

# A Practical Guide for Design, Installation, Acceptance and Maintenance of Fire Service Installations and Equipment



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# Preface

The Fire Services Department has long been committed to maintaining fire safety in buildings. We are convinced that frequent communication with the trade is essential if we are to accomplish this goal. It is also imperative for us to collaborate with the trade so as to ensure that all relevant requirements pertaining to Fire Service Installations and Equipment are adhered to. To this end, the department has regularly organised seminars entitled “FSD Connects with the Construction Industry” since 2017 to share and exchange views and experience with the trades, professional bodies/institutions and collaborating departments on the latest fire safety requirements in relation to General Building Plan submissions, FSIs acceptance inspections, maintenance of FSIs and other fire safety matters.

This Guide, though not exhaustive, outlines the general points to note regarding the design, installation, acceptance and maintenance of FSIs at various stages, specifies the DOs and DON'Ts for compliance with FSD's requirements, includes useful checklists in the appendices and contains extracts from previous FSD Connects. To keep the trade abreast of the latest development, the Guide will be updated on a regular basis and enriched with useful information from the FSD Connects in future.

This guide is for general reference and informational purposes only. Users should not only rely on the information given in this guide and should consult the FSD and relevant professional persons whenever there are doubts about the application of the relevant ordinance or guidelines stated in this publication on individual circumstances.

Fire Services Department  
First issue: February 2021



# Introduction

This guide outlines the important principles to be considered and points to be noted during the design, installation, acceptance inspection and maintenance stages of FSI in buildings.

The target readers of this guide are trade practitioners and stakeholders, such as, authorised persons, registered professional engineers, registered fire service installation contractors and property management personnel. It is our hope that this Guide will provide you with invaluable assistance in complying relevant requirements for achieving the building fire safety.

This guide is comprised of four parts as follows:

- Design
- Installation
- Acceptance inspection
- Maintenance

This guide should be read in conjunction with the applicable ordinances, regulations and codes in Hong Kong, in particular the Codes of Practice for Minimum Fire Service Installations and Equipment and Inspection, Testing and Maintenance of Installations and Equipment and various Circular Letters as published by the FSD.

# Terms, Definitions and Abbreviations

AP	Authorized Person
AS	Authorized Signatory
AI	Annual Inspection
BD	Buildings Department
CFD	Computational Fluid Dynamics
CO	Carbon Monoxide
CoP	Codes of Practice for Minimum Fire Service Installations and Equipment and Inspection, Testing and Maintenance of Installations and Equipment
EPD	Environmental Protection Department
EMSD	Electrical and Mechanical Services Department
FS Notes	Fire Services Notes
FS Code 2011	Code of Practice for Fire Safety in Buildings 2011 promulgated by Buildings Department
EVA	Emergency Vehicular Access
FSMP	Fire Safety Management Plan
FSAR	Fire Safety Assessment Report
FSD	Fire Services Department
FSI	Fire Service Installations and Equipment
FH/HR	Fire hydrant/hose reel
FAS	Fire Alarm System
FCP	Fire Control Panel
GBP	General Building Plan
MJC	Multiple Jet Control
MFACP	Manual Fire Alarm Call Points
PRV	Pressure Reducing Valve
PNAP	Practice Note for Authorized Persons, Registered Structural Engineers and Registered Geotechnical Engineers
QP	Qualified Person
RPE	Registered Professional Engineer
RFSIC	Registered Fire Service Installation Contractor
SES	Smoke Extraction System
SCS	Smoke Control System
SPS	Staircase Pressurization System
T&C	Testing and Commissioning
VAC	Ventilation/Air-conditioning Control System
WSD	Water Supplies Department



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# PART I – Design

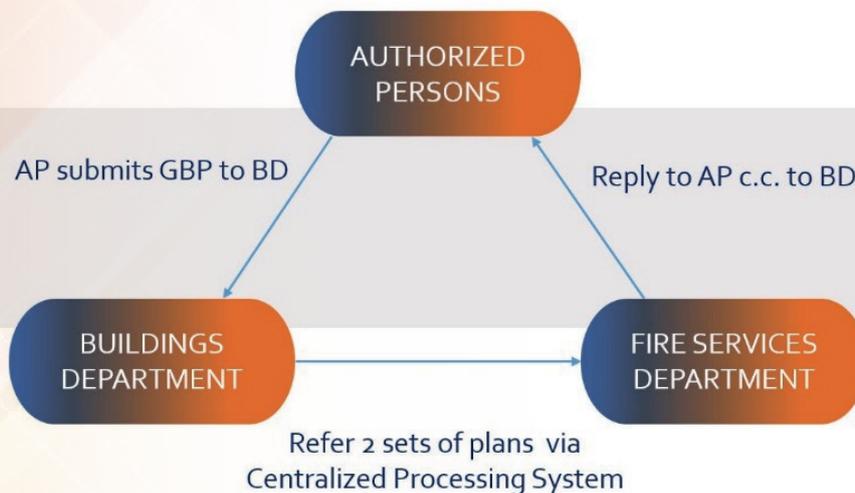


## 1.1 Workflow of General Building Plan Submission

- (a) To begin, the General Building Plan (GBP) submission is an essential step in the design stage. To streamline and expedite the plan processing procedure, Authorized Person (AP) shall follow the guidelines as stipulated in the Practice Note for APs, Registered Structural Engineers and Registered Geotechnical Engineers (PNAP) ADM-2<sup>1</sup> published by the Buildings Department (BD). A simplified workflow regarding building plan submission of private projects is appended hereunder for reference.

### Workflow

#### For Private Projects



#### Reference: PNAP ADM-2

<sup>1</sup>The Practice Note for Authorized Persons, Registered Structural Engineers and Registered Geotechnical Engineers (PNAP) ADM-2 can be downloaded from the following URL and QR Code : <https://www.bd.gov.hk/doc/en/resources/codes-and-references/practice-notes-and-circular-letters/pnap/ADM/ADM002.pdf>





## 1.2 General Building Plan Submission

- (a) Construction schedule is always tight and early approval for commencement of building works is a crucial factor for timely completion of building projects, the Fire Services Department (FSD) pledges to expedite the plan processing time.
- (b) The checklist to facilitate submission of GBP by AP is appended at Appendix I as general reference.

### 1.2.1 DOs(✓) and DON'Ts(x)

#### DOs (✓)

- ✓ Cross-checking of FS Notes for typos before submission;
- ✓ Ensure previous amendments are incorporated in the latest submission;
- ✓ Submit non-code-compliant items in the form of written enquiry at early stage; and
- ✓ Be conversant with the promulgation of latest FSD Circular Letters/brief notes of meeting between AP and FSD.

#### DON'Ts (x)

- ✗ Submit piecemeal alterations which unnecessarily increase the number of amended GBP;
- ✗ Submit FS Notes which are not tallied with layout plans;
- ✗ Omit to incorporate amendments made in previous submission in the latest submission;
- ✗ Include Fire Service Installations and Equipment (FSI) not mentioned in Fire Services Notes (FS Notes); and
- ✗ Include items not related to FSI provision in FS Notes (e.g. Electromagnetic Lock).



## 1.2.2 Common Irregularities

Some common irregularities observed during plan processing and are listed below for reference:

### Missing of international standards for systems in FS Notes:

- 4.8 NO AUTOMATIC SPRINKLER INSTALLATION SHALL BE PROVIDED IN THE FOLLOWING AREA:
- T1 AND T2 (G/F LIFT LOBBY AND RECEPTION, 2/F AND ABOVE EXCEPT STAIRCASE ON 2/F AND 3/F)
  - T3, T5, T6 AND T8 (G/F AND ABOVE)

#### AUTOMATIC FIRE DETECTION SYSTEM

5. AUTOMATIC FIRE DETECTION SYSTEM SHALL BE PROVIDED AND INSTALLED IN ACCORDANCE WITH THE ABOVE RULES FOR ENTIRE BASEMENT AND PODIUM WITH AREAS NOT COVERED BY SPRINKLER SYSTEM LOCATED AT CLUB HOUSE INCLUDING TRANSFORMER ROOM IN PODIUM WITH THE EXCEPTION OF DOUBLE SLAB ABOVE THE TRANSFORMER ROOM, DOUBLE SLAB ABOVE THE HV SWITCH ROOM, CAR PARKING AREAS, DRIVEWAY/RAMP, WATER METER CABINET, VENT DUCT AND F&M PIPE

Standards of Fire Detection System was found missing

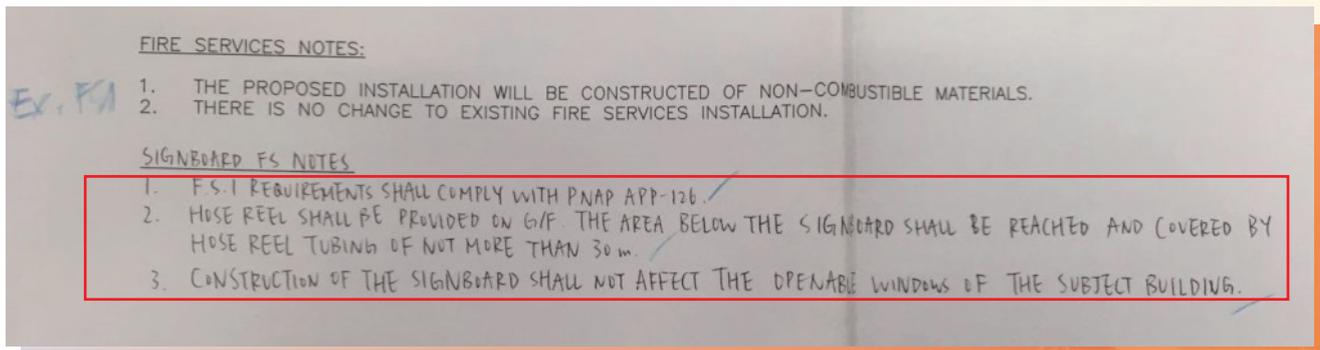
### FS Notes not tallied with layout plans:

#### FIRE HYDRANT AND HOSE REEL SYSTEM

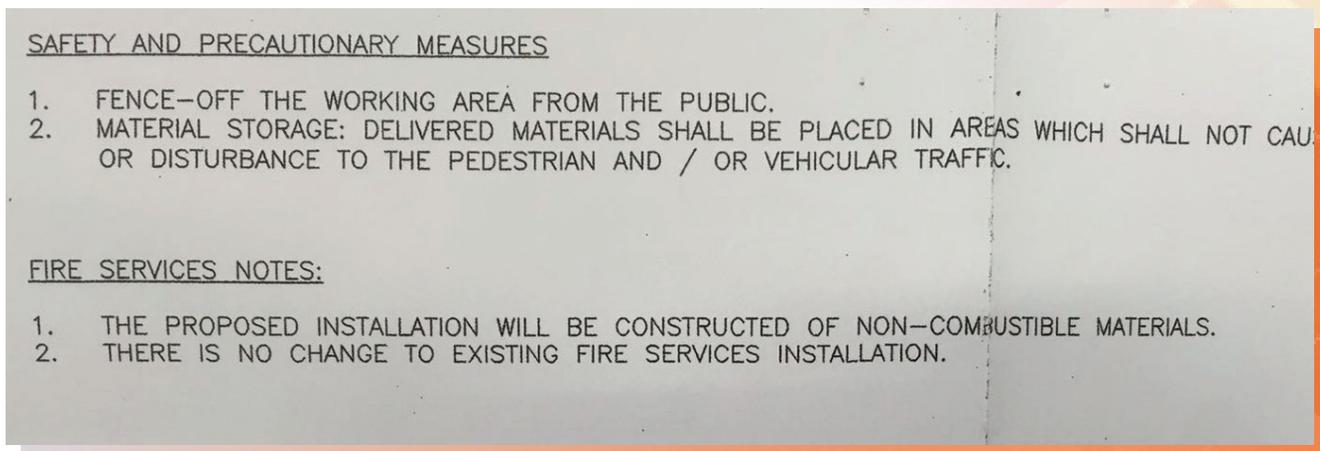
1. FIRE HYDRANT AND HOSE REEL SYSTEM CONSISTING OF FIRE HYDRANTS AND HOSE REELS SHALL BE PROVIDED AND INSTALLED IN ACCORDANCE WITH THE FSD'S CIRCULAR LETTER NO. 2/2013 AND CODE OF PRACTICE FOR MINIMUM FIRE SERVICES INSTALLATION AND EQUIPMENT - 2012 EDITION TOGETHER WITH THE FOLLOWING DESIGN CRITERIA.
2. FIRE HYDRANTS AND HOSE REELS SHALL BE PROVIDED AS SHOWN ON THE BUILDING PLAN.
3. ONE 36M<sup>3</sup> F. S. WATER TANK SHALL BE PROVIDED AT THE LOCATION AS SHOWN ON PLAN TO SERVE THE FIRE HYDRANT AND HOSE REEL SYSTEM OF THE BUILDING.
4. FIXED FIRE PUMP SHALL BE INSTALLED INSIDE THE F. S. PUMP & TANK ROOM AT THE LOCATION AS SHOWN ON THE BUILDING PLAN. THE FIXED FIRE PUMP SHALL ALSO ACT AS F.S. INTERMEDIATE BOOSTER FOR THE FIRE HYDRANTS THAT TO BE LOCATED EXCEED 60 METRE FROM THE F.S. INLETS AT GROUND FLOOR.
5. F.S. INLETS FOR THE FIRE HYDRANT AND HOSE REEL SYSTEM SHALL BE PROVIDED AT GROUND FLOOR AS SHOWN ON THE BUILDING PLAN. THE F.S. INLETS SHALL BE INTERCONNECTED.

The concerned F.S. Pump & Tank Room could not be located on plan

**Amendments made in previous submission not incorporated in the latest submission:**



**Plan amendments made in the 1<sup>st</sup> submission**



**Previous amendments not incorporated in the 2<sup>nd</sup> submission**

**Inclusion of items not related to FSI provision in FS Notes(e.g. Electromagnetic Lock):**

The provision of electromagnetic Lock is under the jurisdiction of the BD and the relevant notes shall be incorporated in “General Notes” instead of “FS Notes”.





## 1.3 Fire Safety Assessment Report Submission

- (a) The framework for fire engineering approach is set out in Part G of the Code of Practice for Fire Safety in Buildings 2011 promulgated by Buildings Department (FS Code 2011). The adoption of such can provide an alternative solution to those buildings where the compliance with prescriptive standard is technically difficult. Problems due to deviation from prescriptive standards shall be analyzed and the corresponding fire engineering solution shall be technically justified, validated and then established for agreement of Authorities on case-by-case basis according to the type and characteristics of the relevant buildings.
- (b) The checklist to facilitate the formulation of Fire Safety Assessment Report (FSAR) is appended at Appendix II as general reference.

### 1.3.1 Useful Tips

- ✧ Identify clearly the non-code-compliant items or items not covered by FS Code 2011 in well-organized approach;
- ✧ Propose point by point of the compensation fire safety measures for non-code-compliant items with justification of equivalent fire safety level achieved;
- ✧ Provide clear, suitable and sufficient drawings and sectional views to illustrate the problems and the alternatives to solve;
- ✧ Propose convincing fire scenario for study and assessing the worst scenario;
- ✧ Propose justifiable and tenable conditions with documentary support;
- ✧ Adopt scientific assessments formula quoted from commonly accepted handbooks, guides and standards with clear explanation of the selected parameters or criteria;
- ✧ Present calculations in a clear and traceable approach for ease of reference;
- ✧ Conduct sensitive test with at least one exit blocked for evacuation analysis;



- ❖ Arrange suitable range of scales of tenable conditions such as temperature, visibility and Carbon Monoxide (CO) concentration in the presentation of snapshots of Computational Fluid Dynamics (CFD) for clarity;
- ❖ Include all the source codes of CFD as one of the critical parts of the FSAR;
- ❖ Apply Safety Factor recommended in G3.4 of the FS Code 2011 with justifiable explanation;
- ❖ Select soot yield and CO yield used for CFD simulations with justifications;
- ❖ Specify the installation positions and level of smoke extraction grilles and make up air grilles in the snapshots of CFD simulation results;
- ❖ Analyze tenable conditions under fire scenario by CFD under prevailing wind with snapshots showing Velocity Vectors of impact due to prevailing wind for adoption of static smoke extraction systems; and
- ❖ Highlight the revised parts of fire engineering report in the re-submission.

### **1.3.2 General Guidance**

Fire engineering approach for development should focus on non-code-compliant items with effective and efficient alternatives to enhance the fire safety level of the development comparable to that of code compliant design. Typical example is the over-sized compartment for which there is no purposely prescribed fire safety requirement. Fire engineering approach adopted with intention to waive the Code's requirements such as non-provision of automatic fire suppression system, is not recommended as it is in principle not accepted according to the spirit of fire engineering approach.



## 1.4 Fire Safety Management Plan Submission

- (a) The Fire Safety Management Plan (FSMP) shall be established with reference to Part F of the FS Code 2011. Implementation of FSMP shall be maintained throughout the intended life of the development in order to assure the fire safety provisions.
- (b) The checklist to facilitate the formulation of FSMP is appended at Appendix III as general reference.

### 1.4.1 Useful Tips

- ✧ Prepare exhaustive bounding conditions to cover all physical conditions and software of management to ensure the validity of the fire engineering assessment throughout the life cycle of the development;
- ✧ Follow the requirements of section 8 of Part G of the FS Code 2011 relating to Bounding Conditions;
- ✧ Follow the requirements of Part F of the FS Code 2011 when preparing the FSMP;
- ✧ Formulate the FSMP with the strength and hierarchy of fire safety management team with designated duties assigned for clear execution of management plan effectively;
- ✧ Prepare the FSMP which is enforceable, reasonable and lawful;
- ✧ Include the undertaking letter of the development proponent as an essential part of the FSAR;
- ✧ Highlight the revised parts of the FSAR in the re-submission; and
- ✧ Effect appropriate adjustment to the FSMP based on all the changes made in GBP submission.



### 1.4.2 General Guidance

- (a) FSMP is an essential element in connection with fire engineering approach to overcome insurmountable constraints in developments with unique characteristics. As stressed in the Commentary in Part F of the FS Code 2011, management and maintenance of fire safety provisions are important for assuring the effectiveness of fire safety provisions installed for the intended life of the developments in particular that effective fire safety management can perform the roles of mitigating potential fire risks, assisting occupants to reach the ultimate place of safety in case of fire. Fire safety provisions in the development can be kept in good condition by means of periodic inspection and maintenance.
- (b) FSMP should follow the framework outlined in the FS Code 2011 with details tailored for the development. Aspects such as the task force strength, the clear division of designated duties amongst team members, team hierarchy and their relevant training background relating to fire safety management should be outlined in the plan. A maintenance plan should be prepared to holistically cover both active and passive fire safety measures to ensure that periodic maintenance and staff training are carried out at regular interval with proper audit and/or record system.
- (c) Fire action plan is a plan involving the strategically formulated actions to report fire incident and assist the safe evacuation of occupants. Staff training and occupant training should be detailed in the training plan e.g. familiarization of exit routes, location of FS/ sprinkler pump. Practically, a copy of FSMP shall be kept at the management office to ensure that management staffs are conversant with the plan.



## 1.5 Smoke Control System Submission

- (a) Submission procedure, documents required and technical requirements for smoke control drawing submission are set out in the Codes of Practice for Minimum Fire Service Installations and Equipment and Inspection, Testing and Maintenance of Installations and Equipment (CoP), FSD Circular Letters No. 4/96<sup>2</sup> and No. 4/2008<sup>3</sup> respectively.
- (b) Approval on smoke control submission shall be granted from FSD prior to the submission of FSI/314 and FSI/501 for request of initial FSI compliance inspection.
- (c) The checklists to facilitate the submission of Smoke Control System (SCS) submission is appended at Appendix IV as general reference.

### 1.5.1 Useful Tips

#### General: -

- ✧ Approved GBP with compartmentation plan, layout and FS Notes shall be attached for reference;
- ✧ Should fire engineering approach be adopted, design shall comply with the approved FSAR and the corresponding documents shall be attached for reference;
- ✧ The GBP, FSAR and design report shall be read in conjunction and coherent on the design of the SCS submission;
- ✧ The scope of SCS shall be clearly indicated in the approved FS Notes;
- ✧ Form FSI/314 or FSI/314A shall be duly endorsed by AP with the latest version of approved GBP in line with the architectural layout; and
- ✧ Submitted plans shall be clear and precise with suitable scale according to FSD Circular Letter No. 4/96.



## Smoke Extraction System: -

- ✧ Design criteria shall be stated in the FSAR;
- ✧ Interlocking mechanism of smoke extraction fans and make up air fans during power failure or system malfunction shall be explicitly indicated in the mode table;
- ✧ Operation status of the system under boundary fire scenario shall be included in the mode table;
- ✧ Smoke zone shall be clearly indicated in the layout and schematic for reference;
- ✧ Fire compartmentation shall be clearly indicated in the layout and schematic drawing according to the approved compartmentation plan for reference;
- ✧ Separation distance between smoke exhaust outlets and other building openings shall be maintained according to CoP or approved FSAR;
- ✧ Location of fire curtain for forming smoke zone shall be tallied with the approved FSAR;
- ✧ Location of fire barrier such as fire shutter shall be tallied with the approved GBP; and
- ✧ Make up air at low level shall be ensured to avoid pre-mature mixing of cool air with hot smoke.

<sup>2</sup> The FSD Circular Letter No. 4/96 can be downloaded from the following URL and QR Code :  
[https://www.hkfsd.gov.hk/eng/source/circular/e04\\_1996.pdf](https://www.hkfsd.gov.hk/eng/source/circular/e04_1996.pdf)



<sup>3</sup> The FSD Circular Letter No. 4/2008 can be downloaded from the following URL and QR Code :  
[https://www.hkfsd.gov.hk/eng/source/circular/2008\\_04.pdf](https://www.hkfsd.gov.hk/eng/source/circular/2008_04.pdf)





### **Staircase Pressurization System : -**

- ✧ Critical fire scenario shall be adopted for selection of equipment, sensitivity case could be included in the design report for justification;
- ✧ Classification of system (i.e. Class A / B) shall be clearly indicated in the submission;
- ✧ Attention shall be drawn to prevent over de-pressurization of accommodation with small area;
- ✧ Accommodation if served by both smoke extraction system (SES) and staircase pressurization system (SPC), proper Testing and Commissioning (T&C) shall be conducted to prevent over de-pressurization during simultaneous operation of both systems;
- ✧ By-pass ductworks for pressurization fans and air release fans could be considered to prevent over de-pressurization or over pressurization condition;
- ✧ Individual accommodation served by more than one door openings with the pressurized fireman's lift lobby or staircase, the number of doors to be opened in open door scenario shall be explicitly considered; and
- ✧ Location of air intake shall be properly selected to avoid re-circulation of smoke.

