructions of Architect/Engineer. Approved brand of cement (OPC 53 grade): TATA / APOLLO / JINDAL	Sqm	4,577.00	₹ 592.00	₹ 27,09,584.00
14	Textured Paint on New/repaired plastered Surface Providing and applying 2 or more coats of water based 100% Apex weatherproof textured paint of Asian, Dulex, Berger or equivalent approved make and shade having low VOC content less than 50grams/ litre & UV resistance as per IS 15489:2004, Alkali & fungal resistance, dirt resistance exterior paint of required shade (Company Depot Tinted) with silicon additives to concrete and plastered surfaces, ceilings, etc., with roller finish including preparing surfaces, applying primer, scaffolding, etc. after thoroughly brushing the surface to remove all the dirt and all loose powder free from mortar dropping and other foreign material and sand paper smooth etc, at all heights and locations complete in all respects and as per instructions of Architect/Engineer. Approved brand: Narolac, Acro, Asian, Spectrum	Sqm	525.00	₹ 201.00	₹ 1,05,525.00
15	Premium Acrylic Smooth exterior paint Providing and applying 2 or more coats of water based 100% Acrylic premium emulsion paint exterior grade of Asian, Dulex, Berger or equivalent approved make and shade having zero VOC & UV resistance as per IS 15489:2004, Alkali & fungal resistance, dirt resistance exterior paint of required shade (Company Depot Tinted) with silicon additives to concrete and plastered surfaces, ceilings, etc., with roller finish including preparing surfaces ,applying 2 to 3 mm thick putty over plastered surface & applying primer including scaffolding, etc. after thoroughly brushing the surface to remove all the dirt and all loose powder free from mortar dropping and other foreign material and sand paper smooth etc, at all heights and locations complete in all respects and as per instructions of Architect/Engineer. New work (Two or more coats applied @ 1.43 litre/ 10 sqm. Over and including priming coat of exterior primer applied @ 0.90 litre/10 sqm. (Approved makes- Asian paints Apex Ultima, Nerolac XL Total, Dulux Ultra clean Max)	Sqm	4,012.00	₹ 160.00	₹ 6,41,920.00

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16	<u>Waterproofing for Chajja Flooring/Slab</u> Providing and laying water proofing treatment on roofs of slabs by applying cement slurry mixed with water proofing cement compound consisting of applying: (a) after surface preparation, first layer of slurry of cement @ 0.488 kg/ sqm mixed with water proofing cement compound @ 0.253 kg/sqm. (b) laying second layer of Fibre glass cloth when the first layer is still green. Overlaps of joints of fibre cloth should not be less than 10 cm. (c) third layer of 1.5 mm thickness consisting of slurry of cement @ 1.289 kg/sqm mixed with water proofing cement compound @ 0.670 kg/sqm and coarse sand @ 1.289 kg/sqm. This will be allowed to air cure for 4 hours followed by water curing for 48 hours. The entire treatment will be taken upto 30 cm on parapet wall and tucked into groove in parapet all around. (d) fourth and final layer of brick tiling with cement mortar (which will be paid for separately). For the purpose of measurement the entire treated surface will be measured. Approved : SIKA / BASF / DR FIXIT / ARDA	Sqm	1,853.00	₹ 584.00	₹ 10,82,152.00
17	<u>Stitching of Cracks (Injection grouting)</u> Providing and injecting approved grout in proportion recommended by the manufacturer into cracks/honey-comb area of concrete/masonry by suitable gun/pump at required pressure including cutting of nipples after curing etc. complete as per directions of Engineer-in-Charge. (The payment shall be made on the basis of actual weight of approved grout injected.) Epoxy injection grout in concrete/RCC work of approved make Note: Removing of dead mortar and cleaning of surface after grouting work is included in this item.	Kg	50.00	₹ 469.00	₹ 23,450.00
18	<u>Buy back of Aluminium fins</u> of 300 (L) x 50 (W) x 3000(H) and 1.5 mm thick (approximate size of fins) including loading and unloading of material from site all complete as per directed by engineer in charge. Deduction Item - Amount to be deducted	Kg	-40,970.00	₹ 150.00	-₹ 61,45,500.00
Sub total 1: for Façade Work					₹ 11,35,11,192.00

BILL OF QUANTITIES- SITE DEVELOPMENT, BOUNDARY WALL AND HORTICULTURE WORKS		
Rates shall be inclusive of the following		
1) The servicable and unservicable materials shall be stacked separately and properly in the designated		
2) All the civil works has to be carried out with minimum 43 grade OPC cement and VSI grade crushed		
3) All the civil works must be cured for at least 7 days.		
4) For all works, water to be use must be fresh, potable and pure without any salinity and turbidity.		
5) The rates quoted for all items of the BOQ shall include the following specifications:-		
i) All the works are to be carried out at all height and locations i.e. from foundation level, ground floor of		
ii) Providing and fixing Mild steel double scaffolding system (cup and lock type) on the exterior side, up to		
iii) The scaffolding system shall be stiffened with bracing, runners connection with the building fascia etc.		
iv) Providing and fixing temporary support arrangement such as steel props (upto any number whenever		
v) Providing and fixing safety net around the work so that loose plaster/ concrete does not cause damage		
vi) Providing and covering entire external surface with Hessian cloth curtains throughout the duration of		
vii) Providing all types of PEE to the workforce such as safety shoes, safety helmets, reflective safety		
viii) The quoted rate should include cost of nessary scaffolding, staging, centring and shuttering etc. as		
ix) Rates shall be inclusive of all enabling works like tower cranes with all safety measures , arial lifts, man		
x) Before starting the excavation NGL levels shall be got varified and approved by SBI/APMC and RL		

Upliftment / Upgradation of Facade of SBI LHO Building New Delhi

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Item No.	DESCRIPTION	UNIT	Total Qty	Rate	Amount
	xi) All rates should be inclusive all loading, unloading, shifting, all leads, lifts, sorting, transportation,				
	xii) All the above mentioned points including the requisite elements and items as mentioned shall be				
	xiii) Though locations of execution are mentioned for specific items, Contractor have to execute those all				
S.no	Description	Unit	Quantity	Rate	Amount
1	<u>Demolishing R.C.C. work manually/</u> by mechanical means including stacking of steel bars and disposal of unserviceable material to any approved place and for all lead with in the site / premise as per direction of Engineer - in- charge.	Cum	2.00	₹ 3,010.00	₹ 6,020.00
2	<u>Removing existing Flooring</u> Dismantling stone slab flooring laid in cement mortar including stacking of serviceable material and disposal of unserviceable material to any approved place and for all lead with in the site / premise as per direction of Engineer - in- charge.	Sqm	3,908.00	₹ 226.00	₹ 8,83,208.00
3	<u>Demolishing brick work manually/ by mechanical means</u> including stacking of serviceable material and disposal of unserviceable material to any approved place and for all lead with in the site / premise as per direction of Engineer - in- charge. ♦In cement mortar	Cum	83.00	₹ 1,746.00	₹ 1,44,918.00
4	<u>Dismantling steel work in built up sections</u> in angles, tees, flats and channels including all gusset plates, bolts, nuts, cutting rivets, welding etc. including dismembering and stacking at any approved place and for all lead with in the site / premise as per direction of Engineer - in- charge.	Kg	16,750.00	₹ 5.00	₹ 83,750.00
5	<u>Disposal of moorum/building rubbish/ malba/</u> similar unserviceable, dismantled or waste material by mechanical transport including loading, transporting, unloading outside the site/premises to any munipale approved dumping ground/ NDMC approved dumping yard / unobjectionable place (within / outside Municiple limits) or to any place arranged by the contractor of his own with all lead and lift, including royalty, loading at site, Mechanical transportation, unloading, stacking, spreading, etc. complete as directed by the Engineer-in-charge. Note - item to be applicable in urban areas having directions for restricted hours for movement/ plying of load carrying motor vehicle of 2.83 cum or more.	0	161.00	₹ 2,500.00	₹ 4,02,500.00

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Item No.	DESCRIPTION	UNIT	Total Qty	Rate	Amount
6	<p>Earthwork in Excavation, manually or by mechanical means (Hydraulic excavator) for foundation of walls, column footings, plinth beams, steps, water tanks, cess pits, sumps etc., in all types of soil including soft or hard moorum, boulders (upto 0.10 cum) shoring the sides wherever necessary, bailing/pumping out sub-soil /rain water, necessary shoring, strutting, dressing, levelling compacting the excavated bed to desired levels and keeping the foundation trenches and pits dry including filling back the trenches by selected and approved quality excavated earth in layers not exceeding 20 cm., etc. including stacking top vegetation soil & good available earth for backfilling (at any distance, lead & place arranged by the contractor of his own) complete in all aspects as per drawings and instructions of Engineer in charge.</p> <p>Rate to include necessary cost towards transportation of remaining material rendered surplus out side the Bank's premises/site and disposing the same to place arranged by the contractor of his own with all lead and lift including labour for loading, unloading surplus excavated earth complete as directed by the Bank.</p>	Cum	901.00	₹ 221.00	₹ 1,99,121.00
7	<p>Filling approved quality available excavated surplus good earth or muram (brought from outside) -excluding rock etc. in trenches, plinth, plinth protection, under floors, sides of foundations etc. spreading in layers not exceeding 20 cm in depth, consolidating each deposited layer by ramming (manually or mechanically), dressing, levelling, watering, compacting etc. complete with all lead, lift & transportation within the site/plot/premises as per drawings and instructions of Engineer in charge.</p> <p>Required finished compacted volume shall be measured for payment.</p>	Cum	837.00	₹ 166.00	₹ 1,38,942.00
8	<p>Supplying and filling in plinth with sand under floors, including watering, ramming, consolidating and dressing complete.</p>	Cum	29.00	₹ 1,800.00	₹ 52,200.00
9	<p>Providing and laying 75 mm thick compacted bed of dry brick aggregate of 40 mm thick nominal size including spreading, well ramming, consolidating and grouting with jamuna sand, including finishing smooth etc. complete as per direction of Engineer-in-charge.</p>	Sqm	130.00	₹ 169.00	₹ 21,970.00

