



2023-Master Plan of Preventive Maintenance

Banyan Tree Bangkok

2024-Fire Alarm & Fire Protection and M&E Preventive Maintenance

Item	Description	Qty	Standard (Time / Year)	By Hotel Engineering	By Outsource	Jan-24						Feb-24					
						Current Month			YTD			Current Month			YTD		
						Actual	Target	Var	Actual	Target	Var	Actual	Target	Variance	Act	Target	Var
1	Fire Alarm System																
1.1	Smoke Detector and Heat Detector	1715	Yearly		X	0	0	0	0	0	0	246	170	76	246	170	76
1.2	Pull Station	174	Yearly		X	0	0	0	0	0	0	47	18	29	47	18	29
1.3	Flow Switch	143	Yearly		X	0	0	0	0	0	0	15	14	1	15	14	1
1.4	Supervisory Switch	129	Yearly		X	0	0	0	0	0	0	13	12	1	13	12	1
1.5	Emergency Phone	63	Yearly		X	0	0	0	0	0	0	8	7	1	8	7	1
1.6	Bell	200	Yearly		X	0	0	0	0	0	0	69	20	49	69	20	49
1.7	Speaker	247	Yearly		X	0	0	0	1	0	1	0	25	-25	0	25	-25
1.8	Control Panel	3	Monthly	X	X	3	3	0	3	3	0	3	3	0	6	6	0
1.9	Computer & Graphic	1	Monthly		X	1	1	0	1	1		1	1	0	2	2	0
2	Fire Protection System																
2.1	Fire Hose Cabinet	160	Yearly	X		0	0	0	0	0	0	15	15	0	15	15	0
2.2	Sprinkler System	129	Yearly	X		0	0	0	0	0	0	0	15	-15	0	15	-15
2.3	FM-200 System	3	2-Monthly		X	0	0	0	0	0	0	3	3	0	3	3	0
			6-Monthly	x		3	0	3	3	0	3	0	0	0	3	0	3
2.4	Co-2 System	1	2-Monthly		X	0	0	0	0	0	0	1	1	0	1	1	0
			6-Monthly	x		1	0	1	1	0	1	0	0	0	1	0	1
2.5	Kitchen Fire Suppression System																
2.5.1	Fire Suppression- Magpie	0	2-Monthly		X	0	0	0	0	0	0	8	8	0	8	8	0
			6-Monthly	x		0	0	0	0	0	0	0	0	0	0	0	0
2.5.2	Fire Suppression-Anti fire/ Srivikorn Hordling	6	2-Monthly		X	0	0	0	0	0	0	6	6	0	6	6	0
			6-Monthly	x		6	0	6	6	0	6	0	0	0	6	0	6
2.6	Gas Alarm System	8	2-Monthly	X		8	0	8	8	0	8	8	8	0	16	8	8
2.7	Fire Hydent	1	Quarterly	X		0	0	0	0	0	0	1	1	0	1	1	0
2.8	Emergency Light	331	Quarterly	X		331	0	331	331	0	331	331	331	0	662	331	331
2.9	Fire Exit Sign	279	Quarterly	X		279	0	279	279	0	279	279	0	279	558	0	558
2.10	Pressurization Fan	5	Monthly	X		5	5	0	5	5	0	5	5	0	10	10	0
2.11	Fire Stair Case Lighting (no. of stair)	5	Quarterly	X		155	0	155	155	0	155	155	5	150	310	5	305
2.12	Electric fire pump	2	Monthly		X	2	2	0	2	2	0	2	2	0	4	4	0
			Yearly	x			0	0	0	0	0	0	0	0	0	0	0
2.13	Jockey Pump	2	Monthly		X	2	2	0	2	2	0	2	2	0	4	4	0
			Yearly	x		0	0	0	0	0	0	0	0	0	0	0	0
2.14	Fire Extinguisher	296	Monthly	X		296	296	0	296	296	0	296	296	0	592	592	0
			Yearly	X		0	0	0	0	0	0	0	0	0	0	0	0
2.15	Gas station	4	Monthly	X		4	4	0	4	4	0	4	4	0	8	8	0
2.16	Lightning Protection	1	Yearly		X	0	0	0	0	0	0	0	0	0	0	0	0
2.17	Intercom of Elevator Test	16	Monthly	X		16	16	0	16	16	0	16	16	0	32	32	0
2.18	Kitchen Hood Cleaning	12	Quarterly		X	0	0	0	0	0	0	0	0	0	0	0	0
2.19	Laundry Hood Cleaning	1	2-Monthly		X	0	0	0	0	0	0	1	1	0	1	1	0
3	Electric system																
3.1	Transformer	6	Yearly		X	0	0	0	0	0	0	0	0	0	0	0	0
3.2	Main Distribution Board & EDB	8	Yearly		X	0	0	0	0	0	0	0	0	0	0	0	0
3.3	Generator	2	2-Monthly		X	0	0	0	0	0	0	2	2	0	2	2	0

