



REPUBLIC OF THE PHILIPPINES  
**PHILIPPINE STATISTICS AUTHORITY**

**CONSTRUCTION OF FIT-OUT AND LANDSCAPE WORKS FOR THE  
TWENTY-THREE (23) STOREY PHILIPPINE STATISTICS AUTHORITY  
(PSA) OFFICE BUILDING WITH COVERED ROOF DECK  
PSA COMPLEX, EAST AVENUE, DILIMAN, QUEZON CITY**

**DETAILED ARCHITECTURAL AND ENGINEERING DESIGN ( DAED )  
M E C H A N I C A L**

NOTE:  
PURSUANT TO SECTION 4 OF ANNEX "A" OF THE REVISED IMPLEMENTING RULES AND REGULATION OF R.A. 5464, APPROVAL BY THE AUTHORIZED DPWH OFFICIALS OF DETAILED ENGINEERING SURVEYS AND DESIGN UNDERTAKEN BY CONSULTANTS NEITHER DIMINISHES THE RESPONSIBILITY OF THE LATTER FOR THE TECHNICAL INTEGRITY OF THE SURVEYS AND DESIGN NOR TRANSFER ANY PART OF THAT RESPONSIBILITY TO THE APPROVING OFFICIALS.

THE DESIGN CONSULTANT SHALL BE HELD RESPONSIBLE FOR THE FAILURE OF THE FACILITY/ES / STRUCTURES DUE TO FAULTY DESIGN EXCEPT FOR THE CHANGES MADE WITHOUT THE CONFORMITY OF THE CONSULTANTS.

DRAWINGS AND SPECIFICATIONS DULY SIGNED, STAMPED OR SEALED, AS INSTRUMENTS OF SERVICE, ARE PROPERTY AND DOCUMENTS OF THE ARCHITECT. WHETHER THE OBJECT FOR WHICH THEY ARE MADE IS EXECUTED OR NOT, IT SHALL BE UNLAWFUL FOR ANY PERSON, WITHOUT THE WRITTEN CONSENT OF THE ARCHITECT OR AUTHOR OF SAID DOCUMENTS, TO DUPLICATE OR TO MAKE COPIES OF SAID DOCUMENTS FOR USE IN THE REPETITION OF AND FOR OTHER PROJECTS OR BUILDINGS, WHETHER EXECUTED PARTLY OR IN WHOLE.

