

INDOOR UNIT SCHEDULE					
ITEM	QTY	DESCRIPTION	COOLING CAPACITY	POWER SUPPLY	SYSTEM SERVED
CCU-01	2	4Way Ceiling Cassette Unit	3.60 kW	230V/1Ph/50Hz	AHU
CCU-02	2	4Way Ceiling Cassette Unit	5.35 kW	230V/1Ph/50Hz	AHU
CCU-03	4	4Way Ceiling Cassette Unit	7.10 kW	230V/1Ph/50Hz	AHU
CCU-04	7	4Way Ceiling Cassette Unit	10.50 kW	230V/1Ph/50Hz	AHU
CCU-A-01	2	4Way Ceiling Cassette Unit	3.90 kW	230V/1Ph/50Hz	VRF
CCU-C-01	1	4Way Ceiling Cassette Unit	2.00 kW	230V/1Ph/50Hz	VRF
CCU-C-02	3	4Way Ceiling Cassette Unit	3.90 kW	230V/1Ph/50Hz	VRF
CCU-D-01	2	4Way Ceiling Cassette Unit	5.60 kW	230V/1Ph/50Hz	VRF
CCU-D-02	3	4Way Ceiling Cassette Unit	3.90 kW	230V/1Ph/50Hz	VRF
CCU-D-03	1	4Way Ceiling Cassette Unit	13.80 kW	230V/1Ph/50Hz	VRF
CCU-D-04	1	4Way Ceiling Cassette Unit	16.10 kW	230V/1Ph/50Hz	VRF
CCU-FAA-01	1	4Way Ceiling Cassette Unit	3.90 kW	230V/1Ph/50Hz	DX
CCU-RCR-01	1	4Way Ceiling Cassette Unit	3.90 kW	230V/1Ph/50Hz	DX
CCU-RR-01	1	4Way Ceiling Cassette Unit	3.90 kW	230V/1Ph/50Hz	DX
CCU-TR-01	1	4Way Ceiling Cassette Unit	2.60 kW	230V/1Ph/50Hz	DX
HCU-01	2	Ceiling Concealed Unit	10.60 kW	230V/1Ph/50Hz	AHU
HCU-02	1	Ceiling Concealed Unit	14.10 kW	230V/1Ph/50Hz	AHU
MWU-01	6	Midwall AC Unit	2.90 kW	230V/1Ph/50Hz	AHU
MWU-02	3	Midwall AC Unit	3.80 kW	230V/1Ph/50Hz	AHU
MWU-03	1	Midwall AC Unit	6.70 kW	230V/1Ph/50Hz	AHU
MWU-A-01	1	Midwall AC Unit	4.80 kW	230V/1Ph/50Hz	VRF
MWU-A-02	1	Midwall AC Unit	6.70 kW	230V/1Ph/50Hz	VRF
MWU-A-03	1	Midwall AC Unit	4.80 kW	230V/1Ph/50Hz	VRF
MWU-AM-01	1	Midwall AC Unit	4.80 kW	230V/1Ph/50Hz	DX
MWU-AD-01	1	Midwall AC Unit	6.70 kW	230V/1Ph/50Hz	DX
MWU-B-01	3	Midwall AC Unit	6.70 kW	230V/1Ph/50Hz	VRF
MWU-B-02	1	Midwall AC Unit	6.70 kW	230V/1Ph/50Hz	VRF
MWU-C-01	4	Midwall AC Unit	3.60 kW	230V/1Ph/50Hz	VRF
MWU-COU-01	1	Midwall AC Unit	6.70 kW	230V/1Ph/50Hz	DX
MWU-D-01	1	Midwall AC Unit	6.80 kW	230V/1Ph/50Hz	VRF
MWU-D-02	5	Midwall AC Unit	6.00 kW	230V/1Ph/50Hz	VRF
MWU-DC-01	1	Midwall AC Unit	3.60 kW	230V/1Ph/50Hz	DX
MWU-FO-01	1	Midwall AC Unit	6.70 kW	230V/1Ph/50Hz	DX
MWU-FS-01	1	Midwall AC Unit	6.70 kW	230V/1Ph/50Hz	DX
MWU-OF-01	1	Midwall AC Unit	3.60 kW	230V/1Ph/50Hz	DX
MWU-OF-01	1	Midwall AC Unit	4.80 kW	230V/1Ph/50Hz	DX
MWU-RRR-01	1	Midwall AC Unit	6.70 kW	230V/1Ph/50Hz	DX
MWU-T-01	1	Midwall AC Unit	3.80 kW	230V/1Ph/50Hz	DX
MWU-TR-01	1	Midwall AC Unit	6.70 kW	230V/1Ph/50Hz	AHU
UCU-B-01	1	Underceiling Indoor Unit	7.10 kW	230V/1Ph/50Hz	VRF
Grand total:	74				

