

पनवेल महानगरपालिका जाहीर निविदा दरपत्रक

आयुक्त, पनवेल महानगरपालिका हद्दीतील प्रभाग समिती - अ, अंतर्गत खारघर येथील सेक्टर - ३५ एच, भुखंड क्र. ०१ येथे अंतराळ संग्रहालय (Space Museum) निर्माण करणे. या कामाचे अंदाजपत्रक बनविण्याकरीता खाली नमूद केलेल्या बाबींकरीता खालील नमूण्यात दर मागविण्यात येत आहे.

अ.क्र.	कामाचे नाव	मुदत
१	पनवेल महानगरपालिका हद्दीतील प्रभाग समिती - अ, अंतर्गत खारघर येथील सेक्टर - ३५ एच, भुखंड क्र. ०१ येथे अंतराळ संग्रहालय (Space Museum) निर्माण करणे.	०४/०७/२०२५ ते १०/०७/२०२५ (७ दिवस)

Specification

Sr. No	Item	DESCRIPTION	Unit	Quantity
External Development				
1.	Cobble Stones (pathway)	Provide, Supply & Installation of Cobbles Stones of premium Granite Cobble in Top Edge Machine Cut. These granite cobblestones are meticulously cut to provide a uniform, sleek finish while maintaining exceptional durability. Pattern shall be provided as per the selection Dimensions : 100mm x100mm x 50-70mm Thk	Sq.M	330
2.	Cobble Stones (Entrance Area)	Provide, Supply & Installation of Cobbles Stones of premium Granite Cobble in Top Edge Machine Cut. These granite cobblestones are meticulously cut to provide a uniform, sleek finish while maintaining exceptional durability. Pattern shall be provided as per the selection Dimensions : 100mm x100mm x 50-70mm Thk	Sq.M	200
3.	Designer Concrete and Stamping (TYPE 1) - VEHICULAR RAMP	Provide, Supply & Installation of Designer Stamped concrete.It is a system of adding colour, pattern and texture to a plain concrete slab at the time of pouring. A finished Designer concrete surface gives an attractive, three-dimensional, two-toned appearance. Many different effects can be achieved from ancient cobble patterns to contemporary stone block, or a classical Mediterranean tile. Edges of plain, matching or contrasting patterns can be added and the product can be applied to steps.The finished job is sealed with a protective coating which helps protect the product from dirt and staining.	Sq.M	430
4.	Designer Concrete and Stamping (TYPE 2) - ROADS	Provide, Supply & Installation of Designer Stamped concrete.It is a system of adding colour, pattern and texture to a plain concrete slab at the time of pouring. A finished Designer concrete surface gives an attractive, three-dimensional, two-toned appearance.Many different effects can be achieved from ancient cobble patterns to contemporary stone block, or a classical Mediterranean tile. Edges of plain, matching or contrasting patterns can be added and the product can be applied to steps.The finished job is sealed with a protective coating which helps protect the product from dirt and staining.	Sq.M	1900
5.	Space Museum Name in Acrylic (Main Gate)	Providing & Fixing 3mm Thk Acrylic sheet CNC Cut Acrylic 50mm depth Hollow box letters for building Name plate "SPACE MUSEUM" (Letter Height=24"x 86", 24"x 142") with required hardware, accessories, tool, fastners etc. complete. The design shall be approved Architect.	No.	4
	Space Museum Name in S.S. (lanscepe Area)	Providing & Fixing S.S. with P.U. Paint coating 150mm depth Hollow box letters for building Name plate "SPACE MUSEUM" (Letter Height=48"x 216", 48"x 284") with required LED light,	No.	1

		hardware, accessories, tool, fastners etc. complete. The design shall be approved Architect.		
6.	Panvel Municipal Corporation Logo	Providing & Fixing 4mm Thk White translucent Acrylic sheet 50mm depth circular hollow box with PMC Logo as per design with Backlit Vinyl Print Matt Lamination on Imported Avery Dennison Media & with backside 12 mm thick Sun board Channel Size of Logo shall be of 1200mm dia approved by Engineer In charge. The Logo should be backlitted with led & including all required hardware, accessories, tool, fastners etc. complete. The design should be approved by engineer or Architect	No.	6
TOILET FIXTURES				
7.	AUTOMATIC SOAP DISPENSER	Providing and fixing of approved make Automatic liquid soap dispenser with necessary supports and hardware complete as per the approval of architect Technical Specification : MOTOR TYPE : DC Motor, 1400 RPM, 0.5 W, SENSING RANGE : around 3-10 cm, LIQUID OUTPUT :1.5ml To 2ml. BATTERY TYPE : 4 X AA size batteries, VARIETY OF DETERGENTS : Soap MATERIAL : 304 stainless steel, COLOR : Silver, Finish : Matt, CAPACITY : 1100 ml, INSTALLATION : Wall-mounted, OPERATION :Touch free infrared sensor TRANSPARENT RESERVOIR KNOB - allows you to view contents and easy to see the internal object capacity changes. Make : Dolphy, Bobrick, Euronics	Nos.	8
8.	HAND DRIER	Providing and fixing of Hand drier of approved make with complete accessories, as per the approval of architect Material : 304 Stainless SteelPower : 1650WVoltage : AC220-240V , 50/60HzOperation : Touch Free Infra-Red ActivationAuto Cut Off : 30 SecSpeed : 24000 RPMNoise Level : 70 db(A)Heater Element : YesAir Speed : 95 m/sDrying Time : 7-10sMotor : Brushless MotorBlowing Volume : 150 m3 / hWaterproof : IPX4Weight : 12 Kg	Nos.	8
9.	TISSUE PAPER DISPENSER	Providing and fixing of tissue paper of approved make with complete accessories, as per drawing and to complete as per the approval of architect QUALITY MATERIAL:Colour: White , Durably constructed using High grade ABS, It also features a lock on top to help prevent tampering and vandalism.Healthy and Eco-friendly. No lead, acidproof, alkali-resisting, anti corrosion, Attractive an durable. CLEAN, SLEEK APPEARANCE:This paper dispenser features a Matte finish, adding a clean, modern look that will brighten any restroom. With a window design, which is convenient to monitor the height of the bathroom tissue paper at any time. LARGE CAPACITY: Holds up to about 300 (M & Z Fold), 450 Multifold Tissues, ensuring that everyone can get single dispensing of guest paper hand towels without refilling frequently. Easy to refill by using the lock key. Make : Dolphy, Bobrick, Euronics	Nos.	10
10.	SHOE POLISHER	Providing and fixing of Shoe Polisher as per the approved code & make in the location as per the approval of architect Material : Stainless Steel Color : Silver Operation : Fully Automatic Rotational Speed : 1400Rpm Voltage : AC 220V, 50Hz Cream Tank Capacity : 200 ml Time Protection : 15 Seconds Used For Brown Shoes, Black Shoes Dimension 370X210X330 mm Make :	Nos.	4

		Dolphy, Bobrick, Euronics		
11.	DUST BIN TYPE-01	Providing and fixing of Dust Bin as per the approval and in the location as per the approval of architect Size : 12" X 24" S.STEEL PUSH WASTE BIN - (10 X 18) Make : Dolphy, Bobrick, Euronics	Nos.	35
12.	WASHROOM PANEL	Providing and fixing of approved Washroom Panel with necessary supports and hardware complete as per the approval of architect WASHROOM PANEL/RECESSED/S.STEEL (3 IN 1) (AUTOMATIC PAPER DISPENSER / HIGH SPEED HAND DRYER / WASTE RECEPTACLE) Installation : Recessed Operation : Paper Dispenser + Hand Dryer + Waste Bin Material : 304 Stainless Steel Paper Dispenser Capacity : 600 C-Fold Or 800 MultiFold Paper Towel Hand Dryer Power : 800-1350W (Hot & Cold Wave) Waste Container Capacity : 21 Litres Dimension : (W)330x(H)1700x(D)130MM Make : Dolphy, Bobrick, Euronics	Nos.	6
13.	PAPER HOLDER	Supplying, Fixing CP toilet paper holder fixed with SS screws complete.	Nos.	30
14.	HOOKS	Supplying, Fixing CP twin coat hook fixed with SS screws on to the toilet door.	Nos.	30
SECURITY CHECK EQUIPMENTS				
15.	Baggage Scanner	Providing & installing Baggage Scanner as per the manufacturer specifications / Installation guildlines provided in the attached document	Nos.	1
16.	Metal Detector	Providing & installing Metal Detectors as per the manufacturer specifications / Installation guildlines provided in the attached document	Nos.	2
17.	Flap Barriers	Providing & installing Flap Barriers as per the manufacturer specifications / Installation guildlines provided in the attached document	Nos.	4
18.	Boom Barriers	Providing & installing Boom Barriers as per the manufacturer specifications / Installation guildlines provided in the attached document	Nos.	4
19.	Convex Mirror	Convex mirror with MS Supporting frame and fixing accessories Dimensions : 32 Inches	Nos.	5
20.	Speed Breaker	Plastic/PVC speed breaker with black and yellow combination with acrylic reflectors Dimensions : 500mm x 400mm x 75mm (H)	Nos.	15
21.	Rumble strips	Providing and making rumble strips 15-20mm high at centre, 250mm wide placed at 1M centre to centre over drive way floor using close graded premix surfacing material type B and Thermoplastic road marking paint shall confirm to technical Specification	Nos.	20
FAÇADE LIST				
22.	FT-01	Entrance Glazing - Semi-unitized Strip Glazing		
		Design, Fabrication, Supply, Installation, cleaning & handover of Semi-unitize glazing system designed to with stand the wind pressure of confirming to IS -875 part III. The profile system consist of glass which structurally glazed on sash profile with double sided tape & structural silicone, with necessary brackets of Aluminium alloy of 6005 T6/ MS with HDG with three dimensional adjustment with serrations and serrated washers to arrest the wind load movement, Anchor, screws and fasteners with non staining weather sealant having colour matching to RAL shade of aluminium framing and Aluminium flashing sealed all around parameter inside and outside to seal the gaps between curtain wall and the building structure all complete required to perform as per specification and drawing in conjunction with BOQ.		
		The system design shall be based on closed joint system & with		

