

BILL OF QUANTITY - ELECTRICAL WORK					
Client	MADHYA PRADESH INDUSTRIAL DEVELOPMENT CORPORATION				
Name of work	UPGRADATION WORK AT INDUSTRIAL AREA HATOD TEHSIL DHAR DIST. DHAR				
Consultant	M/S, AADINATH CONSTRUCTION , INDORE				
SOR	ELECTRICAL MPPWD SOR 1.01.2024 AND AMMND UPTO DATE				
Tender Amount	0.11 Cr.				
S.No	SOR Item No.	Description of Item	Unit	Quantity	Rate in Rs
1	MPPWD Elec SOR 4.1	Point wiring (excluding metallic switch box & sheet but including switches, sockets, lamp holders/ceiling roses etc) with 1.5sq. mm. PVC insulated cable FRLS with copper multi strand conductor ISI marked in concealed rigid P.V.C. conduit (HMS) ISI marked of suitable size and 1.5sq. mm. PVC insulated FRLS copper earth continuity conductor of green colour inside conduit, screwless connector for joints etc. as required as per specification for :-			Using modular accessories
	4.1.1	Light point/fan points.			
	4.1.1.1	Primary short point	Each	8	451.00
	4.1.1.2	Primary medium point	Each	8	830.00
	4.1.3	3 Pin 6 Amp socket outlet on separate board			
	4.1.3.1	Short Point	Each	1	574.00
	4.1.3.2	Medium point	Each	1	990.00
2	MPPWD Elec SOR 4.2	Point wiring (excluding metallic switch box & sheet but including switches, sockets) for 3 pin 6 Amp. socket outlet point with 1.5sq. mm. PVC insulated cable FRLS with copper multi strand conductor ISI marked in concealed rigid P.V.C. conduit (HMS) ISI marked of suitable size and 1.5sq. mm. PVC insulated copper earth continuity conductor of green colour inside conduit with required materials as per specification on same board.	Each	2	265.00
3	MPPWD Elec SOR 4.3	Wiring for circuit wiring with PVC insulated cable FRLS with copper multi strand conductor ISI marked in concealed rigid P.V.C. conduit (HMS) of ISI marked suitable size etc. as required as per specification			
	4.3.1	2x2.5 Sq.mm.	Metre	60	139.00

S.No	SOR Item No.	Description of Item	Unit	Quantity	Rate in Rs
4	MPPWD Elec SOR 9.1	Point wiring (excluding metallic switch box & sheet) for 3 Pin 16 Amp. socket outlet point with 4sq. mm. PVC insulated cable FRLS with copper multi strand conductor ISI marked in concealed rigid P.V.C. conduit (HMS) ISI marked of suitable size etc. with 20/16 Amp. F.T. switch & socket/S.S. combined 20/16/6 Amp. of ISI marked and 4sq. mm. PVC insulated FRLS copper earth continuity conductor of green colour inside conduit, screwless connector for joints as per specification for :-			
	9.1.1	On separate board			
	9.1.1.1	Short point	Each	1	985.00
5	MPPWD Elec SOR 16.1	Supply and fixing PVC conduits required confirming to IS 9537 (Part-3), ISI marked along with the accessories in concealed system etc. as required.			
	16.1.2	PVC. conduit 25 mm (HMS)	Metre	80	74.00
6	MPPWD Elec SOR 18.2	Supplying and fixing of approved make modular type G.I. metal box 1.2mm minimum thick and depth 50mm for single row boxes and 60mm depth for two/three row boxes earth terminal stud with nut and washer with modular base and cover plate including fixing in concealed etc. as required for:-			
	18.2.2	3 Module metal box	Each	2	216.00
	18.2.3	4 Module metal box	Each	3	244.00
7	MPPWD Elec SOR 19.1	Supplying and drawing single core PVC insulated cable FRLS with copper multi strand conductor ISI marked in existing rigid PVC casing and capping/conduit in surface or concealed as per specification.			
	19.1.2	2.5 sq. mm. wire			
	19.1.2.1	1 X 2.5 sq. mm.	Metre	50	30.00
8	MPPWD Elec SOR 27.8	Supply of ISI marked and accepted standard of miniature circuit breaker (MCB) of 'C' series with short circuit indication, suitable for 240/415 Volts,50 Cycle, 10 kA/15 kA Value AC supply conforming to IS : 8828 : 1996, IEC : 60898 :2002 & 60947-2 but without enclosures :-			
	27.8.2	Double Pole			
	27.8.2.2	MCB DP 6Amp to 32Amp 10kA rating	Each	2	887.00

