

**FSD Connects with the Construction Industry
to Speed up Building Plan Processing and Acceptance Inspection of FSI**

A briefing was conducted to the Construction Industry by FSD on 24 November 2017 with the attendance of AP, RFSIC and other building professionals/stakeholders as well as representatives from government departments. The presentation is now uploaded for the trade's reference. Apart from the enhancement measures taken by FSD, the main feature of the presentation includes a detailed analysis of real rejected cases for better illustration.

While the improvement measures adopted by FSD as given in the presentation may help expedite the process in part, cooperation from building professionals and the trade is no less important for ensuring the statutory procedures of processing GBPs and acceptance inspection of FSI are carried out in an efficient manner. Drawing from the experience in recent years, FSD has identified several areas in which the building professionals could contribute to speed up the process for a timely delivery of building projects, namely –

- (i) ensuring quality building plan submissions to avoid repeated rejections and re-submission due to avoidable errors and omissions in the plans;
- (ii) confirming the necessity of the adoption of performance-based approach at the early stage of the project and submitting relevant engineering reports to FSD for assessment and approval as soon as practicable. As it requires a considerable amount of time for FSD to assess, with due care and diligence, whether the fire safety standard under the performance-based approach is acceptable, bunching of voluminous fire-engineering reports towards the final stage is highly undesirable and would inevitably delay the project delivery; and
- (iii) ensuring FSI have been properly installed and tested in accordance with the requirements stipulated in the relevant Circulars and guidelines before submitting application to FSD for acceptance inspection.

FSD will, in collaboration with the trade, continue its endeavour to achieve swift processing of GBPs and efficient acceptance inspection of FSI, with a view to facilitating a shorter property development cycle.

FSD



**Construction
Industry**

**FSD connects with the
Construction Industry to speed up
Building Plan Processing and
Acceptance Inspection of FSI**

24.11.2017

Welcoming Address

Assistant Director (Licensing and Certification)
Ir. LEUNG Kwun-hong

Flow of Presentation

▶ Processing of Building Plans

- Deputy Chief Fire Officer (Fire Safety)

Mr. CHAN Kam-fai

▶ Acceptance Inspection of FSIs

- Deputy Chief Fire Officer (Licensing & Certification)

Mr. CHENG Sui-on

▶ Q & A session

Processing of Building Plans

Deputy Chief Fire Officer (Fire Safety)

Mr. CHAN Kam-fai

Processing of Building Plans

Full scale review in 2014

Objectives

- ▶ Reduce processing time
 - ▶ Increase approval rate
- 

Processing of Building Plans

Consideration

- ▶ Change to established procedures
 - ▶ Resources implication
 - ▶ Cooperation from the trade
- 