3.3	Generator	2	Yearly		X	0	0	0	0	0	0	0	0	0	0	0	0
3.4	Electric Panel	100	Yearly		X	0	0	0	0	0	0	4	10	-6	4	10	-6
3.5	Load Centre	393	Yearly		X	0	0	0	0	0	0	4	40	-36	4	40	-36
3.6	Thermo scan	1	Yearly		X	0	0	0	0	0	0	0	0	0	0	0	0
4	Air Condition System																
4.1	Chiller Unit	6	Monthly		X	6	6	0	6	6	0	6	6	0	12	12	0
			Yearly		X	0	0	0	0	0	0	0	0	0	0	0	0
4.2	Cooling Tower	11	Monthly	X		11	11	0	11	11	0	11	11	0	22	22	0
			Quarterly	X		0	0	0	0	0	0	0	0	0	0	0	0
4.3	Condensing Pump	18	Quarterly	X		2	0	2	2	0	2	18	0	18	20	0	20
4.4	Chilled Water Pump	15	Quarterly	X		0	0	0	0	0	0	15	0	15	15	0	15
4.5	Heat Exchanger Unit	2	6-Monthly	X		0	0	0	0	0	0	1	0	1	1	0	1
4.6	AHU & FCU											0					
4.6.1	AHU&FCU: Front of the House	161	6-Monthly	X		26	0	26	26	0	26	17	30	-13	43	30	13
4.6.2	AHU: Public Area Romsai=3, Lobby=2,Baiyun=1,V-Too=6)	12	6-Monthly	X		0	0	0	0	0	0	0	2	-2	0	2	-2
4.6.3	FCU&AHU: Back of the House.	124	6-Monthly	X		1	0	1	1	0	1	20	25	-5	21	25	-4
4.6.6	AHU: Production Kitchen	2	Quarterly	X		0	0	0	0	0	0	0	0	0	0	0	0
4.7	Softener	8	Monthly	X		8	8	0	8	8	0	8	8	0	16	16	0
4.8	Ventilation System																
4.8.1	Exhaust Fan - Guestroom	6	Quarterly	X		0	0	0	0	0	0	0	0	0	0	0	0
4.8.2	Exhaust Fan - Laundry	3	Quarterly	X		0	0	0	0	0	0	0	3	-3	0	3	-3
4.8.3	Exhaust Fan - Electrical room	5	Quarterly	X		0	0	0	0	0	0	5	5	0	5	5	0
4.8.4	Exhaust Fan - Other machine rooms	5	Quarterly	X		0	0	0	0	0	0	0	5	-5	0	5	-5
4.8.5	Exhaust Fan & Fresh air - Kitchen					0						0			0		
1	Verigo Kitchen, 61st floor	1	Quarterly	X		1	0	1	1	0	1	0	1	-1	1	1	0
2	Vertigo-Too Kitchen, 60th floor	2	Quarterly	X		1	0	1	1	0	1	1	2	-1	2	2	0
3	Baiyun Kitchen 59th Floor	3	Quarterly	X		4	0	4	4	0	4	2	3	-1	6	3	3
4	Taihei Kitchen & Pantry room, 54th floor	3	Quarterly	X		0	0	0	0	0	0	2	3	-1	2	3	-1
5	Taihei Kitchen, 53rd floor	2	Quarterly	X		0	0	0	0	0	0	1	2	-1	1	2	-1
6	Saffron-Pantry room, 52nd floor	3	Quarterly	X		0	0	0	0	0	0	2	3	-1	2	3	-1
7	Saffron Kitchen, 51st floor	2	Quarterly	X		0	0	0	0	0	0	2	2	0	2	2	0
8	Club Lounge Kitchen, 19th floor	2	Quarterly	X		0	0	0	0	0	0	2	2	0	2	2	0
9	Staff Canteen, 14th floor	1	Quarterly	X		0	0	0	0	0	0	0	0	0	0	0	0
10	Main Kitchen, Basement	2	Quarterly	X		0	0	0	0	0	0	0	0	0	0	0	0
11	Production Kitchen, Basement	2	Quarterly	X		0	0	0	0	0	0	0	0	0	0	0	0
12	Romsai Kitchem, Basement	2	Quarterly	X		0	0	0	0	0	0	0	0	0	0	0	0
13	Goodies Kiten, TW1	1	Quarterly	X		0	0	0	0	0	0	0	0	0	0	0	0
5	Sanitary System																
5.1	Cold Water Transfer Pump	6	Quarterly		X	0	0	0	0	0	0	6	0	6	6	0	6
5.2	Hot Water Machine					0			0			0			0		
	33rd - 58th Floor	14	Quarterly	X		0	0	0	0	0	0	4	14	-10	4	14	-10
	22nd - 32nd Floor	46	Quarterly	X		8	0	8	8	0	8	4	0	4	12	0	12
	21st	4	Quarterly	X		0	0	0	0	0	0	0	4	-4	0	4	-4
	15th - 18th Floor	8	Quarterly	X		0	0	0	0	0	0	0	8	-8	0	8	-8
	Basement Floor	1	Quarterly	X		0	0	0	0	0	0	0	1	-1	0	1	-1
5.3	Heat Pump																
	33rd - 58th Floor	12	Quarterly	X		0	0	0	0	0	0	0	0	0	0	0	0
	23rd - 32nd Floor	11	Quarterly	X		0	0	0	0	0	0	0	0	0	0	0	0
	15th - 18th Floor	4	Quarterly	X		0	0	0	0	0	0	0	0	0	0	0	0

	Basement Floor	1	Quarterly	X		0	0	0	0	0	0	0	0	0	0	0	0
5.4	Wastewater Treatment Pump	16	Quarterly		X	0	0	0	0	0	0	16	0	16	16	0	16
5.5	Booster Pump System	1	Quarterly	X		0	0	0	0	0	0	1	1	0	1	1	0
5.6	Submersible Pump & Waterfall Pump	19	Quarterly		X	0	0	0	0	0	0	0	0	0	0	0	0
5.7	Water Filter Machine	34	2-Monthly	X		31	0	31	31	0	31	31	31	0	62	31	31
6	Laundry plant																
6.1	Boiler	2	2-Monthly	X		0	0	0	0	0	0	1	2	-1	1	2	-1
			Yearly		X	0	0	0	0	0	0	0	0	0	0	0	0
6.2	Laundry Equipment	34	2-Monthly		X	34	34	35	34	34	0	0	34	-34	34	68	-34
7	Kitchen Equipment																
7.1	Oven&Buner	178	Quarterly	X		0	0	0	0	0	0	0	0	0	0	0	0
7.2	Refrigerator	172	Quarterly		X	0	0	0	0	0	0	172	172	0	172	172	0
7.3	Frezzer Room	17	Quarterly		X	17	0	17	17	0	17	17	17	0	34	17	17
7.4	Ice Making Machine	25	2-Monthly	X		23	0	23	23	0	23	25	25	0	48	25	23
7.5	Dish&Glass Washer Machine.	21	2-Monthly	X		21	0	21	21	0	21	21	21	0	42	21	21
8	Swimming Pool Pump																
8.1	Cannon Pump.	1	2-Monthly	X		0	0	0	0	0	0	1	1	0	1	1	0
8.2	Curtain Pump.	1	2-Monthly	X		0	0	0	0	0	0	1	1	0	1	1	0
8.3	Jacuzzi Pump No.1	1	2-Monthly	X		0	0	0	0	0	0	1	1	0	1	1	0
8.4	Jacuzzi Pump No.2	1	2-Monthly	X		0	0	0	0	0	0	1	1	0	1	1	0
8.5	Swimming Pool Pump.	1	2-Monthly	X		0	0	0	0	0	0	1	1	0	1	1	0
8.6	Water Feature Pump.	1	2-Monthly	X		0	0	0	0	0	0	1	1	0	1	1	0
9	Elevator&Escalator																
9.1	Guest Elevator	5	Monthly		X	5	5	0	5	5	0	5	5	0	10	10	0
9.2	Service Elevator	3	Monthly		X	3	3	0	3	3	0	3	3	0	6	6	0
9.3	Centre Core Elevator	6	Monthly		X	6	6	0	6	6	0	6	6	0	12	12	0
9.4	Hydaulic Elevator and Escalator	3	Monthly		X	5	3	2	5	3	2	3	3	0	8	6	2
10	PABX																
	Inspect by Hotel-Engineering	1	Quarterly		X	0	0	0	0	0	0	1	1	0	1	1	0
	Inspect by NEC (Thailand)	1	Quarterly		X	0	0	0	0	0	0	1	1	0	1	1	0
11	CCTV																
	Revised	324	Bi-Monthly		X	0	0	0	0	0	0	60	324	-264	60	324	-264
12	Plant Room Inspection (Ceiling/Wall/Flooring/Lighting)																
	Plant Room Inspection (Ceiling/Wall/Flooring/Lighting)	25	Bi-Monthly	X		0	12	-12	0	12	-12	0	13	-13	0	25	-25
13	Valve Tag																
13.1	Fire Protection System, floors	61	6-Monthly	X		0	0	0	0	0	0	0	0	0	0	0	0
13.2	Cold Water system, 61 floors	61	6-Monthly	X		0	0	0	0	0	0	0	0	0	0	0	0
13.3	Hot Water system, 61 floors	61	6-Monthly	X		0	0	0	0	0	0	0	0	0	0	0	0
13.4	Air condition system, 61 floors	61	6-Monthly	X		0	0	0	0	0	0	0	0	0	0	0	0
13.5	Laundry Plant, 1 floors	1	6-Monthly	X		0	0	0	0	0	0	0	0	0	0	0	0
14	Saffron Cruise																
14.1	Main Engine	2	Monthly	x		2	2	0	2	2	0	2	2	0	4	4	0
14.2	Generator	2	Monthly	x		2	2	0	2	2	0	2	2	0	4	4	0
14.3	Water Pump	9	Monthly	x		9	9	0	9	9	0	9	9	0	18	18	0