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Item No.	DESCRIPTION	UNIT	Total Qty	Rate	Amount
10	<p><u>Providing and laying damp-proof course 50 mm thick</u> with cement concrete 1:2:4 (1 cement : 2 coarse sand (zone-III) including manufactured sand derived from Recycled Concrete Aggregate (RCA) upto 25% : 4 graded stone aggregate 20 mm nominal size (Recycled Concrete Aggregate (RCA) upto 25%)); along with Providing & applying a coat of residual petroleum bitumen of grade of VG-10 of approved quality using 1.7 kg per square metre on damp proof course after cleaning the surface with brushes and finally with a piece of cloth lightly soaked in kerosene oil.</p> <p>15thk Granite (black pearl), projected edges moulded (upper edge on both side) to be fixed on on upper part of bitumen layer (refer drawing) and the upper part of the granite to be made rough for proper gripping of brick masonry on upper part of this damp proof course; all complete.</p>	Sqm	92.00	₹ 650.00	₹ 59,800.00
11	<p><u>Providing and laying PCC (plain cement concrete) M 10 grade concrete, 1:3:6 by volume</u> (1 part of cement: 3 parts of coarse sand: 6 parts of stone aggregates of size 20mm and downgraded) ,M10 under foundation (for base), plinth protection, coping, sill concrete etc. manufactured in a fully automatic batching plant and transported to site of work in transit mixers having continuous agitation, for all leads and placing/pumping from Transit mixers to site of laying ,spreading, ramming, compacting as per requirement, finishing in line, level and plumb, curing etc. including the cost of centering, shuttering complete in all respect as per specification or as directed by Architect/Engineer.</p> <p>1:3:6 (1 Cement: 3coarse sand (zone-III) : 6 graded stone aggregate 20 mm nominal size) Cement content considered in this item is @ 220 kg/cum.</p>	Cum	367.00	₹ 5,745.00	₹ 21,08,415.00
12	<p><u>Providing and laying in position ready mixed M-20 cement concrete for reinforced cement concrete</u> work for all levels below and above plinth for RCC structural elements, viz. footing, columns, beams, slabs, floor /plinth beams, plinth beam etc. in any shape and as per structural design and as directed using fly ash and OPC 43-grade cement with cement content as per approved design mix, manufactured in fully automatic batching plant and transported to site of work in transit mixers having continuous agitation, for all leads and heights including placing/pumping of RMC from Transit mixers to site of laying of concrete, spreading, compacting and finishing the surface in line, level and plumb as per requirement and curing etc. including the cost of centering, shuttering, staging, propping, scaffolding, finishing, curing etc. and also including the cost of admixtures in recommended proportions as per IS: 9103 to accelerate / retard setting of concrete, improve workability without impairing strength and durability but excluding reinforcement, as per direction of Engineer-in-charge.</p> <p>Cement content considered in this item is @ 300 kg/cum.</p>	Cum	207.00	₹ 13,908.00	₹ 28,78,956.00

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Item No.	DESCRIPTION	UNIT	Total Qty	Rate	Amount
13	<p><u>Steel Reinforcement</u> Providing & laying and fixing in position high strength deformed steel bars of minimum grade Fe 550 TMT bars conforming to IS : 1786/1139 for RCC structures including straightening, cutting, bending and binding in position of steel reinforcement bars to correct shape and size as per detailed drawings, specifications and approved bar-bending schedules, including preparing & maintaining bar bending schedules in substructure / superstructure walls, columns, slabs, beams, etc.; with correct size super fine micro concrete cover blocks and annealed binding wire (G.I.) of 18 gauge including dewatering to keep site dry etc. complete for all heights and depths below and above plinth level including staging, scaffolding etc. as per specification or as directed by the Engineer in charge.</p> <p>Measurement of steel is strictly as per I.S. Code. No extra for bending will be permitted.</p> <p>Thermo-Mechanically Treated bars of grade Fe-500D or more (Approved Makes- JSW, TATA, SAIL, Jindal Steel & power)</p>	Kg	24,327.00	₹ 91.00	₹ 22,13,757.00
14	<p><u>Brick work with common burnt clay F.P.S.</u> (non modular) bricks of class designation 7.5 in foundation and plinth in:</p> <p>Providing and constructing 230 mm thick (or above) brick masonry walls in sub structure / foundation with well burnt uniform size and colour locally available approved quality bricks of class 7.5 with minimum crushing strength not less than 75kg/cm² in Cement Mortar 1:6 (1 cement : 6 coarse sand) for walls, shaft walls, parapets, drains, manholes, trenches etc. in proper line, levels and plumb including striking out / raking out joints, curing, necessary scaffolding, etc. complete for all heights and levels in substructure and super structure as per the approved drawing and as per instructions of Architect / Engineer in charge.</p>	Cum	129.00	₹ 8,135.00	₹ 8,05,734.00
15	<p>Providing and constructing 230 mm thick (or above) brick masonry walls for superstructure above plinth level & up to highest floor level with well burnt uniform size and colour locally available approved quality bricks of class 7.5 with minimum crushing strength not less than 75 kg/cm² in Cement Mortar 1:4 (1 cement : 4 coarse sand) for walls, shaft walls, parapets, drains, manholes, trenches etc. in proper line, levels and plumb including striking out / raking out joints, curing, necessary scaffolding, etc. complete for all heights and levels in substructure and super structure as per the approved drawing and as per instructions of Architect / Engineer in charge.</p> <p>Cement mortar 1:4 (1 cement : 4 coarse sand)</p>	Cum	81.00	₹ 8,725.00	₹ 7,06,725.00

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Item No.	DESCRIPTION	UNIT	Total Qty	Rate	Amount
16	<p><u>UPVC Work for Window/Ventilators</u></p> <p>Providing and fixing factory made uPVC glazed/wire mesh windows/ doors comprising of lead free uPVC multi-chambered frame, sash and mullion/coupler (where ever required) extruded profiles having minimum wall thickness of 1.70 mm for Series R1 and R2 profiles and 2.10 mm any shape, colour and design duly reinforced with galvanized mild steel section made of required shape & size as per CPWD Specification, uPVC extruded glazing beads, interlocks and Inline sash adaptor (where ever required) of appropriate dimension, EPDM gasket, hardware, SS 304 grade fasteners of minimum 8 mm dia with countersunk head, comprising of matching polyamide PA6 grade sleeve for fixing frame to finished wall as per IS 1367 : Part 1 to 14, plastic packers, plastic caps and necessary stainless steel screws etc. Profile of frame, sash & mullion (if required) shall be mitred cut and fusion welded/mechanically jointed duly sealed at all corners, including drilling of holes for fixing hardware and drainage of water etc. After fixing frame the gap between frame and adjacent finished wall shall be filled with weather proof silicon sealant over backer rod of approved size and quality, all complete as per approved drawing conforming to CPWD specification & direction of Engineer-in-Charge. Section of steel reinforcement and cross sections of uPVC profiles to be as per design approved by Engineer-in-Charge.</p>	Sqm	101.00	₹ 8,160.00	₹ 8,24,160.00
	Wire mesh / Glazing of plain/ toughened/ laminated/ double glass unit with / without high performance coatings as per design requirements and conforming to IS: 3548 & IS: 16231 shall be paid separately.				
	Two track two panels sliding window with Aluminium channel for roller track, wool pile, nylon rollers with SS 304 body.				
	Using R4 series with frame (64 mm & above) x (45 mm & above) & sash (44 mm & above) x (55 mm & above) with zinc alloy (zamak) powder coated handle on every panel along with multi-point locking system (Height above 1.8m) Weight : minimum 2 kg / sqft Approved :Fenesta / Aisi / Veka				
17	<p>Providing and fixing <u>M.S. grills of required pattern (in ornamental designer pattern as mentioned in drawing)</u> etc. with M.S. flats, square or round bars (solid / hollow) etc. including priming coat with approved steel primer, and fixing the MS grill with PCC blocks & MS hold fasts (as mentioned in working drawing) all complete.</p>	Kg	5,476.00	₹ 186.00	₹ 10,18,536.00

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Item No.	DESCRIPTION	UNIT	Total Qty	Rate	Amount
18	<p><u>Stainless Steel Railing with glass fitting</u> Providing and fixing Stainless steel (SS 304) knock down railing system comprising Ø 50mm Handrail fixed on 10 x 50 mm S.S. Flat baluster with glass holding accessories (including top bracket to hold hand railing), placed at maximum 1200 mm c/c along with 12mm thick toughened glass connected with baluster with special glass holding fixtures. The Glass height should be taken as minimum 650mm. The balustrade would be fixed onto floor with casted base plate of minimum 6mm thickness anchored down on slab with Hilti fasteners. Base plate shall be concealed with suitable S.S. 316 grade cover Cap so that the mounting anchor fasteners are not visible after installation. Wall thickness of all Pipes shall be taken as 1.5mm along with all visible components developed in High Grade S.S. and whenever required, joints to be filled with bushings for extra strength. Railing height to be taken @ 915mm from floor level. Rate should be inclusive of making glass with necessary drill counter with polished edge finish, top bracket to hold handrail, welding, grinding, buffing, polishing and making curvature (wherever required) and fitting the same with necessary stainless steel nuts and bolts complete, fixing the railing with necessary accessories & stainless steel dash fasteners , stainless steel bolts etc., of required size, on the side of waist slab/wall with suitable arrangement as per approval of Architect/Engineer. Note : For payment purpose, length of handrails will be taken (between outer edge of glass) excluding the length of railing beyond glass. Approved : KICH/ Closma /OZONE</p>	RMT	23.00	₹ 6,356.00	₹ 1,46,188.00
19	<p><u>Providing and laying Sand Blast finish Granite stone flooring</u> in required design and patterns, in linear as well as curvilinear portions of the building all complete as per the architectural drawings with 30 mm thick stone slab over 20 mm (average) thick base of cement mortar 1:4 (1 cement : 4 coarse sand) laid and jointed with cement slurry and pointing with white cement slurry admixed with pigment of matching shade including rubbing, curing and polishing etc. Stones to be fixed as per the design (laying & grooving pattern) mentioned in drawing, grinding & polishing the upper surface for smooth finish; all complete as specified and as directed by the Engineer-in-Charge. Sand Blast finish granite stone slab Sira grey, Yes white, apple green, Crystal blue, or equivalent. Base price for stone : 140/- per sqft (including sand blasting)</p>	Sqm	1,100.00	₹ 3,051.00	₹ 59,93,900.00

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Item No.	DESCRIPTION	UNIT	Total Qty	Rate	Amount
20	<p><u>Granite Flooring Gloss Finished</u></p> <p>Providing and laying Polished Granite stone Cladding in required design and patterns, in linear as well as curvilinear portions of the building all complete as per the architectural drawings with 18 mm thick stone slab over 20 mm (average) thick base of cement mortar 1:4 (1 cement : 4 coarse sand) laid and jointed with cement slurry and pointing with white cement slurry admixed with pigment of matching shade including rubbing , curing and polishing etc. Stones to be fixed as per the design (laying & grooving pattern) mentioned in drawing, grinding & polishing the upper surface for smooth finish; all complete as specified and as directed by the Engineer-in-Charge.</p> <p>Polished Granite stone Jet Black, Black Galaxy granite, Sira grey, Adhunik grey / brown, statuario extra white, Elite Brown, Cat Eye or equivalent. Base price for stone : 145/- per sqft (including gloss finish)</p>	Sqm	2,549.00	₹ 2,907.00	₹ 74,09,943.00
21	<p><u>Flamed Finish Granite Flooring for Stairs and Ramp area</u></p> <p>Providing and laying 18mm thick machine cut flamed finish Granite stone flooring in ramp or staircase treads (treads in one piece) as per detailed drawings including moulding, bull nosing, chamfer, finger grip with polishing, fixed in cement mortar 1:4 and neat cement floating to proper line, level and plumb, filling the joints with white cement including approved pigment to match the colour of granite slab including buffing, cleaning, curing etc. complete in all aspects and as directed by Architect/Engineer.</p> <p>Flamed finish granite stone slab , Black Galaxy granite, Sira grey, Adhunik grey / brown, statuario extra white, Elite Brown, Cat Eye or equivalent. Base price for stone : 2400/- per sqm</p>	Sqm	648.00	₹ 4,230.00	₹ 18,91,135.00
22	<p><u>RED SAND Stone work (machine cut edges) for wall lining</u></p> <p>etc. upto 3.0 metre height, backing filled with a grout of average 12 mm thick cement mortar 1:3 (1 cement : 3 coarse sand) including pointing in white cement mortar 1:2 (1 white cement : 2 stone dust) with an admixture of pigment matching the stone shade : Stones to be fixed as per the design (laying & grooving pattern) mentioned in drawing, grinding & polishing the upper surface for smooth finish; all complete (including required scaffolding work, if any)</p> <p>Gang saw cut stone</p> <p>30 mm thick Red sand stone Base price for Marble : 65/- per sqft</p>	Sqm	619.00	₹ 2,643.00	₹ 16,36,017.00

