

REFERENCE OF TENDER	DESCRIPTION OF TENDER	TIME PERIOD OF TENDER	DEPARTMENT/DIVISION/ UNIT REQUESTING TENDER	FEES	CLOSING DATE NOT LATER THAN 2.00PM	FOCAL PERSON
KK/292/2022/ESTETRIPASH(TC)	<p>THE PROVISION OF MAINTENANCE SERVICES FOR FIRE ALARM SYSTEM AND FIRE PROTECTION SYSTEM FOR RIPAS HOSPITAL FOR A PERIOD OF FIVE (5) YEARS</p> <p>Kelayakan Pemborong/Pembekal: Berdaftar dengan Jabatan Bomba dan Penyelamat, Kementerian Pembangunan atau Kementerian Kesihatan</p> <p>Kelas/Kategori: - Kelas: II ke atas Kategori: KPME05</p>	5 YEARS	Department of Estate Management and Transport, Raja Isteri Pengiran Anak Saleha (RIPAS) Hospital	\$500.00	29 th November 2022	<p>IR Abdul Mushawwir bin Haji Abdul Rahman Jurutera Kanan Hospital Hospital Raja Isteri Pengiran Anak Saleha Kementerian Kesihatan Negara Brunei Darussalam Contact No.: 2242424 EXT 8637/8640/2222 e-mail: mushawwir.rahman@moh.gov.bn</p>

TABLE OF CONTENTS

1.	GENERAL	1
2.	MAINTENANCE SERVICES	1
2.1	Preventive Maintenance.....	1
2.2	Corrective Maintenance	2
2.3	Additional Services.....	2
3.	SPARE PARTS	2
4.	PERSONNEL	3
5.	INSURANCE	3
6.	LOG BOOKS AND REPORTS	3
7.	EQUIPMENT	4
8.	CONTRACT PRICE AND PAYMENT	4
	SCHEDULE I – LOCATION OF EQUIPMENT UNDER THE SYSTEM	5
	SCHEDULE II – MAINTENANCE SCHEDULES	14
I.	TESTING AND INSPECTION OF FIRE ALARM SYSTEM	14
II.	INSPECTION AND TESTING OF FIRE SPRINKLER SYSTEM	15
III.	TESTING AND INSPECTION FOR FIRE HOSEREEL SYSTEM (QUARTERLY)	17
IV.	INSPECTION & SERVICING FIRE EXTINGUISHERS INCLUDING REFILLING (YEARLY)....	18

SECTION 2

SPECIFICATIONS

TENDER REFERENCE NO.: KK/292/2022/ESTETRIPASH(TC)

INVITATION TO TENDER THE PROVISION OF MAINTENANCE SERVICES FOR FIRE ALARM SYSTEM AND FIRE PROTECTION SYSTEM FOR RIPAS HOSPITAL FOR A PERIOD OF FIVE (5) YEARS

1. GENERAL

- 1.1 Tenderers are sought from suitably qualified and registered Fire Protection Firms with skilled staff and adequate testing instruments who wish to be considered for the provision of maintenance services (hereinafter "Maintenance Services") for the Fire Alarm System, FM-200, NAF S-III Sprinkler System, Fire Hosereel System and Fire Extinguishers (hereinafter "the System") for the Raja Isteri Pengiran Anak Saleha Hospital (hereinafter "RIPAS Hospital") for a duration of **Five (5) years** as set out in **Schedule I – Location of Equipment under the System**.
- 1.2 The Tenderer shall provide Maintenance Services for the System inclusive of all necessary spare parts and replacement parts to ensure that the System is kept in good working order and condition and functioning efficiently within the manufacturer's specifications. The Maintenance Services consist of:
- Preventive maintenance; and
 - Corrective maintenance
- 1.3 All prices to be quoted shall include labour, parts and transport charges.
- 1.4 The Tenderer shall also ensure that technical services shall be available twenty-four (24) hours a day for the convenience of the Government to provide assistance for any emergency service. In the event that any attended calls are made during the preventive maintenance period, there shall not be any charges for the replacement of parts.

2. MAINTENANCE SERVICES

2.1 Preventive Maintenance

- 2.1.1 Scheduled or routine preventive maintenance, which includes testing and inspection, on the System shall be performed during Government working hours [07.45 am – 12.15pm and 01.30 pm – 04.30 pm].
- 2.1.2 Preventive maintenance shall be performed every three (3) months in accordance or with the maintenance schedules set out in **Schedule II – Maintenance Schedules** as recommended by the manufacturers' service manuals.
- 2.1.3 Although the maintenance schedules may not include instructions for every component of each item of the equipment, the Tenderer is expected to carry out the usual maintenance process in accordance with the normal trade practices and to meet specific requirements of the respective equipment's manufacturer's recommendations.
- 2.1.4 The frequencies of the preventive maintenance may be adjusted, by mutual agreement, to suit the duty and conditions of operation of the System's equipments.
- 2.1.5 Where follow-up work is considered necessary and involves further repairs, the Tenderer shall notify the Superintending Officer of the extent of the repairs before proceeding with the work.
- 2.1.6 The Tenderer shall ensure that downtime of any of the equipment within the System is kept to a minimum. The maximum period for which any equipment to be continuously out-of-service shall be **three (3) days**. A penalty of **B\$100.00 per day** shall be imposed if the said period if exceeded and that, it is in the opinion of the Superintending Officer, the System ought reasonably to have been put back to service.

2.1.7 The Tenderer is also required to submit monthly reports covering details of periodic inspection, servicing and repairs. The monthly report shall include, but not limited to, a log showing the time when fault notice was received, nature of fault, time when rectification work was initiated, actual time taken for repair, materials and parts used.

2.2 Corrective Maintenance

2.2.1 Corrective maintenance shall be performed at **ANY TIME (inclusive of public holiday)** upon notification by the Superintending Officer or his representative.

2.2.2 The Tenderer shall dispatch his technician to a site specified by the Superintending Officer or his representative **within 30 minutes** (hereinafter "Response Time") after being notified in writing or telephone that a fault is reported via a "Service Call Slip" which the Tenderer shall collect prior to commencing the repair or replacement works. This Service Call Slip must be certified by the Superintending Officer or his representative with an official stamp, time in, time out and date.

2.2.3 If the Response Time is exceeded, a penalty of **B\$50.00 per hour** shall be imposed upon the Tenderer for every hour or part thereof that the Response Time is exceeded.

2.2.4 The technician shall complete any repair or replacement of parts within **seven (7) days** from the time the technician arrives at the specified site. A penalty of **\$100.00 per day** shall be imposed if the said downtime is exceeded and that, it is in the opinion of the Superintending Officer, the System ought reasonably to have been put back to service.

2.2.5 Any breakdown report(s) shall be forwarded to the Estate Maintenance, RIPAS Hospital on the next working day for approval of ESTET Superintending Officer.

2.3 Additional Services

2.3.1 The Tenderer shall service the existing panels such as tightening the cable, terminations, replacement of fused indicating lights, faulty meters, tidying up the internal wirings, relays, components, boards, and other necessary work required.

2.3.2 The Tenderer is also required to provide necessary protection against the existing plants and equipment in the adjacent working areas while carrying out the Maintenance Services.

3. SPARE PARTS

3.1 The Tenderer shall maintain sufficient spare parts which are commonly used to ensure and enable all preventive maintenance to be carried out and to replace any parts which may be reasonably expected to be needed due to breakdown.

3.2 The Tenderer shall submit a price list of all parts or items as listed out in **Schedule A – Schedule of Price**. This list shall be inclusive of all duties, taxes, labour charges, transport charges and maintained for five years.

3.3 The Tenderer shall remove and replace any parts supplied which are damaged, defective or do not meet the respective specification. Failure to do within the stipulated time by the Superintending Officer may result in the removal of the part/s by the Superintending Officer and replaced by others. The Government reserves the right to recover all costs and expenses incurred for such removal and replacement.

3.4 A grace period of **two (2) weeks** for repairs which are outstanding due to unavailability of spare parts or awaiting spare parts, after which a penalty of **B\$100.00 per day or part thereof** shall be imposed. A written notice will be given to the Tenderer seven (7) days prior to expiry of the grace period and start of the penalty.

3.5 If, in the opinion of the Superintending Officer, any of the parts supplied are not in accordance with the specifications, the superintending officer reserves the right to submit the part/s to expert examination and/or test. All costs in connection therewith shall be borne by the Tenderer unless such examination and/or test show that the said part/s is/are in accordance with its specification/s.

3.6 All parts supplied must be certified with approval from the Department of Fire and Rescue Services.

4. PERSONNEL

4.1 To ensure the proper and efficient execution of the Maintenance Services, the Tenderer shall provide and employ qualified and competent workers to perform the Maintenance Services as follows:

- Two (2) registered and qualified supervisor
- Six (6) qualified technician

4.2 Failure to provide the required personnel to carry out the Maintenance Services will result in an imposition of the following charges:

- Supervisor - **B\$75.00 / day**
- Technician - **B\$50.00 / day**

4.3 The Tenderer shall ensure that such personnel are properly trained and employed (if they are employed outside of Brunei Darussalam) by the Tenderer throughout the three-year duration.

4.4 The Tenderer is required to submit a list of names, addresses, qualifications, experiences and other relevant information that the Superintending Officer may require, of all persons that shall be employed for the performance of the Maintenance Services in the format set out in **Section 3** of this Invitation To Tender. Any amendments made to the list shall be submitted in writing within five (5) days upon knowledge that any person has been added or deleted from the list during the three-year duration.

4.5 The Superintending Officer reserves the right to remove, reject or replace any persons employed by the Tenderer, who in the opinion of the Superintending Officer is not competent to execute the Maintenance Services, and shall direct the Tenderer to replace such person/s.

4.6 All personnel employed by the Tenderer shall be neatly and properly attired in uniforms and equipped with proper tools and safety equipment to enable them to carry out their work safely, accurately and without any risk of causing damage to the System or RIPAS Hospital.

5. INSURANCE

The Tenderer shall warrant that he will maintain at his own expense, comprehensive general liability, errors and omissions, workers' compensation, public liability, property damage and automobile liability insurance. Upon request by the Government, the Tenderer shall furnish certificates showing that such insurance is in effect and will not be cancelled or changed in the absence of a prior 30-days' written notice to the Government.

6. LOG BOOKS AND REPORTS

6.1 A record of the work done on each maintenance visit for each location in **Schedule I** shall be noted in a log book by the Tenderer.

6.2 The log book must show the date, time and duration of work performed; a description of the work performed; and the names of the Tenderer's personnel responsible for performing the work.

6.3 Completion of the maintenance visit shall be affixed via the technician's signature and shall be confirmed in writing by the Superintending Officer or his representative.

6.4 The log book must be available for inspection by the Government at any time.

- 6.5 The Tenderer shall also submit Maintenance Service Reports in a format acceptable to the Government and shall include the following information:
- reference number of any equipment of the System;
 - job number;
 - date of completion of job;
 - date, time and total time any equipment of the System is made unavailable to the Government;
 - name of Tenderer's technician/personnel responsible for carrying out the job; and
 - comments of the person requesting the Maintenance Services.
- 6.6 Any verbal reports made by the Estate Maintenance, RIPAS Hospital on any breakdown shall be made available to the superintending officer or his representative within twenty-four (24) hours of receiving the complaint. Such report must state the nature of the fault, work done and whether any further work is required.

7. EQUIPMENT

The Tenderer shall ensure that all technicians working on site are equipped with adequate equipment and/or tools to enable them to carry out their work safely, accurately and without risk of causing any damage to the System or any of the buildings. Such equipment and tools include but are not limited to the following:

- Multitester
- Insulation Tester
- Smoke/heat detector tester
- Glass fuse
- Indicator panel bulbs
- General Tool kit

8. CONTRACT PRICE AND PAYMENT

- 8.1 The Tenderer shall quote the cost of an annual service contract which shall consist of the maintenance services charges and the cost of parts replaced (if any), upon receipt of:
- Three (3) copies of invoice (one (1) original copy and two (2) duplicate copies of the invoice)
 - Service Call Slip; and
 - A detailed Maintenance Service Report
- 8.2 The Tenderer shall submit the invoice of the previous month **within first two (2) weeks of each month**. All claims shall be addressed to:

***Head of Section
Estate Maintenance Section
RIPAS Hospital
Negara Brunei Darussalam***

- 8.3 Payment will be made within forty-five (45) days after submission of the invoice and other related documents, subject to any deduction under the Contract and satisfactory certification by the Government during the preceding month.