14.4	Steering Gear	2	Monthly	x		0	2	-2	0	2	-2	2	2	0	2	4	-2
14.5	Winch	2	Monthly	x		2	2	0	2	2	0	2	2	0	4	4	0
14.6	Wastewater Treatment System	1	2-Monthly	x		1	1	0	1	1	0	0	0	0	1	1	0
14.7	Fan Coil Unit	22	Quarterly	x		22	22	0	22	22	0	0	0	0	22	22	0
14.8	Condensing Unit	5	Quarterly	x		5	5	0	5	5	0	0	0	0	5	5	0
14.9	CCTV System // monthly	26	2-Monthly	x		26	26	0	26	26	0	0	0	0	26	26	0
14.10	Kitchen Equipment //	8	Quarterly	x		0	0	0	0	0	0	0	8	-8	0	8	-8
14.11	Refrigerator	11	Quarterly	x		0	0	0	0	0	0	11	11	0	11	11	0
14.12	Ice Making Machine //	2	Monthly	x		2	2	0	2	2	0	2	2	0	4	4	0
14.13	Dish washing machine // monthly	3	Monthly	x		3	3	0	3	3	0	3	3	0	6	6	0
14.14	Kitchen Fire Suppression System // 6	1	6-Monthly	x		0	1	-1	0	1	-1	0	0	0	0	1	-1
14.15	Gas Alarm System //	1	Monthly	x		1	1	0	1	1	0	1	1	0	2	2	0
14.16	Fire Alarm System //	1	Monthly	x		1	1	0	1	1	0	1	1	0	2	2	0
14.17	Life Jacket Inventory //mo	1	Monthly	x		1	1	0	1	1	0	1	1	0	2	2	0
14.18	Fire Extinguisher	13	Monthly	x		13	13	0	13	13	0	13	13	0	26	26	0
14.19	Electric Pannel //	13	Quarterly	x		0	13	-13	0	13	-13	0	0	0	0	13	-13
14.20	AV-Equipment Inventory	1	Monthly	x		1	1	0	1	1	0	1	1	0	2	2	0
14.21	Engineering Tool Inventory	1	Monthly	x		1	1	0	1	1	0	1	1	0	2	2	0
15	Apsara Cruise																
15.01	Main Engine	2	Monthly	x		2	2	2	0	2	-2	2	2	0	4	4	0
15.02	Generator	2	Monthly	x		2	2	0	2	2	0	2	2	0	4	4	0
15.03	Cold Water Supply System	1	Monthly	x		1	1	0	1	1	0	1	1	0	2	2	0
15.04	Air Conditioning System	1	Quarterly	x		1	0	1	1	0	1	1	1	0	2	1	1
15.05	Wastewater Treatment System	1	Monthly	x		1	1	0	1	1	0	1	1	0	2	2	0
15.06	Flooding Prevention pump	1	Monthly	x		1	1	0	1	1	0	1	1	0	2	2	0
15.07	Emergency Light	1	Monthly	x		1	1	0	1	1	0	1	1	0	2	2	0
15.08	Fire Extinguisher	1	Monthly	x		1	1	0	1	1	0	1	1	0	2	2	0
15.09	CCTV	1	2-Monthly	x		1	1	0	1	1	0	0	0	0	1	1	0
15.10	Kitchen Equipment, 21	1	Quarterly	x		21	0	21	21	0	21	1	1	0	22	1	21
15.11	Gas Alarm System	1	Monthly	x		1	1	0	1	1	0	1	1	0	2	2	0
15.12	AV-Equipment Inventory	1	Monthly	x		1	1	0	1	1	0	1	1	0	2	2	0
15.13	Life Jackey Inventory	1	Monthly	x		1	1	0	1	1	0	1	1	0	2	2	0
15.14	Engineering Tool Inventory	1	Monthly	x		1	1	0	1	1	0	1	1	0	2	2	0
16	Water Quarterly Management System																
16.1	Legionella-Monitoring																
16.1.1	Cooling Tower (Basin Water)																
	- 9th Floor	1	Quarterly		x	1	0	1	1	0	1	1	1	0	2	1	1
	- 10th Floor	1	Quarterly		x	1	0	1	1	0	1	1	1	0	2	1	1
16.1.2	Water Storage Tank																
	- Subbasement Floor	1	Quarterly		x	0	0	0	0	0	0	1	1	0	1	1	0
	- 35th Floor	1	Quarterly		x	0	0	0	0	0	0	1	1	0	1	1	0
	- 61st Floor (WC 2)	1	Quarterly		x	0	0	0	0	0	0	1	1	0	1	1	0
	- 61st Floor (WC 3)	1	Quarterly		x	0	0	0	0	0	0	1	1	0	1	1	0

[illegible]



