

*SCHEDULE 5B AND 5C ATTACHMENTS – MODIFICATION REQUIRED*

**SCHEDULE 5B AND 5C  
ATTACHMENTS**

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ATTACHMENT A

CO-LOCATION EQUIPMENT INSTALLATION AND MAINTENANCE PROCEDURES

**SingTel Comment: General**

*Amendments have been made to the attachments for Schedule 5B to reflect the current wording of and proposed changes to the Schedule 8 (Attachments).*

**ATTACHMENT A – GENERAL COMMENT**

*IDA notes that certain clauses contained in Attachment A either duplicate provisions of, or are substantive provisions that should be contained in, Schedules 5B and 5C. Accordingly, IDA directs SingTel to modify Attachment A by:*

- (a) deleting such duplicate provisions in Attachment A (for example, without limitation, Clauses 1.1, 1.8.5, and the first sentence of 1.8.11 of Attachment A duplicate Clauses 6.1 and 6.2, Clauses 6.6 and 6.7, and Clause 6.10 respectively of Schedules 5B and 5C; and*
- (b) moving such substantive provisions in Attachment A to Schedule 5B and/or 5C (as the case may be).*

**1. INSTALLATION OF EQUIPMENT AT CO-LOCATION SPACE**

**1.1 Installation of Co-Location Equipment**

- 1.1.1** Prior to commencing installation of its Co-Location Equipment, the Requesting Licensee must submit detailed installation plans and an installation timetable no less than ten (10) Business Days before commencement of works for SingTel's approval. The Requesting Licensee shall not commence installation of its Co-Location Equipment until it has received SingTel's approval.

**CLAUSE 1.1.2 – MODIFICATION REQUIRED**

**1.1.2** The Requesting Licensee must ensure that the floor loading of its Co-Located Equipment shall be limited to a maximum 5 kN per sqm or otherwise as specified by SingTel. The Requesting Licensee shall engage a Professional Structural Engineer licensed by the Republic of Singapore and approved by SingTel to compute the actual floor loading to certify that the floor loading limit is not exceeded prior to the installation of its Co-Location Equipment. The Requesting Licensee shall not commence installation of its Co-Location Equipment until it has provided SingTel, with five (5) Business Days' advance notice, with a copy of the certification of compliance issued by the licensed Professional Structural Engineer.

**SingTel Comment: Clause 1.1.2**

*SingTel has amended clause 1.1.2 to require the Professional Structural Engineer to be approved by SingTel. SingTel considers that it is necessary to ensure the integrity and standard of SingTel's Co-location Space.*

*IDA directs SingTel to modify Clause 1.1.2 in the manner as specified below:*

- (1) Unless there are technical or legitimate justifications, IDA requires SingTel to increase the specified maximum floor loading area to 10 kN per sqm, as a higher density usage will result in a more efficient usage of Co-Location Space.*
- (2) In IDA's view, there is no necessity for SingTel to approve the Professional Structural Engineer engaged by Requesting Licensees. Professional Structural Engineers are licensed by professional bodies. Accordingly, IDA directs SingTel to delete the phrase "and approved by SingTel".*

**CLAUSE 1.2 – MODIFICATION REQUIRED**

**1.2** The Requesting Licensee must install its Co-Location Equipment in the Co-Location Space within thirty (30) Business Days after the final site inspection. If the Requesting Licensee's failure to complete installation is attributable to circumstances beyond the Requesting Licensee's reasonable control, SingTel will grant a reasonable extension of time for installation to the Requesting Licensee at the Requesting Licensee's request. A Requesting Licensee's request under this clause must describe the circumstances beyond the Requesting Licensee's control and such

request must be received prior to the expiry of the aforementioned thirty (30) Business Day period.

*IDA notes that this Clause 1.2 does not specify the timeframe within which SingTel will notify the Requesting Licensee whether or not it approves the request for extension of time. This results in business uncertainty for the Requesting Licensee. Accordingly, SingTel directs IDA to modify Clause 1.2 to provide that SingTel will notify the Requesting Licensee of its approval or rejection within 2 Business Day from the date of request for extension.*

- 1.3** The Requesting Licensee must not locate equipment other than Co-Location Equipment in the Co-Location Space.

***CLAUSE 1.4 - MODIFICATION REQUIRED***

*IDA finds the restrictions on the number of cables and fibre strands in Clauses 1.4.1 to 1.4.3 to be unreasonable. As such, IDA requires SingTel to justify such restrictions, failing which SingTel must remove these restrictions.*

**1.4 Optical Fibre Cable**

- 1.4.1** Unless otherwise agreed by the Parties, the Requesting Licensee must not install more than two (2) physical optical fibre cables in the Co-Location Space.
- 1.4.2** Unless otherwise agreed by the Parties, the Requesting Licensee shall only be permitted to terminate eight (8) fibre strands per fibre cable at the Co-Location Space.
- 1.4.3** Unless otherwise agreed by the Parties, the Requesting Licensee shall install no more than two (2) optical fibre cable(s) up to the designated Lead-in Manhole or Roof site outside the Co-Location Site.

**CLAUSE 1.5 - GENERAL COMMENTS**

**1.5 Cable Pulling**

*A Requesting Licensee that arrives at the Co-Location Site may find that type of connectors to be used is different from what it had expected. This will result in delay in the installation process. Accordingly, IDA directs SingTel to specify the type of connectors to be used. If SingTel is not able to do so, SingTel must provide satisfactory justification.*

**1.5.1** The Requesting Licensee shall provide SingTel with no less than five (5) Business Days of cable pulling between the designated Lead-in Manhole or Roof site and the Co-Location Space.

**1.5.2** The Requesting Licensee shall be responsible for the provisioning and installation of its cables or waveguide from the tower to the Co-Location Space. SingTel shall be responsible for the provisioning and installation of its cable from the Roof Space to the Co-Location Space. The Requesting Licensee shall pay SingTel the charges specified in Schedule 9 for undertaking this activity. The Requesting Licensee must not undertake any cable pulling between Roof Space and the Co-Location Space.

