



DEENDAYAL PORT AUTHORITY

ISO 9001:2008 | ISO 14001 | ISPS Compliant Port



Office of Executive Engineer (Electrical), Ground Floor, Nirman Building, New Kandla, Kutch, Pin Code 370210.

No.: EL/AC/1001 (^C' type quarters)

Date: 21/02/2025

EXPRESSION OF INTEREST [EOI]

“Construction of New `C' type Quarters at Gopalpuri – Electrical Part”

(This EOI does not constitute any binding commitment from the Deendayal Port Authority to proceed with the work or invite any or all the parties in the subsequent bidding process.)

Executive Engineer (Electrical), DPA invites Expression of Interest for deriving the rates in respect of work of “Construction of New `C' type Quarters at Gopalpuri – Electrical Part” from the reputed firms from those who have executed similar work in Government/public sectors and other leading private organizations. The Expression of Interest (EOI) documents containing details of Technical Specifications are enclosed herewith.

The interested firms are requested to submit their rates in the Expression of interest for the said extra item work in BOQ format as enclosed at Annexure – I. The completed EOI (Expression of Interest) shall be submitted to the office of the undersigned on or before 25/02/2025. A scanned copy of EOI duly signed & stamped is also acceptable through e-mail Id deepak.hazra@deendayalport.gov.in.

Executive Engineer (Elect.)
Deendayal Port Authority

ELECTRICAL DIVISION

Name of Work: Construction of New 'C' type Quarters at Gopalpuri - Electrical Part

ANNEXURE-I

S/N	Description	Qty	Unit	Rate	Amount
1	Providing and fixing concealed wiring for modular light /tube /bell/exhaust fan point with PVC insulated single core standard copper conductor wire, as per the Tech. Spec. No:-01	882.00	Ea		
2	Providing & fixing following concealed wiring for single phase sub-circuit from the main switch /meter/DBs /MCBs to the switch board as per the Tech. Spec. No:-02				
(a)	with 2 X 2.5 sq.mm. copper conductor (single phase, neutral & earth)	4800.00	m		
(b)	2 X 4 sq.mm. copper conductor (single phase, neutral & earth neutral)	2100.00	m		
3	Providing and fixing concealed wiring for modular FAN point with PVC insulated single core stranded copper conductor wire as per Tech. Spec. No:-03	160.00	Ea		
4	Providing and fixing 40 watt or above 4 feet LED light complete with labour and material and as per the technical specification no. 4	170.00	Ea		
5	Providing and fixing 5 pin 5/6 A X 240 Volt modular half plug point as per Tech. Spec. No:-05	172.00	Ea		
6	Providing and fixing concealed wiring for 20 A X 240 Volt Modular Power point as per Tech. Spec. No:-06	84.00	Ea		
7	Providing and fixing concealed wiring for modular AC point 32 A X 240 V with individual modular switch as per the tech. spec. no. 7	70.00	Ea		
8	Supply at site 1200 MM BLDC type ceiling fan with three blades along with its all accessories white glossy along with its remote control regulator , as per Approved Make list as per the Tech. Spec. No:- 8	160.00	Ea		
9	Fixing of above 1200 mm BLDC ceiling fan with all accessories as per the Tech. Spec. No:-9	160.00	Ea		

10	Supply and fixing of 20 Watt Gate light fixture with all accessories as per the technical specification no. 10.	28.00	Ea		
11	Supply and installation of following type distribution board complete with ELCB, TP, DP and SP - IP42 degree of protection as per technical specification no. 11 (a)				
(a)	16 Way Double Door Distribution Box with providing 01 No. 40 Amp. Three phase ELCB, 01 no. 40 Amp. TPN MCB, 02 nos. 32 Amp. DP MCB and 03 nos. 6-10 Amp. SP MCB	14.00	Ea		
(b)	Supply, Installation, Testing and Commissioning of 3 phase 4 wire LCD type digital energy meter 3X240 V AC 10 to 16 Amp. Rating Class 1.0, frequency 50 Hz. 450 Imp/KWh Alongwith polycarbonate 3 phase meter box, complete with labour and material.	15.00	Ea		
12	Supply and Preparation earthing station, chemical treated back filled compound earthing system with Pipe-In-Strip 30-40 mm Dia GI type 3 Mtr Depth, Maintenance free as per Tech. Spec. No. 12.	14.00	Ea		
13	Providing & connecting following type earth flat for earth station to equipments as per requirement as per Tech. Spec. No:-13.				
	a) 8 SWG GI earthing wire	700.00	m		
	b) 25X6 Hot Dip GI Strips.	300.00	m		
14	Supply at site 4 Core, LT armoured aluminium conductor XLPE cable of 1.1KV grade of the following type & size as per Tech. Spec. No:- 14				
(a)	4 Core, 35 sq.mm.	400.00	m		
(b)	4 Core, 50 Sq.mm	400.00	m		
15	Laying of cable at site, through various route up to 50 sq.mm, LT armoured aluminium conductor XLPE cable of 1.1KV grade of the following type & size as per Tech. Spec. No 15 (a) to (e)				
a)	Hard/soft soil by providing & putting Brick & Sand, by excavating the 800 Mtr Depth, 600 mm width, after laid cable redone the surface area	400.00	m		
b)	Through RCC/CC/Paver by Cutting/Breaking by putting suitable diameter HPDE / DWC Pipe, after laid cable redone the surface area.	200.00	m		
c)	Cable laid, by providing & erection Box type FRP Tray 150 mm width.	200.00	m		
d)	Dressing of cable on existing wall with GI clamp.	100.00	m		