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Banyan Tree Bangkok

2024-Fire Alarm & Fire Protection and M&E Preventive Maintenance

Item	Description	Qty	Standard (Time / Year)	By Hotel Engineering	By Outsource	Mar-24						Apr-24					
						Current Month			YTD			Current Month			YTD		
						Actual	Target	Var	Actual	Target	Var	Actual	Target	Var	Actual	Target	Var
1	Fire Alarm System																
1.1	Smoke Detector and Heat Detector	1715	Yearly		X	80	170	-90	326	340	-14	0	170	-170	326	510	-184
1.2	Pull Station	174	Yearly		X	18	18	0	65	36	29	0	18	-18	65	54	11
1.3	Flow Switch	143	Yearly		X	14	14	0	29	28	1	0	14	-14	29	42	-13
1.4	Supervisory Switch	129	Yearly		X	12	12	0	25	24	1	0	12	-12	25	36	-11
1.5	Emergency Phone	63	Yearly		X	7	7	0	15	14	1	0	7	-7	15	21	-6
1.6	Bell	200	Yearly		X	0	20	-20	69	40	29	0	20	-20	69	60	9
1.7	Speaker	247	Yearly		X	0	25	-25	0	50	-50	0	25	-25	0	75	-75
1.8	Control Panel	3	Monthly	X	X	3	3	0	9	9	0	3	3	0	12	12	0
1.9	Computer & Graphic	1	Monthly		X	1	1	0	3	3	0	1	1	0	4	4	0
2	Fire Protection System																
2.1	Fire Hose Cabinet	160	Yearly	X		15	15	0	30	30	0	15	15	0	45	45	0
2.2	Sprinkler System	129	Yearly	X		0	15	-15	0	30	-30	0	15	-15	0	45	-45
2.3	FM-200 System	3	2-Monthly		X	2	0	2	5	3	2	2	0	2	7	3	4
			6-Monthly	x		0	0	0	3	0	3	0	3	-3	3	3	0
2.4	Co-2 System	1	2-Monthly		X	1	0	1	2	1	1	1	0	1	3	1	2
			6-Monthly	x		0	0	0	1	0	1		0	0	1	0	1
2.5	Kitchen Fire Suppression System																
2.5.1	Fire Suppression- Magpie	0	2-Monthly		X	0	0	0	8	8	0	0	0	0	8	8	0
			6-Monthly	x		0	0	0	0	0	0	0	8	-8	0	8	-8
2.5.2	Fire Suppression-Anti fire/ Srivikorn Hordling	6	2-Monthly		X	0	0	0	6	6	0	0	0	0	6	6	0
			6-Monthly	x		0	0	0	6	0	6	0	6	-6	6	6	0
2.6	Gas Alarm System	8	2-Monthly	X		0	0	0	16	8	8	8	8	0	24	16	8
2.7	Fire Hydent	1	Quarterly	X		0	0	0	1	1	0	0	0	0	1	1	0
2.8	Emergency Light	331	Quarterly	X		0	0	0	662	331	331	146	0	146	808	331	477
2.9	Fire Exit Sign	279	Quarterly	X		279	279	0	837	279	558	0	0	0	837	279	558
2.10	Pressurization Fan	5	Monthly	X		5	5	0	15	15	0	5	5	0	20	20	0
2.11	Fire Stair Case Lighting (no. of stair)	5	Quarterly	X		155	0	155	465	5	460	155	0	155	620	5	615
2.12	Electric fire pump	2	Monthly		X	0	0	0	4	4	0	2	2	0	6	6	0
			Yearly	x		2	2	0	2	2	0	0	0	0	2	2	0
2.13	Jockey Pump	2	Monthly		X	0	0	0	4	4	0	2	2	0	6	6	0
			Yearly	x		2	2	0	2	2	0	0	0	0	2	2	0
2.14	Fire Extinguisher	296	Monthly	X		296	296	0	888	888	0	296	296	0	1,184	1,184	0
			Yearly	X		0	0	0	0	0	0	0	0	0	0	0	0
2.15	Gas station	4	Monthly	X		4	4	0	12	12	0	4	4	0	16	16	0
2.16	Lightning Protection	1	Yearly		X	0	0	0	0	0	0	0	1	-1	0	1	-1
2.17	Intercom of Elevator Test	16	Monthly	X		16	16	0	48	48	0	16	16	0	64	64	0
2.18	Kitchen Hood Cleaning	12	Quarterly		X	10	12	-2	10	12	-2	0	0	0	10	12	-2
2.19	Laundry Hood Cleaning	1	2-Monthly		X	0	0	0	1	1	0	1	1	0	2	2	0
3	Electric system																
3.1	Transformer	6	Yearly		X	0	2	-2	0	2	-2	0	2	-2	0	4	-4

3.2	Main Distribution Board & EDB	8	Yearly		X	0	2	-2	0	2	-2	0	2	-2	0	4	-4
3.3	Generator	2	2-Monthly		X	0	0	0	2	2	0		2	-2	2	4	-2
			Yearly		X	0	0	0	0	0	0	0	0	0	0	0	0
3.4	Electric Panel	100	Yearly		X	4	10	-6	8	20	-12	0	10	-10	8	30	-22
3.5	Load Centre	393	Yearly		X	41	40	1	45	80	-35	0	40	-40	45	120	-75
3.6	Thermo scan	1	Yearly		X	0	0	0	0	0	0	0	0	0	0	0	0
4	Air Condition System																
4.1	Chiller Unit	6	Monthly		X	6	6	0	18	18	0	6	6	0	24	24	0
			Yearly		X	0	0	0	0	0	0		2	-2	0	2	-2
4.2	Cooling Tower	11	Monthly	X		11	0	11	33	22	11	11	11	0	44	33	11
			Quarterly	X		11	11	0	1	11	-10	0	0	0	1	11	-10
4.3	Condensing Pump	18	Quarterly	X		1	18	-17	21	18	3	0	0	0	21	18	3
4.4	Chilled Water Pump	15	Quarterly	X		0	15	-15	15	15	0	0	0	0	15	15	0
4.5	Heat Exchanger Unit	2	6-Monthly	X		1	2	-1	2	2	0	0	0	0	2	2	0
4.6	AHU & FCU																
4.6.1	AHU&FCU: Front of the House	161	6-Monthly	X		23	32	-9	66	62	4	8	33	-25	74	95	-21
4.6.2	AHU: Public Area Romsai=3, Lobby=2,Baiyun=1,V-Too=6)	12	6-Monthly	X		8	2	6	8	4	4	0	2	-2	8	6	2
4.6.3	FCU&AHU: Back of the House.	124	6-Monthly	X		10	25	-15	31	50	-19	21	25	-4	52	75	-23
4.6.6	AHU: Production Kitchen	2	Quarterly	X		0	2	-2	0	2	-2	0	0	0	0	2	-2
4.7	Softener	8	Monthly	X		8	8	0	24	24	0	8	8	0	32	32	0
4.8	Ventilation System																
4.8.1	Exhaust Fan - Guestroom	6	Quarterly	X		0	6	-6	0	6	-6	0	0	0	0	6	-6
4.8.2	Exhaust Fan - Laundry	3	Quarterly	X		0	0	0	0	3	-3	0	0	0	0	3	-3
4.8.3	Exhaust Fan - Electrical room	5	Quarterly	X		0	0	0	5	5	0	0	0	0	5	5	0
4.8.4	Exhaust Fan - Other machine rooms	5	Quarterly	X		0	0	0	0	5	-5	0	0	0	0	5	-5
4.8.5	Exhaust Fan & Fresh air - Kitchen								0						0		
1	Verigo Kitchen, 61st floor	1	Quarterly	X		0	0	0	1	1	0	0	0	0	1	1	0
2	Vertigo-Too Kitchen, 60th floor	2	Quarterly	X		0	0	0	2	2	0	0	0	0	2	2	0
3	Baiyun Kitchen 59th Floor	3	Quarterly	X		0	0	0	6	3	3	0	0	0	6	3	3
4	Taihei Kitchen & Pantry room, 54th floor	3	Quarterly	X		0	0	0	2	3	-1	0	0	0	2	3	-1
5	Taihei Kitchen, 53rd floor	2	Quarterly	X		0	0	0	1	2	-1	0	0	0	1	2	-1
6	Saffron-Pantry room, 52nd floor	3	Quarterly	X		0	0	0	2	3	-1	0	0	0	2	3	-1
7	Saffron Kitchen, 51st floor	2	Quarterly	X		0	0	0	2	2	0	0	0	0	2	2	0
8	Club Lounge Kitchen, 19th floor	2	Quarterly	X		0	0	0	2	2	0	0	0	0	2	2	0
9	Staff Canteen, 14th floor	1	Quarterly	X		0	1	-1	0	1	-1	0	0	0	0	1	-1
10	Main Kitchen, Basement	2	Quarterly	X		0	2	-2	0	2	-2	0	0	0	0	2	-2
11	Production Kitchen, Basement	2	Quarterly	X		0	2	-2	0	2	-2	0	0	0	0	2	-2
12	Romsai Kitchen, Basement	2	Quarterly	X		0	2	-2	0	2	-2	0	0	0	0	2	-2
13	Goodies Kitchen, TW1	1	Quarterly	X		0	1	-1	0	1	-1	0	0	0	0	1	-1
5	Sanitary System																
5.1	Cold Water Transfer Pump	6	Quarterly		X	0	6	-6	6	6	0	0	0	0	6	6	0
5.2	Hot Water Machine								0						0		
	33rd - 58th Floor	14	Quarterly	X		2	0	2	6	14	-8	2	0	2	8	14	-6
	22nd - 32nd Floor	46	Quarterly	X		34	46	-12	46	46	0	0	0	0	46	46	0
	21st	4	Quarterly	X		0	0	0	0	4	-4	0	0	0	0	4	-4
	15th - 18th Floor	8	Quarterly	X		0	0	0	0	8	-8	0	0	0	0	8	-8
	Basement Floor	1	Quarterly	X		0	0	0	0	1	-1	0	0	0	0	1	-1