S.No	SOR Item No.	Description of Item	Unit	Quantity	Rate in Rs
9	MPPWD Elec SOR 27.11	Supply of approved make powder coated sheet steel encloser SPN MCB DB inclusive of busbar, neutral bar, earth bar, connection copper wire not less than 16 sq.mm & two earth terminals etc. complete as per IS:13032(exclusive of MCB & isolator)-			
	27.11.3	4 Way double door IP 43 protection	Each	1	1699.00
10	MPPWD Elec SOR 28.4	Fixing of MCB/MCCB/Isolator in sheet steel enclosure as required as per accepted practice, including mounting on busbar and cable connection etc. complete (labour only)			
	28.4.1	MCB/Isolator SP/DP	Each	2	22.00
11	MPPWD Elec SOR 28.8	Labour charges for fixing sheet steel enclosures, MCB/MCCBDB flush mounting type, as per accepted practice, duly embedded and end plate completely flushed in wall, cable connection etc. complete :-For item no :-			
	28.8.1	27.11.1 to 27.11.7 ; 27.12.1 to 27.12.3 &27.13.1	Each	2	268.00
12	MPPWD Elec SOR 29.7	Supply and fixing in position LED lamp of approved make			
	29.7.6	12W 250Volt	Each	1	191.00
13	MPPWD Elec SOR 29.25	Supply and fixing of approved make step type modular electronic fan regulator including connection etc. as required on existing board			
	29.25.2	100 Watt(2 module)	Each	1	484.00
14	MPPWD Elec SOR 30.1	Supplying, erection and testing of approved make electric Ceiling fan of double ball bearing complete with standard down rod, canopy, hanging shackle, Aluminium blades, without regulator, A.C. 230-250 volts including connections with all necessary material complete of approved as required confirming to IS :374/2019 with upto date amendments.			
	30.1.2	Ceiling Fan (ISI marked)-1200 mm Sweep, with minimum air delivery 210 m ³ /min and service value $\geq$ 4.00 as per BEE..	Each	1	2292.00
15	MPPWD Elec SOR 30.13	Supply and fixing M.S. down rod 14 SWG (2mm) thick for ceiling fan including threading, painting, making holes etc. as required complete. Note: For new works difference of installed & standard down rod length shall be paid.	Metre	1	114.00

S.No	SOR Item No.	Description of Item	Unit	Quantity	Rate in Rs
16	MPPWD Elec SOR 31.6	Supply and fixing recessed mounting LED downlighter, LED of 1to 3Watt each assembled on single MCPCB, having color temp up to 6500 K & having 50000 burning hrs. life with minimum @ L70, system lumen output should be minimum with efficacy > 100lm/Watt. LED driver PF > 0.95,THD < 20% & surge protection 4KV. The colour rendering index of LED light should be more than 70. Housing made of pressure die cast aluminium / CRCA powder coated frame with glare free diffused polycarbonate cover. Submission LM79 08/IS16106(2012), IEC60598, IEC61347i/c connection wire, testing etc. to complete the job.			
	31.6.5	14/15 Watt, color temp 3000-6500k as required.	Each	16	1150.00
17	MPPWD Elec SOR 31.3	Supply and fixing Led tube rod comprising of LED tube with non-integral/integral driver, upto 6500K color temp having 40000 burning hrs life with minimum @ L 70, system lumen output should be minimum with system efficacy> 100 lm/Watt. LED driver PF> 0.95 & THD < 20%. The colour rendering index of LED light should be more than 70. Submission LM 79-08/IS16106 (2012), IEC60598, IEC61347i/c connection wire, testing etc. to complete the job.			
	31.3.4	Tube light LED 1 X 20/22Watt, Integral i/c batten aluminium body, PC diffuser.	Each	2	782.00
18	MPPWD Elec SOR 41.1	Supply of XLPE insulated power cable (conforming IS-7098 Part-I) 1100 Volt grade, 1 core/2 core/3½ core/4 core ISI marked with alu. stranded /solid conductor			
	41.1.6		Meter	20	142.00
	41.1.6.2	10 sq. mm.			
19	MPPWD Elec SOR 37.35	Earthing For Domestic Electrical Installation			
	37.35.2	Providing and fixing earthing arrangement with 38.1 mmdia 2.5 metre long galvanized iron pipe electrode including packing of charcoal powder and salt as per specification watering pipe 19mmdia G.I. connection, cover plate having locking arrangement on the top etc. completely with refilling the pit as required, including excavation of earth pit in soil / soft rock	Each	1	3670.00

