



झारखण्डअर्बनइंफ्रास्ट्रक्चरडेवलपमेंटकंपनीलिमिटेड, (जुडको लि0)

(झारखण्डसरकारका उपक्रम)

तृतीय तल, प्रगतिभवन, आर0आर0डी0ए0 भवन, कचहरीचौक राँची-834001, झारखण्ड

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CIN: U45200JH2013SGC001752

Ref No.Dated-28

Date:05.05.2018

1	<u>Name of the work</u>	Jharkhand Urban Infrastructure Development Company Limited (JUIDCO Ltd.) requires quotations from manufacturers/supplier/stockiest for different items (Flooring Work, Water proofing, Plumbing, Signage work, Electrical work, Lighting, CCTV Sculpture, Landscaping etc) for "Construction of Gautam Budha Udyan at Chiraundi, Ranchi, JHARKHAND"
2	<u>Availability of Quotation Description</u>	Online juidco.jharkhand.gov.in under Tenders Link and udhd.jharkhand.gov.in under the Tender Link from 06 th May, 2018
3	<u>Mode of submission of Quotation</u>	Offline (Through Post/By Hand/By mail on juidcolimited@gmail.com)
4	<u>Date of start of submission of Quotation</u>	06-05-2018 from 10:00 Hrs
5	<u>Last Date of Quotation Submission</u>	12-05-2018 up to 15:00 Hrs
6	<u>Quotation Submission Address</u>	Jharkhand Urban Infrastructure Development Company Limited, 3rd floor, Pragati Sadan, Kutchery Chowk, Ranchi, Jharkhand 834001
7	<u>Helpline number for e-procurement cell</u>	9650157608/9955788111

Sd/-

(Sajal Sen Gupta)
General Manager(P & M)
JUIDCO Ltd.

Details of NS Items for the construction of Gautam Budha Udyan at Chiraundi, Ranchi. Jharkhand