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Item No.	DESCRIPTION	UNIT	Total Qty	Rate	Amount
23	<p><u>Raj Nagar Plain white marble</u> Providing and fixing <u>18 mm thick gang saw cut, mirror polished</u>, premoulded and prepolished, machine cut for platforms, vanity counters, window sills, facias and similar locations of required size, approved shade, colour and texture laid over 20 mm thick base cement mortar 1:4 (1 cement : 4 coarse sand), joints treated with white cement, mixed with matching pigment, epoxy touch ups, including rubbing, curing, moulding and polishing to edges to give high gloss finish etc. complete at all levels. Stones to be fixed as per the design (laying & grooving pattern) mentioned in drawing, grinding & polishing the upper surface for smooth finish; all complete as specified and as directed by the Engineer-in-Charge. Base price for Marble : 90/- per sqft</p> <p>Area of slab over 0.50 sqm</p>	Sqm	218.00	₹ 2,895.00	₹ 6,31,110.00
24	<p><u>Glass Mossaic tile for fountain inner part</u> Providing and fixing Glass mosaaic tiles on finished plain wall surface of size 20 mm x 20 mm x 4 mm in all colour, design , fixing in customize design as per direction of Engineer-in-Charge. The glass mosaaic tiles to be fixed on the wall surface with the help of approved adhesive applied at the rate of 2.5 kg per sqm and grouting of the same. The rate is inclusive of all operation, material and required pattern approved by Engineer-in Charge:</p>	Sqm	120.00	₹ 3,298.00	₹ 3,95,760.00
25	<p>Providing and laying <u>cobbles made up of GRC having size 110 x 110 x 40 mm</u> of approved, design & shape, laid in required colour and pattern over a bed of RCC surface, filling the joints with line black cement etc. all complete as per the direction of Engineer-in-charge.</p> <p>Make: Dalal GRC, UNISTONE, ECO VIsion, Indo Art</p>	Sqm	973.00	₹ 2,064.00	₹ 20,08,272.00
26	<p>Providing and laying <u>outdoor grade Parking tile (DU rock-Concrete Nero)</u> having size 400 x 400X12 mm of approved, design & shape, laid in required colour and pattern over a bed of RCC surface, filling the joints with line black cement, curing, etc. all complete as per the direction of Engineer-in-charge.</p> <p>make : Kajaria, Somany, RAK, NITCO</p>	Sqm	621.00	₹ 1,292.00	₹ 8,02,332.00

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Item No.	DESCRIPTION	UNIT	Total Qty	Rate	Amount
27	<p><u>Providing & fixing approved make Vertical Linear Baffle False Ceiling</u> made out of Aluminum Extrusion in Aluminum alloy grade 6063. The baffle blade shall be in size of 75x 25 x 3600mm in approved design or shade. The baffle blade shall be suspended using Slotted U-profile at on-center spacing in multiples of 25mm (75mm C/C). Longer lengths of Baffle to be connected by Baffle Joiner and the ends to be fixed with End caps.</p> <p>Installation of U-Grid: The U profile to be suspended at every 1200mm on-centre using 6mm threaded rod from the structural soffit using U-profile hanger. U-profile splice to be used to join more than one U profiles of length 3.75M. 1st U-Grid Channel must be no more than 400mm from the perimeter.</p> <p>Installation of Baffles: Locate the slot for Baffle Hangers in slot of Baffle section at 1200mm centres. Hangers are inserted into the slot, then rotated 90° and fixed into position by tightening the grub screw. Baffle to be lifted into position and hangers engage over lip of U-Grid Channel. Each Hanger to be secured into position by inserting the Locking Clip.</p> <p>Baffles blades to be connected at ends with Baffle Joiner, which are inserted into the top and bottom slots of the Baffle closed profile for alignment only. The bottom Joiner to be located first and fastened on one side only. The top Joiner to be fitted then and secured with grub screws on one side. Then the two Baffle sections shall be joined and the top Joiner is screw fastened on the 2nd Baffle profile. End Caps to be located by pushing the End Cap tongues into Baffle slots.</p> <p>All complete as per manufacturer's specification and as directed by Architect / Engineer. Plan Area treated shall be measured for payment purpose.</p>	Sqm	885.00	₹ 3,960.00	₹ 35,04,600.00
28	<p>Painting with <u>synthetic enamel paint</u> of approved brand and manufacture of required colour to give an even shade :</p> <p>Two or more coats on new work over an under coat of suitable shade with ordinary paint of approved brand and manufacture</p> <p><i>Approved brand : Narolac, Asian, Dulux</i></p>	Sqm	576.00	₹ 192.00	₹ 1,10,592.00
	<p>Providing and fixing <u>Chlorinated Polyvinyl Chloride (CPVC) pipes</u>, 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 & fittings with one step CPVC solvent cement and the cost of cutting chases and making good the same including testing of joints complete as per direction of Engineer in Charge. Concealed work, including cutting chases and making good the walls etc.</p> <p>Approved brand: Supreme, Finolex , Astral</p>				
29	40 mm nominal outer dia Pipes	RMT	407.00	₹ 596.00	₹ 2,42,572.00
30	25 mm nominal outer dia Pipes	RMT	120.00	₹ 340.00	₹ 40,800.00
31	<p>Providing and fixing <u>C.P. brass angle valve</u> for taps, & all types of water points of approved quality conforming to IS:8931</p> <p>25 mm nominal bore</p>	Each	50.00	₹ 757.00	₹ 37,850.00

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Item No.	DESCRIPTION	UNIT	Total Qty	Rate	Amount
32	<p>Providing and laying non-pressure <u>NP2 class (light duty) R.C.C. pipes with collars</u> jointed with stiff mixture of cement mortar in the proportion of 1:2 (1 cement : 2 fine sand) including testing of joints etc. complete :</p> <p>300 mm dia RCC pipe</p>	RMT	290.00	₹ 843.00	₹ 2,44,470.00
33	<p><u>Fountain</u> Providing and fixing of water fountain system with necessary items for making it function including Geyser nozzle ¾" (Make :- Brass Chrome plated), Ball joint, Underwater light 18v/27w ABS body multicolor, CVD for light, Open-well pump 03 H.P. Total 21 (APPROX)nos. water fountain spouts (in 3 OR 4 separate assembly) , soap foam bubble type, upto 1200 mm water through, (Make : Crompton/ Kirloskar), Pump panel, Cable 4 core 2.5 mm & Cable 3 core 2.5 mm , All plumbing accessories like Tee (GI), Band (GI), Pipe (CPVC), Ball valve, NRB, FTA,NTA, Solvent, etc., including installation, testing all complete as per design requiremnet & directed by engineer in charge.</p>	LS	1.00	₹ 5,27,321.00	₹ 5,27,321.00
34	<p><u>Sculpture</u> Designing, casting, providing and fixing of FRP sculpture (abstract modern art element as per client approval) as described by the architect as per pictures and other necessary details provided by the architect & design approved by SBI, the sculpture need to be in scale and proportion of overall site complex, the drafted design need to be approved by the architect & SBI before begining of casting work, transporting the finished product with due precaution, inclusive of loading and unloading, and installtion at site with required preacution, all inclusive. Base price : 50K per piece</p> <p>Size - 4 Feet high and 3 feet wide (Approx)</p>	Each	5.00	₹ 87,113.00	₹ 4,35,565.00
35	<p><u>Wheel breaker</u> providing and fixing of precast wheel bracker having size of 1800 mm long 150 mm wide and 150mm depth of M-30 grade of concrete using joint less moulds, Reinforced with 4 nos. of 8mm dia Tor steel & 6 mm dia stirrup @ 150 mm c/c along with length, Provided with a slot of 600 X 75 mm in the center & at bottom for water drainage & 2 holes of 20 mm dia through out the depth of kerb for fixing the nails for the purpose of anchoring the kerb to the ground, including all associated work all complete.</p> <p>Approved brand: KK concerte / Vyara / Hindustan / SRC / ECO vision</p>	Each	101.00	₹ 814.00	₹ 70,700.00
36	<p><u>Drain Cover</u> Providing and fixing of precast RCC grating Drain Cover for covering the drain at road side as per specified in the drawing and directed by engineer incharge.</p> <p>Size of the Drain cover is 900 x 450 x 90 MM. Approved brand: KK concerte / Vyara / Hindustan / SRC / ECO vision</p>	Each	32.00	₹ 814.00	₹ 26,048.00

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Item No.	DESCRIPTION	UNIT	Total Qty	Rate	Amount
37	<u>Sump pit Cover</u> Providing and fixing of precast sumpit cover for covering the Pit at road side as per specified in the drawing and directed by engineer incharge. Size of the Sumpit cover is 610 x 500 x 90 MM. Approved brand: KK concerte / Vyara / Hindustan / SRC / ECO vision	Each	9.00	₹ 581.00	₹ 5,229.00
38	<u>Catch Basin cover</u> Providing and fixing of Precast cover for Catch basin for covering the catch basin top part at road side as per specified in the drawing and directed by engineer incharge. Size of the Cat basin cover is 810 x 810 x 90 MM. Approved brand: KK concerte / Vyara / Hindustan / SRC / ECO vision	Each	88.00	₹ 697.00	₹ 61,336.00
39	<u>GRC Planter 3 feet height</u> Providing and fixing of GRC Planter (without plants but including filling the pot with good earth, manure and pebbles on top layer), of average height 3 feet as per landscape plan and directed by engineer in charge. Base price : 10 K Make : Eco vision, Unistone, Dalal GRC	Each	22.00	₹ 14,519.00	₹ 3,19,418.00
40	<u>GRC Planter 1'6" height</u> Providing and fixing of GRC Planter (without plants but including filling the pot with good earth, manure and pebbles on top layer), of average height 3 feet as per landscape plan and directed by engineer in charge. Base price : 6 K Make : Eco vision, Unistone, Dalal GRC	Each	4.00	₹ 8,712.00	₹ 34,848.00
41	<u>Perforated pipe for recharge dugwell</u> Providing and fixing of Perforated pipe for recharge dugwell as per site requirement and specified in the drawing and directed by engineer in charge all complete in all respect.	RMT	49.00	₹ 1,162.00	₹ 56,938.00
42	<u>UPVC pipe 75 mm dia</u> Providing and fixing of UPVC pipe of 75 mm dia as per site plan with all plumbing fixtures , all complete as per directed by engineer in charge. <i>Approved brand: Suprem, Apollo , Astral</i>	RMT	104.00	₹ 750.00	₹ 78,000.00