SCHEDULE I – LOCATION OF EQUIPMENT UNDER THE SYSTEM

ITEM NO.	DESCRIPTIONS	QTY	UNIT
<p>1</p> <p>1.1</p> <p>1.2</p> <p>1.3</p> <p>1.4</p> <p>1.5</p>	<p><u>LOCATION</u></p> <p>BLOCK 1:</p> <p>Ground Floor (Ward 1) Main Fire Panel and 24V Battery Bank.</p> <p>RGH016FAB01E Battery Cells, Wiring etc.</p> <p>RGH016FZP01E Fire Zones 1-5,8 Activating Devices, Sensors, Wirings, Fixing, etc.</p> <p>First Floor (Ward 6) Sub-Panel RGH011FZP02E Fire Zones, 1-5, 6 Activating Devices, Sensors, Wirings, Fixings, etc.</p> <p>Second Floor Sub-Panel RGH011FZP03E Fire Zones, 1-5 Activating Devices, Sensors, Wirings, Fixings, etc.</p> <p>Third Floor Sub-Panel RGH011FZP04E Fire Zones Panel, 1-5, Component Activating Devices, Sensors, Wirings, Fixing, etc.</p> <p>Fourth Floor & Roof Sub Panel RGH011FZP05E Fire Zones 1-7 Activating Devices, Sensors, Wirings, Fixings, etc.</p>	<p>1</p> <p>1</p> <p>1</p> <p>1</p> <p>1</p> <p>1</p>	<p>Lot</p> <p>Lot</p> <p>Lot</p> <p>Lot</p> <p>Lot</p> <p>Lot</p>
<p>2.</p> <p>2.1</p> <p>2.2</p> <p>2.3</p> <p>2.4</p>	<p>BLOCK 2</p> <p>Ground Floor Main Fire Panel and Battery Bank</p> <p>RGH02GFAB02E Battery Cells, Wiring etc.</p> <p>RGH02GFZP06E Fire Zones 1-5, Activating devices, Sensors, Wirings, Fixing, etc.</p> <p>First Floor Sub-Panel RGH021FZP07E Fire Zones, 1-5, Activating Devices, Sensors, Wirings, Fixings, etc.</p> <p>Second Floor Sub-Panel RGH022FZP08E Fire Zones, 1-5 Activating Devices, Sensors, Wirings, Fixings, etc.</p> <p>Third Floor Sub-Panel</p>	<p>1</p> <p>1</p> <p>1</p> <p>1</p> <p>1</p>	<p>Lot</p> <p>Lot</p> <p>Lot</p> <p>Lot</p> <p>Lot</p>

	RGH023FZP09E Fire Zones Panel, 1-5, Component Activating Devices, Sensors, Wirings, Fixing, etc.		
3.	BLOCK 3		
3.1	Ground Floor main Fire Panel and 24V Battery Bank. RGH03GFAB03E Battery Cells, Wirings, etc.	1	Lot
	RGH03GFZP10E Fire Zones 1-5,8 Activating Devices, Sensors, Wirings, etc.	1	Lot
3.2	First Floor Sub-Panel RGH031FZP11E Fire Zone 1-5, Activating Devices, Sensors, Wirings, etc.	1	Lot
3.3	Second Floor Sub-Panel RGH032FZP12E Fire Zones 1-5, Activating Devices, Sensors, Wirings, etc.	1	Lot
3.4	Third Floor & Roof Sub-Panel RGH033FZP13E Fire Zones 1-5, Activating devices, Sensors, Wirings, Fixing, etc	1	Lot
4.	BLOCK 4		
4.1	Ground Floor Main Fire Panel and 24V Battery Bank RGH03GFAB03E Battery Cells, Wirings, etc.	1	Lot
	RGH03GFZP10E Fire Zones 1-5,8 Activating Devices, Sensors, Wirings, etc.	1	Lot
4.2	First Floor Sub-Panel RGH031FZP11E Fire Zone 1-5, Activating Devices, Sensors, Wirings, etc.	1	Lot
4.3	New Operation Theatre 1st Floor Ground Floor main Addressable Fire Panel include Repeater Panel and Interphase Module Activating Devices, Sensors, Wirings, etc.	1	Lot
4.4	Second Floor Sub-Panel Fire Zone 1-5 Conventional Panel c/w charger and battery. Activating Devices, Sensors, Wirings, etc.	1	Lot
5	BLOCK 5		
5.1	Ground Floor Main Fire Panel and 24V Battery Bank RGH-BK5-GF-BAT Battery Cells, Wiring etc.	1	Lot

	RGH-BK5-GF-FZP Fire Zones 1-4, Activating devices, Sensors, Wirings, Fixing, etc.	1	Lot
5.2	Entrance (Monitoring Unit) RGH-BK5-MZP Master Fire Zones Panel 48 Zones.	1	Lot
6	BLOCK 6/WARD BLOCK		
6.1	Basement Main Fire Panel and 24V Battery Bank. RGH-BK6-BM-BAT Battery Cells, Wirings, etc.	1	Lot
	RGH-BK6-BM-FZP Fire Zones 1-4, Activating Devices, Sensors, Wirings, etc.	1	Lot
6.2	First Floor (Laundry) Main Fire Panel & 24V Battery Bank. RGH-BK6-1F-BAT. Battery Cells, Wirings, etc.	1	Lot
	RGH-BK6-1F-FZP Fire Zones 1-5, Activating Devices, Sensors, Wirings, Fixing, etc.	1	Lot
7.	OUTPATIENT DEPARTMENTS		
7.1	Main House NOTE: NOT IN USE RGH-OPD-GH-MMP (Out Of Commission). Mimic Panel, Wirings, Components, etc.	1	Lot
7.2	Lift Lobby Main Fire panel & Battery Bank RGH-OPD-LL-BAT. Battery Cells, Wiring etc.	1	Lot
	RGH-OPD-LL-FZP. Fire Zones 1-12, Activating Devices, Sensors, Wirings, Fixing, etc.	1	Lot
7.3	Main Entrance Sub Fire Panel & 24V Battery Bank. RGH-OPD-ME-BAT. Battery Cells, Wirings, etc.	1	Lot
	RGH-OPD-ME-FMP. Fire Zones, 13-17, 31, Activating Devices, Sensors, Wirings, Fixings, etc.	1	Lot
7.4	Main Entrance Mimic Panel RGH-OPD-ME-MMP. Wirings, Components, etc.	1	Lot
7.5	Accident and Emergency Sub Panel & 24V Battery Bank RGH-OPD-AE-BAT. Battery Cells, Wirings, etc.	1	Lot
	RGH-OPD-AE-FZP. Fire Zones 18-22, 30,	1	Lot

	Activating Devices, Sensors, Wirings, etc.		
7.6	RGH-OPD-AE-MMP Mimic Repeater Panel. Components, Wirings, etc.	1	Lot
7.7	X-Ray Sub-Panel & 24V Battery Bank RGH-OPD-XR-BAT. Battery Cells, Wirings, etc.	1	Lot
	RGH-OPD-XR-FZP Fire Zones 23-27, Activating Devices, Sensors, Wirings, etc.	1	Lot
7.8	ADMINISTRATION Sub-Panel & 24V Battery Bank RGH-OPD-AD-BAT. Battery Cells, Wirings, etc.	1	Lot
	RGH-OPD-AD-FZP Fire Zones 28-29, Activating Devices, Sensors, Wirings, etc.	1	Lot
8.	NURSING COMPLEX (Pakar II)		
8.1	UPLK – Unit Pendidikan Lanjutan Kejururawatan. (Proposed Cancer centre)		
	RGH-UPLK-BAT Battery Cells, Charger, Wirings, Components, etc.	1	Lot
	RGH-UPLK-FZP Fire Zones Panel 1-2, Components. Activating Devices, Sensors, Wirings, etc.	1	Lot
8.2	NC- Nurses Student Hostel		
	RGH-NCX-SH-BAT Battery Cells, Charger, Components, Wirings, etc.	1	Lot
	RGH-NCX-SH-FGZP Fire Zones Panel, 1-3, 3-6, Components, Activating Devices, Sensors, Wirings, etc.	1	Lot
9.	SPORTS COMPLEX AND ESTATE MAINTENANCE SECTION BUILDING		
9.1	Sports Complex Main Fire Panel & Battery Bank RGH-SCX-SC-FZP Fire Zones 1-2, Activating Devices, Sensors, Wirings, etc.	1	Lot
9.2	Building & Engineering Services Main Fire Panel & Battery Bank RGH-BES-BE-BAT Battery Cells, Wiring etc.	1	Lot
	RGH-BES-BE-FZP Fire Zones 1-6, Activating Devices, Sensors, Wirings, etc.	1	Lot

	<u>NAFS 111 INSTALLATION</u>		
10.	BLOCK 6 SUB-STATION NO.1		
10.1	RGH-BK6-S1-BAT Battery Cell, Charger, Wirings, Components, etc.	1	Lot
	RGH-BK6-S1-NZP Halon Zone Panel 1-8, Components Activating Devices, Sensors, Wirings etc	1	Lot
10.2	Block 6-A/C Chiller & Boiler Plant Room. To maintain Modular NAF S 111 Generator Room c/w Cylinders, Gauges, Fittings. Activating Mechanisms, Top Up 1301 Gas, Wirings, etc.	1	Lot
10.3	LT SWITCHBOARD NO.1 RGH-WBB-LI-NZP NAF S 111 Zones Panel 1-4 Components Activating Devices, Sensors, etc	1	Lot
10.4	LT SWITCHBOARD NO.2 RGH-WBB-L2-NZP NAF S 111 Zones Panel, 1-2 Components Activating Devices, Sensors, Wiring, etc.	1	Lot
11.	OUTPATIENT DEPARTMENT (OPD) AND CENTRAL STATE LABORATORY (CSL)		
11.1	Out Patient Dept. (UPS) Room RGH-OPD-UR-NZP NAF S 111 Zones Panel 1-4 Components Activating Devices, Sensors, Wiring, etc.	1	Lot
11.2	Central State Laboratory- Ground Floor (GA) RGH-CSL-GF-NZP NAF S 111 Zone Panel, 1-12 M/Panel, Components Activating Devices, Sensors, Wirings, etc.	1	Lot
	RGH-CSL-GF-MMP Halon Zones panel, 4-8, Mimic panel, Components, Wirings, etc.	1	Lot
11.3	Central State Laboratory – 1st Floor (1A) RGH-CSL-1F-NZP Battery Cells, Charger, Components, Wirings, etc.	1	Lot
12.	INFLAMMABLE STORE & OUT PATIENT SUB STATION NO. 2		
12.1	Inflammable Store RGH-OPD-1S-NZP NAF S 111 Zones Panel 1-2 Components Activating Devices, Sensors Wirings, etc.	1	Lot
12.2	Out Patient – Sub Station No.2 To maintain Modular NAF S 111 Systems, c/w Regulators, Activating Devices, Sensors, Wirings, etc.	1	Lot
12.3	RGH-OPD-NZP NAF S 111 Zones Panel 1-8 Components Activating Devices, Sensors, Wiring, etc.	1	Lot

13.	BUNGA KUNING Addressable 2 loops and Hosereel. Components, Activating Devices, Sensors, Wiring etc. Battery Cells, Charger, Wiring, Components, etc.	1	Lot
14.	EXTENSION OPD Fire Alarm Addressable 4 Loop and Hosereel. Components, Activating Devices, Sensors, Wiring etc. Battery Cells, Charger, Wirings, Components etc.	1	Lot
15.	TRANSPORT BUILDING		
15.1	Ground Floor Main Fire Panel & Battery Bank. Fire Zones 1-14. Components, Activating Devices, Sensors, Wiring etc. Battery Cells, Wirings, etc. Mimic Panel, Wirings, etc.	1	Lot
15.2	1st. Floor- State Laboratory Store NAF S 111, Halon Zone Panel 1-4. Components, Activating Devices, Sensors, Wiring etc. Battery Cells, Charger, Wirings, Components etc.	1	Lot
15.3	2nd. Floor- SPS Store NAF S 111 Halon Zone Panel 1-4. Components, Activating Devices, Sensors, etc. Battery Cells, Charger, Wiring, Components etc	1	Lot
15.4	2nd. Floor- Loading Area NAF S 111 Halon Zone Panel 1-8 Components, Activating Devices, Sensors etc. Battery Cells, Charger, Wiring, Components etc.	1	Lot
16.	SPRINKLER SYSTEM		
	BLOCK 4 Bi-Monthly test of Sprinkler System as per particular condition.	1	Lot
17.	HOSEREEL SYSTEM Quarterly testing and inspection of Hosereel System at RIPAS Hospital as Per Particular Condition and location.	1	Lot
18.	MEDICAL LIBRARY – GROUND FLOOR AES 100 Series – Main Fire Alarm Panel Smoke Detector – 19 No's Heat Detector – 1 No Bell – 4 No's Break Glass – 4 No's		
18.1	MEDICAL LIBRARY – 1st FLOOR AES 100 Series – Main Fire Alarm Panel Smoke Detector – 12 No's Heat Detector – 1 No Bell – 3 No's Break Glass – 3 No's	1	Lot
18.2	MEDICAL LIBRARY – 2nd FLOOR AES 100 Series – Main Fire Alarm Panel Smoke Detector – 13 No's Bell – 2 No's Break Glass – 2 No's		
19.	KLINIK PAKAR 2 AES 100 Series – Main Fire Alarm Panel Smoke Detector – 2 No's Heat Detector – 30 No	1	Lot