**1.6 Power & Earth**

**CLAUSE 1.6.1 – MODIFICATION REQUIRED**

**1.6.1** SingTel shall designate and provide the communication earth and Power Distribution Point for the Requesting Licensee's Co-Location Equipment. The Requesting Licensee shall pay SingTel the Charges for the provision of the communication earth and power installation and termination in accordance with Schedule 9.

*To ensure proper earthing, IDA is of the view that it is necessary to specify the relevant earthing standards. IDA's position is supported by industry feedback. Accordingly, IDA directs SingTel to specify the relevant earthing standards.*

**CLAUSE 1.6.2 – MODIFICATION REQUIRED**

**1.6.2** Subject to clause 1.6.3, SingTel shall provide power of:

(a) a minimum of twenty (20) fused Amps and multiples thereof where the Requesting Licensee requires direct current; and

- (b) a minimum of thirteen (13) fused Amps and multiples thereof where the Requesting Licensee requires alternating current,

up to a maximum of two hundred (200) fused Amps per Co-Location Space.

*IDA takes the view that it is necessary for Requesting Licensees to have the added option of being supplied with uninterrupted power supply in order to guard against the risk of power outages. This is consistent with international best practice and is supported by industry comment. Accordingly, IDA directs SingTel to offer Requesting Licensees the option of requesting for uninterrupted power supply.*

### **CLAUSE 1.6.3 – MODIFICATION REQUIRED**

- 1.6.3** If power is not available at the Co-Location Space or SingTel is unable to provide power in accordance with clause 1.6.2, the Requesting Licensee may request that SingTel extend the Co-Location Space as part of Site Preparation Work in relation to that Co-Location Space in order that the Requesting Licensee can obtain power in accordance with clause 1.6.2. The Requesting Licensee shall be liable for any costs incurred by SingTel in fulfilling a request under this clause.

#### **SingTel Comment: Clause 1.6.3**

*There may be some situations where SingTel is unable to provide power at a Co-Location Space or may be unable to do so in accordance with the requirements set out in clause 1.6.2. SingTel has introduced clause 1.6.3 to take account of such a scenario and to allow the Requesting Licensee to obtain power in accordance with clause 1.6.2 following lodgement of a request as part of Site Preparation Work in relation to the Co-Location Space.*

*SingTel should be able to recover its costs associated with extending the Co-Location Space following receipt of request under clause 1.6.3.*

*SingTel is under a regulatory obligation to provide Co-Location (please refer to paragraph 5.3 of the IRS/MWS Schedule). In particular, paragraph 5.3.2 specifically states that SingTel must “offer to provide...power...at each co-location site”. Therefore, the onus is on SingTel to ensure that the Co-Location Site comes with power. IDA recognises that this may, in some cases, require SingTel to undertake additional works. However, SingTel is being compensated for its provision of this service in the form of a Charge. IDA’s position*

*is supported by industry feedback. Accordingly, IDA directs SingTel to delete Clause 1.6.3 in its entirety.*

**1.7 Interference**

**1.7.1** Each Party shall ensure that its Co-Location Equipment does not cause any interference to the other Party's equipment, plant, Facilities, Networks and the equipment of other occupying Licensees in the Co-Location Space, including when installing the equipment. In the event of any interference, the Parties shall take, in good faith, reasonable measures to resolve the problem promptly. Where the Requesting Licensee's equipment is causing interference to existing equipment and the interference cannot be resolved, the Requesting Licensee shall remove the source of interference immediately.

**1.7.2** If SingTel determines that the interference poses an immediate risk of personal injury or significant property damage, it may, withdraw physical access and, at the Requesting Licensee's cost, take measures necessary to prevent such injury or damage. Otherwise, SingTel may provide the Requesting Licensee with five (5) Business Days' notice to rectify the interference. After such time, if the interference continues, SingTel may withdraw physical access and, at the Requesting Licensee's cost, take measures to prevent the interference.

**1.8 Standard Operating Procedures and Safety**

***CLAUSES 1.8.1 AND 1.8.2 – MODIFICATIONS REQUIRED***

*While IDA recognises that SingTel can issue written instructions to Requesting Licensees under Clauses 1.8.1 and 1.8.2, IDA requires SingTel to qualify its discretion under these clauses by inserting the word "reasonable" before the phrase "written instructions".*

**1.8.1** In relation to the installation, operation and maintenance of its Co-Located Equipment located in the Co-Location Space, the Requesting Licensee must comply with the Standard Operating Procedures for Co-Location Space in Attachment B of this Schedule as amended from time to time, and any written instructions which are provided to the Requesting Licensee by SingTel.

**1.8.2** In relation to physical access to the Co-Location Space, the Requesting Licensee shall comply with the Physical Access Procedures in Attachment C as amended from time to time and any written instructions which are provided to the Requesting Licensee by SingTel.

- 1.8.3** Any rubbish/debris created in the course of installation or maintenance shall be removed daily by the Requesting Licensee.
- 1.8.4** SingTel may attend the Co-Location Space to which access has been approved for the installation, modification, replacement or addition of the equipment to verify that the Requesting Licensee is undertaking the installation, modification, maintenance, operation, replacement or addition of the equipment in accordance with the approved request, the installation plans, the Standard Operating Procedures in Attachment B and such other written instructions provided to the Requesting Licensee. The costs of such attendance shall be borne by the Requesting Licensee.
- 1.8.5** Where, as a result of an attendance under sub-clause 1.8.4, SingTel notifies the Requesting Licensee that its installation is not in accordance with the approved request, the installation plans, the Standard Operating Procedures in Attachment B of this Schedule or such other written instructions provided to the Requesting Licensee, the Requesting Licensee must take appropriate corrective action within five (5) Business Days of such notice. If the Requesting Licensee fails to do so, SingTel may withdraw physical access or undertake the appropriate corrective action and recover the reasonable cost from the Requesting Licensee accordingly.
- 1.8.6** The Requesting Licensee shall consult with and obtain the consent of SingTel before carrying out any hacking or drilling work on the floor, wall and ceiling slabs.
- 1.8.7** No Hot Works shall be carried out by the Requesting Licensee without prior approval from SingTel and any such works must be performed in accordance with SingTel's safety procedures. "Hot Works" means any work involving riveting, welding, flame cutting, burning, gouging or any other work involving the use of heat for producing sparks.
- 1.8.8** No work shall be performed by the Requesting Licensee on any of SingTel's equipment, Facilities, plant or Networks including, but not limited to earth bars and Power Distribution Points/boards.
- 1.8.9** No flammable or hazardous materials shall be used by the Requesting Licensee, whether on a permanent or temporary basis, during and after the installation period. No smoking is allowed. No food or drinks are allowed in the Co-Location Space.
- 1.8.10** All connection of the Requesting Licensee's Co-Location Equipment to SingTel's earth bars and Power Distribution Points/boards shall be carried out by SingTel's

