

FSD CL No. 2/2024

Fire Protection Measures in High-rise Buildings under Construction

New Projects Division
Senior Station Officer LAU Yin-pok

Background

- Several notable fires in high-rise buildings under construction
 - No. 4 alarm fire in Middle Road in Tsim Sha Tsui in 2023
- Review of fire protection measures in high-rise buildings under construction (existing requirements stipulated in FSD CL No. 2/2008)
- Consultation engaged relevant professional bodies, trades and government departments



Stakeholders involved in consultation

1. Fire Services Department (FSD) 消防處
2. Architectural Services Department (ArchSD) 建築署
3. Buildings Department (BD) 屋宇署
4. Electrical and Mechanical Services Department (EMSD) 機電工程署
5. Housing Department (HD) 房屋署
6. The Association of Architectural Practices (AAP) 建築師事務所商會
7. The Hong Kong Federation of Electrical and Mechanical Contractors Limited (FEMC) 香港機電工程商聯會
8. The Association of Registered Fire Service Installation Contractors of Hong Kong Limited (FSICA) 香港註冊消防工程公司商會
9. Hong Kong Construction Association (HKCA) 香港建造商會
10. The Hong Kong Institute of Architects (HKIA) 香港建築師學會
11. The Hong Kong Institution of Engineers (HKIE) 香港工程師學會
12. The Hong Kong Institute of Surveyors (HKIS) 香港測量師學會
13. The Real Estate Developers Association of Hong Kong (REDA) 香港地產建設商會

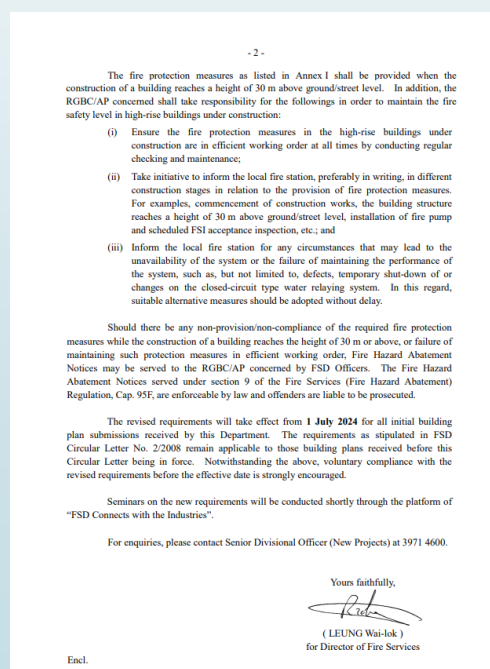
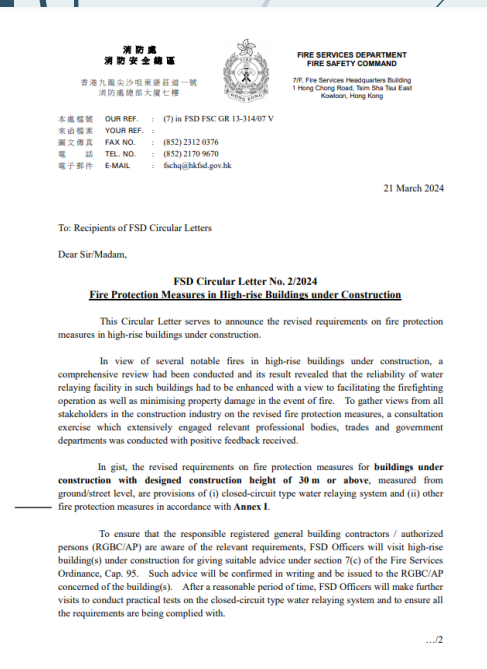
FSD Circular Letter No. 2/2024

- Revised requirements announced through FSD Circular Letter No. 2/2024 on 21/3/2024
- Applicable to buildings under construction with designed construction height of 30 m or above

Construction of a building reaches a height of 30 m

Closed-circuit type water relaying system

Other fire protection measures



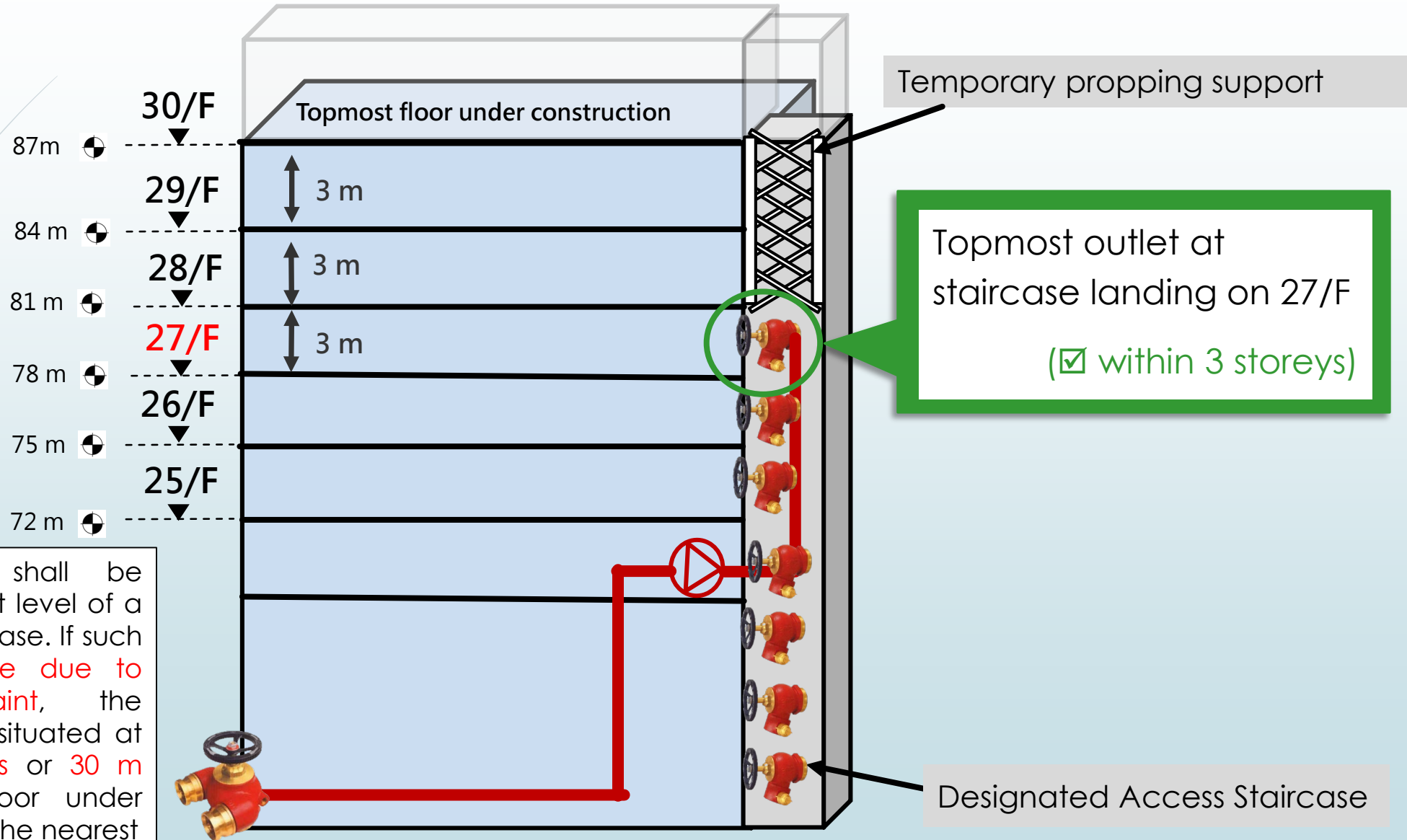
Comparison between FSD CL No. 2/2008 and FSD CL No. 2/2024

Requirement	FSD CL No. 2/2008	FSD CL No. 2/2024
Provision of water relaying facility when the construction height reaches 30 m	<ul style="list-style-type: none">- Installation of electrical fire pump(s) or placing portable fire pump(s) on designated floor (for designed height 30-80 m); or- Closed-circuit type water relaying system (for designed height over 80 m)	Closed-circuit type water relaying system (for designed construction height 30 m or above) (only option)