5.3	Heat Pump																
	33rd - 58th Floor	12	Quarterly	X		0	12	-12	0	12	-12	0	0	0	0	12	-12
	23rd - 32nd Floor	11	Quarterly	X		0	11	-11	0	11	-11	0	0	0	0	11	-11
	15th - 18th Floor	4	Quarterly	X		0	4	-4	0	4	-4	0	0	0	0	4	-4
	Basement Floor	1	Quarterly	X		0	1	-1	0	1	-1	0	0	0	0	1	-1
5.4	Wastewater Treatment Pump	16	Quarterly		X	0	16	-16	16	16	0	0	0	0	16	16	0
5.5	Booster Pump System	1	Quarterly	X		0	0	0	1	1	0	0	0	0	1	1	0
5.6	Submersible Pump & Waterfall Pump	19	Quarterly		X	0	19	-19	0	19	-19	0	0	0	0	19	-19
5.7	Water Filter Machine	34	2-Monthly	X		31	0	31	93	31	62	23	0	23	116	31	85
6	Laundry plant																
6.1	Boiler	2	2-Monthly	X		0	0	0	1	2	-1	0	2	-2	1	4	-3
			Yearly		X	0	0	0	0	0	0	0	0	0	0	0	0
6.2	Laundry Equipment	34	2-Monthly		X	32	34	-2	66	102	-36	0	34	-34	66	136	-70
7	Kitchen Equipment																
7.1	Oven&Buner	178	Quarterly	X		178	178	0	178	178	0	0	0	0	178	178	0
7.2	Refrigerator	172	Quarterly		X	0	0	0	172	172	0	0	0	0	172	172	0
7.3	Frezzer Room	17	Quarterly		X	0	0	0	34	17	17	0	0	0	34	17	17
7.4	Ice Making Machine	25	2-Monthly	X		21	0	21	69	25	44	20	25	-5	89	50	39
7.5	Dish&Glass Washer Machine.	21	2-Monthly	X		0	0	0	42	21	21	21	21	0	63	42	21
8	Swimming Pool Pump																
8.1	Cannon Pump.	1	2-Monthly	X		0	0	0	1	1	0	0	1	-1	1	2	-1
8.2	Curtain Pump.	1	2-Monthly	X		0	0	0	1	1	0	0	1	-1	1	2	-1
8.3	Jacuzzi Pump No.1	1	2-Monthly	X		0	0	0	1	1	0	0	1	-1	1	2	-1
8.4	Jacuzzi Pump No.2	1	2-Monthly	X		0	0	0	1	1	0	0	1	-1	1	2	-1
8.5	Swimming Pool Pump.	1	2-Monthly	X		0	0	0	1	1	0	0	1	-1	1	2	-1
8.6	Water Feature Pump.	1	2-Monthly	X		0	0	0	1	1	0	18	1	17	19	2	17
9	Elevator&Escalator																
9.1	Guest Elevator	5	Monthly		X	5	5	0	15	15	0	5	5	0	20	20	0
9.2	Service Elevator	3	Monthly		X	3	3	0	9	9	0	3	3	0	12	12	0
9.3	Centre Core Elevator	6	Monthly		X	6	6	0	18	18	0	6	6	0	24	24	0
9.4	Hydraulic Elevator and Escalator	3	Monthly		X	3	3	0	11	9	2	3	3	0	14	12	2
10	PABX																
	Inspect by Hotel-Engineering	1	Quarterly		X	0	0	0	1	1	0	0	0	0	1	1	0
	Inspect by NEC (Thailand)	1	Quarterly		X	0	0	0	1	1	0	0	0	0	1	1	0
11	CCTV																
	Revised	324	Bi-Monthly		X	0	0	0	324	324	0		324	-324	324	648	-324
12	Plant Room Inspection (Ceiling/Wall/Flooring/Lighting)																
	Plant Room Inspection (Ceiling/Wall/Flooring/Lighting)	25	Bi-Monthly	X		12	12	0	12	37	-25		13	-13	12	50	-38
13	Valve Tag																
13.1	Fire Protection System, floors	61	6-Monthly	X		0	0	0	0	0	0	0	0	0	0	0	0
13.2	Cold Water system, 61 floors	61	6-Monthly	X		0	0	0	0	0	0	0	0	0	0	0	0
13.3	Hot Water system, 61 floors	61	6-Monthly	X		0	0	0	0	0	0	0	0	0	0	0	0
13.4	Air condition system, 61 floors	61	6-Monthly	X		0	0	0	0	0	0	0	0	0	0	0	0

	- 9th Floor	1	Quarterly		x	0	0	0	2	1	1	0	0	0	2	1	1
	- 10th Floor	1	Quarterly		x	0	0	0	2	1	1	0	0	0	2	1	1
16.1.2	Water Storage Tank																
	- Subbasement Floor	1	Quarterly		x	0	0	0	1	1	0	0	0	0	1	1	0
	- 35th Floor	1	Quarterly		x	0	0	0	1	1	0	0	0	0	1	1	0
	- 61st Floor (WC 2)	1	Quarterly		x	0	0	0	1	1	0	0	0	0	1	1	0
	- 61st Floor (WC 3)	1	Quarterly		x	0	0	0	1	1	0	0	0	0	1	1	0
16.1.3	Guestroom - Cold Water Supply																
	15th -18th floor	1	Quarterly		x	0	0	0	1	1	0	0	0	0	1	1	0
	22nd-32nd floor	1	Quarterly		x	0	0	0	1	1	0	0	0	0	1	1	0
	33rd-58th floor	1	Quarterly		x	0	0	0	1	1	0	0	0	0	1	1	0
16.1.4	Guestroom - Hote Water Supply																
	15th -18th floor	1	Quarterly		x	0	0	0	1	1	0	0	0	0	1	1	0
	22nd-32nd floor	1	Quarterly		x	0	0	0	1	1	0	0	0	0	1	1	0
	33rd-58th floor	1	Quarterly		x	0	0	0	1	1	0	0	0	0	1	1	0
16.2	Total Bacteria Monitoring Program																
16.2.1	Cooling Tower (Basin Water)																
	- 9th Floor	1	Monthly		x	1	1	0	3	3	0	1	1	0	4	4	0
	- 10th Floor	1	Monthly		x	1	1	0	3	3	0	1	1	0	4	4	0
16.3	Analys water as per city water standard																
	Underground Water Storage Tank		Yearly		x	1	1	0	1	1	0	0	0	0	1	1	0
16.4	Swimming pool water																
	Monthly test	1	Monthly		x	1	1	0	3	3	0	1	1	0	4	4	0
	Yearly test	1	Year		x	1	1	0	1	1	0	0	0	0	1	1	0