staff. Charges for the work shall be borne by the Requesting Licensee as set out in Schedule 9.

- 1.8.11** Where, during the course of installation, operation, maintenance, replacement or repair of its Co-Located Equipment the Requesting Licensee causes any damage to SingTel's Co-Location Site, plant, Network, equipment or Facilities, the Requesting Licensee must report the damage immediately to SingTel. SingTel shall rectify any damage in any way it deems fit, the cost and expense in connection with the damage including for the repair thereof shall be borne by the Requesting Licensee.
  
- 1.8.12** The Requesting Licensee shall report immediately any incident, injury, harm, fatal or otherwise, that occurs at the Co-Location Site to SingTel. For fatal or serious accidents, the accident site shall be left undisturbed to facilitate the relevant authority to investigate the circumstance leading to the accident. The Requesting Licensee shall report immediately to the Ministry of Manpower, police and insurance company of any fatal accident having occurred at the Co-Location Site. The Requesting Licensee shall be liable for and shall indemnify and keep indemnified SingTel against all losses, claims, proceedings, damages, liabilities, costs and expenses for injuries or death to any person whomsoever or any loss or damage to any property whatsoever which arise out of or in consequence of any act or omission of the Requesting Licensee's employees and contracts in relation to the Co-Location Site and against all claims, demands, proceedings, damages, costs, charges and expenses whatsoever in respect thereof.

**1.9 Final Inspection**

- 1.9.1** Upon completion of the installation of the Co-Location Equipment in the Co-Location Space, the Requesting Licensee shall advise SingTel and request SingTel to conduct a final inspection and confirm that the installation conforms with the approved detailed installation plans.
  
- 1.9.2** Where the final inspection reveals that the installation does not materially conform with the approved detailed installation plans, SingTel shall notify the Requesting Licensee. The Requesting Licensee must re-install or take other appropriate corrective action within ten (10) Business Days of notification, or such other time as is otherwise agreed. The Requesting Licensee shall bear the reasonable costs that SingTel incurs for the inspection of the re-installation or other appropriate corrective action. SingTel may still inform and require the Requesting Licensee to make adjustments to its installation where the installation does not conform with the

installation plan in a non-material way, but this notification will not delay the approval process under this Schedule.

**1.9.3** If the Requesting Licensee fails to re-install or take the appropriate corrective action referred to in clause 1.9.2, SingTel may take appropriate corrective action including removal of the Requesting Licensee's Co-Location Equipment. The reasonable costs for the corrective action shall be borne by the Requesting Licensee.

**2. MAINTENANCE OF CO-LOCATION EQUIPMENT IN CO-LOCATION SPACE**

**2.1** The Requesting Licensee shall be responsible for the operation and maintenance of its Co-Location Equipment.

**2.2** In the operation and maintenance of the Co-Location Equipment, the Requesting Licensee must:

- (a) take such other action as a reasonably prudent Requesting Licensee would; and
- (b) keep the Co-Location Space in a tidy and safe condition at all times; and
- (c) ensure that flammable or toxic material is not left in or around the Co-Location Space following maintenance or other operations.

**2.3** If a fault, defect or problem with the Co-Location Equipment of the Requesting Licensee causes or may cause damage to the Co-Location Space or SingTel's Facilities, the Requesting Licensee must:

- (a) notify SingTel as soon as practicable; and
- (b) repair the fault, defect or problem or take other appropriate corrective action immediately.

**2.4** Where SingTel determines that the Requesting Licensee's Co-Location Equipment pose an immediate risk of personal injury or significant property damage, it may, at the Requesting Licensee's cost, take interim measures necessary to prevent such injury or damage, pending attendance by the Requesting Licensee to perform corrective work.

**2.5** The Co-Location Equipment must only be used by the Requesting Licensee for the purpose of connecting the Requesting Licensee's Network to the tower site or Roof Space.

**2.6** If the Requesting Licensee detects a fault, defect or problem in a Co-Location Space, it must notify SingTel as soon as possible.

**2.7 Compliance**

**2.7.1** The Requesting Licensee must ensure that its employees, agents and approved subcontractors comply with the provisions of this Schedule including all reasonable procedures and directions of SingTel as notified to the Requesting Licensee from time to time.

**2.7.2** The Requesting Licensee must comply with all laws, codes, standards, authorisations and licences when performing works under this Schedule.

**2.7.3** The Requesting Licensee must ensure that it has all necessary permits, approvals and licences from any person, governmental, regulatory or relevant authority in order to perform works under this Schedule. Where requested to do so, SingTel will reasonably assist the Requesting Licensee to obtain any such necessary permit, approval or licence.

**2.7.4** Nothing in this Schedule vests in the Requesting Licensee any right, title or proprietary interest in the Co-Location Site.

**2.8 Marking of Equipment**

**2.8.1** The Co-Location Equipment must be marked by the Requesting Licensee to clearly indicate that it is owned by the Requesting Licensee and in such manner as SingTel may reasonably direct from time to time.

**ATTACHMENT B**

**STANDARD OPERATING PROCEDURES  
FOR CO-LOCATION SPACE**

**1. ROLES AND DUTIES**

**1.1 Supervisor**

**1.1.1** The Supervisor shall provide guidance and advice to his workers on the general safety requirements and any other particular safety measures required at a specific site and/or project.

