

Project Area	External Electrification - Façade Lighting IIT Bombay - Main Building - External				<b>Date</b>	21.03.2025
Item No.	Item Description	Qty	Unit	Rate	Amount	
<b>1.0</b>	<b>Distribution Boards &amp; LT Panels</b>					
	S/I/T/C of Ready Made/Factory Fabricated, Sheet Steel, Powder Coated, Dust and Vermin proof and Double hinged door, IP-43, MCB type Lighting/Power Distribution Board suitable for Surface Mounting on Wall/Beam, with all internal materials such as DIN rails, Neutral Link, interconnected wiring complete with Earthing Link with following switchgear. The Contractor shall include all necessary hardware such as wooden screws/Anchor Fastener to install the DBs/Angle Iron Frame Work					
1.1	<b>Outdoor Type LT Panel (Factory Fabricated)</b> S/I/T/C of Factory Fabricated IP54 , Outdoor Panel (West & East Side) as per attached BOQ (sheet attached separately). Panel installation shall be carried out in outdoor (open to Sky) . The cost includes supply, installation, Testing & Commissioning with excavation in all type of soil & making required foundation with PCC/RCC Pedestal with Cement+Sand+ Metal Stone with required Anchor Fasteners. The Base Frame made from duly painted 50 x 6 mm MS Angle Frame to keep panel 450 mm above shall be in the scope of above work. (The Civil Work is included in Electrical Contractor's Scope)	2.00	Nos			-
2.0	<b>LT Cables</b>					
3.1	S/I/T/C of 1.1KV Grade, LT Power Armoured Cable of ,Aluminium / Copper conductor,PVC insulated, Multi Core, PVC Tape, Wrapped Inner sheathed/Extruded innersheath, GI strip/ wire armoured and overall extruded PVC sheathed conforming to IS: 1554, laid in/on Cable Trench (excavated/RCC) , wall / ceiling / Cable Tray using AL clamps of 2 mm thick as per the route shown at site and further as directed by consultant/client for following sizes. Cost of Saddle, Cable Tie, Name Plate is included in cost of Cable					
3.1.1	4C x 25 mm <sup>2</sup> AYWY Cable (ODPW & E)	500.00	M			-
3.1.2	3C x 2.5mm <sup>2</sup> YWY Cable (Outdoor Lighting except Water Body, First Floor - Floor Glazing Lights)	2,200.00	M			-
3.1.3	3C x 1.5mm <sup>2</sup> Lapp Make Olflex Classic 600/1000V PVC Cable Black Colour UV Resistant (for Water Body, First Floor - Floor Glazing)	250.00	M			-
4	<b>Cable Termination</b>					
4.1	S & Termination of <b>Double Compression Cable</b> End Termination with PVC Hood of above mentioned cables by using Crimping type Copper Lugs for Copper Conductor & Aluminium Lugs for Aluminium Conductor, Insulation Tape etc. as required complete with earthing of glands etc. The Cost of Cable Tag is included in scope of Termination.					
4.1.1	4C x 25 mm <sup>2</sup> AYWY Cable (LDB)	4.00	No.			-
4.1.2	3C x 2.5mm <sup>2</sup> YWY Cable	202.00	Nos.			-
4.1.3	3C x 1.5mm <sup>2</sup> IP68 Gland for Lapp Make Olflex Classic 600/1000V PVC Cable UV Resistant	34.00	No.			-
5	<b>Lighting Wiring</b>					
5.1	<b>Surface/Concealed Wiring (For Saxena Auditorium - Indoor Fittings, Canopy Lights)</b> S/I/T/C of Concealed/Surface wiring using <b>FRLS Grade 1100 V</b> ,PVC insulated wires (with R,Y,B (Ph),Black (N),Yellow-Green (E) color code) pulled through <b>at least 25 mm (minimum)</b> heavy gauge <b>PVC LHSFT (MMS) White Colour conduit</b> with accessories like Tee,Bend,Junction Box,Coupling,Saddle,Spacer,Pull wire & Ceiling Rose laid on ceiling/wall/below floor and through PVC casing capping for wall from relevant distribution board to switch board & from Switch Board to Light/Fan/Power Point.The Chasing,drilling etc of wall/beam if required shall be part of point wiring & shall not be paid extra. .The Civil work also includes making the wall OK with Plaster & shall not be paid extra.The contractor shall offer Modular Switch,Socket,Box & Plate. <b>Contractor must visit the site for better understanding of layout.</b>					
5.1.1	<b>Conduit Wiring</b> S/I/T/C of FR PVC Conduit wiring on Concealed/Surface i.e. on Slab/Wall for Corridor Lighting with following size of PVC Conduit & required accessories i.e. Saddle,Spacer,Tee,Bend,Junction Boxes etc. with FRLS wire 1100 V Grade of following Runs & Size. The Scope shall also include the Termination/ Connection of Wire at Fitting & Panel End with lugs.					