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Item No.	DESCRIPTION	UNIT	Total Qty	Rate	Amount
43	Providing/supplying and installation of <u>porta cabin of required size (6 feet x 4 feet approx)</u> at site; at desired location as per directed by engineer in charge/Architect. Porta cabin made up of MS frame and GI sheet projected roof, walls made of weather proof Cement sheet (12 thk) clad from both side of wall surface and finished with exterior grade texture paint and window openings made of UPVC windows (sliding type, 2 track, without mesh) and with 6 thk tamper glass, with locking facility and with all accessories. Doors to be made of GI frame and flush door shutter finished with 1thk laminate, with all hardware fittings & locking facilities, and with LED light fixtures and electric points (switches & power sockets) with GI conduits, all complete in all respect. Sample design and colour has been approved by architect & SBI before on-site installation.	Each	2.00	₹ 58,075.00	₹ 1,16,150.00
44	<u>Boring/drilling bore well of required dia for casing/ strainer pipe</u> , 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 300 mm dia	Metre	160.00	₹ 600.00	₹ 96,000.00
45	<u>Buy back of existing boundary wall grill</u> including dismantallation of the grills, stacking the grills at site (as per directed by engineer in charge / bank), loading, unloading and transport charges of the products; all complete.	Kg	16,750.00	-₹ 35.00	-₹ 5,86,250.00

Horticulture Work					
H1	<u>Supplying and stacking of good earth at site</u> including royalty and carriage upto any lead (As per the site condition) complete (earth measured in stacks will be reduced by 20% for payment).	Cum	183.00	₹ 437.00	₹ 79,971.00
H2	Supplying and stacking of <u>well decayed cattle manure</u> at site including royalty and carriage upto any lead (As per the site condition) complete	Cum	183.00	₹ 210.00	₹ 38,430.00
H3	<u>Spreading of sludge, dump manure and/or good earth</u> in required thickness as per direction of officer-in-charge (cost of sludge, dump manure and/ or good earth to be paid separately).	Cum	183.00	₹ 44.00	₹ 8,052.00

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Item No.	DESCRIPTION	UNIT	Total Qty	Rate	Amount
H4	<u>Trenching in ordinary soil up to a depth of 60 cm</u> including removal and stacking of serviceable materials and then disposing of surplus soil, by spreading and neatly levelling within a lead of 50 m and making up the trenched area to proper levels by filling with earth or earth mixed with sludge or / and manure before and after flooding trench with water (excluding cost of imported earth, sludge or manure).	Cum	183.00	₹ 66.00	₹ 12,078.00
H5	Fine dressing of the ground, (For Landscaping Work), including cleaning of existing site, levelling the undulating upper level of the existing ground level and levelling the same with proper / required slope and level as per drainage / irrigation and landscape plan, as mentioned in drawing or as per instruction of architect / engineer at site, all complete in all respect.	Sqm	917.00	₹ 3.00	₹ 2,751.00
H6	Mixing earth and sludge or manure with good earth, and spreading the same in landscape area / flower beds in the required proportion, and levelling the ground as per requirement of landscape and irrigation plan as specified or directed by the Officer-in-charge; all complete in all respect.	Cum	917.00	₹ 31.00	₹ 28,427.00
H7	<u>Preparation of beds for hedging and shrubbery</u> by excavating 60 cm deep and trenching the excavated base to a further depth of 30 cm, refilling the excavated earth after breaking clods and mixing with sludge or manure in the ratio of 8:1 (8 parts of stacked volume of earth after reduction by 20%: one part of stacked volume of sludge or manure after reduction by 8%), flooding with water, filling with earth if necessary, watering and finally fine dressing, leveling etc. including stacking and disposal of materials declared unserviceable and surplus earth by spreading and leveling as directed, within a lead of 50 m, lift up to 1.5 m complete (cost of sludge, manure or extra earth to be paid for separately)	Cum	917.00	₹ 189.00	₹ 1,73,313.00
H8	<u>Digging holes in ordinary soil and refilling the same</u> with the excavated earth mixed with manure or sludge in the ratio of 2:1 by volume (2 parts of stacked volume of earth after reduction by 20% : 1 part of stacked volume of manure after reduction by 8%) flooding with water, dressing including removal of rubbish and surplus earth, if any, with all leads and lifts (cost of manure, sludge or extra good earth if needed to be paid for separately) Holes 90 cm dia, and 90 cm deep	Each	24.00	₹ 121.00	₹ 2,904.00
H9	<u>Filling mixture of earth and sludge</u> or manure in the desired proportion in trenches, flooding with water and leveling (cost of supplying earth and sludge or manure and mixing excluded).	Cum	366.00	₹ 15.00	₹ 5,490.00

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Item No.	DESCRIPTION	UNIT	Total Qty	Rate	Amount
H10	Providing and <u>stacking (including digging earth upto required depth)</u> of <u>Rhapis Excelsa Palm plant</u> , having ht. 75 cm to 90 cm with 12 to 15 equal suckers, well developed, full of fresh & healthy leaves from bottom to top in 25 cm size Earthen pot/Plastic pot & as per direction of the officer-in-charge; and watering of soil, all complete..	Each	2,852.00	₹ 323.00	₹ 9,21,196.00
H11	Providing and stacking of <u>Roystonea regia (Royal palm)</u> of height 220-240 cm. with necessary (bamboo-50 dia-avg) temporary support, triangular shape as per direction of the officer-in-charge	Each	24.00	₹ 8,131.00	₹ 1,95,144.00
H12	Providing and stacking of <u>Wedelia (ground cover)</u> of height 30-45 cm including unloading, stacking , <u>digging earth upto required depth</u> ; to be planted at a distance of 150 mm centre to centre as per direction of the officer-in-charge or as mentioned in landscape plan, including necessary digging of soil for plantation and watering of soil, all complete.	Sqm	480.00	₹ 726.00	₹ 3,48,480.00
H13	Providing and stacking of <u>Green conocarpus (outdoor)</u> - including unloading, stacking , digging earth upto required depth to be planted @ 600 C/C in 1 row including loading and unloading etc. , as per direction of the officer-in-charge, including necessary digging of soil for plantation and watering of soil, all complete.	Each	199.00	₹ 581.00	₹ 1,15,619.00
H14	<u>Providing and stacking of Ground cover - Alternanthera @ 300 C/C bothways</u> including loading and unloading etc. , as per direction of the officer-in-charge	Each	182.00	₹ 41.00	₹ 7,462.00
H15	<u>Providing and stacking of green ribbon grass (ground cover)</u> at 300 mm center to center including loading and unloading etc. , as per direction of the officer-in-charge	Each	2,002.00	₹ 59.00	₹ 1,18,118.00
H16	<u>Plantation of Trees, Shrubs, and Hedge</u> at site i/c watering and removal of unserviceable material's as per direction of officer in charge (excluding cast of plant & water).				
a	Trees Plant	Each	24.00	₹ 6.00	₹ 144.00
b	Shrubs Plant	Each	3,051.00	₹ 3.00	₹ 9,153.00
c	Hedge Plant /Ground cover	Each	14,182.00	₹ 2.00	₹ 28,364.00
	1. Tree	Each	24.00	₹ 7.30	₹ 175.00
	2. Scrub	Each	3,051.00	₹ 3.65	₹ 11,136.00
	3. Plant	Each	14,182.00	₹ 2.45	₹ 34,746.00

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Bill of Quantities

Item No.	DESCRIPTION	UNIT	Total Qty	Rate	Amount
H17	Providing and fixing of geotextile for landscape work, non woven type (bio-degradable) 120 GSM thick minimum, to be fixed with soil staplers / wooden or bamboo pins; between mother earth and good earth layer (or as required during execution process), with overlapping width of 150 mm; all complete as per directed by engineer in charge.	Sqm	259.00	₹ 175.00	₹ 45,325.00

Sub total 2: for Site Development & Landscape works	₹ 4,10,72,034.00
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BILL OF QUANTITIES - ELECTRICAL WORKS

S.No.	DESCRIPTION	UNIT	QTY.	RATE IN Rs.	AMOUNT IN Rs.
	(ALL SITC works)				
A	FRONT FAÇADE LIGHTING WORK				
	LIGHT LUMINAIRES OF BUILDING FAÇADE				
1	<p>SITC of 1000mm(length may vary +-10 mm) long rigid architectural RGBW (W=4000K) LED Linear light with non-integral driver & housing made of Extruded aluminium alloy 6063 grade & die-cast aluminium end caps. The luminaire shall have electrostatically applied polyester powder coating finish. The luminaire width shall be 38mm & height of 47mm without brackets(+5%). The luminaire's integrated brackets shall be made of extruded aluminium & the same shall be so designed that the luminaire can be tilted from $\pm 95^\circ$. The luminaire shall have silicon glue between optical cover & LED chamber to ensure proper IP66 protection. The nominal weight of the luminaire shall be 1.55KG ($\pm 10\%$). The luminaire shall be equipped with high-power Cree, osram, or equivalent. Variation of $\pm 10\%$ in specification may be acceptable which varies from brand to brand. The fixture shall have $25^\circ \times 40^\circ$ beam angle & the lens shall be made of anti-aging & anti UV-PMMA material. The optical cover shall be made of IK06 rated clear tempered glass. The LEDs shall have minimum CRI ≥ 80 for white light & shall have SDCM≤ 4. The fixture shall come with power & DMX cable of minimum 100mm length. The fixtures shall be installed with have IP67 connectors. The luminaire shall have system wattage not exceeding 36W+-5% and system lumen output of not less than 1140lumens. Fixture shall operating temperature range of -5°C to 60°C. The fixture shall have an Non-integral driver with input voltage for 220-240 VAC, 50/60Hz. The luminaire shall have declared life of 50,000 burning hours at L70 @ 35deg.</p> <p>The luminaire shall have class I insulation. The luminaire shall be compatible with DMX512 controller. The luminaire shall automatically addressable using hand-held addressing device. The luminaire shall be capable of 8-bit control of RED, Green, Blue & White (W=4000K) to produce 16.7million colours. The luminaire shall be capable of digital dimming of 65536 steps. The successful bidder shall submit the following certifications/reports for approval before supply of materials: product data sheets, LM79 report from NABL accredited lab, illuminance diagram, polar curve & LM80 report issued by LED manufacturer . The bidder shall upload the luminaire BIS certificate along with technical bid. The luminaire shall be supplied with necessary connectors for connecting lead/jump cables & end plates/covers.</p> <p>Make : Wipro / Signify-Philips or equivalent</p>	Nos	210.00	₹ 32,000.00	₹ 67,20,000.00

