# REQUIREMENTS FOR ALTERATION AND ADDITION WORKS TO LEASED PREMISES

<table>
<thead>
<tr>
<th>S/NO</th>
<th>CONTENTS</th>
<th>PAGE NO</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>GENERAL REQUIREMENTS</td>
<td>4-5</td>
</tr>
<tr>
<td>2.</td>
<td>GENERAL GUIDELINES ON ARCHITECTURAL &amp; BUILDING WORKS</td>
<td>6-13</td>
</tr>
<tr>
<td>3.</td>
<td>STRUCTURAL INSTALLATION</td>
<td>13</td>
</tr>
<tr>
<td>4.</td>
<td>SPECIFIC M&amp;E REQUIREMENTS</td>
<td></td>
</tr>
<tr>
<td></td>
<td>A.   ELECTRICAL SYSTEM</td>
<td>13 - 17</td>
</tr>
<tr>
<td></td>
<td>B.   AIRCONDITIONING SYSTEM</td>
<td>18 - 19</td>
</tr>
<tr>
<td></td>
<td>C.   SPRINKLER SYSTEM</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td>D.   PUBLIC ADDRESS SYSTEM</td>
<td>21 - 22</td>
</tr>
<tr>
<td>5</td>
<td>DETAILED REQUIREMENTS FOR M&amp;E PLANS</td>
<td>23 - 25</td>
</tr>
</tbody>
</table>
6 FORMS AND ANNEXES

BUILDING WORKS

6.1 APPLICATION FOR CARRYING OUT ADDITION AND ALTERATION/RENOVATION WORKS

6.2 PERMIT FOR CARRYOUT ADDITION AND ALTERATION/RENOVATION WORKS

MECHANICAL & ELECTRICAL SERVICES

6.3 APPLICATION FOR RENEWAL OF LICENSE TO USE OR OPERATE AN ELECTRICAL INSTALLATION

6.4 CERTIFICATE OF RESPONSIBILITY OF INSTALLATION AFTER TURN-ON

6.5 LETTER OF CONSENT

6.6 LETTER OF UNDERTAKING

6.7 ELECTRICAL TEST REPORT

6.8 LETTER OF IDEMNITY
GENERAL REQUIREMENTS

1. The tenant and his consultant architect/professional engineer/contractor shall comply with Properties (Services) requirements and guidelines on renovation works.

2. The tenant shall ensure that a site inspection is conducted and to check and verify all drawings on the site before actual commencement of any work. The tenant shall keep Properties (Services) informed should there be any discrepancies in the drawings.

3. The tenant shall ensure that the renovation work should not encroach into public and circulation areas.

4. The tenant shall ensure that where asbestos-containing materials will be removed, used or handled in the installation works, they shall notify the Ministry of Manpower.

5. The tenant shall ensure that no person shall commence or carry out any building works except under the full time supervision of an appropriate qualified site supervisor. The particular of such person shall be made known to Properties.

6. Properties reserve the right to inspect the leased premise without notice from time to time.

7. All works carried out on site should be in strict accordance to the approved drawings.

8. After the completion of the renovation works, it shall be the responsibility of the tenant to maintain the new and existing installation in a proper working condition and update all drawings with two sets of as-built drawings and one auto-cad soft copy extended to Properties (Services).

9. The tenant shall submit risk assessments and to attend Properties (Services) safety awareness briefing before commence of work.

10. Hacking of beam, columns and slabs are not allowed including drilling of inserts through beams, columns and slabs.
11. **Sprinkler/Aircon System**

11.1 Removal or modification of fire sprinkler system must be done by registered fire Protection Company.

11.2 No addition of VAV boxes and control are allowed without approval. No alteration is to be done on the main ducts except approved tap-off by the Landlord.

12. **Use of Lift**

12.1 Approval must be sought to use passenger lift with suitable materials to protect both the lift car interior and exterior such as the car door, jamb etc.

13. **Debris Removal**

13.1 All renovation debris must be removed out of the building by the tenant's contractor daily. Debris cannot be disposed in the building bin centres.

Footnote: Before commencement of any addition/alteration/renovation works, a permit approved by the Properties (Services) must be obtained and displayed at the leased premises.
GENERAL GUIDELINES ON ARCHITECTURAL & BUILDING WORKS

A. BEFORE COMMENCEMENT OF WORK

i) To seek clearance with Properties (Services) and obtain the necessary permit at Properties office (STC-02A) for STC/CCB or Properties office (ALH-07C) for work in ALH before commencing any renovation works in the building.

ii) To complete and return to Properties (Services) the attached Letter of indemnity

iii) Contractor/project officer is required to inform the building operations centre (STC-02A, extension 53424 for STC/CCB or ALH-07C, extension 16061/62/63) before commencement of work on site.

B. HOARDING

i) The work site shall be hoarded up before actual renovation work can commence on site. All renovation works shall be confined within the hoarded area. The minimum requirements for temporary hoarding must be met as stated below:

   a) Project title on the works to be displayed
   b) Expected completion date
   c) Compliance with details laid down in Annex A and B
   d) Contact number for the site supervisor/project manager should be displayed prominently at the work site

All works carried out must be confined to the boundary of the premise or within the hoarding area. The surrounding area and the route used for the transportation of materials must be protected by means of plywood (at least 6mm thick) with proper painting subject to Properties (Services)’ approval.

* For renovation work duration exceeding 4 weeks, all proposed hoarding shall be of gypsum board material of minimum 15mm thick complete with approved finishes.