**1.1.2** The Supervisor must ensure that compliance with safety requirements is strictly observed.

**1.1.3** The Supervisor must be familiar with all safety practices and procedures.

**1.1.4** Proper personal protective equipment such as safety helmets, safety belts, etc. must be issued when necessary for use.

**1.1.5** Every accident/injury should be reported immediately to the Singapore Telecom Site Supervisor.

**1.1.6** For minor injuries, ensure that the injured receives first aid attention, even for the smallest wound.

**1.1.7** For serious injuries, identify and isolate the cause of accident immediately, and render first aid treatment by a trained first aider. Notify the Singapore Telecom Site Supervisor immediately for the necessary follow-up action.

**2. INSTRUCTIONS TO BE STRICTLY ADHERED TO**

**2.1** Personnel working at the hoist area, especially the contractor's worker-in-charge of securing equipment, must wear a safety belt (to be supplied by their own contractor).

**2.2** During lunch break, no contract workers shall remain on top of the frame on the cable trough and there will be no hoisting but the contractor's workers are free to carry out other work eg. packing in the work area.

**2.3** All contract workers shall adhere to strict instructions from the staff of Singapore Telecom.

**2.4** No materials are to be temporarily stored at the hoist area and passage ways.

**2.5** All debris must be removed daily.

**3. GENERAL EXCHANGE REGULATION**

**3.1** Every worker is expected to:-

- (a) comply with instruction, both verbal and written
- (b) follow safety, housekeeping and other rules
- (c) be courteous
- (d) be punctual
- (e) have a decent haircut

**3.2** It is an offence to:-

- (a) listen into or interfere with telephone conversations or tamper with circuitry or any other equipment in the Exchange
- (b) disclose official documents or information
- (c) remove Singapore Telecom property without proper authorisation
- (d) smoke within prohibited areas
- (e) gamble, sleep or be engaged in any other unauthorised activity in the Exchange
- (f) commit any act of vandalism
- (g) be within exchange premises and prohibited areas (eg. Power Room, MDF Room) after duty hours

- (h) be within exchange premises and prohibited areas (eg. MDF Room) when not required to go there to work
- (i) consume food and drinks within prohibited areas
- (j) bring any unauthorised receivers, transmitters and tape recorders into the exchange or any prohibited areas.

**4. GENERAL SAFETY WORK PROCEDURES**

**4.1 Housekeeping**

- 4.1.1 All workers must clean up their work place at the end of each Business Day.

**4.2 Proper Attire**

- 4.2.1 Female workers are advised to refrain from wearing loose clothing for example skirts or baju kurong, etc.

**4.3 Personal Protective Equipment**

- 4.3.1 Wear safety helmets during the recovery of ironworks, racks, cutting of cables and hoisting work.

- 4.3.2 Wear gloves when handling rough or sharp materials.

**4.4 Working with Ladder**

- 4.4.1 Ladders shall be securely fixed or placed on level ground so as to prevent slipping or falling.

- 4.4.2 Do not stand on the top two steps of a ladder exceeding 3m height (standing on top of a ladder is dangerous).

- 4.4.3 Do not leave tools on the ladder. Use tool bags or pockets where appropriate.

- 4.4.4 Do not overreach from a ladder or lean too far out. Move the ladder close to the work.

- 4.4.5 Do not repair damaged or worn-out ladders. Any such ladders should be returned to store for replacement.
- 4.4.6 Do not place boxes on top of ladders and/or platforms for doing work.
- 4.4.7 Ensure that travelling ladders are securely locked before stepping onto the ladder steps.
- 4.4.8 Do not jam the locking device of a travelling ladder with wedges.
- 4.4.9 Always face a ladder when climbing or descending.
- 4.4.10 In positioning the ladder, make sure that electric power lines are not in the way.
- 4.4.11 When working atop a ladder placed in front of the door ensure that it is locked.
- 4.4.12 Refrain from working under ladders.
- 4.5 Handling of Equipment and Tools**
- 4.5.1 Be thoroughly familiar with the operational procedures of electrical appliances before use.
- 4.5.2 Inspect tools before you use them – broken, cracked or worn out tools are unsafe.
- 4.5.3 Use the correct tool intended for a particular job.
- 4.5.4 After the usage of any tool, it must be returned to the tool box in its original position.
- 4.5.5 Inspect all electrical tools/equipment for damaged insulation, loose wires and proper connections before use.
- 4.5.6 Electrical supply to the electrical tools/equipment must be switched off and the plugs disconnected when not in use.
- 4.5.7 If any work is to be carried out on live electrical parts, disconnect the power supply.
- 4.5.8 Never throw tools from one person to another especially when working at heights.

**4.5.9** Do not run or leave electrical wire/cable across passageways, wet surfaces and on sharp edges.

**5. DOS AND DON'T FOR FIRE PREVENTION**

**5.1 DO**

**5.1.1** DO familiarise yourself with the location of fire alarm buttons, fire extinguishers and hose reels in your work area and the operation of the extinguishing system eg. halon gas.

**5.1.2** DO familiarise yourself with the Fire Evacuation Routes in your work area.

**5.1.3** DO ensure that all electrical appliances and equipment are in good working condition and are maintained by authorised personnel.

**5.1.4** DO mop spilt oil, solvent, varnish or flux off the floor.

**5.1.5** DO dispose waste into the dust bins or other receptacles provided and empty them regularly.

**5.1.6** DO remove combustibles away from the work areas when they are not in use.

**5.1.7** DO attack the fire from the windward side with the fire fighting aid. By so doing, the wind will carry the flames, smoke, and fumes away from the fire fighters and at the same time, carry the extinguishing agent into the fire.