5.1.1.a	PVC MMS FR Conduit with 2W x 2.5 mm <sup>2</sup> (P & N) + 1 x 1.5mm <sup>2</sup> ( E ) (Single Phase Wiring)	200.00	M			-
5.2	<b>Casing Capping Wiring</b> S/I/T/C of PVC Casing Capping wiring on Surface i.e. on Slab/Wall for Corridor Lighting with following size of FR PVC Casing & required accessories i.e. Saddle,Spacer,Coupler, Tee,Bend,Junction Boxes etc. with FRLS wire of Grade of 1100V following Runs & Size					
5.2.1	PVC FR Casing Capping with 2W x 2.5 mm <sup>2</sup> (P & N) + 1 x 1.5mm <sup>2</sup> ( E ) (Single Phase Wiring)	200.00	M			-
6	<b>Switch Socket Items</b>					
6.1	S/I/T/C of Following Switch Socket Items suitable on Surface/Cocealed application with Metal (GI) / PVC Box with Modular Plate & Switch/Socket/Telephone Socket/Data Socket. The Rate will include Chasing of Wall (if required) & making it good after Box Fixing with Proper Treatment of chased wall.					
6.1.1	Modular Box + Plate + 16A,SP,Switch - 1 Nos. (Lighting Switch)	5.00	Nos.			-
6.1.2	Modular Box + Plate + 16A,SP,Switch - 1 Nos. + 2M 6/16A, 5 Pin Socket 2 Nos. (on item 1 - Lighting Switch Board)	5.00	Nos.			-

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<b>7</b>	<b>650 / 1100 V FRLS PVC Copper Wire</b> S & Laying of following size 1100 V, FRLS wire in Conduit/Casing or Cable tie or Capping as per Client's instruction					
7.1	4 mm2 FRLS Copper Wire	1,000.00	M			-
7.2	2.5 mm2 FRLS Copper Wire	1,000.00	M			-
7.3	1.5 mm2 FRLS Copper Wire	1,000.00	M			-
<b>8</b>	<b>S/I/T/C of Heavy Duty PVC Conduit with all necessary hardware &amp; accessories like Tee,Bend,Junction Box to be installed in cordination with Civil Contractor &amp; Furniture Contractor for Concealed or Surface Application.The scope includes Cutting,Fixing,making Holes etc as per site condition. Per Phase one conduit will be used.</b>					
	<b>PVC Conduit</b>					
`8.1.1	20 mm PVC Conduit	100.00	M			-
`8.1.2	25 mm PVC Conduit	100.00	M			-
`8.1.3	32 mm PVC Conduit	100.00	M			-
`8.1.4	40 mm PVC Conduit	100.00	M			-
<b>`9</b>	<b>PVC Flexible Pipe</b>					
`9.1	20mm PVC Flexible Pipe	100.00	M			-
`9.2	25mm PVC Flexible Pipe	100.00	M			-
`9.3	32mm PVC Flexible Pipe	100.00	M			-
`9.4	40mm PVC Flexible Pipe	100.00	M			-
<b>`10</b>	<b>PVC Gland for Flexible Cable</b>					
`10.1	20 mm PVC Gland for Flexible Cable	200.00	Nos			-
`10.2	25 mm PVC Gland for Flexible Cable	200.00	Nos			-
`10.3	32 mm PVC Gland for Flexible Cable	200.00	Nos			-
`10.4	40 mm PVC Gland for Flexible Cable	200.00	Nos			-
<b>11</b>	<b>PVC Casing &amp; Capping</b> S & I of PVC Casing Capping with all necessary hardware & accessories like Tee,Bend,Junction Box.					