e)	Termination of LT cable in the existing feeder pillar complete with labour and material alongwith 40 Amp. MCCB 25 KA 420 V AC as per site requirement.	14.00	Ea		
16	Supply, Installation, Testing & Commissioning of concealed wiring as per site situation for inverter connecting all the main rooms light & fans, complete with labour and material and as per the technical specification no. 16.	14.00	Ea		
17	Supply at site 200 ±5% Watt LED Flood Light fitting as per the Technical Specification No. 17	12.00	Ea		
18	Fixing of 200 ±5% Watt LED Flood Light fitting as per the technical specification no. 18.	12.00	Ea		
19	Supply, Installation, Testing and Commissioning of Stair Case wiring complete with all material and labour as per Technical Specification No. 19.	9	Ea		
Total Amount: Rs.					

(Rupees

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(NOTE: The rates should be inclusive of all taxes, duties, fees, cess etc. and all incidental charges; but exclusive of GST)

Seal & Signature of
Contractor

Executive Engineer (Elect.)
Deendayal Port Authority

TECHNICAL SPECIFICATION

Technical Specification No. 1 :

This item includes providing & fixing concealed wiring for modular light/tube/bell/exhaust fan point from switchboard with flame retardant, 1100 voltage grade, single core stranded copper conductor wire with IS 694: 2010 of size 1.5 sq.mm for phase & neutral wire and 1 sq.mm continuous stranded copper conductor wire for earth to be laid through PVC Round Pipe with IS 9537 (Part 3): 2021 of size 20 mm Diameter of Medium Mechanical Strength (MMS) type and other accessories such as tee, junction box, inspection bend, elbow etc. of approved make. The proper size of grew shall be prepared by contractor on wall/ceiling as case may be & the conduit pipe shall be laid through prepared grew and in case of new construction the pipes shall be laid during reinforcement work. After laying of pipe the grew shall be closed with mixture of cement & sand and to match with existing surface of wall/ceiling. The work includes providing & fixing of single pole, one way, 6A, 240V modular piano type domestic electrical switch with screw type terminal, 1 module, copper/brass, white color, polycarbonate electrical grade material, with ISI mark, conforming to IS 3854: 2023. The work includes providing & fixing of 3 plate modular ceiling rose /angle holder made from polycarbonate on suitable size of PVC box with cover. The PVC box shall be embedded properly in the wall and the switch shall be fixed on cover of the embedded box. The work includes necessary wiring, connections & earth linking with all material, labour, tools & tackles as directed by Engineer-in-charge.

Technical Specification No. 2 (a) :

This item includes providing & fixing concealed wiring for single phase sub-circuit from the main switch /meter /DBs / MCBs to the switchboard with flame retardant, 1100 Voltage grade, single core stranded copper conductor wire conforming to IS 694: 2010 of size 2.5 sq.mm for phase & neutral wire and 1.5 sq.mm continuous stranded copper conductor wire for earth to be laid through PVC Round Pipe with IS 9537 (Part 3): 2021 of size 25 mm Diameter of Medium Mechanical Strength (MMS) type and other accessories such as tee, junction box, inspection bend, elbow etc. of approved make. The proper size of grew shall be prepared by contractor on wall/ceiling as case may be & the conduit pipe shall be laid through prepared grew and in case of new construction the pipes shall be laid during reinforcement work. After laying of pipe the grew shall be closed with mixture of cement & sand and to match with existing surface of wall/ceiling. The work includes necessary wiring, connections & earth linking with all material, labour, tools & tackles as directed by Engineer-in-charge.