**5.1.8** DO familiarise yourself with the use of safety breathing apparatus.

**5.2 DON'T**

**5.2.1** DON'T smoke in any exchange/workshop areas and any other areas designated "No Smoking".

**5.2.2** DON'T empty the waste from an ash tray into any receptacle containing combustible materials.

**5.2.3** DON'T overload any power point with electrical appliances or equipment.

- 5.2.4** DON'T replace any blown fuse with one of more than the specified rating.
- 5.2.5** DON'T store any flammable material/liquid (varnish or solvent) below or near any main electrical switch box or heat source.
- 5.2.6** DON'T accumulate waste and packing materials at the work areas.
- 5.2.7** DON'T leave solvent, varnish, flux, alcohol or other flammable liquids in the open without any lid on the container.
- 5.2.8** DON'T open or break windows or doors when an area is filled with smoke due to combustion except to avoid suffocation.
- 5.2.9** DON'T walk upright in a room filled with smoke due to combustion. Crawl out of the affected area through the nearest exit.
- 5.2.10** DON'T use water or any soda acid extinguisher to put out electrical, oil or liquid fires as these will not put out the fire but help to spread the fire and pose electrocution risks.
- 5.2.11** DON'T discard solvent, thinner or alcohol into the waste bin. Use proper containers with lids for its disposal.
- 5.2.12** DON'T leave unattended any hot soldering iron or other 'live' electrical appliances.
- 5.2.13** DON'T obstruct the passage ways, walk ways, corridors and fire exit door, fire fighting and fire detection equipment/installation.
- 5.2.14** DON'T damage the roof surface or drill, hack or anchor anything into the Roof Space.

## ATTACHMENT C

## PHYSICAL ACCESS PROCEDURES

## 1. General

1.1 The Requesting Licensee shall provide to SingTel a master list of persons nominated by it to have physical access to the tower, Roof Space or Co-Location Space in accordance with the prescribed form in Attachment D. The master list shall contain, without limitation, for each person, the following details:

- (a) Full name;
- (b) Company name/Requesting Licensee's Contractor name;
- (c) NRIC/Passport no.;
- (d) Contact no.; and
- (e) Fax no.

***CLAUSE 1.2 – MODIFICATION REQUIRED***

1.2 The master list provided under sub-clause 1.1 shall be maintained and updated by the Requesting Licensee and a new master list provided to SingTel whenever any amendments are made to the master list. SingTel may charge an administrative fee for processing and updating its master list.

**SingTel Comment: Clause 1.2**

*SingTel incurs costs in updating its master list to correspond to changes made by the Requesting Licensee to its own master list. SingTel should be able to recover these costs from the Requesting Licensee in the form of an administrative fee.*

*The Master List is a requirement imposed by SingTel and which IDA does not consider to be necessary. In this respect, IDA will not allow SingTel any recovery of its costs for processing and updating a Master List. Accordingly, IDA rejects SingTel's proposed amendments to Clause 1.2.*

1.3 The Requesting Licensee shall ensure that its workmen listed in the master list are either Singaporeans or holders of valid work permits.

1.4 No person will be permitted physical access to the tower, Roof Space or Co-Location Exchange Building without being nominated on the master list under subclause 1.1 and without a current valid Letter of Authorisation as in Attachment F.

**1.5 Physical Access Request**

1.5.1 Subject to clause 1.6, where the Requesting Licensee wishes to obtain physical access to the tower, Roof Space or Co-Location Space, it must submit a request in writing in accordance with the prescribed form in Attachment E to the designated contact points of the tower, Roof Space or Co-Location Space, not less than twenty-four (24) hours before the requested physical access date. The request must contain, without limitation:

- (a) the purpose for which physical access is requested;
- (b) the identity of the senior person who will be present and who will be responsible for the persons who will be physically accessing the facility;

***CLAUSE 1.5.1(c) – MODIFICATION REQUIRED***

- (c) a complete list of the persons (limited to a maximum of four (4)) who will be physically accessing the facility; and

*IDA notes the industry feedback on the current limitation on the number of persons that may access a facility. IDA agrees that the existing cap of 4 persons is unreasonably restrictive because it is conceivable that more than one of the 4 persons may be indisposed at any one time, or that the nature of the access may require more than 4 persons. IDA requires SingTel to propose a reasonable increase in the number of personnel that will be granted physical access.*

- (d) an estimate of the time during which physical access is requested.

***CLAUSE 1.5.2 - MODIFICATION REQUIRED***

1.5.2 SingTel shall, upon receipt of the request under sub-clause 1.5.1, advise the Requesting Licensee of whether the request for physical access has been approved in accordance with the prescribed form in Attachment E. The approval shall be the Letter of Authorisation as

in Attachment F. . The Requesting Licensee shall be liable for any costs incurred by SingTel in processing a request under sub-clause 1.5.1 as specified in Schedule 9.

**SingTel Comment: Clause 1.5.2**

*SingTel should be allowed to recover the costs it incurs in processing requests for Physical Access Procedures.*

*IDA's position is that it is reasonable to require SingTel to provide notification by fax of any approval for physical access, given the possible delay if such notification is sent by post. IDA directs SingTel to modify Clause 1.5.2 to incorporate the requirements specified. In addition, any reasonable cost which SingTel seeks to recover for processing such request is subject to IDA's approval. If SingTel wants to recover such costs, SingTel must propose for inclusion in Schedule 9 the relevant costs.*

**1.5.3** Upon approval under sub-clause 1.5.2, SingTel shall provide escort service to the Requesting Licensee to physically access the tower, Roof Space or Co-Location Space within twenty-four (24) hours. The Requesting Licensee shall pay to SingTel the Charges for escort service as provided in Schedule 9.

**1.5.4** Where SingTel approves a request for physical access, the Requesting Licensee will comply with the terms and conditions set out in clause 1.8.

**1.5.5** The Requesting Licensee will be liable for escort Charges commencing at the time of approved access and ceasing when the Requesting Licensee's personnel leaves the exchange, tower or Roof Site. Where the Requesting Licensee's personnel leaves the exchange, tower or Roof Site within two (2) hours of the time of approved access, the Requesting Licensee will be liable for escort Charges for a minimum of two (2) hours .