11.1	25 mm	100.00	M			-
11.2	50 mm	100.00	M			-
<b>12</b>	<b>S/I/T/C of following 230V,50 HZ, Single Phase LED Light Fitting (with Lamp) with mounting arrangement required install fitting like Base Frame/GI Threaded Rod/Hook/Nut/Bolt/Down Rod/Clamps/Ball Socket/Foundation Bolts &amp; 3C x 1.5mm2 flexible wire &amp; Gland from 3 Way IP68 Junction Box / Ceiling rose to fitting. LED Fitting shall be provided with <u>ON SITE warranty 60 months</u> by Light Fitting Manufacturer from date of Supply). For Outdoor Flood light the Foundation Bolts/Frame/Anchor Fastners/Hardware is included in above price. The Aiming of Fitting will be carried out to acheive desired performance / effect of light in Night Hours to satisfy client/Architect.</b>					
	<b>Product details *(refer enclosed product data sheet of each light fitting with installation sheet for reference and workings in the tender and project site installation works)</b>					
12.1	<b>Entrance Canopy Roof above Signage - Indirect Lighting</b> <b>Ligman ALDO series Cat ref ALD-30252 - 12W</b>	3.00	Nos			-
	<b>OR</b>					
	<b>Alternative</b> <b>Unilamp ALESSA series Cat ref 8019-H-2-003-A2 (identical light fitting from Unilamp make but technical specification of item no 1 of Ligman ALDO ALD 30252 to fully comply)</b>					
	Luminaire Housing					
	Light source					
	LED optic Lens					
	Diffuser / Cover					
	Driver					
	IP and IK					
	Dimensions					
	Weight					
	Finish / Colour					
	Accessories, Hardware, etc					
	Certifications and Compliances					
12.20	<b>Entrance Canopy Roof - Direct Lighting</b> <b>Ligman JET Series Cat ref JE 80031 - 14W</b>	8.00	Nos			-

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	<b>OR</b>					
<b>Alternative</b>	<b>Unilamp MINITUBE series 4001-D-3-503-XX (identical light fitting from Unilamp make but technical specification of item no 1.1 of Ligman JET series JE 80031 to fully comply)</b>					
Luminaire Housing	Cylindrical heavy duty Die-cast aluminium housing and diffuser trim of corrosion resistant, anti condensation moisture free design, pretreated and powder coated decorative surface mounted outdoor application and front frame for glass diffuser					
Light source	LED COB CRI > 80, CCT 3000K, SDCM < 3, L70 > 50000 hrs					
Reflector	high efficiency optical reflector for very wide beam > 70 deg					
Diffuser / Cover	clear toughened glass diffuser fixed to the Trim having anti ageing silicone gasket for long time IP protection					
Driver	non dimmable ON /OFF integral LED driver BIS approved integral 14W					
IP and IK	IP 65, IK 08					
Dimensions	Height 230 mm and dia 100mm					
Weight	1.6 kgs					
Finish / Colour	UV resistant powder coated non peeling, non chipping black / grey finished per site needs					
Accessories, Hardware, etc	all hardware SS 304 grade Stainless steel and no visible wiring from the light fitting product design					
Certifications and Compliances	Ingress Protection IP 65, IK 03, Class I, design for humidity entry and UV resistant materials and components LM 79, BIS and IP test certificate needed from independent third party NABL listed laboratory					
12.3	<b>First Floor -Column Bottom lighting for floor Glazing - Direct Lighting East Side (Inside the Building)</b>					
	<b>Unilamp SIRIUS 300 Cat ref 8033-H-3-474-XX</b>	16.00	Nos		-	
	<b>OR</b>					
<b>Alternative</b>	<b>Ligman - Legend Cat ref LE 40601 S alternate to Unilamp 14W as per site application can be considered IP 65 minimum - 14W</b>					
Luminaire Housing	Extruded Aluminum housing corrosion resistant S 6063, anti condensation moisture free design, pretreated and powder coated surface mounted outdoor application					
Light source	LED SMD type MCPCB mounted CRI > 80, CCT 3000K, SDCM < 3, L70 > 50000 hrs					
Lens / Reflector	high efficiency optical reflector for elliptical beam ~ 46/16 deg					
Diffuser / Cover	clear toughened glass diffuser fixed to the Trim having anti ageing silicone gasket for long time IP protection					
Driver	non dimmable integral ON /OFF LED Constant Current driver BIS approved integral 5W					
IP and IK	IP 67, IK 08 for cover					
Dimensions	LxWxH mm nominal dimensions 310x60x60 mm					
Weight	1.6 kgs					
Finish / Colour	UV resistant powder coated non peeling, non chipping black / grey finished per site needs					
Accessories, Hardware, etc	Two IP67 connectors, supplied outdoor cable, Two cable entries for through wiring, all Hardware stainless steel SS 304, Silicone gasket					
Certifications and Compliances	Ingress Protection IP 67, IK 08, Class I, design for humidity entry and UV resistant materials and components LM 79, BIS and IP test certificate needed from independent third party NABL listed laboratory					
	<b>Column Flood lighting West &amp; East Side</b>					
12.4	<b>Ligman ODESSA 12 Cat ref OD-50141 or ODESSA 6 cat ref no OD 50163 - 60W</b>	48.00	Nos		-	