Comparison between FSD CL No. 2/2008 and FSD CL No. 2/2024

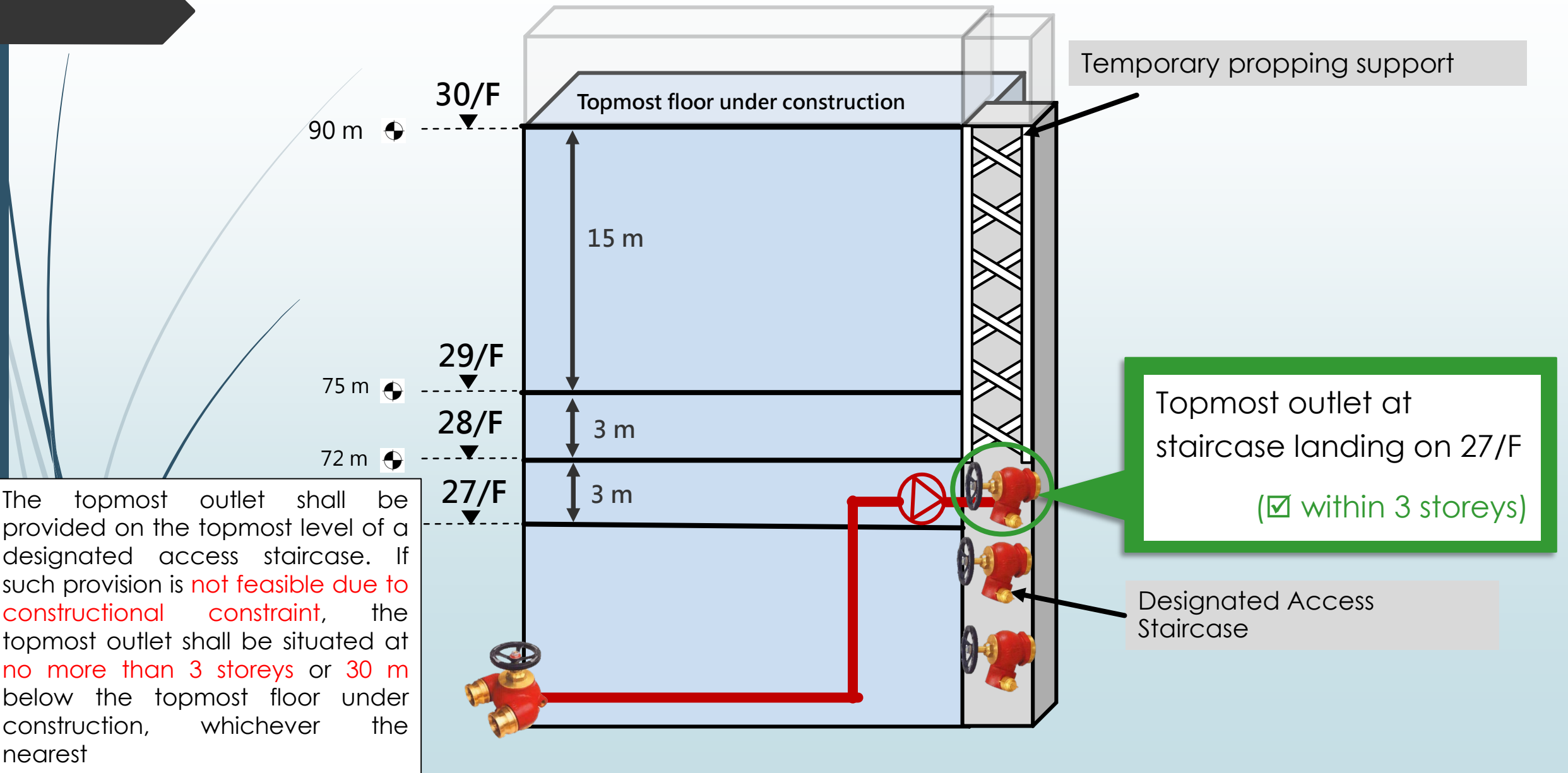
Requirement	FSD CL No. 2/2008	FSD CL No. 2/2024
Topmost hydrant outlet of the closed-circuit type water relaying system	Situating at no more than 7 storeys or 30 m below construction floor , whichever the nearest	Situating at topmost level of a designated access staircase . If not feasible due to construction constraint, situating at no more than 3 storeys or 30 m below construction floor , whichever the nearest

Example 1 – General Building



The topmost outlet shall be provided on the topmost level of a designated access staircase. If such provision is not feasible due to constructional constraint, the topmost outlet shall be situated at no more than 3 storeys or 30 m below the topmost floor under construction, whichever the nearest

Example 2 – Floor with high ceiling



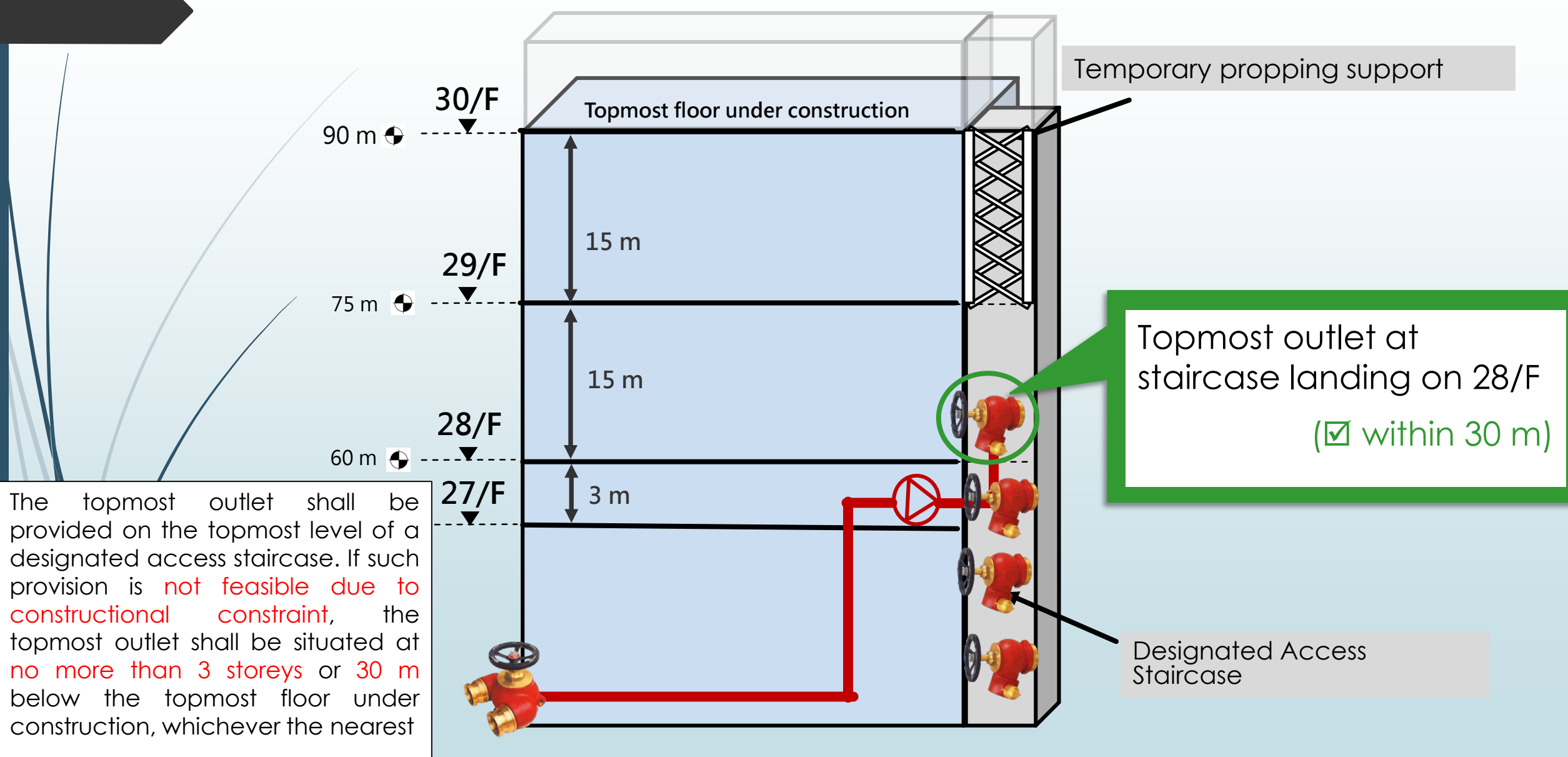
The topmost outlet shall be provided on the topmost level of a designated access staircase. If such provision is **not feasible due to constructional constraint**, the topmost outlet shall be situated at **no more than 3 storeys** or **30 m** below the topmost floor under construction, whichever the nearest

