Norman Disney & Young

Plant and Riser Areas Spatials Matrix

Project Name: University / Marcus Clark
Project No.: C40143-001
Prepared By: Ron Milson
Date: 14/10/2022
Rev: 1.0

Apartments

		Location	Dimension			Area	Comment
	Equipment		Width (m)	Depth (m)	H (m) MIN height clearance	m2	
MECHANICAL SERVICES							
MAJOR PLANT							
M-SK-008	Carpark Ventilation System - Supply Air - Fan Room 01	Roof plant	3.5	9.5	NA	33.25	INCLUSIVE OF AXIAL SUPPLY FAN, 2 OFF 2D PODDED ATTENUATORS & MSSB
M-SK-008	Carpark Ventilation System - Exhaust Air - Fan Room 01	Roof plant	3.5	9.5	NA	33.25	INCLUSIVE OF AXIAL EXHAUST FAN, 2 OFF 2D PODDED ATTENUATORS & MSSB
M-SK-008	Carpark Ventilation System - Supply Air - Fan Room 02	Roof plant	3.5	9.5	NA	33.25	INCLUSIVE OF AXIAL SUPPLY FAN, 2 OFF 2D PODDED ATTENUATORS & MSSB
M-SK-008	Carpark Ventilation System - Exhaust Air - Fan Room 02	Roof plant	3.5	9.5	NA	33.25	INCLUSIVE OF AXIAL EXHAUST FAN, 2 OFF 2D PODDED ATTENUATORS & MSSB
M-SK-003	Staircase Pressurization Fan Room (Basement) 01	Basement 01	5	6	3	30	INCLUSIVE OF AXIAL SUPPLY FAN & MSSB
M-SK-008	Staircase Pressurization Fan Room (Apartment) 01	Roof plant	5	6	3	30	INCLUSIVE OF AXIAL SUPPLY FAN & MSSB
M-SK-008	Pressure Relief Fan Room 01	Roof plant	6.5	3	3	19.5	INCLUSIVE OF AXIAL EXHAUST FAN & MSSB
M-SK-003	Staircase Pressurization Fan Room (Basement) 02	Basement 01	5	6	3	30	INCLUSIVE OF AXIAL SUPPLY FAN & MSSB
M-SK-008	Staircase Pressurization Fan Room (Apartment) 02	Roof plant	5	6	3	30	INCLUSIVE OF AXIAL EXHAUST FAN & MSSB
M-SK-008	Pressure Relief Fan Room 02	Roof plant	6.5	3	3	19.5	INCLUSIVE OF AXIAL EXHAUST FAN & MSSB
M-SK-008	Residential Condenser compound 01	Roof plant	15	8	1.6	120	Clear space required on either end.
M-SK-008	Residential Condenser compound 02	Roof plant	7	8	1.6	56	Clear space required on either end.
M-SK-003	Residential Condenser compound 03	Basement 01	12	0.45	1.6	5.4	H/L Space for condenser units
M-SK-003	Residential Condenser compound 04	Basement 01	12	0.45	1.6	5.4	H/L Space for condenser units
M-SK-002	Residential Condenser compound 05	Basement 02	12	0.45	1.6	5.4	H/L Space for condenser units
M-SK-002	Residential Condenser compound 06	Basement 02	19.5	0.45	1.6	8.775	H/L Space for condenser units
M-SK-003	Residential Condenser compound 07	Basement 03	12	0.45	1.6	5.4	H/L Space for condenser units
M-SK-003	Residential Condenser compound 08	Basement 03	19.5	0.45	1.6	8.775	H/L Space for condenser units
RISERS							
M-SK-004 to M-SK-008	Kitchen Exhaust Riser 01	Ground to Roof	1.1	1.1	-	1.21	To accommodate 3000 L/s
M-SK-004 to M-SK-008	Kitchen Exhaust Riser 02	Ground to Roof	1.1	1.1	-	1.21	To accommodate 3000 L/s
M-SK-001 to M-SK-008	Carpark Ventilation System - Exhaust Air Riser 01	Basement 03 to Roof	1.5	1.1	-	1.65	To accommodate 7500 L/s
M-SK-001 to M-SK-008	Carpark Ventilation System - Supply Air Riser 01	Basement 03 to Roof	1.4	1.0	-	1.4	To accommodate 6000 L/s
M-SK-001 to M-SK-008	Carpark Ventilation System - Exhaust Air Riser 02	Basement 03 to Roof	1.5	1.1	-	1.65	To accommodate 7500 L/s
M-SK-001 to M-SK-008	Carpark Ventilation System - Supply Air Riser 02	Basement 03 to Roof	1.4	1.0	-	1.4	To accommodate 6000 L/s
M-SK-001 to M-SK-004	Staircase Pressurization Supply Riser (Basement) 01	Basement 03 to Ground	1.5	1.5	-	2.25	Subject to the review of the building certifier