	Bell – 4 No's Break Glass – 4 No's		
20.	M & E DEPARTMENT GROUND FLOOR Acclaim main fire alarm panel Smoke Detector – 28 No's Heat Detector – 11 No Bell – 2 No's Break Glass – 2 No's Fire Extinguisher Abc Dry Powder 4kg – 16 No's Co2 – 16 No's Hosereel – 5 No's	1	Lot
20.1	MEZZANINE FLOOR Acclaim sub panel Smoke Detector – 8 No's Bell – 2 No's Break Glass – 2 No's		
20.2	1st FLOOR Acclaim Sub Panel Smoke Detector – 10 No's Heat Detector – 14 No Bell – 1 No's Break Glass – 1 No's		
21.	MHU KIARONG HOUSE NO. 5, 6, 7, 8, 9, 10, 11, CDC 1, 2, 3, 4 AND 5 Components, Activating Devices, Sensors, Wiring etc. Battery Cells, Charger, Wirings, Components etc. Fire Extinguisher		
21.1	House No: 5 4 – Zone Conventional fire alarm panel – 1 -No H2O (9 Liter) – 2 No Co2 (2Kg) – 1 No's Dry powder – 3 No's Smoke detector – 9 No's Exit light – 3 No's	1	Lot
21.2	House No: 6 4 – Zone Conventional fire alarm panel – 1-No H2O (9 Liter) – 2 No Co2 (2Kg) – 1 No's Dry powder – 3 No's Smoke detector – 10 No's Exit light – 3 No's	1	Lot
21.3	House No: 7 H2O (9 Liter) – 1 No Co2 (2Kg) – 1 No's Dry powder – 2 No's Smoke detector – 3 No's Battery Operated	1	Lot
21.4	House No: 8 H2O (9 Liter) – 1 No Dry powder – 4 No's Smoke detector – 3 No's	1	Lot

	Battery Operated		
21.5	House No: 9 H2O (9 Liter) – 1 No Co2 (2kg) – 1 - No Dry powder – 3 No's Smoke detector – 5 No's Battery Operated	1	Lot
21.6	House No: 10 H2O (9 Liter) – 1 No Co2 (2Kg) – 2 No's Dry powder – 2 No's Smoke detector – 3 No's Battery Operated	1	Lot
21.7	House No: 11 H2O (9 Liter) – 1 No Co2 (2Kg) – 2 No's Dry powder – 2 No's Smoke detector – 1 No's Battery Operated	1	Lot
21.8	House No: 1 (CDC) 4 – Zone Conventional fire alarm panel – 1-No Dry powder – 3 No's Co2 (2Kg) – 3 No's Smoke detector – 12 No's Manual call point – 2 No's Fire alarm bell – 2 No's	1	Lot
21.9	House No: 2 (CDC) 4 – Zone Conventional fire alarm panel – 1-No Dry powder – 3 No's Co2 (2Kg) – 3 No's Smoke detector – 14 No's Manual call point – 2 No's Fire alarm bell – 2 No's	1	Lot
	House No: 3 (CDC) 4 – Zone Conventional fire alarm panel – 1-No Dry powder – 3 No's Co2 (2Kg) – 3 No's Smoke detector – 13 No's Manual call point – 2 No's Fire alarm bell – 2 No's	1	Lot
	House No: 4 (CDC) 4 – Zone Conventional fire alarm panel – 1-No Dry powder – 3 No's Co2 (2Kg) – 3 No's Smoke detector – 10 No's Manual call point – 2 No's Fire alarm bell – 2 No's	1	Lot
	House No: 5 (CDC) 4 – Zone Conventional fire alarm panel – 1-No Dry powder – 3 No's Co2 (2Kg) – 3 No's Smoke detector – 12 No's	1	Lot

	Manual call point – 2 No's Fire alarm bell – 2 No's Security Post (CDC) 4 – Zone Conventional fire alarm panel – 1-No Dry powder – 1 No Co2 (2Kg) – 1 No Smoke detector – 12 No's Manual call point – 1 No Fire alarm bell – 1 No	1	Lot
22	Warga Emas & Home-Based Nurse Pusat Amal Cerah Sejahtera (PACS), Subok Co2 (2Kg) – 10 No's Dry powder – 9 No's	2	Lot
23	House No: 11 (Tempat Berkhatan), Spg 253-54-6, Kg Kiarong 4 – Zone Conventional fire alarm panel – 1-No Dry powder – 3 No's Co2 (2Kg) – 3 No's Smoke detector – 14 No's Manual call point – 2 No's Fire alarm bell – 2 No's	1	Lot
24	House No: 3, 7 and 11, Spg 253-43, Kg Kiarong 4 – Zone Conventional fire alarm panel – 1-No Dry powder – 3 No's Co2 (2Kg) – 3 No's Smoke detector – 14 No's Manual call point – 2 No's Fire alarm bell – 2 No's	1	Lot

SCHEDULE II – MAINTENANCE SCHEDULES

I. TESTING AND INSPECTION OF FIRE ALARM SYSTEM

General

It is the responsibility of the contractor to ensure that the installation is tested in accordance with the requirements specified in Fire Alarm Code of Practice CP:10. The tests should be conducted for the maintenance of the installation and all results of the tests should be recorded in the log book.

Daily Check

A check should be made every day to ascertain if the system is operating normally. Fault(s) detected should be recorded and steps taken immediately to ensure that the fault(s) is rectified.

If a fault is detected, the contractor should ensure that the following actions are taken:

- (a) Determine the area affected by the fault and decide whether special action (such as fire patrols) are needed in that area.
- (b) If possible, determine the reason for the fault, or note the activities immediately prior to the fault in the area affected.
- (c) Arrange for service and repair immediately.

Weekly Test

The following tests and checks should be made every week:

- (a) Carry out a simulated fire alarm call by operating any alarm zone so as to transmit a fire alarm signal to monitoring station and reset the system.
- (b) Check the battery voltage and conditions.
- (c) On completion of the tests ensure that all switches are in the correct operating condition, and should faults condition exist take immediate steps to rectify the faults.
- (d) The person carrying out the test should record in the log any faults(s) identified and that the above test has been carried out.

Monthly Test

In addition to Weekly Test specified above, the following inspection and testing procedures should be carried out each month:

- (a) Simulate fire conditions on all alarm zones and reset the system to normal. Confirm with the monitoring station when the test has been completed.
- (b) Check battery voltage and charging current in accordance with the manufacturer's instructions.
- (c) Check batteries and their terminals as specified by the manufacturer to ensure that the specific gravity and the electrolyte in each cell is correct.

- (d) Check condition of battery cabinet for corrosion and to ensure that the batteries are stored in a secure condition.
- (e) Check to ensure that all indicating lights are operating correctly and replace if faulty.
- (f) Check operating of all alarm sounders.
- (g) Disconnect the battery supply and ensure that the visual and audible fault signals are activated at the main alarm panel.
- (h) Simulate main power supply failure and ensure that the system will operate correctly with the standby battery power supply.
- (i) Simulate fire alarm conditions and check the output signals available to initiate the remote auxiliary function that is required to be in operation in the event of fire as in accordance with the appropriate codes.
- (j) Simulate fault conditions on all alarm zones to ensure that the main alarm panel is operating correctly.
- (k) Check that main alarm panel is in a clean and operative condition.
- (l) Visually inspect the condition of components, terminations and cables.
- (m) Ensure that faulty parts are replaced and the replacement has been carried out satisfactory. Record in the log book any circuit fault that required repair.
- (n) Check that all switches are returned to their operating position after the test.
- (o) The person carrying out the test should record in the log any fault(s) identified and that the above test has been carried out.

I. INSPECTION AND TESTING OF FIRE SPRINKLER SYSTEM

Daily and Weekly Inspection Items

- (a) Control valves supervised with seals in correct (open or closed) position.
- (b) Backflow preventers:
 - i. Valves in correct (open or closed) position.
 - ii. Sealed, locked or supervised & accessible.
 - iii. Relief port on PRZ device not discharging.

Monthly Inspection Items (in addition to above items)

- (a) Control valves with locks or electrical supervision in correct (open or closed) position.
- (b) Sprinkler wrench with spare sprinklers.
- (c) Gauges on wet-pipe system in good condition and showing normal water supply pressure.
- (d) Alarm Valves:
Gauges show normal supply water pressure, free from physical damage, valves in Correct (open or closed) position and no leakage from retarding chamber or drains.

Quarterly Inspection Items (in addition to above items)

- (a) Pressure Reducing Valves:
In open position, not leaking, maintaining downstream per design criteria, and in good condition with handwheels not broken.
- (b) Hydraulic nameplate (calculated systems) securely attached to riser and legible.
- (c) Fire Department Connections:
Visible, accessible, couplings and swivels not damage and rotate smoothly, plugs or cap in place and undamaged, gaskets in place and in good condition, identification sign(s) in place, check valve is not leaking, clapper is in place and operating properly and automatic drain valve in place and operating properly.

(If plugs or caps are not in place, inspect interior for obstructions).
- (d) Alarm devices free from physical damage.

Annual Inspection Items (in addition to above items)

- (a) Proper number and type of spare sprinklers.
- (b) Visible sprinklers:
 - i. Free of corrosion and physical damage.
 - ii. Free of obstructions to spray patterns.
 - iii. Free of foreign materials including paint.
 - iv. Liquid in all glass bulb sprinklers.
- (c) Visible pipe:
 - i. In good condition/no external corrosion.
 - ii. No mechanical damage and no leaks.
 - iii. Properly aligned and no external loads.
- (d) Visible pipe hangers and seismic braces not damage or loose.
- (e) Hose, hose couplings and nozzles on sprinkler system passed inspection in accordance with NFPA 1962.
- (f) Adequate heat in areas with wet piping.
- (g) Has an internal inspection of pipe been performed by removing the flushing connection and one sprinkler near the end of a branch line within the last 5 years.

(If the answer was "No" conduct an internal inspection).

Testing

The following tests are to be performed at the noted intervals. Report any failures.

1. Quarterly Tests

- a. Mechanical waterflow alarm devices passed tests by opening the inspector's test or by pass connection with alarm actuating and flow observed.

- b. Post indicating valves opened until spring or torsion is felt in the rod, then closed back one-quarter turn.
- c. Main darin test for system downstream of backflow or pressure reducing valve:
 - i. Record Static Pressure _____ psi and Residual Pressure _____ psi.
 - ii. Was flow observed?
 - iii. Are results comparable to previous test?

2. Half Yearly Test (in addition to previous items)

- a. Valve supervisory switches indicate movement.
- b. Electrical waterflow alarm devices passed tests by opening the inspector's test connection or by pass connection with alarms actuating and flow observed.

3. Yearly Tests (in addition to previous items)

- a. Main darin test:
 - i. Record Static Pressure _____ psi and Residual Pressure _____ psi.
 - ii. Was flow observed?
 - iii. Are results comparable to previous test?

III. TESTING AND INSPECTION FOR FIRE HOSEREEL SYSTEM (QUARTERLY)

The following inspection and testing procedures should be carried out:

- 1. Before proceeding the quarterly test, the Superintending Officer or his representative must be notified.
- 2. For hosereel:
 - a. Check water level of water storage tank in the system.
 - b. Check that all stop valves are secured in the open or closed position as appropriate.
 - c. Check and record the pressure at the installation gauge and water supply gauge and ensure that normal water pressure is maintained.
 - d. Start all pumping units by operating the test valve in the manner which simulate the operation of hosereel and check the following:
 - Correct cut-in pressure
 - Efficient pump gland operation
 - Operation of both local and remote pump run alarms
 - e. On the electric motor driven pumps, check the phase failure alarm and check that there is no excessive vibration or noise. Pump shall be operation within 30 seconds.
 - f. After testing of the pumps and resetting of the systems, check and record the pressure at the installation gauge and water supply gauge to ensure that normal pressure is maintained.
 - g. Check the pump room to ensure it is kept free of combustible material and accessible at all times.
 - h. Check hosereel to ensure that the inlet valve, shut off nozzles are sound and free of leaks.
 - i. Check nozzles to ensure no blockage or restriction to the flow.
 - j. Check swivel joint of drum for leakage and ease of movements.