Processing of Building Plans

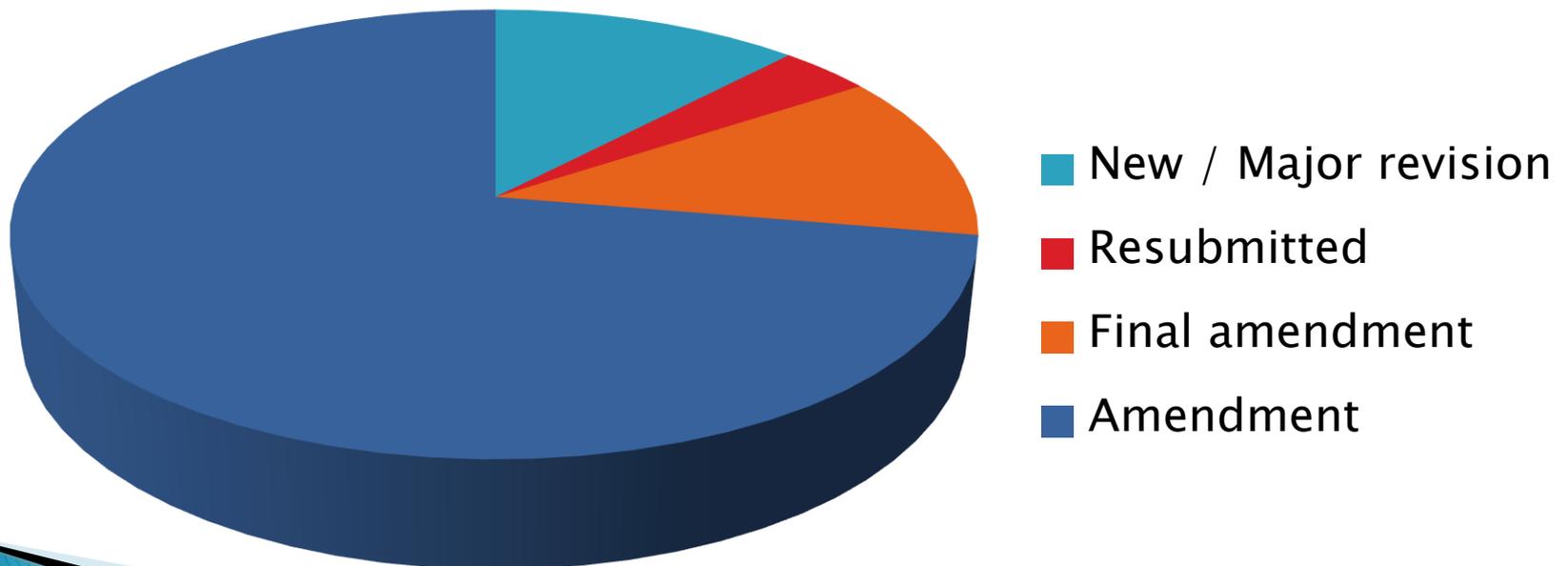
Principle

- ▶ 100% detailed check to all submissions

Processing of Building Plans

1. Prioritization of submissions

Types of Submissions



Processing of Building Plans

1. Prioritization of submissions

- ▶ Two milestones in building projects
 - Commencement to works
 - Occupation Permit
- ▶ **Top** priority to:
 - New / Major submissions
 - Resubmitted submissions
 - Final Amendment submissions
- ▶ **Normal** priority to:
 - Amendment submissions

Processing of Building Plans

2. Open policy in plan amendment

- ▶ Increase approval rate
 - ▶ Reduce abortive work
- 

Processing of Building Plans

3. Case Officer System

- ▶ Stage 1 (2014) – Up to first approval
 - ▶ Stage 2 (2016) – Follow through building projects
- 

Processing of Building Plans

4. Notification mechanism

- ▶ By **Email** FSD Case Officers notify BD Case Officer:
 - On receipt of submissions
 - Outcome of processing

Processing of Building Plans

5. 3-tier processing system

- ▶ Quality assurance
 - Accuracy
 - Consistency

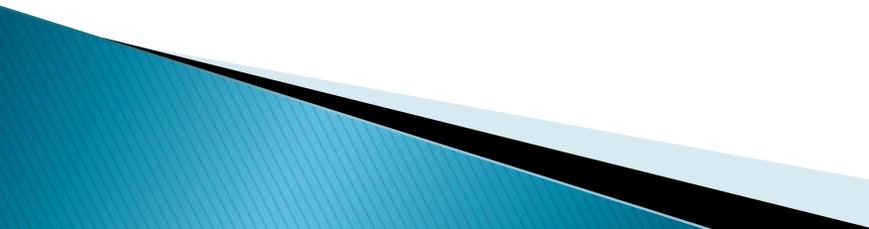
Processing of Building Plans

6. Manpower

- ▶ Internal re-deployment
 - ▶ Additional resources of 12 officers
 - ▶ Employment of retired officers
- 

Processing of Building Plans

7. Regular Liaison Meetings

- ▶ FSD / AP Liaison Meeting
 - ▶ Fire Safety Standards Advisory Group meeting
 - ▶ FSD / Association of Registered Fire Service Installation Contractor meeting
- 