OUTDOOR UNIT SCHEDULE (DX SYSTEM)					
ITEM	QTY	DESCRIPTION	POWER SUPPLY	Mark	Count
ODU-AM-01	1	Heat Pump	230V/1Ph/50Hz		
ODU-AO-01	1	Heat Pump	230V/1Ph/50Hz		
ODU-COU-01	1	Heat Pump	230V/1Ph/50Hz		
ODU-DC-01	1	Heat Pump	230V/1Ph/50Hz		
ODU-FAA-01	1	Heat Pump	230V/1Ph/50Hz		
ODU-FS-01	1	Heat Pump	230V/1Ph/50Hz		
ODU-OF-01	1	Heat Pump	230V/1Ph/50Hz		
ODU-R-01	1	Heat Pump	230V/1Ph/50Hz		
ODU-RCR-01	1	Heat Pump	230V/1Ph/50Hz		
ODU-RR-01	1	Heat Pump	230V/1Ph/50Hz		
ODU-RRR-01	1	Heat Pump	230V/1Ph/50Hz		
ODU-T-02	1	Heat Pump	230V/1Ph/50Hz		
ODU-TR-01	1	Heat Pump	230V/1Ph/50Hz		
ODU-UR-01	1	Heat Pump	230V/1Ph/50Hz		
Grand total:	15				

AIR TERMINAL SCHEDULE					
ITEM	QTY	DESCRIPTION	Mark	Count	Flow
Disc Valve					
DV-01	1	Disc Valve		200e	20.0 L/s
DV-01	1	Disc Valve		200e	45.0 L/s
DV-01	10	Disc Valve		200e	50.0 L/s
DV-01	2	Disc Valve		200e	55.0 L/s
DV-01	5	Disc Valve		200e	65.0 L/s
DV-01	9	Disc Valve		200e	71.0 L/s
Extract Air Diffuser					
EAD-01	1	Extract Air Diffuser		200e	65.0 L/s
EAD-01	1	Extract Air Diffuser		200e	70.0 L/s
EAD-01	3	Extract Air Diffuser		200e	73.0 L/s
EAD-01	1	Extract Air Diffuser		200e	90.0 L/s
EAD-01	2	Extract Air Diffuser		200e	92.0 L/s
EAD-01	4	Extract Air Diffuser		200e	94.0 L/s
EAD-01	3	Extract Air Diffuser		200e	128.0 L/s
Return Air Grille					
RG-01	1	Return Air Grille		200e	247.0 L/s
RG-01	1	Return Air Grille		200e	309.0 L/s
RG-02	1	Return Air Grille		1200x600	0.0 L/s
Supply Air Diffuser					
SAD-01	1	Supply Air Diffuser		150e	15.0 L/s
SAD-01	1	Supply Air Diffuser		150e	20.0 L/s
SAD-01	1	Supply Air Diffuser		150e	80.0 L/s
SAD-01	4	Supply Air Diffuser		150e	106.0 L/s
SAD-01	9	Supply Air Diffuser		150e	110.0 L/s
SAD-02	3	Supply Air Diffuser		150e	106.0 L/s
Supply Air Valve					
SV-01	5	Supply Air Valve		150e	15.0 L/s
SV-01	2	Supply Air Valve		150e	20.0 L/s
SV-01	3	Supply Air Valve		150e	25.0 L/s
SV-01	1	Supply Air Valve		150e	30.0 L/s
Weather Louve					
WL-01	4	Weather Louve		500x500	0.0 L/s
WL-01	1	Weather Louve		500x500	0.0 L/s
WL-02	8	Weather Louve		300x200	0.0 L/s
WL-03	8	Weather Louve		600x500	0.0 L/s
WL-04	3	Weather Louve		500x500	0.0 L/s
Grand total:	120				