M-SK-001 to M-SK-004	Staircase Pressurization Supply Riser (Basement) 02	Basement 03 to Ground	1.5	1.5	-	2.25	Subject to the review of the building certifier
M-SK-004 to M-SK-008	Staircase Pressurization Supply Riser (Apartment) 01	Ground to Roof	1.6	1.5	-	2.4	Subject to the review of the building certifier
M-SK-004 to M-SK-008	Staircase Pressurization Supply Riser (Apartment) 02	Ground to Roof	1.6	1.5	-	2.4	Subject to the review of the building certifier
M-SK-005 to M-SK-008	Pressure Relief Fan Room	L1 to Roof	3.3	2.0	-	6.6	Subject to the review of the building certifier
M-SK-001 to M-SK-004	Staircase Pressurization Supply Riser (Basement) 01	Basement 03 to Ground	1.5	1.5	-	2.25	Subject to the review of the building certifier
M-SK-001 to M-SK-004	Staircase Pressurization Supply Riser (Basement) 02	Basement 03 to Ground	1.5	1.5	-	2.25	Subject to the review of the building certifier
M-SK-004 to M-SK-008	Staircase Pressurization Supply Riser (Apartment) 01	Ground to Roof	1.6	1.5	-	2.4	Subject to the review of the building certifier
M-SK-004 to M-SK-008	Staircase Pressurization Supply Riser (Apartment) 02	Ground to Roof	1.6	1.5	-	2.4	Subject to the review of the building certifier
M-SK-005 to M-SK-008	Pressure Relief Fan Room	L1 to Roof	3.3	2.0	-	6.6	Subject to the review of the building certifier
M-SK-004 to M-SK-008	Refrigerant Pipe Riser 01	Ground to Roof	3.5	0.2	-	0.7	clear internal
M-SK-004 to M-SK-008	Refrigerant Pipe Riser 02	Ground to Roof	2.5	0.2	-	0.5	clear internal
M-SK-001 to M-SK-004	Refrigerant Pipe Riser 03	Ground to Basement 03	3.5	0.2	-	0.7	clear internal
M-SK-001 to M-SK-004	Refrigerant Pipe Riser 04	Ground to Basement 03	2.5	0.2	-	0.5	clear internal
M-SK-003 to M-SK-004	Exhaust Air Riser for BIN01	Basement 01 to Ground	0.6	0.7	-	0.39	Bin Room Exhaust Duct
M-SK-003 to M-SK-004	Exhaust Air Riser for BIN02	Basement 01 to Ground	0.6	0.7	-	0.39	Bin Room Exhaust Duct
ELECTRICAL/ COMMS/ SECURITY SERVICES							
MAJOR PLANT							
E-SK-0G-01	Chamber Substation	Ground	9.5	4.8	3.5	45.60	Internal Dimensions, refer to Evoenergy requirements and standard drawings around the structure around the chamber. 1600mm set down below the substation required for cable management. 2.5m hardstand outside substation. Two lourved outward opening doors for egress and one double lourved door in the middle for equipment access.
E-SK-B3-01	Main Switch Room (1 x MSB's)	Basement 1	6.5	3.5	3.0	22.75	2 hour fire rated room, 2 alternate means of egress via outward swinging doors (0.9m wide and 2.4m high clear area). Locate in south east corner of basement 1, near chamber substation on ground level.
E-SK-B3-01	Building Communications Room	Basement 1	4.0	3.0	2.4	12.00	Smoke Sealed doors. 0.9m minimum clearance from outward opening door.
E-SK-B3-01	Authority Meter Panel	Basement 1	1.5	0.5	2.0	0.75	Located external to MSR for access by Meter readers. Minimum 1200mm clearance infront. Mechnical protection
	Communications Roof Space	Roof	2.0	2.0	-	-	MATV and PayTV antenna
E-SK-B1-01	Meter Panel Cupboard	Basement 1 (south core)	1.5	0.6	2.4	0.90	Smoke sealed doors. To be located central to block core. Door to swing outward and 1m clearance in front of panel and 0.6m clear from edge of open panel door required.
E-SK-B1-01	EV Charging DB Cupboard	Basement 1	1.2	0.6	2.4	0.72	Smoke sealed doors. To be located central to block core. Door to swing outward and 1m clearance in front of DB and 0.6m clear from edge of open DB door required.