Technical Specification No. 2 (b) :

This item includes providing & fixing concealed wiring for single phase sub-circuit from the main switch /meter /DBs / MCBs to the switchboard with flame retardant, 1100 Voltage grade, single core stranded copper conductor wire with IS 694: 2010 of size 4 sq.mm for phase & neutral wire and 1.5 sq.mm continuous stranded copper conductor wire for earth to be laid through PVC Round Pipe with IS 9537 (Part 3): 2021 of size 25 mm Diameter of Medium Mechanical Strength (MMS) type and other accessories such as tee, junction box, inspection bend, elbow etc. of approved make. The proper size of grew shall be prepared by contractor on wall/ceiling as case may be & the conduit pipe shall be laid through prepared grew and in case of new construction the pipes shall be laid during reinforcement work. After laying of pipe the grew shall be closed with mixture of cement & sand and to match with existing surface of wall/ceiling. The work includes necessary wiring, connections & earth linking with all material, labour, tools & tackles as directed by Engineer-in-charge.

Technical Specification No. 3 :

This item includes providing & fixing concealed wiring for modular fan point from switchboard with flame retardant, 1100 Voltage grade, single core stranded copper conductor wire with IS 694: 2010 of size 1.5 sq.mm for phase & neutral wire and 1 sq.mm continuous stranded copper conductor wire for earth to be laid through PVC Round Pipe with IS 9537 (Part 3): 2021 of size 20 mm Diameter of Medium Mechanical Strength (MMS) type and other accessories such as tee, junction box, inspection bend, elbow etc. of approved make. The proper size of grew shall be prepared by contractor on wall/ceiling as case may be & the conduit pipe shall be laid through prepared grew and in case of new construction the pipes shall be laid during reinforcement work. After laying of pipe the grew shall be closed with mixture of cement & sand and to match with existing surface of wall/ceiling. The work includes providing & fixing of single pole, one way, 6A, 240V modular piano type domestic electrical switch with screw type terminal, 1 module, copper/brass, white color, polycarbonate electrical grade material, with ISI mark, conforming to IS 3854: 2023, 2 module step-cut electronic fan regulator with rotary steps and 3 plate modular ceiling rose made from polycarbonate on suitable size of PVC box with cover. The PVC box shall be embedded properly in the wall and the switches shall be fixed on cover of the embedded box. The work includes necessary wiring, connections & earth linking with all material, labour, tools & tackles as directed by Engineer-in-charge.

Technical Specification for Item No. 4:

This includes supply, fixing and commissioning at site 4 ft. long LED Tube light fixture of 40 Watt. The tube light shall be operating on single phase 230V, 50Hz AC supply. The tube light fixture shall be decorative ultra slim round/square profile LED lighting fixture with extruded polycarbonate and shall be have the facility of clamping the tube rod on fixed clip (on the wall) The LED rod shall be fluctuation proof and shall provide with in-built driver and as directed by Engineer-in-Charge.

Technical Specification No. 5 :

This item includes providing & fixing concealed wiring for modular half plug point with flame retardant, 1100 Voltage grade, single core stranded copper conductor wire with IS 694: 2010 of size 1.5 sq.mm for phase, neutral & earth. The work includes providing & fixing of single pole, one way, 6A, 240V modular piano type domestic electrical switch with screw type terminal, 1 module, white color, polycarbonate electrical grade material, with ISI mark, conforming to IS 3854: 2023 and 2 in 1 socket 6A, 240V made from polycarbonate on suitable size of PVC box with modular plate. The PVC unbreakable surface box for required modules shall be fixed rigidly on the wall with wooden gutties and the switch & Socket shall be fixed on modular plate of required modules on the box. The complete work consists necessary wiring connections and earth linking at both the ends with all materials and labour as directed by Engineer-in-charge.

Technical Specification No. 6 :

This item includes providing & fixing concealed wiring for modular Power Plug point with flame retardant, 1100 voltage grade, single core stranded copper conductor wire with IS 694: 2010 of size 4 sq.mm for phase & neutral wire and 2.5 sq.mm continuous stranded copper conductor wire for earth to be laid through PVC Round Pipe with IS 9537 (Part 3): 2021 of size 25 mm Diameter of Medium Mechanical Strength (MMS) type

and other accessories such as tee, junction box, inspection bend, elbow etc. of approved make. The proper size of grew shall be prepared by contractor on wall/ceiling as case may be & the conduit pipe shall be laid through prepared grew and in case of new construction the pipes shall be laid during reinforcement work. After laying of pipe in prepared grew the grew shall be closed with mixture of cement & sand and to match with existing surface of wall/ceiling. The work consists providing & fixing of 20 A, 240V, 5 in 1 power plug unit with switch, socket, fuse & indicator with ISI mark. The PVC box of suitable size shall be embedded properly in the wall and the combined unit shall be fixed on embedded PVC box. The work includes necessary wiring, connections & earth linking with all material, labour, tools & tackles as directed by Engineer-in-charge.