C. COMMENCEMENT OF WORK

1. The tenant or his contractor shall not commence any site work until they have obtained a Renovation Work Permit issued by Properties (Services). The workers’ security passes will be withdrawn if they are caught not complying with those requirements.

2. The tenant may proceed with the installation work only after the relevant authorities have approved every proposed plan. The contractor shall also take note and comply with the conditions of approval (if any).

3. The tenant shall inform Properties (Services) on the commencement and completion dates of the proposed renovation works.
4. Ensure all installation work carried out complied with all statutory requirements imposed by the relevant authorities at its own cost.

5. All works that generate heat or sparks, such as cutting, welding, grinding etc shall require prior written approval in the form of Hot Work Approval. Tenant shall apply for the approval using the prescribed 'Hot Work Approval' application form. Alternatively, A qualified fire patroller with appropriate fire extinguishers is required to be on standby at the site throughout the hot works. The Tenant must ensure that every Fire Safety precaution is taken during the execution of works at all times and shall be held fully responsibility for any consequences due to failure on his part to comply with the Fire Safety measures during the execution of works.

6. No flammable object/material, such as thinner, kerosene, oxygen cylinder, is allowed to be stored in the renovation site. If it is required for the execution of renovation works, it shall be brought to site and removed from the site on the same day.

7. All addition and alteration works, renovations, construction or installation works shall in no way affect the functioning or efficiency of existing fire protection systems and means of escape, on SIA's property.

8. Precautions shall be taken by tenant to prevent damage to SIA property in the course of the renovation works. Carpet in public areas affected by the renovation works shall be covered with clean nylon or plastic sheets and protected with plywood and grey felt carpet. Glass, aluminum panels, tiles, etc. shall be properly protected from welding sparks, corrosive fluid, sharp/abrasive objects, etc. When carrying out renovation works, tenant shall ensure that his contractors do not block or impede any fire protection systems and escape routes.

9. To seal off all air-con grilles during the duration of renovation work and ensure that the dust generated by the renovation does not infiltrate into the existing air-conditioning and ventilation system.

10. All electrical equipment used during the installation work shall obtain electricity supply through 30mA ELCB. The tenant or his contractor shall submit a letter of consent for temporary supply.

11. Tenants shall not use any existing tray/trunking for their own installation.

12. All tools, equipment and materials used for the renovation works should be stored within the hoarding area.

13. The tenant shall not in any way hold SIA responsible for any loss or damage to any equipment, plant or material brought to site for the execution of renovation works.
14. To keep the passages clear at all time.

15. No debris shall accumulate at the site but must be removed from the site daily in approved heavy-duty polythene bags. No debris is allowed to be disposed into the building bin centres.

16. The tenant shall notify Properties immediately of any site problem that is likely to affect the proper operation of the services in building in the course of the renovation works.

17. ALL works such as hacking, drilling, demolition, etc. which are likely to cause noise, dust, disturbance, inconvenience, etc. to the building users shall only be carried out after normal working hours. Normal working hours is as follows;

   Mon – Fri – 0800hrs – 1830 hrs

The tenant shall inform Properties of such works at least 3 days in advance. If the tenant fails to comply with the working hours, the Landlord shall stop all works and the work permit may be revoked.

18. All M&E systems, equipment and plants installed within the tenanted premises shall be colour coded as indicated below:

<table>
<thead>
<tr>
<th>Type of M &amp; E Services</th>
<th>Colour Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Domestic Water (To label as &quot;DW&quot;)</td>
<td>Blue</td>
</tr>
<tr>
<td>2. Rain Water (To label as &quot;RW&quot;)</td>
<td>Green</td>
</tr>
<tr>
<td>3. Compressed Air</td>
<td>Sky Blue</td>
</tr>
<tr>
<td>4. PUB's Gas</td>
<td>Yellow</td>
</tr>
<tr>
<td>5. Drainage</td>
<td>Black</td>
</tr>
<tr>
<td>6. Fire Installation</td>
<td>Signal Red</td>
</tr>
<tr>
<td>7. TAS Installation</td>
<td>Green</td>
</tr>
<tr>
<td>8. Electrical Services</td>
<td>Grey/Orange</td>
</tr>
<tr>
<td>9. CCTV/Card Access</td>
<td>Red Band</td>
</tr>
<tr>
<td>10. PA system</td>
<td>White</td>
</tr>
<tr>
<td>11. BAS</td>
<td>Yellow</td>
</tr>
<tr>
<td>12. NEWater</td>
<td>Purple</td>
</tr>
<tr>
<td>13. Chilled Water Supply</td>
<td>Dark Blue</td>
</tr>
<tr>
<td>14. Chilled Water Return</td>
<td>Light Blue</td>
</tr>
<tr>
<td>15. Condenser Water Supply</td>
<td>Dark Green</td>
</tr>
<tr>
<td>16. Condenser Return Supply</td>
<td>Light Green</td>
</tr>
</tbody>
</table>
19. In the false ceiling, all installation works must be coordinated on site and clearances of 300mm (all round) between the services must be maintained. No fire protection systems are to be impeded or blocked.

20. All workers working in the building are strictly not allowed to SMOKE.

D. AFTER COMPLETION OF WORK

1. The tenant shall make good all works disturbed to Properties satisfaction at his own cost.

2. To arrange for a joint site inspection with Properties upon completion of the renovation works. All fire protection systems will be checked to ensure that they are not blocked or impeded.

3. The tenant shall be responsible for the proper maintenance of the new and existing building works within the leased premise during the tenancy period.

4. The tenant shall maintain all M&E systems, equipment and plants installed within the tenanted premises in good condition and comply with all Authorities’ requirements.