SL.No	Item code	Description Of Items	Unit	Quantity	Rate	Amount
A FLOORING WORK						
1	NON DSR	Providing & Fixing approved Timber Tile flooring over existing rough surface making good, fixing with approved adhesive, including rubbing and polishing making good as per Engineer- In- Charge.	m2	180.00		
2	NON DSR	Providing and fixing Glass mosaic tiles on finished plain wall surface of size 20 mm x 20 mm x 4 mm in all colour, design , fixing in approved design. The glass mosaic tiles shall be fixed on the wall surface with the help of approved adhesive applied at the rate of 2.5 kg per sqm and grouting of the same. All completed as per direction of Engineer-incharge.	m2	1024.70		
B FINISHING WORK						
3	NON DSR	Providing and fixing Natural rock blocks hand cut/ Machine cut and chisel dressed on top, for making steps, flooring etc. laid over 20mm thick base mortar 1:4 (1 cement : 4 coarse sand) with joints 10mm wide filled with same mortar including ruled pointing etc. complete as per direction of engineer-in-charge.	M3	10.31		
C ROOFING & WATER PROOFINGWORK						
4	NON DSR	Providing and fixing wooden battens of size 50x50mm for the asphalt shingles roofing complete as per direction of engineer-in-charge.	M2	0.29		
5	NON DSR	Providing and fixing Stone Blocks of required size and shape Forming Stepped Edge of lake including cutting, rubbing etc. complete as per direction of engineer-in-charge.	m2	53.89		
6	NON DSR	Providing and fixing Asphalt Shingles roof with apex block including cutting, painting of approved shade etc. making good complete as per direction of engineer-in-charge.	m2	80.30		
D PLUMBING WORKS						
7	NS	Providing and fixing of CP brass Health faucet with 8mm dia 1mtr. Long PVC tube and wall hook fixed to wall with rawl plug and CP brass screws complete. (Make: Jaquar Cat. No.ALD-CHR-583)	Each	20.00		
8	NS	Providing & Fixing 300mm long SS grab bars fixed to wall with rawl plugs and CP brass screws complete.(Make: Jaquar Cat.No.AHS 1501)	Each	2.00		
E SIGNAGE WORKS						
9	NS-SW-01	Individual Area signage : - Providing and fixing Individual Area signage of size 500mm x 230mm in 4mm thick powder coated Acrylic Base with Dupont finish as per pantone shade + 3mm Acrylic lazer Cut letters + Color + Lacquer - Type of Signage Door/wall Mounted for the following areas.	Each	20.00		
10	NS-SW-02	Gents Toilet : - Providing and fixing ready made Signage for Gents toilet. White color acrylic. With lazer cut black acrylic of 3mm, Size 120x120x1.5mm. Type Door mounted	Each	4.00		
11	NS-SW-03	Ladies Toilet : - Providing and fixing ready made Signage for Gents toilet. White color acrylic. With lazer cut black acrylic of 3mm, Size 120x120x1.5mm. Type Door mounted	Each	4.00		
12	NS-SW-04	Handicap toilet : - Providing and fixing readymade Signage for Gents toilet. White color acrylic. With lazer cut black acrylic of 3mm, Size 120x120x1.5mm. Type Door mounted	Each	4.00		
13	NS-SW-05	Providing main park signage in SS fnish with supporting system complet. Size - 18.0m x1.0m	Each	1.00		
14	NS-SW-06	Park Directory Signage : - Providing and fixing Floor Directory Signage of size 1225mm x 1800mm in 2" thick ACP Base with Internal Framing + Pantone color + 3M vinyl lazer Cut + Logo are lazer cutout + Laqure	Each	10.00		
15	NS-SW-07	Providing the Thermoplastic paint of approved make, recommended for external application for the Asphalt/ Concrete roads/ Cobble stone flooring to the approved shade for the following shapes, sizes as per the detail drawings adhering to International Standards.		0.00		
16	a	Over 10 cm width	m2	10.00		
17	b	upto 10 cm width	m2	10.00		
18	c	External and internal Directional sinages	Each	1.00		
19	d	Main building sinages	Each	1.00		
20	e	Main entry/exit sinages	Each	1.00		
21	f	Information Sinages	Each	1.00		
F ELECTRICAL WORK						
22		The following provisions shall be required to be made in the Main LT Panel as detailed below:The Switchboards shall have provision to accommodate all cables from the bottom /top as required.All live accessible parts shall be shrouded with 1mm thick polycarbonate/3 mm thick FRP sheet and all equipment shall be finger touch proof. The busbar insulation shall be with heat shrinkable sleeves according to the colour code. SMC shrouds and busbar supports shall be used. All MCCB door handle shall be interlocked and lockable in OFF position.Galvanised hardware with zinc passivation shall be used in fabrication of Switchboards. Suitable Aluminium earth bus to be provided throughout the length of Switchboards.All indication lamps / illuminated push buttons shall be LED type.All incomer meters of Main LT Panel shall be multifunction & should have all the electrical parameters like Ampere, KW, KVAR, KWH, PF, Frequency etc.Coil of all motor starters shall be fed from 440 V / 230 V Control Transformer.2A SP MCBs shall be used as backup protections.All MCCBs shall be variable plug setting type with thermal magnetic up to 630 A rating and with microprocessor based releases above 630 A rating, line load reversibility, Ics = 100% Icu,& rotary handle.All control& power wiring shall be broughtout upto the cable alley in the terminal blocks.All incomer ACBs of Main LT Panel shall be with microprocessor based releases (O/C, S/C & E/F)All rear door of Main LT Panel shall be almirah type with lockable arrangement.Space heater shall be provided with thermostat with 6A MCB as backup protection in each section of Main LT Panel controlled with feeder 20 A DP MCB 10 KA.An approval shall be taken for each panel before manufacturing. Provision for providing 230V or 24V supply for Dual KWHr metering when any or all DG are in operation One separate compartment of minimum size 400 x 900 mm for power management system of D.C.U.'s with control wiring as per following specification and control wiring scheme:Control wiring shall be looped from each energy meter till DCU's compartment for sending DCU register change command from data connectivity.Provision of one 6/16 amp socket & compartment lighting for each vertical section of main panel.5 nos extra of each R,Y,B,G,A colour indicating lamp and illuminated push buttons and normal push button shall be provided with main LT panel .MIMIC diagram shall be for Main LT panel MIMIC shall be made of polycarbonate sheet of 5 mm thickness fixed on acylic sheet of 2mm thick.the size of panel shall be such that the diagram can be visualized from 5 to 6 meter distance. The panel shall display complete single line diagram of Main LT Panel. this line diagram shall be made from luminous non fading materials to glow in dark and each breaker legend shall be provided with bi-colour LED lights to show the ON/OFF status of the respective feeder (Incomers / Bus couplers).All CT shall be cast resin type. Class - 3 CT shall be provided up to 60 amp and above that the CT shall be Class - 1.Illuminated push button on Starter Panels of Pumps.Interlocking / Auto start command terminals for starter Panels.All breaking Capacity for ACB to be Ics=100%Icu and Icw for 1 sec..All breaking Capacity for MCCB to be Ics=100%Icu. All MCB to be C Curve Additional CT's if required for REF of suitable rating burden / class shall be supplied by the Contractor / Panel Manufacturer.Responsibility of installation of KWHr meter, integration with electrical system, billing system and smooth operation of system shall lie with contractor.				
23		MAIN DISTRIBUTION PANEL,3 Phase MCCB INCOMING				

