

BOQ FOR STREET LIGHTING WORKS AND STREET LIGHTING AUTOMATION & MANAGEMENT SYSTEM,					
Sno	Description of material	Unit	Qty	Rate	Amount
	Supply,Erection,Installation, Testing & Commissioning of Street lighting work and Street lighting automation & Management System as per approved design & Technical specification including fabrication & erection of steel materials with ancillary items complete in all respects up to the entire satisfaction of Engineer- In-charge (Including cost of earth excavation,digging,concreting,brick work ,refilling, Painting etc. and all other works contingent thereto)				
1	Supply & Erection of Hot dip galvanized octagonal pole of 4mm thickness, with base plate including cost of nut & bolts and all accessories as supplied by the manufacturer including cost of foundation accessories etc. The foundation bolts as per manufacturer design should be hot dipped galvanized pole complete with Hinged door with locking arrangement. Terminal plate consisting of 02 nos. 100 A 4 pole neutral links including connection etc. with suitable connecting arrangement with 01 nos. DP/SPN MCBs , power terminal for loop-in loop-out connection including cost of R.C.C.-1:1.5:3 for foundation of size 0.7 M x 0.7 M x 1.8 M with minimum 08 nos. 12 mm dia longitudinal MS reinforcement rods with rings of 8 mm dia not more than 200 mm C.C. for fixing the pole with all labor and material required to complete the job in all respects up to the entire satisfaction of engineer in Charge of the work. Make:-Philips/GE/Bajaj/Valmount/Paruthi/BP Projects				
i	12 mtr. Long pole with top dia 100 mm and bottom dia 200 mm with base plate of size 320x320x20 mm .	No.	664		
2	Supply & Erection of Double arm galvanized bracket having arm of 50 mm dia 3.25 mm thick & 2 mtr. long. The Arm should be Welded with 400mm long suitable size of cap with the help of 3 mm thick suitable size of stiffner for making 15° tilt angle.Stiffner should be welded with cap & arm. Make:- Philips/GE/Bajaj/Valmount/Paruthi /BP Projects	No.	148		
3	Supply & Erection of Single arm galvanized bracket having arm of 50 mm dia 3.25 mm thick & 1mtr. long. The Arm should be Welded with 300mm long suitable size of cap with the help of 3 mm thick suitable size of stiffener for making 10° tilt angle.Stiffner should be welded with cap & arm. Make:- Philips/GE/Bajaj/Valmont/Paruthi/BP Projects	No.	516		
4a	Supply and Erection of Smart 135Watt LED luminaire with minimum 125 lumen per watt having an IP66 optic compartment and IP66 control gear compartment, a Pressure die cast aluminum painted housing, a toughened glass protector having impact resistance of IK08,universal electronic driver having operate voltage of 120-277 V, surge protection of 10kV,power factor ≥ 0.90,Colour Rendering Index >70 and neutral white/White light. The street light controller (SLC) should control the light individually and shall be interfaced / integrated with LED driver inside the luminaire IP55 internal box / inbuilt with LED driver or outside luminaire as per NEMA (ANSI C136.41) standards. It should control the LED light over 4G / NB-IoT / GSM / GPRS communication network. It shall perform LED on, off, dimming (0-10, 1-10V), fault detection, energy metering equivalent to class-1. Make:-Philips/Bajaj/Shreder/Osram/Wipro/Crompton	No.	493		
4b	Supply and Erection of 135Watt LED liminaire having an IP66 optic compartment and IP66 control gear compartment, a Pressure die cast aluminium painted housing,a toughened glass protector having impact resistance of IK08,universal electronic driver having operate voltage of 120-277 V, surge protection of 10kV,power factor ≥ 0.90,Colour Rendering Index >70 and neuratl white/White light. Make:-Philips/Bajaj/Shreder/Osram/Wipro	No	493		

Sno	Description of material	Unit	Qty	Rate	Amount
5a	Supply and Erection of 180Watt LED luminaire having an IP66 optic compartment and IP66 control gear compartment, a Pressure die cast aluminium painted housing,a toughened glass protector having impact resistance of IK08,universal electronic driver having operate voltage of 120-277 V, surge protection of 10kV,power factor ≥ 0.90 ,Colour Rendering Index >70 and neutral white/White light. Make:-Philips/Bajaj/Shreder/Osram/Wipro	No	53		