5. The tenant shall submit two (2) complete sets of as-built drawings (Architectural, Structural and M & E drawings), and one Auto-Cad soft copy (CD-Rom) of the as-built drawings to Properties within three weeks upon completion of works.

6. The tenant shall reinstate the leased premises to its original state upon giving up his tenancy, if required by Properties.

7. There shall no increase in the electrical load without prior written notice to Properties. Approval shall be at the sole discretion of Properties.

8. Properties or its appointed custodian contractor reserves the right to inspect the tenant's premise without notice from time to time.

9. The consequence of illegal modification, extension or renovation of the electrical installation shall be the cutting off of power supply to the Tenant's premise or other penalties, which shall be decided by Properties. Properties shall not be held liable for any loss of business as a result of cutting off the electricity supply.

10. The electrical contractor shall obtain from Properties the setting of the overload and earth fault trip before the testing and commissioning of their switchboard. AS.I test shall be conducted on site, witnessed by Properties staff or its maintenance representative before the scheduled turn-on date. A copy of all test result shall be submitted to Properties for record. Nevertheless, Properties reserves the right to
instruct the Tenant to reduce their earth leakage current or overload current setting to a satisfactory level so as not to affect other building Users.

E. PREPARATION OF RENOVATION PLANS

1. The consultant Architect/Professional Engineer/Contractor engaged by the tenant is to ensure that the plans submitted comply with all statutory requirements imposed by relevant authorities.

2. The tenant should submit two (2) sets each of the following preliminary drawings drawn on standard metric size sheets of international "A" series before a meeting is called for detailed discussion:

i) Architectural layout plan.

ii) Sections and elevations.

iii) Sanitary and water supply system layout plan and schematic diagram.

iv) Layout of power and lighting points and cable tray/trunking.

v) Electrical single line diagram (showing the source tapping of power supply). They should include the detailed loading requirement in KW for every circuit shown in the single line. The maximum demand of the connected load shall be indicated.

vi) Layout of fire sprinkler points and hosereels, c/w associated pipings and valves.

vii) Layout of fire alarm callpoints, alarm bells, heat and smoke detectors (indicator of the fire alarm zone).

viii) Layout of aircon diffusers, air return grills, VAV Boxes, thermostat and aircon ducting.

ix) Floor trunking layout.

x) Layout and sizes of gas pipeline.

xi) Layout and single line drawing for the gas leak detection system.

xii) Layout of any other mechanical services not mentioned above.

3. Tenants shall submit two (2) sets of the following drawings if proposed renovation works involves alteration to existing Public Address (PA) system

i) P.A speakers system layout

ii) Cable routing the PA system

4. All drawings shall be drawing to a scale of 1:100 with existing and proposed alteration/new addition works clearly shown in BCA standard colours and properly annotated/defined.
F. ARCHITECTURAL WORKS

1. Demountable Partitions, Walls, Ceiling, Carpet, door etc
   a) Demountable partitions shall be aligned with the existing aluminum mullions and ceiling grids.
   b) Demountable partitions shall have an overall thickness of 75mm comprising of galvanised steel studs with concealed framing.
   c) The demountable partitions, display showcases, walls cabinets etc shall not obstruct the existing wall, floor and ceiling fixtures, eg thermostats, switches, diffusers, smoke detectors, floor junction boxes, etc.
   d) All interior finishing shall be of non-combustible or fire resistant materials. Where gypsum boards are used, especially exposed to the common areas of the Landlord, they must be lined with acceptable wall paper or painting to the approval of the Landlord.
   e) Ceiling materials used shall be of class 'I' fire flame spread rating.
   f) Only approved 50mm wide stainless steel trimmer shall be used for carpet finishing lines.
   g) All carpet installations shall use grippers and / or approved adhesive that is non-combustible, non-flammable, odourless and deterioration resistant. The tenant shall submit the test reports for the Surface Spread of Flame Test for Materials Class I for carpets installed in the premises.
   h) All new doors proposed shall be constructed within the tenanted premises and shall not encroach on the common area when the door swings outward.

2. Flooring
   a) All wet floors especially in kitchens, toilets, sanitary ductrooms, chiller room, mechanical plant rooms, etc, are to be waterproofed.
   b) No drilling of floor for the concealed pipings, conduits or trunkings is allowed, if unavoidable, only hacking works is allowed.
   c) Any hacking or noisy works shall be allowed to commence after normal working hours
   d) Existing junction boxes should not be sealed for functional and maintenance reasons. Access for the opening of such junction boxes should be provided.
3. **Furniture, Fixtures**

a) The edges of materials used for plastic sheeting, joints should be of homogenous colour:

   e.g. i) The edges of laminate finishes must be of solid colour.
   ii) No sharp edges or corner.
   iii) The joints of the furniture must be properly finished.
   iv) And for easy maintenance.

b) Only approved non-combustible or fire retardant materials shall be used for interior furnishing eg wall, door and ceiling and certificates or test reports confirming this have to be submitted to the Properties for their perusal.

c) The tenant shall, ensure that all fire protection systems including sprinkler heads, smoke and heat detectors, dry riser outlets, etc are not blocked or impeded by any decorative ceilings; partitions, paneling, etc.

d) The tenant shall provide ceiling access panels (minimum size of 600mm) at strategic locations if the proposed renovation causes difficulty to access to the space above ceiling by Properties inspection and maintenance staff.

e) Entrance to concession area shall not be obstructed.
G. **STRUCTURAL INSTALLATION**

1. Allowable imposed load on floor shall not exceed the requirement specified by the Landlord.

2. **STRUCTURAL FLOOR PLAN**

2.1 Unless otherwise stated all additional openings/brickwalls/partition or demolished of brickwalls/partitions are to be indicate clearly in the drawings and must be approved by PE (Structural).