SL.No	Item code	Description Of Items	Unit	Quantity	Rate	Amount
24		80 Amps, 50KA, 440 volt 4-P Electrically operated MCCB complete with micro processor based tripping mechanism, shunt release (24V DC), earth fault release and inbuilt O/C & SC releases (Microprocessor based) having variable range with time lag facility to achieve discrimination. Required Interlocking with other incomers & Bus Coupler to be provided as per Interlocking / operation scheme indicated in Drawing No.-PKV/EL/SCH/01. The ACB shall have suitable arrangement for termination of Bus Duct on incoming side and busbar connection at outgoing side, complete with following for each ACB: Digital flush type class -1.0 accuracy multifunction meter with RS-485 communication port with 3 Nos. current transformers of 2500/5 ratio, 15 VA Class 1.0 for metering, 6 nos NO/NC contacts for remote opening & closing, Red/Green/Amber ON/OFF/TRIP indicating lamps with 2A SP MCB backup protection. 1 set of three phase indicating lamps along with 2A SP MCB backup protection. Spring charge & DC supply healthy indicating lamp with 2A SP MCB backup protection. 1 no. current transformer of 2500/5A ratio Class 1.0, 15 VA Burden for PF correction relay. Motor wound spring closing mechanism. Suitable arrangement to receive incoming cable of 7 runs of 3.5 x 300 sq. mm "Al." XLPE conductor OR 2500A TPN Al. Busduct. T-N-C Breaker control switch Control MCB, control terminals & wiring as required. One auto/manual selector switch Combined Under voltage and over voltage relay, 3 Phase with Time delay setting. Restricted Earth Fault Relay, TP MCCB, 50 KA service breaking capacity for direct connection, along with ON indication lamp. 1 no. current transformer of 2000/5A ratio Class PS 15 VA Burden to be supplied loose to mount in Transformer One no. 65 KVAR capacitor bank MPPH type along with 160				
25		DG ACB INCOMING (30 KVA)				
26		80 Amps, 50KA, 440 volt 4-P Electrically operated MCCB complete with micro processor based tripping mechanism, shunt release (24V DC), earth fault release and inbuilt O/C & SC releases (Microprocessor based) having variable range with time lag facility to achieve discrimination. Required Interlocking with other incomers & Bus Coupler to be provided as per Interlocking / operation scheme indicated in Drawing No. - PKV/EL/SCH/01. The Incomer shall have suitable arrangement for termination of Cable on incoming side and busbar connection at outgoing side, complete with following for each ACB:				
27		Digital flush type class -1.0 accuracy multifunction meter with RS-485 communication port for measurement of THD, KVARH KW, KWH, KVAR, PF, V, A, Hz, equivalent to EM6400, with 3 Nos. current transformers of required ratio, 15 VA Class 1.0				
28		6 nos NO/NC contacts for remote opening & closing.				
29		Red/Green/Amber ON/OFF/TRIP indicating lamps with 2A SP MCB backup protection.				
30		1 set of three phase indicating lamps along with 2A SP MCB backup protection.				
31		Spring charge & DC supply healthy, DG set on, ACB ON indicating lamp with 2A SP MCB backup protection.				
32		Motor wound spring closing mechanism.				
33		Suitable arrangement to receive incoming cable of 4 runs of 3.5 x 300 sq. mm "Al." XLPE conductor.				
34		T-N-C Breaker control switch				
35		Control MCB, control terminals & wiring as required.				
36		Combined Undervoltage & Overvoltage relay 3 phase with time delay setting, Reverse Power relay.				
37		One auto/manual selector switch				
38		one set of push buttons for DG start, DG Stop Reset & Emergency Stop.				
39		One 16 amp automatic Battery charger with inbuilt facility of trickle / boost & consisting of :				
40		DC Ammeter (0-30)V.				
41		DC Voltmeter.(0-30)Amp				
42		Charger ON, OFF indications .				
43		1 Nos 6 Window microprocessor based annunciation panel (for each D.G. set) for following indications & Buzzer :				
44		DG set Alarm				
45		DG set Fault				
46		DC supply failure				
47		O/V Fault				
48		Spares.				
49		BUSBAR				
50		Electrolytic high conductivity aluminium three phase and neutral busbars rated at 2500 amps, 36KA, insulated with heat shrinkable coloured PVC sleeves & clip on shrouds for joints. Current density of Bus Bar to be 1.2 sq.mm / amp. Neutral Bus Bar shall be 50% of Phase Bus Bar.				
51		OUTGOINGS (SECTION -I)				
52		7 nos. 63 Amps 35 kA 440 volt FP MCB with overcurrent, earth fault and short circuit releases each complete with:				
53		3 nos 63/5A Class - 1.0, 15 VA Burden CT's for metering				
54		ON / OFF indicating lamps with MCB as backup protection.				
55	MR	MAIN DISTRIBUTION BOARD as described above shall be complete with all interconnections, risers, internal wiring, labels, terminal blocks etc. complete as required.	set	1.00		
56						
57		BUSBAR BOX (outdoor type)				
58		100 Amps TPN Aluminium Bus Bars of suitable length Bus bars shall be colour coded and insulated by heat shrinkable sleeves & clip on shrouds for joints. The current density of Bus bar shall be 1.2 sq.mm./amp.				
59	MR	1 Incoming 4 Outgoing :	set	1.00		
60		MIMIC DIAGRAM				
61		MIMIC shall be made of polycarbonate sheet of 5 mm thickness fixed on acrylic sheet of 2mm thick. the size of panel shall be such that the diagram can be visualized from 5 to 6 meter distance. The panel shall display complete single line diagram of Main LT Panel this line diagram shall be made from luminous non fading materials to glow in dark and each breaker legend shall be provided with bi-colour LED lights to show the ON/OFF status of the respective feeder (Incomers / Bus couplers)				
62		NOTE :-				
63		35 kA fault level continuous Al Earth Bus shall be part of Panel for full length of panel				
64		1 set of 32 amp 4P MCB with wiring upto compartment of D.C.U.'s along with 1 mm sq wire for all RS-485 communication port of KWH meter to D.C.U.'s compartment.				
65		DISTRIBUTION PANELS				
66		Design, manufacture, supply, including supervision during installation, testing and commissioning of 2 mm thick MS sheet steel fabricated cubicle type Panel dust and vermin proof complete with hinged and lockable doors. The Sheet Steel shall undergo minimum eight tank treatment followed by finishing treatment of powder coating with 70 micron minimum thickness. All the panels shall be floor mounted and dead front construction complete with interconnections. (Form III B)				
67		Note:- The panels shall be FRONT operated, with cable entry from the top. Earth bus shall be part of the panel.) (All MCB to be "C" Curve) The following provisions shall be required to be made in the Distribution Panel as detailed below:				