### **Ventilation/Air-conditioning Control System : -**

- ✧ Submission of FSI plans of A&A works with Form FSI/314A, existing tripping method shall be ascertained and ensure that Method "C" will not be utilized with other tripping methods; and
- ✧ Fire compartmentation shall be clearly indicated in the layout and schematic drawing according to the approved compartmentation plan for reference.

## PART II – Installation



### 2.1 Proper Installation of Fire Service Installations and Equipment

- (a) Proper installation of FSI in accordance with design requirements and specifications is of paramount importance to safeguard their functionality and reliability. Every newly installed FSI should be meticulously tested and checked before put into operation; and
- (b) This section provides stakeholders with salient points to be observed during the installations of FSI with a view to facilitating them in compliance with the statutory requirements.

### 2.2 General Guidelines

#### 2.2.1 FSI Provisions

- (a) The FSI provision in a building should be referred to the FS Notes as stated in the approved GBP; and
- (b) Building project with dynamic SES, SPS or water mist system as per the provisional requirements, the designer should be a Registered Professional Engineer (RPE) under the Engineers Registration Ordinance (Cap. 409) in the discipline of building services, fire or mechanical engineering.

#### 2.2.2 Specification of Installation of Fire Service Installations and Equipment

- (a) The specification of an FSI including installation, functionality as well as performance can be referred to Part V of the CoP or other acceptable standards as specified in the FS Notes of the approved GBP; and
- (b) All materials selected for FSI should be of accepted/approved type in accordance with the requirement in “Approval of Portable Equipment and acceptance of FSI and Fire Safety Products” of this guide. For fire resisting cable, please refer to FSD Circular Letter No. 2/2017<sup>4</sup> – Minimum Fire Resisting Cable Requirements for Fire Service Installations.

<sup>4</sup> The FSD Circular Letter No. 2/2017 can be downloaded from the following URL and QR Code : [https://www.hkfsd.gov.hk/eng/source/circular/2017\\_02\\_eng.pdf](https://www.hkfsd.gov.hk/eng/source/circular/2017_02_eng.pdf)





### **2.2.3 Testing and Commissioning.**

- (a) T&C of FSI should be conducted after completion of installation;
- (b) All systems should be tested in accordance with the design requirements such as functionality, performance as well as interoperability, etc; and
- (c) All test results should be properly recorded for compiling with the statutory requirements as well as future maintenance purpose in accordance with the CoP.

### **2.2.4 Other Considerations**

- (a) Maintainability of FSI shall be considered during the process of design and installation. Suitable measures such as provision of proper access or spacing could facilitate the future maintenance; and
- (b) As-fitted FSI plans, T&C records, list of equipment, FSI product catalogues, etc. should be properly maintained and furnished to the FSI owners for administering annual inspection of FSI as stipulated under reg. 8 of the Fire Service (Installations and Equipment) Regulations, Cap. 95B, Laws of Hong Kong.



## 2.2.5 DOs(✓) and DON'Ts(x)

### DOs (✓)



- ✓ Assign proper class of Registered Fire Service Installation Contractor (RFSIC) to conduct FSI installation;
- ✓ Obtain approval of GBP & SCS prior to installation of FSI;
- ✓ Select accepted/ approved type of FSI and fire safety products;
- ✓ Observe the requirements of FSD Circular Letter No. 2/2017 for fire resisting cable;
- ✓ Comply with the specifications as stated in the CoP; and
- ✓ Conduct comprehensive T&C after installation.

### DON'Ts(x)



- ✗ Change of architecture layout without updating the FSI drawings;
- ✗ Omit any provisional requirements as stated in the approved GBP;
- ✗ Cause obstruction to sensing elements, e.g. detectors and sprinkler head, etc.;
- ✗ Connect equipment other than FSI to emergency generator without prior approval;
- ✗ Install smoke detector in location susceptible to environmental impact which may cause unwanted alarm; and
- ✗ Issue certification on completion of installation of FSI (FSI/501a) without ascertain the system's functionality.

# Part III Acceptance Inspection

## 3.1 Acceptance Inspection of FSI

- (a) Pursuant to Section 21(6)(d) of the Buildings Ordinance (Cap.123), FSI acceptance inspection shall be carried out in new buildings for granting an occupation permit. Having confirmed the newly installed FSI are in efficient working order and satisfactory condition, a Fire Services Certificate (FS 172) will be issued by FSD. (Figure 1. The workflow of an acceptance inspection of FSI for a new building)

The following FSD Circular Letters provide the requirements for acceptance inspection: -

FSD Circular Letter No.1/2015<sup>5</sup> - Document Required for Application for Compliance Inspection of Fire Service Installations and Equipment;

FSD Circular Letter No.1/2020<sup>6</sup> – Revised Application Procedure for Inspection and Testing of Fire Service Installations and Equipment in New Building; and

FSD Circular Letter No.3/2020<sup>7</sup> – Facilitation Measures of Application for Approval of Portable Equipment and Acceptance of FSIs and Fire Safety Products.

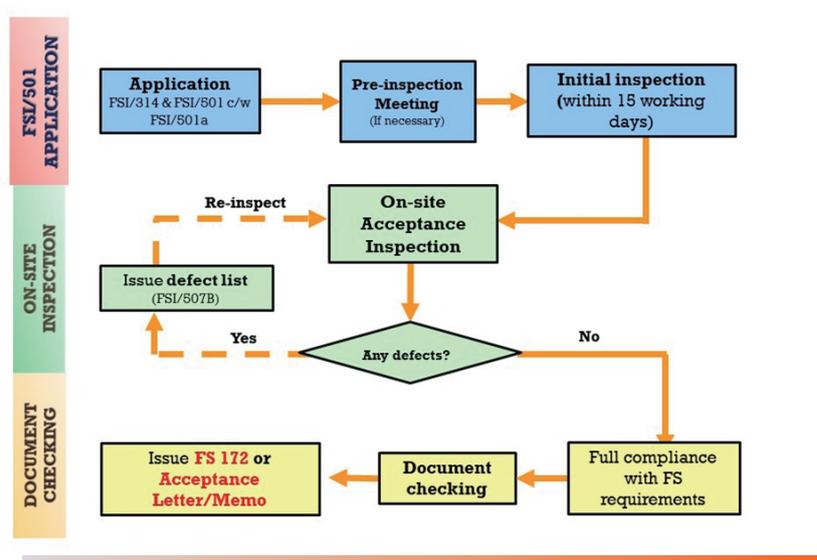


Figure 1. Workflow of the acceptance inspection of FSI for new building

<sup>5</sup> The FSD Circular Letter No. 1/2015 can be downloaded from the following URL and QR Code : [https://www.hkfsd.gov.hk/eng/source/circular/2015\\_01\\_eng.pdf](https://www.hkfsd.gov.hk/eng/source/circular/2015_01_eng.pdf)

<sup>6</sup> The FSD Circular Letter No. 1/2020 can be downloaded from the following URL and QR Code : [https://www.hkfsd.gov.hk/eng/source/circular/2020\\_01\\_eng\\_20200218\\_163332.pdf](https://www.hkfsd.gov.hk/eng/source/circular/2020_01_eng_20200218_163332.pdf)

<sup>7</sup> The FSD Circular Letter No. 3/2020 can be downloaded from the following URL and QR Code : [https://www.hkfsd.gov.hk/eng/source/circular/2020\\_03\\_eng\\_20200721\\_123921.pdf](https://www.hkfsd.gov.hk/eng/source/circular/2020_03_eng_20200721_123921.pdf)



## 3.2 General Guidelines

### 3.2.1 Application for Acceptance Inspection

An application for Acceptance Inspection of FSI should include the following forms, Certificates and Documents: -

Responsible Person	Type of Form/Document	Reference
AP / RPE	Form FSI/501 application for acceptance inspection	FSD Circular Letter No. 1/2020
RFSIC	Copy of Certificate FSI/501a #	FSD Circular Letter No. 1/2020
RFSIC	Form FSI/314 covering FSI Plans*	FSD Circular Letter No. 1/2015 FSD Circular Letter No. 4/96 (for format of FSI plans)
RFSIC / RPE	T&C Checklists	FSD Circular Letter No. 1/2015 (Appendix 1 to 7)
RFSIC / RPE	Test Reports for FSI	Part II of the CoP for Inspection, Testing and Maintenance of Installations and Equipment
RFSIC	FSI - Equipment List	FSD Circular Letter No. 3/2020 FSD Circular Letter No. 1/2015 (for application submitted on/before 31.12.2020)

\* As prior approval for FSI including dynamic SES, SPS and VAC system shall have been obtained from FSD beforehand, no further submission of FSI plans for such system are required. However, RFSIC, AP & RPE shall be reminded that T&C checklist or test reports, where appropriate, for such FSI shall be submitted along with the application.

# RFSIC shall observe that specific FSI systems may be required prior approval or obtained an approved license, e.g. sprinkler installation by hydraulic calculation, DG license for fuel tank of emergency generator.

### 3.2.2 Pre-inspection Meeting

- (a) A pre-inspection meeting will be conducted on a need basis amongst FSD's Inspecting Officers, AP, RFSIC and RPE (if appropriate) before on-site inspection.
- (b) During the pre-meeting, the following tasks will be carried out: -
  - Review the project status and site readiness;
  - Conduct preliminary checking of submitted documents;
  - Receive supplementary documents; and
  - Formulate an inspection schedule as agreed by all parties.
- (c) **A document checklist<sup>8</sup>** is devised for AP, RFSIC and RPE and building owner for document preparation.

<sup>8</sup> The Document Checklist can be downloaded from the following URL and QR Code :  
[https://www.hkfsd.gov.hk/chi/forms/FSIC\\_Checklist\\_Acceptance\\_Inspection\\_chi.pdf](https://www.hkfsd.gov.hk/chi/forms/FSIC_Checklist_Acceptance_Inspection_chi.pdf)





### 3.2.3 On-site Inspection

- (a) An on-site inspection will be conducted within 15 working days, after receipt date of the application.
- (b) The following tasks will be conducted during the course of on-site inspection: -

Tasks	Acceptance Criteria	Examples
Functional checking	- Part V of CoP - T&C checklists / Test reports	- Proper actuation of pump/fans - Actuation of fire alarm via manual call point
Performance verification	- Part V of CoP - T&C checklists / Test reports	- Flow or pressure measurement as per performance requirements
Material checking	- Equipment list - Fire resisting cable as required in FSD Circular Letter No. 2/2017	- Brand, types, modal no., etc. - Fire resisting cables for primary and secondary power supply - Self-contained battery Ampere-hour rating, etc.
Layout checking	- As-fitted FSI Plans - Siting and spacing as required by various standards	- Coverage of sprinkler heads, detector, hose reel, etc. - Mounting height of Manual Call Points, Exit signs, etc.
Interoperability of FSI	- Part V of CoP - FSD Circular Letter 2/2002 <sup>9</sup> for Hot Smoke Test	- Full load power supply test by emergency generator - Hot smoke test for dynamic smoke extraction system - Any inter-relation between FSIs as stated in FER

- (c) Upon completion of the inspection, an inspection report (also known as FSI/507B) will be issued by FSD in which AP and RFSIC are required to acknowledge the items listed on the report by signature.