GENERAL SPECIFICATION

- CONTRACTOR IS ADVISED TO HAVE AN ACTUAL SURVEY OF THE EXISTING CONDITION AT SITE.
- ALL EQUIPMENT SHALL BE INSTALLED IN APPROXIMATE LOCATION AS SHOWN ON THE PLANS.
- CONTRACTOR MUST SUBMIT SHOP DRAWINGS INDICATING ACTUAL EQUIPMENT DIMENSION AND OPERATING WEIGHTS. SUFFICIENT CLEARANCES TO FACILITATE NORMAL SERVICES & MAINTENANCE WORKS ARE PROVIDED IN THIS DESIGN PLANS. HOWEVER, SHOULD ACTUAL EQUIPMENT PHYSICAL SIZES DIFFER CONSIDERABLY FROM THOSE SHOWN IN THE PLANS, THE CONTR. SHOULD NOTIFY THE ARCHITECT OR DESIGN ENGINEER IMMEDIATELY IN WRITING.
- ALL EQUIPMENT SHALL BE SET ON 150MM THICK, LEVEL REINFORCED STEEL BASE, UNLESS OTHERWISE SPECIFIED. (FOR FLOOR MOUNTED EQUIPMENT)
- ALL EQUIPMENT SHALL BE MOUNTED ON OR SUPPORTED BY VIBRATION ISOLATOR OR ASSEMBLIES.
- ALL AC UNIT CEILING CONCEALED SHALL HAVE SERVICE ACCESS TO BE PROVIDED BY THE CIVIL CONTRACTOR.
- ALL PIPING SHALL BE LEAK TESTED WITH A PRESSURE OF AT LEAST 1 1/2 TIMES THE DESIGN WORKING PRESSURE (24 HOURS).
- ALL MATERIALS SHALL BE NEW & CLEAN.
- DEVIATIONS AND REVISIONS FROM THE PLANS SHALL BE PREFERRED TO THE ARCHITECTS FOR REVIEW AND APPROVAL.
- ALL NECESSARY GOVERNMENT PERMITS SHALL BE SECURED AND AND BORNE BY THIS CONTRACTOR.
- ALL WORKS SHALL BE GUARANTEED FOR A PERIOD OF ONE (1) YEAR AFTER DATE OF ACCEPTANCE.
- THE AIR CONDITIONING AND VENTILATION SYSTEM SHOULD BE PROPERLY BALANCE BY A SEPARATE CONTRACTOR AND TO SUBMIT BALANCING REPORT FOR EVALUATION (BY TENANT'S CONTRACTOR).
- THIS CONTRACTOR SHOULD COORDINATE HIS WORKS CLOSELY WITH THE WORKS OF OTHER TRADES. PROVISION FOR THE PIPE PASSAGES THRU WALLS SHALL BE COORDINATED IN ADVANCE WITH THE BUILDING CONTRACTOR. FAILURE ON THE PART OF THIS TO MAKE SUCH PROVISION IN ADVANCE SHALL MEAN PROVIDING THEM LATER AT HIS OWN EXPENSE.
- VRV / VRF WITH AUTOMATIC REFRIGERANT CHARGE FUNCTION TO AVOID OVER CHARGE & UNDER CHARGE .
- VRV/VRV TECHNOLOGY MUST & SHALL INCLUDE VARIABLE REFRIGERANT TEMPERATURE & VARIABLE AIR VOLUME TECHNOLOGY AT THE EVAPORATOR COIL (FCU) ALLOWING THE FCU TO MATCH SETPOINT COMFORT WITH MINIMAL ENERGY CONSUMPTION THROUGH Te INCREASE AND VARY FCU FAN SPEED/AIRFLOW.
- ALL PIPING PASSING ABOVE THE CEILING LEVEL SHOULD BE PROPERLY BRACKETED.  
P-TRAP IS NEEDED FOR CONDENSATE DRAIN PIPE.
- USE THHN MM2 LEAD FREE CONDUCTOR FROM INDOOR TO OUTDOOR SUPPLYING ACCU FAN MOTOR. SPLICING INSIDE THE CONDUIT IS NOT ALLOWED AND PROVIDE JUNCTION BOX IF NECESSARY.
- USE L.T. FLEXIBLE CONDUIT FOR OUTDOOR UNIT, HOWEVER IF EMT IS USED APPLY APPROVED SEALANT AT EVERY JOINT OF EMT.

ABBREVIATION:



- SQ.M SQUARE METER
- CFM CUBIC FEET PER METER
- TR TONS OF REFRIGERATION
- MM MILLIMETER
- KW KILOWATT
- KG KILOGRAM
- DIA. (ø) DIAMETER
- QTY. QUANTITY
- TSP TOTAL STATIC PRESSURE
- Pø PASCAL
- V/PH/HZ VOLTS/PHASE/HERTZ
- FCU FAN COIL UNIT
- EAG EXHAUST AIR GRILLE
- FAG FRESH AIR GRILLE
- EAD EXHAUST AIR DUCT
- FAD FRESH AIR DUCT
- SAD SUPPLY AIR DUCT
- RAD RETURN AIR DUCT
- VD VOLUME DAMPER
- FD FIRE DAMPER
- MVD MOTORIZED VOLUME DAMPER
- SCD SUPPLY CEILING DIFFUSER
- LD LOUVER DOOR
- PAD PRESSURIZATION AIR DUCT
- ESP EXTERNAL STATIC PRESSURE