	<b>OR</b>					
<b>Alternative</b>	<b>Unilamp Alpha Medium Cat ref 5925-A-3-309-XX (identical light fitting from Unilamp make but technical specification of item no 3 of Ligman ODESSA 50141 to fully comply but the wattage shall be 35W)</b>					
Luminaire Housing	Diecast Aluminum housing corrosion resistant, pretreated and powder coated surface mounted outdoor application for uplighting of Columns, anti condensation moisture free design and front frame for glass diffuser					
Light source	LED SMD type MCPCB mounted CRI > 80, CCT 3000K, SDCM < 3, L70 > 50000 hrs					
LED optic Lens	high efficiency optical Narrow beam 7 deg					
Diffuser / Cover	clear toughened glass diffuser fixed to the Trim having anti ageing silicone gasket for long time IP protection					
Driver	non dimmable integral ON /OFF LED Constant Current driver BIS approved integral 60W					
IP and IK	IP 66, IK 08 for cover					
Dimensions	installation surface adjustable up light base vertical 0° to 120° swiveling, for direct column mounting Height 200 mm and dia 190mm					
Weight	5 kgs					
Finish / Colour	UV resistant powder coated non peeling, non chipping black / grey finished per site needs					
Accessories, Hardware, etc	Two IP67 connectors, supplied outdoor cable, Two cable entries for through wiring, all Hardware stainless steel SS 304, Silicone gasket					
Certifications and Compliances	Ingress Protection IP 66, IK 08, Class I, design for humidity entry and UV resistant materials and components LM 79, BIS and IP test certificate needed from independent third party NABL listed laboratory					
	<b>Saxena Auditorium Column Wash Outdoor East Side</b>					
12.5	<b>Ligman Edinburgh Cat ref EDB 50001 / ODESSA 1 - OD 50002 - 11W</b>	15.00	Nos		-	
	<b>OR</b>					

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		<b>Unilamp Micro Alpha 5927-A-2-562-XX (identical light fitting from Unilamp make but technical specification of item no 3.1 of Ligman Edinburgh to fully comply but the wattage shall be 4W)</b>				
	Luminaire Housing	Diecast Aluminum housing corrosion resistant , pretreated and powder coated surface mounted outdoor application, anti condensation moisture free design and front frame for glass diffuser				
	Light source	LED SMD type MCPCB mounted CRI > 80, CCT 3000K, SDCM < 3, L70 > 50000 hrs				
	LED optic Lens	high efficiency optical Narrow beam PMMA lens B1 U0 G0				
	Diffuser / Cover	clear toughened glass diffuser fixed to the Trim having anti ageing silicone gasket for long time IP protection				
	Driver	non dimmable integral ON /OFF LED Constant Current driver BIS approved integral 8W				
	IP and IK	IP 66, IK 08 for cover				
	Dimensions	installation surface adjustable up light base vertical 0° to 180° swiveling, for direct column mounting Height 130 mm and dia 60mm				
	Weight	0.7 kgs				
	Finish / Colour	UV resistant powder coated non peeling, non chipping black / grey finished per site needs				
	Accessories, Hardware, etc	Two IP67 connectors, supplied outdoor cable, Two cable entries for through wiring, all Hardware stainless steel SS 304, Silicone gasket				
	Certifications and Compliances	Ingress Protection IP 66, IK 08, Class I, design for humidity entry and UV resistant materials and components LM 79, BIS and IP test certificate needed from independent third party NABL listed laboratory				
12.6		<b><u>Saxena Auditorium Column Indoor Walk Light East Side</u></b>				
		<b>Ligman Marvik MV 30013 - 10W</b>	26.00	Nos		-
		<b>OR</b>				
	<b>Alternative</b>	<b>Unilamp MIRA round 5060-F-3-901-XX (identical light fitting from Unilamp make but technical specification of item no 3.2 of Ligman Marvik2 to fully comply but the wattage shall be 10W)</b>				
	Luminaire Housing	Diecast Aluminum housing corrosion resistant , pretreated and powder coated surface mounted outdoor application for uplighting of Columns, anti condensation moisture free design and front frame for glass diffuser				
	Light source	LED SMD type MCPCB mounted CRI > 80, CCT 3000K, SDCM < 3, L70 > 50000 hrs				
	LED optic Lens	High efficiency optical Medium beam PMMA lens ~35 deg B1 U0 G0 for down light application only				
	Diffuser / Cover	clear toughened glass diffuser fixed to the Trim having anti ageing silicone gasket for long time IP protection				
	Driver	non dimmable integral ON /OFF LED Constant Current driver BIS approved integral 8W				
	IP and IK	IP 65, IK 08 for cover				
	Dimensions	installation surface for direct column mounting Height 220 mm and dia 100mm mounting bracket for column integral with width of 40mm				
	Weight	2.6 kgs				
	Finish / Colour	UV resistant powder coated non peeling, non chipping black / grey finished per site needs				
	Accessories, Hardware, etc	supplied outdoor cable, cable entries for through wiring, all Hardware stainless steel SS 304, Silicone gasket				
