Quotation

ANNEXURE –III (ENCLOSURES TO TENDER FORM)

Name of the work : Construction of Control and monitoring room cum field lab for FATE, CO_2 & CTGC Systems (Size 10.5 × 5.50m)
Place of work : Hayatnagar Research Farm, CRIDA
Estimated value of Work : Civil: Rs.8.2 lakhs +Electrical Rs. 1.5 lakhs Total 9.7 lakhs
EMD : Rs. 19,000/-
Time for completion of work : 90 days from the date of award of work
Security Deposit : 10% of the value of work

PART – I (CIVIL)

S.no.	Particulars	Unit	Qty	Rate	Amount
1.0 (2.8.1)	Earth work excavation by mechanical/manual means is foundation trenches or trains including dressing of sides & ramming of bottoms, including getting out excavated soil & disposal of surplus excavated soil as directed with is a lead of 100 mm 2 x8.00 x 0.60 x 0.75 = 7.20 2 x4.20 x 0.60 x 0.75 = 3.78 6 x1.20 x 1.20 x 1.50 = 12.96 2x12.00 x 0.60 x 0.40 = 5.76 2x5.80 x 0.60 x 0.40 = 2.78 1x10.0 x 0.30 x 0.60 = 1.80 34.28 m^3	cu.m	34.28		
2.0 (4.1.11)	Providing & laying in position Cement Concrete of specified grade excluding the cost of centering & shuttering with 1:5:10 (1cement,5coarse sand, 10 graded stone aggregate of 40 mm nominal size) 2 x8.0 x 0.60 x 0.10 = 0.96 2 x4.20 x 0.60 x 0.10 = 0.50 1 x10.00x5.00 x 0.20 = 10.00 6 x 1.20x1.20 x 0.20 = 1.72 2x11.50x0.60 x 0.30 = 4.14 2x5.50 x 0.60 x 0.30 = 1.98 19.30 m^3	cu.m	19.30		

3.0 (5.3)	Reinforced cement concrete work in beams, suspended floors roofs having slope up to 15^0 holdings balconies, shelves, chajjas, stair cases up to floor five level excluding the cost of centering, shuttering, finishing and reinforcement with 1:2:4 (1cement, 2 coarse sand, 4 graded stone aggregate of 20 mm nominal size) 6x1.20x1.20x0.60 = 5.18 6x0.30x0.25x4.60 = 2.07 1x10.50x6.70x0.125 = 8.79 4x10.50x0.30x0.25 = 3.15 2x5.50x0.30x6.25 = 0.82 3x7.40x0.30x0.25 = 1.62 2x11.50x0.60x0.10 = 1.38 2x5.50x0.60x0.10 = 0.66 23.67m^3	cu.m	23.67		
4.0 (5.9.2/3)	Centering & shuttering including strutting propping etc. and removal of form for suspended floors, roofs, landings balconies & access plat form	sq.m	280.0		
5.0 (5.22)	Reinforcement for R.C.C work, & pre cost slabs, including straightening cutting, bending placing in position & binding all complete cold twisted bars (including centering)	kg	1760.0		
6.0 (7.1) 6.1 (7.1.1)	Random rubble masonry with hard stone in foundation & plinth including leveling up with Cement Concrete 1:4:8 (1Cement, 4 Courses and, 8 graded stone aggregate of 20 mm nominal size) at plinth level, with 1:6 Cement motor 2 x10.80x 0.40x1.00 = 8.64 2 x5.00 x0.40 x1.00 = 4.00 12.64 m^3	cu.m	12.64		
7.0	Filling of basement with fine murram, watering and consolidation 10.00x5.0x0.60x = 30.0 cu. m	cu.m	30.00		
8.0 (6.1) 8.1 (6.1.2) 8.2 (6.12.2)	9ò Brick work with F.P.S bricks of class designation 75 m foundation & plinth in Cement mortar 1:6 2x10.50x 0.23x 3.10 = 14.97 2x4.00x0.23x3.10 = 7.13 22.10 m^3 Deduction: 2x2.1x1.4x.23= 1.35 5x1.8x1.2x.23= 2.48 3.83 cu.m Net Qty. 22.10-3.83=18.27 cu.m Half brick masonry with F.P.S bricks of Glass designation 75 in foundation & plinth in cement mortar 1:4 (1 cement, 4 sand) 2x10.50x0.60 = 12.60 m^2 2x5.50 x 0.60 = 6.60 m^2 10x0.70x0.75 = 5.63 m^2 24.83m^2	cu.m sq.m	18.27 324.42		