2.2 **For Knocking Down of Walls/Partitions of Adjoining Floor Areas**

2.2.1 The load bearing walls and partitions shall not be removed unless the loads carried are fully transferred to other parts of the building structure without affecting the structural integrity and stability. Such alteration work shall be designed by a Structural Professional Engineer and subject to Properties review and comment. The Building Control Authority or relevant authorities approval will have to be obtained.

2.2.2 **For Hacking of Floor, Walls, Columns and Ceiling**

Please note that hacking of the following is not permitted:

i) The pre-stressed members, joints and waterproofed members.

ii) The structural members for the laying of building services.

2.2.3 **For Partitions and False Ceiling Installations**

The tenant’s Structural P.E. is to certify that the work will not affect the structural integrity when it is required to carry out hacking the flooring and structural members for installation of the partitions and false ceiling.

2.2.4 **Installing of Additional Loads Onto the Floor Areas/Structural Members**

The tenant’s Structural P.E. shall submit the details of permanent additional loads (eg. racking system, safes, weighing machines, computer equipment, aircon plants etc.) proposed to be placed onto the floor area or structural member to Building Control Division for approval. Prior to submission, the tenant is to ensure that the proposed additional loads for the floor or structural members does not exceed the allowance imposed load on floor. This should be designed and approved by the tenant’s Structural/Civil P.E.

Steel plate spreaders are to be provided where there is a high concentrated point load acting into a member to evenly distribute the load to the structure. The spreader is to be designed by the tenants’s Structural P.E.
SPECIFIC M&E REQUIREMENTS

A. ELECTRICAL SYSTEM

1. Tenants to submit the Electrical drawings, electrical layout and single line drawings complete with power and lighting detail circuitries, details of the proposed light fittings indicating the wattage/type of light fitting used.

2. To indicate the maximum connected load on the electrical single line drawing.

3. All electrical drawing submitted must bear the company's chop and must be endorsed by the LEW of the appropriate grade who undertake the design and installation work.

4. To provide emergency lights with battery pack of 2 to 3 hours so as to be able to operate during a power failure.

5. The emergency battery back up lights installed (inclusive of the emergency supply) must be 50% of the total lighting in the premises.

6. Proper enclosure and trunking area to be provided for the submain cables from the isolators to the new Distribution Board. To label the new distribution boards with circuit nos.

7. The cable used for power and lighting circuits shall be 4mm² and 2.5mm² in size respectively.

8. To ensure that the connected load does not exceed the supply capacity of the main distribution board.

9. Multi plugs and extension plugs are not allowed to be used. To have separate switches for Normal and Emergency (Red) lights.

10. All electrical installations must comply with the electrical Code of Practice CP5.

11. To provide proper circuit labels/cable tags on the submain cables and all outgoing cables.

12. To provide new metal conduit/trunking for the laying of submain cables and outgoing cables. No PVC conduits are allowed to be used in the installation works.

13. To label the distribution board, light fittings, light switches, equipments and socket outlets with circuit nos.
14. All cables and trunking/conduits installed must be labelled accordingly at regular intervals.

15. All electrical equipment used during the electrical installation work must obtain electricity supply through 30mA ELCB.

16. To apply 'Permit to Work' from Properties Office before the commencement of work.

17. To duly complete and submit Forms 1, 13, 14, 16 and 17 and the megger test report (Form 18) after installation work.

18. To provide 'As-Built' electrical layout and single line drawing at the-tenant's distribution board.

19. To submit 2 sets 'As-built' electrical drawings and 1 soft copy cd-rom using “Auto-CAD” software to Properties and arranged an inspection upon completion of work.

20. All electrical installations, including addition and alteration to existing electrical installations are to follow the colour codes recommended by SS CP5:1998 or latest revision.
EXPLANATORY NOTES

1 CONSENT OF LICENSED ELECTRICAL WORKER

The grade of licensed electrical worker required to take charge of the electrical installation is based on the total approved capacity which is as follows:

a) Electrician - 45 KVA and below
b) Electrician Technician - 500 KVA and below
c) Electrical Engineer - No limit
d) Electrical Engineer possessing appropriate High Voltage switching authorisation - Installation with High Voltage Equipment

2 VERIFICATION BY APPLICANT

Where an application for a licence or a renewal is made by:

a) a firm, the application form shall be signed by a partner or manager of the firm;
b) a company, the application form shall be signed by a director, secretary or general manager of the company.

3 CERTIFICATE OF FITNESS

The installation is to be inspected and tested at regular intervals, preferably not more than 6 months.

3.1 Approved Load:

Load approved by the Properties.

Installed Load

Total connected load of the electrical installation in KVA (based on a power factor of 0.85)

Standby Generator (if any):

State the number of standby generators and the rating of each in KVA.

3.2 Single-Line & Layout Drawings

THE RELEVANT DRAWINGS OF THE INSTALLATION SHOULD BE SUBMITTED TOGETHER WITH THE APPLICATION. OTHERWISE THE LETTER OF UNDERTAKING (FORM 17) SHALL BE SUBMITTED BY LEW.
In addition to other information, the following have to be provided on the drawings (minimum size A3).

a) Signature of the licensed electrical worker;

b) Licence No. of the licensed electrical worker;

c) Date;

d) Name and Address of the installation;

e) Proper Title Block with Legend;

f) Installation load in KVA.