Topmost outlet at staircase landing on 27/F
(✓ within 3 storeys)

Temporary propping support

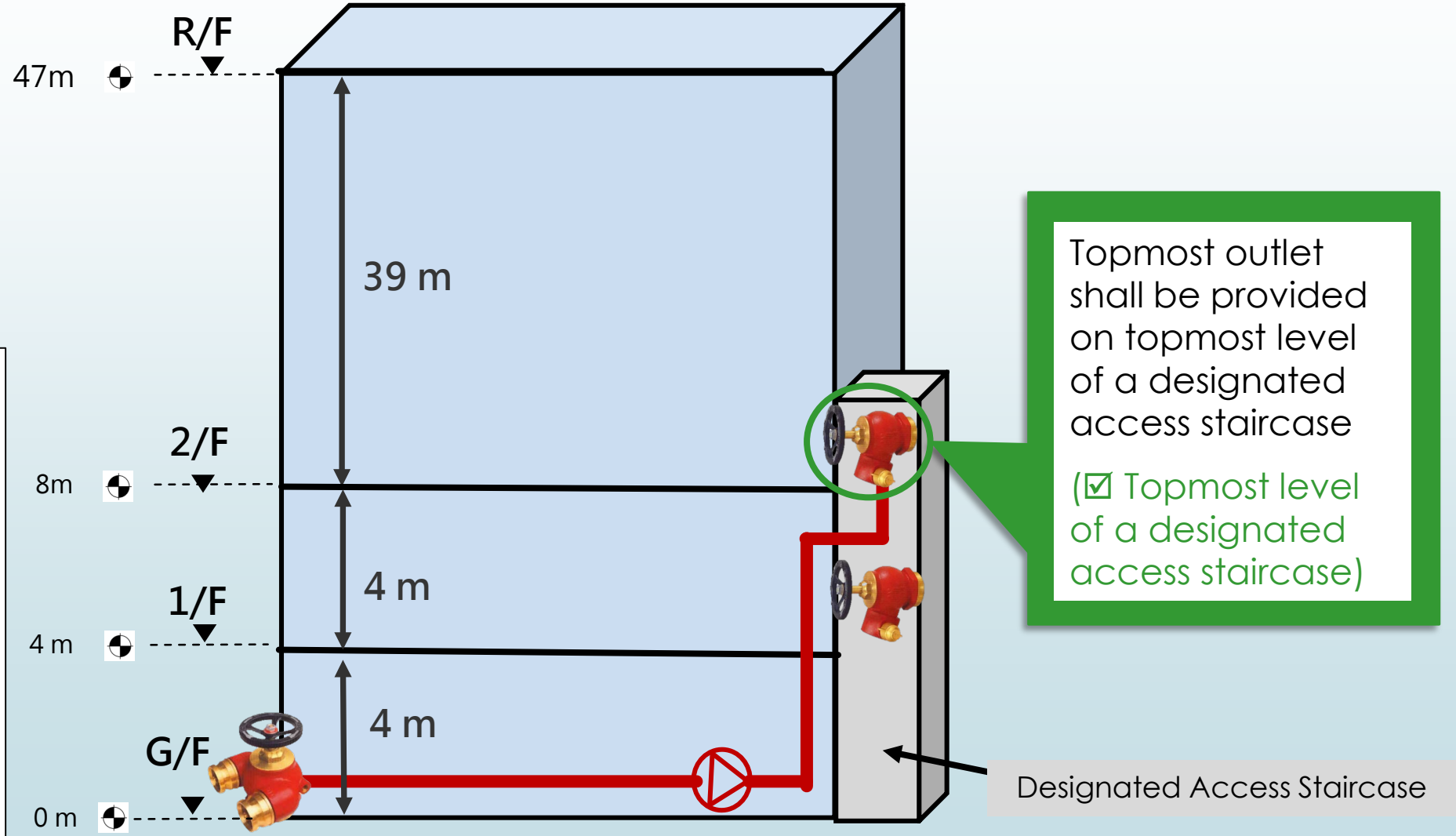
Designated Access Staircase

Example 3 – Two floors with high ceiling



Example 4 – Topmost outlet at topmost level of a designated access staircase


The topmost outlet shall be provided on the topmost level of a designated access staircase. If such provision is not feasible due to constructional constraint, the topmost outlet shall be situated at no more than 3 storeys or 30 m below the topmost floor under construction, whichever the nearest



Topmost outlet shall be provided on topmost level of a designated access staircase
(✓ Topmost level of a designated access staircase)

Designated Access Staircase

Comparison between FSD CL No. 2/2008 and FSD CL No. 2/2024

Requirement	FSD CL No. 2/2008	FSD CL No. 2/2024
Connection between fire pump and riser	Providing flexible hoses on the floor(s) where portable fire pump(s) is/are situated for connecting the pump to the riser 	Fire pump shall be connected to riser by fixed pipelines

Comparison between FSD CL No. 2/2008 and FSD CL No. 2/2024

Requirement	FSD CL No. 2/2008	FSD CL No. 2/2024
Provision of firefighting equipment	N/A	<p>Following equipment shall be provided in every 5 storeys:</p> <ol style="list-style-type: none">1. Minimum of two fire hoses (70 mm) of minimum 20 m in length2. One nozzle



Examples of hoses and nozzle

Comparison between FSD CL No. 2/2008 and FSD CL No. 2/2024

Requirement	FSD CL No. 2/2008	FSD CL No. 2/2024
Distinguishing the temporary water relaying system from the permanent fire hydrant system	Suitable signage of F.S. inlet and fire hydrant outlet in prominent positions	<ol style="list-style-type: none">1. Durable signage of F.S. inlet, fire pump and fire hydrant outlet in prominent positions2. Blue label tape for permanent fire hydrant system not yet in commission



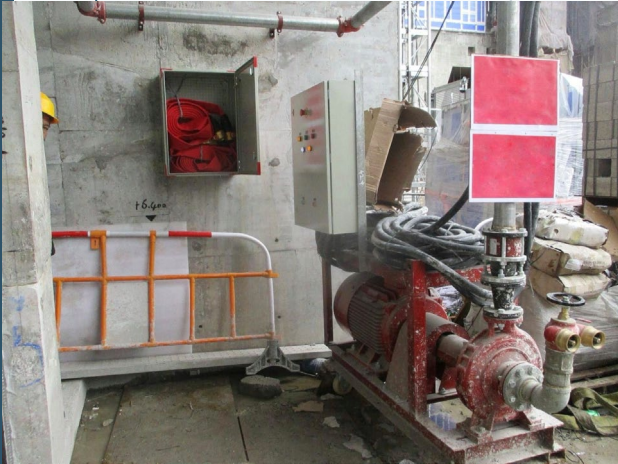
Closed-circuit type water relaying system

- ▶ F.S. Inlet
- ▶ Riser
- ▶ Fire Pump
- ▶ Fire Hydrant Outlet
- ▶ Power Supply

Temporary fire protection measures

Specification similar to Fire hydrant / hose reel system in Code of Practice for Minimum Fire Service Installations and Equipment

Closed-circuit type water relaying system



► F.S. Inlet

- Situated in a prominent position on ground/street level at the exterior of each building block
- For construction site involving **one building only**, F.S. inlet could be provided at **temporary main entrance** of the construction site