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Bill of Quantities

Item No.	DESCRIPTION	UNIT	Total Qty	Rate	Amount
2	<p>SITC of exterior IP68 LED RGB/RGBW Flexible light strip of 5 mtr standard length with 10-15 Watt per meter which can be compatible with the DMX controller. Minimum System lumens of minimum 430-470 lumens/meter and System Lumen Efficacy > 30lm/w+-5%. Luminaire light beam spread - 110°, The Strip should have IP 68 protection and is offered IP 67 rated connector to join the LED Strips incontinuity. The luminaire must be offered with Aluminum channel for mounting the strip lights. The product should be complete with all accessories and Driver. The successful bidder shall submit the following certifications/reports for approval before supply of materials: product data sheets, LM79 report from NABL accredited lab, illuminance diagram, polar curve & LM80 report issued by LED manufacturer . The bidder shall upload the luminaire BIS certificate along with technical bid. The luminaire shall be supplied with necessary connectors for connecting lead/jump cables.</p> <p>Make : Wipro / Signify-Philips or equivalent</p>	Nos	45.00	₹ 16,000.00	₹ 7,20,000.00
3	<p>SITC of Direct view node architectural RGBW (W=4000K) LED light with non-integral driver & housing made of Die-cast aluminum. The luminaire shall have electrostatically applied polyester powder coating finish. The luminaire width shall be 78mm x 57mm x 72mm +-5%. The cover of the fixture should be Diamond spherical. The luminaire shall have silicon glue between optical cover & LED chamber to ensure proper IP66 protection. The nominal weight of the luminaire shall be 0.2KG (±10%). The luminaire shall be equipped with high-power Cree, osram, lumiled or equivalent. The optical cover shall be made of IK06 rated clear tempered glass. The LEDs shall have minimum CRI ≥80 for white light & shall have SDCM≤4. The fixture shall come with power & DMX cable of minimum 100mm length. The fixtures shall be installed with have IP67 connectors. The luminaire shall have system wattage not exceeding 3W and system lumen output of not less than 115lumens and 45,830 NIT. Fixture shall operating temperature range of -40°C to 50°C. The fixture shall have an Non-integral driver with input voltage for 220-240 VAC, 50/60Hz. The luminaire shall have declared life of 50,000 burning hours at L70 @ 35deg. The luminaire shall have class I insulation. The luminaire shall be compatible with DMX512 controller. Variation of +-10% in specification may be acceptable. The luminaire shall automatically addressable using hand-held addressing device. The luminaire shall be capable of 8-bit control of RED, Green, Blue & White (W=4000K) to produce 16.7million colours. The luminaire shall be capable of digital dimming of 65536 steps. The successful bidder shall submit the following certifications/reports for approval before supply of materials: product data sheets, LM79 report from NABL accredited lab, illuminance diagram, polar curve & LM80 report issued by LED manufacturer . The bidder shall upload the luminaire BIS certificate along with technical bid. The luminaire shall be supplied with necessary connectors for connecting lead/jump cables & end plates/covers.</p> <p>Make : Wipro / Signify-Philips or equivalent</p>	Nos	137.00	₹ 14,500.00	₹ 19,86,500.00

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Bill of Quantities

Item No.	DESCRIPTION	UNIT	Total Qty	Rate	Amount
4	<p>SITC of exterior IP68 LED 3000k Neon Flexible light strip of 5 mtr standard length with 10-15 Watt per meter which can be compatible with the DMX / Ethernet controller. Minimum System lumens of minimum 1100 lumens/meter Luminaire light beam spread - 110°, The Strip should have IP 68 protection and is offered IP 67 rated connector to join the LED Strips incontinuity. The luminaire must be offered with Aluminum channel for mounting the strip lights. The product should be complete with all accessories and Driver. The successful bidder shall submit the following certifications/reports for approval before supply of materials: product data sheets, LM79 report from NABL accredited lab, illuminance diagram, polar curve & LM80 report issued by LED manufacturer . The bidder shall upload the luminaire BIS certificate along with technical bid. The luminaire shall be supplied with necessary connectors for connecting lead/jump cables.</p> <p>Make : Wipro / Signify-Philips or equivalent</p>	Nos	165.00	₹ 22,500.00	₹ 37,12,500.00
5	<p>SITC of exterior flood light 3000k 35W, Lumen / watt – >100 lm / W, LM6 PDC Housing, High efficiency glass cover, Lumen Pack : 4000 lm (sys), Driver Efficacy : > 85%, Life L70, 50k Hrs, P66. The Product shall be approved subject to Consulatant / Architects approval in consultation with Bank's Electrical Engineer</p> <p>Make : Wipro / Signify-Philips or equivalent</p>	Nos	152.00	₹ 7,870.00	₹ 11,96,240.00
6	<p>SITC of Flood light architectural RGBW (W=4000K) LED flood with integral driver & housing made of Extruded aluminium alloy 6063 grade & die-cast aluminium end caps. The luminaire shall have electrostatically applied polyester powder coating finish. The luminaire width shall be 155mm x 140mm x 149mm with bracket. The luminaire's integrated brackets shall be made of extruded aluminium & the same shall be so designed that the luminaire can be tilted from ±95°. The luminaire shall have silicon glue between optical cover & LED chamber to ensure proper IP66 protection. The nominal weight of the luminaire shall be 2.2KG (±10%). The luminaire shall be equipped with high-power Cree, osram, lumiled or equivalent. The fixture shall have 10° beam angle & the lens shall be made of anti-aging & anti UV-PMMA material. The optical cover shall be made of IK06 rated clear tempered glass. The LEDs shall have minimum CRI ≥80 for white light & shall have SDCM≤4. The fixture shall come with power & DMX cable of minimum 100mm length. The fixtures shall be installed with have IP67 connectors. The luminaire shall have system wattage not exceeding 24W and system lumen output of not less than 1225lumens. Fixture shall operating temperature range of -40°C to 50°C. The fixture shall have an Non-integral driver with input voltage for 220-240 VAC, 50/60Hz. The luminaire shall have declared life of 50,000 burning hours at L70 @ 35deg. The luminaire shall have class I insulation. The luminaire shall be compatible with DMX512 controller. The luminaire shall automatically addressable using hand-held addressing device. The luminaire shall be capable of 8-bit control of RED, Green, Blue & White (W=4000K) to produce 16.7million colours. The luminaire shall be capable of digital dimming of 65536 steps. The successful bidder shall submit the following</p>	Nos	20.00	₹ 16,500.00	₹ 3,30,000.00

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Item No.	DESCRIPTION	UNIT	Total Qty	Rate	Amount
	certifications/reports for approval before supply of materials: product data sheets, LM79 report from NABL accredited lab, illuminance diagram, polar curve & LM80 report issued by LED manufacturer. The bidder shall upload the luminaire BIS certificate along with technical bid. The luminaire shall be supplied with necessary connectors for connecting lead/jump cables & end plates/covers. The Product shall be approved subject to Consultant / Architects approval Make : Wipro / Signify-Philips or equivalent				
7	Supply of Compact master Content Program Controller (DMX controller) with capability to control minimum 8 DMX512 universes or equivalent, playback scenes and animations stored in its SD card, and it can be used for offline scenes scheduling, setting brightness, white balance and playback speed adjustments. It should be able to amplify the DMX signal in cascaded connection & support automatic playback scheduling. It should support power-on startup and scheduled timing start along with capability of unattended operation and remote scene triggering if needed. The Content Program Controller shall have integrated LCD display & support IR remote control. The dimensions of the Content Program Controller shall be approximately 278X193X66 mm (±10%). It should be housed in aluminium casing. The Input voltage shall be 12VDC & shall have 2 RJ45 ports on Input side. The IEC classification shall be Class III. It should operate on DM512 protocol. The output shall have 8 X 3P lockable terminals. The power consumption shall be 8W (±10%). The Content Program Controller shall have one SD card slot for maximum 32GB card & the SD card being used shall be FAT32 format. The Content Program Controller shall come with 220-240V to 12V DC power supply. The IP rating of content program controller shall be IP20 & shall comply to CE,CQC certifications. The DMX controller/content program controller shall be from the same make/brand/manufacturer as that of façade lighting luminaires. The working temperature range shall be -5°C to 60°C. The successful bidder shall submit the technical data sheet for approval before supply of material. Make : Wipro / Signify-Philips or equivalent	Nos	1.00	₹ 3,85,670.00	₹ 3,85,670.00
8	Supply of RDM-6Wall Splitter or equivalent,should be able to provide 6-output DMX/RDM splitter with DMX/RDM pass-through supporting bi-directional communications for discovery, addressing and DMX control of Ethernet/DMX products.This unit takes the incoming DMX/RDM signal and splits the signal into six separate output channels allowing for expanding the number of devices controlled from 32 to 6x32. The output terminals are electronically isolated from the input & RDM-through port and share a common ground reference.All six output ports have an independent output driver to boost the DMX/RDM signal. Surface or DIN-rail mountable,Isolated DMX/RDM Input/Outputs,Automatic switching between DMX and RDM mode for auto-discovery,Environment-IP20, Interior applications,Finish/Color-Polycarbonate, Certification: CE Certified. Make : Wipro / Signify-Philips or equivalent	Nos	8.00	₹ 21,500.00	₹ 1,72,000.00

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Item No.	DESCRIPTION	UNIT	Total Qty	Rate	Amount
9	<p>The addressing device should be fast and convenient to address writing and testing for DMX512 luminaires or equivalent. The device should support internal test animation for DMX512 addresses verification. It should have SD card slot to store animation and scenes & should support searching for RDM / DMX luminaires and static detection. It should be powered by Micro-B type USB power supply. The Product shall be approved subject to Consultant / Architects approval</p> <p>Make : Wipro / Signify-Philips or equivalent</p>	Nos	1.00	₹ 50,450.00	₹ 50,450.00
10	<p>Testing, commission, and program lighting fixtures according to the Bank's requirement in coordination with consultant/architect's, follow these steps:</p> <p>1. Review Requirements:</p> <ul style="list-style-type: none"> - Obtain detailed requirements and standards from the consultant/architect. - Understand the desired lighting scenes and themes for each area. <p>2. Planning:</p> <ul style="list-style-type: none"> - Develop a plan outlining the sequence of testing and commissioning. - Identify all DMX-controlled lighting fixtures and their locations. - Plan the different lighting scenes and themes that need to be designed. <p>3. Installation Verification:</p> <ul style="list-style-type: none"> - Ensure all lighting fixtures are installed correctly and securely. - Check the wiring and connections for DMX controllers and fixtures. <p>4. Programming DMX Controllers:</p> <ul style="list-style-type: none"> - Set up DMX controllers and configure them according to the lighting design plan. - Program the controllers to create multiple lighting scenes and themes. - Ensure each fixture responds correctly to DMX signals. <p>5. Testing and Commissioning:</p> <ul style="list-style-type: none"> - Test each lighting fixture individually to ensure proper operation. - Verify that the programmed scenes and themes are executed correctly. - Adjust programming as needed to meet the design specifications. <p>6. Approval Process:</p> <ul style="list-style-type: none"> - Present the programmed lighting scenes and themes to the consultant/architect for approval. - Make any required adjustments based on feedback. <p>7. Documentation and Training:</p> <ul style="list-style-type: none"> - Document the programming and commissioning process. - Provide training to relevant personnel on how to operate and maintain the lighting system. <p>8. Final Verification:</p> <ul style="list-style-type: none"> - Conduct a final walkthrough with the consultant/architect to ensure all requirements are met. - Obtain final approval and sign-off. <p>Make : Wipro / Signify-Philips or equivalent</p>	Nos	1.00	₹ 1,95,456.00	₹ 1,95,456.00