4 SUBMISSION OF DRAWINGS AND FORMS

All completed drawings and forms are to be submitted to:

Singapore Airlines Ltd
Properties (Services)
2A SIA Training Centre
720 Upper Changi Road East
Singapore 486852 for STC/CCB or

Singapore Airlines Ltd
Properties (Services)
7C-3 Airline House
25 Airline Road
Singapore 819829 for ALH
B. AIRCONDITIONING SYSTEM

1. The tenant shall submit 2 sets of plans (minimum A2 size) showing the existing position of air-conditioning diffuser, air return grilles, VAV boxes, duct sizes, thermostat etc. and the proposed changes. All the drawings are to be endorsed by a Professional Engineer (P.E). No alteration is to be done on the main duct. All additional air conditioning shall be coloured in the plan. The tenant shall submit detailed heat load calculations for the tenanted area and the calculations are to be endorsed by a PE(M).

2. The renovation work to be carried out must comply with the regulations laid down in the Code of Practice CP13 or latest revision, and other requirements by FSB.

3. The type, make, model and rating of any fitting/equipment used are to be clearly indicated in the drawings.

4. All new ducts to be installed shall be insulated. Flexible ducts installed must not exceed 4 metres in length.

5. Tenants to note that the installation of excess lighting/computer/equipment and erection of full height partitions will affect the space temperature and ventilation. If no modification works is done to the aircon system, tenant shall submit a letter from a Professional Engineer (Mechanical) to ensure that the stipulated space temperature of 23±1 °C can be achieved. Failing which the tenant has to install additional split aircon units at their own cost and submit proposal drawings for Properties approval.

6. Tenants are required to provide "Access Panel" near each VAV boxes for maintenance purposes.

7. For split unit airconditioning system a detailed cross sectional plan showing the mounting, location of the condensing units for the airconditioning should be reflected in the drawings.

8. All FCU's installed shall be securely mounted with steel rods c/w with bolts and nuts. And the condensing units shall have neoprene pad with a proper aluminium tray and discharge pipe must be provided beneath the condensing unit.

9. All refrigerant pipes and condensate pipes shall be run in sleeves provided. Condensate pipe must be drained to the nearest floor trap.

10. The airconditioning renovation works shall include the electrical single-line diagram showing the MCB rating, position of switch socket outlet, operating switch, isolator, catalogue etc. for the airconditioning unit.

11. The tenant is to ensure that the electrical load of the additional airconditioning unit will not trip the electrical mains.
12. The location of the condensing unit installed shall seek the approval of Properties. The loading of the condensing unit are to be endorsed by a Civil RE and submitted to Properties for approval.

13. The tenant shall properly labelled all condensing units, refrigerant and condensate pipe installed. In addition, tenant are to submit the refrigerant pressure pipe test. Insulation for refrigerant and condensate pipe shall be class 'O'.

14. There shall be no illegal tapping of aircon at the main ducts before the VAV boxes. Any illegal tapping will be removed by Properties Custodian Contractor and a penalty of 15% above the cost will be charged to the guilty party.
C. SPRINKLER SYSTEM

1. Tenants must adhere fully to the standards and regulations laid down in the code of practices CP 52.

2. The tenant's qualified person (ie. Professional Engineer (Mechanical) has to endorse on the drawings as whether the fire protection system has been affected by the renovation.

3. If the Fire protection System is affected:
   a) Tenants must submit the proposed sprinkler additions/alteration works for the premises with the Qualified Person's endorsement on the drawings to FSSB for approval;
   b) Landowners endorsement on the drawings for the above submission is required; and
   c) Tenants must also submit 2 sets of fire sprinkler drawing with endorsement and approval letter from FSSB once they have received the required approval from the authorities.

4. If the Fire Protection System is not affected, drawings must still be submitted to FSSB for approval with the said status of the Fire Protection System endorsed onto the drawings by the Qualified Person.

5. If there are any decorate false ceiling/canopy/display cabinets etc. installed below the existing false ceiling, which has sprinkler, installed, the tenant's Qualified Person shall ensure and certify that the sprinkler discharge pattern is not affected.

Isolation and Draining

6. Any isolation, draining and recharging to the affected sprinkler system must be done by our custodian contractor, and is chargeable, to the tenant. This works can only be performed provided the tenant has obtained "Work Permit to Work" from Properties and is supervised by the tenant's Professional Engineer and will be done during normal office hours. The system must be promptly charged up by 1630 hrs.

7. The request, to be submitted 3 working days prior to the isolation and draining, could only be made by the supervisor of the work and he/she is required to be present during draining and charging of the requested zone.

8. The sprinkler works contractor must carry out physical site checks with our maintenance contractor to ensure that the requested zone is the right one. The date of the site check must be indicated on the isolation form. No approval will be given at all if physical checks on site were not carried out, regardless of how urgent the works may be.

9. For new pipes work - a pressure test report (certification) is required before it can be connected to the existing sprinkler system. Existing sprinkler layout is handed over to the tenants who are required to upgrade or carry out any changes to the pipe size or distribution in accordance to the current code.

10. All sprinkler works have to be done by experienced workers.
D. PUBLIC ADDRESS SYSTEM

1. The tenant shall arrange with Properties and its Custodian Contractor for site inspection prior to the relocation/replacement/installation of loudspeakers (including loudspeaker grilles) or the replacement of false ceiling.