S.No	SOR Item No.	Description of Item	Unit	Quantity	Rate in Rs
20	MPPWD Elec SOR 37.5	Add extra for using salt and charcoal/coke for G.I. plate or copper plate earth electrode as required including excavation and refilling the pit in all type of soil, murrum	Each	1	1655.00
21	MPPWD Elec SOR 37.9	Supply and laying 25mm X 5mm G.I. strip at 0.5 metre below ground level as strip earth electrode including jointing etc. as required.	Metre	2.5	130.00
22	MPPWD Elec SOR 56.16	LED RGB/RGBW flood lighting luminaire Supply and fixing of LED RGB/RGBW flood lighting luminaire for facade lighting with Die-cast aluminium housing, powder-coated finish, of following wattage. Luminaire shall be capable of producing dynamic color changing light for with 16 million colors by DMX/Ethernet based control. The beam angle of the fitting shall be narrow, medium, wide or asymmetric as per the requirement. Luminaire shall be complete with driver and capable of operating at line voltage without any separate power supply from 100-270 V AC, 50 Hz with power factor > 0.9 . Fixture shall be suitable to operate at an ambient temperature range of - 10°C to +50°C and shall be IP 65 and IK 06 rated. Lifetime shall be at least L70:50000 burning hours at 50°C. Luminaire shall be conforming to BIS (IS 10322) and shall be complete with all necessary accessories required for proper working of fixture including weather proof connection cables, water proof connectors etc. as required.			
	56.16.7	90W	Each	4	45997.00
23	MPPWD ELECTRICAL 29.25	Supply and fixing of approved make step type modular electronic fan regulator including connection etc. as required on existing board			
	29.25.2	100 Watt(2 module)	Each	4	484.00
24	MPPWD ELECTRICAL 30.1	Supplying, erection and testing of approved make electric Ceiling fan of double ball bearing complete with standard down rod, canopy, hanging shackle, Aluminium blades, without regulator, A.C. 230-250 volts including connections with all necessary material complete of approved as required confirming to IS :374/2019 with upto date amendments.			

S.No	SOR Item No.	Description of Item	Unit	Quantity	Rate in Rs
	30.1.2	Ceiling Fan (ISI marked)-1200 mm Sweep, with minimum air delivery 210 m ³ /min and service value $\geq$ 4.00 as per BEE..	Each	4	2292.00
25	MPPWD ELECTRICAL 32.3	Providing and fixing circular/hexagonal cast iron or M.S. sheet box for ceiling fan clamp of internal dia 140mm, 73mm height, top lid of 1.5mm thick M.S. sheet with its top surface hacked for proper bonding, top lid shall be screwed into the cast iron/M.S. sheet box by mean of 3.3mm dia. round headed screws, one lock at the corners. Clamp shall be made of 12mm dia M.S. bar bent to shape as per standard drawing.	Each	4	90.00
26	MPPWD ELECTRICAL 30.13	Supply and fixing M.S. down rod 14 SWG (2mm) thick for ceiling fan including threading, painting, making holes etc. as required complete. Note: For new works difference of installed & standard down rod length shall be paid.	Metre	2	114.00
27	MPPWD ELECTRICAL 46.11	SPLIT AC (inverter model) :-Supply, installation, testing and commissioning of Split type wall mounted air conditioning unit of following capacity including indoor, outdoor unit fitted with inverter based rotary compressor, copper condenser and first charge refrigerant R410A. The condensing unit working range should be capable for providing coolingbetween+/-5deg.C to 50deg.C & heating within 0deg.C to 15deg.C including connection of copper pipe of required size upto 3 mtr., insulation, cordless remote control, auto air swing louvers,wall stand for outdoor unit, connection copper leadwire, condensed water outlet pipe2mtr. complete etc as required. Outdoor/indoor units should be of same make (brand).			
	46.11.2	SPLIT AC (inverter model, Cooling only)			
	46.11.2.5	1.8/2 TR star rating 3 star	Each	1	59500.00

S.No	SOR Item No.	Description of Item	Unit	Quantity	Rate in Rs
28	46.30	Copper piping: - Supply, installation, testing and commissioning of interconnecting copper refrigerant pipe work (19mm/13mm thick) duly insulated with elastomeric nitrile rubber type tubular insulation between indoor & outdoor units as per specifications. And exposed piping should be wrapped with glass woven cloth and lag coating for vapour barrier and weather protection. Joints shall be covered with nitrile rubber tape of 3 mm thick complete as per specification.			
	46.30.10	12.7 mm O.D. wall thickness $\geq$ 0.8mm (insulation – 13 mm thick)	Rmt	20	689.00
29	46.31	Drain piping :- Providing and fixing of CPVC, 6Kg/cm ² drain water piping with fittings, support and insulated with 6 mm thick closed cell elastomeric nitrile rubber insulation complete as per specification.			
	46.31.2	25 mm dia ID	Rmt	15	202.00
30	46.41	Controlcable: - Supply and laying, testing & commissioning of following sizes of copper conductor control cables on existing tray including fixing clamps & proper connections to equipment etc. complete as required			
	46.41.3	4C x 2.5 sq.mm	Rmt	30	214.00
31	MPPWD ELECTRICAL 31.3	Supply and fixing Led tube rod comprising of LED tube with non-integral/integral driver, upto 6500K color temp having 40000 burning hrs life with minimum @ L 70, system lumen output should be minimum with system efficacy > 100 lm/Watt. LED driver PF > 0.95 & THD < 20%. The colour rendering index of LED light should be more than 70. Submission LM 79-08/IS16106 (2012), IEC60598, IEC61347i/c connection wire, testing etc. to complete the job.			
	31.3.4	Tube light LED 1 X 20/22Watt, Integral i/c batten aluminium body, PC diffuser.	Each	13	782.00
32	MPPWD ELECTRICAL 18.2	Supplying and fixing of approved make modular type G.I. metal box 1.2mm minimum thick and depth 50mm for single row boxes and 60mm depth for two/three row boxes earth terminal stud with nut and washer with modular base and cover plate including fixing in concealed etc. as required for:-			