**SingTel Comment: Clause 1.5.5**

*SingTel allocates resources in respect of Physical Access Requests and makes such resources available from the time of approved to the time the escort leaves the relevant exchange. SingTel should be able to recover these costs from the Requesting Licensee.*

**1.5.6** The Requesting Licensee must notify SingTel as soon as possible (but in any event, within six (6) hours of the time approved for physical access) of any change or cancellation to time of the request for physical access.

**SingTel Comment: Clause 1.5.6**

*SingTel allocates resources and schedules escorts in accordance with the Letter of Authorisation for physical access to tower, Roof Space or Co-Location Space. SingTel requires advance notice if there is a change to a physical access request to allow it to reallocate resources in an efficient manner.*

- 1.5.7** Subject to clause 1.5.6, where the Requesting Licensee's personnel is not present at the approved date and time of the physical access, SingTel shall be entitled to recover the full escort Charges for the approved duration of access. Where the Requesting Licensee's personnel was scheduled to leave the exchange, tower or Roof Site within two (2) hours of the approved time of physical access, the Requesting Licensee shall be liable for escort Charges for a minimum of two (2) hours.

**SingTel Comment: Clause 1.5.7**

*Please refer to SingTel's comments in relation to clause 1.5.5.*

**1.6 Emergency Physical Access Request**

- 1.6.1** The Requesting Licensee shall submit to SingTel for approval, a list of designated senior personnel contained on the master list who are authorised to request emergency physical access.

**CLAUSE 1.6.2 – MODIFICATION REQUIRED**

- 1.6.2** In the event of an emergency where physical access is required by the Requesting Licensee to address the emergency situation, the Requesting Licensee must first request via facsimile and then contact via a telephone call to the designated contact point of the tower, Roof Space or Co-Location Space.

*In view of the nature of emergencies, IDA's position is that it is unreasonable to require the Requesting Licensee to fax to SingTel its request for emergency access before SingTel grants approval. Instead, IDA requires SingTel to modify Clause 1.6.2 to clarify that it is permissible for a Requesting Licensee to request for emergency access by way of verbal notification over the telephone only. However, where approval is granted, SingTel may require the Requesting Licensee to send a confirmatory fax by the next Business Day. IDA directs SingTel to modify Clause 1.6.2 to incorporate the requirements specified.*

**1.6.3** The emergency physical access request under sub-clause 1.6.2 must specify, without limitation:

- (a) the full name of the requesting party; and
- (b) NRIC/Passport number; and
- (c) contact number; and
- (d) details of the emergency situation (whether it is service affecting or non-service affecting); and
- (e) the identity of the senior person who will be present and who will be responsible for the persons who will be accessing the tower, Roof Space or Co-Location Space; and

***CLAUSE 1.6.3 – MODIFICATION REQUIRED***

- (f) a complete list of the persons (limited to a maximum of four (4)) who will be accessing the tower, Roof Space or Co-Location Space; and

***Please refer to IDA’s annotations above at Clause 1.5(c). As a consequential amendment, IDA directs SingTel to modify Clause 1.6.3 to incorporate the requirements specified.***

- (g) an estimate of the time during which physical access is requested.

***CLAUSE 1.6.4 - MODIFICATION REQUIRED***

**1.6.4** SingTel shall upon receipt of the request shall advise the Requesting Licensee of whether the request for physical access has been approved. The Requesting Licensee shall be liable for any costs incurred by SingTel in processing an application for physical access as specified in Schedule 9.

**SingTel Comment: Clause 1.6.4**

***SingTel should be allowed to recover the costs associated with an application for physical access.***

***IDA agrees that SingTel may recover the costs it incurs in processing physical access requests. However, for transparency, SingTel must state upfront the specific charges in Schedule 9.***

*Accordingly, IDA directs SingTel to propose the relevant Charges for IDA's approval, and subsequently for incorporation into Schedule 9.*

**CLAUSE 1.6.5 – MODIFICATION REQUIRED**

**1.6.5** Upon approval under sub-clause 1.6.4, SingTel shall provide escort service to physically access the tower, Roof Space or Co-Location Space within two (2) hours for a service affecting emergency or within four (4) hours for a non-service affecting emergency. This access shall be permitted on an interim basis only. Physical access shall be for a maximum period of eight (8) hours unless otherwise agreed. The Requesting Licensee shall pay to SingTel the Charges for escort service as provided in Schedule 9.

*IDA notes that SingTel was able to provide escort service for physical access within 1 hour under the existing RIO. Given that the nature of an emergency requires the Requesting Licensee to access its equipment as speedily as possible, IDA rejects SingTel's justifications for increasing its response time under this clause to 2 hours. Accordingly, SingTel must continue to provide escort service for physical access within 1 hour.*

**SingTel Comment: Clause 1.6.5**

*The requirement for SingTel to provide an escort to physically access the tower, Roof Site or Co-Location Space within 1 hour for a service affecting emergency is overly stringent and unreasonable. SingTel considers that the requested timeframe of 2 hours is reasonable and is consistent with the timeframe for physical access provided by other FBOS at their own sites. SingTel notes that some FBOs cannot provide SingTel with access with this timeframe at their own sites.*

**1.6.6** Where SingTel approves a request for physical access, the Requesting Licensee will comply with the terms and conditions set out in clause 1.8.

**1.6.7** Where, in an emergency situation, both SingTel and the Requesting Licensee require physical access to undertake corrective action, SingTel shall have priority.