	Certifications and Compliances	Ingress Protection IP 66, IK 08, Class I, design for humidity entry and UV resistant materials and components LM 79, BIS and IP test certificate needed from independent third party NABL listed laboratory				
		<b><u>Ground Floor Parking Area - Light fitting West Side</u></b>	7.00	Nos		-
12.7		<b>Ligman Tango TA-31861 - 35W</b>				
		<b>OR</b>				
	<b>Alternative</b>	<b>Unilamp Medium Tube 5005-9-3-902-XX (identical light fitting from Unilamp make but technical specification of item no 3.3 of Ligman Tango to fully comply but assymetrical forward throw light distribution and the wattage shall be 20W)</b>				
	Luminaire Housing	Diecast Aluminum housing corrosion resistant , pretreated and powder coated surface mounted outdoor application, anti condensation moisture free design and front frame for glass diffuser				
	Light source	LED SMD type MCPCB mounted CRI > 80, CCT 3000K, SDCM < 3, L70 > 50000 hrs				
	LED optic Lens	High efficiency optical T3 beam 140X68 deg PMMA lens B1 U0 G1 for front drive cum pathway light application only				
	Diffuser / Cover	clear toughened glass diffuser fixed to the Trim having anti ageing silicone gasket for long time IP protection				
	Driver	non dimmable integral ON /OFF LED Constant Current driver BIS approved integral 8W				
	IP and IK	IP 65, IK 08 for cover				
	Dimensions	installation surface for direct column mounting Height 275 mm and dia 185mm mounting bracket for column integral with width of 100mm				
	Weight	4.4 kgs				
	Finish / Colour	UV resistant powder coated non peeling, non chipping black / grey finished per site needs				
	Accessories, Hardware, etc	supplied outdoor cable, cable entries for through wiring, all Hardware stainless steel SS 304, Silicone gasket				

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	Certifications and Compliances					
	Ingress Protection IP 66, IK 08, Class I, design for humidity entry and UV resistant materials and components LM 79, BIS and IP test certificate needed from independent third party NABL listed laboratory					
	identical light fitting from Unilamp make but technical specification of item no 3.2 of Ligman Marvik2 to fully comply but the wattage shall be 35W					

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12.8	<b>Entrance Pathway and Landscape Wall Wash Light West Side</b> <b>Ligman Lightalk1 LA-60003 28W</b>	9.00	Nos		-	
	<b>OR</b>					
	<b>Alternative</b> Unilamp - SIRIUS 600 HI - CC GROUND RECESS 9066-K-3-540-01 (identical light fitting from Unilamp make but technical specification of item no 4 of Ligman Lightalk 1 LA 6003 fully comply but front cover with toughened glass factory sealed safe for Human walk over type (without SS frame) the wattage shall be 25W)					
	Luminaire Housing	Diecast Aluminum end caps with extruded housing corrosion resistant , pretreated and powder coated surface mounted outdoor application , anti condensation moisture free design and SS 316 front frame for glass diffuser				
	Light source	LED SMD type MCPCB mounted CRI > 80, CCT 3000K, SDCM < 3, L70 > 50000 hrs				
	LED optic Lens	High efficiency optical asymmetrical beam 27x60 deg PMMA lens B0 U5 G0 for front drive cum pathway landscape wall light application only				
	Diffuser / Cover	clear toughened glass diffuser fixed to the Trim having anti ageing silicone gasket for long time IP protection				
	Driver	non dimmable integral ON /OFF LED Constant Current driver BIS approved integral 28W				
	IP and IK	IP 67, IK 08 for cover				
	Dimensions	installation recessed inground for landscape lighting LxWxH mm 655x85x100 mm (dimensions of installation box will be higher as per Ligman recessing box)				
	Weight	4.6 kgs				
	Finish / Colour	UV resistant powder coated non peeling, non chipping black / grey finished per site needs				
	Accessories, Hardware, etc	supplied outdoor cable, cable entries for through wiring, all Hardware stainless steel SS 304, Silicone gasket, inground gel based junction box with IP68 connectors				
	Certifications and Compliances	Ingress Protection IP 67, IK 08, Class I, design for humidity entry and UV resistant materials and components LM 79, BIS and IP test certificate needed from independent third party NABL listed laboratory				
12.9	<b>Flood lighting West &amp; East Side + Annexue Building Wall Wash to be installed on Pedestal as per client's instruction</b> <b>Ligman (Quantum QA-50021) - 269W</b>	31.00	Nos		-	
	<b>OR</b>					
	<b>Alternative</b> Unilamp Space 2041-I-A-666-XX (identical light fitting from Unilamp make but technical specification of item no 5 of Ligman Quantum to fully comply but wattage 75W so qty. shall be more i.e 2 nos per location minimum and site demonstration to be proposed if this item is offered as an alternative with suitable installation and other requirements for electrical and civil works to meet project needs)					