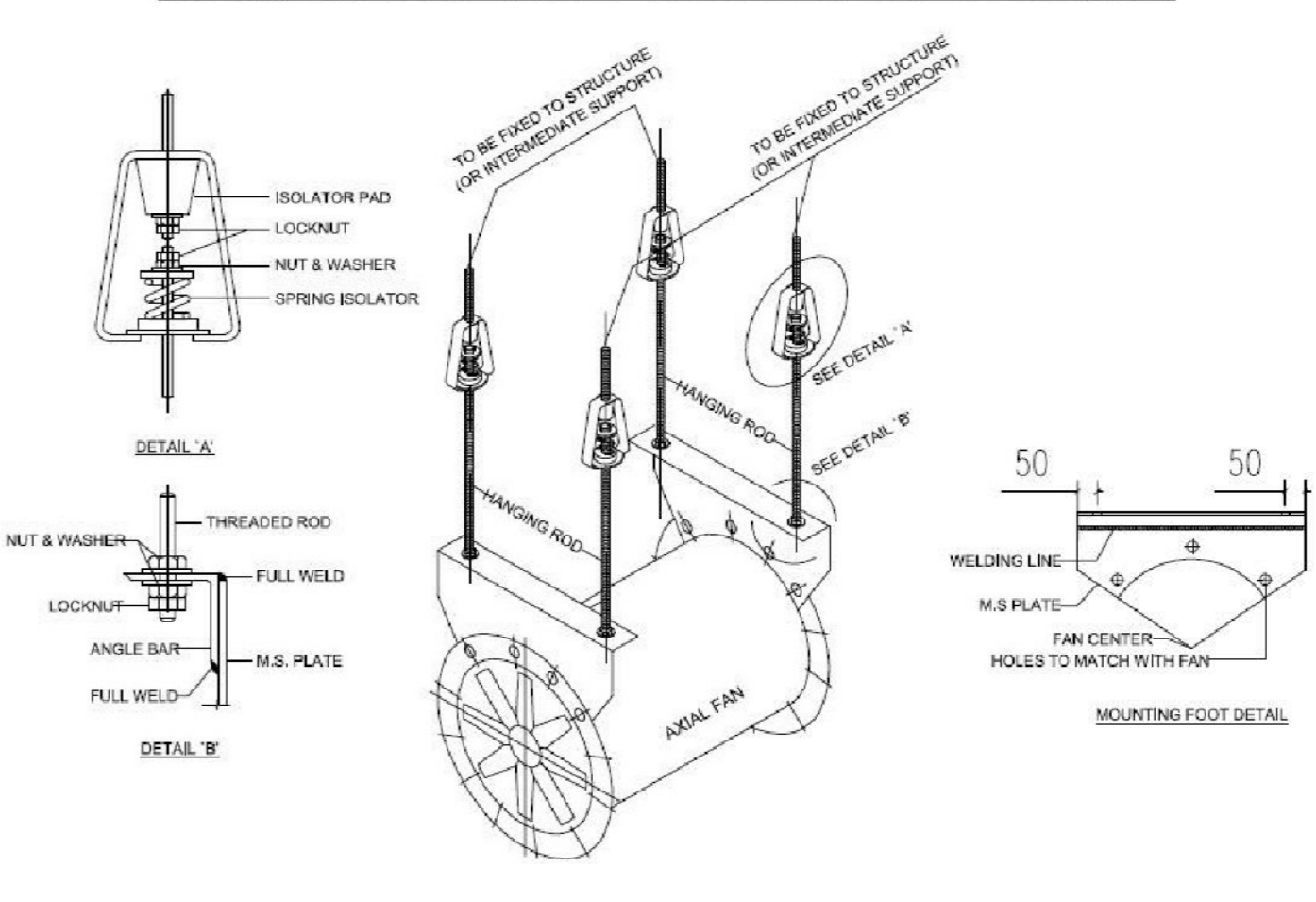
PUMP SCHEDULE					
ITEM	QTY	DESCRIPTION	INPUT POWER	POWER SUPPLY	
PUMP-01	1	Flexible Coupled Regenerative Turbine Process Pump	230V/1Ph/50Hz		
PUMP-02	1	Flexible Coupled Regenerative Turbine Process Pump	230V/1Ph/50Hz		
Grand total:	2				