		minimum 2 barrier gaskets for improved weather performance, drainage at all floor levels, spandrel panel shall have pressure release slots on vertical side of profile system to avoid condensation. The design to accommodate building movements, thermal expansions & the seismic movements. The system shall be designed considering surface temperatures of 80-90 deg Cel & temperature differential of 25 deg cel without creating excess stress in the system. All metal joints in the wet area shall be small joint sealant applied to ensure water tightness.		
		The two barrier gasket system consists of 1st & 2nd gasket barrier of EPDM gaskets to achieve the required compression & seal in the system. EPDM Gaskets shall be of micro cured (Online Curing) with shore A hardness of 60-65.		
		Flashing / Trim / Floor Closure at Parapet level, floor level, beam bottom level and required flashings shall be provided continuously with required GI / EPDM membrane / Aluminium sheet. Internal & External concealed Flashings shall be 1.2 mm thk. EPDM membrane sheet. External exposed flashing shall be 2 mm thk. Aluminium sheet with SDF coated matching with external Aluminium profiles. Internal exposed flashing shall be 2 mm thk. Aluminium sheet with SDF coated matching with internal aluminium profiles.		
		The extruded aluminium sections of Alloy 6063 T5 / T6 & tolerances confirming to DIN / EN standard from approved extruder. The structural profiles shall have minimum 2.5 mm wall thickness. All the internal & externally visible surfaces shall have high Durability (Akzonobel) / Super durable (Jotun) Powder coating of 60 - 80 micron confirming to AAMA 2604 (RAL colour as per Architect's approval). The non visible aluminium surfaces shall have minimum chromatizing treatment.		
		The quote rate shall include all design, engineering & shop drawing approval from architect & consultant, mock-ups, sample submission, handling of all materials (loading, unloading, shifting, etc.), scaffoldings, access equipment's etc. The quote rate shall include all duties, statutory obligations and safety code compliance as per industry standards.		
	a.1	Semi-unitized Glazing System (A)		
		Quote rate for complete system as mentioned above under (B) for Glazing	m ²	55
	a.2	Vision Glass : Extra over a.1		
		Vision Glass : DGU Laminated Glass Providing & fixing the vision glass on the Curtain wall panel	m ²	55
	a.3	Spandrel Glass : Extra over a.1		
		Spandrel Glass (GLS 02) : SGU (as per Architect's approval) Providing & fixing the spandrel glass on the glazing	m ²	10
	a.4	Spandrel Shadow Box : Extra over a.1		
		Quote extra over on item (a.1) for providing and fixing the spandrel shadow box with the mineral wool insulation of 75 mm thick 128 kg/m3 density slab with inbuilt black veil of 0.65mm firmly held on the G.I. sheet (mill finish) of 1.5 mm thk on back side along with GI "L" shape stiffener for rigidity with 1.5 mm thk. thick with fixing to mullion and transom as per the intent drawing. GI tray shall have finish of Powder coating of C2 category with 15 years warranty (RAL colour as per Architect's approval. The insulation system shall meet 2 hour's fire-rated. (Spandrel Panel Materials and Fixing System Should Be Followed As Per Approved Fire Test 'UL Certificate')	m ²	10

	a.5	Automatic Sliding Door		
		Design, Fabrication, Supply, Installation, Testing, Protection, Cleaning & Handover of Automatic sliding door made out 11.89 mm thick Laminated glass with DORMA ES 200 / GEZE operator with sensors on both side of the sliding door shutters glass shall have sealing brush arrangement all around for sealing door with fix glass panels as per drawing intent. The Operator shall have cover of SS in No 8 polish finish or as per architect's approval. The automatic door shall be capable of withstanding the wind pressure of confirming to IS -875 part III. The door shall remain open under power failure situation with safety need as per EN standard. Air curtain framing to be consider in facade vendor's scope.		
		The quote rate shall include all design, engineering & shop drawing approval from architect & consultant. The quote rate shall include statutory obligations and safety code compliance as per client.		
		Quote rate for complete system as mentioned above under item (c.3) for Door opening 2400 mm x 3000 mm including 11.89 mm Laminated glass (6 mm thk. Clear H.S. + 0.89 mm SGP + 5 mm thk. Clear H.S. glass)(as per Architect's approval).	Nos.	2
23.	FT-02	Perforated Cladding -3 mm thk. Aluminium Perforated Sheet Cladding		
		Design, Fabrication, Supply, installation, protection, cleaning & handover of 3 mm thk. Aluminium perforated sheet cladding of approved make in solid or metallic colours cladding panel as per architect approved of Curves/Bend & perforation pattern as per architectural design intent. Using grid work of prefabricated aluminium vertical tube section & horizontal tube to with stand the design wind pressure confirming to IS -875 part III as per structural requirement. The fastening brackets of Aluminium alloy 6061 T5 / MS with HDG with serrations and serrated washers to arrest the wind load movement, fasteners and anchor bolts of approved make in SS 316, Nylon separators to prevent bi-metallic contacts, non staining weather sealant between grooves all complete required to perform as per specification and drawing in conjunction with BOQ.		
		Aluminium Perforated Sheet panel shall have sub frame all around panel and aluminium stiffener profile as per structural requirements. System shall consist of SS mesh inside as per drawings.		
		Prefabricated grid mullions are fixed on to the RCC and concrete masonry walls with SS 316 anchor bolts as recommended by approved supplier to support given design loads. The brackets shall have provision movement to accommodate the construction tolerances with +25mm plumb in case of RCC structure and +20mm plumb in case of steel structure. Use of aluminium brackets with serration and serrated washers to prevent wind direction movement after final position. Use of Hot Dipped galvanised brackets with serrations and serrated washers on to Steel structures.		
		Design, Fabrication, Supply and install required structural steel frame work for Cladding Panel in line with design drawings made out of MS pipe sections / I Beams / Box sections / Channels / Plates of approved make of first quality (E250 grade) confirming to IS standard. The steel design shall accommodate thermal stresses resulting from thermal expansion due to surface temperatures. The steel structure shall be hot deep galvanizing finish (100 micron).		
		The design shall accommodate the building movements, thermal expansion and seismic movements.		
		The extruded aluminium sections of Alloy 6063 T5 / T6 & tolerances confirming to DIN / EN standard from approved extruder. 3 mm thk. aluminium mesh shall be of 3000 grade & shall be pre-coated having high Durability (Akzonobel) / Super durable (Jotun) Powder coating of 60 - 80 micron confirming to AAMA 2604 with		

		minimum of 15 years warranty. The non visible aluminium surfaces shall have minimum chromatising treatment.		
		The quote rate shall include all design, engineering & shop drawing approval from architect & consultant, mock-ups, sample submission, handling of all materials (loading, unloading, shifting, etc.), scaffoldings, access equipment's etc. The quote rate shall include all duties, statutory obligations and safety code compliance as per industry standards.		
	b.1	3 mm Aluminium Perforated Sheet Cladding		
		Quote rate for complete system as mentioned above under G) including 3 mm thk. Aluminium Perforated sheet including SS mesh inside	m ²	3,500
	b.2	Steel Structure Work		
		Design, Fabrication, Supply and install required structural steel frame work for support of Walk-way & Perforated Sheet in line with design drawings made out of MS pipe sections / I Beams / Box sections / Channels / Plates of approved make of first quality (E250 grade) confirming to IS standard. The steel design shall accommodate thermal stresses resulting from thermal expansion due to surface temperatures. The steel structure shall be hot deep galvanizing finish (100 micron).		
		Structural steel frame work in line with design drawings made out of MS pipe sections / Box sections / Plates of approved make of first quality (E250 grade) confirming to IS standard. The steel design shall accommodate thermal stresses resulting from thermal expansion due to surface temperatures. The steel structure shall be finish with the following i. Surface Preparation – Blast cleaned to Sa 2.5 confirming to BS EN ISO 8501-1 ii. Primer : Zinc Rich Epoxy 75 micron iii. Barrier : Epoxy Mio 125 micron iv. Finish : Polyurethane – 50 Micron (Only for exposed steel)		
		The quote rate shall include all design, engineering & shop drawing approval from architect & consultant, mock-ups, sample submission, handling of all materials (loading, unloading, shifting, etc.), scaffoldings, access equipment's etc. The quote rate shall include all duties, statutory obligations and safety code compliance as per Industry standards.	Kg	1,75,000
24.	FT-03	Entrance Glass Canopy		
		Design, Fabrication, Supply, Installation, Cleaning & Handover of Glass canopy custom designed to with stand the design wind pressure confirming to IS -875 part III. Glass canopy system comprising of 17.52mm thick SGP Laminated Glass (8 mm Clear Float Glass (Toughened) + 1.52mm SGP interlayer + 8 mm Ceramic Frit Glass (Toughened) shall be held by SS 316 grade clamps (as per tender intent) assembly supported on Stainless Steel tubular structure which fixed with SS 316 tie rod & connecting brackets as per the given elevational drawings at entrance. Clear silicon to be GE / Dow Corning make (or as approved by the Facade Consultant). Rate to include accessories required to connect to the Stainless steel frame structure. Rate to also include 3 mm thk. S.S. gutter for rain water drainage.		
		The Stainless Steel Structure support for Canopy is taken from the buildings concrete walls . The Structural S.S. section sizes would be as per structural requirements. The Thickness of the members & any additional supports shall be according to Structural requirement. Site welding is not allowed (except gutter).		
		Design, Fabrication, Supply and install required structural steel frame work for Canopy in line with design drawings made out of		