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2023-Master Plan of Preventive Maintenance

Banyan Tree Bangkok

2024-Fire Alarm & Fire Protection and M&E Preventive Maintenance

Item	Description	Qty	Standard (Time / Year)	By Hotel Engineering	By Outsource	May-24						Jun-24					
						Current Month			YTD			Current Month			YTD		
						Actual	Target	Var	Actual	Target	Var	Actual	Target	Var	Actual	Target	Var
1	Fire Alarm System																
1.1	Smoke Detector and Heat Detector	1715	Yearly		X	257	170	87	583	680	-97		170	-170	583	850	-267
1.2	Pull Station	174	Yearly		X	51	18	33	116	72	44		18	-18	116	90	26
1.3	Flow Switch	143	Yearly		X	0	14	-14	29	56	-27		14	-14	29	70	-41
1.4	Supervisory Switch	129	Yearly		X	0	12	-12	25	48	-23		12	-12	25	60	-35
1.5	Emergency Phone	63	Yearly		X	10	7	3	25	28	-3		7	-7	25	35	-10
1.6	Bell	200	Yearly		X	51	20	31	120	80	40		20	-20	120	100	20
1.7	Speaker	247	Yearly		X	0	25	-25	0	100	-100		25	-25	0	125	-125
1.8	Control Panel	3	Monthly	X	X	3	3	0	15	15	0		3	-3	15	18	-3
1.9	Computer & Graphic	1	Monthly		X	1	1	0	5	5	0		1	-1	5	6	-1
2	Fire Protection System																
2.1	Fire Hose Cabinet	160	Yearly	X		15	15	0	60	60	0		15	-15	60	75	-15
2.2	Sprinkler System	129	Yearly	X		0	15	-15	0	60	-60		15	-15	0	75	-75
2.3	FM-200 System	3	2-Monthly		X	0	0	0	7	3	4		3	-3	7	6	1
			6-Monthly	x		0	0	0	3	3	0		0	0	3	3	0
2.4	Co-2 System	1	2-Monthly		X	0	0	0	3	1	2		1	-1	3	2	1
			6-Monthly	x		0	1	-1	1	1	0		0	0	1	1	0
2.5	Kitchen Fire Suppression System																
2.5.1	Fire Suppression- Magpie	0	2-Monthly		X	0	0	0	8	8	0		8	-8	8	16	-8
			6-Monthly	x		0	0	0	0	8	-8		0	0	0	8	-8
2.5.2	Fire Suppression-Anti fire/ Srivikorn Hordling	6	2-Monthly		X	0	0	0	6	6	0		6	-6	6	12	-6
			6-Monthly	x		0	0	0	6	6	0		0	0	6	6	0
2.6	Gas Alarm System	8	2-Monthly	X		0	0	0	24	16	8		8	-8	24	24	0
2.7	Fire Hydent	1	Quarterly	X		1	1	0	2	2	0		0	0	2	2	0
2.8	Emergency Light	331	Quarterly	X		331	331	0	1,139	662	477		0	0	1,139	662	477
2.9	Fire Exit Sign	279	Quarterly	X		0	0	0	837	279	558		279	-279	837	558	279
2.10	Pressurization Fan	5	Monthly	X		5	5	0	25	25	0		5	-5	25	30	-5
2.11	Fire Stair Case Lighting (no. of stair)	5	Quarterly	X		5	5	0	625	10	615		0	0	625	10	615
2.12	Electric fire pump	2	Monthly		X	2	2	0	8	8	0		2	-2	8	10	-2
			Yearly	x		0	0	0	2	2	0		0	0	2	2	0
2.13	Jockey Pump	2	Monthly		X	2	2	0	8	8	0		2	-2	8	10	-2
			Yearly	x		0	0	0	2	2	0		0	0	2	2	0
2.14	Fire Extinguisher	296	Monthly	X		296	296	0	1,480	1,480	0		296	-296	1,480	1,776	-296
			Yearly	X		0	0	0	0	0	0		335	-335	0	335	-335
2.15	Gas station	4	Monthly	X		4	4	0	20	20	0		4	-4	20	24	-4
2.16	Lightning Protection	1	Yearly		X	0	0	0	0	1	-1		0	0	0	1	-1
2.17	Intercom of Elevator Test	16	Monthly	X		16	16	0	80	80	0		16	-16	80	96	-16
2.18	Kitchen Hood Cleaning	12	Quarterly		X	0	0	0	10	12	-2		12	-12	10	24	-14
2.19	Laundry Hood Cleaning	1	2-Monthly		X	0	0	0	2	2	0		1	-1	2	3	-1
3	Electric system																
3.1	Transformer	6	Yearly		X	0	2	-2	0	6	-6		0	0	0	6	-6