E-SK-0G-01	Retail DB (1 per tenancy)	Ground	1.8	0.4	2.4	0.72	Door to swing outward and 1m clearance in front of DB and 0.6m clear from edge of open DB door required.
E-SK-B3-01 to E-SK-TY-04	NTD	All Retail and Apartments	0.6	0.1	0.1	0.06	refer to spatial markup for details. To be mounted at the front of a cupboard (e.g. linen press or Built in robe)
E-SK-TY-01 to E-SK-TY-04	Apartment Load Centres	All Apartments	0.4	-	0.4	-	refer to spatial markup for details. To be recessed within wall near entrance to apartment.
E-SK-0G-01	Building A & B - Electrical Cupboard (one per Core)	Ground	2.0	0.6	Full height	1.20	Smoke sealed doors. To be located central to block core. Door to swing outward and 1m clearance in front of DB and 0.6m clear from edge of open DB door required.
E-SK-0G-01	Building A & B - Communications Cupboard, incl fire, security & BMS cabling (one per Core)	Ground	1.2	0.6	Full height	0.72	Smoke sealed doors. Risers to be vertically aligned. To be located central to core with ceiling space access into corridor zone for distrubtion to rooms.
RISERS							

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	Equipment		Width (m)	Depth (m)	H (m) MIN height clearance	m2	
E-SK-0G-01 to E-SK-TY-04	Building A - Electrical Riser Cupboard	High Level of Ground - top level	2.0	0.6	Full Height	1.20	Smoke sealed doors. Risers to be vertically aligned. To be located central to core with ceiling space access into corridor. Door to swing outward and 1m clearance in front of DB and 0.6m clear from edge of open DB door required.
E-SK-0G-01 to E-SK-TY-04	Building B - Electrical Riser Cupboard	High Level of Ground - top level	1.5	0.6	Full Height	0.90	Smoke sealed doors. Risers to be vertically aligned. To be located central to core with ceiling space access into corridor. Door to swing outward and 1m clearance in front of DB and 0.6m clear from edge of open DB door required.
E-SK-0G-01 to E-SK-TY-04	Building A - Communications Riser Cupboard, incl fire, security & BMS cabling	High Level of Ground - top level	1.2	0.6	Full height	0.72	Smoke sealed doors. Risers to be vertically aligned. To be located central to core with ceiling space access into corridor zone for distrubtion to rooms.
E-SK-0G-01 to E-SK-TY-04	Building B - Communications Riser Cupboard, incl fire, security & BMS cabling	High Level of Ground - top level	1.0	0.6	Full height	0.60	Smoke sealed doors. Risers to be vertically aligned. To be located central to core with ceiling space access into corridor zone for distrubtion to rooms.
E-SK-B3-01 to E-SK-B1-01	Building A & B - Basement Electrical Riser Cupboard	Basement 3 - Basement 1	0.8	0.6	Full Height	0.48	Smoke sealed doors. Risers to be vertically aligned. To be located central to core with access into high level cable tray for distribution to carpark. Door to swing outward and 1m clearance in front of DB and 0.6m clear from edge of open DB door required.
E-SK-B3-01 to E-SK-B1-01	Building A & B - Communications Riser Cupboard, incl fire, security & BMS cabling (one per Core)	Basement 3 - Basement 1	0.8	0.6	Full height	0.48	Smoke sealed doors. Risers to be vertically aligned. To be located central to core with access into high level cable tray for distribution to carpark.

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FIRE SERVICES							
MAJOR PLANT							
F-SK-B1 to F-SK-L0	Static Water Storage Tanks	Must be located on Basement 1 or Ground Floor	9.3	6.5	2.7	60.5	1 tank (with effective capacities of 88kL) concrete in-situ tanks to adjoin directly onto fire pump room each with internal dimensions of 9.3m(W) x 6.5m(L) x 2.7m(H). 800mm high x 1.5m wide access hatch / opening above high water level into each tank with built in external and internal access ladder on adjoining wall between pump room and tanks. Low water level must be 100mm above floor. This building is required dual water supply. Supply 1 - Direct boost town main supply with a electric pump Supply 2 - Water storage tank and a diesel engine pump. If ICON water rejected direct boost from the town main additional space for a 50kL water storage tank is required.
F-SK-B1 to F-SK-L0	Fire Service Pump Room	Basement 1 or Ground floor next to water storage tanks	8.0	5.5	2.7	44.0	If located in Basement 1, must have fire rated access via a fire stair/passageway directly connected to ground level (street), for fire fighting personnel.