► Riser

- Located at or adjacent to a designated access staircase
- Provision shall be made for the water supplied to the inlet to bypass such pump(s) in the event of failure of the pump(s)

Closed-circuit type water relaying system

► Fire Pump

- shall be provided to relay water for all floors
- Shall be connected to riser by **fixed pipelines**
- Shall be capable of providing adequate flow of not less than 900 l/min
 - Any 2 hydrant outlets each with a flow of 450 l/min at a running pressure of not less than 3.5 (bar) but not more than 8.5 (bar)
- Can be controlled simultaneously by start/stop push buttons at the F.S. inlet

Closed-circuit type water relaying system

► Fire Hydrant Outlet

- shall be provided on **every stabilized floor** except the ground/street level
- The topmost outlet shall be provided on the **topmost level** of a designated access staircase
- If such provision is not feasible due to constructional constraint, the topmost outlet shall be situated at no more than **3 storeys or 30 m below** the topmost floor under construction, whichever the nearest



Closed-circuit type water relaying system

► Power Supply

- Each fire pump shall be connected to the normal power supply from the construction site and to a secondary power source
- If the secondary power source is provided by an external means (e.g. diesel generator or enertainer, etc.)
 - It shall be capable of sustaining full load operation of all fire pump(s) for a period of **not less than 6 hours**
 - Shall be capable of supplying power for all fire pump(s) in **not more than 15 seconds** in case of failure of normal power supply



e.g. Enertainer (淨能櫃)

Other fire protection measures

► Site Fire Hoses and Nozzles

- Minimum of **two detachable flexible fire hoses** of 70 mm in diameter and minimum 20 m in length and **one nozzle** shall be provided at every five storeys



► Site Information

- Construction status including current construction height and number of storeys, floor of fire pump(s) located, quantity of fire pump shall be provided
- A set of schematic diagram showing the typical arrangements of electricity supply to fire pump(s) shall be provided

Visits to construction sites by FSD personnel

- FSD Officers will visit high-rise building(s) under construction for giving suitable advice
- Such advice will be **confirmed in writing** and be issued to the registered general building contractors / authorized persons (RGBC/AP) concerned of the building(s)
- After a reasonable period of time, FSD Officers will make further visits to conduct **practical tests on the closed-circuit type water relaying system** and to ensure all the requirements are being complied with





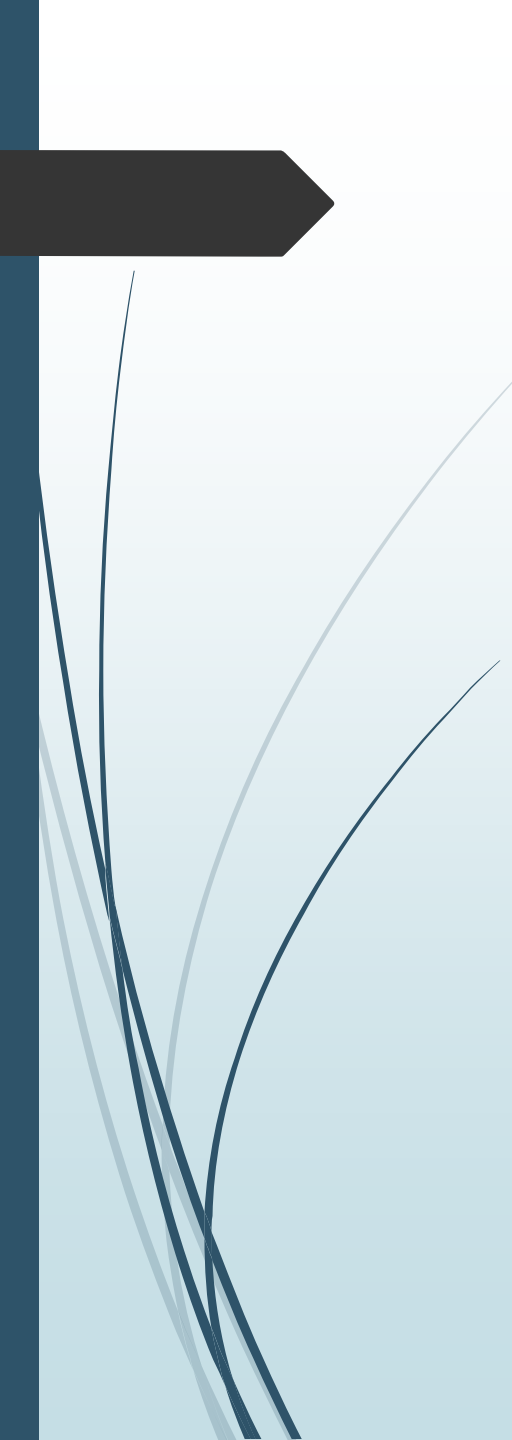
Responsibilities of registered general building contractors / authorized persons

- ▶ Ensure the fire protection measures in the high-rise buildings under construction are **in efficient working order** at all times by conducting regular checking and maintenance
 - ▶ Until submission of FSI/501 of permanent fire hydrant / hose reel system
- ▶ Take initiative to inform the local fire station, preferably in writing, in different construction stages
 - ▶ commencement of construction works
 - ▶ the building structure reaches a height of 30 m
 - ▶ installation of fire pump
 - ▶ scheduled FSI acceptance inspection



Responsibilities of registered general building contractors / authorized persons

- ▶ Inform the local fire station for any circumstances that may lead to the unavailability of the system or the failure of maintaining the performance of the system
- ▶ Defects, temporary shut-down of or changes on the closed-circuit type water relaying system



Responsibilities of registered general building contractors / authorized persons (RGBC/AP)

- Should there be any non-provision/non-compliance of the required fire protection measures while the construction of a building reaches the height of 30 m or above; or
- Failure of maintaining such protection measures in efficient working order
- **Fire Hazard Abatement Notices** may be served to the RGBC/AP concerned by FSD Officers
- Fire Hazard Abatement Notices are enforceable by law and offenders are **liable to be prosecuted**



Effective Date

- ▶ Revised requirements will take effect from **1 July 2024**
- ▶ For all **initial building plan submissions** received by this Department
- ▶ For initial building plan submission before the effective date, FSD CL No. 2/2008 remains applicable. However, voluntary compliance with the revised requirements is strongly encouraged



Thank You

Introduction of the

Registered Fire Engineer Scheme

NG Chun-ki

Assistant Divisional Officer (Support) (Acting)
Fire Services Department

NOTE

1. CONCRETE PUNTHS FOR GRP TANK & PUMP ARE BY OTHER.
2. SUPPORTING FRAME FOR GLASS TANK IS BY OTHER.
3. CONTROL VALVE CABINETS ARE BY OTHERS.
4. ALL CABLES SHALL RUN ON CEILING OR WALL AS FAR AS POSSIBLE.
5. 100A TPN INCOMING POWER SUPPLY SWITCH IS BY OTHER.
6. SPRINKLER / NOZZLE AT (1) AND (2) SHALL HAVE 20mm AND 25mm THREAD RESPECTIVELY. ALL OTHERS SHALL HAVE 15 mm THREAD.
7. SPRINKLER / NOZZLE AT (3) TO (5) AND (6) TO (7) ARE BY OTHER.