IV. **INSPECTION & SERVICING FIRE EXTINGUISHERS INCLUDING REFILLING (YEARLY)**

Inspection and Testing Fire Extinguisher (Yearly)

(1) WATER CO2

- Safety Pin
- Adhesive Label
- 'O' Ring

(2) DRY POWDER

- 1Kg Powder
- Quad Ring
- Operating Head Complete
- Adhesive Label
- Safety Pin
- Pressure Gauge
- Nozzle c/w Hose (4.5Kg above only)

(3) CARBON DIOXIDE

- 1Kg CO2 gas
- Quad Ring
- Safety Pin
- Discharge Horn
- Adhesive Label
- Valve Body

(4) CARBON DIOXIDE (CO2) CARTRIDGE

- 55gm
- 75gm
- Refilling CO2

(5) FOAM

- Quad Ring
- Plunger
- Safety Pin
- Aluminium Sulphate
- Sodium Bicarbonate
- Adhesive Label

(6) STICKER

(7) BRACKET

SECTION 3
FORMS TO BE USED
CONTENTS

- A TENDER FORM
- B INFORMATION SUMMARY
- C SUB-CONTRACTS
- D COMPANY'S BACKGROUND
- E REFERENCES
- F LETTER OF DECLARATION
- G COMPLIANCE FORM
- H LIST OF MANPOWER ALLOCATION

SCHEDULE A

FORM OF TENDER

TENDER REFERENCE NO.: KK/292/2022/ESTETRI PASH(TC)

INVITATION TO TENDER

FOR THE PROVISION OF MAINTENANCE SERVICES FOR FIRE ALARM SYSTEM AND FIRE PROTECTION SYSTEM FOR RIPAS HOSPITAL FOR A PERIOD OF FIVE (5) YEARS

I. FIRE HOSEREEL SYSTEM

ITEM	DESCRIPTION	UNIT	MATERIAL RATE (B\$)	LABOUR RATE (B\$)
1	FIRE HOSEREEL SYSTEM			
1.1.1	Manual Swing Fire Hosereel Drum (complete set)	Nos		
1.1.2	Fixed type Fire Hosereel Drum (complete set)	Nos		
1.1.3	30 metre 25mm Ø Fire Hosereel Hose	Nos		
1.1.4	Fire Hosereel Cabinet	Nos		
1.1.5	Hosereel Nozzle c/w hose clip	Nos		
1.1.6	Hosereel Clip	Nos		
1.1.7	Break glass set with key	Nos		
1.1.8	Hosereel Wall Bracket	Nos		
1.1.9	Hose Guide	Nos		
1.1.10	Stop Nozzle with Nozzle Locking Device	Nos		
1.1.11	Hosereel Door lock set	Nos		
1.1.12	Hosereel door hinge	Nos		
1.1.13	Hosereel 1 leaf woodern door with glass frame	Set		
1.1.14	Hosereel 1 1/2 leaf woodern door with glass frame	Set		
1.1.15	Hosereel Notice bilingual as Bomba spec.	Nos		
1.1.16	Hosereel Service Sticker	Nos		
1.2	UL/FM Approved Fire Hosereel Pumps			
1.2.1	Electric Pump, capacity up to 5 HP	Nos		
1.2.2	Electric Pump, capacity up to 10 HP	Nos		

ITEM	DESCRIPTION	UNIT	MATERIAL RATE (B\$)	LABOUR RATE (B\$)
1.2.5	Diesel Engine Pump, capacity up to 5 HP	Nos		
1.2.6	Diesel Engine Pump, capacity up to 10 HP	Nos		
1.2.7	UL Approved package set fire hose reel pump.2 Electric Motor Driven Booster Pump and 1 Jockey pump complete with Pump Set, Electric Motor, Base Frame and all accessories like pressure switch, pressure gauges, Butterfly valves etc. Panel and Cable from Panel to Pump and duty conditions as follows (1 working and 1 Stand By + 1 Jockey pump)			
1.2.7.1	Flow rate: 8 M3/H -Head: 40 M/H	Set		
1.2.7.2	Flow rate: 10 M3/H -Head: 45 M/H	Set		
1.2.7.3	Flow rate: 12 M3/H -Head: 50 M/H	Set		
	Fire Hosereel Pump Accessories / Parts			
1.2.10	Pump Bearing	Nos		
1.2.11	Rewinding of motor 1 – 2.5 HP	Nos		
1.2.12	Rewinding of motor 3 – 10 HP	Nos		
1.2.13	Flexible Joint	Nos		
1.2.14	Stop Valve	Nos		
1.2.15	Check Valve	Nos		
1.2.16	Gate Valve 25 – 75mm	Nos		
1.2.17	Pressure Gauge	Nos		
1.2.18	Pressure Switch	Nos		
1.2.19	40 – 70 AH 12V acid Battery	Nos		
1.2.20	80 – 100 AH 12V acid Battery	Nos		
1.2.21	Pump Service Sticker	Nos		
1.3	Fire Hosereel Pump Control Panel			
1.3.1	Fire Hosereel Pump Control Panel up to 5.5 kW	Nos		
1.3.2	Fire Hosereel Pump Control Panel up to 15 kW	Nos		

ITEM	DESCRIPTION	UNIT	MATERIAL RATE (B\$)	LABOUR RATE (B\$)
1.3.3	Indicator Lamp c/w bulb	Nos		
1.3.4	Timer Relay	Nos		
1.3.5	Latching Relay	Nos		
1.3.6	Contactora	Nos		
1.3.7	Selector Switch	Nos		
1.3.8	Delay On/Off Timer	Nos		
1.3.9	2-Pole Relay	Nos		
	Fire Pump Engine Diesel Accessories / Parts			
1.3.10	Fuel Oil Filter	Nos		
1.3.11	Lubrication Oil Filter	Nos		
1.3.12	Air Filter	Nos		
1.3.13	Shut of Valve c/w accessories for diesel engine fire pump	Nos		
1.3.14	Drive Belt	Nos		
1.3.15	Pump Bearing	Nos		
1.3.16	Pump Impeller	Nos		
1.3.17	Engine Start Battery	Nos		
1.3.18	Top up lubrication oil (Price per litre)	Nos		
1.3.19	Flush system and refill with new lubrication oil (Price per litre)	Nos		
1.3.20	Diesel Fuel (Price per litre)	Nos		
1.4	Fire Hosereel Tank (Brand : Stainless Steel Type)			
	Hose reel tank complete with valves, fittings, supports and all necessary accessories.			
1.4.1	Fire Hosereel Rectangular water tank c/w label and red paint, capacity up to 5,000 litres	Nos		
1.4.2	Fire Hosereel Rectangular water tank c/w label and red paint, capacity up to 9,100 litres	Nos		
1.5	Piping of Fire Hosereel System			
	Labour charges for excavation/hacking of piping, repair and			

ITEM	DESCRIPTION	UNIT	MATERIAL RATE (B\$)	LABOUR RATE (B\$)
	making good per metre length			
1.5.1	ø25 mm	Nos		
1.5.2	ø32 mm	Nos		
1.5.3	ø40 mm	Nos		
1.5.4	ø50 mm	Nos		
1.5.5	ø65 mm	Nos		
	Fitting of Piping Fire Hosereel System			
	Pipe			
	Class 'C' or stainless steel malleable specials extruded type, such as Reducers, elbows, flanges. The pipes shall be painted with primer & Paint using approved type, Galvanized, supports at standard spacing, anchor fasteners, bolts, nuts, clamps, rails "U" & threaded bolt, Including cutting, Welding, fixing in / on walls, ceiling by using the supports etc,			
1.5.6	ø25 mm	Nos		
1.5.7	ø32 mm	Nos		
1.5.8	ø40 mm	Nos		
1.5.9	ø50 mm	Nos		
1.5.10	ø65 mm	Nos		
	Tee/elbow/socket joint			
1.5.11	ø25 mm	Nos		
1.5.12	ø32 mm	Nos		
1.5.13	ø40 mm	Nos		
1.5.14	ø50 mm	Nos		
1.5.15	ø65 mm	Nos		
1.6	Aluminum cable			
	FRLS,PVCouter sheated, steel armored, aluminum conductor,			

ITEM	DESCRIPTION	UNIT	MATERIAL RATE (B\$)	LABOUR RATE (B\$)
	Aluminum cable for main pumps and jockey pump			
1.6.1	4C x 4 sq.mm	Mtr		
1.6.2	4C x 6 sq.mm	Mtr		
1.6.3	4C x10 sq.mm	Mtr		
1.6.4	4C x 16 sq.mm	Mtr		
1.6.5	4C x 25 sq.mm	Mtr		
1.6.6	4 C x 1.5 sq.mm Copper armored for Instrumentation	Mtr		
	Cable Containment			
	Cable trunking, ladder, tray and surface/conceal conduit inclusive of supporting brackets, fixing cleats, junction boxes, brass bushes, saddles, adapters, earthing link and all necessary accessories.			
	Cable tray			
1.6.7	50mm wide	Mtr		
1.6.8	100mm wide	Mtr		
	Trunking			
1.6.9	50mm x 25mm	Mtr		
1.6.10	50mm x 50mm	Mtr		
1.6.11	75mm x 50mm	Mtr		
1.7	Servicing of Fire Hosereel System			
1.7.1	Rectifying Charge	Nos		
1.7.2	Repair charge	Nos		
1.7.3	Installation and commissioning charge	Nos		
1.7.4	Painted with primer & paint using approved type	Mtr		
TOTAL			\$	\$

II. FIRE SPRINKLER SYSTEM

ITEM	DESCRIPTION	UNIT	MATERIAL RATE (B)	LABOUR RATE (B)
1	FIRE SPRINKLER SYSTEM			
	Class 'C' Pipe, malleable specials extruded type, such as Reducers, elbows, flanges. The pipes shall be painted with primer & Paint using approved type, Galvanized, supports at standard spacing, anchor fasteners, bolts, nuts, clamps, rails "U" & threaded bolt, Including cutting, Welding, fixing in / on walls, ceiling by using the supports etc.			
1.1	Fire Sprinkler System Accessories/Parts			
1.1.1	Sprinkler Head	Nos		
1.1.2	Alarm Gong	Nos		
1.1.3	Flow Switch	Nos		
1.1.4	Sight Glass Flow Connection	Nos		
1.1.5	Pressure Switch	Nos		
1.1.6	Pressure Gauge	Nos		
1.1.7	Pump Bearing	Nos		
1.1.8	Pump Impeller	Nos		
1.1.9	Breeching Inlet 4 ways	Nos		
1.1.10	Breeching Inlet 2 ways	Nos		
1.1.11	Strainer	Nos		
1.1.12	Restricted Orifice	Nos		
1.1.13	Check Valve	Nos		
1.1.14	Gate Valve 25mm – 75mm	Nos		
1.1.15	Water Motor	Nos		
1.1.16	Retard Chamber	Nos		
1.1.17	Flow Meter	Nos		
1.2	Standard response Sprinkler quartzoid bulb type with 15mm screwed endconnection of 68 deg. C. temperature rating,K 80 and orifice shall Not be less than 3 mm.			

ITEM	DESCRIPTION	UNIT	MATERIAL RATE (B)	LABOUR RATE (B)
1.2.1	Pendent sprinkler	Nos		
1.2.2	Side Wall sprinkler	Nos		
1.2.3	Upright sprinkler	Nos		
1.3	Piping of Fire Sprinkler System			
	Labour charges for excavation/hacking of piping, repair and making good per metre length			
1.3.1	ø25 mm	Mtr		
1.3.2	ø32 mm	Mtr		
1.3.3	ø40 mm	Mtr		
1.3.4	ø50 mm	Mtr		
1.3.5	ø65 mm	Mtr		
1.3.6	ø80 mm	Mtr		
1.3.7	ø100 mm	Mtr		
1.3.8	ø150 mm	Mtr		
1.3.9	ø200 mm	Mtr		
1.3.10	ø250 mm	Mtr		
1.4	Fitting of Piping Fire Sprinkler System			
	Tee/elbow/socket joint			
1.4.1	ø20 mm	Nos		
1.4.2	ø25 mm	Nos		
1.4.3	ø32 mm	Nos		
1.4.4	ø40 mm	Nos		
1.4.5	ø50 mm	Nos		
1.4.6	ø65 mm	Nos		
1.4.7	ø80 mm	Nos		
1.4.8	ø100 mm	Nos		
1.4.9	ø150 mm	Nos		
1.4.10	ø200 mm	Nos		
1.4.11	ø250 mm	Nos		