9.0 (5.12)	Providing, hoisting & fixing up to floor five level pre cost R.C.C work in lintels, chajjas, shelves plain window sills and including cost of required centering shuttering, finishing smooth with 6 mm thick cement ploster 1:3 (1 cement, 3 sand) on exposed surface complete with reinforcement with 1:2:4 (1 cement , 2 coarse sand, 4 graded stone aggregate of 20 mm nominal size 1 x 7.0 x 0.75 x 0.52 = 5.25 7 x 1.8 x 0.75 x 0.10 = 9.45 14.70 m^2	sq.m	14.70		
10.0 (13.12)	18 mm Cement plaster in two coats under layer 12 mm thick cement plaster 1:5 (1cement, 5 coarse sand) finished with top layer 6 mm thick cement plaster 1:3 2x10.50x3.80 = 79.80 2x10.0x3.10 = 62.00 2x5.00x3.10 = 31.00 2x5.50x3.80 = 41.80 1x10.0x5.0 = 50.00 2x2x10.50x0.70 = 29.40 2x2x5.50x.70 = 15.40 309.40sq,m Deduction: 2x2.10x1.40 =5.88 5x1.80x1.20 =10.80 16.88sq.m Net Qty. 309.40-16.88 = 292.72 sq.m	sq.m	292.72		
11.0 (13.33.2)	Raised & cut pointing for exposed face of R.R. masonry with cement mortar 1:3 (1cement, 3 fine sand) 2x10.50x0.50 = 10.50 2x5.50x0.50 = 5.50 16.00 sq.m	sq.m	16.00		
12.0 (11.41.2)	Providing & laying vitrified glazed floor tiles 600x600 mm of first quality (Johnson / kajaria make) confirming to IS : 1562 of approved make in required colour & shade to be laid on 25 mm cement mortar 1:8 (1cement, 6sand) including pointing the joints with white cement & matching pigments, complete 1x10.30x5.30 = 54.59 m^2	sq.m	54.59		

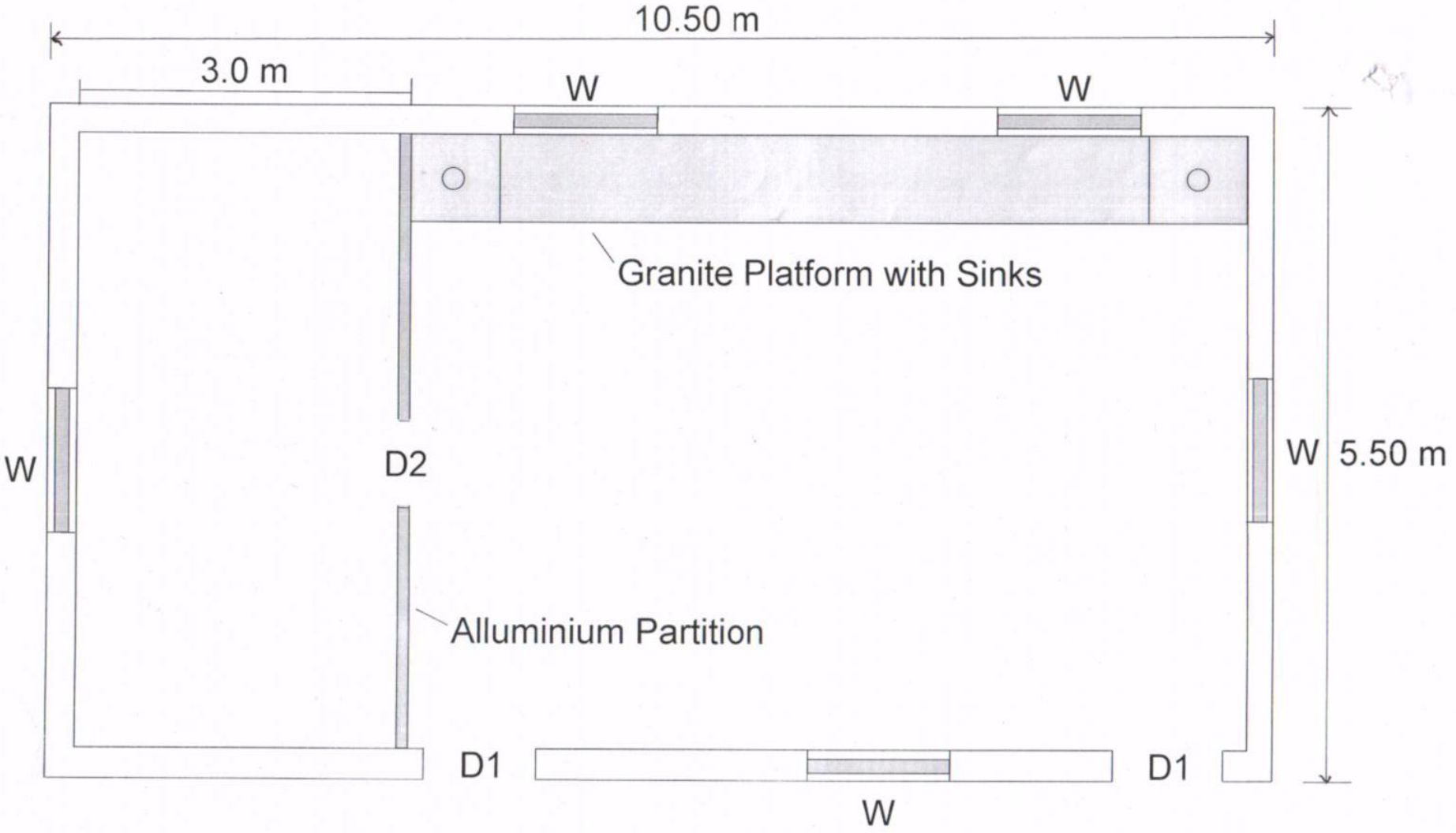
13.0 (21.1)	Providing aluminum work for doors, windows, ventilators and portions with extruded built up standard tubular sections/appropriate z sections & other sections of approved make conforming to IS: 7338 IS:1285 fixed with rawl plugs and screws or with expansion hold fasteners including necessary filling up of gaps at Junctions at top bottom & sides with required pvc/neoprene felt etc., Aluminum sections shall be smooth, rust free, straight, mitered & jointed mechanically wherever required including cleat angle, Aluminum snap beating for glazing/ paneling, C.P. brass / stainless steel screws all complete as per requirements of site engineer.				
13.1 (21.2.1)	For fixed portion: 1x5.0x3.10	kg	52.00		
13.2 (21.1.2)	Door : 1x2.10x1.0	kg	10.0		
13.3 (21.1.2)	Windows frame of approved design & sliding shutter with locking facility (cost of glazing to be paid separately) 5x1.80x1.20	kg	140.00		
14.0 (21.2)	Providing & fixing 12 mm Thick pre laminated particle board flat pressed three layer or graded wood particle board confirming to IS: 12823 grade 1 Type-II in paneling fixed in aluminum doors and partition frames with C.P. brass / stainless steel screws etc., complete as per architectural drawings and directions of site in charge.				
14.1 (21.2.1)	Prelaminated particle board with decorative lamination on side and balancing lamination on other side 1x5.0x1.0 = 5.0 sq.m	sq.m	5.0		
15.0 (21.3)	Providing & fixing glazing in aluminum door, window, ventilator shutter & partitions etc., with PVC/neoprene gasket etc., complete as per directions of site engineer.				
15.1 (21.3.2)	With float glass panes of 5.5 mm thickness 1x5.0x2.00 = 10.00 sq.m 6x1.80x1.20 = 12.96 sq.m 22.96 sq.m	sq.m	22.96		