5b	Supply and Erection of 180 Watt LED luminaire having an IP66 optic compartment and IP66 control gear compartment, a Pressure die cast aluminium painted housing,a toughened glass protector having impact resistance of IK08,universal electronic driver having operate voltage of 120-277 V, surge protection of 10kV,power factor ≥ 0.90 ,Colour Rendering Index >70 and neutral white/White light. Make:-Philips/Bajaj/Shreder/Osram/Wipro	No	53		
6a	Supply and Erection of 210Watt LED luminaire with minimum 125 lumen per watt having an IP66 optic compartment and IP66 control gear compartment, a Pressure die cast aluminum painted housing, a toughened glass protector having impact resistance of IK08,universal electronic driver having operate voltage of 120-277 V, surge protection of 10kV,power factor ≥ 0.90 ,Colour Rendering Index >70 and neutral white/White light. The street light controller (SLC) should control the light individually and shall be interfaced / integrated with LED driver inside the luminaire IP55 internal box / inbuilt with LED driver or outside luminaire as per NEMA (ANSI C136.41) standards. It should control the LED light over 4G / NB-IoT / GSM / GPRS communication network. It shall perform LED on, off, dimming (0-10, 1-10V), fault detection, energy metering equivalent to class-1. Make:-Philips/Bajaj/Shreder/Osram/Wipro/Crompton	No.	259		
6b	Supply and Erection of 210Watt LED luminaire having an IP66 optic compartment and IP66 control gear compartment, a Pressure die cast aluminium painted housing,a toughened glass protector having impact resistance of IK08,universal electronic driver having operate voltage of 120-277 V, surge protection of 10kV,power factor ≥ 0.90 ,Colour Rendering Index >70 and neutral white/White light. Make:-Philips/Bajaj/Shreder/Osram/Wipro	No	259		
7	240V of 9KA breaking capacity,C-curve,10A SP MCB ,Make :- ABB/Schneider/Legrand/Siemens/L&T/C&S/INDOASIAN	No.	664		
8	A set of 4nos. Each lighting pole terminal suitable for connection of 3nos. 25 Sq. mm. 3.5 core Al. conductor,armoured cable all work complete as per Instruction of EIC & material shall be IS standard.	Set	664		
9	Supply & Erection 1.1 kv 4 core 25 sqmm PVC insulated Al. conductor galvanized steel strip armoured cable for street lighting power connection, under ground cable, loose in existing pipe or trenches complete with necessary connections.Make:Finolex/Ralison/Delton/Gemscab/Havells/Grandlay/Paramount/Sterlite/RPG/KEI	Mtr.	34319		

Sno	Description of material	Unit	Qty	Rate	Amount
10	<p>Supply,installation,testing and commissioning of outdoor type Smart Intelligent street light control Panel and Area Light Panel having suitable loading capacity, made of 2mm thick CRCA Sheet duly powder coated, having degree of protection IP 65, 300mm high M.S. angle iron Stand for floor mounting, suitable for bottom side cable entry, Pad locking facility etc. as per technical specification & System requirement, equipped with the following items (but not limited to) complete in all respects up to the entire satisfaction of engineer-in-charge of the work:-</p> <p>1) GSM/GPRS/4G/NB-IoT/Ethernet enabled controller having controlling facility up to 200 luminaire on a single breaker / contactor, Modbus (RS 485) interfacing facility, door open / close status and spare digital inputs for connection of further components (e.g. Photo sensors, motion sensor, temperature sensor),Integrated relay output, Setup and operation with SLC Software, Type of protection: IP65 with 12/24V DC battery and battery charger.</p> <p>2) 100A,4Pole, with thermo-magnetic release & extended rotary handle,25KA MCCB as incomer</p> <p>3) AC/DC Operated ,4Pole,AC3 type, 80A Power contactor (in case of DC operated contactor battery & Battery charger etc. shall be the integral part of the Panel)</p> <p>4) High electrolytic grade Aluminum Busbar set for 200A capacity with heat shrinkable sleeve on suitable Insulators</p> <p>5) Multifunction meter, CT/PT, Indication Lights for phases and operation status, completely wired -up with FRLS wire etc.</p> <p>6) One set of Power terminals for incoming supply and 6nos. set of power terminal for outgoing supply suitable for 415 Volts AC 3-Phase 4 wire supply. The terminal sets shall be suitable for connecting up to 4core 95sqmm Aluminum conductor PVC/XLPE Insulated,Armoured cable</p> <p>7) 25x6 mm Al/GI Earthing Strips.</p> <p>8) 6nos TPN 40Amp C-curve 10kA MCB for outgoing</p> <p>9) All other items required for system requirement shall be the integral part of the</p>	No.	17		
