

TENDER DOCUMENT

PRICE BID

PROPOSED AIR CONDITIONER WORK FOR ADMINISTRATIVE
OFFICE OF
Saptagiri Grameena Bank

AT
SURVEY No. 261/3, VELLORE ROAD, CHITTOOR-517001

DATE OF ISSUE: - 22.04.2024.

TENDER SUBMISSION ON: - 15.05.2024 AT 3.00 P.M.

TENDER OPENING (Technical Bid): 15.05.2024 AT 05.00 P.M

TENDER OPENING (Price Bid): 16.05.2024 AT 05.00 P.M

COMPLETION PERIOD – 60 DAYS



సప్తగిరి గ్రామీణ బ్యాంక్
(ప్రభుత్వ రంగ సంస్థ : ఇండియన్ బ్యాంక్ చే ప్రాయోజితం)
Saptagiri Grameena Bank
(Public Sector RRB : Sponsored by Indian Bank)

SAPTAGIRI GRAMEENA BANK

Head Office, #19/565-11, 3rd floor, Vishal mart upstairs, Opp: Venkateswara Theatre, Vellore
Road, Chittoor-517001.

Architects

KANAMADI AND ASSOCIATES

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ABSTRACT OF COST

**SUBJECT: AIRCONDITIONING WORK
SAPTAGIRI GRAMEENA BANK, HEAD OFFICE, CHITTOOR**

Details of tender amount quoted by the contractor:

Sr.No	Particulars of works	Amount
1	AIRCONDITIONING WORKS – PART-A	Rs.
2	GST-28%	
3	AIRCONDITIONING WORKS – PART-B	Rs.
4	GST-18%	RS.
5	GRAND TOTAL (1+2+3+4) =	RS.

(Total Quoted Amount in Words)=_____

Rate inclusive of all Material charges, Transportation, Local levies as applicable, Loading, Unloading, Lifting- Shifting, Erection, Testing , Commissioning, Scaffolding, etc. as applicable.

Before quoting the rates Contractor must visit the existing HO Building and study the existing AC and reutilization of all the AC INDOOR & OUTDOOR UNITS (VRF), COPER PIPE etc., should be used in new HO Building in various locations.

Signature of Contractor with Seal



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INSTRUCTIONS

1. The Bill of Quantities shall be read in conjunction with the Drawings, Conditions of Contract and Specifications, as these documents are jointly explanatory and descriptive of the works included in the Contract.
2. General directions and descriptions of work and materials given elsewhere in the Contract documents are not necessarily repeated in the Bill of Quantities. Reference is to be made to the other documents for information.
3. The Contractor shall be deemed to have visited the construction site and existing Head Office premises before preparing his Tender and to have examined for himself the conditions under which the work will be priced and all other factors affecting the execution of the work and the cost thereof.
4. The Quantities of work and material in the Bill of Quantities are not to be considered as limiting or extending the scope of work to be done and materials to be supplied by the Contractor. The quantities in the Bill of Quantities are an estimate of the amount work but the work will be measured on completion and the contractor will be paid on the actual measurement of work approved by the Architect.
5. Any special methods of measurements used are stated at the head of or in text of the Bills of Quantities for the items affected. All other items are measured net in accordance with the drawings and no allowance has been made for wastage. Unless otherwise specified measurements shall be as per relevant Indian Standard.
6. A price or rate in figures is to be entered against the item in the Bill of Quantities, whether quantities are stated or not. Item against which no price is entered will be considered as covered by other prices or rates in the Bills.
7. The prices and rates interested are to be the full inclusive value of the works described under the various items, including all costs and expenses which may be required for the completion of the work described, together with all cost and obligations set forth or implied in the conditions of Contract, Specifications and the Drawings.
8. Some finishing items may be quantity wise completely altered (either added or omitted) and the same shall not affect any rates quotes.
9. Where prices have been entered against Lump sum items, payment for such affected items shall be made in proportion to the extent to which works have been done at the time of billing and the same is at discretion of the Architect.