Technical Specification No. 7 :

This item includes providing & fixing concealed wiring for A.C. Point with flame retardant, 1100 voltage grade, single core stranded copper conductor wire with IS 694: 2010 of size 4 sq.mm for phase & neutral wire and 2.5 sq.mm continuous stranded copper conductor wire for earth to be laid through PVC Round Pipe with IS 9537 (Part 3): 2021 of size 25 mm Diameter of Medium Mechanical Strength (MMS) type and other accessories such as tee, junction box, inspection bend, elbow etc. of approved make. The proper size of grew shall be prepared by contractor on wall/ceiling as case may be & the conduit pipe shall be laid through prepared grew and in case of new construction the pipes shall be laid during reinforcement work. After laying of pipe the grew shall be closed with mixture of cement & sand and to match with existing surface of wall/ceiling. The work includes providing & fixing of 32A, 240V, 2 module, modular DP switch with indicator and 32A, 240V, 5 pin, modular Socket made from polycarbonate on suitable size of PVC box with cover. The PVC box shall be embedded properly in the wall and the switches & Sockets shall be fixed on cover of the embedded box. The work includes necessary wiring, connections & earth linking with all material, labour, tools & tackles as directed by Engineer-in-charge.

Technical Specification for Item No. 8 :

This includes supply of 1200 mm sweep BLDC Motor ceiling fan (5 star) fitted with heavy duty grease filled double ball bearing that ensures noiseless performance and long lasting smoother life of fan suitable up to 240 V AC supply. The Fan blades aerodynamically balanced to ensure maximum air delivery at lower power consumption & the blades shall be made of 'heavy gauge' aluminum sheet so as to retain the blade's angel over a longer period. The Fan motor made of superior grade copper wire and impregnated in special varnish for long life operation. The motor shall be totally enclosed and low-loss-silicon steel stampings ensure minimum power consumption with high optimum output. The Fan coated with a special anticorrosive enamel paint that makes them rust free and ensures a classic appearance and longer life. The supplied fan conforming to ISI specifications. The fan shall be supplied along with accessories of approved make and as per IS specification as directed by Engineer-in-charge.

Technical Specification for Item No. 9 :

This includes fixing & commissioning of supplied BLDC motor ceiling fan with all accessories in existing hook or by fixing of heavy duty round base hook of with pull out load 75 Kg & Jurk /vibration Load 40 Kg. This also including necessary wiring and connection from nearest point / Ceiling rose through PVC flexible copper conductor wire and earth linking etc. with all material and labour as directed by Engineer-in-charge.

Technical Specification for Item No. 10 :

This items includes supply and fixing of 20 watt LED gate light complete with all accessories/fixtures with operating on 180 to 240 V single phase 50 HZ supply. The model will be decided by EIC before procurement.

Technical Specification for Item No. 11 (a) :

This item Supply & installation of following type distribution board complete with ELCB, TP, DP and SP - IP42 degree of protection. The DB shall be made from special grade of CRCA sheet and powder coated. The DB shall be fitted with Bus bar, DIN Rail and neutral link.

16 Way Double Door Distribution Box one number along with following accessories: -

01 Nos. 40 Amp. Three phase ELCB with 30mA sensitivity DIN mounted.

01 Nos 40 amp. TPN MCB 'C' series DIN mounted

02 nos. 32 Amp. DP MCB 'C' series DIN mounted

03 nos. 6-10 Amp. SP 'C' series DIN mounted

This includes fixing & commissioning of supplied double door TPN DB on wall / structure as directed. The DB shall be fixed rigidly on wall through suitable size of nut bolt / anchor fastener / cemented wooden gutties as directed. This includes necessary wiring, connections, and earth linking with all material, labour tools & tackles as directed by Engineer-In-Charge.

Technical Specification for Item No. 11 (b) :

This item includes Supply, Installation, Testing and Commissioning of 3 phase 4 wire LCD type digital energy meter 3X240 V AC 10 to 16 Amp. Rating Class 1.0, frequency 50 Hz. 450 Imp/KWh Alongwith polycarbonate 3 phase meter box and meter test certificate, complete with labour and material and as directed by Engineer-in-Charge.

Technical Specification for Item No. 12 :

This includes Supply and preparation of earth station with chemical treated back filled compound Corrosion protection by hot dip 30-40 mm dia Pipe-in-strip GI Type 3 Mtr Depth, Maintenance free including all accessories & Masonry work Enclosure with cover plate.