EXTRACTION FANS SCHEDULE					
ITEM	QTY	DESCRIPTION	AIR FLOW	POWER SUPPLY	
EF-01	1	Fire Rated Cased Axial Fan			
EF-02	1	Fire Rated Cased Axial Fan			
EF-03	1	Fire Rated Cased Axial Fan			
EF-04	2	Propeller Wall Fan Size 18	50.0 L/s		
EF-05	1	Fire Rated Cased Axial Fan			
EF-06	1	Fire Rated Cased Axial Fan			
EF-07	1	Fire Rated Cased Axial Fan			
EF-08	1	Fire Rated Cased Axial Fan			
EF-09	1	Fire Rated Cased Axial Fan			
EF-10	1	Fire Rated Cased Axial Fan			
EF-11	1	Fire Rated Cased Axial Fan			
EF-12	1	Fire Rated Cased Axial Fan			
EF-13	1	Fire Rated Cased Axial Fan			
Grand total:	14				

VENTILATION FANS SCHEDULE					
ITEM	QTY	DESCRIPTION	AIR FLOW	POWER SUPPLY	
SF-01	2	Fire Rated Cased Axial Fan			
SF-02	1	Fire Rated Cased Axial Fan			
SF-03	1	Fire Rated Cased Axial Fan			
SF-05	1	Fire Rated Cased Axial Fan			
SF-06	1	Fire Rated Cased Axial Fan			
SF-07	1	Fire Rated Cased Axial Fan			
SF-08	1	Fire Rated Cased Axial Fan			
SF-09	1	Fire Rated Cased Axial Fan			
SF-10	1	Fire Rated Cased Axial Fan			
SF-11	1	Fire Rated Cased Axial Fan			
SF-12	1	Fire Rated Cased Axial Fan			
SF-13	1	Fire Rated Cased Axial Fan			
Grand total:	13				

CHILLER UNITS SCHEDULE					
ITEM	QTY	Description	POWER SUPPLY		
CHILLER-01	1	AQUASNAP 30RB	400V/50Hz/3Ph		
CHILLER-02	1	AQUASNAP 30RB	400V/50Hz/3Ph		
Grand total:	2				