10. "Providing and Fixing" shall mean that the Contractor has to provide such materials not being procured and borne by the Bank and "removing and refixing shall mean that the contractor has to use such material available in the existing Head Office premises but which are required for the item and if no materials need be provided by the Contractor, the rate shall be only for fixing of the component covered in the item.
11. The Bidder should have undertaken such contract works continuously for the past 5 years.
12. The bidder should strictly follow the specifications and quality standards as noted in the online terms.
13. The bidder should complete the entire work within the time frame as given by the bank.
14. The bidder has to follow and co-ordinate with M/s Kanamadi & Associates, Architects & Engineers, Bangalore our bank panel Architect, or to follow and co-ordinate with any other agency/ Architect approved by the bank from time to time during the course of contract work.
15. The contractor should reduce the cost of the unit of work to the extent of unit of work/item of AIR CONDITIONER proposed to remove or delete during the course of execution/ erection/ fixation of the above said unit of work/item/fixtures.
16. The bidder has to use the extent of unit of work / item of AIR CONDITIONER available in the existing premises located at #19/565-11,3rd floor, Vishal mart upstairs, Opp: Venkateswara Theatre, Vellore Road, Chittoor-517001


General Manager
Saptagiri Grameena Bank, Head Office, Chittoor



PROPOSED AC WORK OF SAPTHAGIRI GRAMEENA BANK, BRANCH, ATM, REGIONAL OFFICE , IT , CONFERENCE AND HEAD OFFICE AT CHITTOOR

SL.NO.	ITEM DESCRIPTION	UNIT	QTY	Rate		Amount		Remarks
				Supply	Installation	Supply	Installation	
	Supply, Installation, Testing & Commissioning & Handing over of the following:							
	ALL SPECIFICATION OF BOQ SHOULD BE READ IN CONJUNCTION WITH THE TECHNICAL SPECIFICATIONS. NO DEVIATION OF SPECIFICATION UNLESS ANY WRITTEN COMMUNICATION FORWARDED TO THE CONCERNED BY CONSULTANTS.							
I	VRF SYSTEM - VRF HIGH SIDE							
A	VRF - ODU							
	Supply, installation, testing and commissioning of VRV outdoor units (modular type) with Inverter Driven / Digital Scroll compressor, condenser, fans, controls, etc. Outdoor unit including full charging of R410A refrigerant gas. Quoted unit should be single outdoor module and above 14 HP units to have multiple compressors. Combination of high wall, cassette, fan coil, ducted type indoor units, to have capability to cool independently for the requirements of the rooms. The outdoor unit shall be factory assembled unit housed in a sturdy weatherproof casing. Cabling, Control wiring, interlocking etc. to make the installation complete.							
	Proposed system to have ISEER of minimum 5.7 at variable ambient and COP should not be less than 3 at 100% load at AHRI condition. Unit to have ultra-precise 0.1 Hz control over compressor rotation speed. Sound pressure level of each outdoor unit shall not be more than 63 dBA measured horizontally 1 m away and 1.5 meter above ground at the standard condition. Condensing unit should be operated under the wider range of outdoor ambient temperature from - 5 deg C to 52 deg C.							
	The refrigerant circuit should include an accumulator, oil separator, oil dilution function which is supported by specific solenoid valve under accumulator, liquid and gas shut off valves, solenoid valves, an electronic expansion valve. The cylindrical accumulator shall be constructed from mild steel plates pressed into shape. The accumulator shall have enough capacity to prevent any liquid refrigerant from flowing back into compressor suction.							
	To facilitate efficient commissioning and troubleshooting of the total system, outdoor unit shall be enabled with Near field communication technology. It should be possible to generate the system operation data which will be validated with manufacturer technical team. Outdoor unit to have ESP of minimum 60 Pa for effective air circulation and heat transfer.							
1.0	The compressor shall be of highly efficient hermetic scroll type and equipped with inverter control capable of changing the speed in accordance to the cooling load requirement. The inverter shall be IGBT type to be efficient and quiet operation. The outdoor unit shall have the multi-step of capacity control to meet load fluctuation and indoor unit individual control. The frame structure shall be mounted on MS plate & serrated rubber pads.							
	Note: Fans and copper tubes of air cooled condenser along with copper tubing / piping with all joints and U-Bends exposed to coastal areas corrosive atmosphere / aggressive ambient, shall be painted with special corrosion prevention coating either in factory or at site.							
	Note: VRF Indoor & Outdoor unit selection should be summer ambient temperature & relative humidity.							
	Note: VRF outdoor units' cost shall include Interface / communicate to with Third party Building Automation / BMS System. Communication should be BACnet / IP communication & necessary cabling works. Note: Indoor units and outdoor units naming is done as per the client requirement and required interface to be done by HVAC vendor to IBMS vendor.							
	Note: Costing is inclusive of Lifting, Shifting & Positioning with MS angle base frame structure duly black painted with synthetic epoxy paint for all outdoor units. The frame structure shall be mounted on MS plate & serrated Anti Vibration rubber pads with Vacuum cleaning, Gas charging, Pressure testing and Commissioning.							
	Note: From the Floor DB to Starter panel / MCB/MCCB and necessary incoming power & earthing cabling supply & installation works are in Electrical Vendor scope. From the Electrical starter panels / MCB/MCCB to HVAC equipment's all power, control & earthing cabling and termination works are in HVAC vendor scope of works.							
1.01	12 HP - Outdoor unit (Cooling only) VRF Circuit-01- GF	No.	1					
1.02	24 HP - Outdoor unit (Cooling only) VRF Circuit-01- 1F- conference room	No.						Using existing 2 Nos. 26 HP Outdoor Units
1.03	24 HP - Outdoor unit (Cooling only) VRF Circuit-01- 1F- Workstation and other	Nos.						
1.04	44 HP - Outdoor unit (Cooling only) VRF Circuit-01- 2F	Nos.	1					
	TOUCH SCREEN CENTRALIZED CONTROLLER- of up to 60 units minimum compatibility model.	Nos.	1					