1. Objectives
2. Consultations & Study

3. Duties & Responsibilities
4. Registration
5. Implementation

6. Licence Application (Current Practice)
7. Licence Application (RFE Scheme)

8. Committee, Panels & Boards
9. Disciplinary Offences
10. Conflicts of Interest
11. Code of Practice

12. Timetable

Objectives

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Objectives of RFE Scheme



- ◆ To facilitate business operation
- ◆ To optimize the use of professional human resources
- ◆ To provide greater flexibility to applicants

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Consultations & Study

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Summary of Consultations and Study



- Trade consultations conducted in 2007, 2011 and 2017
- Business Impact Assessment conducted in 2012

Year	Event	Major Issue	
2004	Consultation letter	EU's recommendations	
2007	1st trade consultation	Phased implementation pioneered with 'licensed premises'	
		Option A	FSD will issue Fire Services Certificate upon receipt of Fire Safety Certificate from RFE
		Option B	Fire Safety Certificate issued by RFE will have the same validity as Fire Services Certificate issued by FSD
2011	2nd trade consultation	Option A	Single class - RFE(Fire)
		Option B	Separate classes - RFE(RA), RFE(FSI) & RFE(VS)
2012	BIA	Stakeholders generally supported the Scheme	
2017	3rd trade consultation	Registration eligibilities, disciplinary and appeal mechanism	
2023	4th trade consultation	Code of Practice	

Stakeholders of Consultations



Engineering Sector

ACEHK

ASHRAE
(HK Chapter)

CIBSE
(HK Branch)

HKIE

HKIE
(Fire Discipline)

HKIE
(Fire Division)

IFE
(HK Branch)

Ir Dr The Hon
LO Wai-kwok,
SBS, MH, JP

Surveying and Architectural Sector

AAP

BDLBSA

HKIA

HKIS

HKIS
(BSD)

RICS

Works Contractors

BSOMES

HKACRA

HKCA

HKFEMC

HKGBCA

HKRSCVA

RFSICA

Potential Clients

FHKHO

HKCSM

HKFORT

HKHA

HKTA

IDP

REDA

Property Management Sector

HKAPMC

HKFI

PMSA

Duties & Responsibilities

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Classes of Registration



◆ **RFE (Risk Assessment)**

◆ **RFE (Fire Service Installation)**

◆ **RFE (Ventilating System)**

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(BY OTHER)

Duties of RFE (Risk Assessment)



- ◆ Inspection of premises
- ◆ Fire risk assessment
- ◆ Recommendation on the suitability for intended use
- ◆ Fire safety requirements
- ◆ Inspection/assessment must be conducted :
 - ◆ personally by the RFE(RA); or
 - ◆ by another person under RFE(RA)'s supervision at the place
- ◆ Before issuing any FSR, RFE(RA) must submit the requirements to the Director for endorsement.

Specified Form
Downloadable at
Registered Fire
Engineer Scheme
homepage

Duties of RFE (FSI/VS)



- ◆ Inspection of premises
- ◆ Testing of FSI/VS
- ◆ Fire Safety (FSI/VS) Certificate
- ◆ Inspection/testing must be conducted :
 - ◆ personally by the RFE(FSI/VS); or
 - ◆ by another person under RFE's supervision at the place
- ◆ Within 3 working days after inspection/testing, RFE(FSI/VS) must issue an FSC to the client with copy to the Director
- ◆ The Director may carry out an Audit Check of any FSC

Specified Form
Downloadable at
Registered Fire
Engineer Scheme
homepage

Registration

0.85m x 0.85m x 1.1m(H)
CABINET FOR INLET

1 OF PIPE
AT 2200 AFFL

ECCENTRIC
REDUCER AT PUMP
SUCTION (TYPICAL)

1 OF PIPE AT
= 1100 AFFL

ESSENTIC
REDUCER
WITH INCLUDED
ANGLE $\leq 15^\circ$

DRAIN PIPE
FOR PUMP

FILL CUP

AT 1m AFFL

0.8m x 0.5m
x 0.8m(H)
GLASS TANK
300 LIT.
MOUNTED ON
0.7m HIGH
SS FRAME

AT 1m
AFFL

180A TPN
SWITCH
PUMP CONTROL
PANELS

1.2m(W) x 1.5m(H)
STAINLESS STEEL FRAME
WITH 1.2m(W) x 0.8m(H)
WOOD BOARD

PRESSURE SWITCH
ASSEMBLIES

1 OF 15 PIPES AT
2100 TO 2200 AFFL

1 OF PIPE AT 2200 AFFL

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Requirements for Registration



- At least 1 year of relevant working experience
- Registered Professional Engineer in any of the following discipline:

Discipline	RFE (RA)	RFE (FSI)	RFE (VS)
Fire	✓	✓	✓
Building Services		✓	✓
Mechanical		✓	✓
Electrical		✓	

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(BY OTHER)

Requirements for Registration



- At least 6 years of relevant working experience
- Bachelor degree** in any of the following disciplines:

Discipline (Engineering)	RFE (RA)	RFE (FSI)	RFE (VS)
Fire	✓	✓	✓
Building Services	Top-up course or equivalent	Top-up course or equivalent	Top-up course or equivalent
Mechanical	Top-up course or equivalent	Top-up course or equivalent	Top-up course or equivalent
Civil	Top-up course or equivalent	Top-up course or equivalent	Top-up course or equivalent
Structural	Top-up course or equivalent	Top-up course or equivalent	Top-up course or equivalent
Electrical		Top-up course or equivalent	
Building Surveying	Top-up course or equivalent	Top-up course or equivalent	Top-up course or equivalent

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Requirements for Registration



- At least 15 years of relevant working experience
- Competence** equivalent to, or higher than, the followings:

Discipline (Engineering)	RFE (RA)	RFE (FSI)	RFE (VS)
Fire	Top-up course or equivalent	Top-up course or equivalent	Top-up course or equivalent
Building Services	Top-up course or equivalent	Top-up course or equivalent	Top-up course or equivalent
Mechanical	Top-up course or equivalent	Top-up course or equivalent	Top-up course or equivalent
Civil	Top-up course or equivalent	Top-up course or equivalent	Top-up course or equivalent
Structural	Top-up course or equivalent	Top-up course or equivalent	Top-up course or equivalent
Electrical		Top-up course or equivalent	
Building Surveying	Top-up course or equivalent	Top-up course or equivalent	Top-up course or equivalent

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Matters about Registration



◆ Fees

- ◆ application for, or renewal of, registration
- ◆ issue of or amendment to certification / card

◆ Certificate of Registration and Registration Card

◆ Effective for 5 years

◆ Published in the Gazette

- ◆ available for public inspection at FSD website / office

Implementation

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Implementation



◆ Phased implementation

- ◆ RFE to familiarize in certification service
- ◆ FSD to share knowledge and experience to RFE
- ◆ FSD to evaluate market responses and risks

◆ FSD will maintain current services at different stages

- ◆  Fire risk assessment
- ◆  Compliance check
- ◆  Certification

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Certification by FSD



◆ Fire Risk Assessment

- ◆ Compatibility, accessibility, etc.
- ◆ Fire safety requirements
 - ◆ Fire service installation or equipment (FSI)
 - ◆ Ventilating system (VS)
 - ◆ Other items (MoE, PU foam, etc.)

◆ Compliance Check

- ◆ Inspection of premises
- ◆ Testing of FSI/VS
- ◆ Verification of FS 251, etc.



Licence Application

(Current Practice)

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Workflow of Licence Application



Referral of application

Licensing Authority

Fire risk assessment

FSD

(around 17 days)

Fire safety requirements

Completion of works

FSI

VS

Compliance check

FSD

(around 14 days)

Fire Services Certificate

Licence (subject to other requirements)

Licensing Authority

FILL CUP

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AT 1m AFFL

AT 1m AFFL

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Licence Application (RFE Scheme)

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6. SPRINKLER / NOZZLE AT ① AND ② SHALL HAVE 20mm AND 25mm THREAD RESPECTIVELY. ALL OTHERS SHALL HAVE 15 mm THREAD.
7. SPRINKLER / NOZZLE AT ③ TO ⑤ AND ⑥ TO ⑦ ARE BY OTHER.