2. All adjustment/relocation of speakers are to be carried-out only after the approval of Properties. 2 copies of drawings of Scale 1:100 are to be submitted to Properties for approval. The tenant shall sign with a stamped undertaking on the drawings that they will be responsible for any conflict with other services for maintenance or performance.

3. The speakers may be moved within the length of the flexible conduit subject to condition 4 and 5 below. For speakers involving in height, condition 4 must be met.

4. No speaker shall be moved more than 300mm from its approved position. Speakers coverage must not be blocked especially by shelving.

5. The mounting must remain as that of the approved type. All relevant mounting fixtures must be firmly secured. Please note that the speaker must be supported from the secondary grid if it is available.

6. Additional partitions or walls erected must be such that the existing speaker coverage is still capable of meeting the latest PA tender specifications. Otherwise the tenants must ensure that additional speakers are installed to meet this requirement and in full compliance to CP25.

7. All areas such as storerooms, toilets, equipment rooms etc must be covered by speakers as stated in CP25.

8. The tenant shall be fully responsible for the acoustic performance as specified in the latest PA tender specifications. The tenant shall be responsible for the safety of the speaker adjusted/relocated. He may choose to employ any contractor, preferably BCA registered, he so wishes. The tenant shall submit 3 copies of 1:100 scale as-built drawings.

9. The tenants must bear the full cost of reinstatement should the speakers fail to perform as required in the latest PA specifications.

10. The tenant must ensure that the new speaker installation is accessible for maintenance. Otherwise the tenant must undertake at his own cost to provide access as and when required for maintenance or repair purposes. The ceiling opening required for regular maintenance of 8" speaker is 300 x 300mm centered directly below the speaker. For 12" speakers the opening required is 400 x 400mm centered directly below the speaker. The existing baffle of diameter 250mm are meant for removable 2 by 4 feet softboard ceiling only. For other types the tenant have to provide his own baffle with 50% perforation.
11. The tenant will also have to bear the cost for verification of the relocated PA speaker. The cost shall be paid to Properties Custodian Contractor.

12. Prior to disconnecting the speaker line and speaker, the tenant must arrange at his own cost to have the system in that area turned-off to prevent damages to the amplifiers.

13. These guidelines serve only as a guide and do not relieve the tenant of any of his responsibility and also do not relieve the tenant from seeking approval from all relevant authorities, prior to the execution of the PA speaker works.

14. The tenant shall have to pay for the acoustic testing and commissioning. The cost shall be paid to Properties Custodian Contractor.

15. After completion of the renovation works, the tenant shall arrange with Properties and its Custodian Contractor for the inspection and testing of the relocated/replaced/installed loudspeakers (including loudspeaker grille) at site.
DETAILED REQUIREMENT FOR M&E PLANS

1. SINGLE LINE DIAGRAM

- shall incorporate the following:

1.1 Service cut-out circuit breaker (indicate rating)

1.2 Utilities Meter Recording (UMR) meter (indicate rating and sensitivity) to be provided by Tenant and sample shall be approved by Properties before installation. Location of UMR panel to be indicated.

1.3 Earth Leakage Circuit breaker (indicate rating and pole). Sample shall be approved by Properties before installation.

1.4 Isolator (rating and number of poles).

1.5 Distribution board c/w outgoing MCBs (indicate ratings).

1.6 Sub-main and final sub-circuits is to be numbered and its loads in KW indicated.

1.7 The maximum demand for the complete installation shall be indicated.

2. POWER AND LIGHTING PLAN

- shall incorporate the following:

2.1 All existing, additional or obsolete power points and lighting points are to be clearly indicated.

2.2 All power and lighting circuits are to be numbered according to the distribution board outgoing circuits.

2.3 List the type of lamps and their wattages. List the current rating, number of phases, voltage, power factor and KVA rating of all equipment.

2.4 Location of distribution board is to be indicated.

2.5 All exit lights and emergency battery back-up lights to be installed are of the same make and model as existing.

3. FIRE ALARM SYSTEM LAYOUT PLAN

3.1 All existing detectors are to be indicated.

3.2 Proposed addition or deletion of detectors are to be stated.

3.3 Any detector to be dismantled owing to the change of ceiling board etc. shall be clearly indicated.

3.4 Full or half partition of the room which may affect the effectiveness of the detector shall be stated.
3.5 The type, make, model and rating of the fittings/equipment used are to be clearly indicated in the drawings.

3.6 All the drawings are to be endorsed by a qualified person.

3.7 The tenant shall engage their own professional engineer to submit the installation drawings to the Fire safety and Shelter Department.

3.8 The tenant shall reinstate to the original design upon giving up of tenancy. All relevant approval must be obtained.

4. FLOOR TRUNKING PLAN

4.1 Proposed relocation or deletion of the existing floor trunking system shall be indicated in the floor trunking layout plan.

4.2 Any new floor trunking to be installed are to be indicated in the floor trunking layout plan and to be submitted together with the renovation plans.

5. FIRE PROTECTION LAYOUT PLAN

5.1 All existing detectors are to be indicated.

5.2 Proposed addition or deletion of detectors are to be stated.

5.3 Any detector to be dismantled owing to the change of ceiling board etc. shall be clearly indicated.

5.4 Full or half partition of the room which may affect the effectiveness of the detector shall be stated.

5.5 The type, make, model and rating of the fittings/equipment used are to be clearly indicated in the drawings.

5.6 All the drawings are to be endorsed by a qualified person.

5.7 The tenant shall engage their own professional engineer to submit the installation drawings to the Fire Safety Bureau.