	<p>Supply,installation,testing and commissioning of 4G / NB-IoT /GPRS/GSM/Ethernet based web / cloud based Scada system for street lighting control and management system with customized cloud server. The cloud service provider (CSP) shall be MeitY approved / registered to Govt. Of India (Megharaj) cloud service provider and having DC / DR center in India only. For Street Light Management application shall be hosted on cloud and provide required equipment & accessories for the system, having the facility such as individual luminaire status, monitoring & control, SMS/mail alerts for faults, threshold / theft alerts and operation status, daily & monthly report generation, Google map, remote dimming of individual luminaire, automatically real time clock operation,Auto/manual mode operation, graphical analysis for energy consumption and energy saving on daily & monthly basis. As per technical specification complete in all respects up to the entire satisfaction of engineer-in-charge of the work.(For local command and control center including cost of Industrial type PC,printer,U.P.S.,server setup, data connectivity, data handling charges, Web based SCADA system charges/subscription etc. for a period of ten years)</p> <p>MAKE:-Philips/Bajaj/GE/Osram/Crompton</p>	Job	1		
11	<p>Supply & Erection of 2.5 mm sheathed cable 1.1 kV,3 core , 2.5 sq. mm PVC insulated sheathed LT copper standard cable As per IS: 694-1990 .</p> <p>Make:Finolex/Ralison/Delton/Gemscab/Havells/Grandlay/Paramount/Sterlite/RPG/KEI</p>	Mtr.	10556		
12	<p>Supply and erection of mark <u>double walled corrugated (DWC) HDPE pipe laid 1 mtr. below ground level including digging and refilling of earth, cost of labor and material required to complete the job</u> in all respect up to the entire satisfaction of Engineer-in charge of the work make Duraline/ Rex /Gemini/Tirupati</p> <p>(i) HDPE pipe 63/50 mm outer dia/inner dia</p>	Mtr.	30437		

Sno	Description of material	Unit	Qty	Rate	Amount
13	Supply of material & Construction of foundation 1700 mm depth in ground & 200 mm above from ground level as per the dimensions of approved design of Street lighting panel board (including cost of Excavation,plastering,painting,Cement concrete 1:4:8 with 20 mm nominal size stone aggregate & first class brick work in cement, Stone dust mortar (1:5) etc. with a suitable arrangement for installation of Panel board on foundation and entry ,exit & termination facility for LT armoured underground cable in panel board.	No.	15		
14	Supply , Erection & cable termination of 4 core 25 sqmm Al. conductor PVC insulated galvanized steel strip armoured cable with following materials complete in all respects up to the entire satisfaction of engineer in charge, Make: Commet/Dowell's/Jainson/Cosmos				
i	Double compression NI- Plated Heavy duty Brass cable gland	No.	85		
ii	25 sqmm Al. lugs heavy duty	No.	5652		
15	<u>Earthing & Earthing Material</u> i) Earthing set with 4 0mm dia B-Class GI Pipe, 6 mtr (3 Mtr) , long with charcoal,salt, masonry enclosure and GI (CI) cover plate as per design including cost of earth excavation,digging,refilling etc., as required with necessary connections complete in all respects	No.	160		
16	ii) Supply & laying of 6 SWG. GI wire single run along with LT distribution cable, for earthing continuity of under ground cable including thimbles, soldering etc.	Kg	5707		
17	iii) Supply, Erection & laying of GI Flat, 25x6 mm at 0.5 mtr. below ground level as strip earth electrode including soldering etc. as required for earthing of Street Light Panel board, Poles, & welded with GI pipe of earth pit .	Mtr.	1600		
	TOTAL COST				
	ADD - GST @18%				
	Grand Total incl. GST				