		MS pipe sections / I Beams / Box sections / Channels / Plates of approved make of first quality (E250 grade) confirming to IS standard. The steel design shall accommodate thermal stresses resulting from thermal expansion due to surface temperatures. The steel structure shall be hot deep galvanizing finish (100 micron).		
		The quote rate shall include all design, engineering & shop drawing approval from architect & consultant, mock-ups, sample submission, handling of all materials (loading, unloading, shifting, etc.), scaffoldings, access equipment's etc. The quote rate shall include all duties, statutory obligations and safety code compliance as per Industry standards.		
	c.1	Glass Canopy system		
		Quote rate for complete Glass Canopy system as mentioned above under (C)	m ²	140
	c.2	Glass (GLS 08) :- 17.52 mm Thk. SGP Laminated :- Providing & Fixing the glass on the Spider wall system		
		GLASS : 8 mm Clear Float Glass (Toughened) + 1.52 mm SGP interlayer + 8 mm Clear Float Glass (Toughened) 100% Heat Soak tested with Ceramic fritting (Pattern as per architect's approval)	m ²	140
	c.3	Steel Structure Work		
		Providing & fixing of Steel Structure (E250 grade) with HDG 100 micron finish to support for Canopy .	Kg	12,600
25.	FT-04	4 mm ACP Cladding		
		Design, Fabrication, Supply, installation, protection, cleaning & handover of cladding having 4 mm thk. A2 grade Aluminium composite panel cladding of approved make in solid or metallic colours as per architect's approval using grid work of prefabricated aluminium extruded sections to with stand the design wind pressure confirming to IS -875 part III. The fastening brackets of Aluminium alloy 6061 T5 / MS with HDG with serrations and serrated washers to arrest the wind load movement, fasteners 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 in conjunction with BOQ.		
		The 4mm thk ACP consists of 0.5mm outer skin of Aluminium with Lumiflon based fluorocarbon paint or kynar 500 based PVDF paint confirming to AAMA 2605 + 3 mm Fire rated 90% mineral filled core A2 Class + 0.5 mm aluminium skin with service coat. The panel shall be designed for 10 -12mm groove in horizontal & 10 to 12 mm groove in verticals with close joint system. Vertical & Horizontal groove shall be filled by non staining high performance weather sealant. ACP panel shall have subframe all around panel , L Angle 12x1mm at corner joints of panel backfolds as per tender intent drawings and aluminium stiffener profile as per structural requirements.		
		Prefabricated grid mullions are fixed on to the RCC structure as recommended by approved supplier to support given design loads. The brackets shall have provision movement to accommodate the construction tolerances with +25mm plumb in case of RCC structure and + 20mm plumb incase of steel structure . Use of Hot Dipped galvanised brackets with serrations and serrated washers on to RCC structures.The design shall accommodate the building movements, thermal expansion and seismic movements.		
		Copping panel shall have stiffeners fixed continuously from below to support the live load of 1KN. Also copping needs to be provided with 1.5 mm Aluminium strip of 30mm over groove having SDF coatong of color matching to sheet fixed with sealant bedding. For copping primary seal of 1 mm GI sheet & minimum 1.2 mm thk.		

		EPDM membrane need to use.		
		The extruded aluminium sections of Alloy 6063 T5 / T6 & tolerances confirming to DIN / EN standard from approved extruder. All the internal & external visible surfaces shall have high Durability (Akzonobel) / Super durable (Jotun) Powder coating of 60 - 80 micron confirming to AAMA 2604 with minimum waraanty of 25 years. The non visible aluminium surfaces shall have minimum chromatizing treatment.		
		The quote rate shall include all design, engineering & shop drawing approval from architect & consultant, mock-ups, smaple submission, handling of all mateirals (loading, unloading, shifting, etc). The quote rate shall include all duties, statutory obligations and safety code compliance as per Industrial standards.		
		Quote rate for complete system as mentioned above under (D) 4 mm thk. ACP Sheet Cladding		
		ACP Cladding Work	m ²	1,350
26.	FT-05	Dry Stone Cladding under Cut system		
		Design, Fabrication, Supply, Installation, Protection, Cleaning & Handover of Dry Stone cladding system using approved color stoneslab not less than 30 mm thick and size custom designed to withstand the design wind pressure confirming to IS-875 part III. The system shall be designed to accommodate Stone panel of 30 mm thickness and size as per drawings fixed on M.S. bracket using Aluminium bracket with HILTI or Fischer under cut anchors , anchor fasteners of approved make and fasteners as per structural requirement, nylon separators to prevent bi-metallic contacts, non staining weather sealants, aluminium trims and flashings to seal the gaps between curtain wall and the building structure, all complete required to perform as per specifications and drawings in conjunction with BOQ.		
		The granite shall be treated with resign based sealer so that water absorption can be reduce and it also helps in reduction of formation of moss and dust deposition.All M.S shall be Hot dip Galvanized with 100 mic.Vertical & Horizontal groove shall be filled by non staining high performance weather sealant.		
		Scope of work shall include for groove cutting, chamfering, edge polishing, fabrication, anchor fasteners, scaffolding to the required heights, wastages, work at all levels and heights, cleaning the surface, protection of the tile from any damage till handed over to the Employer.		
		The system shall accommodate the replacement possibility of damaged Granite without disturbing any other panels. The extruded aluminium sections of Alloy 6060 T5 and tolerances confirming to EN standard from approved extruder. All the aluminium grid work members shall have minimum anodizing finish (20-22 micron).		
		The system shall accommodate the replacement possibility of damaged Granite without disturbing any other panels. Granite shall be glued to inside aluminium sheet at inclined & overhead area for safety purpose. The extruded aluminium sections of alloy 6061 T6 and tolerances confirming to EN standard from approved extruder.		
		The quote rate shall include all design, engineering & shop drawing approval from architect & consultant, mock-ups, sample submission, handling of all materials (loading, unloading, shifting, etc), scaffoldings, access equipments etc. The quote rate shall include all duties, statutory obligations and safety code compliance as per industry standards.		
		Dry Granite Cladding system		
		Quote rate for complete system as mentioned above under (E) for Stone Cladding		
		30 mm thk. Stone Panel		

		Quote rate for suply of 30 mm thk. Stone panel as per Architect 's approval (Stone Basic rate to consider Rs. 2800 /Sqm)	m ²	1,350
27.	FT-07	Glass Railing With Balustrade		
	(Option-1)	Design, supply and install Glass Railing system having height of 1200 mm from FFL, custom designed to with stand the design wind pressure & live Load confirming to relevent IS codes. The design shall accommodate glass panel of 17.52 mm thk Sentry laminated glass and its dead load. The glass will be fixed with (SS 316 Grade) balustrade post having minimum thickness of 12 mm as per structural requirement to be fixed with necessary connection made out of stainless steel fittings of approved design with necessary termination /bends etc. complete. It shall consist of 50 mm dia. S.S. hand rail fixed on balustrade.		
		Design shall accommodate floor movement of 25 mm at the floor bottom SS base plate, with SS 316 grade fasteners and anchor bolts 316 grade of approved make, weather sealants of Dow Corning or approved make, teflon/ nylon bushes & separators to prevent bi-metallic contacts, all in complete required to perform as per specification and drawing in conjunction with BOQ.		
		The quote rate shall include all design, engineering & shop drawing approval from architect & consultant, mock-ups, sample submission, handling of all materials (loading, unloading, shifting, etc.), scaffoldings, access equipment's etc. The quote rate shall include all duties, statutory obligations and safety code compliance as per Industry standards.		
		Glass Railing System		
		Quote rate for complete system as mentioned above under (F)	Rmtrs.	50
		Glass :- 17.52 mm Thk.Sentry Plus Laminated Providing & Fixing the glass on the Spider wall system		
		GLASS :8 mm Clear Float Glass Toughened + 1.52 mm SGP interlayer + 8 mm Clear Float toughened Glass (100% Heat Soak Tested)	m ²	60
	FT-07	Glass Railing - Seamless		
	(Option-2)	Design, supply and install Glass Railing system having height of 1200 mm from FFL, custom designed to with stand the design wind pressure & live Load confirming to relevent IS codes. The design shall accommodate glass panel of 21.52 mm thk Sentry laminated glass and its dead load. The glass will be fixed at bottom with extruded Aluminium U profile with SS 316 Anchor fasteners along with 50 mm dia Aluminium Rail at top.The system should be tested as per requirements.		
		Glass railing system shall have Contineous Aluminium base runner profile, ABS componets, EPDM gaskets, anti lift mechanism, anchor bolts, SS screws, SS dowel pins, connectors etc to complete assembly to perform glass under cantilever design.		
		System shall have custom designed continuous type aluminium base runner profile in alloy 6063 T6. Base profile in pieces will not be acceptable. Glass shall have minimum 100 mm engagement in the base profile, profile base shall have minimum 12mm thickness to accommodate stresses due to live load , wind load and impact load . No metal components shall be in contact with glass. Complete assembly to be child safe and non temperable type.		
		EPDM gaskets shall be microwave cured type.Finish to profile shall be either anodised 25 microns or Super Durable powder coated in required color as per architectural requirement.		
		The quote rate shall include all design, engineering & shop drawing approval from architect & consultant, mock-ups, sample submission, handling of all materials (loading, unloading, shifting, etc.), scaffoldings, access equipment's etc. The quote rate shall include all duties, statutory obligations and safety code compliance as per		