Licence Application for Premises



◆ 18 Ordinances/Regulations

◆ 6 licensing authorities

Licensing authority	Licensed premises	Cap.
EDB	School	279
	Premises for conducting registered courses or exempted	493B
FEHD	General restaurant, light refreshment restaurant, factory canteen, bakery, food factory, composite food shop	132X
	Funeral parlour	132AD
	Premises for the sale and consumption of intoxicating liquor	109B
HAD	Karaoke establishment	573
	Amusement game centre	435
	Public dancing hall, dancing school	114A
	Bedspace apartment	447
	Club-house	376
	Cinema, theatre, place of public entertainment	172A
	Hotel, guest house	349
HKPF	Massage establishment	266
LCSD	Billiard centre, bowling centre, public skating rink	132BA
SWD	Residential care home for the elderly	459
	Residential care home for persons with disabilities	613
	Drug dependence treatment centre	566
	Child care centre	243

Workflow of Licence Application



Referral of application	Applicant				Licensing Authority			
Fire risk assessment	RFE(RA)		RFE(RA)		FSD		FSD	
Fire safety requirements	RFE(RA)		RFE(RA)		FSD		FSD	
Endorsement	FSD		FSD		FSD		FSD	
Completion of works	FSI	VS	FSI	VS	FSI	VS	FSI	VS
Compliance check	RFE (FSI)	RFE (VS)	RFE (FSI)	FSD	FSD	RFE (VS)	FSD	FSD
Fire Safety Certificate	RFE (FSI)	RFE (VS)	RFE (FSI)	FSD	FSD	RFE (VS)	FSD	FSD
Audit Check	FSD	FSD	FSD	FSD	FSD	FSD	FSD	FSD
Licence (subject to other requirements)	Licensing Authority							

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 7. SPRINKLER / NOZZLE AT (1) TO (3) AND (4) TO (6) ARE BY OTHER.

AT 1m AFFL
 18925
 CURTAIN (BY OTHER)
 AT 1m AFFL

Workflow of Audit Check



FSD conducts random Audit Check on certification works completed by RFE

In order

Minor discrepancies

Major discrepancies

FSD takes fire hazard abatement action against the licensee, informs licensing authority, and investigates against RFE for any contravention of Regulations or CoP

Disciplinary Board

FSD gives licensee reasonable period of time to rectify (and implement temporary mitigation measure(s) for major discrepancies)

Licensing authority issues warning letter and gives licensee reasonable period of time to rectify

FSD conducts follow-up check

Discrepancies rectified

Discrepancies not rectified

FSD informs licensing authority and records result

FSD informs licensing authority, licensees and RFE, and records result

FSD informs licensing authority to consider taking licence enforcement action

For major discrepancies cases, the licensing authority may revoke/suspend the licence

Committee, Panels & Boards

NOTE

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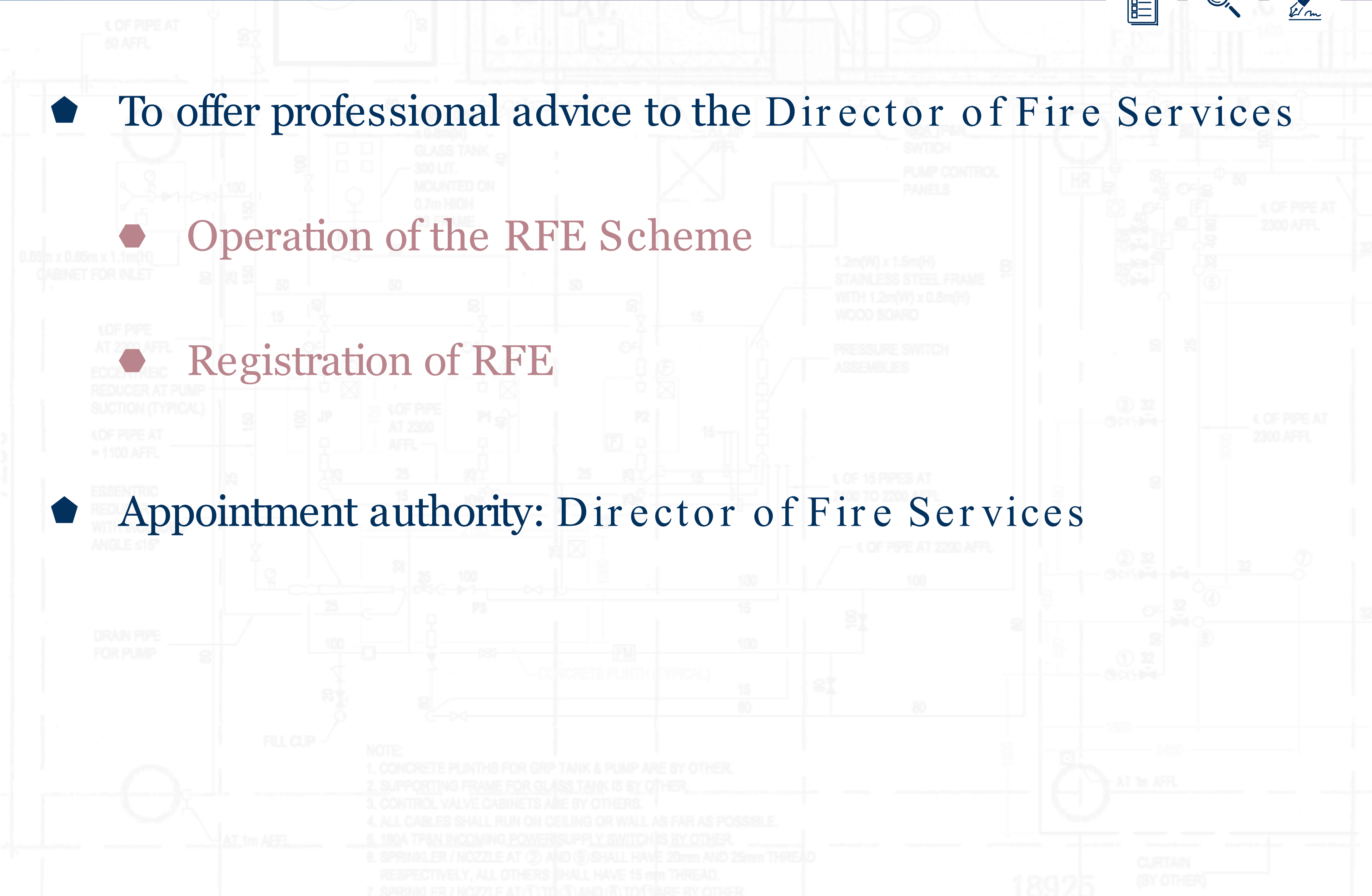