B	VRV/VRF - IDU							
2.0	Supply Installation, Testing & Commissioning of Ceiling mounted 4 Way Cassette Units with decorative panel Ceiling mounted unit with multi speed fan, cooling coil, Cordless remote + Receivers, thermostat, washable type Pre-filter, auto swing in single directions, low noise fan, electronic expansion valve. The fan shall be Aerodynamically designed diffuser turbo fan type. single way unit direction air distribution, the cooling coil shall be of seamless copper tubes and shall have continuous Aluminium fins. Unit shall have filter cleanable type of resin net fixed to an integrally molded plastic frame. Unit shall have High Lift drain pump, low gas level detection system. Unit shall have an electronic expansion valve which control refrigerant flow rate in respond to load variations of room. units shall be suitable for single phase power supply, etc. (The units shall be suitable for input power supply of 1phase, 230volts, 50hz.)							
	Areas located as per Load Summary and with following duty points							
2.01	4.0 TR	Nos.						Will be using the existing Units
2.02	3.2 TR	Nos.	3					Out of 11 units, 8 Units are existing
2.03	2.0 TR	No.	16					
2.04	1.5 TR	No.	3					Out of 4 units, 1 unit is existing
2.05	1.0 TR	No.	2					
3.0	Supply Installation, Testing & Commissioning of Wall Mounted Units with Cordless remote + Receivers Wall mounted Type Indoor unit with multi speed fan, cooling coil, cordless remote, thermostat, washable type Pre-filter, auto swing in single directions, low noise fan, complete with electronic expansion valve. Units shall be suitable for single phase power supply, etc. (The units shall be suitable for input power supply of 1phase, 230volts, 50hz.)							
3.01	2.0 TR	Nos.	9					
3.02	1.5 TR	Nos.	1					
3.03	1.0 TR	Nos.	8					
C	DX SYSTEM (Direct Expansion Split Unit System)							
4.0	Supply, Installation, Testing and Commissioning of DX Split Duct able Air Conditioners of below mentioned capacities with indoor unit and suitable capacity out door unit. The indoor unit shall comprise of forward curved fan section, motored-coil, thermostatic expansion valve, thermostat etc. The outdoor unit shall comprise of one or two Inverter scroll Compressor, one or two condenser coil with fan for capacities of AC Units exceeding above 5.0TR, necessary controls like HP/LP cut out, drier, starters for the compressors and fan in built electrical controls First charge of gas and oil mounting. The package should also consist of necessary remote controller. The configuration of AC Units are as below. The Utilisation of AC Units will follow the Tender drawing / schedule of AC Units. AC Units will be with HFC R 410a refrigerant gas and pre filter at Indoor Unit. Split ACs will be with suitable remote. The external static of AC Unit to be with 6mm-15mm ESP as per manufacturer's standard for ducted splits. Scope also covers for commissioning activities also. Quoted rate includes supply and laying with end termination of suitable power copper cabling from isolator (Provided by Elec Agency.) approximately 5 Rmt. per unit with other electrical related accessories. Noise level shall not exceed 50 dB at 1 meter distance. The unit shall be suitable for 415 ± 10% volts, 50 cycles/ second, 3 Phase AC supply. Scope also includes canvass connections The Units should be BMS compatible							
	The cooling capacity mentioned shall be actual capacity to be delivered by the equipment suitable for total of Equipment manufacture's standard length of refrigerant copper piping with insulation between indoor and outdoor units inclusive of vertical drop downwards from the indoor unit, and at an outdoor temperature of 36 deg C.							
	The unit selected shall be suitable for operating at the manufacture's standard lengths of refrigerant piping as per the manufacturer's catalogue.							
	Structural Stand for positioning condenser units with necessary vibration isolating serrated rubber pads. Also, the supplier to ensure that all support stands are of hot dipped galvanized frame with two 12.5 mm thick neoprene vibration isolators under the whole unit. Also, rubber pads should be placed under the condenser units. The GI stand to be painted with two coats of primer and two coats of epoxy paint of Black Color.							
4.01	2.0 TR	Nos.						Existing units to be used
	TOTAL (Rs) HIGH SIDE EQUIPMENT							