		Industry standards.		
		Glass Railing System		
		Quote rate for complete system as mentioned above under (F)	Rmtrs.	50
		Glass 21.52 mm Thk.Sentry Glass Plus Laminated Providing & Fixing the glass on the railing system		
		GLASS :10 mm Clear Float Glass Toughened + 1.52 mm SGP interlayer + 10 mm Clear Float toughened Glass (100% Heat Soak Tested)	m ²	60
		EXTERIOR LIGHTING FIXTURES		
28.	POLE LIGHTS (PARKING AREA)	<p>SITC of 6M height designer pole Suitable to post top fixture made in combination of galvamed circular pipe which is fabricated using 114mm dia x 3mm thick base section with section with Minimum height of 1200mm, the middle section is of 76mm dia x 3.0mm thick with height of section is more than 2800mm. The Double arm ornamental designer bracket made in combination of galvanized galvamed pipe sections 76mm dia. x 3.0mm thick with height of section 2000 & horizontal bracket arm of galvanized 48mm dia x 3mm thick of length 1000mm. Decorative part inside the bracket is made in laser cut with minimum thickness of 2mm sheet to add aesthetic on the bracket arm as shown in drawing. The pole is to be provided with a surface mounting suitable base plate of dia 200mm and 12mm thickness as per IS standards and structural reports .The base plate shall be welded to the pole shaft From top and bottom. All dimension is within +/- 5% tolerance. The pole should be provided with an inbuilt junction box to fix Four-way connector and 6A MCB at the bottom - the inbuilt box should have a flush door of size 80 mmW x 300 mmH. The mounting plate shall be provided with Round holes for alignment of the pole. The suitable size foundation bolt shall be supplied along with the pole of EN 8 grade. The pole shall be coated with etch primer and further with epoxy zinc phosphate primer & then painted with environmentally stable polyurethane paint. (coating thickness - >80 microns minimum). The manufacturer needs to provide a structural analysis for structural stability of the pole. The test certificate of raw material shall be provided as IS 1239/1161/ IS 2062 E250. The same needs to be confirmed in form of Test Certificates from the manufacturer. The Manufacturer should have valid ISO 9001:2015 from CE certification. Please refer the attached drawing no – 6M DA WHITNEY POLE WITH CUJAM SM.</p>	NO.	10
29.	POLE LIGHTS (SITE PRERIFERY)	<p>SITC of 6M height designer pole Suitable to post top fixture made in combination of galvamed circular pipe which is fabricated using 114mm dia x 3mm thick base section with section with Minimum height of 1200mm, the middle section is of 76mm dia x 3.0mm thick with height of section is more than 2800mm. The Single arm ornamental designer bracket made in combination of galvanized galvamed pipe sections 76mm dia. x 3.0mm thick with height of section 2000 & horizontal bracket arm of galvanized 48mm dia x 3mm thick of length 1000mm. Decorative part inside the bracket is made in laser cut with minimum thickness of 2mm sheet to add aesthetic on the bracket arm as shown in drawing. The pole is to be provided with a surface mounting suitable base plate of dia 200mm and 12mm thickness as per IS standards and structural reports .The base plate shall be welded to the pole shaft From top and bottom. All dimension is within +/- 5% tolerance. The pole should be provided with an inbuilt junction box to fix Four-way connector and 6A MCB at the bottom - the inbuilt box should have a flush door of size 80 mmW x 300 mmH. The mounting plate shall be provided with Round holes for alignment of the pole. The suitable size foundation bolt shall be supplied along with the pole of EN 8 grade. The pole shall be coated with etch primer and further with epoxy</p>	NO.	35

		zinc phosphate primer & then painted with environmentally stable polyurethane paint. (coating thickness - >80 microns minimum). The manufacturer needs to provide a structural analysis for structural stability of the pole. The test certificate of raw material shall be provided as IS 1239/1161/ IS 2062 E250. The same needs to be confirmed in form of Test Certificates from the manufacturer. The Manufacturer should have valid ISO 9001:2015 from CE certification. Please refer the attached drawing no – 6M DA WHITNEY POLE WITH CUJAM SM.		
30.	DECORATIVE LIGHTS IN LANDSCAPE AREA	SITC of decorative luminaire made of spun aluminium body as shown in the drawing for unique and better aesthetics with a diameter of housing not less than 510 mm (±3%) Diameter and 295 mmH (±3%). The luminaire should have High Pressure Die-Cast thermal management with vertical fin design for longer life of the LEDs. The luminaire shall be IP65 optical compartment with third party NABL report. The diffuser shall be Toughened Glass and IK rating of ≥ 8 (with attached internal IK report from the manufacturer). Then mounting arrangement should be such that it is easily maintainable and made of SS 304 arrangement as shown in the drawing. The luminaire shall be provided with street light optics Type II lens made from PC/PMMA material. The luminaire NABL third party lighting distribution report should be attached along with the bid for providing better and effective lighting distribution for the safety and proper lighting for road vehicles. The luminaire LEDs should be of CCT 5700k \pm 500K, colour rendering index (CRI) ≥ 70 and residual flux of 70% (L70) @ 50,000 burning hours at Ta of 25°C. The manufacturer need to provide the luminaire shall be suitable for operating within temperature range from - 10°C to + 40°C. The luminaire should be designed to operate at any voltage from 140V to 280V, with Power Factor ≥ 0.95 (with optional built in Over Voltage protection) and shall be provided with internal surge protection of 4 kV and external surge protection of 10 kV, electrical Class I wattage 60W \pm 10% with MCPCB of not less than 1.6 mm thickness and Cu of 35 microns and 2.5 Thermal conductivity for fixture. The LED used should be high power Epoxy LEDs (Make- Osram/bridgelux/nichia/cree) with Macadam ≤ 5 and Cri ≥ 70 and CCT 5700K. The luminaire should have System efficacy (Lumens/watt) >100 lumens/watt. The luminaire should be having a warranty for a period of 5 years against any manufacturing defects. The Manufacturer should have valid ISO 9001:2015 from CE certification. The manufacturer should have internal testing equipment's especially 2m Integrating Sphere, IPX6, IK10, Humidity Chamber. The manufacturer shall submit the LM 80 report for LED used in the fixtures. Similar to Model no. Cujam Ø510mm SM FG SL 60w LED 57K. The luminaire should be RoHS compliant as per Government notification and with a valid BIS Number.	NO.	45
31.	SPIKE LIGHTS IN LANDSCAPE AREA	SITC of garden Spike Light made of aluminium body with High Pressure Die-Cast Thermal Management for longer life of the LEDs and the IP65 optical compartment. The back cover should also be High Pressure Die Cast Aluminium. The luminaire NABL 3rd party report needs to be attached for IP65 and ies file for lighting distribution from goniometer and LM79 Report from 3rd Party NABL. The system AC wattage of the luminaire shall be 3W (\pm 10%) with COB. Colour temperature (CCT) of 3000K, colour rendering index CRI ≥ 70 and residual flux of 70% (L70) @ 50,000 hours at Ta of 25°C. The luminaire shall be suitable for operating within temperature range from - 10°C to + 40°C. The COB used should be (Make- Bridgelux/Nichia/Cree/Lumiled) with Macadam ≤ 5 . The luminaire should be designed to operate at any voltage from 140V to 280V, with Power Factor ≥ 0.85 and shall be	NO.	20