	Luminaire Housing	Diecast Aluminum end caps with extruded housing corrosion resistant , pretreated and powder coated surface mounted outdoor application , anti condensation moisture free design and front frame for glass diffuser				
	Light source	LED SMD type MCPCB mounted CRI > 80, CCT 3000K, SDCM < 3, L70 > 50000 hrs				
	LED optic Lens	High efficiency optical asymmetrical beam ME or T3 or WB light distribution of PMMA lens as per site location				
	Diffuser / Cover	clear toughened glass diffuser fixed to the Trim having anti ageing silicone gasket for long time IP protection				
	Driver	non dimmable integral ON /OFF LED Constant Current driver BIS approved integral 28W				
	IP and IK	IP 66, IK 08 for cover				
	Dimensions	installation recessed inground for landscape lighting HxWxD mm 580x450x160 mm				
	Weight	16 kgs				
	Finish / Colour	UV resistant powder coated non peeling, non chipping black / grey finished per site needs				
	Accessories, Hardware, etc	supplied outdoor cable, cable entries for through wiring, all Hardware stainless steel SS 304, Silicone gasket				
	Certifications and Compliances	Ingress Protection IP 66, IK 08, Class I, design for humidity entry and UV resistant materials and components LM 79, BIS and IP test certificate needed from independent third party NABL listed laboratory				
12.10	<b>Pole Light towards Garden &amp; Road for (West and East) - To be Installed on existing Bajaj GI Pole with Modification in Poles for Cable Entry</b> <b>Unilamp MiniSpace 25W Cat ref 2040-B-3-394-XX</b>	42.00	Nos		-	
	<b>OR</b>					
	<b>Alternative</b> Ligman MARYS 3 cat ref MY 80041 (CUSTOMISED FITTING Enclosure of OD 21011) (identical light fitting from Ligman make but technical specification of item no 6 of Unilamp MiniSpace to comply but wattage 20W and with NB, MB and WB as per site demonstration to be proposed if this item is offered as an alternative with suitable installation and other requirements for electrical and civil works to meet project needs) 20W					
	Luminaire Housing	Diecast Aluminum end caps with extruded housing corrosion resistant , pretreated and powder coated surface mounted outdoor application , anti condensation moisture free design and front frame for glass diffuser for pole mounting				
	Light source	LED SMD type MCPCB mounted CRI > 80, CCT 3000K, SDCM < 3, L70 > 50000 hrs				
	LED optic Lens	High efficiency optical asymmetrical beam T2 or NB or MB light distribution of PMMA lens as per site location				
	Diffuser / Cover	clear toughened glass diffuser fixed to the Trim having anti ageing silicone gasket for long time IP protection				
	Driver	non dimmable integral ON /OFF LED Constant Current driver BIS approved integral 20W				

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	IP and IK	IP 66, IK 09 for cover				
	Dimensions	installation Recessed in Ground for landscape lighting HxWxD mm 250x190x105 mm				
	Weight and installation arrangement on pole	4.2 kgs and mounting bracket suitable for installation on pole 3 to 4 nos per location as per product application for landscape and Driveway lighting needs of the project				
	Finish / Colour	UV resistant powder coated non peeling, non chipping black / grey finished per site needs				
	Accessories, Hardware, etc	supplied outdoor cable, cable entries for through wiring, all Hardware stainless steel SS 304, Silicone gasket no visible connecting cables from flood light to power cable allowed, all electrical cabling, wiring, connection to be concealed in bracket or poles				
	Certifications and Compliances	Ingress Protection IP 66, IK 09, Class I, design for humidity entry and UV resistant materials and components LM 79, BIS and IP test certificate needed from independent third party NABL listed laboratory				



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	<b>Lower Ground Floor Water Body Area (Inside the Building)</b>					
12.11	<b>LED Linear Hydra Flex LL20 C 13 30 C R length IP67 13W/M</b> Linear flexible light fitting for continuous surface mounting for water body area surface mounting on wall / cornice / coves around water body having dimensions of clear optics and lens without dots cross section of 16mm x 16mm type Light Line 20 Flex SW13 3000K / 4000K IP6724V 13W/m L80/B10 60000h, Flexible top bend or side bend IP 67 CRI > 90,SDCM < 2; complete with all accessories for installation and wiring as per site conditions IP68 gel connector (considering 5 meter on 1 circuit) constant Voltage remote 24V 100W IP67 Non Dim PSU (considering 5 meter on 1 circuit)	33.00	M		-	
12.12	<b>Ground Floor - Strip Light for Name Plate Illumination</b> Surface Mounted LED Linear extruded 60mmwidth low height 70mm with prismatic diffuser non dimmable integrated CC driver SLASH S or Channel S - 3000K, CRI > 90, SDCM < 3 for continuous mounting end to end in 2m and 1.2m segments for total 5.3m length, 1000 Lumens / Meter, Diffused - make <b>Regent Lighting</b>	6.00	M		-	