SL.No	Item code	Description Of Items	Unit	Quantity	Rate	Amount
68		All live accessible parts shall be shrouded with 1mm thick polycarbonate/3 mm thick FRP sheet and all equipment shall be finger touch proof. The busbar insulation shall be with heat shrinkable sleeves according to the colour code. SMC shrouds and busbar supports shall be used. All MCCB door handle shall be interlocked and lockable in OFF position.				
69		Galvanised hardware with zinc passivation shall be used in fabrication of Switchboards.				
70		Suitable Aluminium earth bus to be provided throughout the length of Switchboards.All indication lamps / illuminated push buttons shall be LED type.Coil of all motor starters shall be fed from 440 V / 230 V Control Transformer.2A SP MCBs shall be used as backup protections.All MCCBs shall be variable plug setting type with thermal magnetic up to 630 A rating and with microprocessor based releases above 630 A rating, line load reversibility, Ics = 100% Icu,& rotary handle.All control& power wiring shall be broughtout upto the cable alley in the terminal blocks.An approval shall be taken for each panel before manufacturing.Provision of one 6/16 amp socket & compartment lighting for each vertical section of main panel.Illuminated push button on Starter Panels of Pumps.Interlocking / Auto start command terminals for starter Panels.All breaking Capacity for ACB to be Ics=100%Icu and Icw for 1 sec..All breaking Capacity for MCCB to be Ics=100%Icu.All MCB to be C Curve				
71		FANS & LIGHT FIXTURES:				
72	MR	Supplying, fixing, testing and commissioning of Surface mounted luminaire for 20W LED 4 feet fixture with extruded thermal polycarbonate housing fixture should be of minimum 2000 lumens (6500 KELVIN) suitable for operation on 230 volt 50 Hz,Single Phase AC supply with electronic driver and all accessories complete for ceiling/wall/ Surface including wiring, connection with 1.5 sq.mm FRLS PVC insulated copper conductor single core cable including earthing etc. as required. Similar to Philips Make, Cat No: BN 550WLED 20-6500 or equivalent preferred make.	each	15.00		
73	MR	15W/16W Round shape LED Downlighter suitable for operation on 230V AC supply with minimum 1125 lumens. LED make shall be Nichia, Cree, Citizen having LM 80 Complied as per L70 standard tested for min. 10k hours confirming minimum 50000 burning hours of life 6500K LED's only. LED Driver shall withstand 2kV surge protection. Complete fitting similar to WIPRO make CAT NO. Garnet Slim D821665 or equivalent preferred make.	each	10.00		
74	MR	Supplying, fixing, testing and commissioning of surface/ recessed type 12W LED down-lighter with high efficiency white reflector and high transmissive diffuser ,fitting complete with, holder, electronic driver, heat sink and LED (less than 10% THD), low depth with die cast aluminium housing LED with CRI >70, 6500K, including driver etc., as required similar toWipro make CAT No.D811265; Philips Cat no. Green LEDi 12 w DN193B LED12S 6500 PSU WH S1 or equivalent preferred make.	each	10.00		
75	MR	Supplying, fixing, testing and commissioning of Surface Mounted 36/30 watt CEILING LED Light fixture or equivalent to Philips RC380B LED32S-6500 L120W30 PSU OD	each	10.00		
76	MR	Supplying, fixing, testing and commissioning of mirror light 5/4W LED min 350 lumens, 1 feet length, 6500 K complete with electronic driver, lockable holders and LED lamp including connection etc. as required similar to Wipro cat no. Garnet 5W-D530565 GR or or equivalent preferred make.	each	6.00		
77	MR	10/11W LED Bulkhead fixture with min 850 Lumens suitable for operation on 230V AC supply with minimum LED make shall be Nichia, Cree, Citizen having LM 80 Complied as per LM80 standard tested for min. 10k hours confirming minimum 50000 burning hours of life 6500K LED's only. LED Driver shall withstand 2kV surge protection. Complete fitting similar to WIPRO make CAT NO. LW03-850-XXX-57-XX or equivalent preferred make.	each	6.00		
78	MR	15W LED wallbacket light fixture with min 850 Lumens suitable for operation on 230V AC supply with minimum LED make shall be Nichia, Cree, Citizen having LM 80 Complied as per LM80 standard tested for min. 10k hours confirming minimum 50000 burning hours of life 6500K LED's only. LED Driver shall withstand 2kV surge protection. Complete fitting similar to WIPRO make CAT NO. LW03-850-XXX-57-XX or equivalent preferred make.	each	6.00		
79	MR	Supplying, fixing, testing and commissioning of 5 Star BEE rating 1200mm sweep ceiling fan complete with blades, down rod, shackle insulator, canopy etc. including providing of electronic step regulator with face plate matching the existing modular switches as required similar to Havells make Model: ES-50 Premium 5 star or equivalent preferred make.	each	6.00		
80	MR	Supplying, fixing, testing and commissioning of Wall mounted luminaire for 18W/20W LED 4 feet fixture with extruded thermal polycarbonate housing fixture should be of minimum 1800 lumens (6500 KELVIN) suitable for operation on 230 volt 50 Hz,Single Phase AC supply with electronic driver and all accessories complete for ceiling/wall/ Surface including wiring, connection with 1.5 sq.mm FRLS PVC insulated copper conductor single core cable including earthing etc. as required. Similar to Philips Make, Cat No: BN 550WLED 20-6500 or equivalent preferred make.	each	6.00		
81	MR	Supplying, fixing, testing and commissioning of following size exhaust/ fresh air fan complete with gravity louver and connection with 3 core flexible wire as required.	each	6.00		
82	MR	a) 300mm 1400 RPM Heavy duty Metal exhaust fan Havells make model: Turbo Force SP or equivalent preferred makes.	each	5.00		
83		Supply, testing of under noted sizes of copper conductor XLPE insulated PVC sheathed & sleeved armoured and overall PVC sleeved 1.1 KV grade power distribution cables conforming to relevant IS code and as per specification in ground (including trenches) through pipe or on wall / racks cable trays including dressing and clamping the cable with MS zinc passivated clamps etc. as required.				
84	MR	4 x 6 sq.mm	each	20.00		
85	MR	4 x 4 sq.mm	each	40.00		
86	MR	4 x 2.5 sq.mm	each	50.00		
87		Supplying, laying, connecting,terminating, testing & commissioning of under noted sizes of PVC insulated, PVC sheathed unarmoured and overall PVC sleeved 1.1 KV grade control cables in pipe, wall, racks, cable trays, including, dressing, clamping with M.S Zinc passivated clamps etc as required conforming to relevant IS code and technical specifications.				
88	MR	8C x 1.5 sq.mm	each	50.00		
89	MR	10C x 1.5 sq.mm	each	50.00		
90	MR	14C x 1.5 sq.mm	each	20.00		
91	MR	Supply and fixing of cable tray/steel work in position including clamps, frame work of flats, angle iron, channel with fabrication work including cutting, bending, welding, drilling bolting etc. as per design as required. One coat of primer and 2 coats of enamel paint of approved shade shall be provided.	each	5.00		
92		EXTERNAL LIGHTING				
93	MR	Supply of following sizes XLPE insulated (Heavy duty) Aluminium or Copper conductor armoured cables suitable for working voltage upto and including 1100 Volts complete as required and as per specifications. 2 x 6 sq.mm, Al conductor cable	each	1800.00		
94		Supply,fixing and laying of Heavy duty PVC pipes complete buried in floor with joints and other accessories as required.	meter	150.00		
95	MR	25 mm dia , 2 mm thick	each	30.00		

