



NAYA RAIPUR DEVELOPMENT AUTHORITY

**Tender Document for Supply, Installation, Testing ,
Commissioning of air conditioning and air cooling system
& other allied accessories for Commercial Tax Building
,HOD Panchayat building and Jail & Home Guard Building
at sector-19 of Naya Raipur**

(Following Three-Envelope Tender Procedure)

**Schedule – A
Price Tender
To be submitted in ENVELOPE-3**

NIT No. 131 /HVAC/VB/ELECT/CE(E)/NRDA/2016-17, Naya Raipur

Dated: 05.11.2016

Issued by: Chief Executive Officer,
Naya Raipur Development Authority (NRDA)
4th Floor, Paryavas bhawan, North block, Sector- 19,
Naya Raipur- 492 002, Chhattisgarh
Tel No: + 91 771 2512500; Fax No.: +91 771 2512400.
Website: www.nayarapur.gov.in

Tender Document Contains

- (a) Only schedule "A" and Section-I of schedule "D" are to be filled & signed by the tenderer
- (b) All the certificates as per pre qualification criteria shall be appended with relevant forms of schedule "D"

1. PART ONE (NRDA F-1)-(Attached herewith, to be submit along the tender)

Part (A)

- a) Press Notice
- b) Detailed NIT

Part (B)

a) Schedule-A

- (i) Cost Abstract
- (ii) Bill of Quantities

- b) Schedule-B –NIL
- c) Schedule-C –NIL
- d) Schedule-D

Section-I..... Technical tender forms

- (i) Letter of Technical Tender
- (ii) Tenderer's Information Sheet
- (iii) Annual Turnover
- (iv) Specific Construction Experience
- (v) Declaration
- (vi) Check list for Technical tender evaluation

Section –IIScope of work

Section –III..... Technical specifications of work

Section –IV..... Special Conditions of Contract

Section –V..... List of approved makes

Section –VI..... Drawings

- e) Schedule-E
- f) Schedule-F

2. PART TWO (NRDA F-2/3)-Standard form (Not Attached herewith, and not to be submitted along the tender) Important note: - Link site <http://nayarapur.com/documents/gcc.pdf>

- 1. General Guidelines
- 2. Tender
- 3. General rules and directions
- 4. Conditions of contract
- 5. Clauses of contract
- 6. Model rules relating to labour, water supply and sanitation in labour camps safety code
- 7. Contract forms
 - (a) Draft Format for Performance Security
 - (b) Earnest Money Deposit Form (Bank Guarantee)
 - (c) Format of Contract Agreement
 - (d) Draft Format for Performance Guarantee for Water Proofing and Anti-termite Works
 - (e) Indemnity Bond
 - (f) Indenture Bond

(g) Notice for Appointment of Arbitrator

8. Proforma of schedules (Schedule 'A' to Schedule 'F')

Naya Raipur Development Authority (NRDA) Raipur, Chhattisgarh

Document details

Name of work : “Supply, Installation, Testing , Commissioning of air conditioning and air cooling system & other allied accessories for Commercial Tax Building ,HOD Panchayat building and Jail & Home Guard Building at sector-19 of Naya Raipur”.

Name of Tenderer:

Details

- a) Cost of Tender Document : Rs
- b) EMD : Rs

Signature of Tenderer

Date: _____

Signature of Contractor.....

Signature of NRDA.....

Cost Abstract

Supply, Installation, Testing , Commissioning of air conditioning and air cooling system & other allied accessories for Commercial Tax Building ,HOD Panchayat building and Jail & Home Guard Building at sector-19 of Naya Raipur

Sr. no	DESCRIPTION	Total Amount Rs. (In Figure)	Total Amount Rs. (In words)
A	Supply, Installation, Testing , Commissioning of air conditioning and air cooling system & other allied accessories for Commercial Tax Building ,HOD Panchayat building and Jail & Home Guard Building at sector-19 of Naya Raipur	-	
	Total amount In INR	-	