3.2	Main Distribution Board & EDB	8	Yearly		X	0	2	-2	0	6	-6		0	0	0	6	-6
3.3	Generator	2	2-Monthly		X	0	0	0	2	4	-2		0	0	2	4	-2
			Yearly		X	0	0	0	0	0	0		2	-2	0	2	-2
3.4	Electric Panel	100	Yearly		X	0	10	-10	8	40	-32		10	-10	8	50	-42
3.5	Load Centre	393	Yearly		X	0	40	-40	45	160	-115		40	-40	45	200	-155
3.6	Thermo scan	1	Yearly		X	0	0	0	0	0	0		0	0	0	0	0
4	Air Condition System																
4.1	Chiller Unit	6	Monthly		X	6	6	0	30	30	0		6	-6	30	36	-6
			Yearly		X	6	0	6	6	2	4		0	0	6	2	4
4.2	Cooling Tower	11	Monthly	X		11	11	0	55	44	11		0	0	55	44	11
			Quarterly	X		11	0	11	12	11	1		11	-11	12	22	-10
4.3	Condensing Pump	18	Quarterly	X		18	0	18	39	18	21		18	-18	39	36	3
4.4	Chilled Water Pump	15	Quarterly	X		16	0	16	31	15	16		15	-15	31	30	1
4.5	Heat Exchanger Unit	2	6-Monthly	X		0	0	0	2	2	0		0	0	0	0	0
4.6	AHU & FCU																
4.6.1	AHU&FCU: Front of the House	161	6-Monthly	X		3	33	-30	77	128	-51	2	33	-31	79	161	-82
4.6.2	AHU: Public Area Romsai=3, Lobby=2,Baiyun=1,V-Too=6)	12	6-Monthly	X		0	2	-2	8	8	0		4	-4	8	12	-4
4.6.3	FCU&AHU: Back of the House.	124	6-Monthly	X		2	25	-23	54	100	-46	1	24	-23	55	124	-69
4.6.6	AHU: Production Kitchen	2	Quarterly	X		0	0	0	0	2	-2		2	-2	0	4	-4
4.7	Softener	8	Monthly	X		8	8	0	40	40	0	3	8	-5	43	48	-5
4.8	Ventilation System																
4.8.1	Exhaust Fan - Guestroom	6	Quarterly	X		0	0	0	0	6	-6		6	-6	0	12	-12
4.8.2	Exhaust Fan - Laundry	3	Quarterly	X		0	3	-3	0	6	-6		0	0	0	6	-6
4.8.3	Exhaust Fan - Electrical room	5	Quarterly	X		0	5	-5	5	10	-5		0	0	5	10	-5
4.8.4	Exhaust Fan - Other machine rooms	5	Quarterly	X		0	5	-5	0	10	-10		0	0	0	10	-10
4.8.5	Exhaust Fan & Fresh air - Kitchen								0						0		
1	Verigo Kitchen, 61st floor	1	Quarterly	X		0	1	-1	1	2	-1		0	0	1	2	-1
2	Vertigo-Too Kitchen, 60th floor	2	Quarterly	X		0	2	-2	2	4	-2		0	0	2	4	-2
3	Baiyun Kitchen 59th Floor	3	Quarterly	X		0	3	-3	6	6	0		0	0	6	6	0
4	Taihei Kitchen & Pantry room, 54th floor	3	Quarterly	X		0	3	-3	2	6	-4		0	0	2	6	-4
5	Taihei Kitchen, 53rd floor	2	Quarterly	X		0	2	-2	1	4	-3		0	0	1	4	-3
6	Saffron-Pantry room, 52nd floor	3	Quarterly	X		0	3	-3	2	6	-4		0	0	2	6	-4
7	Saffron Kitchen, 51st floor	2	Quarterly	X		0	2	-2	2	4	-2		0	0	2	4	-2
8	Club Lounge Kitchen, 19th floor	2	Quarterly	X		0	2	-2	2	4	-2		0	0	2	4	-2
9	Staff Canteen, 14th floor	1	Quarterly	X		0	0	0	0	1	-1		1	-1	0	2	-2
10	Main Kitchen, Basement	2	Quarterly	X		0	0	0	0	2	-2		2	-2	0	4	-4
11	Production Kitchen, Basement	2	Quarterly	X		0	0	0	0	2	-2		2	-2	0	4	-4
12	Romsai Kitchen, Basement	2	Quarterly	X		0	0	0	0	2	-2		2	-2	0	4	-4
13	Goodies Kitchen, TW1	1	Quarterly	X		0	0	0	0	1	-1		1	-1	0	2	-2
5	Sanitary System																
5.1	Cold Water Transfer Pump	6	Quarterly		X	6	0	6	12	6	6		6	-6	12	12	0
5.2	Hot Water Machine								0						0		
	33rd - 58th Floor	14	Quarterly	X		1	14	-13	9	28	-19		0	0	9	28	-19
	22nd - 32nd Floor	46	Quarterly	X		4	0	4	50	46	4		46	-46	50	92	-42
	21st	4	Quarterly	X		0	4	-4	0	8	-8		0	0	0	8	-8
	15th - 18th Floor	8	Quarterly	X		0	8	-8	0	16	-16		0	0	0	16	-16
	Basement Floor	1	Quarterly	X		0	1	-1	0	2	-2		0	0	0	2	-2

5.3	Heat Pump																
	33rd - 58th Floor	12	Quarterly	X		0	0	0	0	12	-12		12	-12	0	24	-24
	23rd - 32nd Floor	11	Quarterly	X		0	0	0	0	11	-11		11	-11	0	22	-22
	15th - 18th Floor	4	Quarterly	X		0	0	0	0	4	-4		4	-4	0	8	-8
	Basement Floor	1	Quarterly	X		0	0	0	0	1	-1		1	-1	0	2	-2
5.4	Wastewater Treatment Pump	16	Quarterly		X	16	0	16	32	16	16		16	-16	32	32	0
5.5	Booster Pump System	1	Quarterly	X		0	1	-1	1	2	-1		0	0	1	2	-1
5.6	Submersible Pump & Waterfall Pump	19	Quarterly		X	11	0	11	11	19	-8		19	-19	11	38	-27
5.7	Water Filter Machine	34	2-Monthly	X		8	34	-26	124	65	59	6	0	6	130	65	65
6	Laundry plant																
6.1	Boiler	2	2-Monthly	X		0	0	0	1	4	-3		2	-2	1	6	-5
			Yearly		X	0	0	0	0	0	0		0	0	0	0	0
6.2	Laundry Equipment	34	2-Monthly		X	34	34	0	100	170	-70		34	-34	100	204	-104
7	Kitchen Equipment																
7.1	Oven&Buner	178	Quarterly	X		6	0	6	184	178	6	1	178	-177	185	356	-171
7.2	Refrigerator	172	Quarterly		X	172	172	0	344	344	0		0	0	344	344	0
7.3	Frezzer Room	17	Quarterly		X	17	17	0	51	34	17		0	0	51	34	17
7.4	Ice Making Machine	25	2-Monthly	X		4	0	4	93	50	43	4	25	-21	97	75	22
7.5	Dish&Glass Washer Machine.	21	2-Monthly	X		0	0	0	63	42	21		21	-21	63	63	0
8	Swimming Pool Pump																
8.1	Cannon Pump.	1	2-Monthly	X		0	0	0	1	2	-1		1	-1	1	3	-2
8.2	Curtain Pump.	1	2-Monthly	X		0	0	0	1	2	-1		1	-1	1	3	-2
8.3	Jacuzzi Pump No.1	1	2-Monthly	X		0	0	0	1	2	-1		1	-1	1	3	-2
8.4	Jacuzzi Pump No.2	1	2-Monthly	X		0	0	0	1	2	-1		1	-1	1	3	-2
8.5	Swimming Pool Pump.	1	2-Monthly	X		0	0	0	1	2	-1		1	-1	1	3	-2
8.6	Water Feature Pump.	1	2-Monthly	X		0	0	0	19	2	17		1	-1	19	3	16
9	Elevator&Escalator																
9.1	Guest Elevator	5	Monthly		X	5	5	0	25	25	0		5	-5	25	30	-5
9.2	Service Elevator	3	Monthly		X	3	3	0	15	15	0		3	-3	15	18	-3
9.3	Centre Core Elevator	6	Monthly		X	6	6	0	30	30	0		6	-6	30	36	-6
9.4	Hydraulic Elevator and Escalator	3	Monthly		X	3	3	0	17	15	2		3	-3	17	18	-1
10	PABX																
	Inspect by Hotel-Engineering	1	Quarterly		X	1	1	0	2	2	0	0	0	0	2	2	0
	Inspect by NEC (Thailand)	1	Quarterly		X	1	1	0	2	2	0	0	0	0	2	2	0
11	CCTV																
	Revised	324	Bi-Monthly		X	324	324	0	648	972	-324	0	0	0	648	972	-324
12	Plant Room Inspection (Ceiling/Wall/Flooring/Lighting)																
	Plant Room Inspection (Ceiling/Wall/Flooring/Lighting)	25	Bi-Monthly	X		0	12	-12	0	62	-62		13	-13	0	75	-75
13	Valve Tag																
13.1	Fire Protection System, floors	61	6-Monthly	X		0	0	0	0	0	0		0	0	0	0	0
13.2	Cold Water system, 61 floors	61	6-Monthly	X		0	0	0	0	0	0		0	0	0	0	0
13.3	Hot Water system, 61 floors	61	6-Monthly	X		0	0	0	0	0	0		0	0	0	0	0
13.4	Air condition system, 61 floors	61	6-Monthly	X		0	0	0	0	0	0		0	0	0	0	0