		provided with optional built in Over Voltage and Under Voltage protection and internal surge protection of 4kV, electrical Class I. The luminaire shall comply with safety requirements of applicable BIS standard and the Bidder shall submit a copy of valid BIS certificate. The offered luminaire shall be made in India with local value addition of not less than 70%, with the housing die-casted & manufactured in India. The luminaire should be having a warranty for a period of 2 years against any manufacturing defects. The manufacturer should have internal testing equipment's especial 2m Integrating Sphere, IPX6, IK10, Humidity Chamber. The manufacturer shall submit the LM 80 report along with the tender. Similar to Model No. Wurren Spike 9w LED 30K. The luminaire should be with a valid BIS Number.		
32.	DECORATIVE LIGHTS IN LANDSCAPE AREA	SITC of decorative luminaire made of aluminium body with Die-Cast Thermal Management for longer life of the LEDs and the IP65 optical compartment. The back cover should also made of Die Cast Aluminium. Transparent toughened glass having impact resistance protection of IK09. The system AC wattage of the luminaire shall be 25W ($\pm 10\%$) with Colour temperature (CCT) of 3000K, colour rendering index CRI ≥ 70 and residual flux of 70% (L70) @ 50,000 hours at Ta of 25°C. The luminaire shall be suitable for operating within temperature range from - 10°C to + 50°C. The LED used should be high power LEDs (Make-Osram/bridgelux/nichia/cree/Lumiled) with Macadam ≤ 5 . The luminaire should be deigned to operate at any voltage from 220V to 240V, with Power Factor ≥ 0.90 and shall be provided with optional built in Over Voltage and Under Voltage protection and internal surge protection of 4kV. The luminaire shall comply with safety requirements of applicable BIS standard and the Bidder shall submit a copy of valid BIS certificate. Overall outer dimensions of luminaire shall be 265mmL ($\pm 3\%$) x 90mmW ($\pm 3\%$) and the shape shall be as per the sketch attached herewith. The luminaire should be having a warranty for a period of 2 years against any manufacturing defects. The Manufacturer should have valid ISO 9001:2015 from CE certification. The manufacturer should have internal testing equipment's especial 2m Integrating Sphere, IPX6, IK10, Humidity Chamber. The manufacturer shall submit the LM 80 report along with the tender. Similar to Model No. Model: Sirius 265 Step 25w 30k. The luminaire should be with a valid BIS Number.	NO.	125
33.		SITC of 869mm Height Decorative Bollard, made of Aluminium pipe. The base plate should be as shown in the drawing. The luminaire should be with High Pressure Die- Cast Thermal Management for longer life of the LEDs and the IP65 optical compartment. The diffuser shall be Optical grade clear PMMA pipe of diameter not less than 150mm. The decorative pedestal to be mounted on a suitable size Aluminium plate. The mounting plate shall be provided with proper holes for alignment of the bollard. The system AC wattage of the luminaire shall be 9W ($\pm 10\%$), colour rendering index CRI ≥ 70 and residual flux of 70% (L70) @ 50,000 hours at Ta of 25°C. Colour temperature (CCT) of 3000K. The luminaire shall be suitable for operating within temperature range from - 10°C to + 40°C. The light source should be (Make-Osram/bridgelux/nichia/cree/Lumiled) with Macadam ≤ 5 . The luminaire should be deigned to operate at any voltage from 140V to 280V, with Power Factor ≥ 0.95 and shall be provided with optional built in Over Voltage and Under Voltage protection and internal surge protection of 4/4 kV in both Common & Differential Modes. The luminaire shall comply with safety requirements of applicable BIS standard and the Bidder shall submit a copy of valid BIS certificate. Overall outer dimensions of luminaire shall be Ø150mm	NO.	10

		(±3%) and 469mm (±5%) Height and the shape shall be as per the sketch attached herewith. The offered luminaire shall be made in India with local value addition of not less than 70%, with the housing die-casted & manufactured in India. The luminaire should be having a warranty for a period of 2 years against any manufacturing defects. The Manufacturer should have valid ISO 9001:2015 from CE certification. The manufacturer should have internal testing equipment's especial 2m Integrating Sphere, IPX6, IK10, Humidity Chamber. The manufacturer shall submit the LM 80 report along with the tender. Similar to Model No. Menkar Ø150mm BP 869H Clear 9w LED 30K Al. The luminaire should be with a valid BIS Number.		
34.	BOLLARDS TYPE 1	<p>SITC of 0.431m Height Decorative Bollard, made of Aluminium Extrusion. The luminaire should be with High Pressure Die- Cast Thermal Management for longer life of the LEDs and the IP54 optical compartment. The aluminium bottom casting shall be provided with proper holes for alignment of the bollard. The system AC wattage of the luminaire shall be 9W (± 10%), colour rendering index CRI ≥ 70 and residual flux of 70% (L70) @ 50,000 hours at Ta of 25°C. Colour temperature (CCT) of 3000K. The luminaire shall be suitable for operating within temperature range from - 10°C to + 40°C. The light source should be (Make- Osram/bridgelux/nichia/cree/Lumiled) with Macadam ≤ 5. The luminaire should be deigned to operate at any voltage from 140V to 280V, with Power Factor ≥ 0.95 and shall be provided with optional built in Over Voltage and Under Voltage protection and internal surge protection of 4/4 kV in both Common & Differential Modes. Overall outer dimensions of luminaire shall be with outer dia 90mm (±3%) and 431mm (±5%) Height and the shape shall be as per the sketch attached herewith. The offered luminaire shall be made in India with local value addition of not less than 70%, with the housing die-casted & manufactured in India. Approved makes: Schreder/Reytek/Ligman. Important: In case the Bidder proposes alternate make, it would be necessary to submit a fully functional sample of the luminaire along with the bid failing which the bid will be considered and non-responsive and rejected. The luminaire should be having a warranty for a period of 2 years against any manufacturing defects. The Manufacturer should have valid ISO 9001:2015 from TUV Rhineland & CE certification. The manufacturer should have internal testing equipment's especial 2m Integrating Sphere, IPX6, IK10, Humidity Chamber. The manufacturer shall submit the LM 80 report along with the tender. Similar to Model No. Lych BP 831H 9w LED 30K AL. The luminaire should be with a valid BIS Number.</p>	NO.	95
35.	BOLLARDS TYPE 2	<p>SITC of 0.831m Height Decorative Bollard, made of Aluminium Extrusion. The luminaire should be with High Pressure Die- Cast Thermal Management for longer life of the LEDs and the IP54 optical compartment. The aluminium bottom casting shall be provided with proper holes for alignment of the bollard. The system AC wattage of the luminaire shall be 9W (± 10%), colour rendering index CRI ≥ 70 and residual flux of 70% (L70) @ 50,000 hours at Ta of 25°C. Colour temperature (CCT) of 3000K. The luminaire shall be suitable for operating within temperature range from - 10°C to + 40°C. The light source should be (Make- Osram/bridgelux/nichia/cree/Lumiled) with Macadam ≤ 5. The luminaire should be deigned to operate at any voltage from 140V to 280V, with Power Factor ≥ 0.95 and shall be provided with optional built in Over Voltage and Under Voltage protection and internal surge protection of 4/4 kV in both Common & Differential Modes. Overall outer dimensions of luminaire shall be with outer dia 90mm (±3%) and 831mm (±5%) Height and the shape shall be as per the</p>	NO.	10

		<p>sketch attached herewith. The offered luminaire shall be made in India with local value addition of not less than 70%, with the housing die-casted & manufactured in India. Approved makes: Schreder/Reytek/Ligman. Important: In case the Bidder proposes alternate make, it would be necessary to submit a fully functional sample of the luminaire along with the bid failing which the bid will be considered non-responsive and rejected. The luminaire should be having a warranty for a period of 2 years against any manufacturing defects. The Manufacturer should have valid ISO 9001:2015 from TUV Rhineland & CE certification. The manufacturer should have internal testing equipment's especial 2m Integrating Sphere, IPX6, IK10, Humidity Chamber. The manufacturer shall submit the LM 80 report along with the tender. Similar to Model No. Lych BP 831H 9w LED 30K AL. The luminaire should be with a valid BIS Number.</p>		
36.	<p>DECORATIVE BOLARDS TYPE 3</p>	<p>SITC of 0.3m Height Decorative Bollard, made of Aluminium pipe and no fabrication from sheet metal is allowed. The pipe thickness should not be less than 2.5mm. The base plate should be as shown in the drawing. The luminaire should be with aluminium Thermal Management for longer life of the LEDs and the IP66 optical compartment. The Luminaire should be single piece and not open from top to maintain aesthetics of the product. The Luminaire should be opened from bottom for maintenance. The luminaire NABL 3rd party report needs to be attached for IP65 and ies file for lighting distribution from goniometer and LM79 Report from 3rd Party NABL. The Light engine should be covered with clear Toughened Glass. The bollard need to have the laser cut design as shown in drawing with an opening of minimum 110mm (+/-5%). The bollard shall have Optical Grade PC sheet behind laser cut design for aesthetics. The system AC wattage of the luminaire shall be 9W ($\pm 10\%$), colour rendering index CRI ≥ 80 and residual flux of 70% (L70) @ 50,000 hours at Ta of 25°C. Colour temperature (CCT) of 3000K. The luminaire shall be suitable for operating within temperature range from - 10°C to + 40°C. The light source should be (Make Osram/bridgelux/nichia/cree/Lumiled) with Macadam ≤ 5. The luminaire should be designed to operate at any voltage from 140V to 280V, with Power Factor ≥ 0.95 and shall be provided with optional built in Over Voltage and Under Voltage protection and internal surge protection of 4/4 kV in both Common & Differential Modes, electrical Class I. The luminaire shall comply with safety requirements of applicable BIS standard and the Bidder shall submit a copy of valid BIS certificate. Overall outer dimensions of luminaire shall be SQ150mm ($\pm 3\%$) and 900mm ($\pm 5\%$) Height and the shape shall be as per the sketch attached herewith. The luminaire should be having a warranty for a period of 2 years against any manufacturing defects. The Manufacturer should have valid ISO 9001:2015 from CE certification. The manufacturer should have internal testing equipment's especial 2m Integrating Sphere, IPX6, IK10, Humidity Chamber. The manufacturer shall submit the LM 80 report along with the tender. Similar to Model No. Polis E 150mm DIFF BP 3000H 9w LED 30K AL. The luminaire should be with a valid BIS Number.</p>	NO.	105
37.	<p>POLE LIGHTS TYPE 3</p>	<p>SITC of 3M height designer pole Suitable to post top fixture made in combination of galvanized circular pipe which is fabricated using 114mm dia x 3mm thick base section with Minimum height of 1200mm, the top section is of 76mm dia x 3.0mm thick with height of section is more than 2800mm. The pole is to be provided with a surface mounting suitable base plate of dia 200mm and 10mm thickness as per IS standards and structural reports. The base plate shall be welded to the pole shaft From top and bottom. All dimension is within +/- 5% tolerance. The pole should be provided</p>	NO.	25