II VRF SYSTEM - VRF LOW SIDE								
1.0	Structural stand for VRV unit Supply, Fabrication of MS structural support for VRV outdoor unit with 2 coat of Anti rust paint and 1 coat of Epoxy paint painted with Approved color. The specification of the support should be as per final approved drawings.	Nos.	20					
2.0	Supply, of extra Refrigerant R-410A	Lot	1					
	Lifting and shifing of units	Lot	1					
	Testing and commissioning of units	Lot	1					
3.0	Supply, installation, testing and commissioning of Interconnecting VRF copper refrigerant pipe work duly insulated with elastomeric nitrile rubber type tubular insulation between indoor & outdoor units as per specifications. All piping inside the room shall be properly supported with hanger and all external piping shall run in covered cable tray. Pipe and insulation standard and material type as per OEM recommendations. Note - The actual measurement of copper piping should be taken as per site condition only. Note- refrigerant piping quantity to be estimated before finalization of order or receipt of work order as per the drawing and take necessary amendment if any variation in the quantity.							
3.01	41.3 mm OD (Insulation = 19mm thick)	Rmt						28 mtrs existing will be used
3.02	34.9 mm OD (Insulation = 19mm thick)	Rmt	58					Out of 95mtrs, 4 mtrs existing will be used and 33 mtrs of 31.8mm will be used
3.03	28.6 mm OD (Insulation = 19mm thick)	Rmt	117					Out of 149mtrs, 32 mtrs existing will be used
3.04	25.4 mm OD (Insulation = 19mm thick)	Rmt						Out of 117 mtrs, 28 mtrs existing will be used
3.05	22.2 mm OD (Insulation = 13mm thick)	Rmt	89					Out of 119 mtrs, 70 mtrs existing will be used
3.06	19.1 mm OD (Insulation = 13mm thick)	Rmt	49					Out of 281 mtrs, 168mtrs existing will be used
3.07	15.9 mm OD (Insulation = 13mm thick)	Rmt	113					Out of 131 mtrs, 25 mtrs existing will be used
3.08	12.7 mm OD (Insulation = 13mm thick)	Rmt	106					Out of 227mtrs, 168 mtrs existing will be used
3.09	9.5 mm OD (Insulation = 13mm thick)	Rmt	59					Out of 81 mtrs, 8 mtrs existing will be used
3.10	6.4 mm OD (Insulation = 13mm thick)	Rmt	73					
4.0	Supply, installation, testing and commissioning of Refnet joints to connect copper piping of the indoor unit onto the main circuit line.	Sets	35					Out of 54 sets, 19 sets existing will be used
5.0	Supply and Installation of factory fabricated GI duct 24G	Sqmts	RO					
6.0	Supply and installation of flexible duct 100mm dia	Rm	RO					
7.0	Supply, installation, testing and commissioning of Electrical Cabling for the VRF AC units. Note - The actual measurement of control & power cabling should be taken as per site condition only.							
7.01	4 core 16 sq.mm/as per OEM recommendation(FRLS Copper armrod) power cable with saddles/supports & PVC conduits to connect Eke (Individual 63 Amps) feeder to all VRF Outdoor units. (Location near to the VRF ODU units) Note - Main electrical panel to TPN MCB/MCCB and TPN MCB/MCCB to VRF power supply are in HVAC vendor scope.	Rmt	70					Out of 80 mtrs, 10 mtrs existing will be used
7.02	4 core 10 sq.mm/as per OEM recommendation(FRLS Copper armrod) power cable with saddles/supports & PVC conduits to connect Eke (Individual 40 Amps) feeder to all VRF Outdoor units. (Location near to the VRF ODU units) Note - Main electrical panel to TPN MCB/MCCB and TPN MCB/MCCB to VRF power supply are in HVAC vendor scope.	Rmt	50					
7.03	3 core 2.5 sq.mm flexible (FRLS Copper) power cable with saddles/supports & PVC conduits to connect Eke (5 Amps-Plug top & socket) feeder to all VRF indoor units. Will be as per the make of AC Unit. All necessary civil works should be a part of scope.	Rmt	250					
7.04	4 core 2.5 sq.mm flexible (FRLS Copper) power cable with saddles/supports & PVC conduits to connect Eke (5 Amps-Plug top & socket) feeder to all VRF indoor units. (6 TR to 10.0TR) Will be as per the make of AC Unit. All necessary civil works should be a part of scope.	Rmt	120					Out of 120mtrs. 42 mtrs existing cable will be used
7.05	2 core 1.5 sq.mm flexible (FRLS Copper) communication / looping cable with saddles/supports & PVC conduits to connect indoor units to VRF & DX Outdoor units. Will be as per the make of AC Unit. All necessary civil works should be a part of scope.	Rmt	125					Out of 650mtrs. 525 mts of existing 2c x 0.75 sq. mm cable will be used
	Supply and Installation perforated cable tray with top cover	Rmt	30					
	300x100mm	Rmt	30					
	150x100mm							
8.0	Supply, installing, testing and commissioning of CPVC heavy duty drainpipe of various sizes as given below. The rate shall include necessary wall chasing drilling holes and insulation with 6 mm Thick nitrile rubber tube and necessary Installation accessories such as supports and clamps. with insulation cut to required lengths and installed with all screwed joints, and providing and fixing in position the necessary elbows, tees and reducers as per specifications for CSU/ AHU/ FCU drain.							