◆ To offer professional advice to the Director of Fire Services

◆ Operation of the RFE Scheme

◆ Registration of RFE

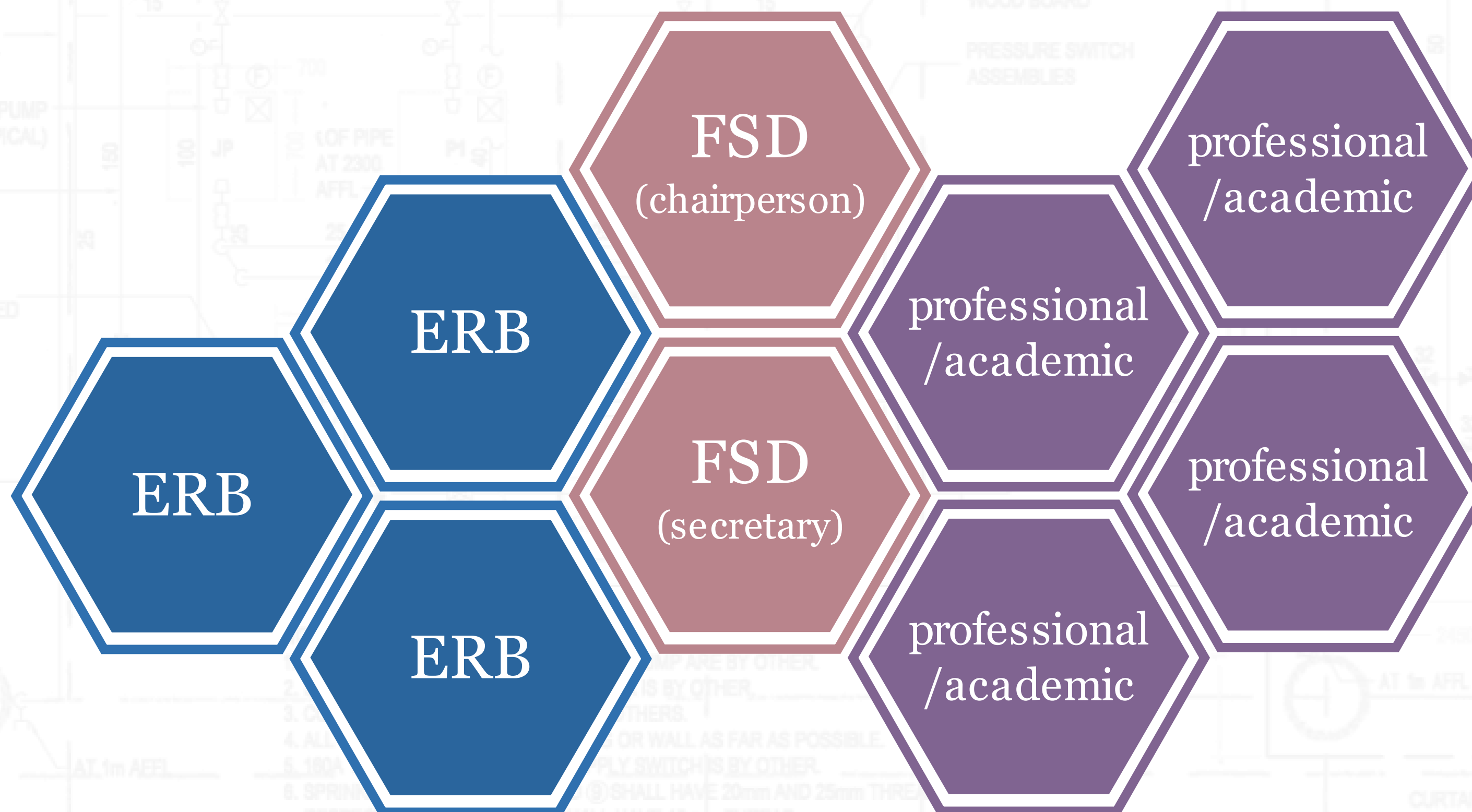
◆ Appointment authority: Director of Fire Services



Registration Committee



- ◆ FSD Officers as chairperson and secretary
- ◆ Nominations from Engineers Registration Board
- ◆ Nominations from professional or academic bodies



Interview Board Panel



- ◆ To conduct professional interviews with applicants
 - ◆ Assess applicants' level of competence
 - ◆ Recommend if the applications should be approved
- ◆ Appointment authority: Director of Fire Services
- ◆ Nominations from professional or academic bodies

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CURTAIN
(BY OTHER)

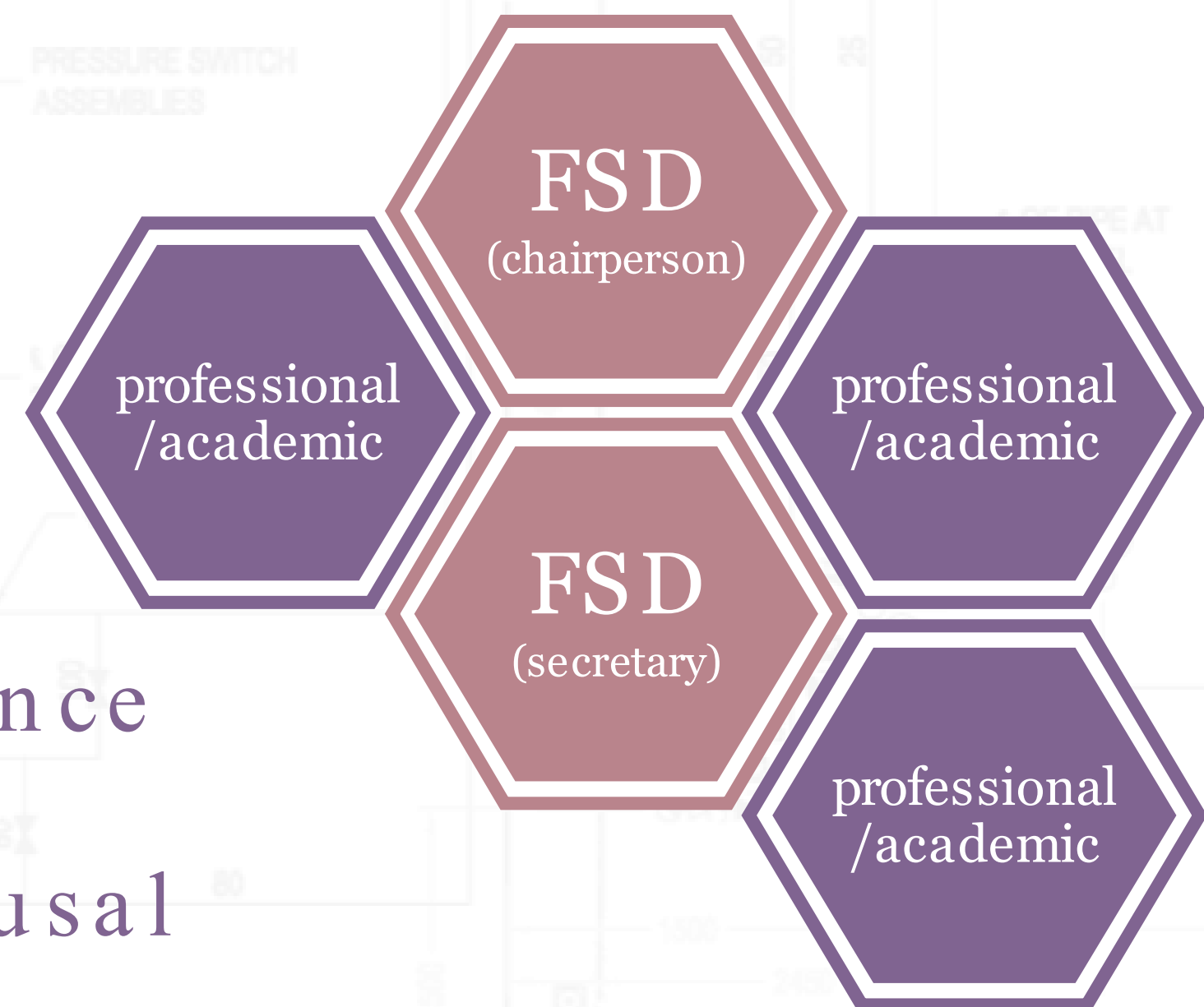
Interview Board



- ◆ Director appoints 3 members for Interview Board
- ◆ FSD Officers as chairperson and secretary

Functions of Interview Board

- ◆ examine applicant's qualifications
- ◆ conduct professional interview
- ◆ inquire applicant's relevant experience
- ◆ advise Director on approval or refusal



Disciplinary Board Panel



- ◆ To consider cases in which an RFE is suspected to have failed to discharge his/her duties properly
- ◆ Appointment authority: Secretary for Security
- ◆ Nominations from professional or academic bodies

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18925

CURTAIN
(BY OTHER)