### 3.2.4 Re-inspection Arrangement

- (a) After completion of rectification, re-inspection will be arranged with the following conditions:
- All defects mentioned in the inspection report are duly rectified and conformed with FSD requirements;

<sup>9</sup> The FSD Circular Letter No. 2/2002 can be downloaded from the following URL and QR Code :<https://www.hkfsd.gov.hk/eng/source/circular/02-2002-ENG.pdf>





- A written request is required to submit to Fire Service Installations Division of FSD for appointment of re-inspection by fax or post; and
  - The re-inspection will be arranged on a first-come, first-served basis.
- (b) Having confirmed all defects are rectified during the on-site re-inspection, the acceptance inspection of FSI will be deemed to be completed. Otherwise, further re-inspection will be required.

### **3.2.5 Document Checking**

- (a) It will be commenced after completion of on-site inspection with a satisfactory result. During document checking, AP, RFSIC and RPE are permissible to proceed the following tasks: -
- Make minor amendments to GBP;
  - Revise FSI plans, equipment lists, etc; and
  - Supplement outstanding documents

### **3.2.6 Issuance of Fire Services Certificate**

- (a) After confirming that the newly installed FSIs are in full compliance with the FS requirements, a Fire Services Certificate (FS 172) for non-government buildings, or an acceptance memo/ a letter for government buildings will be issued by FSD.
- (b) The Certificate shall only be valid when the permanent and adequate water supply from Water Supplies Department (WSD) for the FSI has been connected.



### 3.3 Common Irregularities

The defects in the form of incompleteness of building works, insufficient coverage of FSI or improper installation of FSI are appended below for reference:

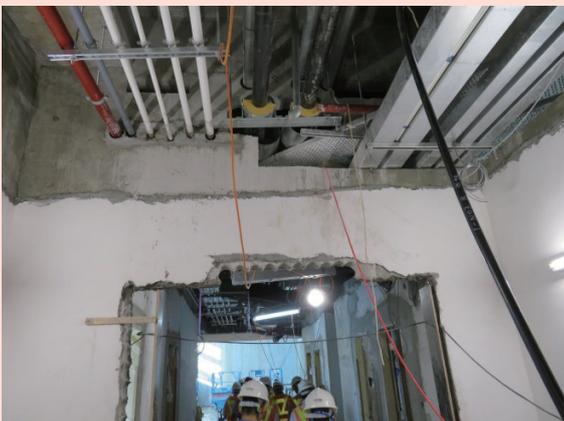
#### 3.3.1 Incompletion of Building Works



**X** Blockage of Means of Escape by Scaffolding



**X** Poor site condition which hampered layout checking



**X** Incompletion of building works (Smoke stop door)



**X** Missing of enclosure for FS Inlets



**X** Missing of smoke stop door



**X** Incompletion of building works (Fire Resisting Construction)

### 3.3.2 Incompletion of Installation of FSI



**X** Missing of sound bell and manual call point for FH/HR System



**X** Missing of fire extinguisher



**X** Incomplete installation of sprinkler system



### 3.3.3 Improper installation of FSI



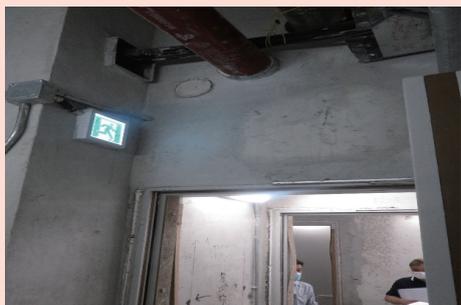
- ✗ Obstruction by building structures that hamper the operation of a fire hydrant



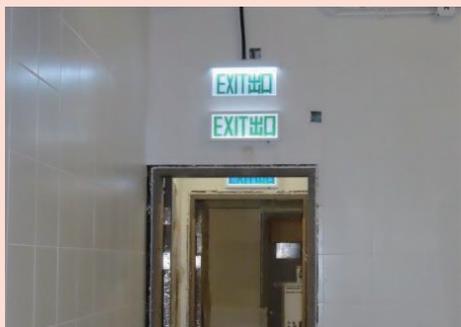
- ✗ Improper installation of manual call points



- ✗ Installation of butterfly valve at the sprinkler pumps inlets



**X** Exit sign not positioned directly above the doorway of the exit.



**X** Duplicated exit signs



**X** Improper installation of detector (Clearance between light fitting and detector should be properly maintained in accordance with BS 5839 Part I)



**X** Improper installation of detector (Clearance below detector should be maintained of 500 mm at least; Detectors should not be mounted within 1m of any air inlet of a forced ventilation system)



- ✘ Incomplete of building works (Hamper the operation of street fire hydrant by FSD members)



- ✘ Spindle of the underground valve of a street fire hydrant more than 500 mm below valve pit cover



### 3.3.4 Other Irregularities



**X** Numerous faults & trouble signals of AFA panel



**X** Static pressure at hydrant outlet exceeded 850 kPa



- ✘ Smoke discharge (including air release of SPS) on facade less than 5000mm from other building's opening



- ✘ Sprinkler head found contaminated by paint

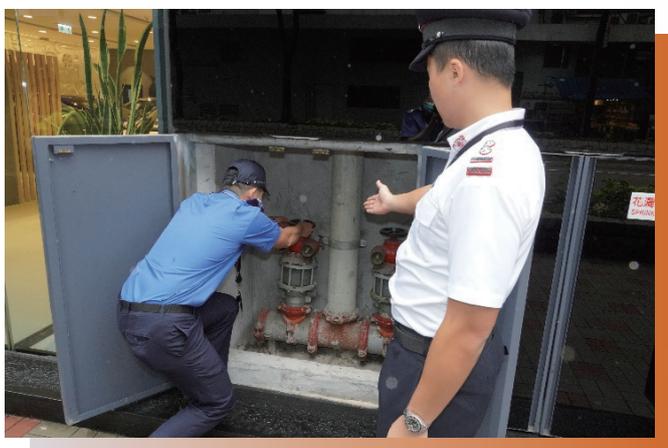


- ✘ Obstruction to Hose Reel by miscellaneous articles

## PART IV – Maintenance

### 4.1 Maintenance of Fire Service Installations and Equipment

- (a) According to regulation 8 of the Fire Service (Installations and Equipment) Regulations, Cap 95B, Laws of Hong Kong<sup>10</sup> - Duty of owners of fire service installations or equipment, the owner of any fire service installation or equipment which is installed in any premises shall—
- i. keep such fire service installation or equipment in efficient working order at all times; and
  - ii. have such fire service installation or equipment inspected by a registered contractor at least once in every 12 months.
- (b) Any person who contravenes the regulation 8 shall be guilty of an offence and shall be liable on conviction to a fine at level 5.



<sup>10</sup> The Fire Service (Installations and Equipment) Regulations, Cap 95B, Laws of Hong Kong can be download from the following URL and QR Code :  
<https://www.elegislation.gov.hk/hk/cap95B!en@2019-09-19T00:00:00>





## 4.2 Annual Inspection Checklists

- (a) To standardize the procedures carried out by RFSIC while conducting Annual Inspection (AI), the AI checklists to facilitate AI of fire hydrant/hose reel (FH/HR) system and supply tanks by RFSIC was firstly introduced through the FSD Circular Letter No. 4/2019<sup>11</sup> on 13.12.2019 and its Chinese version was published through the FSD Circular Letter No. 2/2020<sup>12</sup> on 18.2.2020. Subsequently, the AI checklist for sprinkler system was introduced through the FSD Circular Letter No. 8/2020<sup>13</sup> on 15.12.2020.
- (b) As mentioned in the previous part of the guide, FSI owners are required under regulation 8 of the Fire Service (Installations and Equipment) Regulations (Cap. 95B) to keep their FSI in efficient working order at all times and have them inspected at least once in every 12 months by an RFSIC. RFSIC engaged by FSI owners for conducting AI are responsible for assisting the FSI owners in complying with this statutory requirement and ensuring the proper functioning of their FSI. In this light, FSD has devised AI checklists for FSI, which specify the minimum requirements for AI for RFSIC to comply with when conducting AI and tests of the FSI.

### 4.2.1 General Guidelines

The checklists specified the minimum requirements for AI for respective FSI. Incomplete inspection or inspection not conducted in full accordance with the checklists shall not be recognised as properly completed AI and the general guidelines were as follows :

- (a) The checklists, which shall be completed by RFSIC when conducting AI, contain a series of inspection and testing procedures with which RFSIC are required to comply with;
- (b) The checklists are applicable to all requirements as stipulated in different versions of CoP and appropriate edition of the Sprinkler Installation Rules. RFSIC should exercise professional judgement to select suitable items (in accordance with appropriate version of CoP and appropriate edition of the Sprinkler Installation Rules applicable to the system) to carry out the inspection;
- (c) RFSIC are ultimately responsible for certifying that the FSI are in efficient working order and conform with the requirements specified in the CoP and appropriate edition of the Sprinkler Installation Rules.



#### 4.2.2 DOs(✓) and DON'Ts(x)

##### DOs (✓)

- ✓ Conduct AI of FH/HR system, supply tanks and sprinkler system according to the respective checklist;
- ✓ Complete and sign the checklists upon completion of the relevant inspection and testing procedures;
- ✓ Forward a copy of the duly completed checklist to the person on whose instructions the work was undertaken; and
- ✓ Retain a scanned or hard copy of the duly completed and signed checklists for at least 7 years and provide for audit check and verification by the FSD upon request.

##### DON'Ts (x)

- ✗ Carry out inspection with item which is not applicable to the FSI in the building (i.e. apply requirements in inappropriate version of CoP);
- ✗ Sign the AI checklist by any person other than Authorized Signatory (AS);
- ✗ Fail to produce the checklists upon request;
- ✗ Incomplete completion of checklist; and
- ✗ Contain false or misleading information in the checklist.

<sup>11</sup> The FSD Circular Letter No. 4/2019 can be downloaded from the following URL and QR Code :  
[https://www.hkfsd.gov.hk/eng/source/circular/2019\\_04\\_eng\\_20191218\\_095824.pdf](https://www.hkfsd.gov.hk/eng/source/circular/2019_04_eng_20191218_095824.pdf)



<sup>12</sup> The FSD Circular Letter No. 2/2020 can be downloaded from the following URL and QR Code :  
[https://www.hkfsd.gov.hk/eng/source/circular/2020\\_02\\_eng\\_20200224\\_102450.pdf](https://www.hkfsd.gov.hk/eng/source/circular/2020_02_eng_20200224_102450.pdf)



<sup>13</sup> The FSD Circular Letter No. 8/2020 can be downloaded from the following URL and QR Code :  
[https://www.hkfsd.gov.hk/eng/source/circular/2020\\_08\\_eng\\_20201218\\_154204.pdf](https://www.hkfsd.gov.hk/eng/source/circular/2020_08_eng_20201218_154204.pdf)





## 4.3 Inspection of Fire Control Panel, Fire Hydrant/Hose Reel System and Fire Alarm System

### 4.3.1 General Guidelines

- (a) Advisory letters to RFSIC dated 20.7.2018<sup>14</sup> & 19.12.2018<sup>15</sup> refer. In accordance with CoP 1994 or earlier editions, it was not necessarily for Fire Alarm System (FAS) to be a separate system. In such cases, all Manual Fire Alarm Call Points (MFACP) and alarm bells are connected to and controlled by the fixed fire pump panel in the FH/HR System;
- (b) A blown fuse or a tripped miniature circuit breaker in the pump control circuit may impair the functioning of both the fixed fire pump(s) in the FH/HR System and the alarm bells in the FAS;
- (c) Although the abovementioned connections and control configuration were code compliance, RFSIC are advised to carry out necessary tests to check the wiring of the MFACP and alarm bells;
- (d) Building owners/occupiers of such system should be informed of the condition of the system and advised to enhance the system according to the requirements set out in the CoP 1998 or later editions; and
- (e) The enhancement works to be taken are solely voluntary.