16.0 (21.4) 16.1	Providing & fixing double action hydraulic door spring of approved brand & manufacture IS: 6315 marked, for doors including cost and cover plates with brass pivot and single piece M.S. Sheet out box with slide plate etc., as per directions of site engineer With stainless steel cover plate.	each	1no		
17.0 (21.8) 17.1	Filling the gap in between aluminum frame & adjustment wall/ceiling by providing weather silicon sealant over backer rod of approved quality as per direction of site engineer. Up to 10 mm depth & 10 mm width	meter	20.00		
18.0 18.1 18.2 (0696) 18.3 (0698) 18.4 (0703) 18.5	Providing & fixing following anodized Aluminum hard ware of approved quality and make, as per requirement of site engineer AL Latches(heavy) 300mm AL Sliding door bolt (heavy) 300x16 mm A1. Tower bolt 300x10mm A1. Door handles 125 m with plate 175x32mm Round shape Al. Door handles (Heavy)	 Each Each Each Each Each	 2nos. 2nos. 6nos. 8nos. 2nos.		
19.0 (10.13)	Providing & fixing T-iron frame for doors, windows and ventilators of mild steel Tee sections, Joints mitred and welded with 15x3mm longs 10cm long embedded in cement concrete blocks 15x10x10 cm of 1:3:6 or with dash fastener or with fixing clips or with bolt & nuts as required, including fixing of necessary butt wings and screws and applying a priming coat of approved steel primer Door : 2.10x1.40 ï 2nos Window : 1.80x1.20 ï 6 nos	kg	61.38		
20.0 (9.20) 20.1 (26.1)	Providing & fixing ISI marked flush door shutters (double door) with decorative lamination on one side balancing lamination on one side & balancing lamination on other side conforming to IS: 2202 with frame of first class hardwood & well matched lamination on other side, complete. 35 mm Thick including ISI marked stainless steel butt hinges with necessary screws 2x2.10x1.40 = 5.88 m^2	sq.m	5.88		