Bill of quantity

Supply, Installation, Testing , Commissioning of air conditioning and air cooling system & other allied accessories for Commercial Tax Building ,HOD Panchayat building and Jail & Home Guard Building at sector-19 of Naya Raipur

Sr No.	Description of Item	Unit	Quantity	Rate in INR	Rate in Words (INR)	Amount in INR
A	FOR AIR CONDITIONING					
1	AC UNITS					
1.1	Supplying fixing Installation testing and commissioning of approved make split type Air Conditioner unit and fixing cooling unit on wall at desired location and condensing unit on out side wall/ ceiling/ floor at desired location having standard length of copper piping with insulation and drainage pipe length as per requirement, necessary wiring including providing and fixing necessary good quality powder coated MS frame etc complete as required					
A	1.0 TR SPLIT AC (5 STAR)	No.	34.00			Rs. -
B	1.5 TR SPLIT AC (5 STAR)	No.	17.00			Rs. -
C	2 TR SPLIT AC(5 STAR)	No.	78.00			Rs. -
1.2	Supplying fixing installation commissioning and testing of approved make cassette type Air Conditioner unit and fixing cooling unit on wall at desired location and condensing unit on out side wall/ ceiling/ floor at desired location having standard length of copper piping with insulation and drainage pipe length as per requirement, necessary wiring including providing and fixing necessary good quality powder coated MS frame etc					
A	2 TR Cassette AC(5 STAR)	No.	6.00			Rs. -

Sr No.	Description of Item	Unit	Quantity	Rate in INR	Rate in Words (INR)	Amount in INR
B	3 TR Cassette AC(5 STAR)	No.	9.00			Rs. -
1.3	Three/Six pin industrial socket with industrial plug top of suitable mcb rating					
a	20 amp for 3 TR Cassette AC 3 phase	No.	15.00			Rs. -
b	32 amp for 4 TR Cassette AC 3 phase	No.	17.00			Rs. -
c	20 Amp single phase	No.	5.00			Rs. -
d	20 amp for 2 TR Split AC single phase	No.	25.00			Rs. -
1.4	Wiring for circuit/ sub main wiring along with earth wire with the following sizes of FR PVC insulated copper conductor, single core cable in concealed PVC conduit as required.with termination glands and GI earthing, identification tags , clamps , saddles etc.(Wire/Cable)					
a	3 X 1.5 sq. mm in 20 mm conduit	Mtr	400.00			Rs. -

Sr No.	Description of Item	Unit	Quantity	Rate in INR	Rate in Words (INR)	Amount in INR
b	3x2.5 sq. mm in 20 mm conduit	mtr	800.00			Rs. -
c	3 X 2.5 sq. mm in 25mm conduit	Mtr	500.00			Rs. -
d	4 X4 sq. mm in 25mm conduit	Mtr	300.00			Rs. -
e	3 X 4 sq. mm in 25mm conduit	Mtr	550.00			Rs. -
f	6 X 4 sq. mm in 32mm conduit	Mtr	200.00			Rs. -
1.5	Supply, connecting and fixing extra length of copper piping for split type air conditioners of following dia and approved quality with insulation sleeve etc complete as required					
a	5/8 "(15.9mm with 13mm insulation)	Mtr	700.00			Rs. -
b	1/2 "(12.7mm with 13mm insulation)	Mtr	1300.00			Rs. -

Sr No.	Description of Item	Unit	Quantity	Rate in INR	Rate in Words (INR)	Amount in INR
c	1/4 "(6.4mm with 13mm insulation)	Mtr	1300.00			Rs. -
d	19.1mm with 13mm insulation	Mtr	700.00			Rs. -
e	9.5 mm with 13mm insulation	Mtr	750.00			Rs. -
2	Supplying and fixing of following sizes PVC conduit along with accessories in surface complete as required					
a	25 MM	Mtr	1200.00			Rs. -
3	Supply, Installation, testing and commissioning of PPRC piping complete with fittings, supports as per specifications					
a	25 MM	Mtr	1000.00			Rs. -
4	Providing and fixing on wall surface G.I. pipes medium class complete with G.I. fittings and clamps, including cutting, making good the walls etc. and testing of joints complete:					
a	25 mm dia. nominal bore	Mtr	300.00			Rs. -