<sup>14</sup> The letter to RFSICs dated 20.7.2018 can be downloaded from the following URL and QR Code :  
[https://www.hkfsd.gov.hk/eng/source/Letter\\_Inspection\\_Fire\\_Control\\_Panels\\_FH\\_HR\\_FAS\\_20180720\\_eng.pdf](https://www.hkfsd.gov.hk/eng/source/Letter_Inspection_Fire_Control_Panels_FH_HR_FAS_20180720_eng.pdf)

<sup>15</sup> The letter to RFSICs dated 19.12.2018 can be downloaded from the following URL and QR Code :  
[https://www.hkfsd.gov.hk/eng/source/Letter\\_Inspection\\_FH\\_HR\\_Systems\\_FAS\\_20181219\\_eng.pdf](https://www.hkfsd.gov.hk/eng/source/Letter_Inspection_FH_HR_Systems_FAS_20181219_eng.pdf)





### 4.3.2 DOs(✓) and DON'Ts(x)

#### DOs (✓)

- ✓ Check the condition of the fuse of the Fire Control Panel (FCP) and the circuit of the FAS;
- ✓ Ascertain whether the FCP could activate the FAS automatically upon receipt of signals from a MFACP;
- ✓ Ascertain whether the FAS would operate continuously until it is switched off manually at the FCP;
- ✓ Inform building owners/occupiers of the condition of the system; and
- ✓ Advise building owners/occupier on the works required to enhance the functionality of the FH/HR System and the FAS in accordance with the requirements set out in the CoP published in or after 1998.



Checking the fuse of the FCP



Checking the Fire Booster Pump Panel

#### DON'Ts (x)

- x Omit to check the condition of the fuse of the FCP.



## 4.4 Inspection, Maintenance, Modification and Repair of Fire Service Installations and Equipment with Moving Parts

### 4.4.1 General Guidelines

- (a) Advisory letters to RFSIC dated 19.3.2019<sup>16</sup> & 22.11.2019<sup>17</sup> refer.
- (b) Moving parts of FSI which had been installed for a long time, such as disc/stem or piston/spring assembly inside the Pressure Reducing Valve (PRV) of a water-based system, did not operate properly due to wear and tear, thus affecting the effective functioning of the whole system;
- (c) FSI would not be reinstated to efficient working order timely after actuation if lack of spare parts/components; and
- (d) To minimize the system downtime which would adversely affect the fire safety standard of the premises under protection, FSI owners should be advised to keep sufficient stock of spare parts/components of the FSI for replacement, particularly those not readily available in the market.

<sup>16</sup> The letter to RFSICs dated 19.3.2019 can be downloaded from the following URL and QR Code :  
[https://www.hkfsd.gov.hk/eng/source/Letter\\_Inspection\\_FSIE\\_eng\\_20190325\\_172644.pdf](https://www.hkfsd.gov.hk/eng/source/Letter_Inspection_FSIE_eng_20190325_172644.pdf)



<sup>17</sup> The letter to RFSICs dated 22.11.2019 can be downloaded from the following URL and QR Code :  
[https://www.hkfsd.gov.hk/eng/source/Letter\\_FSIC\\_IMMR\\_eng\\_20191212\\_110331.pdf](https://www.hkfsd.gov.hk/eng/source/Letter_FSIC_IMMR_eng_20191212_110331.pdf)



#### 4.4.2 DOs(✓) and DON'Ts(x)

##### DOs (✓)

- ✓ Inspect, clean, test, recalibrate and lubricate (where appropriate) the moving parts of FSI (e.g. FS/Sprinkler inlets, hydrant outlets, PRV and control valves) during the inspection, maintenance, modification or repair of FSI, particularly those have been installed for a long time;
- ✓ Reinstall the entire FSI and ensure that it is in efficient working order after inspection, maintenance, modification or repair of FSI;
- ✓ Check to verify that there is sufficient water flow and water pressure from hose reels and hydrant outlets;
- ✓ Check to verify FS/Sprinkler inlets and pumps can operate properly;
- ✓ Check to verify FS/Sprinkler tanks are properly refilled; and
- ✓ Advise FSI owner to keep sufficient stock of spare parts/components of the FSI.

##### DON'Ts(x)

- ✗ Visually inspect the FS/Sprinkler inlets only; and
- ✗ Reinstall the FSI without ensuring it is in efficient working order after inspection, maintenance, modification or repair of FSI.



Component of Pressure Reducing Valve



Moving parts of Pressure Reducing Valve



Fire Service inlet



Defective Fire Service inlet noted during functional test



Defective component in Fire Service inlet



Photos of Multiple Jet Control



## 4.5 Shutdown of Fire Service Installations for Maintenance, Inspection, Modification or Repair

To prevent the occurrence of fire hazard and to ensure the efficient operation of the FSD in the event of fire, it is imperative that the FSD should be promptly notified of the FSI shutdown so that the units of the FSD may formulate appropriate contingency plan and advise the owners/occupiers of the premises to take additional fire safety measures during the shutdown period, where necessary. For details, please refer to the FSD Circular Letter No.1/2021<sup>18</sup> .

### 4.5.1 General Guidelines

- (a) FSI are installed in premises for the protection of life and property in case of fire. Any FSI which is defective may constitute a fire hazard within the meaning of section 2 of the Fire Services Ordinance, Cap. 95, Laws of Hong Kong;
- (b) RFSIC will be engaged by the FSI owners to inspect FSI to see whether they have to be shut down for maintenance/modification/repair, the RFSIC is therefore the most appropriate person to notify the FSD accordingly. In fact, the notification mechanism has been implemented for years and is extensively adopted by both RFSIC and the FSD;
- (c) When RFSIC is employed to maintain/inspect/modify/repair the following FSI of which the work is expected to be carried out **overnight or for more than 24 hours continuously**, the RFSIC should notify the FSD the defect as soon as possible within 24 hours after the defect is identified literally:
  - (i) Fire Hydrant/ Hose Reel System;
  - (ii) Sprinkler System;
  - (iii) Fire Alarm System;
  - (iv) Street Fire Hydrant System;
  - (v) Water Spray System
  - (vi) Smoke Extraction System;
  - (vii) Staircase Pressurization System;
  - (viii) Dry Riser System;
  - (ix) Fire Detection System of premises with sleeping risk .

<sup>18</sup> The FSD Circular Letter No. 1/2021 can be downloaded from the following URL and QR Code : [https://www.hkfsd.gov.hk/eng/source/circular/2021\\_01\\_eng\\_20210119\\_174824.pdf](https://www.hkfsd.gov.hk/eng/source/circular/2021_01_eng_20210119_174824.pdf)





- (d) Written notification should be made if the shutdown is arisen from a situation where there are defect in the FSI system which may, in the event of fire, put the entire building or licensed/registered premises e.g. Child Care Centres, Dangerous Goods Stores and etc. in jeopardy. Examples, which are not exhaustive, are as follows:

**Fire Hydrant / Hose Reel System, Sprinkler System, Street Fire Hydrant System**

- (i) No water supply (e.g. water tank is empty / leaking, piping to water tank is disconnected, etc.);
  - (ii) Whole set of duty and standby pumps are defective; and
  - (iii) Inlet / stop valve at various tank connection is defective
- (e) Taking into consideration the building occupancy and its associated risk, the RFSIC should specify in the written notification that any of the following type of licensed/registered premises are likely to be affected by the FSI shutdown:
1. Residential Care Home for the Elderly / Persons with Disabilities;
  2. Child Care Centres;
  3. Places of Public Entertainment (e.g. cinemas, theatres, theme parks, etc. where large licensed area and large number of participants are concerned);
  4. Hotels, Guesthouse Accommodations; or
  5. Dangerous Goods Stores.
- (f) RFSIC should clearly specify in the written notification whether the work is carried out for the compliance with the Fire Safety Direction/ Fire Safety Improvement Direction, where appropriate, issued under any of the following relevant Ordinance:
1. Fire Safety (Commercial Premises) Ordinance, Cap. 502;
  2. Fire Safety (Buildings) Ordinance, Cap. 572; or
  3. Fire Safety (Industrial Buildings) Ordinance, Cap. 636.
- (g) Disruption to the normal operation of the FSI caused by its shutdown should be kept to the minimum. A systematic approach should be adopted in carrying out the works. The affected FSI should be shut down by sections and be resumed normal as soon as practicable. If the affected portion of the system could not be reinstated to normal working condition by the end of a working shift, arrangements should be made for the portion to be isolated and the remainder of the system to be reinstated. With the exception of the above fire safety improvement works as required by Fire Safety Direction/ Fire Safety Improvement Direction, where appropriate, under Cap. 502/572/636, which might take relatively longer time than the general FSI work, the period of FSI shutdown in each submission should not be more than 14 days:

- 
- (h) If extension of FSI shutdown period is required, the RFSIC should submit a written notification of extension to the FSD before the previously scheduled date of completion. However, if there is change in the extent of the affected FSI system which warrants shutdown for maintenance / inspection / modification / repair, the RFSIC should submit a fresh written notification to the FSD following the procedures as stated in the FSD Circular Letter No. 1/2021. Moreover, upon resumption of normal operation of the FSI, the RFSIC should also submit a written notification to the FSD in this regard without delay;
- (i) If the RFSIC is no longer employed for the work, a written notification to the FSD should be submitted before the previously scheduled date of completion, and the owner of FSI should be informed of the details of the FSI shutdown without delay;

Under normal circumstances, the written notification shall only be completed and signed by the Qualified Person (QP) or Authorized Signatory (AS) of the RFSIC. When staff of RFSIC is tasked to respond to carry out the work and shutdown of FSI is considered necessary, the RFSIC could, in case of urgency, delegate his/her staff to submit the duly completed written notification on behalf of himself/herself. The RFSIC should also indicate the serial number of relevant FS 251, if any, which was previously issued for the inspection work of the FSI system (Part I of Appendix VI refers) ; and