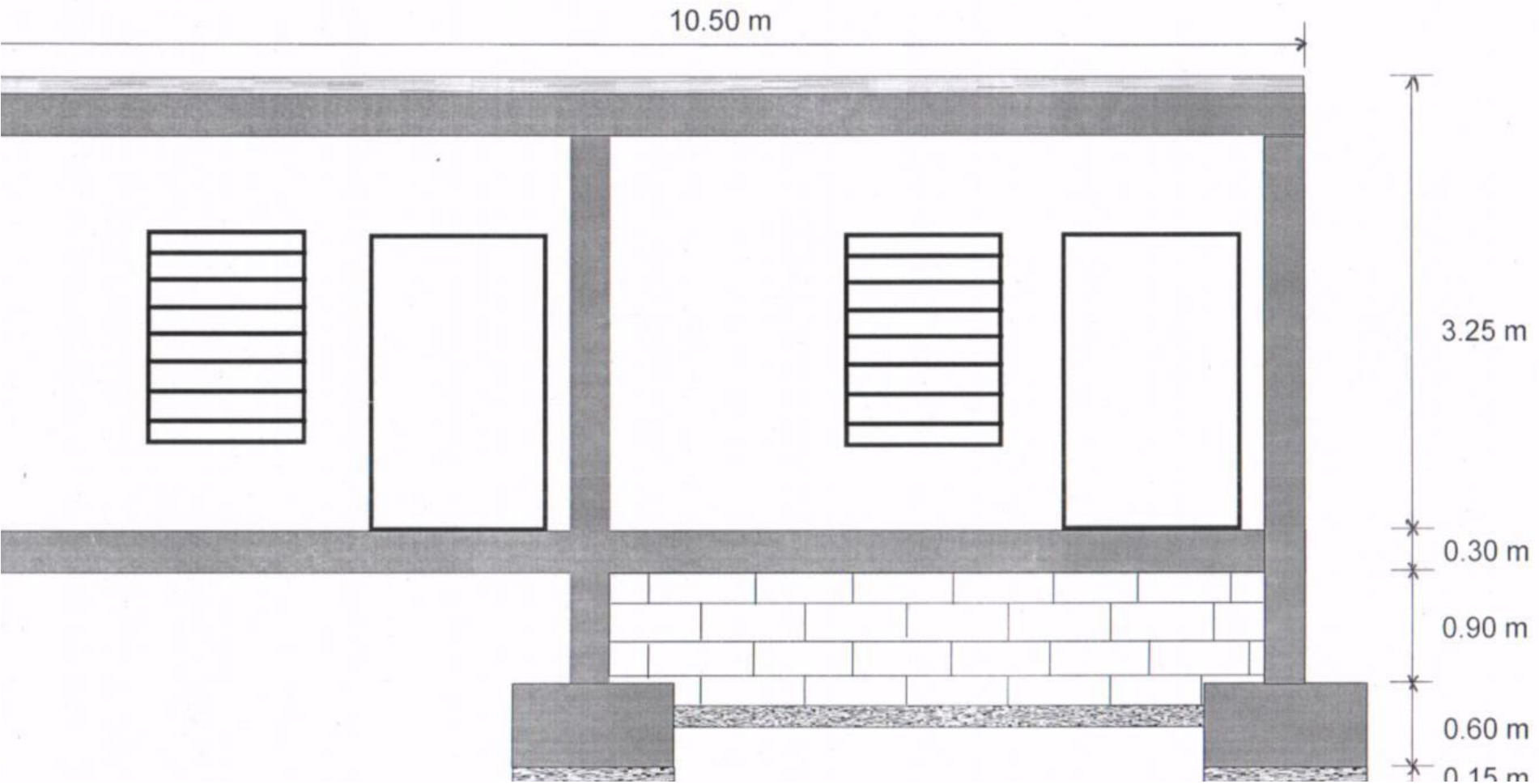
21.0 (8.2.2)	Providing and fixing 18mm thick mirror polished machine cut granite for platforms, Varity counters, windows sills of required size of approved shade, colour & texture laid over 25S mm thick base cement mortar 1:4 (1 cement, 4 coarse sand with joints treated with white cement, mixed with matching pigments, epoxy touchups, including rubbing, caning moulding & polishing to edge to give high gloss finish etc., compete at all levels.				
21.1 (8.2.2.2)	Granite of any colours & shade, area of slab over 1.0 sq.m 1x7.0x0.75 = 5.25 m^2	sq.m	5.25		
21.2 (8.3.2)	Extra for proving edge moulding to 18 mm thick granite stone including machine polishing o give high glass finish, complete as per directions of site engineer. Granite work	metre	11.80		
22.0 (19.4.1.1)	Providing and fixing square-mouth S.W. gully trap grade óAô complete with C.I. grating brick masonry chamber with water tight C.I. cover with frame of 300x300 mm size (inside) the weight of cover to be not less than 4.50kg and frame to be not less than 2.70kg as per standard design 100x100 mm size p type with F.P.S bricks of class designation 75	each	4nos.		
23.0 (18.10.1)	Providing & fixing G.I. pipes of approved make complete G.I. fittings & clamps including cutting & making good the walls etc.				
23.1 (18.10.3)	20mm dia nominal bore	metre	6.0		
23.2	25mm dia nominal bore	metre	25.0		
24.0 (17.11)	Providing and fixing white vitreous china laboratory sink of approved make with C.I. brackets, C.P. brasstrap with necessary C.P. brass unions complete including painting of fitting and brackets, cutting and making good the wall wherever required. 600x450x200 mm	each	2nos.		