ITEM	DESCRIPTION	UNIT	MATERIAL RATE (B)	LABOUR RATE (B)
	PIPE			
1.4.12	ø20 mm	Nos		
1.4.13	ø25 mm	Nos		
1.4.14	ø32 mm	Nos		
1.4.15	ø40 mm	Nos		
1.4.16	ø50 mm	Nos		
1.4.17	ø65 mm	Nos		
1.4.18	ø80 mm	Nos		
1.4.19	ø100 mm	Nos		
1.4.20	ø150 mm	Nos		
1.4.21	ø200 mm	Nos		
1.4.22	ø250 mm	Nos		
1.5	Stainless Steel Fire Sprinkler Tank			
	Sprinkler tank complete with valves, fittings, supports and all necessary accessories.			
1.5.1	Fire Sprinkler Tank, capacity up to 30,000 litres	Lot		
1.5.2	Fire Sprinkler Tank, capacity up to 45,000 litres	Lot		
	Water tank accessories			
1.5.3	level indicators	Nos		
1.5.4	internal and external ladders	Nos		
1.5.5	Inlet/outlet valves, overflow and drain			
1.5.6	ø100 mm	Nos		
1.5.7	ø150 mm	Nos		
1.5.8	ø200 mm	Nos		
1.5.9	ø250 mm	Nos		
1.6	UL/FM Approved Fire Fire Sprinkler Pumps			
	Electric Motor Driven Booster Pump complete with Pump Set, Electric Motor and Diesel engine driven pumps ,Base Frame and all accessories.			
1.6.1	Jockey Pump, capacity up to 1.5 HP to 5 HP	Nos		

ITEM	DESCRIPTION	UNIT	MATERIAL RATE (B)	LABOUR RATE (B)
1.6.2	Electric Pump, capacity up to 10 HP to 20HP	Nos		
1.6.3	Electric Pump, capacity up to 20 HP to 40HP	Nos		
1.6.4	Diesel Engine Pump, capacity up to 10 HP to 20HP	Nos		
1.6.5	Diesel Engine Pump, capacity up to 20 HP to 40HP	Nos		
	Fire Pump Engine Diesel Accessories/Parts			
1.6.6	Fuel Oil Filter	Nos		
1.6.7	Lubrication Oil Filter	Nos		
1.6.8	Air Filter	Nos		
1.6.9	Shut off Valve c/w accessories for diesel engine	Nos		
1.6.10	Drive Belt	Nos		
1.6.11	Pump Bearing	Nos		
1.6.12	Pump Impeller	Nos		
1.6.13	Engine Start Battery	Nos		
1.6.14	Top up lubrication oil (Price per litre)	Ltr		
1.6.15	Flush system and refill with new lubrication oil (Price per litre)	Ltr		
1.6.16	Diesel Fuel (Price per litre)	Ltr		
1.7	Fire Sprinkler Pump Control Panel			
	UL/FM Approved control panel for Electrical motor driven pumps and Diesel engine driven pumps.			
1.7.1	Fire Sprinkler Pump Control Panel up to 10kW	Nos		
1.7.2	Fire Sprinkler Pump Control Panel up to 20 kW	Nos		
1.7.3	Fire Sprinkler Pump Control Panel up to 30kW	Nos		
1.7.4	Fire Sprinkler Pump Control Panel up to 40 kW	Nos		
	Accessories/Parts			
1.7.5	Indicator Lamp c/w bulb	Nos		
1.7.6	Time Relay	Nos		
1.7.7	Latching Relay	Nos		
1.7.8	Contactors	Nos		
1.7.9	Delay On/Off Timer	Nos		

ITEM	DESCRIPTION	UNIT	MATERIAL RATE (B)	LABOUR RATE (B)
1.7.10	2-Pole Relay	Nos		
1.7.11	Battery charger	Nos		
1.7.12	Auto manual selector switch	Nos		
1.7.13	Auxiliary relays	Nos		
1.8	FRLS,PVC outer sheated, steel armored, aluminum conductor,			
	Aluminum cable for main pumps and jockey pump			
1.8.1	4C x 4 sq.mm	Mtr		
1.8.2	4C x 6 sq.mm	Mtr		
1.8.3	4C x10 sq.mm	Mtr		
1.8.4	4C x 16 sq.mm	Mtr		
1.8.5	4C x 25 sq.mm	Mtr		
1.8.6	4C x 35 sq.mm	Mtr		
1.8.7	4C x 50 sq.mm	Mtr		
1.8.8	12 C x 2.5 sq.mm.Aluminum cable Diesel engines	Mtr		
1.8.9	4 C x 1.5 sq.mm Copper armored for Instrumentation	Mtr		
1.9	Cable Containment ladder, tray and surface/conceal conduit inclusive of supporting brackets, fixing cleats, junction boxes, brass bushes, saddles, adapters, earthing link and all necessary accessories			
	Cable tray			
1.9.1	50mm wide	Mtr		
1.9.2	100mm wide	Mtr		
1.9.3	150mm wide	Mtr		
	Trunking			
1.9.4	50mm x 25mm	Mtr		
1.9.5	50mm x 50mm	Mtr		
1.9.6	75mm x 50mm	Mtr		
1.9.7	75mm x 75mm	Mtr		
1.9.8	100mm x 50mm	Mtr		
1.10	DRY /WET RISER SYSTEM			

ITEM	DESCRIPTION	UNIT	MATERIAL RATE (B)	LABOUR RATE (B)
1.10.1	Breeching Inlet 2 way	Nos		
1.10.2	Breeching Inlet 4 way	Nos		
1.10.3	Landing Valve	Nos		
1.10.4	Gate Valve	Nos		
1.10.5	Fire Hose 2 1/2	Nos		
1.10.6	Regulating Valve	Nos		
1.11	Servicing of Dry /Wet Riser System			
1.11.1	Repair and services charge	Nos		
1.11.2	Installation and commissioning charge	Nos		
1.11.3	Painted with primer & paint using approved type	Nos		
1.12	Servicing of Fire Sprinkler System			
1.12.1	Rectifying Charge	Nos		
1.12.2	Repair charge	Nos		
1.12.3	Installation and commissioning charge	Nos		
1.12.4	Painted with primer & paint using approved type	Mtr		
TOTAL			\$	\$

III. WET PIPE AFFF SPRINKLER SYSTEM FOR HELIPAD

ITEM	DESCRIPTION	UNIT	MATERIAL RATE (B)	LABOUR RATE (B)
1	WET PIPE AFFF SPRINKLER SYSTEM FOR HELIPAD			
	The sprinkler system shall be a closed-head wet pipe AFFF foam water sprinkler system designed to provide adequately proportioned foam water solution at listed water flows past proportioning device. System shall be installed in accordance with NFPA 16, Standard for the Installation of Closed Head Foam-Water Sprinkler Systems, NFPA 11, Standard for Low Expansion Foam, NFPA 13, Standard for Installation of Sprinkler Systems and all other applicable codes or requirements.			
1.1	Wet Pipe AFFF Sprinkler System Accessories/Parts			
1.1.1	Alarm Valve	Nos		
1.1.2	Concentrate Controller (Proportioner)	Nos		
1.1.3	Foam Bladder Tank	Nos		
1.1.4	Concentrate Control Valve	Nos		
1.1.5	Foam Concentrate Piping	Mtr		
1.1.6	Foam Concentrate	Ltr		
1.1.7	Discharge Devices	Nos		
1.1.8	Alarm Pressure Switch	Nos		
1.1.9	System Overhead Piping	Mtr		
1.1.10	Check Valve	Nos		
1.1.11	Diaphragm Valve	Nos		
1.1.12	pressure reducing valve	Nos		
1.1.13	Regulator	Nos		
1.1.14	Strainers	Nos		
1.1.15	Hangers and Supports	Nos		
1.1.16	Fire Department Connection	Nos		
1.1.17	Underground Piping	Mtr		
1.1.18	Drains and Flushing Connections	Nos		

1.1.19	Riser Test Connections	Nos		
1.1.20	Foam Concentrate Pump	Nos		
1.1.21	Pump Controller	Nos		
1.1.22	Control Panel	Nos		
1.1.23	Detector	Nos		
1.1.24	Manual Actuation	Nos		
1.1.25	Abort Switch	Nos		
1.2	Servicing of Fire Foam System	Nos		
1.2.1	Rectifying charge	Nos		
1.2.2	Repair and services charge	Nos		
1.2.3	Installation and commissioning charge	Nos		
1.2.4	Painted with primer & paint using approved type	Nos		
TOTAL			\$	\$

IV. GAS EXTINGUISHING SYSTEM

ITEM	DESCRIPTION	UNIT	MATERIAL RATE (B)	LABOUR RATE (B)
1	Gas Extinguishing System (UL/EN / LPCB Approved) (Kitchen Fire Suppression System,1230 Novec, FM200, NAFS111,Co2 and Inert Gas)suitable for operating at 24 v Dc, complete with annunciation windows ,test, acknowledge & reset push buttons, hooter, indication lamps for main power supply and dc power etc.			
1.1	Gas System Control Panel			
1.2	Twin Gas Extinguishing Panel			
1.2.1	2-Zone	Nos		
1.2.2	4-Zone	Nos		
1.2.3	6-Zone	Nos		
1.2.4	8-Zone	Nos		
1.3	Fire Zone Module Card	Nos		
1.4	Battery Charger	Nos		
1.5	24V sealed lead acid battery up to 20AH	Nos		
1.6	24V sealed lead acid battery 20 - 50AH	Nos		
1.7	24VDC Relay	Nos		
1.8	Indicator Lamp	Nos		
1.9	Fuse	Nos		
	Accessories/Parts			
1.1	Smoke Detector	Nos		
1.11	Heat Detector	Nos		
1.12	Manual pull station	Nos		
1.13	Gas Discharged Sign Lamp	Nos		
1.14	Evacuate Area Sign Lamp	Nos		
1.15	Gas Discharge Hose	Nos		
1.16	Gas Discharge Nozzle	Nos		
1.17	Manual Actuator	Nos		

ITEM	DESCRIPTION	UNIT	MATERIAL RATE (B)	LABOUR RATE (B)
1.18	Level operated control lever	Nos		
1.19	Shutoff Devices	Nos		
1.2	Rotating / strobe light	Nos		
1.21	Abort station	Nos		
1.22	Exit sign	Nos		
1.23	Actuator	Nos		
1.24	Solenoid	Nos		
1.25	Warning sign	Nos		
1.26	Indicator panel (silkscreen c/w LED light, wiring)	Lot		
1.27	Digital Communicator/Auto Dialler	Nos		
1.2	Agent storage cylinders	Nos		
	UL/FM Approved Gas with cylinders complete with extinguishing agent, valves, actuators and support brackets			
1.2.1	Cylinder capacity 10 – 20 kg	Nos		
1.2.2	Cylinder capacity 20 – 30 kg	Nos		
1.2.3	Cylinder capacity 30 – 40 kg	Nos		
1.2.4	Cylinder capacity 40 – 50 kg	Nos		
1.2.5	Cylinder capacity 50 – 60 kg	Nos		
1.2.6	Cylinder capacity 60 – 70 kg	Nos		
1.3	Refilling of Gas Cylinder			
1.3.1	1 kg of FM200 gas	Nos		
1.3.2	1 kg of CO ₂ gas	Nos		
1.3.3	1 kg of NAFS	Nos		
1.3.4	1 kg Novec 1230	Nos		
1.3.5	1 Kg Wet Chemical	Nos		
1.4	Servicing of Gas Extinguishing System			
1.4.1	Installation and commissioning charges	Nos		
1.4.2	Repair and Services charges (per system)	Nos		
	DOT Hydrostatic Testing facility and equipment meet all NFPA requirements for the hydrostatic testing of self			

ITEM	DESCRIPTION	UNIT	MATERIAL RATE (B)	LABOUR RATE (B)
	contained breathing apparatus compressed gas cylinders in addition to testing ABC portable fire extinguisher cylinders. Hydrostatic Test requirements will be Department of Transportation (DOT) ,Occupational Safety and Health Administration (OSHA) and National Fire Protection Association (NFPA)			
1.4.3	Cylinder capacity 10 – 20 kg	Nos		
1.4.4	Cylinder capacity 20 – 30 kg	Nos		
1.4.5	Cylinder capacity 30 – 40 kg	Nos		
1.4.6	Cylinder capacity 40 – 50 kg	Nos		
1.4.7	Cylinder capacity 50 – 60 kg	Nos		
1.4.8	Cylinder capacity 60 – 70 kg	Nos		
1.5	Labour charges for excavation/hacking of piping, repair and making good per metre length			
1.5.1	ø25 mm	Mtr		
1.5.2	ø32 mm	Mtr		
1.5.3	ø40 mm	Mtr		
1.5.4	ø50 mm	Mtr		
1.5.5	ø65 mm	Mtr		
1.5.6	ø80 mm	Mtr		
1.5.7	ø100 mm	Mtr		
	Pipework			
	Pipes inclusive all necessary fittings, brackets, bends, elbows, hangers, supports, wall chasing, paintings, trenches, excavation, back-filling, etc.			
1.5.8	ø25 mm	Mtr		
1.5.9	ø32 mm	Mtr		
1.5.10	ø40 mm	Mtr		
1.5.11	ø50 mm	Mtr		
1.5.12	ø65 mm	Mtr		
1.5.13	ø80 mm	Mtr		
1.5.14	ø100 mm	Mtr		