		<p>with an inbuilt junction box to fix Four-way connector and 6A MCB at the bottom - the inbuilt box should have a flush door of size 80 mmW x 300 mmH. The mounting plate shall be provided with Round holes for alignment of the pole. The suitable size foundation bolt shall be supplied along with the pole of EN 8 grade. The pole shall be coated with etch primer and further with epoxy zinc phosphate primer & then painted with environmentally stable polyurethane paint. (coating thickness - >80 microns minimum). The manufacturer needs to provide a structural analysis for structural stability of the pole. The test certificate of raw material shall be provided as IS 1239/1161/ IS 2062 E250. The same needs to be confirmed in form of Test Certificates from the manufacturer. The Manufacturer should have valid ISO 9001:2015 from CE certification. Please refer the attached drawing no – 3M Arvon PT Pole Make- REYTEK. Note:- Please note that the price are without foundation bolts.</p>		
38.	POLE LIGHT TYPE 4	<p>Achermer PT Opal 45w LED 30K. Achermer Post Top Luminaire housing cum heat sink should be made of High Pressure Die Cast Aluminium body ring of 450mm diameter (+/-10mm) with radially outward 32 nos specially engineered thermal fins (not less than 11mm max height) for effective and longer life of leds & better thermal management to serve the purpose of life of the product as required by the Customer for uninterrupted application of the Lighting Product. The light diffuser should be designed in such a way to provide continuous uninterrupted (Not divided in 2 or 3 or multiple parts) Light Emitting surface for soothing, clean and uniform lighting and aesthetics of the product. The diffuser of the complete luminaire should be single 1 piece Injection Moulded Polycarbonate Opal in nature. The diffuser shall be IK rating of ≥ 9 (with attached internal IK report from the manufacturer). The luminaire shall be provided with continuous 360 degree light System</p> <ul style="list-style-type: none"> - The luminaire shall be IP65 optical compartment. - Light Engine should consist of 3 nos of Metal Clad printed Circuit boards of 1.6mm thickness and 35 micron Cu thickness and 1TC mounted with Epoxy 3030 Package LED of Make - Osram/Bridgelux/Nichia/Cree/Lumileds and nos between 75 to 95 nos for the uniform light distribution. The Light source must have CCT 3000k +/-500K, CRI ≥ 70 and residual flux of 70% (L70) @ 50,000 burning hours at Ta of 25°C - The control Gear Driver compartment of the Luminaire needs to be aesthetically placed in such a way that it is not seen in the Pole and Fixture Lighting System so has to maintain the uniformity and aesthetics of the Pole Fixture - Achermer Post Top should have 2 aesthetically designed Arms of 120mm radial distance to support and connect the Diffuser light portion to the Pole mounting Cap 	NO.	25
		<ul style="list-style-type: none"> - The manufacturer need to provide the luminaire shall be suitable for operating within temperature range from - 10°C to + 40°C. The luminaire should be designed to operate at any voltage from 140V to 270V, with Power Factor ≥ 0.95 (with optional built in Over Voltage protection) and shall be provided with internal surge protection of 4 KV and external surge protection of 10 kV, electrical Class I wattage 45W $\pm 10\%$. - The luminaire should have System efficacy (Lumens/watt) 70($\pm 10\%$) lumens/watt. - The luminaire should be having a warranty for a period of 2 years against any manufacturing defects. The Manufacturer should have valid ISO 9001:2015 from CE certification. The manufacturer should have internal testing equipment's especially 2m Integrating Sphere, IPX6, IK10, Humidity Chamber. The manufacturer shall submit the LM 80 report for LED used in the fixtures. The luminaire 		

		should have a valid BIS Number. similar to Model No. Acherner PT Opal 45w LED 30K.		
39.	GARDEN SPIKE LIGHTS TYPE 2	<p>SITC of Garden Spike Light made of aluminium body with High Pressure Die-Cast Thermal Management with aesthetically designed Fins for longer life of the LEDs and the IP65 optical compartment. The back cover should also be High Pressure Die Cast Aluminium. The system AC wattage of the luminaire shall be 9W($\pm 10\%$) WITH COB (MAKE-BRIDGELUX/LUMILED/TYF) For better light output with aluminium reflector, Colour temperature (CCT) of 3000K, colour rendering index CRI ≥ 80 and residual flux of 70% (L70) @ 50,000 hours at Ta of 25°C. The luminaire should be designed to operate at any voltage from 140V to 280V, with Power Factor ≥ 0.95 and shall be provided with optional built in Over Voltage and Under Voltage protection and internal surge protection of 4kV, electrical Class I. Overall outer dimensions of luminaire shall be 215mmL ($\pm 3\%$) x 100mmW ($\pm 3\%$) and 406mmH ($\pm 3\%$) Height and the shape shall be as per the shown image. The luminaire should be having a warranty for a period of 2 years against any manufacturing defects. The Manufacturer should have valid ISO 9001:2015 from CE certification. The manufacturer should have internal testing equipment's especial 2m Integrating Sphere, IPX6, IK10, Humidity Chamber. The manufacturer shall submit the LM 80 report along with the tender. Similar to Model No. castor spike 9w 30k.</p>	NO.	25
40.	WALL LIGHTS	<p>sitc of of Wall Light made of aluminium body with High Pressure Die-Cast Thermal Management for longer life of the LEDs and the IP65 optical compartment. The back cover should also me High Pressure Die Cast Aluminium. The luminaire NABL 3rd party report needs to be attached for IP65 and ies file for lighting distribution from goniometer and LM79 Report from 3rd Party NABL. The system AC wattage of the luminaire shall be 15W ($\pm 10\%$) with COB. Colour temperature (CCT) of 3000K, colour rendering index CRI ≥ 80 and residual flux of 70% (L70) @ 50,000 hours at Ta of 25°C. The luminaire shall be suitable for operating within temperature range from - 10°C to + 40°C. The COB used should be (Make- Bridgelux/Nichia/Cree/Lumiled) with Macadam ≤ 5. The luminaire should be deigned to operate at any voltage from 140V to 280V, with Power Factor ≥ 0.95 and shall be provided with optional built in Over Voltage and Under Voltage protection and internal surge protection of 4KV, electrical Class I. The luminaire shall comply with safety requirements of applicable BIS standard and the Bidder shall submit a copy of valid BIS certificate. Overall outer dimensions of luminaire shall be 100mmW ($\pm 3\%$) and 215mmH ($\pm 5\%$) Height and the shape shall be as per the sketch attached herewith. The offered luminaire shall be made in India with local value addition of not less than 70%, with the housing die-casted & manufactured in India. A declaration from the manufacturer on its letter head in this regard shall be submitted by the Bidder failing which the bid will be considered and non-responsive and accordingly rejected. Further, any misrepresentation in this regard will lead to rejection and blacklisting of the Company. Approved makes: Schreder/Reytek/Ligman. Important: In case the Bidder proposes alternate make, it would be necessary to submit a fully functional sample of the luminaire along with the bid failing which the bid will be considered and non-responsive and rejected. The luminaire should be having a warranty for a period of 2 years against any manufacturing defects. The Manufacturer should have valid ISO 9001:2015 from CE certification. The manufacturer should have internal testing equipment's especial 2m Integrating Sphere, IPX6, IK10, Humidity Chamber. The manufacturer shall submit the LM 80 report along with the tender. Similar to Model No. Castor 15w LED</p>	NO.	35