Sr No.	Description of Item	Unit	Quantity	Rate in INR	Rate in Words (INR)	Amount in INR
5	Providing and fixing ball valve (brass) of approved quality, High or low pressure, with plastic floats complete					
a	15 mm nominal bore	Mtr	20.00			Rs. -
6	Supply,installation,testing and commissioning of GI volume dampers complete with neoprene rubber gaskets nuts bolts, screw linkage, flanges et, as per specification	Sqmtr	30.00			Rs. -
7	Flexible Connection double layer fire resstance canves cloth between Duct and Air Washer	Sqmtr	30.00			Rs. -
8	Providing and fixing 6 SWG dia G.I. wire on surface or in recess for loop earthing along with existing surface/ concealed conduit/submain wiring/ cable as required	Mtr	900.00			Rs. -
9	INSULATION OF AIR COOLING					
a	Insulation of Air cooling Duct on Exposed Areas with fixing of 50mm thermocoal by applying a coat of bitumin using@1.7 kg per meter squire and Fixing of Aluminiam Clading	Sqmtr	977.00			Rs. -
10	Automatic Star Delta Starter ThreePhase 63 Amps (Suitable for Blower Motor off 20000 CFM AIR WASHER) VFD is also acceptable	Each	4.00			Rs. -
11	Automatic Star Delta Starter ThreePhase 80 Amps(Suitable for Blower Motor off 25000 CFM AIR WASHER) VFD is also acceptable	Each	2.00			Rs. -

Sr No.	Description of Item	Unit	Quantity	Rate in INR	Rate in Words (INR)	Amount in INR
12	Automatic Star Delta Starter ThreePhase 100 Amps(Suitable for Blower Motor off 30000 CFM AIR WASHER) VFD is also acceptable	Each	2.00			Rs. -
13	Providing and fixing following rating and breaking capacity MCCBin existing cubicle panel board including drilling holes in cubicle panel, making connections, etc. as required.					
a	3 pole MCCB, 80-100A, Fixed Thermal Release, 10KA	Each	8.00			Rs. -
14	ELECTRICAL PANEL (Commercial Tax Building)					
	Supplying, installation, testing and commissioning of L.T. panel fully compartmentalized cubical type sheet clad floor mounted totally enclosed , extensible on both sides, switch board suitable for use on 415 Volts 3-phase, 4 wire, 50 Hz system having required fault capacity, housed with incoming and outgoing, Aluminium bus bars with current rating of 0.8 Amp/sq.mm, interconnection etc. with indication lamps, accessories etc, as required as per specification and schematic diagram as required. (AC Floor Panel)					
	Incoming					
	1 Nos. 250Amps FP feeder each having one number 3 phase 415 Volts, 50 Hz, 35 KA front operated 250 Amps. 4P MCCB with isolable neutral complete in all respects.					
	Bus bar					
	1 set of 250 Amps, 415 volts, 3 phase, 4 wire colour coded aluminium TPN bus bar, after taking all derating factors.					
	Outgoings					
	3 pole MCCB, 80A, 10KA -4 NOS					
	Instruments					
	1 Nos. 0 500 Volts, 96 sq.mm voltmeter with protection fuses and selector switch.					
	1 Nos. 0 200 Amps, 96 sq.mm ammeter with 200/5A CT's and selector switch.					
	1 Set R Y B phase indicating lamps with protection fuses.					
	1 Lot of control wiring.					