The work shall be carried out to entire satisfaction of Engineer-in-charge. This work includes all labour and material as directed by Engineer-in-Charge.

Technical Specification for Item No. 13 :

The works include providing & fixing the following size earth strip and wire from earth station to equipment / Main DB or as per requirement. The complete work consists necessary wiring connections and earth linking at both the ends with all materials and labour as directed by Engineer-in-charge.

a) 8 SWG Hot DIP GI wire,

b) 25X 6 Hot DIP GI strips, having minimum 80 Micron galvanized coating.

Technical Specification for Item No. 14 :

Supply at site 4 Core, LT armoured aluminium conductor XLPE cable of 1.1KV grade of the following type & size

- a) 4 Core, 35 Sq.mm
- b) 4 Core, 50 Sq.mm

This includes supply at site 1.1 KV grade, 4 Core, 35 Sq. mm Aluminum conductor, XLPE insulated armoured cable confirming to IS : 7098 (Part-I) 1985 with up to date amendments and of approved make with ISI mark. The cable shall have marking/embossing at the interval of every meter showing its progressive length. The contractor shall produce the routine test certificate during supply of cable at site. The rate shall inclusive of all taxes, duties, packing, forwarding, insurance, transportation and unloading at site of work etc.

b) This includes supply at site 1.1 KV grade, 4 Core, 50 Sq. mm Aluminum conductor, XLPE insulated armoured cable confirming to IS : 7098 (Part-I) 1985 with up to date amendments and of approved make with ISI mark. The cable shall have marking/embossing at the interval of every meter showing its progressive length. The contractor shall produce the routine test certificate during supply of cable at site. The rate shall inclusive of all taxes, duties, packing, forwarding, insurance, transportation and unloading at site of work etc.

Technical Specification for Item No. {15} :

Laying of single length of cable at site, through various route up to 50 sq.mm , LT armoured aluminium conductor XLPE cable of 1.1KV grade of the following type & size.

a) In Hard / soft Soil

The cable shall be laid through excavation in soft/hard soil. The trench to be excavated 0.6 Mtr. Wide and 0.8 Mtr. deep. The bed of 50mm of river sand shall be provided in the bottom of the excavated trench. The cable shall be laid over the bed of river sand. This includes providing & laying of Bricks and sand i.e. parallel to the cable and the gaps shall be filled by fresh river sand. The cable shall be covered by keeping half round heavy duty RCC NP 2 Pipe. The filling of the trench shall be done with by provided Sand cover (at least 50mm from cable surface) completely & followed by excavated stuff & should be watered and rammed properly to its original position. The excess excavated stuff shall be disposed off from the Site of work and spreaded in low laying area as directed. The contractor shall provide heat shrinkable straight through joint of relevant size of approved make if the laying of cable shall be more than standard drum length. This includes all labour and material as directed by Engineer-in-Charge.

b) In RCC /CC/ paver block / interlocking block

Cable shall be laid Through RCC/CC/Paver block and interlocking block by cutting /Breaking and removing by through suitable tools & plants, after that trench 600mm depth & 300 mm width trench shall be prepare, and by providing & laying HDPE/DWC pipe. Cable shall be laid through suitable diameter HPDE / DWC Pipe, after laid cable redone the surface area as per its original positions. This includes all labour and material as directed by Engineer-in-Charge.

c) In box type FRP tray 150mm Width

This providing and fixing of 150 mm FRP Perforated cable tray (thickness 2 mm or above) on wall, structure with suitable support / clamp, hardwares, nut bolt, coupler plate, tee, bend, elbow and other require tools & tackles with erection of site requirement as directed by Electrical-In-Charge. Wall and ceiling area cable tray laid maintain proper level to the end. The rate shall be firm and inclusive of all taxes, excise duty, octroi, packing and forwarding, insurance, loading at supplier's depot, transportation and unloading at site of work. All materials and labour as directed by Engineer-in-charge.

d) This item includes dressing of cable on wall upto size of 50 sq.mm. with GI saddle to be fixed on the cable at half meter distance and same shall be dressed in a proper alignment with complete labour and material as directed by Engineer-in-Charge.

e) This item includes termination of LT cable in the existing feeder pillar complete with labour and material alongwith 40 Amp. MCCB 25 KA 420 V AC as per site requirement and as directed by Engineer-in-Charge.

Technical Specification for Item No. 16 :

This item includes Supply, Installation, Testing & Commissioning of concealed wiring as per site situation for inverter connecting all the main rooms light & fans, complete with labour and material and as directed by Engineer-in-Charge.