**1.7 Rejection Of Physical Access Request**

**CLAUSE 1.7.1 – MODIFICATION REQUIRED**

*IDA directs SingTel to modify Clause 1.7.1 to incorporate the following requirements:*

(a) *IDA is of the view that Clause 1.7.1 should not apply to emergency physical access requests for the following reasons: (1) in view of the nature of emergencies, it is unreasonable for SingTel to have an unqualified right to reject the Requesting Licensee's request for physical access; (2) please refer to IDA's annotations above at Clause 1.6.2 above - since IDA requires SingTel to permit the Requesting Licensee to make a verbal notification ahead of its fax notification, several of the bases for rejection under this Clause 1.7.1 will not apply to emergency physical access requests. Therefore, IDA directs SingTel to clarify that Clause 1.7.1 is only applicable in the cases of regular physical access requests, and not to emergency physical access requests. If there are any circumstances under which SingTel requires the discretion to reject an emergency physical access request, SingTel must propose an exhaustive list of such circumstances for IDA's approval.*

(b) *In addition, where SingTel rejects any request for physical access, SingTel must provide the Requesting Licensee with an explanation of the basis for its rejection.*

1.7.1 SingTel may reject a request for physical access or emergency physical access, or revoke an approval for physical access where:

- (a) the request is not in the prescribed form and does not contain all the required information; or
- (b) the persons listed on the request do not appear on the master list or SingTel has advised that the person(s) listed have been barred either by SingTel or the relevant authorities; or
- (c) SingTel has scheduled work for the time specified by the Requesting Licensee in the request; or
- (d) SingTel determines that the physical access or work to be performed by the Requesting Licensee as specified in the request may breach sub-clause 1.8.2 of this Schedule; or
- (e) SingTel determines that the physical access may jeopardise or interfere with the integrity of SingTel's Network, Facilities, equipment or plant or create a security risk; or
- (f) SingTel determines that the area is unsafe; or
- (g) the Requesting Licensee is in breach of this Schedule.

**1.8 Conditions Of Physical Access**

**1.8.1** SingTel may refuse any person physical access to, or require that person to be removed from a tower, Roof Space or Co-Location Site where:

- (a) that person cannot, upon request, produce a current valid Letter of Authorisation and any identification card which is issued by SingTel; or
- (b) SingTel has previously notified the Requesting Licensee of problems with that person (e.g. the person has breached safety requirements or Standard Operating Procedures); or
- (c) the person has been barred under sub-clause 1.8.7; or
- (d) where in the opinion of SingTel, the person's action may cause damage to SingTel's properties or may compromise or threaten safety; or
- (e) the person loiters around SingTel's premises other than the tower, Roof Space or Co-Location Space for which physical access is granted for permitted works to be carried out.

**1.8.2** The Requesting Licensee must not do or omit to do anything in connection with gaining physical access to the tower, Roof Space or Co-Location Site which may:

- (a) threaten the safety of SingTel's employees, customers or third persons; or
- (b) interfere physically or electrically with the delivery of telecommunication services supplied or to be supplied by SingTel; or
- (c) jeopardise the integrity or confidentiality of communications within SingTel's Network;  
or
- (d) threaten the security of the tower, Roof Space or Co-Location Site; or
- (e) cause damage to the tower, Roof Space or Co-Location Site.

**1.8.3** The Requesting Licensee must ensure that:

- (a) physical access is gained through the specified entry; and
- (b) only persons with a current and valid Letter of Authorisation can gain physical access;  
and

## ATTACHMENT C

- (c) physical access is gained only to the tower, Roof Space or Co-Location Site or part thereof for which approval has been granted; and
- (d) each person gaining physical access shall comply with all the check-in procedures such as exchanging their identity cards or work permits for the “V” or “C” identification cards or such as may be implemented by SingTel from time to time and signing a log book at the security post in which is recorded the full name of the person, IC/Passport no., contact no., date and time of entry and departure from the facility; and
- (e) the applicable Standard Operating Procedures and any written instructions are followed; and
- (f) the tower, Roof Space or Co-Location Space is left in a safe and tidy condition; and
- (g) the Requesting Licensee’s senior person informs SingTel when work has been completed and all Requesting Licensee personnel have left the facility.

**1.8.4** A representative of SingTel may attend and specify an entry to the tower or Co-Location Space and verify that the Requesting Licensee complies with the conditions of physical access. The cost of such attendance shall be borne by the Requesting Licensee.

**1.8.5** No still, motion or digital cameras, film, negatives, tape or digital recorders, explosives, inflammables, cigarettes, lighters and equipment with electromagnetic emissions or radiation are allowed in the Co-Location Site.

**1.8.6** Where, for whatever reason, the Requesting Licensee decides that a person nominated by it under clause 1.1 should no longer be permitted physical access it must immediately notify SingTel and provide an updated master list.

**1.8.7** Without prejudice to any other rights SingTel may have (whether under contract, at law, or in equity), where the Requesting Licensee:

- (a) gains unauthorised entry to the tower, Roof Space or Co-Location Site or part thereof; or
- (b) uses, or attempts to use, the Letter of Authorisation for any purpose other than the purpose for which approval was granted,

physical access may be immediately terminated and the person(s) will henceforth be barred from entering any Facilities of SingTel.

## ATTACHMENT C

- 1.8.8** The Requesting Licensee must not grant a third person physical access to the tower, Roof Space or Co-Location Site.
- 1.8.9** For non-emergency physical access requests, the Requesting Licensee access for works to be carried out at the tower, Roof Space or Co-Location Space shall be limited to weekdays during office hours, from Monday - Friday 9.00 a.m. – 5.00 p.m., 1 hour lunch break, unless prior arrangement has been made with SingTel. In the case of emergency access, SingTel shall provide twenty-four (24) hours access seven (7) days a week.
- 1.8.10** The Requesting Licensee shall report to the police and SingTel for any loss of identification card and bear the cost and expense for the replacement of the card.

MASTER LIST FOR PHYSICAL ACCESS TO TOWER, ROOF SPACE OR CO-LOCATION SPACE

S/n	Name	Company Name / Requesting Licensee A's Contactor Name	IC / Passport No.	Contact Tel No.	Fax No.
1	Richard Tan	Requesting Licensee A	1234567C	68888999	62899848
2	Yeh Sing Ping	Pipe Construction Pte Ltd	3333444A	67777788	62885678
	Two examples for reference.				