Disciplinary Board



Secretary appoints 3 members for **Disciplinary Board**

FSD Officers as secretary and member

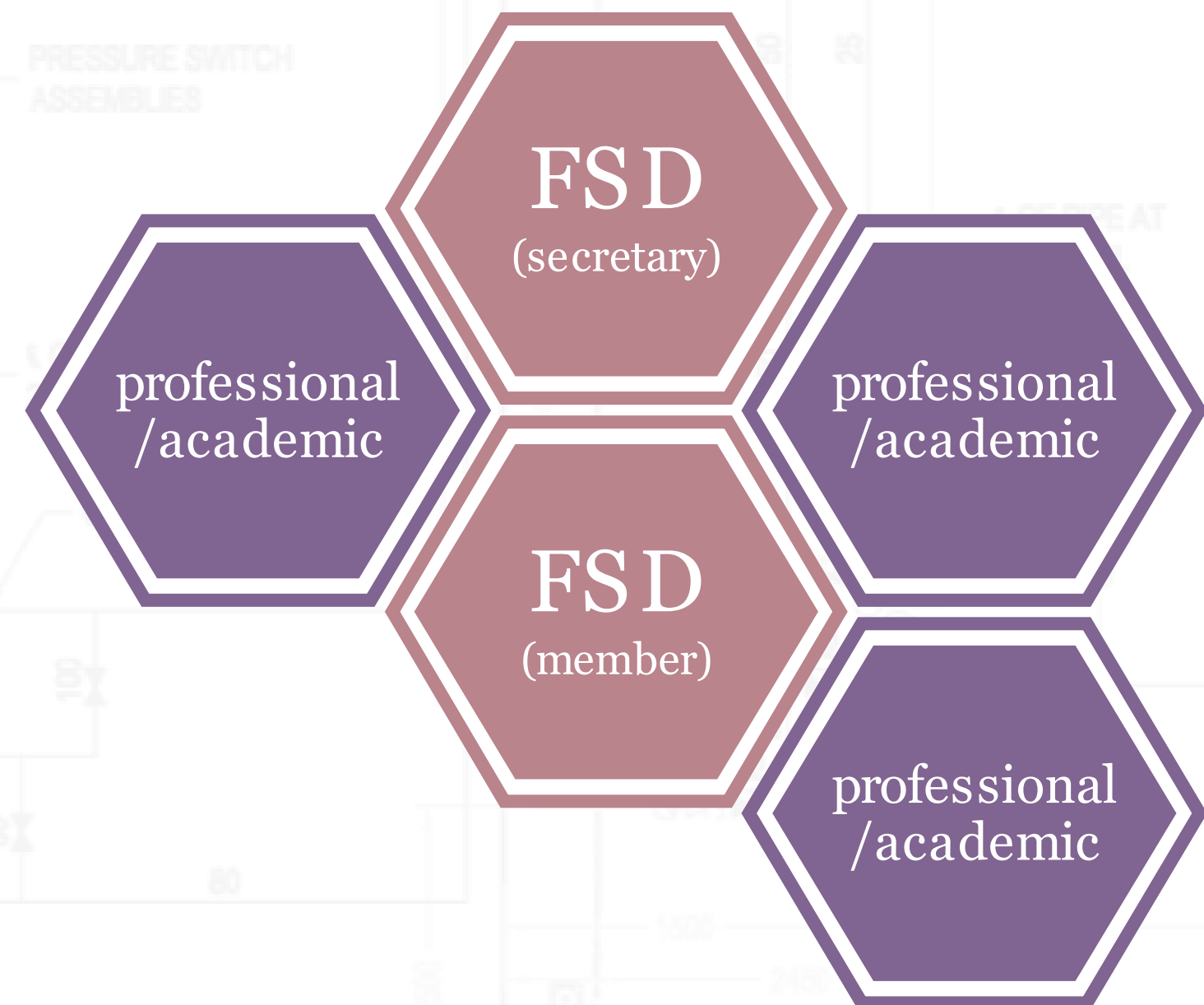
Members elect a chairperson

Decision by majority of votes

Orders include:

◆ Reprimand

◆ Remove name from register



Appeal Board



- ◆ Secretary appoints 8 members for Appeal Board
- ◆ FSD Officers as secretary

- ◆ Members elect a chairperson
- ◆ Decision by majority of votes



Disciplinary Offences

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Disciplinary Offences



◆ Misconduct or neglect in any professional respect

◆ Convicted in HK or elsewhere of any offence that may bring the profession into disrepute

◆ Failed to attend before a disciplinary board or an appeal board

◆ Contravened the Code of Practice

Disciplinary Offences



◆ New Regulation of RFE

- ◆ Obtained registration by fraud or misrepresentation
- ◆ Held himself/herself out to be an RFE for a class for which he/she is not registered
- ◆ Failed to discharge duties of RFE
- ◆ Certified compliance with deviating FSR
- ◆ Convicted of a criminal offence

Conflicts of Interest

NOTE

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7. SPRINKLER / NOZZLE AT ③ TO ⑤ AND ⑥ TO ⑦ ARE BY OTHER.

Conflicts of Interest



◆ RFE(FSI) or RFE(VS) must NOT issue any FSC if:

he/she is a proprietor, shareholder, director, partner or employee of -

a contractor or company in connection with the installation or provision of -

fire service installation or equipment, ventilating system, or any items specified in the FSR for the scheduled premises in -

a specified period immediately before the installation or provision.

◆ RFE must submit a declaration

Specified Form

Downloadable at
Registered Fire
Engineer Scheme
homepage

Code of Practice

NOTE

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◆ Procedural requirements

◆ workflow of fire risk assessment

◆ samples of fire safety requirements

◆ workflow of compliance check

◆ workflow of certification

◆ Disciplinary offences

◆ Trade consultation from 22 Dec 2023 to 31 Mar 2024

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Timetable

0.85m x 0.85m x 1.1m(H)
CABINET FOR INLET

1 OF PIPE
AT 2200 AFFL

ECCENTRIC
REDUCER AT PUMP
SUCTION (TYPICAL)

1 OF PIPE AT
= 1100 AFFL

ESSENTIC
REDUCER
WITH INCLUDED
ANGLE $\leq 15^\circ$

DRAIN PIPE
FOR PUMP

FILL CUP

AT 1m AFFL

0.8m x 0.5m
x 0.8m(H)
GLASS TANK
300 LIT.
MOUNTED ON
0.7m HIGH
SS FRAME

AT 1m
AFFL

180A TPN
SWITCH
PUMP CONTROL
PANELS

1.2m(W) x 1.5m(H)
STAINLESS STEEL FRAME
WITH 1.2m(W) x 0.8m(H)
WOOD BOARD

PRESSURE SWITCH
ASSEMBLIES

1 OF 15 PIPES AT
2100 TO 2200 AFFL

1 OF PIPE AT 2200 AFFL

NOTE

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2. SUPPORTING FRAME FOR GLASS TANK IS BY OTHER.
3. CONTROL VALVE CABINETS ARE BY OTHERS.
4. ALL CABLES SHALL RUN ON CEILING OR WALL AS FAR AS POSSIBLE.
5. 180A TPN INCOMING POWER SUPPLY SWITCH IS BY OTHER.
6. SPRINKLER / NOZZLE AT ① AND ② SHALL HAVE 20mm AND 25mm THREAD RESPECTIVELY, ALL OTHERS SHALL HAVE 15 mm THREAD.
7. SPRINKLER / NOZZLE AT ③ TO ⑤ AND ⑥ TO ⑦ ARE BY OTHER.

Indicative Timetable



Liaison with
Licensing authorities
on fees proposal

Liaison with
DoJ to finalize
draft regulations

Vetting by
LegCo

Trade
consultation on
**Code of
Practice**

Consultation with
FSTB



Thank You

0.85m x 0.85m x 1.1m(H)
CABINET FOR INLET

1 OF PIPE
AT 2200 AFFL

ECCENTRIC
REDUCER AT PUMP
SUCTION (TYPICAL)

1 OF PIPE AT
= 1100 AFFL

ESSENTIC
REDUCER
WITH INCLUDED
ANGLE $\leq 15^\circ$

DRAIN PIPE
FOR PUMP

FILL CUP

AT 1m AFFL

0.8m x 0.5m
x 0.8m(H)
GLASS TANK
300 LIT.
MOUNTED ON
0.7m HIGH
SS FRAME

1 OF PIPE
AT 2300
AFFL

CONCRETE PLINTH (TYPICAL)

AT 1m
AFFL

160A TP&N
SWITCH
PUMP CONTROL
PANELS

1.2m(W) x 1.5m(H)
STAINLESS STEEL FRAME
WITH 1.2m(W) x 0.8m(H)
WOOD BOARD

PRESSURE SWITCH
ASSEMBLIES

1 OF 15 PIPES AT
2100 TO 2200 AFFL

1 OF PIPE AT 2200 AFFL

NOTE:

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6. SPRINKLER / NOZZLE AT ② AND ③ SHALL HAVE 20mm AND 25mm THREAD RESPECTIVELY, ALL OTHERS SHALL HAVE 15mm THREAD.
7. SPRINKLER / NOZZLE AT ① TO ③ AND ⑥ TO ⑧ ARE BY OTHER.

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