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Item No.	DESCRIPTION	UNIT	Total Qty	Rate	Amount
11	Supplying & laying of D link / Amp. Make Cat 6 data cable in 2 mm th. PVC conduit from controller to light fixture . Armoured CAT 6 cable as per site requirement. (Each box 305 mtr) .Cat6 four pair cable is designed for high performance and speed. high impedance cable capable of carrying high bit-rate signalling for extended distance.- The cat 6 cable shall have U.L CERTIFIED.,Insulation: HDPE over Copper Wires, Inner Jacket PVC Gray, Armoring and Outer Jacket FR-PVC Black 0.85mm,EC GRADE COPPER, Armoring: Aluminium Wire with ,INTERNATIONAL STANDARD TWISTING,OUTER LD PVC (WEATHER AND TEMPERATURE PROOF),DCM TESTED,FLUKE TESTED,F.R FRESH HIGH-QUALITY PVC or equivalent Make : Wipro / Signify-Philips or equivalent	Nos	26.00	₹ 10,000.00	₹ 2,60,000.00
12	Supplying, installation testing commissioning of 24-port loaded Modular Jack Panel (For UTP Jacks), (For Data utp Field Cable) Cat 6 24 Port Jackpanel - loaded- A DATAfor termination of data cable & to be mounted in mounting rack 21 U switch. Make : Wipro / Signify-Philips or equivalent	Nos	22.00	₹ 12,500.00	₹ 2,75,000.00
13	Supplying, installation testing commissioning of floor mounted 21 u Networking Rack (600 x600mm) closed rack with accessories for data open race with magnetic lockable doors, end panels with accessories , earth kit complete as required. Make : Wipro / Signify-Philips or equivalent	Nos	1.00	₹ 15,500.00	₹ 15,500.00
14	Supply and Laying of following size of cables as per specifications mentioned in the Document elsewhere complete as required with Supplying and making terminal joints for the following size of 1.1 KV PVC insulated copper conductor armoured cables including providing heavy duty copper terminal crimping lugs, solder, insulation tape, approved sealing epoxy compound,Double compression brass cable glands, effecting gland connections and effecting terminal connections to the equipment complete as required. Make : Wipro / Signify-Philips or equivalent				
d.	2 x 2.5 sqmm +1x 2.5sqmm FR PVC insulated copper flex cable. (for strip light + coloum nice light)	RM	2750.00	₹ 170.00	₹ 4,67,500.00
e.	3 x 4sq.mm FR PVC INSULATED copper flexible cable. (for building RGBW integral 1000mm long + flood light + GOBO projector)	RM	3690.00	₹ 240.00	₹ 8,85,600.00

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Item No.	DESCRIPTION	UNIT	Total Qty	Rate	Amount
15	Design manufacture , supply and fixing in position the cable trays of the following sizes for supporting 1100 Volts Grade armoured /unarmoured aluminium /copper conductor cables. Fabricate the cable trays from perforated 1.6/2mm thick M.S. CRCA sheet duly galvanised with expansion coupler plates duly galvanised, with bolts, washer and nuts. Knock out holes for cable connections as per approved design. The tray should comply with the specification of NEC (National Electric Codes) and NEMA (National Electric Manufacturers Association). The steel should be as per IS:226 and galvanising as per IS :2629/BS 729/ASTM 123. The rate shall also include for supporting steel , fish plates , fixing accessories , nuts bolts, supporting down rods , dash fastener, cutting the RCC etc. complete as required. (the horizontal and vertical bends, T's should be factory fabricated and the rate should include for the same)				
a.	150 mm wide x 40 mm x 2.0 mm thk	RM	800.00	₹ 450.00	₹ 3,60,000.00
b.	300 mm wide x 40 mm x 2.0 mm thk	RM	100.00	₹ 550.00	₹ 55,000.00
c.	450 mm wide x 40 mm x 2.0 mm thk	RM	0.00	₹ 750.00	₹ -

B.1	Boundary and landscape lighting
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SUPPLYING , FIXING TESTING & COMMISSIONING					
1	Boundary Wall post Top light -12W LED W28 Brand K Lite CYRILLA PILLAR / Signify-Philips / Wipro or equivalent	Nos	24	₹ 3,650.00	₹ 87,600.00
2	12w Bollard LED light beam angle 24 degree- K LITE, model no KL-4735 VERBENA LED M 36/ Signify-Philips / Wipro or equivalent	Nos	56	₹ 18,700.00	₹ 10,47,200.00
3	UNDER WATER LIGHT WIPRO ARCUS Catalogue no. LU03-950-030-30- XX (20W) / Signify-Philips / Wipro or equivalent	Nos	38	₹ 15,650.00	₹ 5,94,700.00
4	2.5 W STEP LIGHT,COLOR -3000 K WIPRO ARCUS MODEL LT50 -050-XXX-30-XX / Signify-Philips / Wipro OR EQUIVALENT.	Nos	52	₹ 1,650.00	₹ 85,800.00
5	6W LED SPIKE LIGHT 36 DEGREE -WIPRO GARDENIA MODEL NO LED LF 05 (IP 67) 450 -036-27-XX /Signify-Philips / Wipro or equivalent	Nos	30	₹ 2,020.00	₹ 60,600.00
6A	Pole Light Brand : K LITE/ Signify-Philips / Wipro or equivalent Post : Mallow (3.0 mtr height), Black, Matt finish Top lantern : 4891 A9/A12 50W LED D4 Ø 425 X 395 / 425	Nos	48	₹ 18,100.00	₹ 8,68,800.00
6B	KP-9204 Foundation Bolt, 4 Nos of M16 x 300 mm bolt with 8 Nuts, 8 Plain Washer and 8 Spring Washer K Lite / Signify-Philips / Wipro or equivalent	Nos	48	₹ 1,010.00	₹ 48,480.00
6C	KL-5188 Pelican Fort Mini, Dimension : A9 : Ø425 x 407, A12 : Ø425 x 437mm Wattage : 30W LED. K Lite / Signify-Philips / Wipro or equivalent	Nos	48	₹ 7,450.00	₹ 3,57,600.00

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Item No.	DESCRIPTION	UNIT	Total Qty	Rate	Amount
7	Wall light (Arcus-Wipro) or equivalent Model : LW 31/32 18 W Matt Black body K Lite / Signify-Philips / Wipro or equivalent	Nos	40	₹ 6,700.00	₹ 2,68,000.00
B.2	External Lighting Cable Work				
	Supply and Laying of following size of cables as per specifications mentioned in the Document elsewhere complete as required with Supplying and making terminal joints for the following size of 1.1 KV PVC insulated copper conductor armoured cables including providing heavy duty copper terminal crimping lugs, solder, insulation tape, approved sealing epoxy compound, Double compression brass cable glands, effecting gland connections and effecting terminal connections to the equipment complete as required. Approved make- Polycab / Havells/ gloster or equivalent.				
a.	2 x 10sq.mm armoured aluminium conductor cable.	RM	20	₹ 135.00	₹ 2,700.00
b.	2 x 6sq.mm. pvc insulated copper armoured cable .	RM	0	₹ 260.00	₹ -
c.	2 x 4sqmm.+ 1x 2.5sqmm FR PVC copper armoured cable . (for pole light)	RM	1125	₹ 220.00	₹ 2,47,500.00
d.	2 x 2.5 sqmm +1x 2.5sqmm FR PVC insulated copper flex cable.	RM	1500	₹ 170.00	₹ 2,55,000.00
e.	3 x 4sq.mm FR PVC INSULATED copper flexible cable.	RM	800	₹ 240.00	₹ 1,92,000.00
	FOR ELECTRICAL CONTROL ROOM				
1	CIRCUIT CUM POINT WIRING				
A	LIGHT POINTS				
1.a.1	Wiring for light point / fan point/exhaust fan/light socket switch with 3X2.5 (P+N+E) sqmm copper conductor FRLS insulated 1100v grade multi strand wire (RR Kabel/ Havells/ Polycab or equivalent) in concealed / surface using 20/25/32 rigid MS conduit 16swg thick with all bend, tees, saddle mounting box, cover plate ceiling rose, etc. wherever required etc.& chromium plate brass screw/rawl plug etc..The circuit wiring start from DB to point control box /switch box using 3 x 2.5 (P+N+E) sqmm copper conductor FRLS insulated 1100V grade multistrand wire with notification ferrules at both end complete in all respect. The conduit must be fixed with MS saddle at every 80cm on surface and conduit to be laid in ceiling with proper clamps/wall floor filling the chese with cement mortar and finish the same in original form/wooden partition above false ceiling chessess filled with cement mortar as required at site Each circuit shall have separate earth wire.All switch socket must be for modular type with M.S. Boxes and plate extra etc. as required Note:-Each circuit shall have independent earth wire each point shall be earthed. Circuit wiring is to be included in wiring. Make of modular switches / box/ socket- Legrand / MK/ Havells or equivalent				
1.a.1	One light controlled by one 6A modular one way switch.	Nos.	2	₹ 750.00	₹ 1,500.00
1.a.2	Two light controlled by one 6A modular one way switch.	Nos.	1	₹ 900.00	₹ 900.00
1.a.3	One ceiling fan Controlled by one 6A modular one way switch and one electronic type 5 step fan regulator(Cost of fan regulator is included with the supply of ceiling fan)	Nos.	1	₹ 800.00	₹ 800.00
1.a.4	One wall fan controlled by one 6A modular switch, but 6A 6 pin socket has to provide near the wall fan for connections. the point shall terminate at a ceiling rose.	Nos.	1	₹ 900.00	₹ 900.00
1.a.5	One exhaust fan controlled by 6A modular switch,but ceiling rose gas to be provide near the exhaust fan for connection.	Nos.	1	₹ 900.00	₹ 900.00
1.a.6	one 6A,5 pin socket controlled by one 6A modular one way switch light plug controlled by one way switch.				₹ -
1.a.6 (a)	Dependent	Nos.	2	₹ 600.00	₹ 1,200.00
1.a.6 (b)	Independent	Nos.	4	₹ 900.00	₹ 3,600.00

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Item No.	DESCRIPTION	UNIT	Total Qty	Rate	Amount
	For Ground floor Parking area light				
2	Wiring for the following light points controlled by MCB in DB (Cost of MCB has been taken elsewhere in the tender) with 2 x 2.5sqmm+1x 2.5sq.mm FRLS PVC insulated copper conductor wires in concealed/ exposed MS conduits as called for and earthing complete as required.				
a)	First point controlled by existing MCB in D.B.	Nos	15	₹ 1,000.00	₹ 15,000.00
b)	Same as item No. 4 above but LOOP POINT i.e. wiring of point looped from first point with 2 x 2.5sqmm +1x2.5sq.mm FRLS. insulated copper conductor wire in concealed/ exposed MS conduit and earthing	Nos	101	₹ 550.00	₹ 55,550.00
B	POWER POINTS - Electrical control room				₹ -
B	Do -as above (1.a.1) but using 4 sqmm copper conductor wires for the first 16A,6pin modular socket controlled by 16A switch and second point looped with 2.5 sqmm copper conductor wires FRLS insulated 1100V grade (max. 2 points on one MCB).Earth wire shall be 2.5 sqmm copper conductor FRLS insulated wire. (including with Conduit)				
b.1	POWER POINT with 4 sqmm copper conductor wire .	Nos.	3	₹ 1,500.00	₹ 4,500.00
b.2	POWER POINT with 2.5 sqmm copper conductor wire.	Nos.	3	₹ 1,100.00	₹ 3,300.00
C	A.C POINT -Electrical control room				
c.1	Do as above but using 2X4 sqmm copper conductor FRLS insulated wires with1X2.5Sq.mm earth FRLS insulated wire 1100V grade for AC point.The points shall starts from DB & shall finish with the supply & installation for 32A,6pin modular socket controlled by 32ATiny Trip SP MCB, all work complete with accesories as required (For Spilt unit 1 Tr. & 1.5 Tr)	Nos.	1	₹ 2,600.00	₹ 2,600.00
D	DATA & VOICE CABLING				
2.a	STRUCTURE CABLE (VOICE)				
2.a.1	Wiring with Cat 5 E data cable in 2 mm thick PVC conduit with supplying & fixing of modular type plate with box RJ socket to be fixed on wall / partition / etc. The wiring to be laid concealed from system room to various points	Nos.	2	₹ 9,500.00	₹ 19,000.00
2.a.2	Supplying & installation of 1x16 port jack panel for termination of structure cabling (Voice) and to be mount in item no .7 d)	Nos.	1	₹ 5,500.00	₹ 5,500.00
2.b	LAN WIRING				
2.b.1	Supplying & laying of D link / Amp. Make Cat 6 data cable in 2 mm th. PVC conduit from system RM. Armoured CAT 6 cable as per site requirement	Nos.	6	₹ 11,000.00	₹ 66,000.00
2.b.2	P/F mounting cords of following lengths				
i)	3 Feet	Nos.	6	₹ 250.00	₹ 1,500.00
2.b.3	Supplying, installation testing commissioning of 1x24 ports jack panel for termination of data cable & to be mounted in mounting rack 21 U switch.	Nos.	1	₹ 15,000.00	₹ 15,000.00
	FIRE SAFETY (Proposed Electrical room)				
3	Providing & fixing in position 1000 mm wide,Electrical Insulating Mats as per IS 15652:2006, 2mm thick, suitable upto 3.3 KV,fire retardant,no effect of acids, alkalies and transformer oils, moisture proof,high tensile strength and texture finish /cloth impression. (Anti slip ,marking on top)	RM	2	₹ 1,500.00	₹ 3,000.00
4	Supply & fixing in position approved shock treatment chart written in English Hindi and Local language.These charts shall be framed in wooden frame & covered with clear glass.	Nos	2	₹ 1,000.00	₹ 2,000.00