Technical Specification for Item No. 17

The contractor shall supply at site 200 \pm 5% Watt energy efficient LED Flood Light fitting. The Technical Specification of 200 \pm 5% Watt LED Flood Light fitting is as below:

SN	DESCRIPTION	SPECIFICATION
1	Input Power	200 \pm 5% Watt
2	Input voltage AC	120-270 V AC
3	Input Frequency	50 Hz +/-1 Hz
4	Life	50,000 burning hours @ L70B50, Ta 35°C Outdoor
5	Mounting type	Suitable for wall mounting with bracket. The thickness of bracket of fitting shall be minimum 4mm with 360 degree rotatable.
6	Total Harmonic Distortion	<10% maximum
7	Working Temperature	0°C to +45°C
8	Working Humidity	10% to 90% RH
9	Temperature	5700K to 6500K
10	Colour rendering index	>70
11	Efficacy	\geq 110 Lumen/Watt
12	Finishing	Corrosion resistant powder coating
13	Power factor	Not less than 0.95

14	Warranty	<p>5 Years from the date of successful commissioning. It is clarified that during Warranty Period, if the material is found to be defective or has poor performance or has lumen depreciation beyond permissible limit as per LM80 report, the Contractor shall promptly, Replace the material against manufacturing defects /Rectify the material, on receiving the instruction from Engineer in Charge at contractor's cost.</p> <p>The contractor shall have final & total single point responsibility for performance of the LED light fittings supplied.</p>
15	Construction	<p>The housing should be of non-corrosive powder coated pressure die-cast aluminium frame with heat resistant toughened clear glass fixed with SS screw. The LED flood light fitting shall not be of modular type.</p> <p>The LED Flood Light shall have its make embossed / engraved on the Fitting.</p>
16	Surge Protection	<p>The Luminaire should have a 10kV SPD duly bolted inside the Luminaire. The SPD should be able to sustain a minimum 15 hits of 5kA rating i.e. Total of 45 hits across all the three modes as per IEC 61000.</p>
17	Electrical Protection	<p>The Luminaire should be capable of withstanding voltage stress of 440V phase to phase for 8 hrs at 50 degree Celsius and should have low voltage protection as 100V for 48 hours & high voltage cut-off above 325 VAC and should have an auto restart feature.</p>
18	Impact Resistance	IK08
19	Driver Construction	<p>The Drivers should be a potted driver not a printed circuit board without casing, mounted inside the luminaire.</p> <p>The Driver shall be of constant current type and shall have Over voltage, Over current, Over temperature & Short circuit Protection.</p> <p>The driver efficiency shall be more than 85%.</p> <p>List of make of Driver: PHILLIPS Xitanium/ MEANWELL/ OSRAM/ BAG/ SOSEN/ INVENTRONICS. Manufacturers can use their own make LED driver and the LED Driver shall be BIS certified and shall meet the specifications and comply with Safety requirements (IEC 61347-1, IEC 61347-2-13), EMC requirements (CISPR 15/ EN 55015, IEC/EN 61547, IEC/EN 61000-3-2, IEC/EN 61000-3-3).</p>
20	Driver shall safety compliance	As per IEC 61347-1/ IS 15885 (Part2/ SEC13)/BIS certified
21	Ingress Protection Level of LED Light Fitting	IP 65 or more

22	Optics	LED Flood Light fitting: Asymmetric wide or Wide beam Angle
23	Material of optics	PC lens with toughened glass cover. The LEDs should be provided with UV resistant lens/glass cover for avoiding yellowing of the lense/glass cover. Or Exposed lensed PC Lens plate, the LEDs should be provided with anti-dust, UV resistant exposed lens for avoiding any dust & dirt accumulation on the fixtures and yellowing of the lenses.
24	Makes of LEDs	Osram, Cree, Lumileds, Nichia, Seoul.
25	Specification of LED	SMD type with wattage of each LED should be > 1 Watt and ≤ 3 Watt.
26	Certificate/Report	Type test reports for LED fittings & LED Driver. The luminaire should be tested as per IEC 60598 standards and following test reports should be submitted: Thermal Test, Ingress Protection Test, Electrical / Insulation Resistance Test, Endurance Test, Humidity Test. The luminaire should be tested for 'Drop test' as per IEC 60068-2-31/IS9000 Part 7 / Sec 3 standards. The luminaire should be tested for 'Vibration test' as per ANSI/IEC 68-2-6 standards. Should comply to IESNA LM-79 (Approved method for the Electrical and Photometric Measurements of Solid-State Lighting Products). LM79 report from NABL accredited laboratory. The LEDs used should comply to LM-80 standards (IESNA: Approved Method for Measuring Lumen Maintenance of LED Light Sources and LED lumen depreciation time to L70 based on LM-80 data). The LEDs shall comply with photo biological safety norms as per IEC 62471/EN 62471/IS:16108 under Risk Group 1 (Low Risk). BIS Certificate for LED Driver. BIS Certificate for LED Luminaire. Contractor shall submit all the above certificate/report including BIS certificate at the time of supply of fittings.