ITEM	DESCRIPTION	UNIT	MATERIAL RATE (B)	LABOUR RATE (B)
	Tee/elbow/socket joint			
1.5.15	ø25 mm	Nos		
1.5.16	ø32 mm	Nos		
1.5.17	ø40 mm	Nos		
1.5.18	ø50 mm	Nos		
1.5.19	ø65 mm	Nos		
1.5.20	ø80 mm	Nos		
1.5.21	ø100 mm	Nos		
1.6	FRLS,PVC outer sheated, steel armored, aluminum conductor, Aluminum cable for main pumps and jockey pump			
1.6.1	4C x 1.5 sq.mm	Mtr		
1.6.2	4C x2,5 sq.mm	Mtr		
1.6.3	4 C x 1.5 sq.mm Copper armored for Instrumentation	Mtr		
	Cable Containment			
	Cable trunking, ladder, tray and surface/conceal conduit inclusive of supporting brackets, fixing cleats, junction boxes, brass bushes, saddles, adapters, earthing link and all necessary accessories			
	Cable tray			
1.6.4	50mm wide	Mtr		
1.6.5	100mm wide	Mtr		
	Trunking			
1.6.6	50mm x 25mm	Mtr		
1.6.7	50mm x 50mm	Mtr		
1.7	Auto fire detection and auto fire extinguishing pneumatic heat sensing tube based localized fire suppression system for electrical panels/cabinets including control panel fire suppression system complete with clean agent/gas based agent storage cylinders of required capacities, extinguishing agent as specified, polymer fire detection tubing, filling and end-of-line adaptors, pressure switches, control equipment			

ITEM	DESCRIPTION	UNIT	MATERIAL RATE (B)	LABOUR RATE (B)
	and all necessary accessories and fittings etc.			
1.7.1	1kg cylinders	Nos		
1.7.2	2kg cylinders	Nos		
1.7.3	6kg cylinders	Nos		
1.7.4	9kg cylinders	Nos		
1.7.5	12kg cylinders	Nos		
1.8	Servicing of Fire Gas Extinguishing System			
1.8.1	Rectifying Charge	Nos		
1.8.2	Repair charge	Nos		
1.8.3	Installation and commissioning charge	Nos		
1.8.4	Painted with primer & Paint using approved type	Nos		
1.8.5	Linkages for gas control panels to main alarm panel	Lot		
TOTAL			\$	\$

V. FIRE ALARM PANELS

ITEM	DESCRIPTION	UNIT	MATERIAL RATE (B)	LABOUR RATE (B)
1	Fire Alarm Panels			
	Conventional type Fire Alarm Control Panel (UL/EN / LPCB Approved) Main Fire Alarm Panel complete with mimic section and alarm functions and 24V battery charger and batteries.			
	Conventional Fire Alarm Panel			
1.1.1	4 zones	Nos		
1.1.2	8 zones	Nos		
1.1.3	16 zones	Nos		
1.1.4	32 zones	Nos		
	Fire sub alarm panels complete with zone charts			
1.1.5	4 zones	Nos		
1.1.6	8 zones	Nos		
1.1.7	12 zones	Nos		
1.1.8	Indicator panel (silkscreen c/w LED light, wiring)	Nos		
	Fire Alarm Panel Spare Parts (conventional)			
1.1.9	Panel Key	Nos		
1.1.10	Panel Buzzer	Nos		
1.1.11	Indicator Lamp	Nos		
1.1.12	End of Line Resistor	Nos		
1.1.13	Panel Charger unit	Nos		
1.1.14	Ammeter	Nos		
1.1.15	Voltmeter	Nos		
1.1.16	12V Sealed Lead Acid Battery (up to 20 AH)	Nos		
1.1.17	12V Sealed Lead Acid Battery (above 20 AH to 50 AH)	Nos		
1.1.18	Zone module card	Nos		
1.1.19	Main PCB	Nos		

ITEM	DESCRIPTION	UNIT	MATERIAL RATE (B)	LABOUR RATE (B)
1.1.20	Fuses	Nos		
1.1.21	Resistor	Nos		
1.1.22	Power supply extension	Nos		
1.1.23	Digital Communicator/Auto Dialler	Nos		
	Accessories (conventional)			
1.1.24	Heat Detector	Nos		
1.1.25	Smoke Detector	Nos		
1.1.26	Combine Detector			
1.1.27	Smoke Detector Battery Operated	Nos		
1.1.28	Beam Detector (Rx&Tx)	Nos		
1.1.29	Standard detector mounting base	Nos		
1.1.30	Gas Detector	Nos		
1.1.31	Duct Detectors	Nos		
1.1.32	6" Fire alarm Bell	Nos		
1.1.33	Electronic Sounder four tone/Strobes White flash	Nos		
1.1.34	Remote Indicator	Nos		
1.1.35	Indoor Call Point	Nos		
1.1.36	Waterproof Call Point	Nos		
1.1.37	Metal hammer c/w chain for breakglass	Nos		
1.1.38	Spare glass for Breakglass Call Point	Nos		
1.1.39	Fire Command Centre control console	Nos		
1.1.40	Labeling printed label indicating its address	Nos		
1.1.41	Mimic Diagram	Nos		
1.1.42	Service Sticker	Nos		
1.1.43	Service Log book	Nos		
1.2	Addressable Fire Alarm Panel			
	Addressable Fire Alarm Panel (UL/EN / LPCB Approved) Main Fire Alarm Panel complete with (Capable of giving individual address of each detector) Fire Alarm Control and indicating panel,			

ITEM	DESCRIPTION	UNIT	MATERIAL RATE (B)	LABOUR RATE (B)
	microprocessor based with RS 485 communication, pulser, timer for dual stage alarm facility complete with indicators, floor selector switches, stand by SMF lead acid battery (suitable for 48 hours normal operation & after that min. 30 minutes for full load operation),			
1.2.1	1-Loop	Set		
1.2.2	2-Loop	Set		
1.2.3	4-Loop	Set		
1.2.4	6-Loop	Set		
1.2.5	8-Loop	Set		
1.2.6	10-Loop	Set		
1.2.7	Addressable touch screen / button control Panel	Nos		
1.2.8	Addressable Fire Alarm Panel Software Programming	Lot		
1.2.9	Alarm repeater panel	Nos		
1.2.10	Indicator mimic panel (silkscreen c/w LED light, wiring)	Nos		
	Fire Alarm Panel Spare Parts (addressable)			
1.2.11	Panel Key	Nos		
1.2.12	Indicator Lamp	Nos		
1.2.13	End of Line Resistor	Nos		
1.2.14	Panel Buzzer	Nos		
1.2.15	Panel Charger unit	Nos		
1.2.16	Control Panel Modules	Nos		
1.2.17	12V Sealed Lead Acid Battery (up to 20 AH)	Nos		
1.2.18	12V Sealed Lead Acid Battery (above 20 AH to 50 AH)	Nos		
1.2.19	Ammeter	Nos		
1.2.20	Voltmeter	Nos		
1.2.21	Main PCB	Nos		
1.2.22	Fuses	Nos		
1.2.23	Interface card	Nos		
1.2.24	Line Isolator	Nos		

ITEM	DESCRIPTION	UNIT	MATERIAL RATE (B)	LABOUR RATE (B)
1.2.25	Loop Card Module	Nos		
1.2.26	RAM card	Nos		
1.2.27	I/O card	Nos		
1.2.28	Printer Paper (1 roll) (addressable type)	Nos		
1.2.29	Panel Printer	Nos		
1.2.30	TCP/IP Network Card	Nos		
1.2.31	CAN Class A Network Card	Nos		
1.2.32	ModBus Card for 3rd party interfacing	Nos		
1.2.33	RS232 card for PC connection	Nos		
1.2.34	Power supply extension	Nos		
1.2.35	Digital Communicator/Auto Dialler	Nos		
	Accessories (addressable)			
1.2.27	Beam Detector (Rx&Tx)	Nos		
1.2.28	Gas Detector	Nos		
1.2.29	Duct Detectors	Nos		
1.2.30	6" Fire alarm Bell	Nos		
1.2.31	Electronic Sounder four tone/Strobes White flash	Nos		
1.2.32	Heat Detector	Nos		
1.2.33	Smoke Detector	Nos		
1.2.34	Combine Detector			
1.2.35	Detector Base	Nos		
1.2.36	Remote Indicator	Nos		
1.2.37	Indoor Call Point	Nos		
1.2.38	Waterproof Call Point	Nos		
1.2.39	Metal hammer c/w chain for breakglass	Nos		
1.2.40	Spare glass for Breakglass Call Point	Nos		
1.2.41	Fire Command Centre control console	Nos		
1.2.42	Labeling printed label indicating its address			
1.2.43	Service Sticker	Nos		

ITEM	DESCRIPTION	UNIT	MATERIAL RATE (B)	LABOUR RATE (B)
1.2.44	Service Log book	Nos		
1.3	Fire alarm signal complete with wiring, cable support and containment system to the following			
1.3.1	Lift panel	Lot		
1.3.2	Automatic sliding door at Entrance Lobby	Lot		
1.3.3	Car park smoke purging system	Lot		
1.3.4	Smoke extract system	Lot		
1.3.5	Security door	Lot		
1.3.6	Roller shutters	Lot		
1.4	Electrical works			
	LPCB listed cables on vertical and/or horizontal cable support system (exclude cable support system) inclusive of CPC, cable ties, fixing cleats, cable lugs, terminations, jointing and associated ancillary accessories.			
	Fire-rated cable (MICA/XLPE/LSHF)			
	(without CPC)Circuit Protective Conductor			
	1 x 1C			
1.4.1	1.5 mm ²	Mtr		
1.4.2	2.5 mm ²	Mtr		
	(with CPC)			
	1 x 2C			
1.4.3	1.5 mm ²	Mtr		
1.4.4	2.5 mm ²	Mtr		
	1 x 3C			
1.4.5	1.5 mm ²	Mtr		
1.4.6	2.5 mm ²	Mtr		
	1 x 4C			
1.4.7	1.5 mm ²	Mtr		
1.4.8	2.5 mm ²	Mtr		
	PVC insulated cable			

ITEM	DESCRIPTION	UNIT	MATERIAL RATE (B)	LABOUR RATE (B)
	(without CPC)Circuit Protective Conductor			
	1 x 1C			
1.4.9	1.5 mm ²	Mtr		
1.4.10	2.5 mm ²	Mtr		
	(with CPC)			
	1 x 2C			
1.4.11	1.5 mm ²	Mtr		
1.4.12	2.5 mm ²	Mtr		
	1 x 3C			
1.4.13	1.5 mm ²	Mtr		
1.4.14	2.5 mm ²	Mtr		
	1 x 4C			
1.4.15	1.5 mm ²	Mtr		
1.4.16	2.5 mm ²	Mtr		
1.5	Cable Containment Cable trunking, ladder, tray and surface/conceal conduit inclusive of supporting brackets, fixing cleats, junction boxes, brass bushes, saddles, adapters, earthing link and all necessary accessories			
	Cable tray			
1.5.1	50mm wide	Mtr		
1.5.2	100mm wide	Mtr		
	Trunking			
1.5.3	50mm x 25mm	Mtr		
1.5.4	50mm x 50mm	Mtr		
1.5.5	50mm x 75mm	Mtr		
	Conduit			
	Surface			
	Galvanised steel			
1.5.5	ø20	Mtr		

ITEM	DESCRIPTION	UNIT	MATERIAL RATE (B)	LABOUR RATE (B)
1.5.6	ø25	Mtr		
1.5.7	ø32	Mtr		
	Concealed (In Wall, Slab, Partition and RC)			
	Galvanised steel			
1.5.8	ø20	Mtr		
1.5.9	ø25	Mtr		
1.5.10	ø32	Mtr		
1.6	Relocate			
	Conventional type			
1.6.1	Breakglass push-button call point	Nos		
1.6.2	Alarm bell	Nos		
1.6.3	Heat detector	Nos		
1.6.4	Smoke detector	Nos		
1.6.5	Beam detector	Nos		
1.6.6	Flame detector	Nos		
1.6.7	Beacon light	Nos		
	Addressable type			
1.6.8	Breakglass push-button call point	Nos		
1.6.9	Alarm bell	Nos		
1.6.10	Heat detector	Nos		
1.6.11	Smoke detector	Nos		
1.6.12	Beam detector	Nos		
1.6.13	Flame detector	Nos		
1.6.14	Beacon light	Nos		
1.7	SMOKE VENTILATION SYSTEM			
	Accessories			
1.7.1	Fan Blade	Nos		
1.7.2	Fan Motor, capacity up to 5 kW	Nos		
1.7.3	Fan Motor, capacity above 5 kW	Nos		