SL.No	Item code	Description Of Items	Unit	Quantity	Rate	Amount
96	MR	Supply, installation, testing and commissioning of 9 M high pole with following specifications and components :- MS painted pole 100mm outer diameter and base plate of dimensions 300 x 300 x 6mm GI as per specifications and drawings . 1:3:6 concrete foundation and pedestal coping 300 mm dia and height as specified and shown on drawings.6 ways- 20A connector & 6A MCB mounted on 6mm thick painted M.S/GI plate, insulated, and fixed on the pole in a gasketed weather, vermin proof, hinged lockable covered GI cable box suitable for termination of armoured aluminium cable as required. Wiring to Luminaries from the 6A MCB, with 3x 2.5 sq.mm. PVC insulated copper, stranded conductor (P+N+PE) double sheathed wire including terminations. Required reducer with clamping arrangement for fixing the fixtures directly on the pole . Also provide 2 nos. 32 mm. dia. G.I. sleeves for taking the cable to the cable box as shown in drawing. 9 M high pole described as above.	each	72.00		
97	MR	4 M high pole describe as Cast Iron Pole, Mild Steel Bracket with Cast Iron and Cast Aluminium Embellishments, Cast and Spun Aluminium Lighting Fixture, Poly-Carbonate Diffuser, Stainless Steel Screws, Corrosion and UV Ray Resistant Coating.	each	100.00		
98	MR	Supply, Receiving and fixing in position, effecting proper connections, testing and commissioning of 35 W LED LIGHT Luminaire on existing 4 M high pole describe as Cast Iron Pole, Mild Steel Bracket with Cast Iron and Cast Aluminium Embellishments, Cast and Spun Aluminium Lighting Fixture, Poly-Carbonate Diffuser, Stainless Steel Screws, Corrosion and UV Ray Resistant Coating..	each	100.00		
99	MR	Supply, Receiving and fixing in position, effecting proper connections, testing and commissioning of 8W,4000K IHenaBP7iZ6K008 Bollard Light fixture including providing all accessories required for fixing the fixture complete as required.	each	60.00		
100	MR	Supply, Receiving and fixing in position, effecting proper connections, testing and commissioning of Under Water 9LED Light including all accessories required for fixing the fixture complete as required.	each	20.00		
101	MR	Supply, Receiving and fixing in position, effecting proper connections, testing and commissioning of Spike Light fixture PHL-48012 GARDEN LED SPIKE 5W 3000K including providing all accessories required for fixing the fixture complete as required.	each	100.00		
102	MR	Supply, Receiving and fixing in position, effecting proper connections, testing and commissioning of 1X40W LED IHeVBGP7Pn6K040 Gate Light including all accessories required for fixing the fixture complete as required.	each	4.00		
103						
104	MR	F.P. (External Lighting) : -Design, manufacture,Supply, Installation, testing and commissioning at works of Double door panel fabricated with minimum 2mm thick CRCA sheet, Conform to IS Specification, with IP-55 enclosure protection, as per IS-2137(Revised), floor mounting free standing on a suitable massanory pedestal outdoor type panel,provided with hinged detachable and lockable outer opening doors with the following incoming/outgoing MCCB/ MCBs mounted therein including making connections/ interconnections, earthing, painting etc. as required.The panel shall have canopy arrangement on the top.All MCB to be C curve . Feeder Pillar - X. Incoming : - The incoming shall comprise the following :- 1 No 100 A FP MCCB, 16 KA service breaking capacity with heavy duty solid neutral link alongwith Earth fault relay and CBCT. Metering for incoming: Digital Multifunction meter (MFM-4) with RS-485 communication port for measurement of PF, V, A & Hz , equivalent to EM6459, with CT as required. Phase indicating lamps RYB with 2 Amps SP MCB back up. Bus Bars 80 Amps TPN Aluminium Bus Bars of suitable length Bus bars shall be colour coded and insulated by heat shrinkable sleeves & clip on shrouds for joints. The current density of Bus bar shall be 1.2 sq mm /amp. Outgoing (All MCB		1.00		
105	MR	4 mm dia GI wire		500.00		
106	MR	Supply & fixing of thermoplastic, weather proof IP 65, Cable junction box embeded in ground as required including the cost of terminal block & connector for incoming and outgoing cable / wire complete as reured.		2.00		
SUB TOTAL -ELECTRICAL						
G EXTERNAL PLUMBING WORKS						
107	MR	Providing and fixing Blue Coloured MDPE pipes of PE 80 Grade stabilized including all MDPE electrofusion fittings viz. elbows, tees, service saddle, testing of joints complete as per direction of Engineer in Charge For Irrigation System.				
108		PN - 10 Pipe, 50 mm OD PE80 ISO : 4427	m	100.00		
109		PN - 10 Pipe, 63 mm OD PE80 ISO : 4427	m	1400.00		
110		PN - 10 Pipe, 110 mm OD PE80 ISO : 4427	m	400.00		
111	NS-PL-01	Providing, fixing and testing of skid mounted pumping system comprising of :-Horizontal, Single Stage centrifugal pumping set with stainless steel SS-316L stage casing and SS-316L impellers with stainless steel SS-316L shaft as per IEC standards and GJL250 cast iron suction & discharge casing, connected to TEFC ventilated induction motor of 2 pole, 2900rpm, suitable for 400/440 Volts, 3 phase, 50 Hz A.C. supply.Control Panel with programmable logic controller (PLC) for cyclic operation of pumps. Pump working sequence should change after every operation.Contractr overload relays and MCBs should confirm to IEC 898 – 1995/ specifications. Blinking indications for pumps start, trip, low level trip, health supply should be provided in the panel along with the ammeter & voltmeter. Control panel should also consist of cooling fan, controlloer for start and stop of pumps in case of high level and low level in treated water tank, cables, earth wire & control cables.SS Suction and delivery header with Ball valves Hot Pressed brass OT-58 with stainless steel ball and P.T.F.E seal and O-Ring. NRVs to be used should be with Springs and O-Ring arrangement.Complete set system to be mounted on a common base frame and shall follow following duty.Filter/Softener Feed Pump No. of Pumps: 3 (2 Working + 1 Stand by)Capacity : app.900 lpm,Head : 25m	set	1.00		
112	NS-PL-02	Filter Feed Pump : - Providing, fixing and testing of skid mounted pumping system comprising of :- Horizontal, Single Stage centrifugal pumping set with stainless steel SS-316L stage casing and SS-316L impellers with stainless steel SS-316L shaft as per IEC standards and GJL250 cast iron suction & discharge casing, connected to TEFC ventilated induction motor of 2 pole, 2900rpm, suitable for 400/440 Volts, 3 phase, 50 Hz A.C. supply. SS Suction and delivery header with Ball valves Hot Pressed brass OT-58 with stainless steel ball and P.T.F.E seal and O-Ring. NRVs to be used should be with Springs and O-Ring arrangement. Control Panel with programmable logic controller (PLC) for cyclic operation of pumps. Pump working sequence should change after every operation.Contractr overload relays and MCBs should confirm to IEC 898 – 1995/ specifications. Blinking indications for pumps start, trip, low level trip, health supply should be provided in the panel along with the ammeter & voltmeter. Control panel should also consist of cooling fan, controlloer for start and stop of pumps in case of high level and low level in treated water tank, cables, earth wire & control cables. Complete s et system to be mounted on a common base frame and shall follow following duty. Filter/Softener Feed Pump No. of	set	1.00		
113	NS-PL-03	Pressure Filter (Domestic Water) Providing and fixing vertical pressure filter with dual media filter (comprising of 600mm bed depth of graded sand gravel and 600mm bed depth of Anthracite) fabricated from high performance M.S plate of minimum 8mm thick for shell & 10mm thick for dished ends with top and bottom flanged openings including top and bottom hub and lateral distribution and collection system complete with initial charge of filter media, face piping, valves, accessories, painting, testing and commissioning complete.(Tested to 6 Kg/m ²),Discharge : 54000 lph,Filtration Rate : 20000 lit./m2/h,Suggested dia app. : 1800 mm	each	1.00		