13	<b>Excavation of Soil</b> Carrying Excavation in all type of soils by manually or with machines (JCB/Compressor) for LT Cable Laying, GI/Copper Earthing Strip, Light Fitting Pedestal in any type of soil may be Hard Rock, Murum & Soft Soil as per Site Conditions. The Contractor has been advised to Study the existing services (Electrical,Water,Data & Other). Before excavation it is compulsory to take written permission / NOC from Electrical Department of IIT. If required to use cable locating machine & then carry the excavation. Post Laying of Cable The Excavated soil will be backfilled with removal of debris in the excavated soil. The Surplus soil will be disposed outside the IIT campus as per prevailing BMC laws by contractor. Any damage to existing underground utilities will be repaired free of Cost by Contractor.	250.00	Cu.M		-	
14	<b>Cable Route Marker</b> Supply & Installation of Cast Iron Round LT Cable Route Marker with MS Painted 25 x 6 mm Angle & grouted in Concrete Pedestal buried in the Soil . LT Route Marker shall be installed at Every 50 M Distance or at Bend for easy marking of cable route.	15.00	Nos.		-	
15	<b>Supply &amp; Installation of Civil Items</b> Contractor to Supply & Install following Civil items mainly Rrequired for Cable Laying in Excavated Trench. It is mandetory for Contractor to provide Gate Entry Challan & Material Inward certified by PMC Engineer while submitting the Invoice. Inter Contractor sale for civil items is not allowed & will not paid.					
15.1	Hard Red Bricks for Covering on LT Cables for Protection of Cables.	4,800.00	Nos.		-	
15.2	Sand for LT Cable cushion for Protection of LT Cables.	75.00	CU.M		-	
16	<b>Junction Box</b>					
16.1	Supply, Installation,Testing & Commissioning of JB made of high quality Polycarbonate PC - GFS (shock proof, rust free, corrosion free, acid and chemical resistant, fire retardant, self-extinguishing, having high impact against mechanical load, made of halogen and silicon free recyclable material conform to RoHS directive 2002/95/EC, UV resistant according to IEC 61439-1, having high grade internally embedded gasket made of Polyurethane ( PUR ). All left or right side enclosures should have pre-moulded knockouts for side cable entry or for future extension. Each enclosure should have multi no of self-threaded holes to mount mounting plate or Din channel or any equipment. IP67 / 68 , Junction Box with Clip On Screw type Terminals mounted DIN Channel (make wago/phoenix) & Polymer IP 67 Glands as per Junction Box (specified below) with required Hardware (End Plate...). The Scope also includes <b>Sealing Compound to be filled</b> in the Junction Box after Testing and commissioning of the project. <b>Hensel / OBO Make</b>					
16.3	3 Way, IP 67/68 Junction Box with IP 68 Gland & lugs Cable Termination for 2 Cable of 3C x 2.5 mm2 YWY & 1 Cable of 3C x 1/1.5/2.5 mm2 YWY Cable	70.00	Nos.		-	
16.4	4 Way,IP67/68 Junction Box with IP68 Gland & lugs Cable Termination for 3 Cable of 3C x 2.5 mm2 YWY & 1 Cable of 3C x 1/1.5/2.5 mm2 YWY Cable	6.00	Nos.		-	
16.5	IP 68, SP MCB Box with 16A,SP,MCB & with IP68 Glands & lugs Cable Termination for 2 Cable of 3C x 2.5 mm2 YWY & 1 Cable of 3C x 1/1.5/2.5 mm2 YWY Cable - Hensel Make	31.00	Nos.		-	
16.6	IP 68, SP MCB Box with 16A,SP,MCB & with IP68 Glands & lugs Cable Termination for 3 Cable of 3C x 2.5 mm2 YWY & 1 Cable of 3C x 1/1.5/2.5 mm2 YWY Cable - Hensel Make	4.00	Nos.		-	
17	<b>Earthing</b>					
17.1	S//T/C of Earthing Pit made from 20mm Dia x 3000 mm Long Copper Bonded MS Rod with Conductive Aggregate made from 1:3 Cement : Marconite/ABB- CM045/ DHEN Conductive Powder with T Type Grid Terminal made from 50 x 6 mm Copper Bonded MS Welded strip suitable to connect the Grid of 50 x 6 mm HDGI Strip with SS 304 Nutbolts . Also providing FRP or Polymer Chamber of Size 450 x 450 mm with Heavy Duty FRP Chamber Cover to cater of 5000 Kg load bearing capacity. Scope includes to carry excavation / Boring for Earth Pit & Civil work for chamber cover is included in above offer (Loaction ODP West & East)	4.00	No.		-	

Project Area	External Electrification - Façade Lighting IIT Bombay - Main Building - External				<b>Date</b>	21.03.2025
Item No.	Item Description	Qty	Unit	Rate	Amount	
17.2	S/I/T/C of wall mounted 12 SWG Powder Coated MS Fabricated Box with Earthing Busbar made from 32 x 6 mm GI Strip mounted on Insulators. The box shall be fixed on wall with Anchor Fastners. The Busbar shall have 6 Nos of SS Nutbolts.	4.00	No.		-	
<b>18</b>	<b>GI Strip &amp; Earthing Wire</b>					
	S/I/T/C of following size of MS HDGI Earth Strip on wall along with drilling/welding/painting with required Hardware.					