8.01	40 mm Dia	Rmt	30					
8.02	32 mm Dia	Rmt	60					
8.03	25 mm Dia	Rmt	371					
9.0	Supply, installation testing and Commissioning of Rigid PVC 4 kg Piping for fresh air. The rate shall include insulation with 9 mm Thick nitrile rubber tube and necessary Installation accessories such as supports necessary wall chasing drilling holes and clamps. with insulation cut to required lengths and installed with all screwed joints, and providing and fixing in position the necessary elbows, tees and reducers as per specifications for CSU / Cassette unit. Price should include painting which should match with the RAL code of Architect requirement.							
9.01	160 mm Dia	Rmt	RO					
9.02	110 mm Dia	Rmt	RO					
9.03	75 mm Dia	Rmt	RO					
10.0	Supply, installation, testing and commissioning of 5kVA Stabilizer for wall mounted air cooled Inverter 5 Star Rating - Split air conditioning units.			Nos.	2			
11.0	Supply, installation, testing & commissioning of Cabinet inline fan with all accessories like fan, motor, flanges, non-canvass type fire retardant flexible connections, etc.,. The impeller shall be of forward type. The motor should be of IP21, class 'B' insulation suitable for operating at 1phase, 230V, 50hz power supply.							
9.01	400 CFM-15 mm wc.	Nos.	3					
9.02	600 CFM-15 mm wc.	No.	1					
12	MS support works with C Channel / L angle including Anchor fasteners & Threaded rod & rust resistant Epoxy primer and Epoxy Paint etc.			Kgs	150			
TOTAL (Rs) VRF LOW SIDE								
III	Existing system dismantling from the existing HO building, transporting to the new HO building, servicing and installation of the units at the new building. Cost to include dismantling, transporting, servicing and installation							
1.00	26HP Outdoor cooling units	Nos	2					
2.00	1.6TR Cassette Unit	Nos	1					
3.00	2.28TR Cassette Unit	Nos	1					
4.00	2.57TR Cassette Unit	Nos	7					
5.00	2.8TR Cassette Unit	Nos	3					
6.00	3.2TR Cassette Unit	Nos	5					
7.00	Refnut Joins to connect the VRF units	Nos	19					
8.00	41.3 mm OD (Insulation = 19mm thick)	Mtrs	28					
9.00	34.9 mm OD (Insulation = 19mm thick)	Mtrs	4					
10.00	31.8 mm OD (Insulation 19mm thick)	Mtrs	33					
11.00	28.6 mm OD (Insulation = 19mm thick)	Mtrs	32					
12.00	22.2 mm OD (Insulation = 13mm thick)	Mtrs	28					
13.00	19.1 mm OD (Insulation = 13mm thick)	Mtrs	70					
14.00	15.9 mm OD (Insulation = 13mm thick)	Mtrs	117					
15.00	12.7 mm OD (Insulation = 13mm thick)	Mtrs	17					
16.00	9.5 mm OD (Insulation = 13mm thick)	Mtrs	117					
17.00	6.4 mm OD (Insulation = 13mm thick)	Mtrs	8					
18.00	2c x 0.75 sq.mm (VRF communication)	Mtrs	525					
19.00	4c x 2.5 sq.mm (power cable)	Mtrs	42					
20.00	4c x 16 sq.mm (power cable)	Mtrs	10					
TOTAL FOR DISMANTLING, TRANSPORTATION, SERVICING AND INSTALLATION								
GRAND TOTAL (VRF HIGH & LOW SIDE) BOTH SUPPLY AND INSTALLATION EXCLUDING GST								