Sr No.	Description of Item	Unit	Quantity	Rate in INR	Rate in Words (INR)	Amount in INR
	1 Set of designation plates.					
	Other items such as:					
	3 Phase KWH Meter in Incomer	Each	5.00			Rs. -
15	Supplying, connecting and fixing 15mm dia PVC flexible drain pipe (reinforced with nylon threads) in drain outlet of split type air conditioners etc complete as required	Mtr	1000.00			Rs. -
16	ELECTRICAL PANEL (Panchyat Building)					
	Incoming					
	1 Nos. 250Amps FP feeder each having one number 3 phase 415 Volts, 50 Hz, 35 KA front operated 250 Amps. 4P MCCB with isolable neutral complete in all respects.					
	Bus bar					
	1 set of 250 Amps, 415 volts, 3 phase, 4 wire colour coded aluminium TPN bus bar, after taking all derating factors.					
	Outgoings					
	6 Nos. 80 Amps MCCB 35KA FP					
	Instruments					
	1 Nos. 0 500 Volts, 96 sq.mm voltmeter with protection fuses and selector switch.					
	1 Nos. 0 200 Amps, 96 sq.mm ammeter with 200/5A CT's and selector switch.					
	1 Set R Y B phase indicating lamps with protection fuses.					
	1 Lot of control wiring.					
a	1 Set of designation plates.	No.	5.00			Rs. -
17	ELECTRICAL PANEL HOME GUARD AIR COOLING					

Sr No.	Description of Item	Unit	Quantity	Rate in INR	Rate in Words (INR)	Amount in INR
	Manufacture, Supplying, fixing in position, connecting, testing and commissioning of following AC Control panels. Each motor shall be provided with suitable incoming MCCB/ switch fuse unit, Contactors, over load relays, push button stations. Single phase preventers etc. All the components shall be housed in 2 mm thick MS sheet steel housing. The control panel shall be cubical type, dust and vermin proof, hinged and lockable doors and dead front operation. Provide cable glands as required. All interlocking wiring, timers and control wiring shall be done, and earthing the panel. Provide separate compartment for each motor controls. Interlock the door with switch handle complete as required. The bus bars shall be of copper. The control panel shall be suitable for 35 mVA fault level at 415 volts.					
	Air Washer unit Panel Home Guard Building					
	Incoming					
	1 no.200 amp 4P MCCB, with standard releases.					
	0-500 volts voltmeter with SS with control fuses. (1set)					
	0-100 amp ammeter with SS and 100/5 CT's.					
	Phase indicating lights with control fuses.					
	ON/OFF indicating lights.					
	Bus Bars					
	200 amp TPN aluminum bus bar with heat shrinkable insulation colored sleeves (The current density of the bus bar shall be 1.3 sq mm / Ampere.					
	Outgoings					
	2 nos. 63 amp, TPN MCB with 32 amp contactors and over load relay with thermal protection with suitable rating on-off lamp Trip indicating , 25 KA with operating handles and heavy duty solid neutral link with suitable capacity for the blower fan motor With Star Delta Starter With 2 Nos Pump DOL Starter.					
	6 nos. 32 amp, TPN MCB with 32 amp contactors and over load relay with thermal protection with suitable rating on-off lamp drip indicating, 25 KA for 2 numbers pump motor feeders, with the followings for each feeders With DOL Starter With 2 Nos Pump DOL Starter.					
	Note:VFD type out going for blower motor of AHU is also acceptable					

Sr No.	Description of Item	Unit	Quantity	Rate in INR	Rate in Words (INR)	Amount in INR
a	40A TPN MCB SPARE 2 No	No.	1.00			Rs. -
18	ELECTRICAL PANEL					
	Air Washer unit Panel Jail Building					
	Incoming					
	1 no.200 amp 4P MCCB, with standard releases.					
	0-500 volts voltmeter with SS with control fuses. (1set)					
	0-100 amp ammeter with SS and 100/5 CT's.					
	Phase indicating lights with control fuses.					
	ON/OFF indicating lights.					
	Bus Bars					
	200 amp TPN aluminum bus bar with heat shrinkable insulation colored sleeves (The current density of the bus bar shall be 1.3 sq mm / Ampere.					
	Outgoings					
	8 nos. 32 amp, TPN MCB with 32 amp contactors and over load relay with thermal protection with suitable rating on-off lamp drip indicating, 25 KA for 2 numbers pump motor feeders, with the followings for each feeders With DOL Starter With 2 Nos Pump DOL Starter.					
	Note:VFD type out going for blower motor of AHU is also acceptable					
a	40A TPN MCB SPARE 2 No	No.	1.00			Rs. -
19	Supplying and laying following sizes one number PVC insulated/ XLPE, PVC sheathed, steel armoured, aluminium conductor power cable of 1.1 KV grade on surface/ existing cable tray with 1 mm thick GI saddle as required					