SL.No	Item code	Description Of Items	Unit	Quantity	Rate	Amount
114	NS-PL-04	Activated carbon Filter (Domestic Water): - Providing and fixing vertical activated carbon filter comprising of activated carbon filter media fabricated from high performance M.S plate of minimum 8mm thick for shell & 10mm thick for dished ends with top and bottom flanged openings including top and bottom hub and lateral distribution and collection system complete with initial charge of filter media, face piping, valves, accessories, painting, testing and commissioning complete.(Tested to 6 Kg/m2), Discharge : 18000 lph, Filtration Rate : 20000 lit./m2/h, Suggested dia app. : 5500 mm	Each	1.00		
115	NS-PL-05	Water Softener: - Providing and fixing 'Cation' ION exchange water softener fabricated from minimum 8mm thick M.S. plate on shell and 10mm thick M.S. plate on dished ends complete with initial charge of filter media and ION exchange resins, face piping accessories, piping testing and commissioning complete with resins of approved quality and make and brine tank of required capacity. (Bidder must indicate type and quantity of resin used and quantity of salt required per regeneration). Minimum expected rate of flow: 18000 lph, Total soft water to be produced between two regeneration: app. 100 Cum., Expected raw water hardness : app. 500 ppm, Expected treated water hardness: less than 100 ppm, Max. working pressure : 4 Kg/cm2 , Total soft water to be produced between two regeneration: app. 100 Cum.	Each	1.00		
116	NS-PL-06	Providing and fixing M.S salt saturator, internally rubber lined as per requirement and externally painted with suitable anti-corrosive paint, with all required accessories for holding and supplying salt for softener complete in all respects, with electrically operated stirrer and of capacity 500 litres.	Each	1.00		
117	NS-PL-07	Design, Fabrication, assembling, wiring, supply, installation, testing and commissioning of motor control centre fabricated out of 14 gauge CRCA sheet steel. Cable gland plates shall be provided on top as well as at the bottom of the panels. Panels shall be treated with all anticorrosive process before painting as per specifications with 2 coats of red oxide primer and final approved shade of powder coated paint. 2 Nos. earthing terminals shall be provided for 3 phase, 4 wire, 50 Hz supply system. Lifting hooks shall also be provided in case of large panels. Approval shall be taken for each panel before fabrication. Quoted rates shall be inclusive of cables (from this panel to panel of Hydropneumatic system and filter feed pumps and domestic water pumps in accordance to specification) with earthing from panel to earthing pit. Panel shall be supplied with P&I based online MIMIC display with LED's at all specific drive /operation to enable Visual Display of Complete pumps activity on Panel front. For domestic water pumps, raw water pump, auto chemical doser and sump pumps etc. in plant room. One incoming main isolation 100A TPN MCCB (35ka). 40A TPN MCCB outgoing for domestic water transfer pump-2 Nos, 40 A TPN MCCB outgoing for Softener/filter feed pumps - 2 Nos. 32 A TP MCB of for each sump pumps - 2 Nos.	set	1.00		
118	NS-PL-08	Providing and fixing motor pump controller cum water level indicating panel in powder coated sheet metal box in 16 gauges M.S including the following: Electronic water level controller working on magnetic type sensing probes with necessary length of armored cable up to control panel. Electronic minimum 4-level indicator with magnetic type sensing probes and necessary length of armored cable upto control panel. Arrangement of alternate switching mechanism for operational and standby pumps. For Water level indicators with following details: Underground tanks Minimum 4 level Multi level indicators with magnetic type sensor probes complete.	Each	2.00		
119	NS-PL-09	For water level controllers with electronic sensing probe complete in all respect for following functions. i) Domestic Water transfer Pumps. To cut off at low level in domestic water U.G tanks and cut off at high level in OH Domestic water tank and to cut-in at high level in OH tanks.	Set	6.00		