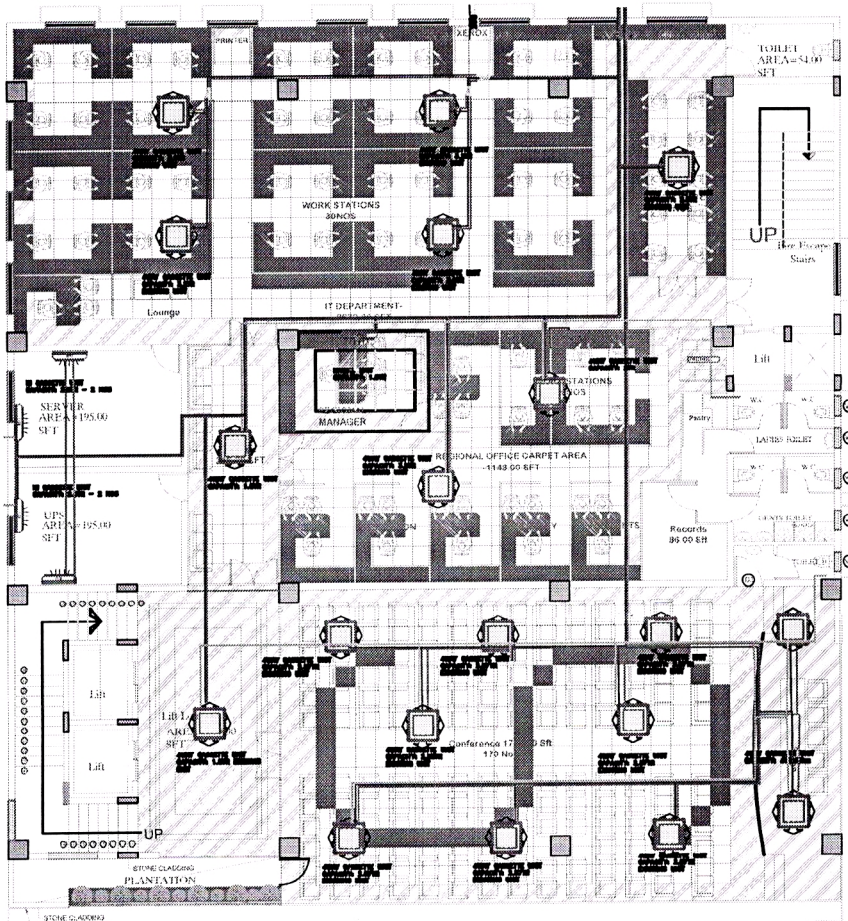


VRF SYSTEM / Split AC- LIST OF APPROVED MAKES FOR EQUIPMENT & MATERIALS		
Note:	Approved equivalent will be considered subject to Client's confirmation & Consultant's Technical Evaluation	
S.No.	Details of Materials / Equipment	Manufacturer's Name
1	AC units VRF/ VRF	Mitsubishi / Toshiba / Carrier / Daikin / LG / Voltas
2	Split Unit (5 Star as per BEE) / Package Unit	Toshiba / Daikin / Carrier / Voltas / LG
3	VRF connected Customized CSU	Urjas / Luftek / Edgetech/ Citizen
4	Ventilation Fans	ELTA / AirMaskin / Air flow / VTS /Nicotra / Caryaire
5	Refrigerant Pipes	Nippon / Mandev Tubes / Mexflow / Rajco / Totaline / Uniflow
6	Drain Pipe C PVC Or PVC	Ashirvad / Astral / Truflo / Supreme
7	Fresh Air PVC Pipes	Ashirvad / Astral / Truflo / Supreme
8	Flexible Connections- Pipe	Cori / Kunwal
9	GSS Sheets	Jindal / Tata
10	Factory Fabricated Ducts	Dev Duct / Wind Duct / Cool freez / Seven Star/Camduct
11	Duct Supports / Anchors Fasteners	Gripple / Hiltti/ Hi Tech / Rawlplug / Lindapter
12	Diffusers / Grilles / Slot Diffusers / Exhaust Disc Valves / Louvers	Airmaster / Air flow / Airmaskin
13	Flexible Ducts	Supa Flex / Seven Star / Twiga
14	Elastomeric Nitrile Rubber Insulation	Alp Aeroflex / K-Flex / Thermobreak / Armacell
15	Filters	Magneto / Citizen / Aaf / Ultra Pure
16	BMS Vendor	Siemens / Johnson / Sauter / Honeywell/ Schneider / Trane / Messung
17	BMS Vendor	Siemens / Johnson / Sauter / Honeywell/ Schneider / Trane / Messung
17	VCD / Butterfly Damper	Airmaster / Air Flow / System air/Camduct
18	Cable Tray	Profab / Pushpak / Patney/ Bombay / Storac
19	Electrical Conduit	VIP