Sr No.	Description of Item	Unit	Quantity	Rate in INR	Rate in Words (INR)	Amount in INR
a	3.5 x 35 sq. mm.	Mtr	450.00			Rs. -
b	4 x 16 sq. mm.	Mtr	700.00			Rs. -
c	3.5 x 25 sq. mm	Mtr	250.00			Rs. -
d	3.5 x 95 sq. mm	Mtr	80.00			Rs. -
e	3.5X50 sq. mm	Mtr	260.00			Rs. -
20	Supply, Installation ,Testing and commissioning of sheet metal sectionalized construction double skin Air Washer Unit with stainless steel tank , each complete with Blower section Wet section and filter section as detailed in the specifications and complete with forward curved DIDW Blower with TEFC squirrel cage induction motor with AC supply in 3 phase, belt drive package, vibration isolation pads -spring mounted, 200 mm Thick Cellulose cooling pads , Mist eliminator, 50 mm thick pre filters, 2 nos monobloc pump set for water circulation,G.I B class/PVC piping Fire proof double layered flexible connections for each outlet complete with flanges made out of 20G G.S.S sheet on both sides for connection to air washer and duct complete with nuts, bolts etc complete as per specifications and as mentioned in the schedule of equipment of following capacities.					

Sr No.	Description of Item	Unit	Quantity	Rate in INR	Rate in Words (INR)	Amount in INR
a	5000 CFM capacity AWU 65 mm static pressure	No.	1.00			Rs. -
b	6000 CFM capacity AWU 65 mm static pressure	No.	4.00			Rs. -
c	6500 CFM capacity AWU 65 mm static pressure	No.	2.00			Rs. -
d	7200CFM capacity AWU 65 mm static pressure	No.	3.00			Rs. -
e	8000CFM capacity AWU 65 mm static pressure	No.	4.00			Rs. -
f	10000 CFM capacity AWU 65 mm static pressure	No.	7.00			Rs. -
g	12000CFM capacity AWU 65 mm static pressure	No.	1.00			Rs. -
h	15000 CFM capacity AWU 65 mm static pressure	No.	5.00			Rs. -

Sr No.	Description of Item	Unit	Quantity	Rate in INR	Rate in Words (INR)	Amount in INR
i	20000 CFM capacity AWU 65 mm static pressure	No.	4.00			Rs. -
j	25000 CFM capacity AWU 65 mm static pressure	No.	5.00			Rs. -
k	30000 CFM capacity AWU 65 mm static pressure	No.	2.00			Rs. -
Total amount of part A						Rs. -
B	FOR AIR COOLING					
1	Manufacture, Supplying, fixing in position, connecting, testing and commissioning of following AC Control panels. Each motor shall be provided with suitable incoming MCCB/ switch fuse unit, Contactors, over load relays, push button stations. Single phase preventers etc. All the components shall be housed in 2 mm thick MS sheet steel housing. The control panel shall be cubical type, dust and vermin proof, hinged and lockable doors and dead front operation. Provide cable glands as required. All interlocking wiring, timers and control wiring shall be done, and earthing the panel. Provide separate compartment for each motor controls. Interlock the door with switch handle complete as required. The bus bars shall be of copper. The control panel shall be suitable for 35 mVA fault level at 415 volts.					
	Air Washer unit Panel					
	Incoming					
	1 no.400 amp 4P MCCB, with standard releases.					
	0-500 volts voltmeter with SS with control fuses. (1set)					
	0-100 amp ammeter with SS and 100/5 CT's.					