The rate shall be inclusive of all taxes (excluding GST), insurance, transportation, unloading at site as directed by Engineer in charge.

Technical Specification for Item No. 18

This item includes fixing of supplied 200 ±5% Watt LED Flood Light fitting on rooftop/wall/structure of the Building at the locations as directed. The mounting of the fitting shall be done with the fasteners as per the details given in instruction sheet of the fitting and as directed by Engineer in Charge. This includes necessary wiring & connections by providing 3 core, 1.5 Sq.mm flexible copper cable from the junction box to luminaire & necessary earth linking connections with all material, labour, tools & tackles as directed by Engineer in Charge.

Technical Specification for Item No. 19

This item includes Supply, Installation, Testing and Commissioning of Stair Case wiring along with its feeder pillar to be connected with street light connection with contactor, MCB and ancillary items complete with labour and material as directed by Engineer-in-Charge.

Seal & Signature of
The Contractor

Executive Engineer (Elect.)
Deendayal Port Authority

Approved Make List for Electrical Items

SN	Description	Recommended Makes
1	HT VCB	SIEMENS / CROMPTON GREAVES/ABB/Schneider
1(a)	HV Gas Insulated Breakers	SIEMENS /Schneider/ABB
2	POWER TRANSFORMERS	VOLTAMP/CROMPTON GREAVES /BHARAT BIJLEE/ BHEL/ SIEMENS/ ABB/ Schneider/T&R
3	DISTRIBUTION TRANSFORMERS	EMCO/KIRLOSKAR/PATSON/VOLTAMP/ ABB / Schneider / T&R
4	RESIN CAST TRANSFORMERS	
	A) RESIN CAST IMPREGNATED	VOLTAMP / KIRLOSKAR / EMCO
	B) DRY CAST	VOLTAMP/KIRLOSKAR/EMCO
5	HT XLPE CABLES	POLYCAB/TORRENT/RPG ASIAN/ /GLOSTER/ UNISTAR/ UNISTAR/KEI/FINOLEX/HAVELS
6	LT XLPE CABLES	POLYCAB/TORRENT/RPG ASIAN/ / RALLISON/PRIMECAB/ HAVELLS/UNISTAR/AVOCAB / ADCAB
7	LT ACB	SIEMENS/L&T/SCHNEIDER/C&S
8	PROTECTION RELAYS	AREVA/L&T/SIEMENS/ABB/C&S
9	LT PANEL	CPRI APPROVED
10	CHANGE OVER SWITCH	SIEMENS/L&T/ABB/C&S/SCHNIDER/ LEGRAND / INDOASIAN
11	SFU FOR MAIN LT DISTRIBUTION PANELS	SIEMENS/L&T/ABB/C&S
12	SFU FOR DISTRIBUTION PANELS & FEEDER PILLERS	SIEMENS/L&T/ABB/C&S/ SCHNEIDER/ LEGRAND/ INDOASIAN/HAVELLS
13	MCCB FOR MAIN LT DISTRIBUTION PANELS	SIEMENS/L&T/ABB
14	MCCB FOR DISTRIBUTION PANELS AND FEEDER PILLERS	SIEMENS/L&T/ABB/C&S/ SCHNIDER/ LEGRAND/ INDOASIAN/HAVELLS
15	MCB/ELCB/RCCB/RCCBO FOR MAIN LT DISTRIBUTION PANEL	SIEMENS/HAGER L&T/ABB