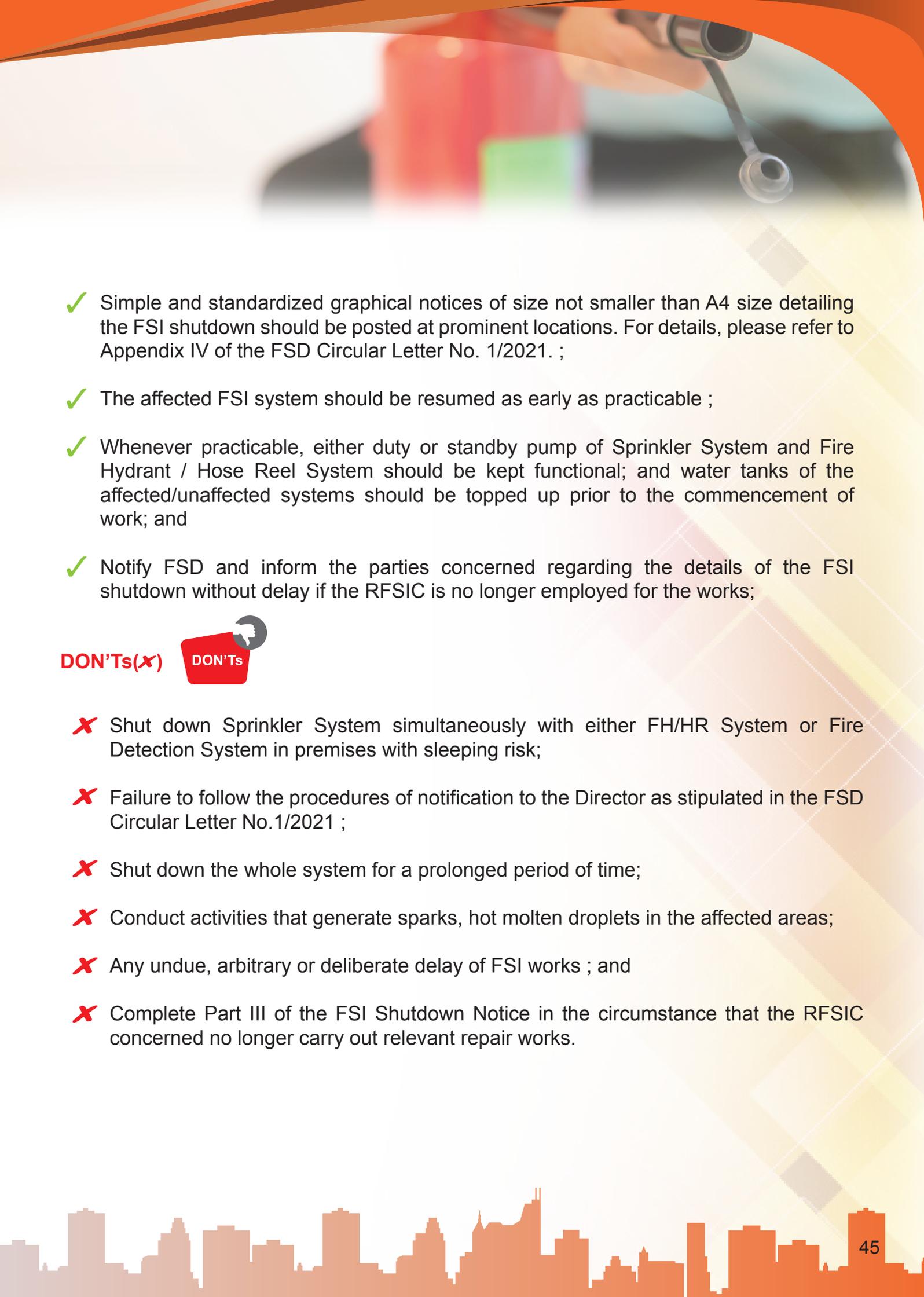
- (j) QP/AS of RFSIC should critically review the need for extension of FSI shutdown and personally confirm such need / resumption of FSI vide the written notification (Part II and III of Appendix VI refer). Serial number of relevant FS 251 which was previously issued for the work(s) must also be provided in the written notification.

#### 4.5.2 DOs(✓) and DON'Ts(x)

DOs (✓)



- ✓ The residents / occupants / property management company should be notified of the FSI shutdown, i.e. the date of commencement and the anticipated date of completion of the maintenance/modification/repair;

- 
- ✓ Simple and standardized graphical notices of size not smaller than A4 size detailing the FSI shutdown should be posted at prominent locations. For details, please refer to Appendix IV of the FSD Circular Letter No. 1/2021. ;
  - ✓ The affected FSI system should be resumed as early as practicable ;
  - ✓ Whenever practicable, either duty or standby pump of Sprinkler System and Fire Hydrant / Hose Reel System should be kept functional; and water tanks of the affected/unaffected systems should be topped up prior to the commencement of work; and
  - ✓ Notify FSD and inform the parties concerned regarding the details of the FSI shutdown without delay if the RFSIC is no longer employed for the works;

### **DON'Ts(x)**



- ✗ Shut down Sprinkler System simultaneously with either FH/HR System or Fire Detection System in premises with sleeping risk;
- ✗ Failure to follow the procedures of notification to the Director as stipulated in the FSD Circular Letter No.1/2021 ;
- ✗ Shut down the whole system for a prolonged period of time;
- ✗ Conduct activities that generate sparks, hot molten droplets in the affected areas;
- ✗ Any undue, arbitrary or deliberate delay of FSI works ; and
- ✗ Complete Part III of the FSI Shutdown Notice in the circumstance that the RFSIC concerned no longer carry out relevant repair works.



### 4.5.3 Common Irregularities

Date commenced : 開始日期	15 March 2018	Estimated Completion Date : 預計完工日期	31 December 2019
<b>Part II 第二部 - Extension of the Shutdown Period for Work 工程延期通知</b>			
The above FSI has to be shut down until 31.12.2020 (Date) due to _____			

Undue delay of the shutdown period (e.g. shutdown for years)

<b>Part III 第三部</b>	
*ACTUAL COMPLETION DATE 正式完工日期	10.17.2020
非本公司維修	
Remark: FSCC will confirm receipt of this notification by returning it by fax which 備註: 消防通訊中心會以加上編號蓋印的回覆傳真確認收妥這份通知書。	

Part III of the FSI Shutdown Notice should not be completed by the RFSIC, which was no longer carry out relevant repair works



## 4.6 FSI/314A Submission

Apart from the statutory requirement under the Fire Service (Installations and Equipment) Regulations, Cap 95B, Laws of Hong Kong for the maintenance of FSI, as per FSD Circular Letter No. 4/96<sup>19</sup>, if the work involves change of FSI layout or location of fixed equipment, a Certificate of Compliance, i.e. FSI/314A together with two copies of as-built FSI layout plans should be submitted to the Director of Fire Services in addition to the copy of F.S. 251. The checklist to facilitate the submission of FSI/314A is appended at Appendix V as general reference.

### 4.6.1 Useful Tips

- ✧ The form FSI/314A shall be duly signed by the appointed RFSIC / Consultant;
- ✧ Location of A&A works as stated in the form FSI/314A shall tally with drawings;
- ✧ Type of FSI shall be clearly stated in the form FSI/314A (Separate FSI/314A form shall be submitted for Improvised Sprinkler System); and
- ✧ The scale of plans and coloring of pipework shall comply with FSD Circular Letter No. 4/96;
- ✧ Prior approval shall be obtained for the following FSI works: -
  - Replacement / Alteration of type of FSI;
  - Works required approval from other departments (e.g. Fire Shutter); and
  - FSI designed for Fire Services Personnel

### 4.6.2 General Guidelines

- (a) Installation, maintenance, repair or inspection of FSI which categorized as alteration and addition works shall be certified by the RFSIC through FS251. For works involves change of FSI layout or location of fixed equipment, FSI/314A shall be submitted together with two copies of as-built FSI plans to FSD in addition to the FS251 for recording.
- (b) It is important that accurate and precise information shall be provided in the plans submitted under FSI/314A to reflect the actual work done of the concerned FSI in order to maintain proper recording of FSD for discharge of duties.
- (c) For A&A works of licensed premises, proper planning of submission schedule is recommended to allow smooth processing of plans and application.

<sup>19</sup> The FSD Circular Letter No. 4/96 can be downloaded from the following URL and QR Code :  
[https://www.hkfsd.gov.hk/eng/source/circular/e04\\_1996.pdf](https://www.hkfsd.gov.hk/eng/source/circular/e04_1996.pdf)





## 4.7 Formulation of Fire Safety Improvement Plans

### 4.7.1 General Guidelines

- (a) The FSD Circular Letter No. 2/2018<sup>20</sup> was issued on 12.12.2018 to advise on the work procedures to be adopted for shutting down FSI in buildings/premises when carrying out fire safety improvement works in accordance with the Fire Safety (Commercial Premises) Ordinance (Cap. 502), Fire Safety (Buildings) Ordinance (Cap. 572) or Fire Safety (Industrial Buildings) Ordinance (Cap. 636);
- (b) RFSIC shall take heed of the hazards posed by the shutdown of FSI in building/premises during the fire safety improvement works;
- (c) RFSIC shall make professional assessment of the circumstances and strictly observe the FSI shutdown guidelines set out in Appendix 9 to the CoP (2012 Revision) and the latest guidelines/ FSD Circular Letter issued by the FSD; and
- (d) RFSIC shall shut down the FSI in affected zone only.



Samples of the blue label tape and notice

<sup>20</sup> The FSD Circular Letter No. 2/2018 can be downloaded from the following URL and QR Code :  
[https://www.hkfsd.gov.hk/eng/source/circular/2018\\_02\\_eng\\_20181220\\_165710.pdf](https://www.hkfsd.gov.hk/eng/source/circular/2018_02_eng_20181220_165710.pdf)





#### 4.7.2 DOs(✓) and DON'Ts(x)



DOs (✓)

- ✓ Fire safety improvement works carried out in buildings/premises under the Fire Safety (Commercial Premises) Ordinance (Cap. 502), Fire Safety (Buildings) Ordinance (Cap. 572) or Fire Safety (Industrial Buildings) Ordinance (Cap. 636) commence only with the prior approval of the FSD on the fire service installation plans (i.e., FSI/314B, FSI/314C or FSI/314D submissions);
- ✓ Major components of the systems of FSI, such as fire service / sprinkler water tanks and pumps, should be installed at the initial stage to ensure that the integral parts of the systems are ready for use as early as practicable;
- ✓ Stick a **BLUE** label tape to the newly installed FSIs that are pending acceptance testing or yet to be commissioned or their parts and put up suitable notices for easy identification;
- ✓ If existing FSI are converted to form part of a new system, they should be shut down at the conversion stage **ONLY** so as to maintain their functionality and to avoid shutdown of FSI for months pending conversion while without annual inspections; and
- ✓ Exercise professional judgement in determining the duration and scale of the shutdown and strictly adhere to the shutdown procedures set out in the latest guidelines/ FSD Circular Letter issued by the FSD to minimise the impact.



DON'Ts(x)

- ✗ Shut down all systems simultaneously;
- ✗ Shut down FSI in unaffected zone; and
- ✗ Commence the improvement works without the prior approval of the FSD.



### 4.7.3 Common Irregularities



Blue label tape and notice were not stuck on the FSI that was not yet put in commission and manual fire alarm call point was not yet installed



Blue label tape was not stuck on the FSI that was not yet put in commission

## 4.8 Disposal of Fire Extinguishers

### 4.8.1 General Guidelines

- (a) It is the duty of owners of fire extinguishers to ensure the proper maintenance of the fire extinguishers. Under the existing legislation, the owners shall have the fire extinguishers inspected by RFSIC at least once a year;
- (b) In addition, the fire extinguishers shall undergo a hydraulic pressure test every five years to ensure that such fire extinguishers are always in good working conditions;
- (c) For the disposal of unserviceable fire extinguishers, members of the public are advised to contact the supplier or an RFSIC to arrange for collection or follow-up; and
- (d) For the RFSIC, it is the duty for them to ensure the proper handling of unserviceable fire extinguishers prior to their disposal in accordance with the notes on maintenance of fire extinguishers as set out in Appendix 11 of the CoP.

### 4.8.2 DOs(✓) and DON'Ts(✗)



- ✓ Stored-pressure type extinguishers should first be discharged and then have their contents cleared or collected according to appropriate procedures;
- ✓ The dry powder of dry powder type extinguishers should be collected for subsequent recycling or disposal;
- ✓ Clean agent fire extinguishers should be discharged to a closed recycling system;
- ✓ Used compressed gas cylinders should be returned to cylinder suppliers for handling;and
- ✓ Used compressed gas cylinders could also be sent to competent waste recyclers for recycling according to the conditions and types of cylinders, after pressure has been relieved.