25.0	Providing and fixing overhead PVC tank (syntax) and connecting to water inlet & outlet line with all necessary hardware complete.	liter	2000		
26.0 26.1 26.2 (18.16.2) 26.3 (16.90) 26.4 (18.18.2) 26.5 (18.18.3)	Providing & fixing following hardware of standard (ISO) of approved make C.P brass three way swan neck taps (heavy) Brass stop cock(heavy) 20mm P.V.C connection Brass ball valve 20mm Brass ball valve 25mm	 each each each each .	 2nos. 2nos. 2nos. 2nos. 2nos.		
27.0 (22.3) 27.1 27.2	Providing and laying water proofing treatment to roof surface 1st course of applying cement slurry @ 4.4 kg/sq.m mixed with water proofing compound confirming to is 2645 in recommended proportions IInd course of 25mm cement plaster 1:3 (1 cement 3 sand) mixed with water proofing compound recommended proportion and finisned with floating coat of neat cement 1x10.50x6.70 = 70.35sq.m	 sq.m	 70.35		
28.0 (13.41) 28.1 (13.41.1)	Distempering with oil bound washable distemper of approved manufacture and of required shade & colour complete New work two or more coats over Primary coat. 2x10.0x3.10 = 62.00 m^2 2x5.0x3.10 = 31.00 m^2 1x10.0x5.00 = 50.00 m^2 143.00 m^2	 sq.m	 49.86		

29.0 (13.16) 29.1 (13.46.1)	Finishing the walls with premium Acrylic smooth exterior paint required shade & make New work two or more coats over priming coat 2x10.50x3.10 = 65.10 2x5.50x3.10 = 34.10 99.20 m^2	sq.m	99.20		
30.0 (13.62) 30.1 (13.62.1)	Painting the door frames, windows and with synthetic enamel paint of approved brand and make of required colour to given even shade. New work. Two or more coats over primary coat. 2x0.5x2.10x1.40 = 2.94 6x1.5x1.80x1.20 = 19.44 22.38sq.m	sq.m	22.38		
				Total:	
(Rupees					)



Line Diagram of Proposed Control and Monitoring Room, cum Field Lab for FATE, CO_2 and CTGC Systems at Hayathnagar Research Farm, CRIDA


10.50 m
3.25 m
0.30 m
0.90 m
0.60 m
0.15 m

PART –II QUOTATION FOR PROVIDING ELECTRICAL WORKS (INTERNAL ELECTRIFICATION) TO FATE CTCG CONTROL ROOM AT R-5 WATERSHED AREA, HRF CRIDA						
NO	**DESCRIPTION OF ITEM**	**SOR ITEM NO. REFERENCE**	**UNIT**	**QUANTITY**	**BASIC RATE AS PER SOR**	**AMOUNT**
1	Point wiring in PVC conduit, with modular type switch for Light point/fan point exhaust fan point etc as per Specifications of Item no.	1.10.3	20	20		
2	Power plug wiring in PVC conduit (2X4 sq.mm) as per Specifications of Item no.	1.12	Meter	80		
3	Power plug wiring in PVC conduit (4X4 sq.mm) as per Specifications of Item no.	1.13	Meter	40		
4	Circuit/ sub-main wiring in PVC conduit with 2x4 sq.mm + 1x4 sq.mm earth wire as per Specifications of Item no.	1.14.3	Meter	90		
5	Telephone wiring in existing conduit: Supplying and drawing 2 pair x 0.5 sq.mm as per Specifications of Item no.	1.18.2	Meter	20		
6	TV / Internet wiring in existing conduit: Supplying and drawing RG-6 grade x 0.7 sq.mm or Ethernet Data cable for Internet as per Specifications of Item no.	1.19	Meter	20		
7	Supplying and fixing 20 mm PVC conduits as per Specifications of Item no.	1.21.1	Meter	20		
8	Supplying and fixing 25 mm PVC conduits as per Specifications of Item no.	1.21.2	Meter	20		
9	Supplying and fixing of 5/6 amps modular type switch / socket as per Specifications of Item no.	1.24.1	Each	8		
10	Supplying and fixing of 15/16 amps modular type switch / socket as per Specifications of Item no.	1.24.3	Each	8		
11	Supplying and fixing of 3 pin, 5/6 amps, modular type socket as per Specifications of Item no.	1.24.4	Each	8		
12	Supplying and fixing of 6 pin, 15/16 amps, modular type socket as per Specifications of Item no.	1.24.5	Each	8		
13	Supplying and fixing of Telephone or TV or Internet data cable Socket outlet as per Specifications of Item no.	1.24.6	Each	2		
14	Supplying and fixing modular and stepped type electronic fan regulator as per Specifications of Item no.	1.25	Each	6		
15	Supplying and fixing modular type blanking plates as per Specifications of Item no.	1.26	Each	6		
16	Supplying and fixing GI Box along with modular base & cover plate for 1 or 2 Module as per Specifications of Item no.	1.27.1	Each	8		