		30K. The luminaire should be with a valid BIS Number.		
41.	BALL LIGHTS IN LANDSCAPE	site of decorative ball luminaire made of die cast aluminium body and the IP65 optical compartment with led (Make-Osram/bridgelux/nichia/cree/samsung/seol) Acrylic diffuser . The system AC wattage of the luminatre shall be 9W (+- 10%) . Fitting should be landscape type decorative Garden light. luminaire with Non-Integral driver with efficiency > 0.73 and having inbuilt surge protection device of 4kVA , Color temperature 3000K Warm white .The luminaire should be having a replacement guarantee for a period of 2 years against any visible ingress of dust and moisture inside the optical compartment, caused due to manufacturing defect. The manufacturere shall submit the LM 80 report along with the tender.Glow ball with size & and height (OD 250 x 250mmH +- 3%) . Mounting options sp(Spike / base plate). Similar to Model No. Ceti Ø250 Spike 9W LED 30K.	NO.	45
42.	CEILING LIGHTS	SITC of Ceiling Ligh made of aluminium body with High Pressure Die-Cast Thermal Management for longer life of the LEDs and the IP65 optical compartment. The luminaire shall be IP65. The system AC wattage of the luminaire shall be 9W (± 10%)WITH COB (MAKE-BRIDGELUX/LUMILED/TYF)For better light output with holder & AL reflector. Colour temperature (CCT) of 3000K, colour rendering index CRI >= 70 and residual flux of 70% (L70) @ 50,000 hours at Ta of 25°C. The luminaire should be deigned to operate at any voltage from 140V to 280V, with Power Factor ≥ 0.90 and shall be provided with optional built in Over Voltage and Under Voltage protection and internal surge protection of 4kV, electrical Class I. The manufacturer should have internal testing equipment's especial 2m Integrating Sphere, IPX6, IK10, Humidity Chamber. The manufacturere shall submit the LM79 & LM 80 report along with the supply of material. Similar to Model No. Bellatrix Ø76mm Ceiling SM 9w LED 30K.	NO.	25
FACADE LIGHTING				
43.	RGBW FLOOD LIGHTS	Supply of high quality RGBW Floodlight projector having precies beam angle as per design or site requirement suitable for façade lighting applications. Housing to be made of pressure Die-Cast Aluminium with excellent heat management system to ensure proper heat dissipation and thermal stability of the luminaire. The luminaire shall have electrostatically applied polyester powder coating finish. Luminaire shall be suitable to operate in a temperature range of -10°C to 50°C, LED life should be at least 50,000 burning hours at L70 at 35°C. The lens shall be made of anti-aging & anti UV-PMMA/PC material and able to minimize hot spots & fringing in color mixing to insure proper light distribution. Suitable for outdoor weather proof conditions having IP66 ingress protection. Transparent toughened glass having impact resistance protection of IK08. The luminaire shall have system wattage 72W and system lumen output of not less than 2890 lumens. Luminaire should have DMX-512 control protocol and should have inbuilt DMX decoder chip. Beam angle should be narrow : 10/15/25/40/60 Degree/As per site condition, The fixture shall have input voltage of 240V AC, provided with internal high efficiency Driver operating on 240V AC, Power factor >0.90, internal Surge protection 4KV and other protections including OCP, OVP, SCP, OTP shall be provided in the driver, Color Temperature : RGBW, Operating Temperature : -10°C to +50°C, Operating Humidity : 10%-90%, LED Makes should be CREE, Lumiled, Osram, Seoul, Lumishee, Nichia, Bridgelux to insure higher lumen output and brightness with SMD LED chips. Luminaire should have pre wired integral male/female waterproof connectors as per IS standard for DMX Loop In/out facility. The successful bidder shall submit the following certifications/ reports for approval before supply of materials: product data sheets, LM79	Nos.	72

		report from NABL accredited lab, polar curve & LM80 report issued by LED manufacturer along with the BIS certificate.		
44.	RGBW FLOOD LIGHTS TYPE 2	Supply of high quality RGBW Floodlight projector having precise beam angle as per design or site requirement suitable for façade lighting applications. Housing to be made of pressure Die-Cast Aluminium with excellent heat management system to ensure proper heat dissipation and thermal stability of the luminaire. The luminaire shall have electrostatically applied polyester powder coating finish. Luminaire shall be suitable to operate in a temperature range of -10°C to 50°C, LED life should be at least 50,000 burning hours at L70 at 35°C. The lens shall be made of anti-aging & anti UV-PMMA/PC material and able to minimize hot spots & fringing in color mixing to insure proper light distribution. Suitable for outdoor weather proof conditions having IP66 ingress protection. Transparent toughened glass having impact resistance protection of IK08. The luminaire shall have system wattage 120W and system lumen output of not less than 4820 lumens. Luminaire should have DMX-512 control protocol and should have inbuilt DMX decoder chip. Beam angle should be narrow : 10/15/25/40/60 Degree/As per site condition, The fixture shall have input voltage of 240V AC, provided with internal high efficiency Driver operating on 240V AC, Power factor >0.90, internal Surge protection 4KV and other protections including OCP, OVP, SCP, OTP shall be provided in the driver, Color Temperature : RGBW, Operating Temperature : -10°C to +50°C, Operating Humidity : 10%-90%, LED Makes should be CREE, Lumiled, Osram, Seoul, Lumisree, Nichia, Bridgelux to insure higher lumen output and brightness with SMD LED chips. Luminaire should have pre wired integral male/female waterproof connectors as per IS standard for DMX Loop In/out facility. The successful bidder shall submit the following certifications/ reports for approval before supply of materials: product data sheets, LM79 report from NABL accredited lab, polar curve & LM80 report issued by LED manufacturer along with the BIS certificate.	Nos.	85
45.	RGBW LINER WALL WASHER LIGHT	Supply of high quality RGBW Linear wall washer in 1000mm having precise beam angle as per design or site requirement suitable for façade lighting applications. Housing to be made of extruded Aluminium alloy with excellent heat management system to ensure proper heat dissipation and thermal stability of the luminaire. The luminaire shall have electrostatically applied polyester powder coating finish. Luminaire shall be suitable to operate in a temperature range of -10°C to 50°C, LED life should be at least 50,000 burning hours at L70 at 25°C. The lens shall be made of anti-aging & anti UV-PMMA/PC material and able to minimize hot spots & fringing in color mixing to insure proper light distribution. Suitable for outdoor weather proof conditions having IP66 ingress protection. Transparent toughened glass having impact resistance protection of IK08. The luminaire shall have system wattage 60W and system lumen output of not less than 2380 lumens, Luminaire should have DMX-512 control protocol and should have inbuilt DMX decoder chip. Beam angle should be narrow : 10x60 /15x45/25/40 Degree/As per site condition, The fixture shall have input voltage of 24V DC, provided with external high efficiency Driver operating on 240V AC, Power factor >0.90, internal Surge protection 4KV and other protections including OCP, OVP, SCP, OTP shall be provided in the driver. Luminaire complying to BIS standard "IS 10322" ,Color Temperature : RGBW, Operating Temperature : -10°C to +50°C, Operating Humidity : 10%-90%, LED Makes should be CREE, Lumiled, Osram, Nichia, Bridgelux/Lumisee to insure higher lumen output and brightness with SMD LED chips. Luminaire should have pre wired integral male/female waterproof connectors as per IS standard for DMX	Nos.	6

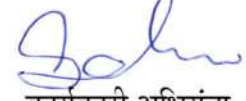
		Loop In/out facility. The successful bidder shall submit the following certifications/reports for approval before supply of materials: product data sheets, LM79 report from NABL accredited lab, polar curve & LM80 report issued by LED manufacturer along with the BIS certificate.		
46.	RGBW LINER WALL WASHER LIGHT TYPE 2	Supply of high quality Static White (3000K) Linear Wall Washer in 1000mm having precise beam angle as per design or site requirement suitable for façade lighting applications. Housing to be made of extruded Aluminium alloy with excellent heat management system to ensure proper heat dissipation and thermal stability of the luminaire. The luminaire shall have electrostatically applied polyester powder coating finish. Luminaire shall be suitable to operate in a temperature range of -10°C to 50°C, LED life should be at least 50,000 burning hours at L70 at 25°C. The lens shall be made of anti-aging & anti UV-PMMA/PC material and able to minimize hot spots to insure proper light distribution. Suitable for outdoor weather proof conditions having IP66 ingress protection. Transparent toughened glass having impact resistance protection of IK08. The luminaire shall have system wattage not exceeding 24W and system lumen output of not less than 1950 lumens, Beam angle should be 10x60 /15x45/25 Degree/As per site condition, The fixture shall have input voltage of 24V DC, provided with external high efficiency Driver operating on 240V AC, Power factor >0.90 @ full Load, internal Surge protection 4KV and other protections including OCP, OVP, SCP, OTP shall be provided in the driver. Luminaire complying to BIS standard "IS 10322", Color Temperature : 3000K, CRI>80,, Operating Temperature : -10°C to +50°C, Operating Humidity : 10%-90%, LED Makes should be CREE, Lumileds, Osram, Nichia, Bridgelux to insure higher lumen output and brightness with SMD LED chips. The manufacturer should have internal testing equipment's especial 2m Integrating Sphere, IPX6, IK10, Humidity Chamber. The manufacturer shall submit the LM79 & LM 80 report along with the supply of material along with the BIS certificate.	Nos.	6
47.	STATIC WHITE CIRCULAR INGROUND	Supply of high quality Static White Circular Inground LED Light having precise symmetrical beam as per design or site requirement suitable for façade lighting applications. Housing to be made of die-cast Aluminium with excellent heat management system to ensure proper heat dissipation and thermal stability of the luminaire. The luminaire shall have corrosion resistance powder coating finish and Stainless Steel (SS 316) frame on top and should have tilting arrangement. Luminaire shall be suitable to operate in a temperature range of -10°C to 50°C, LED life should be at least 50,000 burning hours at L70 at 25°C. The lens shall be made of anti-aging & anti UV-PMMA/PC material and able to minimize hot spots to insure proper light distribution. Suitable for outdoor weather proof conditions having IP67 ingress protection. Toughened glass having impact resistance protection of IK09. The luminaire shall have system wattage 12W and system lumen output of not less than 980 lumens, Beam angle should be symmetrical 15/20/36/45 degree/As per site condition, The fixture shall have input voltage of 24V DC, provided with external high efficiency Driver operating on 240V AC, Power factor >0.90, internal Surge protection 4KV and other protections including OCP, OVP, SCP, OTP shall be provided in the driver. Luminaire complying to BIS standard "IS 10322", Color Temperature : 3000K, CRI>80, Operating Temperature : -10°C to +50°C, Operating Humidity : 10%-90%, LED Makes should be CREE, Lumileds, Osram, Nichia, Bridgelux to insure higher lumen output and brightness with SMD LED chips. The manufacturer should have internal testing equipment's especial 2m Integrating Sphere, IPX6, IK10, Humidity Chamber. The manufacturer shall	Nos.	4