16	MCB FOR DISTRIBUTION PANELS AND FEEDER PILLERS	SIEMENS/L&T/ABB/C&S/ SCHNEIDER/ LEGRAND/ INDOASIAN/ HAVELLS/ STANDARD
17	MCB DISTRIBUTION BOARD	STANDARD / HENSEL/LEGRAND / INDOASIAN / HAVELLS
18	MULTI FUNCTION DIGITAL METER FOR MAIN LT DISTRIBUTION PANELS/DIGITAL KWH METERS	L&T/ENERCON/SECURE/L&G/ RISHABH
19	ANALOG VOLT/AMPARE METER FOR DISTRIBUTION PANELS AND FEEDER PILLERS	RISHABH/AE/ENERCON/L&T
20	SLECTOR SWITCH FOR VOLTMETER/AMPARE METER	L&T/SIEMENS/C&S
21	POWER CONTACTOR & OVER LOAD RELAYS	L&T/SIEMENS/ABB
22	QUARTZ TIME CLOCK SWITCH	L&T/INDOASIAN/SIEMENS
23	PVC WIRE WITH COPPER CONDUCTOR	RR KABEL / KEI / POLYCAB/MILEX/GUJCAB/ STANDARD / FINOLEX / ANCHOR
24	FLUSH TYPE SWITCHES, SOCKETS, HOLDERS AND CEILING ROSES & ELECTRONIC REGULATORS	ANCHOR/MK/NORTHWEST/VINAY /PANAMA / HAVELLS
25	DOOR BELLS/CALL BELLS	ANCHOR/LEGEND/MK/NORTHWEST
26	MODULAR SWITCHES, SOCKETS, PLATES & BOXES	ANCHOR / MK / NORTHWEST / LEGRAND /HAVELLS / INDOASIAN / SIMENS.
27	PVC CONDUIT / OVAL CONDUIT & CASSING CAPPING AND ACCESSORIES	PRECISION/VULCAN/FINOLEX/ GARWARE/ PRESTOPLAST/ SWASTIK / BPI
28	GLS LAMPS & FLUORESCENT LAMPS	PHILIPS / BAJAJ / WIPRO / CROMPTON GREAVES / OSRAM / SURYA ROSHNI / GE
29	HPSV, HPMV & METAL HELIDE LAMPS	PHILIPS / BAJAJ / WIPRO / CROMPTON GREAVES / OSRAM / SURYA ROSHNI / GE
30	IGNITORS FOR HPSV, METAL HELIDE LAMPS	PHILIPS / BAJAJ / WIPRO / CROMPTON GREAVES / OSRAM / SURYA ROSHNI / GE
31	LUMINARIES	PHILIPS / BAJAJ / WIPRO / CROMPTON GREAVES / OSRAM / SURYA ROSHNI / GE/C&S

31a	LED LUMINARIES	Philips/Bajaj/Wipro/CG/Surya/Pyrotech/Syska/Nessa/C&S having surge Protection $\geq 10KV$ for fittings & internal Surge Protection for Driver of $\geq 4KV$, LED Chip only OSRAM/CREE/Philips Lumileds/Citizen/with LM- 79,80 CERTIFICATION
32	CEILING FANS	BAJAJ/ORIENT/USHA/CROMPTON GREAVES / ALMONARD/GEC
33	WALL MOUNTING FANS	BAJAJ/ORIENT/USHA/CROMPTON GREAVES / ALMONARD/GEC
34	EXHUAST FANS	BAJAJ/ORIENT/USHA/CROMPTON GREAVES / ALMONARD/GEC
35	HEAVY DUTY INDUSTRIAL WALL MOUNTING FANS	BAJAJ/ORIENT/USHA/CROMPTON GREAVES / ALMONARD/GEC or its equivalent
36	WATER COOLER	VOLTAS/SHRIRAM USHA/BLUE STAR
37	AIR CONDITIONERS	VOLTAS/CARRIER/BLUESTAR/USHA/ HITACHI/LG/ SAMSUNG/ONIDA
38	REFRIGERATORS	VOLTAS / CARRIER / BLUESTAR / USHA / HITACHI / LG / SAMSUNG / WHIRLPOOL
39	VOLTAGE STABILIZER	VEELINE / CAPRI
40	INVERTERS	SUKAM / MICROTEK
41	D.G. SETS	
	A) ENGINE	CUMMINS/GREAVES/KIRLOSKAR/ CATERPILLAR /ASHOK LEYLAND /VOLVO
	B) ALTERNATOR	STAMFORD/CROMPTON GREAVES /JYOTI/ KIRLOSKAR ELECTRIC
42	ELECTRIC MOTOR	ALSTOM/CROMPTON GREAVES /SIEMENS/ KIRLOSKAR/ABB
43	WATER PUMPS	SWASTIK / KSB
44	WATER GEYSER	BAJAJ/USHA / CROMPTON GREAVES / SPHEREHOT / RACOLD
45	LUGS & CABLE GLANDS	DOWELLS / JAINSON / BRACO

Note: In case of supply of Make of material which is neither available in the DPA approved, the said material should be supplied as per the Make decided by EIC for which written intimation will be given to the contractor.

Before procurement of material, the Make of the material should be approved by EIC in writing.

Seal & Signature of Contractor

Executive Engineer (E)
Deendayal Port Authority

