PARTICULAR SPECIFICATION

APPENDIX BG

M&E PLANTROOM SIZE REQUIREMENT

M&E Plantroom Size and Clear Dimensions Requirement for an 8-car Train Station

Room Description	Min. Rm Size & Clear Dimensions	Qty	Remarks
Private Fire Hydrant Pump Room	37.5m^2: 5m x 7.5m	1 / station	D&B contractor to determine and confirm if required.
Private Fire Hydrant Tank	80m^2 (Min Effective Water Capacity: 200m^3)	1 / station	D&B contractor to determine and confirm if required.
Fire Sprinkler Water Tank Area	60m^2 to 80m^2 (Min Effective Water Capacity: 160m^3)	1 / station	Subject to further coordination.
Signal Equipment Room (SER)	84m^2	1 / station	
Communication Equipment / ISCS Room (CE/ISCS)	115m^2: 10m x 11.5m or 7m x 16.5m	1 / station	
DB Room	7.5m^2: 4.2m x 1.8m	1 / linkway	To be further coordinated with Authority's In-house Designers ~~LTA and the E&M consultant (C1009)~~ to determine can be further optimised to closets can be provided instead.
Entrance DB Closet	1.65m^2: 2.2m x 0.75m	1 / station entrance	To locate at entrance ground level.
Solar PV Inverter Closet	1.5m^2: 2.0m x 0.75m	1 / station entrance	For Entrance with Solar Panel. To locate at entrance ground level.
Mobile Generator Connection Box Closet	1.3m^2	1 / station	To be located facing the driveway access.
TFCC Closet	1.3m^2	1 / station	
AMS Closet	1.5m^2	TBC	Quantity to be coordinated with SWCs.

Room Description	Min. Rm Size & Clear Dimensions	Qty	Remarks
Video Surveillance System Closet	1.2m^2	TBC	Quantity to be coordinated with SWCs.
Seepage Water Holding Tank Monitoring Panel Closet	0.25m^2	1 / station	
Lift Closet	0.22m^2: 0.65m x 0.35m	1 per lift	
Escalator Control Panel Closet	2m^2: 2.7m x 0.75m	TBC	Quantity to be coordinated with SWCs.
LV Switch Room	11.6m x 6m (69 sqm)	2 / station	
DB Room & Closets (Concourse)	3.8m x 2.5m (Room) 5.2m x 0.75m (Closet) 3.2m x 0.75m (Closet)	2 sets / station	Subject to further coordination.
DB Room & Closets (Platform)	6.5m x 3m (Room) 4.2m x 0.75m (Closet) 3.2m x 0.75m (Closet)	2 sets / station	Subject to further coordination.
UPS Battery Room	6.5m x 5m - (32.5 sqm)	2 / station	UPS Battery Room at fire engine access level Subject to further coordination
UPS Electronic ~~Equipment~~ Room	6m x 4m - (24 sqm)	2 / station	UPS Electronic ~~Equipment~~ Room at underground level Subject to further coordination
EPS Battery Room	5.5m x 5m - (27.5 sqm)	1 / station	EPS Battery Room at fire engine access level Subject to further coordination
EPS Electronic ~~Equipment~~ Room	6m x 4m - (24 sqm)	1 / station	EPS Electronic ~~Equipment~~ Room at underground level Subject to further coordination
22kV Switchroom	7.5m x 5.8m (43.5 sqm)	2 / station	
Service Transformer Room	9.2m x 5.5m	2 / station	