F-SK-B3 to F-SK-L0	Fire Hose Reel	Basement 3, Basement 2, Basement 1, Ground Floor	0.9	0.5	Standard height door	0.5	hose reel cupboard within 4m of each exit so that fully extended 36m hose will reach every part of the floor. Additional hydrants and hose reels maybe required throughout the building to achieve full coverage. Hose reel provisions to be further reviewed when Ground level retails partition layouts are available
F-SK-B3 to F-SK-TL-04	Fire sprinkler control valve, hydrant and test drain, fire Service Pipe Riser (combined sprinkler/hydrant system riser, test drain)	On each level within landing of fire stair	1.6	0.5	Full height	0.8	To be located inside the fire isolated staircase/corridor
F-SK-B3 to F-SK-B1	Fire hydrant, riser and test drain	Basement 3 to Basement 1	1.2	0.5	Full height	0.6	To be located inside the fire isolated staircase/corridor
F-SK-L0	FDCIE & EWIS CIE	Ground floor	1.6	0.5		0.8	Fire and EWIS panels to be located and ground level near to main entrance of the building. 0.5m clearance each side and 1m clearance in front is required. Fire and EWIS panels for building A will be located inside the fire control centre. Fire and EWIS panels for building B will be located at foyer area.
F-SK-L0	Fire Brigade Booster Assembly	Ground floor	2.5	1.0	1.5	2.5	External connections facing roadway. Requires fire vehicular access to the booster. To be located within 8m of the road where fire engine will park. Booster assembly to be located within sight of the main entrance of the building.
F-SK-L0	Fire Control Centre	Ground Floor	4.0	3.0	Full height	12.0	A fire control centre must be so located in a building that egress from any part of its floor, to a road or open space, does not involve changes in level which in aggregate exceed 300 mm. The fire control room must be accessible via two paths of travel— (i) one from the front entrance of the building; and (ii) one direct from a public place or fire-isolated passageway which leads to a public place and has a door with an FRL of not less than –/120/30. If Architect is ok with the proposed location, we will consult ACTF&R for approval
RISERS							
F-SK-B3 to F-SK-TL-04	Detection and EWIS cable riser	B3 to Level 13	0.5	0.3	Full height		Vertical riser to run detection and EWIS cabling vertically through building. Location TBC.
F-SK-B3 to F-SK-TL-04	Fire Service Pipe Riser	B3 to Level 13	0.5	0.3	Full height		Vertical riser to run pipes vertically through building. Location TBC.
F-SK-B1 to F-SK-L0	Diesel back-up Fire Pump exhaust flue	Basement 1 Fire Pump Room to Ground level	0.6	0.6	Full height		Diesel pump exhaust flue to rise from fire pump room to discharge at ground floor level at a height above pedestrians reach, or alternatively riser up through building to discharge at higher floor / roof. Longer exhaust run will increase diameter of exhaust flue.
HYDRAULIC SERVICES							
Residential							
SK-H-01	In ground sewer pump station	B3	2	2	-	4.0	In ground sewer pump station for EOT toilets/bin washing.
SK-H-03	Residental Rainwater Pump set	B1	2	2		4.0	Rainwater resuse pumpset plus filters
SK-H-04	Residental Coldwater Pump set & meter	L0	4	4		16.0	Cold Water Pump set with cold water meter
SK-H-04	2x 2000L Inground Grease Arrestor	Ground	3.1	1.6		5.0	Inground grease arrestor for retail tenancies.
SK-H-04	Residental Inground Rainwater Tank	Ground	3	3		9.0	Inground rainwater tank.Final size TBC based on roof catchment area.
SK-H-04 to SK-H-07	Under Bench Instantaneous Hot Water Unit	L0-13	0.17	0.108	0.109	0.0	Located under kitchen bench to serve hot water to kitchen. Typically Zip DSX CL1507.
SK-H-04 to SK-H-07	Wall Mounted Instantaneous Hot Water Unit	L0-13	0.231	0.097	0.466	0.0	Wall mounted Instantanoeus HWU located in vanity/cavity wall with access panels to serve toilet fixtures & laundry. Typically Zip DSX CL1500
Riser							
SK-H-04 to SK-H-07	MAIN HYD RISER	L0-13	0.45	0.3	Full Height	0.1	Hydraulic Risers Located behind shower in every apartment. Hydraulic Riser to include Stormwater, Sewer Vent pipe, releif vent pipe and Cold water pipe.
SK-H-04 to SK-H-07	BALCONY DOWNPIPE RISER	L0-Roof	-	0.15	Full Height	0.0	150mm Downpipe based on roof layout.Typical to all balconies