**ATTACHMENT E - GENERAL COMMENTS**

*Please refer to IDA's annotations above to Clause 1.5.1(c) of Attachment C, above. As a consequential amendment, IDA directs SingTel to modify Attachment E accordingly.*

**REQUEST FOR PHYSICAL ACCESS TO TOWER, ROOF OR CO-LOCATION SPACE**

**The Requesting Operator**

Date of Application : \_\_\_\_\_ Application Reference Number : \_\_\_\_\_

Approval for Physical Access is sought for the purpose of :

\_\_\_\_\_ [ Emergency [Service Affecting / Non-Service Affecting] Normal Access]

Address of Tower/Roof Site/Co-location Space :

Requested Date / Time of Access : \_\_\_\_\_

Estimated Duration of Access : \_\_\_\_\_

Name of Person(s) for which Physical Access is requested,

1. \_\_\_\_\_ [Name of Senior Person & NRIC No / Passport No]
2. \_\_\_\_\_ [Name & NRIC No / Passport No]
3. \_\_\_\_\_ [Name & NRIC No / Passport No]
4. \_\_\_\_\_ [Name & NRIC No / Passport No]

**On Behalf of the Requesting licensee**

Sign : \_\_\_\_\_ Name of Requesting Licensee: \_\_\_\_\_

Name : \_\_\_\_\_ [Company Name]

Designation : \_\_\_\_\_

Department : \_\_\_\_\_

Contact Number : \_\_\_\_\_ Company Stamp : \_\_\_\_\_

Fax Number : \_\_\_\_\_

**SingTel's Reply to the Requesting Operator**

Application returned - incomplete/illegible

Not Approved Reason for Rejection : \_\_\_\_\_

Approved subject to details and conditions given in the attached Letter of Authorisation

Alternative Date and Time SingTel Approval Code : \_\_\_\_\_

**On Behalf of SingTel**

Sign : \_\_\_\_\_ Contact Number : \_\_\_\_\_

Name : \_\_\_\_\_ Fax Number : \_\_\_\_\_

Date : \_\_\_\_\_

<b>Processing Status</b>
Received Date : _____ Queue Status : _____ Processed Date : _____

**ATTACHMENT F - GENERAL COMMENTS**

*Please refer to IDA's annotations above to Clause 1.5.1(c) of Attachment C, above. As a consequential amendment, IDA directs SingTel to modify Attachment F accordingly.*

**LETTER OF AUTHORISATION  
FOR PHYSICAL ACCESS TO TOWER, ROOF SPACE OR CO-LOCATION SPACE**

This Letter of Authorisation is issued in conjunction with the final approval given to the request application via reference \_\_\_\_\_ date \_\_\_\_\_

It must be carried in the possession of the senior person at all time during the duration of access granted to the Tower, Roof Site or Co-Location Space as indicated below.

Location of Tower , Roof Site or Co-Location Space granted for access :

\_\_\_\_\_  
\_\_\_\_\_

Name of Person(s) for which Physical Access is requested.

1. \_\_\_\_\_ [Name of Senior Person & NRIC No / Passport No]
2. \_\_\_\_\_ [Name & NRIC No / Passport No]
3. \_\_\_\_\_ [Name & NRIC No / Passport No]
4. \_\_\_\_\_ [Name & NRIC No / Passport No]

Approved Date of Access : \_\_\_\_\_

Approved Time of Access : \_\_\_\_\_

Approved Duration of Access : \_\_\_\_\_

Approved subject to details and conditions given in the attached Letter of Authorisation

Alternative Date and Time SingTel Approval Code : \_\_\_\_\_

**ATTACHMENT F**

<b>On Behalf of SingTel</b>	
Sign : _____	Contact Number : _____
Name : _____	Fax Number : _____
Date : _____	

**REQUEST FOR TOWER ACCESS LICENSE**

**The Requesting Operator**

Date of Application : \_\_\_\_\_ Application Reference Number : \_\_\_\_\_

**TOWER REQUIREMENTS**

Address of Tower Site : \_\_\_\_\_  
 Number of Antennas : \_\_\_\_\_  
 Model and Specifications of Antennas : \_\_\_\_\_  
 (eg. Size, weight and wind load) \_\_\_\_\_  
 Transmitting and Receiving Frequency : \_\_\_\_\_  
 Transmission Power of each Antenna : \_\_\_\_\_  
 Number of Mounting Positions & height : \_\_\_\_\_  
 Cable / Waveguide Specifications : \_\_\_\_\_  
 Any other specific requirements : \_\_\_\_\_

**CO-LOCATION SITE REQUIREMENTS**

Address of Co-location site : \_\_\_\_\_  
 Type of Equipment to be installed : [Description / Manufacturer / Dimensions] \_\_\_\_\_  
 Co-Location Space Required : [Dimensions and floor area to be occupied] \_\_\_\_\_  
 Power Requirements : \_\_\_\_\_  
 Floor Loading of Equipment : [Weight of Equipment Fully Installed] \_\_\_\_\_  
 Capacity of Transmission /  
 Sub Loop Tie-cable : [Size and Pair] \_\_\_\_\_  
 Type of Fibre and its Diameter : [Number of Fiber Strand & Cable Diameter] \_\_\_\_\_

**On Behalf of the Requesting licensee**

Sign : \_\_\_\_\_ Name of Requesting Licensee: \_\_\_\_\_  
 Name : \_\_\_\_\_ [Company Name]  
 Designation : \_\_\_\_\_  
 Department : \_\_\_\_\_  
 Contact Number : \_\_\_\_\_ Company Stamp : \_\_\_\_\_  
 Fax Number : \_\_\_\_\_

REQUEST FOR TOWER ACCESS LICENSE	
Cont....	
<b>SingTel's Reply to the Requesting Operator</b>	
<input type="checkbox"/> Approved subject to details and <input type="checkbox"/> Not Approved Reason for Rejection : _____	
<input type="checkbox"/> Approved subject to details and conditions given in the attached Letter of Authorisation <input type="checkbox"/> Alternative Date and Time SingTel Approval Code : _____	
<b>On Behalf of SingTel</b>	
Sign : _____ Contact Number : _____ Name: _____ Fax Number : _____ Date : _____	
<b>Processing Status</b>	
Received Date : _____ Queue Status : _____ Processed Date : _____	