		submit the LM79 & LM 80 report along with the supply of material along with the BIS certificate.		
48.	STATIC WHITE LINEAR INGROUND	Supply of high quality Static White Linear Inground 1000mm LED Light having precise asymmetrical beam angle as per design or site requirement suitable for façade lighting applications. Housing to be made of die-cast Aluminium with excellent heat management system to ensure proper heat dissipation and thermal stability of the luminaire. The luminaire shall have corrosion resistance powder coating finish and Stainless Steel (SS 316) frame on top. Luminaire shall be suitable to operate in a temperature range of -10°C to 50°C, LED life should be at least 50,000 burning hours at L70 at 25°C. The lens shall be made of anti-aging & anti UV-PMMA/PC material and able to minimize hot spots to insure proper light distribution. Suitable for outdoor weather proof conditions having IP67 ingress protection. Frosted toughened glass having impact resistance protection of IK08. The luminaire shall have system wattage 36W and system lumen output of not less than 2650 lumens, Beam angle should be 15x45/10x60/25/ 45 degree/As per site condition, The fixture shall have input voltage of 240V AC or 24V DC, provided with external high efficiency Driver operating on 240V AC, Power factor >0.90, internal Surge protection 4KV and other protections including OCP, OVP, SCP, OTP shall be provided in the driver. Luminaire complying to BIS standard "IS 10322", Color Temperature : 3000K, CRI>80, Operating Temperature : -10°C to +50°C, Operating Humidity : 10%-90%, LED Makes should be CREE, Lumileds, Osram, Nichia, Bridgelux to insure higher lumen output and brightness with SMD LED chips. The manufacturer should have internal testing equipment's especial 2m Integrating Sphere, IPX6, IK10, Humidity Chamber. The manufacturer shall submit the LM79 & LM 80 report along with the supply of material along with the BIS certificate.	Nos.	6
49.	RGBW NEON FLEX LIGHT	Supply of Static white RGBW Neon Flex with diffused and homogenous light suitable for outdoor applications of Façade Lighting. Silicon/PU Moulded Flexible tubes with Horizontal bending option. Power Consumption should be between 12~15W/m with 120° beam angle. Ingress Protection should be IP 67 or higher. The fixture shall have input voltage for 24V DC, with external high efficiency driver having power factor >0.90, Surge protection 4KV and other protections including OCP, OVP, SCP, OTP shall be provided. The lumen maintenance L70@ 25 °C of the LED shall not be less than 70% of the initial lumen after 30,000 burning hours, with suitable aluminium mounting profile. * Power supply: DC 24V * Operating Temperature range: -10°C to +45°C * LED make: CREE/ OSRAM/ LUMILED/ SEOUL/ NICHIA/Sanan/Epistar	Mtrs	1000
50.	LED STRIP LIGHTS	Supply of LED Flexible Strip light (3000K) with IP67 rating sealed with anti-UV and anti-UV aging silicon material without color shifting. Lumen output 100Lm/W, 75Watt/5Mtr. Universal PCB width for perfect installation with aluminum profile. SMD LED's, CRI80, 3000K, 120LEDs/M, 15W/m, 8.33mm/cut, 24V dc, 8mm white PCB, overall width 10mm after IP rated, Supply voltage 24VDC, PCB Type: 2oz white FPC, OSP, Class III for safety use, Long lifespan 50K hrs. L70B50@25°C, High density of LED array for dot-free linear lighting performance, better color consistency for visual comfort,. Lead cable (300mm) with suitable numbers of clip, screw, end caps, mounting tracks and waterproof connector. with 3 years warranty.	Mtrs	120
51.	RGBW NEON FLEX LIGHT	Supply of Static white 3000K Neon Flex with diffused and homogenous light suitable for outdoor applications of Façade	Mtrs	40

		<p>Lighting. Silicon/PU Moulded Flexible tubes with Horizontal bending option. Power Consumption should be between 10~12W/m with 120° beam angle. Ingress Protection should be IP 66 or higher. The fixture shall have input voltage for 24V DC, with external high efficiency driver having power factor >0.90, Surge protection 4KV and other protections including OCP, OVP, SCP, OTP shall be provided. The lumen maintenance L70@ 25 °C of the LED shall not be less than 70% of the initial lumen after 30,000 burning hours, with suitable aluminium mounting profile.</p> <p>* Power supply: DC 24V * Operating Temperature range: -10°C to +45°C * LED make: CREE/ OSRAM/ LUMILED/ SEOUL/ NICHIA/Sanan/Epistar</p>		
52.	DMX Controller System with Standalone interfaces	<p>Supply of DMX Controller System with Standalone interfaces. Controller should deliver 512 DMX channels for entry-level budgets and shall have the options to upgrade upto 4 universe, users seeking an easy-to-operate DMX control system. Newly designed aluminium housing with beautiful finish and updated electronics that work with all the latest Pixelerr software Capable of various trigger options and equipped with DC 5-24V input. It is the perfect hardware for easy integration projects</p> <p>DMX Output: 512 Out channels PC and 512 Out Stand Alone. upgradation upto 2048 Channels Input Supply: USB-C (5V-24V. DC, 0.3A). Memory: Internal memory (8 Mb, 5K to 20K DMX step capacity.) Zones: 10 Zones, play 10 scene/sequence at time in Stand Alone. Infrared optional (scenes, play, pause, dimmer, speed) : Additional Infrared (optional) commands and additional commands on triggers. DMX Mode: DMX In/Out, DMX Splitter x 4 ports, DMX Record, DMX Trigger Stand Alone Options: 16-bit and fine channel management, Cross Fade time between scenes, Default start scene when power up. Triggers: Real time clock and calender for each scene, Wi Light 2 Application (iOS, Android), 12 smart contact on 3-5V, Commands from contacts, UDP/ethernet triggers and commands. Max DMX outputs (USB): x12 USB interfaces connected = 12 DMX max Power: DC In USB-C 5V DC + 5-24V DC Input on Terminal Block Housing: Strong Aluminum DIN Rail cabinet, Connectors: USB-C, 3 pin Screw terminalBlock Operating Temperature: -10 to +50 C° IP Rating: IP20</p>	Nos.	1
53.	DMX Splitter	<p>Supply of DMX Splitter, Input Power- 230V AC input through 2pin power socket. Housing rugged alluminium, Operation Temperature -10°C ~ +50°C , This unit takes the incoming DMX signal and splits the signal into six separate output channels allowing for expanding the number of devices controlled from 32 to 6X32, 6 output ports with 3-pin terminal sockets , each output port terminals are optically isolated from the input and share a common ground reference, splitter also act as repeaters, and thus they may be used for transporting a DMX signal across larger distances. Protection Rating IP20 including connection complete as required. Make: Pioneer/Briteq/Swiss</p>	Nos.	5
54.	DMX Amplifier / Booster	<p>Supply of DMX Amplifier / Booster complying to DMX512 protocol. The Compact signal amplifier shall support isolation protection, protects the controllers and ensures that the DMX signal can be normally transmitted to various luminaires, improving the reliability and stability of the entire control system. The DMX</p>	Nos.	4

	Amplifier shall be compact in size & shall be capable to amplify the DMX signal. Operating voltage 24V DC.	
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वर नमूद सुचित दर्शविलेल्या बाबींचे पुरवठा करणारे पुरवठादार/दुकानदार/उत्पादक/विक्रेते यांनी नमूद केलेल्या बाबींकरीता असलेले दर स्वतःच्या लेटरहेडवर महापालिकेच्या कार्यालयात अथवा ई-मेल द्वारे pmcbandhkamdept01@gmail.com यावर दिनांक / /२०२५ पर्यंत पाठवावे ही विनंती, सदर दर हे अंदाजपत्रक तयार करणेसाठी गृहित धरणेत येणार आहेत.



कार्यकारी अभियंता

पनवेल महानगरपालिका

जा.क्र पमपा/बांधकाम/७१२५ /प्र.क्र. ०१ / २२६० /२०२५, दि. ०३/०७/२०२५

प्रत माहितीस्तव — १. माहिती फलक करीता