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Item No.	DESCRIPTION	UNIT	Total Qty	Rate	Amount
5	Supply & fixing in position First Aid Boxes of approved shape and size as required by the local Electrical Inspecting Authority.	Set	1	₹ 2,000.00	₹ 2,000.00
6	Supply & fixing in position the best quality danger notice boards of approved shape & size as reqd. by the local Electrical Inspecting Authority written in English, Hindi & local language.(For 440 Volt & 11000 Volt)	Nos	1	₹ 750.00	₹ 750.00
7	Supply of Tool Box with all necessary tools for maintenance of electrical installation .	Set	1	₹ 2,000.00	₹ 2,000.00

B.	EARTHING SYSTEM				
1	Providing and fixing in position the following copper/G.I. strips and wires including providing all fixing accessories and effecting proper connections.				
a.	Copper tape 32mm x 6mm	RM	0	₹ 1,200.00	₹ -
b.	Copper tape 25mm x 6mm	RM	40	₹ 950.00	₹ 38,000.00
c.	Copper wire 8 SWG	RM	60	₹ 80.00	₹ 4,800.00
d.	G.I tape 35mm x 6 mm	RM	80	₹ 150.00	₹ 12,000.00
e.	G.I tape 25 mm x 6 mm	RM	250	₹ 130.00	₹ 32,500.00
f.	G.I wire 8 SWG (ALL OUTGOING CABLE)	RM	1260	₹ 25.00	₹ 31,500.00
2	G.I Earth Pipe Electrode				
	Earthing with G.I earth pipe 4.5mm long x 40mm dia. Including accessories and providing masonry enclosure with cover plate having locking arrangement and watering pipe etc. (with 35kg compound,masonry chamber) complete as required. (For FEEDER PILLAR & Lighting Pole Earthing)	Set	10	₹ 5,100.00	₹ 51,000.00
3	Supply,Installation, testing and commissioning of Maintenance Free Earthing of make Copper earthing consisting 50mm copper rod (3mtr) with 50 kg compound,masonry chamber with concrete base,C.I man hole cover (cover to be heavy duty) with frame (300mm x 300mm) complete as required ISI marked. (FOR SERVO STABILISER & UPS)	Nos.	2	₹ 11,000.00	₹ 22,000.00
4	Supply, Installation, testing and commissioning of Maintenance Free Earthing of make G.I earthing consisting 50mm G.I rod (3mtr) with 50 kg compound,masonry chamber with concrete base,C.I man hole cover (cover to be heavy duty) with frame (300mm x 300mm) complete as required ISI marked. (Make Gemrod) .(For Main L T PANEL ,LIGHTING CONTROL PANEL)	Nos.	4	₹ 8,200.00	₹ 32,800.00
5	Supplying and laying of the following sizes of Medium duty G.I Pipes below paved area including chase cutting and back filling. (For Road Crossing)				
a.	100 mm dia	RM	70	₹ 400.00	₹ 28,000.00
b.	80 mm dia	RM	50	₹ 250.00	₹ 12,500.00

C.	CABLES ,MAINS & SUBMAINS (L.T CABLE WORK)				
1	Supply and laying, effecting proper connections, testing & commissioning of the following sizes of 1100 Volts Grade XLPE armoured/ unarmoured PVC insulated PVC sheathed aluminium /copper conductor cables conforming to IS : 7098 and IS 1554 Part I and IS 694 for Flexible copper cable with latest amendments laid over M.S supports in existing RCC ducts/laid in Ground /laid on Cable Trays including clamping the cables to supports in an approved manner as required complete with all accessories.				
a	3.5 c x 70 sq.mm XLPE armoured aluminium conductor cable. (From Existing Electrical panel Tappoff to Incomer Main Building)	RM	50	₹ 450.00	₹ 22,500.00
b.	3.5 c x 35 sq.mm XLPE armoured aluminium conductor cable.	RM	0	₹ 350.00	₹ -
c.	4 c x 16 sq.mm XLPE armoured aluminium conductor cable.	RM	0	₹ 180.00	₹ -

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Item No.	DESCRIPTION	UNIT	Total Qty	Rate	Amount
d.	4 c x 10 sq.mm XLPE armoured aluminium conductor cable. (From Main Electrical Panel to Feeder pillar incomer + light db)	RM	245	₹ 140.00	₹ 34,300.00
e.	4 c x 6 sq.mm XLPE armoured aluminium conductor cable	RM	0	₹ 90.00	₹ -
f.	2 c x 16sq.mm XLPE armoured aluminium conductor cable (Emer db & sump pump)	RM	35	₹ 80.00	₹ 2,800.00
2	Supplying and making terminal joints for the following size of 1100 Volts Grade PVC insulated copper conductor armoured cables including providing heavy duty copper terminal crimping lugs, solder, insulation tape, approved sealing epoxy compound, double compression brass cable glands, effecting gland connections and effecting terminal connections to the equipment complete as required.				
a	3.5 c x 70 sq.mm XLPE armoured aluminium conductor cable. (From Existing Electrical panel Tappoff to Incomer Main Building)	Jt	2	₹ 450.00	₹ 900.00
b	3.5 c x 35 sq.mm XLPE armoured aluminium conductor cable.	Jt	0	₹ 300.00	₹ -
c	4 c x 16 sq.mm XLPE armoured aluminium conductor cable.	Jt	0	₹ 225.00	₹ -
d	4 c x 10 sq.mm XLPE armoured aluminium conductor cable. (From Main Electrical Panel to Feeder pillar incomer + light db)	Jt	14	₹ 200.00	₹ 2,800.00
e	4 c x 6 sq.mm XLPE armoured aluminium conductor cable	Jt	0	₹ 150.00	₹ -
f	2 c x 16sq.mm XLPE armoured aluminium conductor cable (Emer db & sump pump)	Jt	4	₹ 150.00	₹ 600.00
D.	CABLE TRAYS				
1	Design manufacture, supply and fixing in position the Ladder Type cable trays of the following sizes for supporting 1100 Volts Grade armoured/ unarmoured aluminium /copper conductor cables. Fabricate the cable trays to from Ladder Type 2.0 mm thick M.S. Flat/ Angle iron with bolts, washer and nuts. as per approved design. The tray should comply with the specification of NEC (National Electric Codes) and NEMA (National Electric Manufacturers Association). The steel should be as per IS:226 and galvanising as per IS :2629/BS 729/ASTM 123. The rate shall also include for supporting steel ,jointing fish plates,fixing accessories,nuts bolts, supporting down rods, dash fastener, cutting the RCC etc. complete as required.				
a.	300mm wide x 50mm x 2mm thk (INSIDE ELECTRICAL ROOM)	RM	25	₹ 450.00	₹ 11,250.00
b.	150mm wide x 50mm x 2mm thk	RM	50	₹ 275.00	₹ 13,750.00
2	Design manufacture , supply and fixing in position the cable trays of the following sizes for supporting 1100 Volts Grade armoured /unarmoured aluminium /copper conductor cables. Fabricate the cable trays from perforated 1.6/2mm thick M.S. CRCA sheet duly galvanised with expansion coupler plates duly galvanised, with bolts, washer and nuts. Knock out holes for cable connections as per approved design. The tray should comply with the specification of NEC (National Electric Codes) and NEMA (National Electric Manufacturers Association). The steel should be as per IS:226 and galvanising as per IS :2629/BS 729/ASTM 123. The rate shall also include for supporting steel , fish plates , fixing accessories , nuts bolts, supporting down rods , dash fastener, cutting the RCC etc. complete as required. (the horizontal and vertical bends, T's should be factory fabricated and the rate should include for the same)				
a.	150 mm wide x 40 mm x 2.0 mm thk	RM	15	₹ 450.00	₹ 6,750.00
b.	300 mm wide x 40 mm x 2.0 mm thk	RM	20	₹ 550.00	₹ 11,000.00
c.	450 mm wide x 40 mm x 2.0 mm thk	RM	0	₹ 750.00	₹ -
d.	600 mm wide x 40 mm x 2.0 mm thk	RM	0	₹ 1,250.00	₹ -

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Item No.	DESCRIPTION	UNIT	Total Qty	Rate	Amount
E.	Ground Floor Lobby Lighting				
	SUPPLYING, FIXING TESTING & COMMISSIONING				
1	Indoor Ceiling light Brand : Wipro AXEON LED LM 34 Down Light With Suspension System LM34-251-XXX-57-CT 20 W Signify-Philips / Wipro / Havells or equivalent	Nos	116	₹ 1,300.00	₹ 1,50,800.00
2	Wipro Recessed light (LED 2' X 2') 2 X 2 Backlit panel : Immaculate LED DD LM 24 / Recess mount LM24-391-XXX-57-DD 31 W Signify-Philips / Wipro / Havells or equivalent	Nos	2	₹ 2,200.00	₹ 4,400.00
F.	DISMANTALLING WORK				
1	Dismantalling of existing drain pipe & connecting & Refixing of NEW UPVC drain pipe work of 4 sided building facade work.	LS	1	₹ 50,000.00	₹ 50,000.00
2	Removing of Existing UNUSED split AC OUTDOOR UNIT from the existing locations/ conditions with proper care with all accessories without damaging the electrical items and the associated built components including disconnection of copper pipe, insulation and electric connection and stacking item in appropriate location as per guidance of the client. Material should be covered with adequate protective cover to protect them from dust, dirt and water during the storage period. The contractor has to reinstall the A/C units (outdoor units) with all necessary components including gas, copper pipe of required dia, insulation, wall brackets, band joints and all the required accessories and has to provide electric connection as per the dwg with all required wires and accessories as mentioned in dwg and tender document, complete in all respect for complete smooth functioning of the AC units. Dismantling & refixing, Positioning Connecting testing & commissioning of existing AC Outdoor unit to its new location with ms stand & copper refrigerant pipe complete accessories as required.	LS	1	₹ 1,50,000.00	₹ 1,50,000.00
G.	Lightning Protection Scheme, Aviation Light				
	Lightning Protection System				
	CHEMICALLY TREATED LOW IMPEDENCE EARTH STATIONS.				
	Supply, installation, testing and commissioning of Dual GI MS Pipes sealed at both ends earthing electrode with flat full length copper terminal inside & filled with highly conductive, non corrosive, non magnetic moisture boosting chemical for Ground Resistance improvement as per detailed specification given below (must comply to IS 3043 code of practice for earthing.) Chemical is also to be put around above pipe electrode in earth pit in form of slurry to retain moisture.				
1.0	Type 2: This type will have pipe electrode which is 3m long & outer shell to have min 80 mm dia x 3.65 mm thick, inner shell to be max. 50mm dia x 3.25 mm thick. with GI coating of 80 to 120 microns for outer shell & about 200 to 300 microns for inner shell. Terminal & electrode flat size should be <u>40 x 10 mm or equivalent GI conductor</u> . Pipe Electrode will be laid inside a bore of about 200mm dia.	Nos.	6	₹ 15,000.00	₹ 90,000.00
	Lightning Protection System (Conventional type)				