## DON'Ts(x)



- x** Illegal disposal of any compressed gas cylinders in public places or at refuse collection points. Offenders are liable to:
  - A fixed penalty of HK\$1,500 under Fixed Penalty (Public Cleanliness and Obstruction) Ordinance (Cap.570);
  - A maximum fine of HK\$25,000 and imprisonment for 6 months under the Public Cleansing and Prevention of Nuisances Regulation (Cap.132BK); and
  - A maximum fine of HK\$200,000 and imprisonment of 6 months under the Waste Disposal Ordinance (Cap.354).
- x** No compressed gas cylinders shall be disposed of as general waste or irresponsibly discarded in public places or at refuse collection points.

### 4.8.3 Common Irregularities

- (a) Consumed fire extinguishers shall not be disposed of as general waste. Abandoned fire extinguishers with contents and under pressure would be regarded as “chemical wastes” and handled by Environmental Protection Department. For the disposal of expired or unserviceable fire extinguishers, they should be passed to the suppliers or RFSICs should be contacted to arrange for collection, follow-up, or reuse after inspection. Fire extinguishers with their contents cleared should also be recycled as scrap metal.



Improper disposal of fire extinguishers



- (b) Improper disposal of fire extinguishers containing harmful substance is a contravention of the provisions of the Waste Disposal Ordinance, which is an offence liable to penalties upon conviction, and the convicted persons may be required to pay for the cost of handling such extinguishers.
- (c) Moreover, any person who dumps waste (including fire extinguishers with pressure and chemical substance discharged) in a public place may contravene the Waste Disposal Ordinance and the Fixed Penalty (Public Cleanliness and Obstruction) Ordinance (Cap. 570). For details, please refer to the leaflet issued by EMSD, EPD, FEHD & FSD<sup>21</sup>.



Improper disposal of fire extinguishers

<sup>21</sup> The leaflet can be downloaded from the following URL and QR Code :

[https://www.epd.gov.hk/epd/sites/default/files/epd/english/environmentinhk/waste/prob\\_solutions/files/Unwanted%20Gas%20Cylinders%20Leaflet%20%28Eng%29.pdf](https://www.epd.gov.hk/epd/sites/default/files/epd/english/environmentinhk/waste/prob_solutions/files/Unwanted%20Gas%20Cylinders%20Leaflet%20%28Eng%29.pdf)





## Appendix I – Checklist for New & Amended Plan Submission

New Plan Submission			
	Item	Reference	✓/✗
1	Two sets of plans submitted to BD for referral to FSD (Remark: Three sets for works under Fire Safety (Commercial Premises) Ordinance or the Fire Safety (Buildings) Ordinance)	PNAP ADM-2	
2	Prescriptive FSI provided according to building occupancies	CoP	
3	Scale of plan provided	-	
4	International standards of various FSI incorporated in FS Notes	-	
5	Reference of FSD Circular Letter incorporated in FS Notes	FSD Website	
6	FS Notes shall tally with the layout plans (e.g. FS tank location/size)	-	
7	Non-code-compliance items submitted in the form of written enquiry prior to GBP submission	-	
8	Provision of Fireman's Lift	Part D, Section 4 of FS Code 2011 <sup>22</sup>	
9	Provision of EVA	Part D, Section 6 of FS Code 2011	
10	Provision of FSI for open kitchen	Clause C13.4 of FS Code 2011	
Amended Plan			
1	Amendment made in previous submission incorporated in the latest submission	-	
2	Submission area clearly indicated on plan	-	
3	Amendments highlighted/ underlined on layout plans/ FS Notes	-	

<sup>22</sup> The FS Code 2011 can be downloaded from the following URL and QR code : [https://www.bd.gov.hk/doc/en/resources/codes-and-references/code-and-design-manuals/fs2011/fs2011\\_full.pdf](https://www.bd.gov.hk/doc/en/resources/codes-and-references/code-and-design-manuals/fs2011/fs2011_full.pdf)





## Appendix II – Checklist for Fire Safety Assessment Report Submission

FSAR Submission		
	Item	
1	A FSAR should be prepared by fire safety consultant and submitted to the Authorities by AP of the development	✓ / ✗
2	The parts of building which are non-compliant to code(s) shall be identified	
3	Non-code-compliant designs and relevant technical constraints should be clearly listed	
4	The alternative solutions to compensate the non-code-compliant elements shall be clearly stated	
5	Reasonable fire size shall be estimated in mathematical approach or by software; and the growth rate according to type of development and usage shall be provided with justification	
6	Formulation of tenability criteria including smoke layer height, radiated heat transfer, converted heat transfer, toxicity, visibility and smoke temperature shall be clearly stated	
7	Proper establishment of the worst fire scenario for conducting fire safety analysis	
8	Proper evaluation of evacuees shall be provided according to use classification as defined in the FS Code 2011	
9	Detection time, alarm time, pre-movement time shall be determined by the type of fire detection system used, building management level and occupant characteristics	
10	Proper formulation of evacuation speed of evacuees by referring to international guidelines with justification	
11	Sensitivity assessments (such as the ineffectiveness of one largest exit) shall be carried out to verify the sustainability of tenable conditions and safe evacuation	
12	Actuation methodology of FSI system shall be identified with demonstration which is technically sound	
13	Proper assessment on the fire safety level of the development and occupants against the established tenable conditions	
14	Prudent formation of Bounding Conditions shall be provided	
15	Undertaking letter on implementation of FSMP and Bounding Condition from future operator / owner shall be provided	
16	CFD shall be conducted to verify the attainment of tenable conditions	



## Appendix III – Checklist for Fire Safety Management Plan Submission

FSMP Submission		
	Item	✓/✗
1	Bounding Conditions shall be included in the GBP	
2	Bounding Conditions shall be included in the DMC	
3	Undertaking letter shall be submitted by owner of development to declare the incorporation of FSMP to DMC	
4	The maintenance plan shall include comprehensive description of: <ul style="list-style-type: none"> <li>➤ FSI provisions</li> <li>➤ Maintenance interval</li> <li>➤ Maintenance methodologies</li> <li>➤ Special maintenance arrangement for relevant FSI</li> <li>➤ Relevant daily house keeping checklist incorporating the features of the premises</li> </ul>	
5	Escape routes as shown in FSMP shall tally with the ones as delineated in the latest approved GBP	
6	The training plan shall include: <ul style="list-style-type: none"> <li>➤ Facilities management team structure</li> <li>➤ Details of roles and responsibilities of each staff</li> <li>➤ Staff training program</li> <li>➤ Details of fire drills</li> </ul>	
7	The fire action plan shall include comprehensive description of the procedures to be taken by each management staff in case of fire such as: <ul style="list-style-type: none"> <li>➤ Identification of fire location</li> <li>➤ Assist in evacuation of occupant especially person with disabilities</li> <li>➤ Provide assistance and information to FSD as required</li> </ul>	
8	Evacuation plans shall tally with the zoning and operation of fire alarm system as stated in FS Notes of GBP	
9	Procedures for any shutdown of FSI for inspection, maintenance, modification or repair as laid down in FSD Circular letter No. 1/2021 shall be followed	
10	Hierarchy, force strength, relevant duties of the Fire Safety Management Team shall be explicitly elaborated	



## Appendix IV – Checklists for Smoke Extraction System, Staircase Pressurization System & Ventilation/Air-conditioning Control System Submission

SES Submission		
	Item	✓/✗
1	Submission of SES drawings shall be accompanied by Form FSI/314 duly signed by AP and the appointed Fire Service Installation Consultant / Contractor certifying that the drawings are identical to the approved General Building Plan	
2	Two sets of FSI drawings as prepared according to Part I of FSD Circular Letter No. 4/96 (one set of drawings shall be coloured) and design reports shall be submitted	
3	GBP with FS Notes approved by FSD and compartmentation plans shall be enclosed to verify the actual extent of the system	
4	If the system is designed based on fire engineering approach, the approved FSAR shall be enclosed for reference	
5	The following drawings and documents shall be provided for assessment: - <ul style="list-style-type: none"> <li>➤ Design Report of the System</li> <li>➤ Schematic Diagram</li> <li>➤ Layout Plan</li> <li>➤ Mode Table</li> <li>➤ Elevation Plan showing the make-up inlet and smoke discharge outlet</li> <li>➤ Design Details of Supervisory Control Panel</li> <li>➤ Power Supply Schematic Diagram</li> <li>➤ FSI layout of Fire Detection System and / or Sprinkler System</li> </ul>	
6	All submissions are signed by a RPE under Cap 409 in Building Service, Fire or Mechanical Engineering for certifying the design is fully compliant with the statutory requirements	
7	The maximum velocity at smoke extraction outlet and make-up air intake shall comply with Clause B.11 under Section 5.23 of CoP	
8	Separate systems shall be provided for each fire compartment of atria or basement	
9	Shafts used for smoke extraction purpose shall contain no other services	
10	Discharge outlets for smoke shall be separated by not less than 5 m in any direction from all air inlets or other openings into any building	
11	No discharges shall be at a height above the surrounding horizontal surface of less than 3 m to the bottom of the outlet and where below 6 m shall not discharge downwards	
12	In all premises where sleeping normally occurs, all fans, motors, drives, starters, etc., shall be installed in duplicate with automatic changeover facilities	
13	In premises where dual purpose systems are utilized, duplicate plants as detailed in item 12 above shall be provided	



14	The following parts shall be included in the Design Report: -	
	➤ Description of building	
	➤ Design criteria of the system (i.e. Fire Engineering Approach or Prescriptive Approach)	
	➤ Description of system including means of extraction and make-up; arrangement of duty and stand-by plants; location of plant room etc	
	➤ Detail calculation of smoke extraction flow rate, make-up air flow rate and corresponding maximum velocity	
	➤ Control and actuation methodology of system	
	➤ Drawing list	
15	The followings shall be included in the Schematic Diagram: -	
	➤ Fan capacity, design flow rate and installation level of each smoke extraction outlet and make-up air intake	
	➤ Suitable FRR to be provided for the ductworks according to CoP	
	➤ Clear indication of smoke zone which tally with the approved FSAR /design report / FS Notes	
	➤ The fan, fire shutter, fire curtain and modulated fire and smoke damper are clearly designated and in line with the layout and mode table	
16	The followings shall be included in the Layout: -	
	➤ Fire compartmentation which tally with the approved GBP / FSAR	
	➤ Location of fire shutter, fire curtain and modulated fire and smoke damper shall tally with the approved GBP / Fire Engineering Report	
	➤ Clear indication of smoke zone which tally with the approved FSAR / design report / FS Notes	
	➤ Suitable FRR to be provided for the ductworks according to CoP	
	➤ The fan, fire shutter, fire curtain and modulated fire and smoke damper are clearly designated and in line with the schematic and mode table	
	➤ Fan capacity, design flow rate and installation level of each smoke extraction outlet and make-up air intake	
	➤ System shall be arranged such that the travel of the smoke is generally counter-flow to that of the egress/escape route	
	➤ Smoke shall not travel more than 30 m before entering the nearest point of inlet to the extract system and at least one extract point shall be provided within each 500 square metres unit of floor area	
17	The followings shall be included in the Mode Table: -	
	➤ "Normal", "Fire" and "No Power / Fail Safe" modes shall be included in the mode table	
	➤ Arrangement under boundary fire condition	
	➤ Interlocking arrangement between smoke extraction fan and make-up air fan / other means of make-up air	
	➤ Design shall be made to ensure a free passage of smoke and maintenance of fire compartmentation under no power / fail safe condition	
	➤ The fan, fire shutter, fire curtain and modulated fire and smoke damper are clearly designated and in line with the schematic and mode table	