TYPICAL INSTALLATION OF ROOF SUSPENDED AXIAL FAN



LEGEND

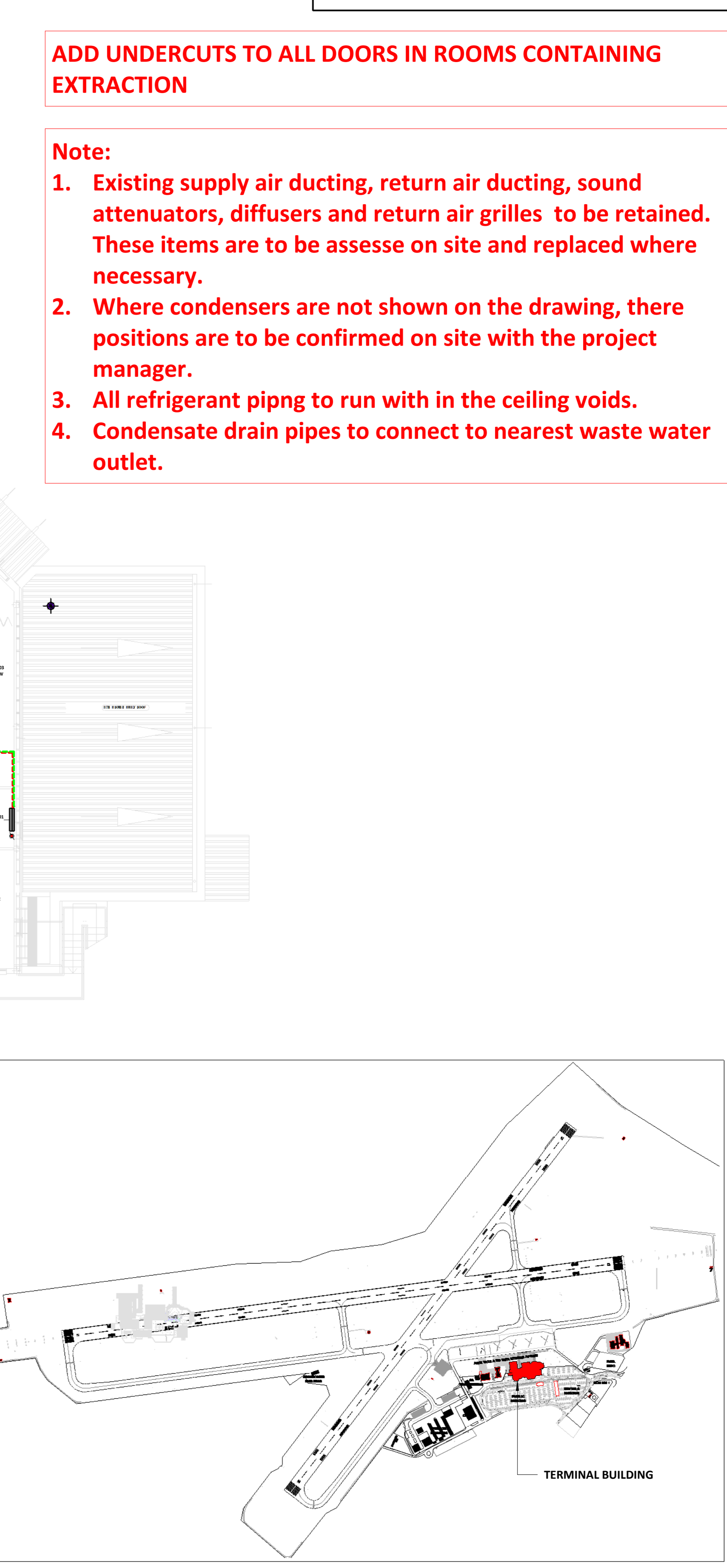
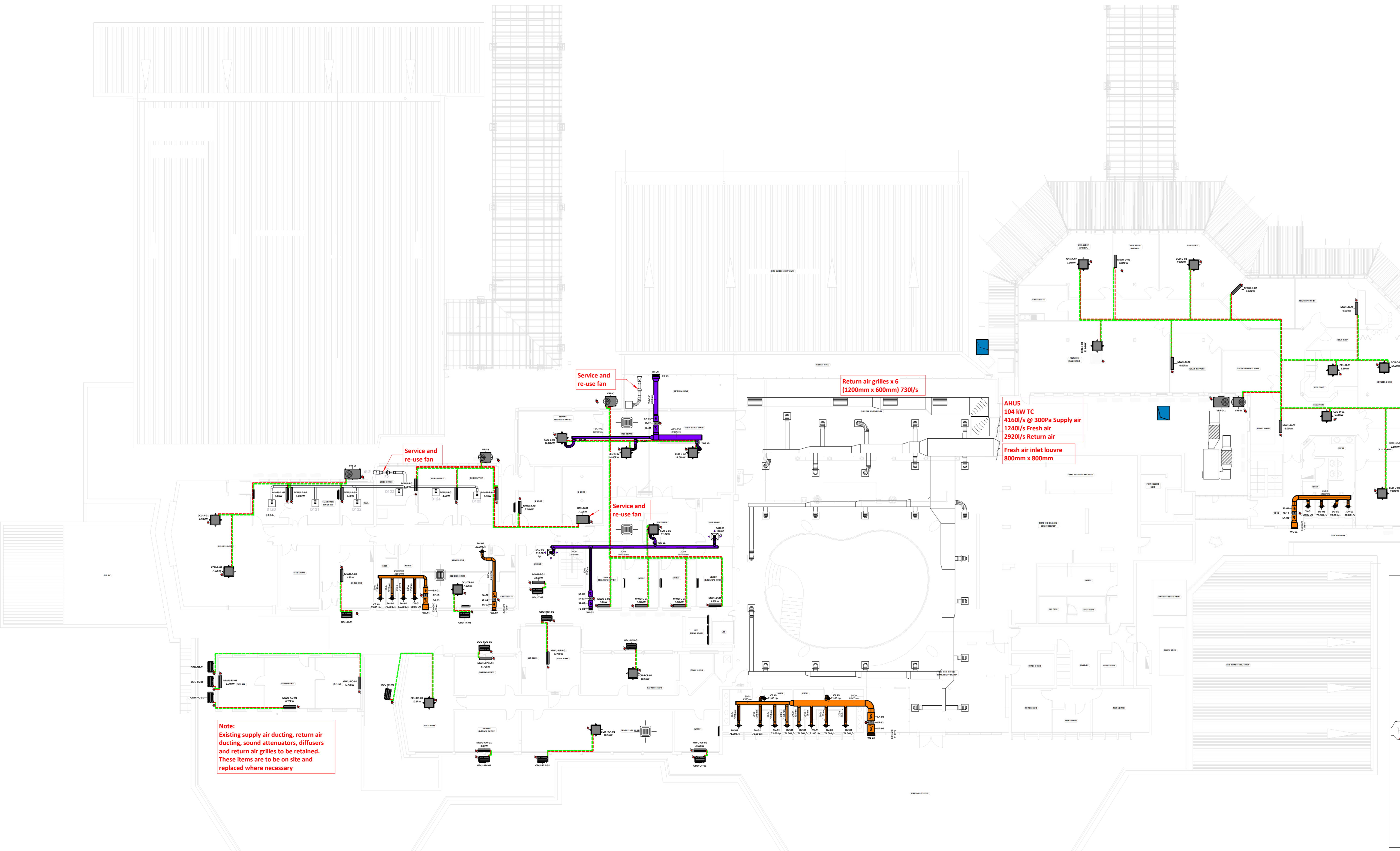
GENERAL	ISOLATOR (3 PHASE)
ISOLATOR (1 PHASE)	
AIR TERMINALS	DISC VALVE (EXHAUST)
WEATHER LOUVER	
Ø250mm CRD SUPPLY DIFFUSER	
RETURN GRILLE	
MECHANICAL EQUIPMENT	ODU (CONDENSOR UNIT)
ODU (VRF UNIT)	
AXIAL FAN	
MIDWALL SPLIT UNIT	
CEILING CASSETTE UNIT	
REFRIGERANT PIPING	GAS LINE
LIQUID LINE	
DUCTING	SUPPLY AIR
RETURN AIR	
FRESH AIR	
EXHAUST AIR	
INDICATES EXISTING DUCTS & TO BE RETAINED	