20	Power cable	Polycab / Havells / Finolex / Anchor or equivalent approved by the bank
22	Copper pipe	Rajaco / Nishan / Tofaline / Mexflow / Mandeva or equivalent approved by the bank
23	Stabilizer	V-Guard or equivalent approved by the bank





FIRST FLOOR AC LAYOUT

Sl. No.	Area	Area (sq. ft.)	Area (sq. m.)	Area (sq. ft.)	Area (sq. m.)
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HVAC LEGEND	
	COPPER PIPE GAS REFRIGERATION
	COPPER PIPE LIQUID REFRIGERATION
	DRAIN PIPE
	REFNUT JOINT
	REFNUT JOINT
	VRF ODU
	4WAY CASSETTE UNIT
	HI WALL UNIT

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PROPOSED FIRST FLOOR FOR SAPTHAGIRI GRAMEENA BANK

SAPTHAGIRI GRAMEENA BANK, CHITTOOR (AP)

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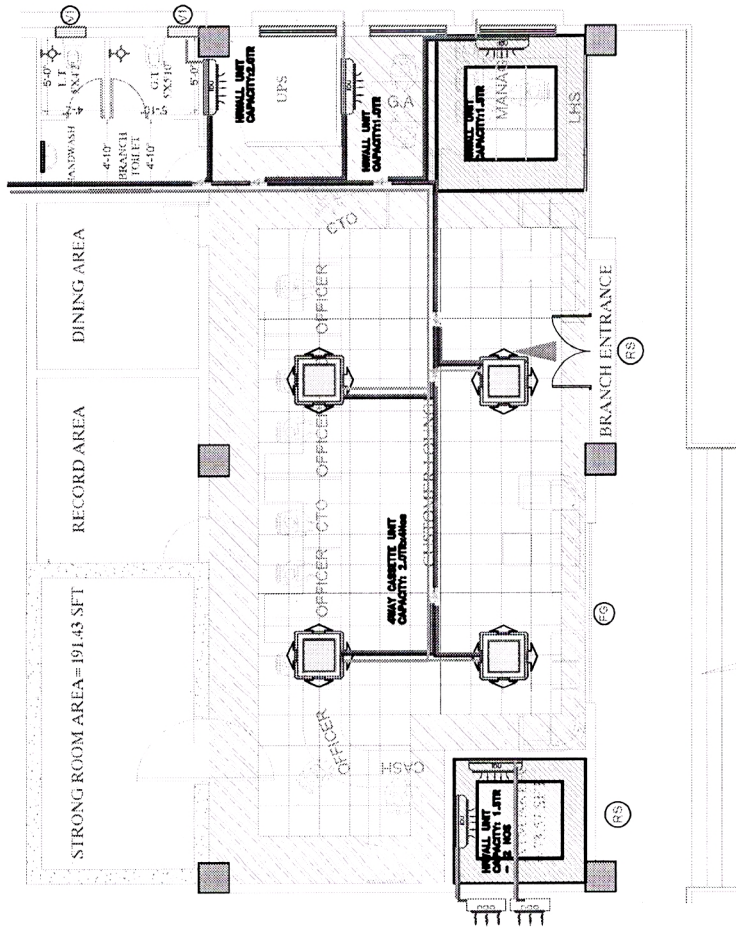
Drawn By: Kavya Checked By: SSK

SCALE: 1/16 DATE: 18.10.2023

DRAWING No: 2

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TR	No.	Total	HP	Quantity	Proposed HP
2	4	8			
15	1	1	15.625	1.80A	1.2
2	1	1			
2	1	1			
1	1	1			

HVAC LEGEND	
	COPPER PIPE GAS REFRIGERENT
	COPPER PIPE LIQUID REFRIGERENT
	DRAIN PIPE
	REFNUT JOINT
	REFNUT JOINT
	VRF ODU
	4WAY CASSETTE UNIT
	HI WALL UNIT