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Item No.	DESCRIPTION	UNIT	Total Qty	Rate	Amount
2	Providing and fixing GI lightning conductor finial . Providing and fixing of lightning conductor finial, made of 25mm dia 300 mm, long GI tube, having single prong at top, with 85mm dia 6mm thick GI base plate including holes etc. complete as required.	Each	8	₹ 3,500.00	₹ 28,000.00
3	Providing Al lightning conductor tape in horizontal run complete with all fixing accessories as required:- Providing and fixing Al tape 20mm x 3mm thick on parapet or surface of wall for lightning conductor as required. (For Horizontal run)	RM	320	₹ 145.00	₹ 46,400.00
4	Providing and fixing Al lightning conductor tape in vertical run complete with all fixing accessories as required:- Providing and fixing Al tape 20mm x 3mm thick on parapet or surface of wall for lightning conductor as required. (For Vertical run)	RM	520	₹ 145.00	₹ 75,400.00
5	Providing and fixing Testing joint for G.I lightning conductor strip: Providing and fixing testing joint, made of 20mm x 3mm thick GI strip, 125mm long, with 4 nos. of GI bolts, nuts, check nuts and spring washers etc. complete as required.	Each	6	₹ 90.00	₹ 540.00
6	Providing and laying GI earth tape for lightning conductor: Providing and laying GI tape, 32mm x 6mm thick, from earth electrode directly in ground as required.	RM	80	₹ 145.00	₹ 11,600.00

H	MAIN L.T PANELS & DISTRIBUTION BOARD (Panel Manufactures :- CPRI Approved)				
3	Supplying, installing, testing & commission of surface/recessed mountings, Double door 415 volts TPN MCB distribution board of steel steel, 1.6mm thick dust phosphatized and painted, inclusive of 200 amps, tinned copper busbars, earthbar, common neutral link, din bar for mounting of MCB's detachable gland / knock out plate & with built in loose wire box, and superior make terminal connectors for all incoming and outgoing circuits duly prewired with adequate size of PVC insulated copper wires between the bus bars and the MCB's as well as the incomer and upto the terminal connectors/ neutral link and ready for installation of following ways as required :				
3.2	8-way TPN DB (FOR LIGHT & POWER) Incomer :- 1 No.40 Amp TPN (10 KA) MCB with 40A DP RCCB (100 MA) each phase Outgoing :- 24 Nos.10/16Amp (10 KA) SP MCB 'C' Series (10 A FOR LIGHT CKT & 16A FOR POWER CKT)	1	No	₹ 13,500.00	₹ 13,500.00
3.3	6-way TPN DB (FOR LIGHT) Incomer :- 1 No.40 Amp TPN (10 KA) MCB with 40 A DP RCCB (100 MA) each phase Outgoing :- 18 Nos.10Amp (10 KA) SP MCB 'C' Series	2	No	₹ 12,500.00	₹ 25,000.00
3.4	8-way SPN DB-2 (FOR UPS) Incomer :- 1 No.40 Amp DP (10 KA) MCB Outgoing :- 8 Nos.10Amp (10 KA) SP MCB 'C' Series	1	No	₹ 6,500.00	₹ 6,500.00

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Item No.	DESCRIPTION	UNIT	Total Qty	Rate	Amount
4	Design, manufacture, supplying, assembling at site the following cubical type, dead front, 2mm thick sheet steel enclosed, free standing indoor type extendible Main M.V Panel and Sub -distribution Boards with vermin proof hinged lockable doors for each compartment provide bus bar interconnections for incoming and outgoing including feeders earthing and painting and as per specifications.				
	Kindly Note :-				
	LT Panel / PCC shall be of non-draw-out type (as per the 'specific Technical Requirement' / BOQ / SLD), in multi-tiers arrangement with modular and compartmentalized construction. The panel shall be lockable with key-lock (as required).				
	: The LT Panel shall be Indoor, sheet steel metal clad, floor mounted, type conforming to (latest edition) . The LT pane The panel shall be complete with bus bars suitable for 1.1 kV with fault level with-stand: 20KA current for 1 sec. : All the equipment shall be accessible from the front side of the panel in case of 'Single front panel without adequate back excess. Protection relays, KWH & indicating meters, etc. shall be mounted on front door; when required. : Provided with anti-condensation space heaters, thermostat controlled & back-up protection (MCB) in each bay; rated for 240Volts, single phase, 50Hz. AC. Power supply. The space heater shall be of 100W rating (each). Cubicles shall be provided with LED lamps with control switches and suitable sockets.				
	All MCCBs shall have: : Ics = Icu = 100% for the breakers. : MCCBs upto 200A shall be with thermal - magnetic releases and beyond 200A shall be with micro-processor based releases. : MCCBs shall be with extended rotary handle as required.				
	All meters shall be digital with LED display.				
	All Multifunctional / Energy Meters shall have RS 485 MODBUS RTU half duplex interface for integrating to BMS .				
	All MCCB, shall have over load and short circuit protection .				
1	The Main L.T. Panel- 1 (Located at Ground) consists of :-				
	Incomer - 1				
	1 No . 125Amps 4P MCCB 25 KA with 125 4P ACOS connection on one side and bus bar connection on the other side .				
	BUSBAR SECTIONS				

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Bill of Quantities

Item No.	DESCRIPTION	UNIT	Total Qty	Rate	Amount
	300 amps TPN busbar chamber of suitable length with Aluminium busbars. All busbars and interconnections shall be of suitable size Aluminium busbar, current density of aluminium shall not be more than 0.8 Amps/sq.mm cross sectional area of Bus Bar provide 50% capacity for neutral bus bar. The Bus Bar shall be suitable for max temperature rise of 30°C above ambient of 45°C .				
	INDICATING PANEL				
	3 nos phase indicating lamps(LED type) each backed up with MCB and switch .				
	Intelligent Panel Meter as per specification for all incoming . Provide CT operated dual energy meter with RS 485 port in all outgoing feeders				
	Provide ON/OFF indication lamp in all outgoing MCB Feeder				
	OUTGOING FEEDERS				
	1x 63Amps TP+N MCB's (10kA) terminals suitable for cable connection on one side and Bus bar connection on other side. (FOR LIGHTING CONTROL PANEL)				
	2x 63Amps TP+N MCCB's (10kA) terminals suitable for cable connection on one side and Bus bar connection on other side. (FOR GROUND FLOOR PARKING LIGHT DB)				
	1x 63Amps TP+N MCCB's (10kA) terminals suitable for cable connection on one side and Bus bar connection on other side. (FOR FEEDER PILLAR -1)				
	1x 63Amps TP+N MCCB's (10kA) terminals suitable for cable connection on one side and Bus bar connection on other side. (FOR FEEDER PILLAR -2)				
	3x 63Amps TPN MCCB's (10kA) with terminals suitable for cable connection on one side and Bus bar connection on other side. (FOR FEEDER PILLAR -3 ,4 &5)				
	2X63Amps DP MCB's (10kA) with terminals suitable for cable connection on one side and Bus bar connection on other side. (FOR UPS /EMER DB)				
	63Amps 4P MCB's (10kA) with terminals suitable for cable connection on one side and Bus bar connection on other side. (SPARE)				
	The MAIN EXTERNAL ELECTRICAL LIGHTING Panel - 1 FOR as described above as per specifications complete	Set	1	₹ 1,65,000.00	₹ 1,65,000.00
B	FEEDER PILLAR -IP 67 (WEATHER PROOF & WATER PROOF)				
1	Supply, Installing testing and commissioning of Main Street Light Distribution Board comprising of the following (IP 67):-				
a.	1 no 63 A TPN MCCB as incomer				
b.	1 no 32 A TP Contactor (230 V coil)				
c.	1 no selector switch to select automatic or manual operation				
d.	1 set of ON/OFF push buttons for manual operation				

Upliftment / Upgradation of Facade of SBI LHO Building New Delhi

Bill of Quantities

Item No.	DESCRIPTION	UNIT	Total Qty	Rate	Amount
e.	1 no L & T timer TSQ -ST (daily dial - 1x 24 Hours)				
f.	30 nos. 16 A/25A SP MCB (10 KA) as outgoing				
g.	100 A TPN AL. busbar.				
h.	All interconnections and wiring as required for automatic ON and OFF operation of the SLDB.				
i.	2 mm thick M.S. sheet metal Cubicle Board as per specifications mentioned elsewhere in the document complete, including earthing as required.				
	FEEDER PILLAR PANEL -IP 67 out door type as described above complete as required.	Set	5	₹ 61,000.00	₹ 3,05,000.00
C	Supply, installation, testing and commissioning of following 50KVA Air cooled Micro controller L.T Servo Voltage Stabilizer with Power output protected against OV, UV & Over load & short circuit enhancing system safety under extreme conditions and inbuilt By pass system for 50KVA servo stabilizer with 2 nos. 125 Amp 4 pole on load changeover switch & 100% unbalanced load suitability of approved make housed in 2 mm thick sheet enclosure of approved design.Terminals shall be suitable for receiving AL. XLPE Cables. as per specifications.User friendly digital screen with status LED's for easy management.Efficiency above 98% & energy saving.Quickest response time 10 ms (Half a cycle). High speed of voltage correction with zero hunting. Excellent regulation as high as $\pm 0.5\%$.Zero wave form distortion & Unaffected by load PF.Auto / Manual Restart Programmable	Set	1	₹ 1,20,000.00	₹ 1,20,000.00
Sub total 2: for Site Development & Landscape works					₹ 2,37,24,786.00
GST EXTRA					

SUB TOTAL 1: Facade work	₹ 11,35,11,192.00
SUB TOTAL 2: Site development & Landscape work	₹ 4,10,72,034.00
SUB TOTAL 3: Electrical Works	₹ 2,37,24,786.00

Grand Total (A)	₹ 17,83,08,012.00
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1	Quoted price HIGHER (then the estimated cost-A)	1	percent	₹ 18,00,91,092.12
2	Quoted price LOWER (then the estimated cost-A)	1	percent	₹ 17,65,24,931.88
2	Quoted price AT PER (the estimated cost-A)	0	percent	₹ 17,83,08,012.00

Note : Only one of the options among SI 1, 2, 3 to be selected & filled by the contractor				
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