NOTE:  
PURSUANT TO SECTION 4 OF ANNEX "A" OF THE REVISED IMPLEMENTING RULES AND REGULATION OF R.A. 9164, APPROVAL BY THE AUTHORIZED DPWH OFFICIALS OF DETAILED ENGINEERING SURVEYS AND DESIGN UNDERTAKEN BY CONSULTANTS NEITHER DIMINISHES THE RESPONSIBILITY OF THE LATTER FOR THE TECHNICAL INTEGRITY OF THE SURVEYS AND DESIGN NOR TRANSFER ANY PART OF THAT RESPONSIBILITY TO THE APPROVING OFFICIALS.  
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EQUIPMENT SCHEDULE

SUMMARY OF FAN COIL UNIT (FCU)

STATUS/UNIT	LOCATION	QTY.	TOTAL COOLING CAP. KW(HP) / BTUH(TR)	MODEL TYPE	AIR FLOW RATE (CFM)	E.S.P. (Po)	PIPING CONNECTIONS		ELECTRICAL DATA				BASIS OF DESIGN (MODEL)	REMARKS
							LIQUID (MM)	GAS (MM)	INPUT (KW)	VOLT	PHASE	HERTZ		
VO3/FCU-1	AS SHOWN	7	5.6(2.0) / 19,100(1.5)	4-WAY CEILING CASSETTE FREE BLOW	600	-	6.40ø	12.70ø	0.040	220	1	60	DAIKIN FXF050AVM	UNIT IS BASED ON DAIKIN BRAND
VO3/FCU-2	AS SHOWN	94	7.1(2.5) / 24,200(2.0)	4-WAY CEILING CASSETTE FREE BLOW	750	-	9.50ø	15.90ø	0.063	220	1	60	DAIKIN FXFQ63AVM	
VO3/FCU-3	AS SHOWN	22	9.0(3.2) / 30,700(2.5)	4-WAY CEILING CASSETTE FREE BLOW	960	-	9.50ø	15.90ø	0.096	220	1	60	DAIKIN FXFQ80AVM	
VO3/FCU-4	AS SHOWN	151	11.2(4.0) / 38,200(3.0)	4-WAY CEILING CASSETTE FREE BLOW	1200	-	9.50ø	15.90ø	0.158	220	1	60	DAIKIN FXFQ100AVM	
VO3/FCU-5	AS SHOWN	165	14.0(5.0) / 47,800(4.0)	4-WAY CEILING CASSETTE FREE BLOW	1500	-	9.50ø	15.90ø	0.178	220	1	60	DAIKIN FXFQ125AVM	
VO3/FCU-6	AS SHOWN	17	7.1(2.5) / 24,200(2.0)	CEILING SUSPENDED FREE BLOW	750	-	9.50ø	15.90ø	0.145	220	1	60	DAIKIN FXHQ63MAVE	
VO3/FCU-7	AS SHOWN	10	11.2(4.0) / 38,200(3.0)	CEILING SUSPENDED FREE BLOW	1200	-	9.50ø	15.90ø	0.199	220	1	60	DAIKIN FXHQ100MAVE	
VO3/FCU-8	AS SHOWN	50	5.6(2.0) / 19,100(1.5)	WALL MOUNTED FREE BLOW	600	-	6.40ø	12.70ø	0.033	220	1	60	DAIKIN FXAQ50PVE	
VO3/FCU-9	AS SHOWN	38	7.1(2.5) / 24,200(2.0)	WALL MOUNTED FREE BLOW	750	-	9.50ø	15.90ø	0.050	220	1	60	DAIKIN FXAQ63PVE	
ADD/FCU-10	AS SHOWN	11	2.2(0.75) / 7,500(0.60)	WALL MOUNTED FREE BLOW	225	-	6.40ø	12.70ø	0.019	220	1	60	DAIKIN FXAQ20PVE	
ADD/FCU-11	AS SHOWN	1	2.8(1.0) / 9,600(0.80)	WALL MOUNTED FREE BLOW	300	-	6.40ø	12.70ø	0.028	220	1	60	DAIKIN FXAQ25PVE	
ADD/FCU-12	AS SHOWN	26	4.5(1.5) / 15,400(1.20)	WALL MOUNTED FREE BLOW	450	-	6.40ø	12.70ø	0.020	220	1	60	DAIKIN FXAQ40PVE	
ADD/FCU-13	AS SHOWN	92	3.6(1.5) / 12,300(1.20)	2-WAY CEILING CASSETTE FREE BLOW	600	-	6.40ø	12.70ø	0.039	220	1	60	DAIKIN FXCQ32AVM	
ADD/FCU-14	AS SHOWN	2	9.0(3.2) / 30,000(2.5)	CEILING SUSPENDED FREE BLOW	960	-	9.50ø	15.90ø	0.199	220	1	60	DAIKIN FXHQ100MAVE	