13.5	Laundry Plant, 1 floors	1	6-Monthly	X		0	0	0	0	0	0		0	0	0	0	0
14	Saffron Cruise																
14.1	Main Engine	2	Monthly	x		2	2	0	10	10	0		2	0	10	12	-2
14.2	Generator	2	Monthly	x		2	2	0	10	10	0		2	-2	10	12	-2
14.3	Water Pump	9	Monthly	x		9	9	0	38	45	-7		9	-9	38	54	-16
14.4	Steering Gear	2	Monthly	x		2	2	0	8	10	-2		2	-2	8	12	-4
14.5	Winch	2	Monthly	x		2	2	0	9	10	-1		2	-2	9	12	-3
14.6	Wastewater Treatment System	1	2-Monthly	x		1	1	0	4	3	1		0	0	4	3	1
14.7	Fan Coil Unit	22	Quarterly	x		6	0	6	49	44	5		0	0	49	44	5
14.8	Condensing Unit	5	Quarterly	x		5	0	5	10	10	0		0	0	10	10	0
14.9	CCTV System // monthly	26	2-Monthly	x		26	26	0	79	78	1	26	0	26	105	78	27
14.10	Kitchen Equipment //	8	Quarterly	x		8	8	0	16	16	0		0	0	16	16	0
14.11	Refrigerator	11	Quarterly	x		11	11	0	22	22	0	11	0	11	33	22	11
14.12	Ice Making Machine //	2	Monthly	x		2	2	0	10	10	0	2	2	0	12	12	0
14.13	Dish washing machine // monthly	3	Monthly	x		3	3	0	15	15	0	3	3	0	18	18	0
14.14	Kitchen Fire Suppression System // 6	1	6-Monthly	x		0	0	0	0	1	-1		0	0	0	1	-1
14.15	Gas Alarm System //	1	Monthly	x		1	1	0	5	5	0		1	-1	5	6	-1
14.16	Fire Alarm System //	1	Monthly	x		1	1	0	5	5	0		1	-1	5	6	-1
14.17	Life Jacket Inventory //mo	1	Monthly	x		1	1	0	5	5	0		1	-1	5	6	-1
14.18	Fire Extinguisher	13	Monthly	x		13	13	0	65	65	0		13	-13	65	78	-13
14.19	Electric Pannel //	13	Quarterly	x		0	0	0	1	26	-25		0	0	1	26	-25
14.20	AV-Equipment Inventory	1	Monthly	x		1	1	0	5	5	0	1	1	0	6	6	0
14.21	Engineering Tool Inventory	1	Monthly	x		1	1	0	5	5	0	1	1	0	6	6	0
15	Apsara Cruise																
15.01	Main Engine	2	Monthly	x		Closed for renovation, start from 1 March unit 30 Sep 2024	2	0	0	10	0		2	-2	0	12	-12
15.02	Generator	2	Monthly	x			2	-2	4	10	-6		2	-2	4	12	-8
15.03	Cold Water Supply System	1	Monthly	x			1	-1	2	5	-3		1	-1	2	6	-4
15.04	Air Conditioning System	1	Quarterly	x			1	-1	2	2	0		0	0	2	2	0
15.05	Wastewater Treatment System	1	Monthly	x			1	-1	2	5	-3		1	-1	2	6	-4
15.06	Flooding Prevention pump	1	Monthly	x			1	-1	2	5	-3		1	-1	2	6	-4
15.07	Emergency Light	1	Monthly	x			1	-1	2	5	-3		1	-1	2	6	-4
15.08	Fire Extinguisher	1	Monthly	x			1	-1	2	5	-3		1	-1	2	6	-4
15.09	CCTV	1	2-Monthly	x			1	-1	1	3	-2		0	0	1	3	-2
15.10	Kitchen Equipment, 21	1	Quarterly	x			1	-1	22	2	20		0	0	22	2	20
15.11	Gas Alarm System	1	Monthly	x			1	-1	2	5	-3		1	-1	2	6	-4
15.12	AV-Equipment Inventory	1	Monthly	x			1	-1	2	5	-3		1	-1	2	6	-4
15.13	Life Jackey Inventory	1	Monthly	x			1	-1	2	5	-3		1	-1	2	6	-4
15.14	Engineering Tool Inventory	1	Monthly	x			1	-1	2	5	-3		1	-1	2	6	-4
16	Water Quarterly Management System																
16.1	Legionella-Monitoring																
16.1.1	Cooling Tower (Basin Water)																

	- 9th Floor	1	Quarterly		x	1	1	0	3	2	1		0	0	3	2	1
	- 10th Floor	1	Quarterly		x	1	1	0	3	2	1		0	0	3	2	1
16.1.2	Water Storage Tank																
	- Subbasement Floor	1	Quarterly		x	1	1	0	2	2	0		0	0	2	2	0
	- 35th Floor	1	Quarterly		x	1	1	0	2	2	0		0	0	2	2	0
	- 61st Floor (WC 2)	1	Quarterly		x	1	1	0	2	2	0		0	0	2	2	0
	- 61st Floor (WC 3)	1	Quarterly		x	1	1	0	2	2	0		0	0	2	2	0
16.1.3	Guestroom - Cold Water Supply																
	15th -18th floor	1	Quarterly		x	1	1	0	2	2	0		0	0	2	2	0
	22nd-32nd floor	1	Quarterly		x	1	1	0	2	2	0		0	0	2	2	0
	33rd-58th floor	1	Quarterly		x	1	1	0	2	2	0		0	0	2	2	0
16.1.4	Guestroom - Hote Water Supply																
	15th -18th floor	1	Quarterly		x	1	1	0	2	2	0		0	0	2	2	0
	22nd-32nd floor	1	Quarterly		x	1	1	0	2	2	0		0	0	2	2	0
	33rd-58th floor	1	Quarterly		x	1	1	0	2	2	0		0	0	2	2	0
16.2	Total Bacteria Monitoring Program																
16.2.1	Cooling Tower (Basin Water)																
	- 9th Floor	1	Monthly		x	1	1	0	5	5	0		1	-1	5	6	-1
	- 10th Floor	1	Monthly		x	1	1	0	5	5	0		1	-1	5	6	-1
16.3	Analys water as per city water standard																
	Underground Water Storage Tank		Yearly		x	0	0	0	1	1	0		0	0	1	1	0
16.4	Swimming pool water																
	Monthly test	1	Monthly		x	1	1	0	5	5	0		1	-1	5	6	-1
	Yearly test	1	Year		x	1	1	0	2	2	0		0	0	2	2	0