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	18.2.5	8/9 Module metal box	Each	6.00	373.00
33	MPPWD ELECTRICAL 16.1	Supply and fixing PVC conduits required confirming to IS 9537 (Part-3), ISI marked along with the accessories in concealed system etc. as required.			
	16.1.2	PVC. conduit 25 mm (HMS)	Metre	10	74.00
34	MPPWD ELECTRICAL 4.3	Wiring for circuit wiring with PVC insulated cable FRLS with copper multi strand conductor ISI marked in concealed rigid P.V.C. conduit (HMS) of ISI marked suitable size etc. as required as per specification			
	4.3.1	2x2.5 Sq.mm.	Metre	60	139.00
35	MPPWD ELECTRICAL 54.5	2MP IP varifocal MFZ dome camera			
	54.5.1	Supply, Installation testing and commissioning of the IP dome camera shall be equipped with a1/2.82 MP progressives can CMOS imager to capture full HD1080p (25/30 fps) images, a 2.8-12mm varifocal lens, and a waterproof (IP66) enclosure.A Saturday /night solution, the camera shall use smart IR technology and provide upto98ft (30m)of IR illumination.The camera shall accept PoE (802.3af) or12V DC power input. min. illumination:-0.1 lux @F1.2, AGC ON, 0 lux with IR video compression :- H.264, noise reduction: 3DNR,backlight compensation :BLC/HLC/DWDR, encodemode:-CBR/VBR (freely adjustable in CBR, 5 levels in VBR).	Each	5	16280.00
36	MPPWD ELECTRICAL 54.6	2MP IP varifocal MFZ bullet camera			

S.No	SOR Item No.	Description of Item	Unit	Quantity	Rate in Rs
	54.6.1	Supply, installation testing and commissioning of the IP bullet camera shall be equipped with a 1/2.8 2 MP progressive scan CMOS imager to capture full HD 1080p (25/30 fps) images, a 2.8 -12 mm Verifocal lens, and a waterproof (IP66) enclosure. As a true day/night solution, the camera shall use Smart IR technology and provide up to 98 ft (30 m) of IR illumination. The camera shall accept PoE (802.3af) or 12 V DC power input. min. Illumination:-0.1 lux @F1.2, AGC ON, 0 lux with IR video compression :- H.264, noise reduction: 3DNR,backlight compensation :- BLC/HLC/DWDR, encode mode:- CBR/VBR (freely adjustable in CBR, 5 levels in VBR).	Each	5	17224.00
37	MPPWD ELECTRICAL 54.19	16 channel NVR with 1 SATA			
	54.19.1	Supply, installation testing and commissioning of 16ch network video recorder with real-time recording: up to 4 MP resolution live view, preview and playback/up to 16 channels at 1080p,with inbuilt PoE, up to 1TB supports complete with UL certification	Each	1	68855.00
38	54.30	Hard disk			
	54.30.2	Providing &fixing of 4 TB hard disk	Each	1	10825.00
39	MPPWD ELECTRICAL 57.2	Supply, installation, testing & commissioning of L.E.D. Television (4K L.E.D. Display O.S. Webos /Android or equivalent, minimum 50 Hz refresh rate Min. 20 W speaker, Wifi/bluetooth enabled, minimum 2 HDMI & 1USB Port, i/c remote and wall/table top accessories).			
	57.2.1	32"	Each	1	20257.00
40	MPPWD ELECTRICAL 38.12	Supplying and drawing 4 pair shielded twisted pair (STP), 0.5 mm PVC insulated copper conductor unarmoured Cat-6 computer cable FRLS in existing surface/concealed, steel/PVC. conduit/ casing-ncapping as required.	Metre	4950	104.00
			Total Amount in Rs		
			Total Amount in Cr.		