18.1	25 x 6 mm (Panel Incomer) GI Strip	200.00	M		-	
18.2	25 x 3 mm (For LDB, PDB) GI Strip	100.00	M		-	
18.3	8 SWG GI Wire	200.00	M		-	
18.4	4 mm <sup>2</sup> Yellow Green Copper Wire	100.00	M		-	
18.5	2.5 mm <sup>2</sup> Yellow Green Copper Wire	100.00	M		-	
18.6	1.5 mm <sup>2</sup> Yellow Green Copper Wire	100.00	M		-	
<b>19.0</b>	<b>Cable Tray &amp; Fabrication</b>					
19.1	Supply, Cutting, Bending & Laying of Hot Dipped GI Perforated Cable tray with Tee/Bend/Off Set/ Elbow of following size with Long Coupler & Hardware. The Cable Tray will be Painted with Synthetic Enamel Painted with Choice of Colour as per site condition. The Bends/Offset/Elbow will not be paid extra.					
19.2	300 (W) x 50 (H) x 2 mm (thick) HDGI MS Perforated Cable Tray	200.00	M		-	
19.3	35 x 15 x 2 mm M (Stick) Pre Galanised C Chanel for Supporting cable tray.	120.00	M		-	
19.4	8mm Threaded Rods with Fastners, hardware & Nut Bolts	240.00	M		-	
19.5	Bullet Type Threaded Fastner (for Threaded Rod)	300.00	Nos.		-	
<b>20.0</b>	<b>Steel Fabrication</b>					
	Supply & Fabrication of any kind of MS Steel incuding Angle, chanel, flat, plate, rod....with Two Coats of Synthetic Enamel Paint + Red Oxide for Light Fitting, Cable Tray & other Supporting. The stell will be of SAIL/JINDAL/TATA make. Rolling Steel MS will not be acceptable.	500.00	KG		-	
<b>21.0</b>	<b>Anchor Fastner</b>					
	Supply & Fixing of Anchor Fastner of following Size for Fixing of MS Steel Fabrication. Hilti Anchor Fastners only					
21.1	75 x 10 mm Pin Type	100.00	Nos.		-	
21.2	75 x 8 mm Pin Type	100.00	Nos.		-	
<b>22</b>	Removal & Shifting of Existing GI Street light (4.5m to 6M) height with Removal of Termination & Light Fitting. The Pole then shifted to IIT for future use at per IIT Policy & available location.	13.00	Nos		-	
<b>23</b>	S/I/T/C OF 100MM Dia (4.5m to 6M) height Pole made of C Class Pipe duly powder coated with MS Foundation Plate matching to existing Foundation Plate Bolts with Arrangements of Installation 3 Pole Fittings and having Pole Box (for arrangements for MCB) and 3C x 2.5 mm <sup>2</sup> YY Cable for Fitting connection with 8 SWG GI Earthing. The old main will not be changed. The Termination will be carried for the same.	13.00	Nos		-	
<b>22</b>	<b>Thermography Services</b>					
	As per IIT Norms Defect Liablity Period shall be 3 Years from date of completion for heathy & satisfactory services of Installation. The Contractor shall carry following verification & rectify the defects found in the report free cost.					
	Carrying Thermography of Installation from Testing Agency (Third Party Only) & providing the Detailed Report of the testing agency in triplicate.					
	If Contractor donot provide the Report the retention amount will not be released	1.00	Job		-	
	<b>Total</b>				-	
	<b>add GST</b>		<b>18%</b>		-	
	<b>Total with GST</b>				-	
	<b>Notes</b>					
2	Contractor cannot carry two phase wiring in same conduit. Single Phase Wiring & Three Phase wiring with Earthing is allowed in respective conduit.					
3	Colour of Conduit will be decided by Architect / PMC / Client as per site condition & finishes					
4	Contractor shall use only one make & one brand Switch Socket for all application.TWO brand/make will not acceptable.					
5	IIT has right select any colour of Plate based on Furniture & Interior Colour.					