GROUND FLOOR AC LAYOUT

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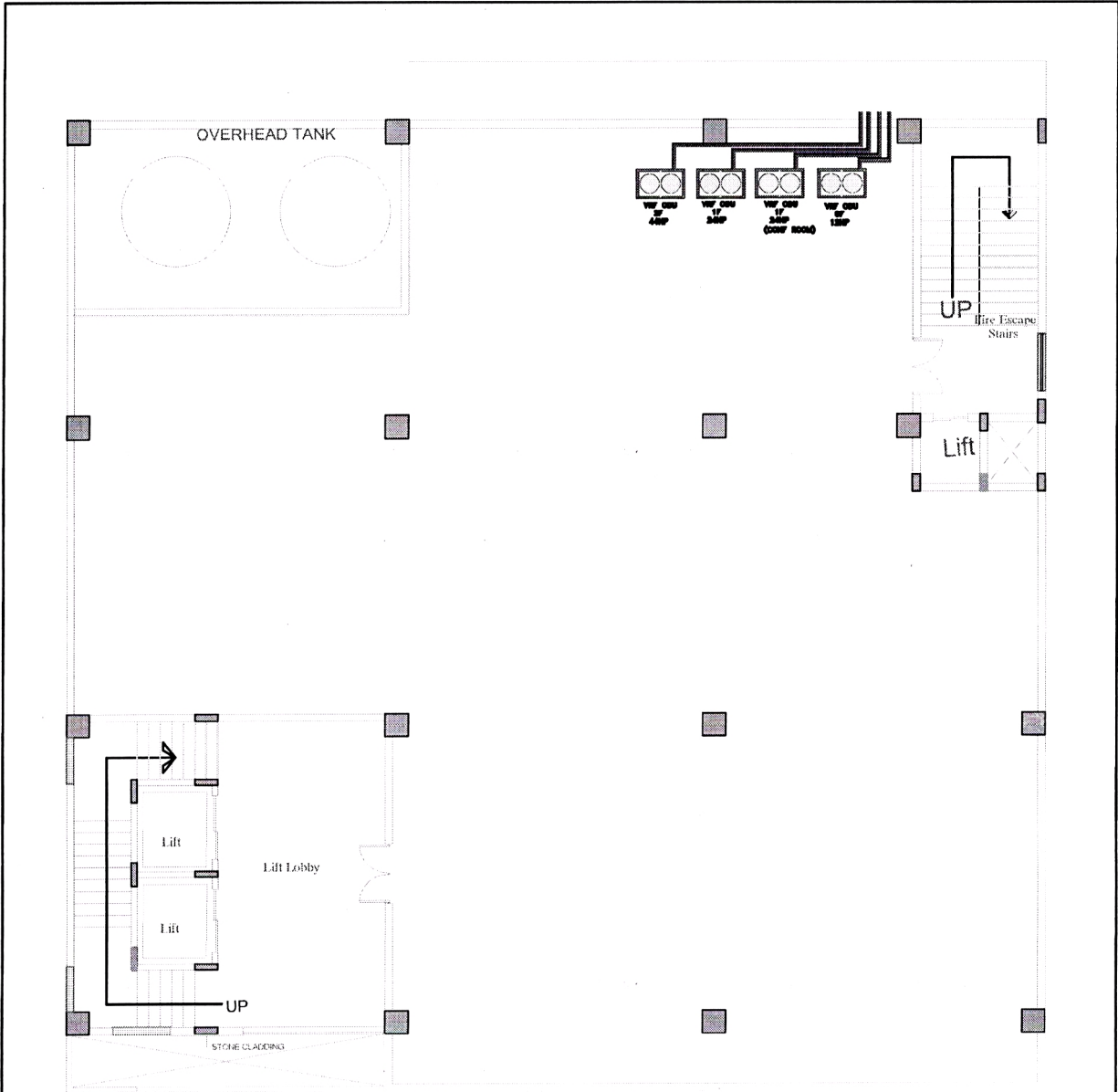
PROPOSED GROUND FLOOR FOR SAPPTHAGIRI GRAMEENA BANK

Drawn By: KAVYA Checked By: SSK
SCALE: NTS DATE: 19.10.2023
DRAWING No: 2

SAPTHAGIRI GRAMEENA BANK, CHITTOOR (AP)

KANAMADI AND ASSOCIATES





TERRACE FLOOR AC LAYOUT

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PROPOSED TERRACE FLOOR FOR SAPTHAGIRI GRAMEENA BANK

SAPTHAGIRI GRAMEENA BANK, CHITTOOR (AP)

Drawn By SUBHASHREE Checked By SSK

SCALE: NTS DATE: 13.10.2022

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