EQUIPMENT SCHEDULE

SUMMARY OF VARIABLE REFRIGERANT VOLUME (VRV) PER MODULE

STATUS/UNIT	LOCATION	MODEL	QTY.	TOTAL COOLING CAP. (HP) / (TR)	REFRIGERANT TYPE	PIPING CONNECTIONS		ELECTRICAL DATA				EER	REMARKS
						LIQUID (MM)	GAS (MM)	INPUT (KW)	VOLT	PHASE	HERTZ		
VRV-1	AS SHOWN	DAIKIN RXMQ4AVE	4	4.0 / 3.0	R-410A	9.50ø	15.9ø	2.88	220	1	60	13.26	UNIT IS BASED ON DAIKIN BRAND
VRV-2	AS SHOWN	DAIKIN RXQ6AYM	2	6.0 / 4.50	R-410A	9.50ø	19.10ø	3.38	380	3	60	16.15	UNIT IS BASED ON DAIKIN BRAND
VRV-3	AS SHOWN	DAIKIN RXQ8AYM	21	8.0 / 6.0	R-410A	9.50ø	19.10ø	5.17	380	3	60	14.78	UNIT IS BASED ON DAIKIN BRAND
VRV-4	AS SHOWN	DAIKIN RXQ10AYM	16	10.0 / 8.0	R-410A	9.50ø	22.20ø	6.84	380	3	60	13.96	UNIT IS BASED ON DAIKIN BRAND
VRV-5	AS SHOWN	DAIKIN RXQ12AYM	55	12.0 / 9.50	R-410A	12.70ø	28.60ø	8.70	380	3	60	13.10	UNIT IS BASED ON DAIKIN BRAND
VRV-6	AS SHOWN	DAIKIN RXQ14AYM	20	14.0 / 11.50	R-410A	12.70ø	28.60ø	10.70	380	3	60	12.71	UNIT IS BASED ON DAIKIN BRAND
VRV-7	AS SHOWN	DAIKIN RXQ16AYM	22	16.0 / 13.0	R-410A	12.70ø	28.60ø	12.90	380	3	60	11.94	UNIT IS BASED ON DAIKIN BRAND
VRV-8	AS SHOWN	DAIKIN RXQ18AYM	21	18.0 / 14.50	R-410A	15.90ø	28.60ø	15.30	380	3	60	11.18	UNIT IS BASED ON DAIKIN BRAND
VRV-9	AS SHOWN	DAIKIN RXQ20AYM	13	20.0 / 16.0	R-410A	15.90ø	28.60ø	17.70	380	3	60	10.79	UNIT IS BASED ON DAIKIN BRAND



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PROJECT: CONSTRUCTION OF FIT-OUT AND LANDSCAPE WORKS FOR THE TWENTY-THREE (23) STOREY PHILIPPINE STATISTICS AUTHORITY (PSA) OFFICE BUILDING WITH COVERED ROOF DECK  
 LOCATION: PSA COMPLEX, EAST AVENUE, DILIMAN, QUEZON CITY

SHEET CONTENT: GENERAL NOTES, ABBREVIATION, EQUIPMENT SCHEDULE

DESIGNER: RTM  
 CAD: Jvø / Rvø  
 CHECKED: RTM  
 DATE: FEB. 2022

REVISIONS: SYMBOL, REMARK, DATE

SHEET NO. M-01