17	Supplying and fixing GI Box along with modular base & cover plate for 6 Module as per Specifications of Item no.	1.27.3	Each	16		
18	Supplying and fixing modular type 3 pin 5/6 amps plug point with 5/6 amps switch as per Specifications of Item no.	1.31	Each	6		
19	Supplying and fixing modular type 6 pin 15/16 amps plug point with 15/16 amps switch as per Specifications of Item no.	1.32	Each	28		
20	Supplying and fixing 3 pin 5 amps ceiling rose as per Specifications of Item no.	1.33	Each	16		
21	Supplying and fixing 125 amps 16 KA TP MCCB in Vertical TPN MCB DB and as per Specifications of Item no.	2.22.3	Each	1		
22	Supplying and fixing vertical type SP/TP 12 way double door pre-wired MCB DB as per Specifications of Item no.	2.43.8	Each	1		
23	Supplying and fixing SP 2+8 way double door pre-wired MCB DB (for UPS) as per Specifications of Item no.	2.41.5	Each	1		
24	Supplying and fixing of 5 amps to 32 amps 240 volts óBô/óCôseries SP MCBs as per Specifications of Item no.	2.51.1	Each	20		
25	Supplying and fixing of 5 amps to 32 amps 240 volts óBô/óCôseries TP MCBs as per Specifications of Item no.	2.51.3	Each	4		
26	Supply and fixing of SP MCB Blanking plates as per Specifications of Item no.	2.53	Each	12		
27	Supply & Fixing 63 amps DP MCB Isolator as per specifications of item no.	2.54	Each	1		
28	Supplying and fixing 20 amps SPN MCB industrial socket outlet with 20 amps ñCò series SP MCB as per Specifications of Item no.	2.62	Each	4		
29	Supplying and fixing 20 amps TPN MCB industrial socket outlet with 20 amps ñCò series TP MCB as per Specifications of Item no.	2.63	Each	3		
30	Proving and fixing MV Danger notice plate as per Specifications of Item no.	2.71	Each	1		
31	Providing Earthing with Copper Earth Plate as per Specifications of Item no.	3.62	Set	2		
32	Supplying and using extra salt and charcoal for copper plate earth electrode per Specifications of Item no.	3.7	Set	2		
33	Supplying and laying 8 SWG Copper wire as per Specifications of Item no.	3.9	Meter	24		
34	Supplying and laying 25x5 mm Copper earth strip on surface or in recesses for main earth connections from earth electrode up to main power DB as per Specifications of Item no.	3.17	Meter	12		

35	ITC of Ceiling Fan as per Specifications of Item no.	1.44	Each	6		
36	ITC of 450 mm exhaust Fan	1.52	Each	2		
37	Extra for Fixing louvers/shutters as per Specifications of Item no.	1.54	Each	2		
38	ITC of 1 x36/40 watt Box type FTL Fitting on surface as per Specifications of Item no.	1.41	Each	2		
39	ITC of 2x36/40 watt Industrial Box type and Dust and vermin proof light or Commercial Mirror optics type FTLfitting with down rods as per Specifications of Item no. Approved	1.42	Each	8		
40	Supplying and fixing extra down rod as per Specifications of Item no.	1.43	Each	8		
41	--					
42						
43						
44						
45	Supply of 1200 mm Ceiling Fan with out regulator. Approved Makes: Orient/Usha/Crompton/Bajaj/Havellôs	MR	Each	6		
46	Supply of 450 mm Heavy duty 240 volts exhaust fan with louvers / shutters. Approved Makes: Crpmpton/Bajaj/Almonard/Havellôs	MR	Each	2		
47	Supply of 1x36/40 watt Industrial Box type FTL fitting with tubes. Approved makes:Philips/Crompton/Bajaj/Crompton/Wipro/ Fortune Art	MR	Each	2		
48	Supply of 2x36/40 watt Industrial Box type and Dust and vermin proof FTL fitting with tubes. Approved makes:Philips/Crompton/Bajaj/Wipro/Fortune Art	MR	Each	6		
49	Supply of 2x36/40 watt Commercial Mirror optics type FTL fitting with tubes. Approved makes:Philips/Crompton/Bajaj/Wipro/Fortune Art	MR	Each	2		
50	Supply and fixing of Fire Extinguishers suitable Electrical and general classes of Fire.	MR	Lumpsum Job	1		
51	Supply and fixing of 3 x 2 feet glass top in teak wood framed multi lingual (English/hindi/telugu) Electrical Shock treatment chart, as per relevant specification	MR	Each	1		
52	Supply and fixing of medical First Aid box with all necessary medicines and accessories as per relevant specification.	MR	Each	1		
53	**Total of Part-II(Electrical)**					

Total of Part-I:Rs
Total of Part-II:Rs
Grand Total:Rs
(Rupees)

(SIGNATURE OF THE TENDERER)

SPECIFICATION SHEET FOR ELECTRICAL WORKS
(ENCLOSURE TO ANNEXURE-III PART-II)

DETAILS OF REQUIREMENTS FOR PROVIDING ELECTRICAL WORKS TO FATE & CTGC CONTR & MONITORING ROOM CUM FIELD LAB AT HRF

A. GENERAL DETAILS OF INDENTOR'S EQUIPMENTS PROPOSED FOR INSTALLATION:

Vide our Indent dtd 13/6/11, an RCC Building in about 10 mtr x 5 mtr area is required to be constructed for housing various state of the art scientific research laboratory equipment of FA & CTGC near R-6 area at HRF and the same is named as "Control & Monitoring Room cum Fiel Lab" where the following equipments are proposed for installation for which proper electrical power supply arrangements are required to be provided:

(1) Various Control & Monitoring Equipments of FATE & CTGC and some Computerized Work Stations with Printer and other Accessories, capable of operating on 415 volts, 3 ph & 230 volts, single phase, 50 cycle.
(2) I no. Tray Drier capable of operating on 415 volts, 3 phase, 50 cycles and is rated at 1 kw.
(3) I no. Hot Air Oven capable of operating on 230 volts, 1 phase, 50 cycles and is rated at 2 kv
(4) I no. Plain Grinding Machine capable of operating on 230 volts, 1 phase, 50 cycles and is ra at 0.5 HP.
(5) 2 no. Electronic Weighing Machines / Balance capable of operating on 230 volts, 1 phase, 5 cycles.
(6) 1 no. Refrigerator of not exceeding 300 ltrs capacity, capable of operating on 230 volts, 1 phase, 50 cycles.
(7) Electrical facility provision for installation of some more same or similar equipment in futu
(8) A set of 10 KVA UPS (Input: 415 volts, 3 Ph, 50 Hz and Output: 230 volts, 1 Ph, 50 Hz) with necessary battery bank. All the Equipments installed inside FATE & CTGC Control Room sha be fed with UPS Power.
(9) Provision for properly bringing in the necessary Ethernet & telephone cables.
(10) Emergency Fire Fighting Appliances, Medical First Aid Box etc shall be provided at suitable place.
(11) All the above Equipments except item No.9, will be supplied & Installed by a separa Vendor.

B. DETAILS OF GENERAL REQUIREMENTS OF INDENTOR FOR PROVIDING ELECTRICAL FACILITIE

(1) The quantity and location / orientation of 6A/16A Modular, Multi & Universal type Switch-Sockets, 20A SPN Metal Clad Outlets with MCB and 20A TPN Metal clad outlets with MCB, shall be considered on the basis of actual present requirement plus 25% spare for future extension provision.
(2) There shall be provision for proper protection & control of each of the above equipment.
(3) Separate and Independent Distribution Boards / Switch Boards shall be provided for UPS ar Non-UPS power distribution & control.
(4) The Physical location and orientation of the above proposed equipments, Ceiling & Exhaust fans, Light Fittings etc shall be as shown in Electrical Layout Drawing, enclosed here with.
(5) Any other works incidental to or associated with the above shall be carried out.

C. DETAILS OF SPECIFIC REQUIREMENTS OF INDENTOR FOR PROVIDING ELECTRICAL FAC

(1) 2 sets of 1 x 36W/40 W Box type FTL Fitting are to be provided, outside control room front side, for general outdoor lighting.
(2) 2 sets 2 x 36W/40 W Mirror Optics type FTL Fitting are to be provided inside the Cont Room.
(3) 4 sets 2 x 36W/40 W Industrial Box and Dust & vermin proof type FTL Fitting are to b provided inside the Sample Processing Lab.
(4) 2 no. suitable Exhaust Fans capable of operating on 230 volts, 1 phase, 50 cycles shall installed for venting out the suspended dust particles.
(5) 1 no. 2 ton Split type Air conditioner for FATE & CTGC Control Room portion only, cap operating on 230 volts, 1 phase, 50 cycles, shall be provided as required for maintaini Control room temperature with in specified limits.
(6) Provision shall be ensured for extending the necessary power supply to Bore Well Pu
(7) 6 sets of 1200 mm Ceiling fans with stepped type electronic regulators are to be provi
(8) 2 sets Copper Plate type earth electrodes shall be provided in order to ensure proper Grounding requirements and limit the Ground potential within specified limit of the equipment Manufacturer.
(9) Necessry power cable between CPWD SS Main Building MV Panel & FATE/CTGC cable please be taken in to accounts, if not considered earlier.