Room Description	Min. Rm Size & Clear Dimensions		Qty	Remarks
	(50.6 sqm)			
TPSS Room	13.5m x 10.5m (141.8 sqm)		1 / station	
Traction Transformer Room	9.8m x 7.6m (74.48 sqm)		1 / station	
Fire Pump Room	7.5m (L) x 5m (W) (37.5 sqm)			Subject to further coordination.
Clean Gas Room	5.5m (L) x 2m (W) (11 sqm)			Subject to further coordination.
ECS Plantroom	Total A/C Area: Below 3000 sqm	11.5m (L) x 10.5m (W) (120 sqm)		Total A/C Area includes FOH and air-conditioned plantrooms in BOH within the station box.
	Total A/C Area: 3000-8000 sqm	12.0m (L) x 14.5m (W) (174 sqm)		
	Total A/C Area: 8000-14000 sqm	17.4m (L) x 15.8m (W) (275 sqm)		
	Total A/C Area: Above 14000 sqm	17.4m (L) x 17m (W) (296 sqm)		
Cooling Tower	Total A/C Area: Below 3000 sqm	11.5m (L) x 10.5m (W) (120 sqm)		*These sizes include the Thermal Energy Storage Tanks for 8-car train station. Total A/C Area includes FOH and air-conditioned plantrooms in BOH within the station box.
	Total A/C Area: 3000-8000 sqm	21.7m (L) x 8.5m (W) (185 sqm)		
	Total A/C Area: 8000-11000 sqm	24.0m (L) x 16.5m*(W) (396 sqm)		
	Total A/C Area: 11000-16000 sqm	27.0m (L) x 16.5m*(W) (446 sqm)		
	Total A/C Area: Above 16000 sqm	30.5m (L) x 16.5m*(W) (504 sqm)		
ECS Control Room 1	17.1m (L) x 8.2m (W) (140 sqm)			
ECS Control Room 2		13.0m (L) x 8.0m (W) (104 sqm)		

Room Description	Min. Rm Size & Clear Dimensions		Qty	Remarks
AHU Room (Concourse & Platform)	Total A/C Area: Below 8000 sqm	11.0m (L) x 5.7m (W) (63 sqm)		Total A/C Area for FOH Public area within the station box.
	Total A/C Area: 8000 – 14000 sqm	11.5m (L) x 6.4m (W) (74 sqm)		
	Total A/C Area: Above 14000 sqm	12.3m (L) x 7.3m (W) (90 sqm)		
AHU Room (For Underground Linkway more than 50m)	Total A/C Area: 1000 sqm	6.8m (L) x 4.6m (W) (32 sqm)		Total A/C Area for the linkway within the station box.
	Total A/C Area: 2000 sqm	7.0m (L) x 5.5m (W) (39 sqm)		
	Total A/C Area: 3000 sqm	7.3m (L) x 6.0m (W) (44 sqm)		
AHU Room (TPSS, TPTX, 22kV, LV & STX)	12.2m (L) x 7.2m (W) (88 sqm)			
AHU Room (22kV, LV, STX)	5.0m (L) x 3.0m (W) (15 sqm)			
OTEF/SEF Room	10.5m (L) x 8.6m (W) (90 sqm)		2 / station	
UPASF Room	10.5m (L) x 6.0m (W) (63 sqm)		2 / station	
LSC Room	3.5 m (L) x 3.0 m (W) (10.5 sqm)			
VE Shaft	4m (L) x 5m (W) (20 sqm)			
VS Shaft	4m (L) x 4m (W) (16 sqm)			
SEF Room (For Underground Linkway more than 50m)	Underground linkway area: 1000 sqm	10.0m (L) x 3.5m (W) (35 sqm)*		*Fans serving 1000 m² subway area shall be installed based on stacked configuration.

Room Description	Min. Rm Size & Clear Dimensions		Qty	Remarks
	Underground linkway area: 2000 sqm	10.2m (L) x 6.4m(W) (66 sqm)		
	Underground linkway area: 3000 sqm	10.5m (L) x 7.6m (W) (80 sqm)		
TVF room	20m (L) x 15m (W) 300 sqm (excluding plenum)		2 / station	
TV shaft	5m (L) x 5m (W) (25 sqm)		2 / station	
OTED	6 sqm		1 / bound	- Min. 1.5m clear headroom - Access via TV plenum to be provided
UPASD	4 sqm		1 / bound	
MDF Room	20 sqm		1 / station	Subject to usage according to COFIP.
MIS Room	54 sqm		1 / station	Subject to usage according to COFIP.

Note:

1. The above sizes are based on clear dimension without obstruction e.g. column, wall etc.
2. Final plantroom sizes shall be coordinated with the Authority's appointed M&E consultant, LTA in-house design team and SWCs, and submitted to the Engineer for acceptance.
3. Where the room sizes between the ADC and the table above differ, the more onerous room size shall prevail