ITEM	DESCRIPTION	UNIT	MATERIAL RATE (B)	LABOUR RATE (B)
1.7.4	Motor Bearings	Nos		
1.8	SMOKE CURTAINS			
	Accessories			
1.8.1	Smoke Curtain per m ²	M2		
1.8.2	Curtain Motor, capacity up to 5 kW	Nos		
1.8.3	Smoke Curtain control panel	Nos		
1.9	FIREMEN INTERCOM /Emergency Voice Communication System			
	Accessories			
1.9.1	Master control panels	Nos		
1.9.2	Master Handset	Nos		
1.9.3	Remote Handset with Cabinet & Breakglass Keylock	Nos		
1.9.4	Disabled refuge remote units (DRS)	Nos		
1.10	Servicing of Fire Alarm System			
1.10.1	Rectifying charge	Nos		
1.10.2	Repair charge	Nos		
1.10.3	Re-Addressing Charge	Nos		
1.10.4	Re- Zoning Diagram Charge	Nos		
1.10.5	Re -Programming charge	Nos		
1.10.6	Installation and commissioning charge	Nos		
1.10.7	Painted with primer & Paint using approved type	Nos		
1.10.8	Linkages for gas control panels to main alarm panel	Nos		
1.10.9	On-call After office hour	Nos		
TOTAL			\$	\$

VI. FIRE EXTINGUISHERS

ITEM	DESCRIPTION	UNIT	MATERIAL RATE (B)	LABOUR RATE (B)
1	FIRE EXTINGUISHERS			
1.1	ABC Dry Chemical Powder pressurized			
	ABC Powder Fire Extinguisher containing Mono Ammonium Phosphate Powder 80%, Stored Pressure Type, Pressure Gauge, fitted with discharge hose, wall mounting bracket etc. applicable on Class A,B,C and electrically started Fire, A Rating- 8A, B Rating 34B, Can Construction : Deep drawn & Co2 Mig welded, Valve Construction : Forging & Machining, Internal Coating of Can : Epoxy Powder coating, External Coating of Can : Epoxy Polyester Powder coating to BS EN 3/ BS 1449 or UL			
1.1.1	4.0 – 6.0 kg	Nos		
1.1.2	9.0 kg	Nos		
1.1.3	25.0 kg trolley type c/w nozzle & hose	Nos		
1.1.4	50.0 kg trolley type c/w nozzle & hose	Nos		
1.2	Nano Fire Extinguishers CLASS B, C, E, F			
	Class B, C, E, F Nano Fire Extinguisher with wall mounting bracket etc.,			
1.2.1	50g	Nos		
1.2.2	100g	Nos		
1.2.3	150g	Nos		
1.2.4	Nano Fire Extinguisher Cabinet	Nos		
1.3	Carbon Dioxide (CO ₂)			
	Carbon Dioxide (CO ₂) Fire Extinguisher C/W squeeze grip operating head, discharged horn, and fixing wall bracket to BS 5045/BS EN 3 or UI			
1.3.1	2.0 – 2.9 kg	Nos		
1.3.2	4.0 – 5.0 kg	Nos		

ITEM	DESCRIPTION	UNIT	MATERIAL RATE (B)	LABOUR RATE (B)
1.3.3	30.0 kg trolley type c/w nozzle & hose	Nos		
1.3.4	45.0 kg trolley type c/w nozzle & hose	Nos		
1.4	Foam CO ₂ Cartridge			
	Mechanical foam unit of 9 lts. Capacity with water inlet and foam water out let, foam maker, foam branch pipe etc. complete. Unit shall be fabricated by M.S. sheet with FRP lining inside and whole unit mounted with rubber wheels of suitable size and handle for movements to BS EN 3/ BS 1449 or UL			
1.4.1	9 litres pressurized	Nos		
1.5	Refilling of Fire Extinguishers			
1.5.1	1 kg of Mono Ammonium Phosphate Powder 80%	Kg		
1.5.2	1 kg of CO ₂	Kg		
1.5.3	Refill 9 litres Foam (ANB)	Kg		
1.5.4	Refill 9 litres Foam (AFF)	Kg		
1.6	Accessories/Parts			
	Replace of fire extinguisher Accessories/Parts			
1.6.1	Safety Pin	Nos		
1.6.2	Adhesive Label	Nos		
1.6.3	Instruction Label	Nos		
1.6.4	O-ring	Nos		
1.6.5	Quad ring	Nos		
1.6.6	Pressure gauge 12 bar	Nos		
1.6.7	Pressure gauge 14 bar	Nos		
1.6.8	Dip tube for Dry Chemical type	Nos		

ITEM	DESCRIPTION	UNIT	MATERIAL RATE (B)	LABOUR RATE (B)
1.6.9	Valve body for Dry Chemical	Nos		
1.6.10	Dip tube for CO ₂ type	Nos		
1.6.11	Discharge hose Dry Chemical type	Nos		
1.6.12	Discharge hose CO ₂ type	Nos		
1.6.13	Valve body for CO ₂ type	Nos		
1.6.14	Service Sticker			
1.6.15	Stencil	Nos		
1.6.16	Indoor Fire Extinguisher Cabinet	Nos		
1.6.17	Outdoor Fire Extinguisher Cabinet	Nos		
1.6.18	Fire Blanket Size ranging from 1.2mx1.8m Fiber Glass Woven with flame proof handles and tested to BS EN 1869. The blanket shall come complete with Metal/hardened plastic container and wall fixing brackets.	Nos		
1.7	Servicing of Fire Extinguishers			
1.7.2	Respray to Bomba Spec. p/cyl	Nos		
1.7.2	Servicing per fire extinguisher cylinder	Nos		
1.8	DOT Hydrostatic Testing facility and equipment meet all NFPA requirements for the hydrostatic testing of self-contained breathing apparatus compressed gas cylinders in addition to testing ABC portable fire extinguisher cylinders. Hydrostatic Test requirements will be Department of Transportation (DOT) ,Occupational Safety and Health Administration (OSHA) and National Fire Protection Association (NFPA)			
1.8.1	Hydrostatic Test for cylinder below 10 kg/9 litres	Nos		
1.8.2	Hydrostatic Test for cylinder 10 kg – 25 kg	Nos		
1.8.3	Hydrostatic Test for cylinder 25 kg – 50 kg	Nos		
TOTAL			\$	\$

VII. EMERGENCY LIGHTS & EXIT SIGN

ITEM	DESCRIPTION	UNIT	MATERIAL RATE (B)	LABOUR RATE (B)
1	Emergency Lights with LED lamp with 10-hour battery backup type & LED lamps as per NFPA standard. These signages may be mounted on wall OR can be fixed on ceiling with gear wire /recessed.	Nos		
2	Emergency Lights with LED lamp with 180 minutes battery backup type & LED lamps as per NFPA standard. These signages may be mounted on wall OR can be fixed on ceiling with gear wire /recessed.	Nos		
3	EXIT Signage's with LED lamp with 180 minutes battery backup type & LED lamps as per NFPA standard. These signages may be mounted on wall or can be fixed on ceiling with gear wire /recessed.	Nos		
	Safety Signages			
	The following decriptive Green color self glow safety signages different sizes / graphics / colours			
4	Arrow downward + Running man + Emergency exit - with symbol.			
	Size 6" X 16"	Nos		
5	Arrow + Running man + Emergency exit - with symbol.			
	Size 6" X 16"	Nos		
6	Red Triangle-Fire extinguisher - with symbol.			
	Size 4" X 6"	Nos		
7	Fire hydrant & Hosereel - with symbol.			
	Size 8" X 8"	Nos		
8	Rout map & Evacuation Plane by Glow Signe			

ITEM	DESCRIPTION	UNIT	MATERIAL RATE (B)	LABOUR RATE (B)
	Size 15`` x 10``	Nos		
9	Rout signal for evacuation by Glow signe Size :10`` x 6``	Nos		
	Accessories/Parts			
10	Battery	Nos		
	Servicing			
11	Rectifying charge	Nos		
12	Repair charge	Nos		
13	Installation ang commissioning charge	Nos		
	LPCB listed cables on vertical and/or horizontal cable support system (exclude cable support system) inclusive of CPC, cable ties, fixing cleats, cable lugs, terminations, jointing and associated ancillary accessories.			
13	1.5 mm ² x 2C			
14	2.5 mm ² x 2C			
15	1.5 mm ² x 3C			
16	2.5 mm ² x 3C			
	PvC Ceble Conduit			
17	ø20			
18	ø25			
TOTAL			\$	\$

VIII. FIRE DOOR

ITEM	DESCRIPTION	UNIT	MATERIAL RATE (B\$)	LABOUR RATE (B\$)
A	Fire Door comply with NFPA Standard No. 80, and as specified herein. All fire-rated doors assemblies shall be tested for compliance with National Fire Protection Association (NFPA) Standard 252(1995), "Standard Methods of Fire Tests of Door Assemblies"; UL 10B, FIRE TESTS OF DOOR ASSEMBLIES, or BS476: part 22, and bear the labels.			
1	Single Leaf Fire Rated Door with frame (With vision panel of wired glass of 10mm thk Including dismantling of existing doors)			
1.1	UL listed/60 minutes Fire Rated Door	M2		
1.2	UL listed/120 minutes Fire Rated Door	M2		
2	Double Leaf Fire Rated Door with frame (With vision panel of wired glass of 10mm thk Including dismantling of existing doors)			
2.1	UL listed/60 minutes Fire Rated Door	M2		
2.2	UL listed/120 minutes Fire Rated Door	M2		
3	Single Leaf Glazed Fire Rated Steel Doors with frame (Including dismantling of existing doors)			
3.1	UL listed/60 minutes Fire Rated Door	M2		
3.2	UL listed/120 minutes Fire Rated Door	M2		
4	Double Leaf Glazed Fire Rated Steel Doors with frame (Including dismantling of existing doors)			
4.1	UL listed/60 minutes Fire Rated Door	M2		
4.2	UL listed/120 minutes Fire Rated Door	M2		
5	UL listed/ Fire Door Accessories			

ITEM	DESCRIPTION	UNIT	MATERIAL RATE (B\$)	LABOUR RATE (B\$)
5.1	Door Closer	Nos		
5.2	Fire & Smoke Seal	Mtr		
5.3	Mortice Latch & Lock	Nos		
5.4	FR sealant	Mtr		
5.5	Floor Spring Door Closers	Nos		
5.6	Free-Swing Door Closers	Nos		
5.7	Guide Rail Door Closers	Nos		
5.8	Concealed Door Closers	Nos		
5.9	Overhead Door Closers	Nos		
5.10	Wall Mounted Fire Door Holders	Nos		
5.11	Flush Mounted Fire Door Retainers	Nos		
5.12	Single leaves Door -Fast Push - Panic Exit Device	Nos		
5.13	Two-leaved Door - Fast Push - Panic Exit Device	Nos		
B	The design and construction of high challenge fire walls, fire walls, and fire barrier walls including protection of openings and penetrations comply with NFPA Standard No. 221.			
1	UL listed fire stopping seal	m2		
2	UI Listed fire retardant wall panel	m2		
TOTAL			\$	\$

XI. BUILDING MANAGEMENT SYSTEM

ITEM	DESCRIPTION	UNIT	MATERIAL RATE (B)	LABOUR RATE (B)
1	Building Management System (BMS) Interface Provision of interfacing (dry contact) for BMS			
1.1	Hosereel system - hosereel pumps, hosereel tank	Lot		
1.2	Dry dryser system - wet riser pumps, jockey pump, storage tank, transfer pumps, transfer tank	Lot		
1.3	Wet riser system - wet riser pumps, jockey pump, storage tank, transfer pumps, transfer tank	Lot		
1.4	External hydrant system - hydrant pumps, jockey pump, storage tank	Lot		
1.5	Fire alarm system - fire alarm panel	Lot		
1.6	Gaseous fire extinguishing system	Lot		
1.7	Automatic sprinkler system - sprinkler pumps, jockey pump, storage tank, transfer pumps, transfer tank	Lot		
1.8	Very early smoke detection and alarm system	Lot		
1.9	Firemen intercom system	Lot		
TOTAL				\$

X. MANPOWER

CATEGORY OF MANPOWER REQUIRED	NO. OF PERSONS PER DAY	JOB DESCRIPTION	QUALIFICATION	CHARGE PER DAY (B\$)
Project Manager	1	The Project Manager holds overall management responsibility for all aspects of fire protection construction projects, Services and Maintenance from conception through systems functioning as intended. He will oversee or conduct scheduling, planning, actual construction, expediting, inspection, quality control, and total delivery of the project according to established criteria. He is responsible for tracking, forecasting, and communicating all costs, and financial measures of the project. Through coordination with the site Estate Maintenance superintendent, the PM will organize and manage all the elements involved in construction - labor, temporary and permanent materials, equipment, supplies, utilities, and time.	Mechanical Engineering, Civil Engineering, or other related degree/Diploma foreign equivalent required i.e. Institution of Fire Engineers. Familiar with Local Fire Code and NFPA standard At least 20 years' experience in Fire Protection Project Management required High Level of self-motivation Ability to multi-task Excellent communication skills, both written and verbal Possess a valid driver's license; in accordance with Company policy	
Engineer	1	Work with other team members in design, review and inspection of fire life safety systems comprising means of egress; fire compartmentation; fire suppression system; fire detection, communication and alarm system; smoke control system; and emergency power Perform and review measurements/calculations for travel distance, occupant load, egress capacity, water supply, hydraulic calculation, voltage drop, power supply, pressurisation, smoke control, etc. Read and understand various local and international codes and standards	Proficiency in AutoCAD or Revit is required Experience in design, supervision and/or inspection of fire life safety systems is preferred Basic knowledge of local fire code and/or other relevant standards (local or NFPA) is preferred With 10 Years' Experience in The Field	
HSE Officer	1	Monitor Health and Safety Meeting Arrangement and Create Reports Develop Strategies Investigate Design Training Programs Give Presentations Perform Risk Assessments	the International diploma or qualified by icao or ex fire officer Brunei fire and rescue services or ex HSE officer Brunei shell occupational health safety Minimum 15 Years' Experience in The Field Especially in Oil / Gas Industries 24 Hours Contactable	