120	NS-PL-10	Providing and fixing G.I. pipes (I.S. 1239 heavy duty class) complete with all necessary G.I. Fittings including all necessary fittings like bends, elbows, tees etc., either welded or screwed or flanged joints as per requirements, including all anchor blocks, anchor fasteners, couplings in all respects including enamel painting of required shade, cutting holes and chases in RCC wall and making good complete (The cost of flanges will be paid separately).				
121		(a) 100mm dia	Metre	30.00		
122		(b) 80mm dia	Metre	30.00		
123	NS-PL-11	Providing and fixing C.I double flanges suction strainer bucket type/ "Y" type including, nuts, bolts and 3mm thick rubber insertion complete. 100mm dia	each	2.00		
124	NS-PL-12	Providing and fixing butterfly valves, wafer end type class PN 1.0 as per I.S:13095 - 1991 or BS:5155, including necessary nuts, bolts, gaskets etc. complete (without gear box)				
125		1(a) 00mm dia nominal bore.	Each	2.00		
126		(b) 80mm dia nominal bore.	Each	2.00		
127	NS-PL-13	Supply, installation, testing and commissioning of the compact brass ball valve with motorised actuator complete with float switch to acuate the motorised valve, contactor with control panel, 3 phase, 415C AC supply complete in all respects.				
128		a. 32mm dia	Each	2.00		
129		b. 40mm dia	Each	2.00		
130	NS-PL-14	Providing and fixing M.S. slotted cable tray supported from ceiling at intervals of 60cms on both ends including cable clips with nuts and bolts welding of support rods with ceiling inserts or through dash fasteners cutting and making good complete.				
131		(a) 300mm wide	Metre	2.00		
132		(b) 150mm wide	Metre	40.00		
133	NS-PL-15	Providing and fixing M.S. structural work fabricated from standard section e.g. M.S rounds, angles, channels, plates including cutting to size, drilling, welding fixing and welding to insert plates in RCC structural members or through dash fasteners as per site conditions as directed by Engineer-in-charge including cutting and making good the walls, ceilings and floors (for pipe supports, clamps etc.)	Kg.	80.00		
134	NS-PL-16	Submersible single stage single entry pumps with C.I.body and C.I. two vane enclosed type impeller connected to TEFC submersible motor for 415 volts, 3 phase, 50 cycles including MCC panel with level controllers, auto control, sequential change over facility with one proper working at low level & two proper working at high level with an audible alarm including all interconnectivity cables, with both pumps connected to common outlet header including valves, non return valves, lifting chains etc. complete in all respect (one working+One Standby) (Solid handling capacity 12mm) Capacity- 100 lpm (Each) Head - 12 m , HP (Approx) 1.0 HP Disinfection	set	2.00		
135	NS-PL-17	Disinfection: Providing and fixing wall mounted Oxylite (Mixed Oxidant) Generation System, based on ECA Technology, producing non toxic mixed Oxidant Solution at 500 ppm of Oxidant Concentration . The solution should be at a pH -7 (Neutral) suitable for 24x7 operations should produce 480 L per day . The system should have a single cell & wall mounted , supplied complete with appropriate dosing pumps , valves, piping, fittings, chemical dosing tank etc.(Make:Oxybee solutions/ Klengen system/Vrinda Ions)	Each	1.00		
136						
137	NS-PL-18	Providing & installation of FLOATING FOUNTAIN Sunburst Nozzles: 1 no. (Group of 15 Nozzles),Ball Joints: 15 nos.,Floater (Boat): 2 nos. ,Header: 1 no.,Ht. of Water Effect: 60 ft. approx.Pump Power: 20 hp, 3 phase, ISI mark, PRIMA make, sub. Fountain , Pumps - 2 nos. ,No. of Lights: 15 nos.- 12V/36W LED Fountain Lights in 3 - 5 colours.SMPS: 1 No.RGB Controller:1 No.Cables & Electrical Double insulated 3 core PVC copper conductors for Materials:pump and 2 core round cables for lights. (All wires Electrical Panel:Supply of complete electrical control panel system Consists of main switch (MCB), starter with over Filter for Pump: 2 nos. Anchor Rope: As per requirement for Float Anchoring.Plumbing Work:Supply and fitting of plumbing materials for complete fountain system only.	each	1.00		
138						
139	NS-PL-19	Providing & isntaalation of Pool Size: 5.0 dia				