NOTES:

- ALL WORKS TO BE EXECUTED STRICTLY IN ACCORDANCE WITH THE HEALTH AND SAFETY ACT, ACT 85 OF 1993 AS AMENDED.
- THE CONSTRUCTION REGULATIONS SHALL BE ADHERED TO IN THE EXECUTION AND PLANNING OF WORKS
- WORKS SHALL BE CONSTRUCTED IN ACCORDANCE WITH APPROVED SHOP DRAWINGS.
- SHOP DRAWINGS SHALL BE ISSUED FOR APPROVAL A MINIMUM OF 14 DAYS PRIOR TO CONSTRUCTION COMMENCEMENT, SUCH SHOP DRAWINGS SHALL BE COMPLETED WITH THE ASSISTANCE OF THE MAIN CONTRACTOR AND VARIOUS TRADES AS REQUIRED TO ENSURE CO-ORDINATION PROVISIONS ARE MADE.
- THIS DRAWING SHALL NOT BE SCALED, FIGURED DIMENSIONS ONLY SHALL BE USED.
- THE PROVISION OF SIGNAGE AND INSTALLATION OF EXPOSED SERVICES SHALL BE IN ACCORDANCE WITH ARCHITECTS DRAWINGS.
- EXPOSED SERVICES COLORS SHALL BE TO ARCHITECTS SPECIFICATION, CLIENT SPECIFICATION AND NATIONAL STANDARDS.
- THIS DRAWING IS TO BE READ AND WORKS ARE TO BE EXECUTED IN ACCORDANCE WITH THE RELEVANT PROJECT SPECIFICATIONS, ENGINEERING CODES AND GOOD ENGINEERING PRACTICE. PIPING SHALL BE SABS 62 MEDIUM WEIGHT. PIPING DIAMETER 200 AND LARGER MAY BE SABS 719 4.5L.
- PIPING Ø65mm AND ABOVE SHALL BE WELDED, FLANGED OR CLAMRON COUPLED, PIPING BELOW Ø65mm SHALL BE BS SCREWED, ALL IN ACCORDANCE WITH PROJECT SPECIFICATIONS, NATIONAL REGULATIONS AND GOOD ENGINEERING PRACTICE.
- PIPING INSULATION ON PIPING Ø200mm AND ABOVE SHALL BE HIGH DENSITY POLYSTYRENE, 30mm THICK, PIPING INSULATION ON PIPING BELOW Ø200mm SHALL BE HIGH DENSITY POLYSTYRENE, 25mm THICK.
- MEANS SWEATH VAPOUR BARRIER TO BE EMPLOYED.
- ALL CHILLED PIPING IN ACCESS FLOOR VOID AND CEILING VOID TO BE INSULATED AND CLAD IN GALVANISED SHEET 0.6mm.
- ALL EXPOSED CHILLED WATER PIPE AND CONDENSATE DRAINS IN CORRIDORS AND PASSAGES TO BE IN A BRUSHED STAINLESS STEEL CONDUIT
- ALL PIPING AND TO BE INSULATED AND CLAD IN SHINY STAINLESS STEEL 0.6mm.
- PIPING SUPPORTS SHALL BE PROVIDED AT ALL CHANGES IN PIPING DIRECTION AND AT A MAXIMUM SPACING AS INDICATED IN THE PIPING SUPPORT TABLE BELOW.
- "ROUGH-IN" TACK AND LOOSELY SUPPORT ALL PIPING AND FITTINGS FOR THE APPROVAL OF THE ENGINEER PRIOR TO FULL WELDING AND FIRM FIXING.
- ALL DISCREPANCIES BETWEEN THIS DRAWING AND ACTUAL SITE CONDITIONS SHALL BE BROUGHT TO THE ATTENTION OF THE RESPONSIBLE ENGINEER.
- FIRE STOPPING SHALL BE PROVIDED AT ALL FIRE BARRIERS AND FIRE WALLS BY THE RESPONSIBLE FIRE PROOFING CONTRACTOR.
- THE APPROVAL OF THE STRUCTURAL ENGINEER SHALL BE SOUGHT FOR ALL PIPING SUPPORT METHODS WHERE STRUCTURAL FIXING IS EMPLOYED.

ADD UNDERCUTS TO ALL DOORS IN ROOMS CONTAINING EXTRACTION

- Note:
- Existing supply air ducting, return air ducting, sound attenuators, diffusers and return air grilles to be retained. These items are to be assessed on site and replaced where necessary.
 - Where condensers are not shown on the drawing, there positions are to be confirmed on site with the project manager.
 - All refrigerant piping to run with in the ceiling voids.
 - Condensate drain pipes to connect to nearest waste water outlet.



1 FIRST FLOOR SCALE 1 : 150

2 KEY PLAN SCALE 1 : 5000

NO.	DATE	BY	ISSUED FOR TENDER	DESCRIPTION
1	2025-09-19	PG	ISSUED FOR TENDER	
NO.	DATE	BY	ISSUED FOR TENDER	DESCRIPTION
REVISIONS:				
101 MANZOLD STREET, NORTH PARK, FORT ELIZABETH, EAST LONDON. TEL: 021-300 8000. E-MAIL: PEG@CARIFRO.COM 4 BELLEVUE ROAD, SOUTHERNDOWN, EAST LONDON. TEL: 021-743 3000. E-MAIL: ELG@CESA.CO.ZA				
CLIENT:				
PROJECT TITLE:	ACSA EAST LONDON HVAC			
DISCIPLINE:	MECHANICAL			
DRAWING TITLE:	TERMINAL BUILDING FIRST FLOOR HVAC LAYOUT			
DESIGNED:	DRAWN:	APPROVED:		
Designer	Author	Approver		
SCALE:	COPYRIGHT PROTECTED	DATE:	2024-06-18	
As indicated				
DRAWING NUMBER:	2413-M-HVAC-TB-02		REV:	T
PROJECT STATUS:	TENDER			