CATEGORY OF MANPOWER REQUIRED	NO. OF PERSONS PER DAY	JOB DESCRIPTION	QUALIFICATION	CHARGE PER DAY (B\$)
Supervisor	1	<p>Perform maintenance and servicing of fire protection and fire alarm system</p> <p>Conduct troubleshooting, repair, testing and commissioning of Dry Fire System (Fire Alarm panels, Mimic panels, Detectors, Fire modules etc).</p> <p>Ensure quality works are be carried out on time schedule</p> <p>Perform ad-hoc tasks as required, including assisting other facilities department team members</p> <p>Job may include moving stock inventory check</p> <p>To perform all duties in accordance with policies and within the Company vision, mission and values</p> <p>Enforce all safety programs and training.</p> <p>Provides input into the research, development, evaluation and implementation of new products, services, technology and processes to ensure MBS competitive position and in anticipation of changing customer needs within the dynamic hospitality and gaming environment</p>	<p>Diploma / Higher NITEC / NITEC in Electronics / Electrical Engineering</p> <p>Experience in the design, installation, programming, maintenance and repairs of Conventional & Addressable Fire Alarm System</p> <p>Able to interpret Fire Alarm Schematic Diagrams.</p> <p>Experience in CAD And 10 Years In The Field is advantageous</p> <p>Class 3 driving license</p> <p>Able to work over weekends</p>	
Instrument Technician	1	<p>To carry out preventive maintenance and servicing of fire protection and fire alarm system on various sites.</p> <p>To carry out troubleshooting, basic repair works and testing and commissioning of fire protection system.</p> <p>Handling of hand and power tools for mechanical and electrical installation, servicing and maintenance work.</p>	<p>Diploma / Higher NITEC / NITEC in Electronics / Electrical Engineering</p> <p>Experience in the design, installation, programming, maintenance and repairs of Conventional & Addressable Fire Alarm System</p> <p>Able to interpret Fire Alarm Schematic Diagrams.</p> <p>Competent with basic report writing for work permit application and/or work completed summaries</p> <p>With 5 Years Field Experience</p> <p>Class 3 driving license</p> <p>Able to work over weekends And on The Public Holiday</p> <p>24 Hours Contactable</p>	

CATEGORY OF MANPOWER REQUIRED	NO. OF PERSONS PER DAY	JOB DESCRIPTION	QUALIFICATION	CHARGE PER DAY (B\$)
Electronic Technician	1	Perform hands-on troubleshooting, service and repairs and installation on-site. -Provide on-site implementation, commissioning, testing and system integration support. System equipment / circuit board troubleshooting Support equipment servicing and maintenance on existing and new projects Support assembly plant and circuit board repairs (electrical wiring/ soldering, etc)	Minimum 2 years of relevant work experience Simple proficiency in English Language; must command a standard level of verbal, and written communication skills Up to date with telecommunication technology and electronic equipment Class 3 driving license Able to work over weekends And on The Public Holiday ,24 Hours Contactable	
Technical Assistant	3	Duties and Responsibilities Responding to intrusion alarm system activation Performing maintenance service, commissioning of alarm systems Attending to customer request on alarm and card access systems.	Good interpersonal communication skills 1-2 years working experience Class 3 driving license Able to work over weekends Able to Work Over Weekend and On the Public Holiday 24 Hours Contactable	

TOTAL OF PRICES

NO.	ITEM DESCRIPTION	PRICE (BND)
1	Fire Hosereel System	\$
2	Fire Sprinkler System	\$
3	Wet Pipe AFFF Sprinkler System for Helipad	\$
4	Gas Extinguishing System	\$
5	Fire Alarm System	\$
6	Fire Extinguishers	\$
7	Emergency Lights and Exit Sign	\$
8	Fire Door/ Fire Stopper / Fire Wall	\$
9	Building Management System	\$
10	Manpower	\$
	TOTAL AMOUNT	\$
TOTAL AMOUNT IN WORDS:		

SUMMARY OF PRICES

ITEM	LOCATION	FREQUENCY	TOTAL NO SERVICE FOR 5 YEARS	RATE PER SERVICE	RATE FOR 5 YEARS
01.1	Preliminaries	Monthly	60		
01	BLOCK 1	Monthly	60		
02	BLOCK 2	Monthly	60		
03	BLOCK 3	Monthly	60		
04	BLOCK 4	Monthly	60		
05	BLOCK 5	Monthly	60		
06	BLOCK 6 / WARD BLOCK	Monthly	60		
07	OUTPATIENT DEPARTMENT	Monthly	60		
08	NURSING COMPLEX (KLINIK PAKAR 11)	Monthly	60		
09	SPORT COMPLEX AND ESTET MAINTENANCE SECTION BUILDING	Monthly	60		
10	BLOCK 6 / WARD BLOCK (FM- 200)	Quarterly	20		
11	OUTPATIENT DEPARTMENT (OPD) AND CENTRAL STATE LABORATORY (CSL) NAF S111	Quarterly	20		
12	INFLAMMABLE STORE & OUT PATIENT SUB-STATION 2 (NAF S111)	Quarterly	20		
13	BUNGA KUNING	Monthly	60		
14	EXTENSION OPD	Monthly	60		
15	TRANSPORT BUILDING (NAF S111)	Quarterly	20		
16	SPRINKLER SYSTEM BLOCK 4	Bi - Monthly	30		
17	HOSEREEL SYSTEM	Quarterly	20		
18	KIARONG HOUSE NO. 5, 6, 7, 8, 9, 10, 11(Rumah Sinar Sejahtera) (Rumah Cahaya Sejahtera) PACS SUBOK & NURSES HOME CDC KIARONG HOUSE NO. 1,2,3,4,5 TEMPAT BERKHATAN HOUSE NO. 11 PHYSIOTHERAPHY HOUSE NO. 3,7,11	Monthly	60		

ITEM	LOCATION	FREQUENCY	TOTAL NO SERVICE FOR 5 YEARS	RATE PER SERVICE	RATE FOR 5 YEARS
19	M & E BUILDING	Monthly	60		
20	EHSAN APARTMENT	Monthly	60		
21	WOMEN AND CHILDREN CENTRE				
21.1	Basement 1	Monthly	60		
21.2	Basement 2	Monthly	60		
21.3	Ground Floor	Monthly	60		
21.4	1 st . Floor	Monthly	60		
21.5	2 nd . Floor	Monthly	60		
21.6	3 rd . Floor	Monthly	60		
21.7	4 th . Floor	Monthly	60		
21.8	5 th . Floor	Monthly	60		
21.9	6 th . Floor	Monthly	60		
21.10	7 th . Floor	Monthly	60		
21.11	8 th . Floor	Monthly	60		
21.12	9 th . Floor	Monthly	60		
TOTAL CONTRACT SUM FOR FIVE YEARS:					

1. I/we, the undersigned are willing to contract for and perform such maintenance, and repairs to Ministry of Health buildings as may be ordered from time to time for a period of Five (5) years commencing from the date of award at the rates contained herein at:-
2. I/we confirm that my/our tender has been calculated on a firm price basis and that I/we have taken into account all aspects, site conditions and other matter that may affect the works. I/we understand that I/we not be allowed any claims for payment may arise out of my/our misunderstanding, and/or misinterpretation and/or miscalculation of the works and/or site conditions.
3. I/we understand and agree that the Government has the option to accept part of my/our tender and I/we agree and confirm that in such case, there shall be no adjustment of my/our tender prices and/or rates.
4. Unless and until a formal agreement is prepared and executed, this tender offer together with your Letter of Acceptance thereof shall constitute a legal and binding contract between us.
5. Our Tender is fully consistent with and does not contradict or derogate from anything in your Invitation To Tender. We have not qualified or changed any of the provisions of your Invitation To Tender.
6. Our offer is valid for **twelve (12)** calendar months from the tender closing date.

Signature & Date

Name

In the capacity of

(Position in the Company)

(Tenderer Official Stamp)

On behalf of

(Name of Company).

Address

Telephone & Fax

MOD Registration No

(Copy of MOD Registration Certificate to be attached)

Class / Category

Fire & Rescue Department
Registration No.

Tender Deposit No.

SCHEDULE B
INFORMATION SUMMARY

- 2.1 Tenderers shall provide in this Schedule the following information:
- (a) Management summary
 - (b) Company profile [including Contractor and sub-contractor(s), if any]
 - (c) Years of experience (as of the Tender Closing Date) of the Contractor and sub-contractor(s) in the:
 - ***Maintenance Fire Alarm and Fire Protection System***
 - (d) Minimum manpower proposal for the project which will be full time on site
 - (e) Other information which is considered relevant.

SCHEDULE C

SUB-CONTRACTORS

- 3.1 Tenderers shall complete Table 3.1 with information about all the companies involved in the provision of the services and items specified in this tender. This shall include details about the Contractor and each sub-contractor involved, as well as their respective responsibilities.
- 3.2 Tenderers shall also indicate in Table 3.1 any alliance relationship established with each sub-contractor. An alliance is defined as a formal and binding business relationship between the allied parties.

Table 3.1 Responsibility Table

		Alliance Relationship between Contractor and Sub-Contractor(s)		
Company Name	Responsibility Description	Alliance Exists? (Y/N)	Date Established	Alliance Description
Contractor				
		Not Applicable	Not Applicable	Not Applicable
Sub-Contractor(s)				

SCHEDULE D

COMPANY'S BACKGROUND

- 4.1 Each of the companies involved in this tender, including Contractor and sub-contractor(s) (if any), shall provide information on the company's background, scope of operations, financial standing and certified copy of its Certificate of Incorporation or Certificate of Registration with the Ministry of Development.

MANPOWER REQUIREMENTS

The minimum MANPOWER requirements for the project and will be full time on the site when the installation is underway: (two (2) supervisor and six (6) tradesman :-

POSITION	NO. OF MEN
.....
.....
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SCHEDULE E

REFERENCES

- 5.1 Tenderers shall submit a list of customers in Table 4.1 to whom the Contractor has provided similar services and items as specified in this tender in the recent 5 years as of the Tender Closing Date.

Table 5.1 References of previous customers

Customer Name & Address	Customer Type (Gov't or Quasi-Gov't)	Contact Person	Title	Contact Number Fax Number & Email Address

*Note: Tenderers shall indicate whether the customer is a Government or Quasi Government organisation. A Quasi Government is defined as an organisation which (1) is managed and controlled by the Government; or (2) has at least 50% shares being held by the Government. Please leave the column blank if the customer is neither a Government or Quasi Government organisation.

- 4.2 The Ministry of Health shall treat all the information submitted under this schedule in strict confidence.
- 4.3 The Ministry of Health reserves the right to contact the references for tender assessment purposes.

**SCHEDULE G
COMPLIANCE FORM**

SECTION	DESCRIPTIONS	YES	NO
1.	Instruction To Tenderers	<input type="checkbox"/>	<input type="checkbox"/>
2.	Specification & Bill of Quantities	<input type="checkbox"/>	<input type="checkbox"/>
3.	Forms to be used	<input type="checkbox"/>	<input type="checkbox"/>
4.	Articles of Agreement & Conditions of Contract	<input type="checkbox"/>	<input type="checkbox"/>

SCHEDULE H

LIST OF MANPOWER ALLOCATION

ENGINEER

Name: _____

Brunei I/C No & Colour: _____

Date of Issue: _____

Valid until: _____

Qualification: _____

Experience: _____

FOREMAN/ SUPERVISOR

Name: _____

Brunei I/C No & Colour: _____

Date of Issue: _____

Valid until: _____

Qualification: _____

Experience: _____

TECHNICIAN

Name: _____

Brunei I/C No & Colour: _____

Date of Issue: _____

Valid until: _____

Qualification: _____

Experience: _____

TRADESMAN/ELECTRICIAN

Name: _____

Brunei I/C No & Colour: _____

Date of Issue: _____

Valid until: _____

Qualification: _____

Experience: _____