6. AIRCONDITIONING SYSTEM LAYOUT PLAN

6.1 The plan submitted shall show the existing positions of air conditioning diffuser, air return grilles, circular ducting, VAV boxes, thermostat etc. and the proposed changes.

6.2 The type, make, model and rating of the fittings/equipment used are to be clearly indicated in the drawings.

6.3 Access opening to false ceiling shall be indicated in the drawings.
7. HOT AND COLD WATER SYSTEM

7.1 The plan submitted shall show both the existing and the proposed hot/cold water supply band return line.

7.2 Proposed addition or deletion of water taps/water meters/fittings etc, are to be stated.

7.3 The type, make, model of the water tap/water meters fittings etc, are to be clearly indicated in the drawings.

7.4 All the drawings are to be endorsed by the professional engineer/licensed plumber who undertake the design and installation work.

7.5 The tenant shall engage their own professional engineer/licensed plumber to submit the installation drawings to PUB and arrange for PUB inspection.

All fitting/material used must be of the approved type by PUB.
APPLICATION FOR CARRYING OUT ADDITION AND ALTERATION / RENOVATION WORKS

Serial No:____________

Section 1 (To be completed by the contractors carrying out the project)

Company’s Name, Address, Contact numbers:

Details and Particulars of Applicant
(Name / IC No / Passport No / Contact No.):

Site Supervisor’s Details and Particulars’
(Name / IC No / Passport No / Contact No.):

Detailed nature of work and location:

Work Period
From:
To:
Extended to:

The following documents must be submitted
Approval by BCA/ FSSB (Please attach a copy of approval issued by BCA/FSSB) or
letter of the undertaking signed by Qualified Person (architect for building work or
professional engineer for M&E and Civil/ Structural works) who is overseeing the entire
project
Complete and return the attached Letter of Indemnity to Properties, SIA
Detailed drawings of the proposed works
Detailed indication of phase schedule on drawings
Workers’ name list approved by Airport Police
Risk assessment and declaration forms in accordance with the Workplace Safety and
Health Act
Factory Permit (For jobs duration of two months or more)
I will abide by the following conditions:

1) To at all times observe and comply with all prevailing laws and regulations relating to safety now and thereafter in force and shall bear all cost and expenses connected with the compliance of the same.

2) To ensure that no illegal workers are employed by it or any of its subcontractors in the execution of any part of the works.

3) Adequate warning signs must be displayed during the course of and proper protection is used to protect existing finishes.

4) To keep site clean and tidy at all times. All debris shall be cleared from the work site and removed from the premises daily, using approved heavy-duty polythene bags. Debris cannot be disposed off in the building bin center.

5) To arrange for a physical inspection to be carried out together with Properties, SIA’s officers and their custodian contractor at least one week before the commencement of work.

6) To make a signboard indicating the Project Title and Expected Completion date which is to be displayed on the hoarding. The contractor must show the approved signboard upon issuance of work permit by Properties, SIA.

7) The contractor is to display a Photostat copy of the approved Work Permit and the signboard indicating Project Title at the job site during the duration of the works and has to produce the original copy to Properties, SIA’s officer or the custodian contractor when demanded.

8) The work permit is solely issued to the contractor to perform the work described above for the approved duration. Contractor may be barred from working in the premises if found working beyond the approved area/duration.

9) The work permit may be withdrawn at any time by Properties, SIA if the contractor fails to comply with the requirements and instructions given.

Section 2 (To be completed by the SIAEC Facilities)

☐ * I certify that the application (by renovation contractor) is requested by us to carry out the above works. All required drawing and documents are in order and have already been submitted to Properties, SIA

☐ * I certify that this renovation work does not involve any hacking/coring works/structural works

___________________    ___________________________
Name & Contact No.       Signature & designation (Manager or authorized signatory)

___________________    ___________________________
Date                 Company’s Stamp
Section 3 (To be completed by the Properties, SIA)

I confirm the following:

☐ * The application by the contractor and the tenant is complete and I support the applicant’s request for the works.

☐ * The duration of the above work shall be as stated

☐ * The duration of the above work shall be changed to: From ______ to ______

☐ * I support to extent the applicant’s request to extend the period of the work permit to ______

(Raise by:
_________________________
Supervisor (Signature and Date)

Approved by
_________________________
AO (Signature and Date)
PERMIT FOR CARRYING OUT ADDITION AND ALTERATION / RENOVATION WORKS

Serial No:_________

Section 1 (To be completed by the contractors carrying out the project)

Company’s Name, Address, Contact numbers:

Details and Particulars of Applicant
(Name / IC No /Passport No/ Contact No.):

Site Supervisor’s Details and Particulars’
(Name / IC No /Passport No/ Contact No.):

Detailed nature of work and location:

Work Period
From:
To:
Extended to:

The application is APPROVED / NOT APPROVED

Properties, SIA
(Name & Designation)  Company Stamp  Signature / Date
APPLICATION FOR RENEWAL OF LICENSE TO USE OR OPERATE AN ELECTRICAL INSTALLATION

(Please read Explanatory Notes before completing the Forms)

PARTICULARS OF THE INSTALLATION

Name of Electrical Installation /Company:

_____________________________________________________________

Business Address:

_____________________________________________________________

_____________________________________________________________

Address of Electrical Installation:

_____________________________________________________________

_____________________________________________________________

Type of Business

_____________________________________________________________

_____________________________________________________________

_____________________________________________________________

APPLICANT’S VERIFICATION

I verify that the information given is correct. The license electrical worker as stated in the Letter of Consent and Certificate of Fitness is appointed by me to operate or be in charge of or to control the electrical installation located at the above address.