Sr No.	Description of Item	Unit	Quantity	Rate in INR	Rate in Words (INR)	Amount in INR
	Phase indicating lights with control fuses.					
	ON/OFF indicating lights.					
	Bus Bars					
	400 amp TPN aluminum bus bar with heat shrinkable insulation colored sleeves (The current density of the bus bar shall be 1.3 sq mm / Ampere.					
	Outgoings					
	5 nos. 63 amp, TPN MCB with 32 amp contactors and over load relay with thermal protection with suitable rating on-off lamp Trip indicating , 25 KA with operating handles and heavy duty solid neutral link with suitable capacity for the blower fan motor With Star Delta Starter With 2 Nos Pump DOL Starter(SUITABLE FOR 18000 CFM AIR WASHER).					
	3 nos. 80 amp, TPN MCB with 32 amp contactors and over load relay with thermal protection with suitable rating on-off lamp Trip indicating , 25 KA with operating handles and heavy duty solid neutral link with suitable capacity for the blower fan motor With Star Delta Starter With 2 Nos Pump DOL Starter(SUITABLE FOR 28000 CFM AIR WASHER).					
	6 nos. 32 amp, TPN MCB with 32 amp contactors and over load relay with thermal protection with suitable rating on-off lamp drip indicating, 25 KA for 2 numbers pump motor feeders, with the followings for each feeders With DOL Starter With 2 Nos Pump DOL Starter (suitable for 10000 CFM AIR WASHER).					
	Note:VFD type out going for blower motor of AHU is also acceptable					
a	40A TPN MCB SPARE 2 No	No.	1.00			Rs. -
2	Supplying and laying following sizes one number PVC insulated/ XLPE, PVC sheathed, steel armoured, aluminium conductor power cable of 1.1 KV grade on surface/ existing cable tray with 1 mm thick GI saddle as required					
a	3.5 x 35 sq. mm.	Mtr	800.00			Rs. -

Sr No.	Description of Item	Unit	Quantity	Rate in INR	Rate in Words (INR)	Amount in INR
b	4 x 16 sq. mm.	Mtr	200.00			Rs. -
c	3.5 x 95 sq. mm	Mtr	150.00			Rs. -
3	Supply,installation,testing and commissioning of GI volume dampers complete with neoprene rubber gaskets nuts bolts, screw linkage, flanges et, as per specification(SOR-2015 ITEM NO 28.18)	Sqmtr	40.00			Rs. -
4	Providing and fixing 6 SWG dia G.I. wire on surface or in recess for loop earthing along with existing surface/ concealed conduit/submain wiring/ cable as required	Mtr	500.00			Rs. -

Sr No.	Description of Item	Unit	Quantity	Rate in INR	Rate in Words (INR)	Amount in INR
	INSULATION OF AIR COOLING					
5	Insulation of Air cooling Duct on Exposed Areas with fixing of 50mm thermocoal by applying a coat of bitumin using@1.7 kg per meter square and laying of LDPE sheet of 220 micron thickness	Sqmtr	300.00			Rs. -
6	Providing and fixing on wall surface G.I. pipes medium class complete with G.I. fittings and clamps, including cutting, making good the walls etc. and testing of joints complete:					
a	25 mm dia. nominal bore	Mtr	150.00			Rs. -
7	Providing and fixing ball valve (brass) of approved quality, High or low pressure, with plastic floats complete					
	15 mm nominal bore	Mtr	10.00			Rs. -
8	Flexible Connection double layer fire resistance canvas cloth between Duct and Air Washer	Sqmtr	10.00			Rs. -
9	150mm MS perforated Cable tray	metre	130.00			Rs. -
	Total amount of part B					Rs. -
	Grand Total of Part (A + B)					Rs. -