## SPS Submission

	Item	✓ / ✗
1	Submission of SPS drawings shall be accompanied by Form FSI/314 duly signed by AP and the appointed Fire Service Installation Consultant / Contractor certifying that the drawings are identical to the approved GBP	
2	Two sets of FSI drawings as prepared according to Part I of FSD Circular Letter No. 4/96 (one set of drawings shall be coloured) and design reports shall be submitted	
3	GBP with FS Notes approved by FSD and compartmentation plans shall be enclosed to verify the actual extent of the system	
4	If the system is designed based on fire engineering approach, the approved FSAR shall be enclosed for reference	
5	The following drawings and documents shall be provided for assessment: - <ul style="list-style-type: none"> <li>➤ Design Report of the System</li> <li>➤ Schematic Diagram</li> <li>➤ Layout Plan</li> <li>➤ Mode Table</li> <li>➤ Elevation Plan showing the air inlet, pressure relief and air release outlet</li> <li>➤ Design Details of Supervisory Control Panel</li> </ul>	
6	All submissions are signed by an RPE under Cap 409 in Building Service, Fire or Mechanical Engineering for certifying the design is fully compliant with the statutory requirements	
7	Safety factor shall be included for estimation of uncertain leakage path according to BS 5588-4	
8	Safety factor shall be included for leakage through ductworks according to BS 5588-4	
9	Clear identification of class of system according to BS 5588-4	
10	Means of pressure relief shall be clearly stated	
11	Proper design shall be made when there are both SES and SPS serving the same accommodation such that satisfactory performance shall be ensured during simultaneous operation of both systems	
12	The following parts shall be included in the Design Report: - <ul style="list-style-type: none"> <li>➤ Description of building</li> <li>➤ Design criteria of the system (i.e. Fire Engineering Approach or Prescriptive Approach)</li> <li>➤ Description of system including class of system; arrangement of duty and stand-by plants; means of air release and pressure relief; location of plant rooms etc</li> <li>➤ Detail calculation of design air flow rate of pressurization fans and air release fans; effective area of pressure relief vent under critical scenario in both close door and open door condition</li> </ul>	



	<ul style="list-style-type: none"> <li>➤ Control and actuation methodology of system</li> <li>➤ Drawing list</li> <li>➤ Door schedule</li> </ul>	
13	<p>The followings shall be included in the Schematic Diagram: -</p> <ul style="list-style-type: none"> <li>➤ Fan capacity, design flow rate and installation location of pressure relief vent, air inlet and air release louver</li> <li>➤ Suitable FRR to be provided for the ductworks according to CoP</li> <li>➤ Clear indication of pressure differential label</li> <li>➤ The fans and Modulated Fire and Smoke Damper are clearly designated and in line with the layout and mode table</li> <li>➤ Single / multiple inject system shall be adopted according to the CoP based on the building height</li> <li>➤ System operation condition under critical scenario in both close door and open door condition</li> <li>➤ Independent air intake louvers facing two different directions to be included if such louvers are not installed near ground level</li> <li>➤ Probe type smoke detector installed in the air intake ductwork</li> <li>➤ Area of pressure relief vent</li> </ul>	
14	<p>The followings shall be included in the Layout: -</p> <ul style="list-style-type: none"> <li>➤ Fire compartmentation which tally with the approved GBP / FSAR</li> <li>➤ Location of fire shutter and modulated fire and smoke damper shall tally with the approved GBP / FSAR</li> <li>➤ Suitable FRR to be provided for the ductworks according to CoP</li> <li>➤ Clear indication of pressure differential label</li> <li>➤ The fan and modulated fire and smoke damper are clearly designated and in line with the schematic and mode table</li> <li>➤ Fan capacity, design flow rate and installation location of pressure relief vent, air inlet and air release louver</li> <li>➤ Smoke detector for actuation of system installed at distance not exceeding 1m from and outside the access doors to the staircase or its approach lobbies</li> </ul>	
15	<p>The followings shall be included in the Mode Table: -</p> <ul style="list-style-type: none"> <li>➤ "Normal", "Fire" and "No Power / Fail Safe" modes shall be provided in the mode table</li> <li>➤ Interlocking arrangement between pressurization fan and air release fan shall be included</li> <li>➤ Design shall be made to ensure maintenance of fire compartmentation under no power / fail safe condition</li> </ul>	



## VAC Submission

	Item	✓ / ✗
1	Submission of VAC drawings shall be accompanied by Form FSI/314 duly signed by AP and the appointed Fire Service Installation Consultant / Contractor certifying that the drawings are identical to the approved GBP	
2	Two sets of FSI drawings as prepared according to Part I of FSD Circular Letter No. 4/96 (one set of drawings shall be coloured) shall be submitted	
3	GBP with FS Notes approved by FSD and compartmentation plans shall be enclosed to verify the actual extent of the system	
4	If the system is designed based on fire engineering approach, the approved FSAR shall be enclosed for reference	
5	The following drawings and documents shall be provided for assessment: - <ul style="list-style-type: none"> <li>➤ Equipment Schedule</li> <li>➤ SchematicDiagram</li> <li>➤ LayoutPlan</li> </ul>	
6	The followings shall be included in the Equipment Schedule: - <ul style="list-style-type: none"> <li>➤ Designation of equipment</li> <li>➤ Area served by the equipment</li> <li>➤ Fire compartment according to the approved GBP</li> <li>➤ Air flow rate of equipment</li> <li>➤ Method of Tripping</li> <li>➤ Criteria for exemption of tripping according to CoP</li> <li>➤ Actuation device</li> <li>➤ Equipment to be tripped shall be highlighted</li> </ul>	
7	The followings shall be included in both Schematic Diagram and Layout: - <ul style="list-style-type: none"> <li>➤ Designation and capacity of equipment</li> <li>➤ Indication of fire compartment</li> <li>➤ Actuationdevice</li> <li>➤ Equipment to be tripped shall be highlighted</li> <li>➤ Manual override switch shall be highlighted</li> <li>➤ Fire dampers forming fire compartment shall be included</li> </ul>	



## Appendix V – Checklist for FSI/314A Submission

FSI/314A Submission		
	Item	✓ / ✗
1	Proper filling of Form FSI/314A: <ul style="list-style-type: none"> <li>➤ Type of FSI shall be clearly stated</li> <li>➤ Location of A&amp;A works shall tally with the drawings</li> <li>➤ The Form shall be signed by the appointed RFSIC / Consultant</li> <li>➤ Date of submission shall not be earlier than the completion date of works as stated in the FS 251</li> </ul>	
2	If the system is designed based on fire engineering approach, the approved FSAR shall be enclosed for reference	
3	The drawings shall be of scale of not less than 1:100	
4	The drawings shall be colored as appropriate, precise and readable	
5	Justification shall be provided for adoption of equipment such as high temperature rating sprinkler head	
6	Prior approval shall be granted for the following cases: <ul style="list-style-type: none"> <li>➤ Replacement of type of FSI</li> <li>➤ Relocation or modification of FSI design for Fire Services Personnel</li> <li>➤ FSI authorized by other Departments such as the Labour Department, Water Supplies Department and Buildings Department</li> </ul>	

## Appendix VI- FSI Shutdown Notice

致：香港消防處  
消防通訊中心  
傳真號碼：2311 0066  
填寫日期：\_\_\_\_\_

此欄由消防處消防通訊中心填寫
消防處檔案編號：
樓宇所屬消防局：

### 消防裝置關閉通知書

樓宇/屋苑名稱：_____	地區：_____
門牌號數及街道名稱：_____	<input type="checkbox"/> 香港 <input type="checkbox"/> 九龍 <input type="checkbox"/> 新界
註冊消防裝置承辦商：_____	級別/編號：_____
本公司確認以下受影響的消防裝置需要 <b>通宵或連續超過 24 小時</b> 關閉	
<input type="checkbox"/> 消防栓/喉轆系統 <input type="checkbox"/> 花灑系統 <sup>(1)</sup> <input type="checkbox"/> 乾喉系統 <input type="checkbox"/> 火警偵測系統(存在休眠風險的處所) <input type="checkbox"/> 火警警報系統 <input type="checkbox"/> 噴水系統 <input type="checkbox"/> 排煙系統 <input type="checkbox"/> 樓梯增壓系統 <input type="checkbox"/> 街道消防栓系統	
以下持牌/註冊處所將會受到影響	上述消防裝置因以下法例要求進行消防安全改善工程
<input type="checkbox"/> 安老/殘疾院舍 <input type="checkbox"/> 酒店/賓館 <input type="checkbox"/> 幼兒中心 <input type="checkbox"/> 危險品倉 <input type="checkbox"/> 公眾娛樂場所(如戲院/劇院/主題公園等)	<input type="checkbox"/> Cap. 502 消防安全(商業處所)條例 <input type="checkbox"/> Cap. 572 消防安全(建築物)條例 <input type="checkbox"/> Cap. 636 消防安全(工業建築物)條例

第一部份 - 關閉消防裝置	填寫人 <sup>(4,5)</sup> 簽署	承辦商蓋印	消防通訊中心蓋印/填寫
開始關閉日期：_____			CMS updated & checked
預計完成日期 <sup>(2)</sup> ：_____			By: _____ Rank/No.
FS 251 <sup>(3)</sup> 編號(如有)：_____			Date: _____
填寫人 <sup>(4,5)</sup> 姓名：_____ 手提電話：_____ 公司電話：_____ 傳真號碼：_____			

第二部份 - 延長關閉消防裝置	填寫人 <sup>(4)</sup> 簽署	承辦商蓋印	消防通訊中心蓋印/填寫
工程需延期至 <sup>(2)</sup> ：_____			CMS updated & checked
FS 251 <sup>(3)</sup> 編號(如有)：_____			By: _____ Rank/No.
			Date: _____
填寫人 <sup>(4)</sup> 姓名：_____ 手提電話：_____ 公司電話：_____ 傳真號碼：_____			

第三部份 - 恢復消防裝置	填寫人 <sup>(4)</sup> 簽署	承辦商蓋印	消防通訊中心蓋印/填寫
工程完成日期：_____			CMS updated & checked
FS 251 <sup>(3)</sup> 編號：_____			By: _____ Rank/No.
			Date: _____
填寫人 <sup>(4)</sup> 姓名：_____ 手提電話：_____ 公司電話：_____ 傳真號碼：_____			

上述已關閉的消防系統不再由本公司負責有關工程，本公司已把該系統的狀況詳細告知委聘人

- 註1：花灑系統應**避免**與消防栓/喉轆系統或火警偵測系統(存在休眠風險的處所)同時關閉。  
 註2：一般而言，除了因法例要求進行的消防安全改善工程外，每次關閉/延長關閉消防裝置的時間不應超過**14天**。  
 註3：註冊消防裝置承辦商須於完成**檢查**任何消防裝置或設備後**14天內**發出一份證明書。  
 註4：第一、第二及第三部份填寫人必須為**合資格人士(QP)**或**獲授權簽署證書人士(AS)**。  
 註5：如承辦商員工在進行工程時認為有必要關閉消防裝置，承辦商可在緊急情況下授權員工代其填寫通知書。



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# Acknowledgement

I would like to express my sincere thanks to my fellow colleagues of the Building Improvement Divisions, Fire Service Installations Division, Fire Service Installations Task Force, New Projects Division and Policy Division for putting forth valuable comments and constructive recommendations in the preparation of the guide.

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