SL.No	Item code	Description Of Items	Unit	Quantity	Rate	Amount
140		Cascade Nozzles: 23 no., 1 inch size. Ball Joints: 23 no., 1 inch size. Gate Valves: 23 no., 1 inch size. Header: 2 no. Ht. of Water: 8 - 10 ft. approx. Pump Power: 10 hp x 2 no., 3 phase sub. F. pump (PRIMA) make No. of Lights: 23 no. (12V/12W, LED, sub. fountain lights in 5-6 Colors) SMPS for Lights: 1 No. RGB Controller: 1 No. Light Stand: Made by Cast Iron and GI Fittings – 23 nos. Cable: Double insulated 3 core PVC copper conductors for pump and 2 core round cables for lights. Filter for Pump: 2 nos. Electrical Materials: Supply of Electrical wires etc. for complete fountain system only. (For Inside the pool only, All wires used are from a Reputed Company) Electrical Panel: Supply of complete electrical control panel system Consists of main switch (MCB), starter with over load relays for pumps, etc. - 1 no. (All electrical equipments will be from a reputed company like L&T, Crompton Greaves, Havels, etc.) Electrical Work: Inside the pool for complete fountain system only. Plumbing Work: Inside the pool for complete fountain system only. Guarantee: One year from the date of completion.	each	1.00		
	H	CCTC AND PA SYSTEM WORKS				
		CCTC SYSTEM WORKS				
141	NS-CC-01	1/3" Megapixel CMOS Sensor, 2 MP Resolution, Weatherproof Bullet Camera, 3.6 mm Fixed Lense, 25/30 FPS, , H.265 compression, POE Supported, Metal Body, with 20mts IR Range,	Nos	25.00		
142	NS-CC-02	1/3" Mega Pixel CMOS Sensor, 2 MP Resolution, 2.8 ~ 12 mm, Weatherproof Bullet Camera Vari focal upto 60mts, 42 IR LED, 25/30 FPS, H.264/MJPEG Compression, POE Supported, Metal Body IP 66.	Nos	65.00		
143	NS-CC-03	1/4" color COMS Sensor, 2 MP Speed Dome PTZ Camera, 36X optical, Support upto 150mts, Metal Body w Black IR, Focus Length 5!120 mm, Preset 256, H.264 Compression,	Nos	3.00		
144	NS-CC-04	128 CH NVR With 16HDD (Hotswappable), H.265/H.264 Compression, 8 MP supported cameras, 16 SATA Interface, RAID Supported, Playback upto 4K, 128 Network Audio Input, Alarm Supported	Nos	1.00		
145	NS-CC-05	4 (POE 10/100/1000) + 1 (10/100/1000) + 1 (FIBER 10/100) Port Switch	Nos	24.00		
146	NS-CC-06	8 (POE 10/100/1000) + 2 (10/100/1000) + 1 (10G) SFP Slot Port Switch	Nos	3.00		
147	NS-CC-07	16 (POE 10/100/1000) + 2 (10G) SFP Slot Port Switch S-16GE- 2UG-250W	Nos	1.00		
148	NS-CC-08	4 Port 10/100/1000 Media Convertor (Pair) S-4SMSF-GE	Nos	24.00		
149	NS-CC-09	8 Port 10/100/1000 Media Convertor (Pair) S-8SMSF-GE	Nos	3.00		
150	NS-CC-10	4 port LIU Fully loaded	Nos	24.00		
151	NS-CC-11	8 port LIU Fully loaded	Nos	3.00		
152	NS-CC-12	16 port LIU Fully loaded	Nos	2.00		
153	NS-CC-13	4TB surveillance HD	Nos	12.00		
154	NS-CC-14	Server Computer with i7 processor , 8GB RAM ,Integrated with Graphics Card & Keyboard , Mouse (HP/Dell/Lenovo/Equivalent)	Nos	1.00		
155	NS-CC-15	Fiber Patch Code	Nos	250.00		
156	NS-CC-16	Single Mode Optical Fiber Cable	Mtr	4000.00		
157	NS-CC-17	Cat-6 Cable	Mtr	2000.00		
158	NS-CC-18	RJ-45 Connectors	Nos	300.00		
159	NS-CC-19	Monitor for display 50"	Nos	1.00		
160	NS-CC-20	Server Rack 42U	Nos	1.00		
161	NS-CC-21	Junction Box	Nos	25.00		
	I	LANDSCAPE FURNITURE WORKS				
162	NS-LF-01	6 feet high Fibre glass matt (#300) sculpture, Iron road amature, first grade polymer resin, epoxy safety layer, acrylic plastic metallic colours complete including scaffolding, fixing at site complete	each	2.00		
163	NS-LF-02	20 feet high Fibre glass matt (#300) sculpture, Iron road amature, first grade polymer resin, epoxy safety layer, acrylic plastic metallic colours complete including scaffolding, fixing at site complete.	each	1.00		