Name of Applicant :________________________  Company Stamp

Designation  :________________________

Telephone  :________________________
CERTIFICATE OF FITNESS

I certify that the * Electrical / Supply Installation at (Name and Address)

Complies in all respect with the Public Utilities Act and Regulations made thereunder.

I shall inspect and test the electrical installation at interval of ______ months

PARTICULARS OF THE *ELECTRICAL / SUPPLY INSTALLATION

Supply voltage : HT 22kV * Earth loop impedance: ________ Ohms
(delete whichever is inapplicable) : LT400/230V * Circuit installation resistance : ________ Megaohms

Approved load : __________ KVA

Installed load : __________ KVA

Standby Generator (if any) KVA Rating No. of Units

SINGLE-LINE & LAYOUT DRAWINGS

The up-to-date single line and layout drawings are attached,

Drawing Reference no: ______________________________________

I am personally satisfied that the * Electrical/ Supply installation is fit for operation and shall on demand produce all relevant reports, test results and up-to-date single-line wiring diagram(s)

Name of Electrical Worker:_______________________ Licence No:________

Address: ______________________________________________________________

Tel No (Office): _______________

(Home): _______________ Signature: _________

Pager No : ____________ Date: ___________
CERTIFICATE OF RESPONSIBILITY OF INSTALLATION AFTER TURN-ON

Address of Electrical Installation

________________________________________________________________

________________________________________________________________

Approved Load: ___________ KVA at ___________ volts

Drawing Reference No: _____________________________

I, the understand, hereby fully responsible for the above * Electrical/Supply Installation, with immediate effect from the time the above *Electrical/Supply Installation is TURNED – ON, in accordance with the relevant Regulations, plans, and specifications and conditions under which such plans and amendments thereto, if any, were approved

Name of Electrical Worker: ___________________________ Licence No: ______

Address: ________________________________________________________________

Tel No (Office): ________________

(Home): ________________ Signature: ______

Pager No : ________________ Date: ______

Note: Applicable to new installation

• Delete whichever is not applicable
LETTER OF CONSENT

I, _______________________________ Licence No: ________________

Consent to operate or be in charge or to control the Electrical Installation during the
validity period of the licence located at the premises

Known as (Name and Address of Installation) ______________________________

___________________________________________________________________

Address: ________________________________________________________________

Tel No (Office): ______________

(Home): _______________ Signature: __________

Pager No : _______________ Date: __________
ELECTRICAL TEST REPORT

NAME OF TENANT: ______________________________ UNIT NO:__________

PARTICULAR OF INSTALLATION: _____________________________________

________________________________________________________________

APPROVED LOAD:_________AMPERES:__________VOLTS: SINGLE/3 PHASE

SWITCHBOARD LOCATION: ___________________________________________

Insulation Test for Sub-main Cables

<table>
<thead>
<tr>
<th>CIRCUIT NO.</th>
<th>CABLE SIZE</th>
<th>RESISTANCE (Mohm)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>R-Y</td>
</tr>
</tbody>
</table>

Insulation Test for Final Sub- Circuits

<table>
<thead>
<tr>
<th>Circuit No</th>
<th>Cable Size</th>
<th>RESISTANCE (Mohm)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>L-N</td>
</tr>
</tbody>
</table>

Test Operation of ELCB : Normal / Not Normal

Polarity throughout the installation is Correct / Incorrect

Tested by: -
Name : ________________________________

(Registered Electrical Worker
PUB License No: ____________)

Signature : ________________________________

Date of Test : ________________________________

For and on Behalf of: ________________________________

34
LETTER OF UNDERTAKING

I, __________________________________________ License No: ____________

Undertake to submit to Head Properties (Services), SIA up-to-date single-line and
layout drawings for the electrical installation located at the premises known as (Name
and Address of Installation)

________________________________________________________________________

________________________________________________________________________

within one month of the date hereof. I understand that in the event that I fail to meet
the requirements, SIA reserves the right to refuse permission for me to take charge of
the installation at any subsequent dates

Address:  __________________________________________________________________

Tel No (Office): ________________

(Home): ________________  Signature: __________

Pager No : ____________  Date: __________

Note: The LEW is required to complete this form only if the single-line drawing is
not submitted with the Application Form
LETTER OF IDEMNITY

WHEREAS IN CONSIDERATION of SINGAPORE AIRLINES LTD, (hereinafter referred to as “SIA” granting their consent to _______________________

using or occupying the demised premises at _____________________________________, to carry out works at or on the demised premises, *I/We, for and on behalf of M/s _____________________________, a Company registered in Singapore and having its registered address at ________________, have its principle place of business at_________________________________, hereby agree and undertake to indemnify SIA from and against all claims, injuries, losses, demands, actions, suits, proceedings, cost, and expenses whatsoever which may be taken or made against SIA. Any injury incurred or may become payable by SIA whether it is fatal or not to any person in respect of any damages or loss to any property of any person, which may arise as a result of the Contractor’s act, omission or default at any time in the employment or in the course of, during the progress of the renovation works, or arising out of or by reason of the grant of the said consent for the carrying out of the said renovation works at or on the demised premises from ______________________ to __________________________

Dated this ____________ (day) of _______________ (month) 20 ____(year)

Name of Contractor : _________________
Designation  : _________________
For and behalf of : _________________ ____________________
NRIC No : _________________
Address  : _________________

__________________
In the presence of
(SIAEC FACILITIES) : _________________ ____________________

Signature & designation
(Manager or authorized signatory)

Date : _________________

* Delete where necessary