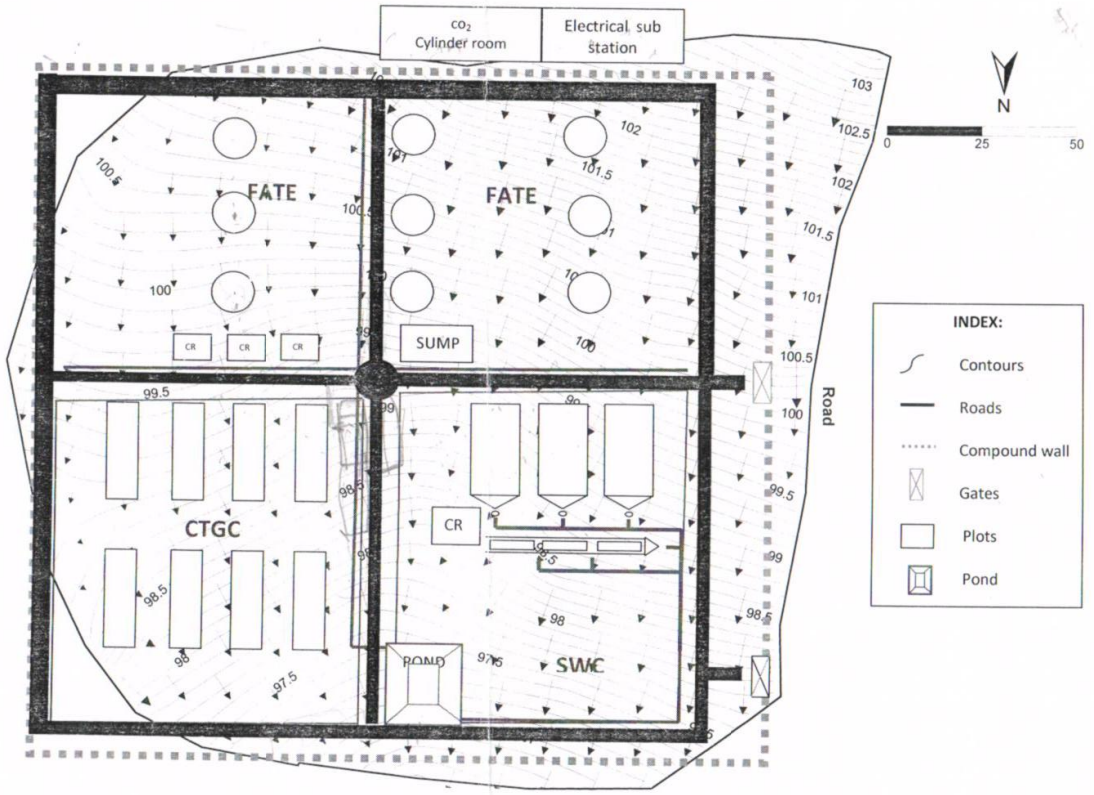
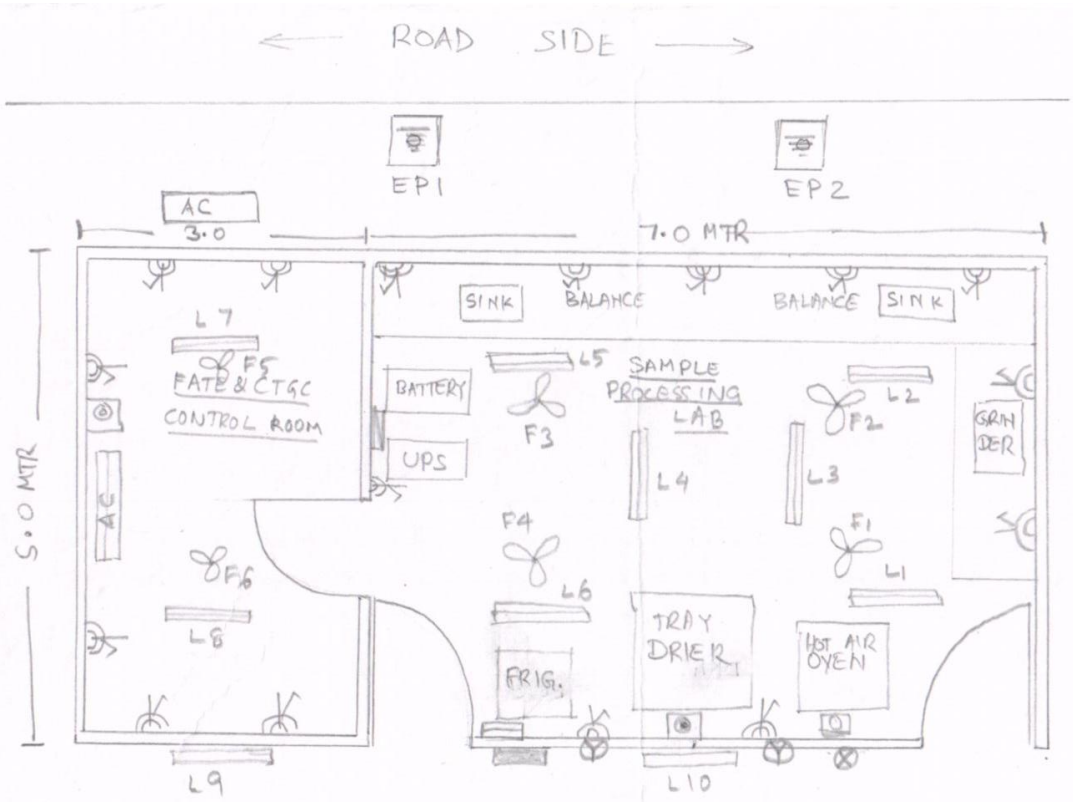


Fig. Experimental Lay out under NICRA at HRF



INDEX:

- MAIN DB
- UPS DB
- SWITCH BOARD
- 6/16 MULTI UNIVERSAL SS OUTLET SPN
- 2 X 36/40 W FTL FTG
- 1 X 36/40 W FTL FTG
- 20A SPN METAL SOCKET OUTLET
- 20A TPN METAL SOCKET OUTLET
- BRACKE FAN
- CEILING FAN
- EX. FAN
- FIRE EX.

PROPOSED EQUIPMENT LAYOUT OF CONTROL ROOM FOR FATE & CTGC SYSTEMS AT HRF

PREPARED BY: (PVC SHEKHAR REDDY) VSM CONSULTANT 30.8.11 (Dr. M. VANAJA) Pr. SCIENTIST (Pl. physiol.)