Processing of Building Plans

8. Technical seminars

- ▶ HK  香港建築師學會 The Hong Kong Institute of Architects on 7 Oct 2017



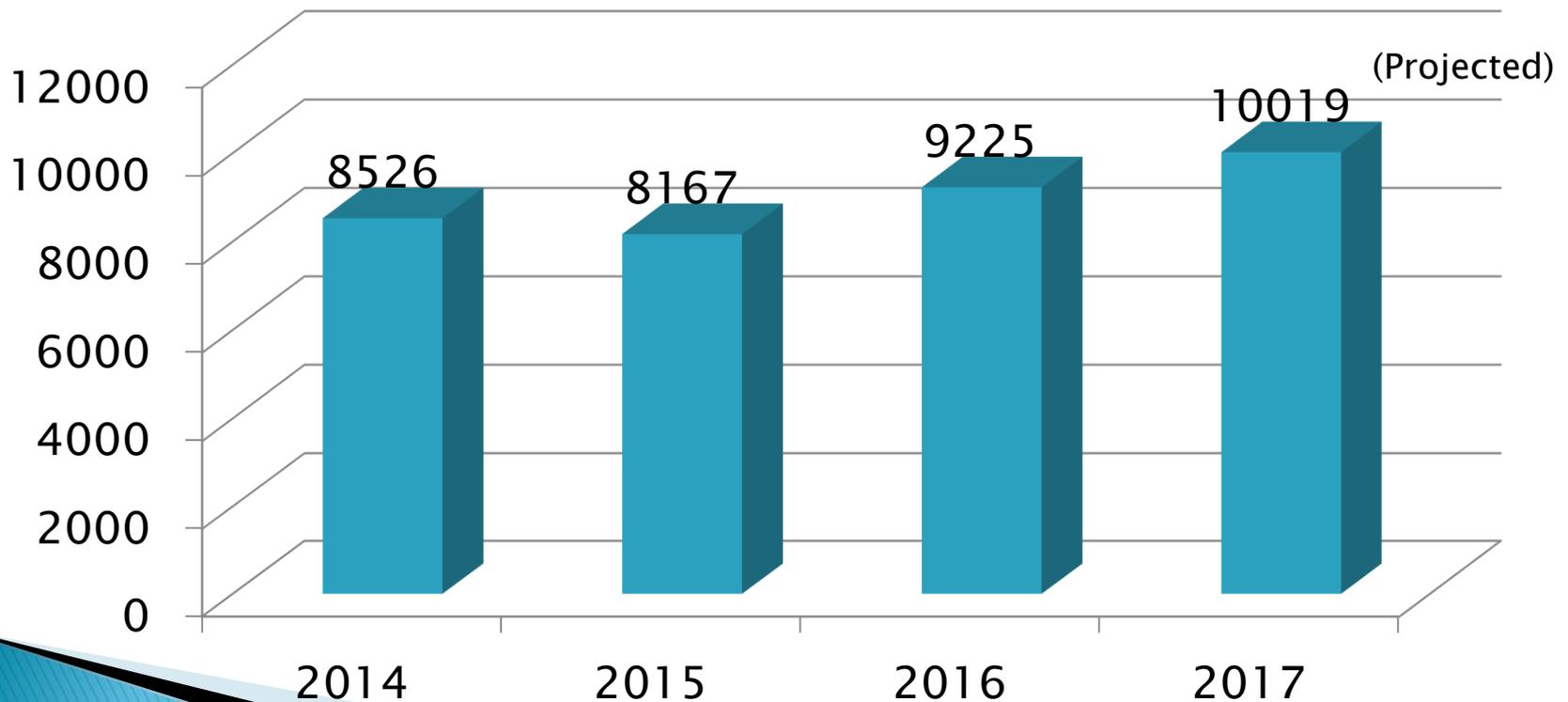
- ▶ HK  THE HONG KONG INSTITUTE OF ENGINEERS 香港工程師學會 on 28 Nov 2017

- ▶ HK  THE HONG KONG INSTITUTE OF SURVEYORS in Jan 2018

Processing of Building Plans

Increasing Trend of GBP Submission

No. of GBP Submission Processed



Processing of Building Plans

1. Prioritization of submission

Priority	Type	2016	2017	Oct 2017
Top	New/Major revision			100%
	Resubmitted			100%
	Final	100%	100%	100%
–	Amended			

Processing of Building Plans

2. Open policy in plan amendment

97% submissions were **approved**

Way Forward

Review is not one-off

- ▶ Monitor prospective workload;
- ▶ Evaluate manpower position

Submission Timeliness and Quality

Fire Engineering Report

- ▶ Adoption of **Performance-based approach** at time close to final stage
- ▶ Cause abortive work and late completion of projects

Amendment Plans

- ▶ Bundle amendments

Quality



Samples of Recent GBP Submissions for Sharing



Example 2

Original Version (FS notes with multi-irregularities spotted by plan processing officer)

FIRE SERVICES NOTES

1) FIRE HYDRANT & HOSE REEL SYSTEM *CL 2/2017??*

A) 1 NO. EACH OF 2 CU/M F.S. WATER TANK TO BE PROVIDED TO SERVE THE FIRE HYDRANT / HOSE REEL SYSTEM FOR EACH OF THE HOUSE. *2m³ FS Tank*

B) NO FIRE HYDRANT WILL BE PROVIDED. *DA*

C) HOSE REEL TO BE PROVIDED FOR THE ENTIRE DEVELOPMENT AS SHOWN ON PLAN TO COVER 30M TO EVERY POINT.

2) MANUAL FIRE ALARM *DA*

A MANUALLY OPERATED FIRE ALARM SYSTEM WILL BE PROVIDED FOR B/F ONLY AND WILL BE INCORPORATED IN THE FHIR SYSTEM IN ACCORDANCE WITH BS 5839-1:2002 + AS:2006 FSD CL 1/2006. ONE ACTIVATING POINT AND ONE AUDIO WARNING DEVICE TO BE LOCATED AT EACH HOSE REEL POINT. THIS ACTIVATING POINT SHALL INCLUDE FACILITIES FOR FIRE PUMP START AND AUDIOVISUAL WARNING DEVICE INITIATION WITHIN THE PREMISES. *DA*

3) PORTABLE EXTINGUISHERS *CH2*

PORTABLE EXTINGUISHERS WILL BE PROVIDED.

4) EMERGENCY LIGHTING AND EXIT SIGN

EMERGENCY LIGHTING WILL BE PROVIDED TO ALL THE B/F AREA IN ACCORDANCE WITH BS5266 PART 1:2011 & BS1838 (1999). *2013*

EXIT SIGNS WILL BE PROVIDED TO ALL EXIT ROUTES FROM B/F IN ACCORDANCE WITH FSD CIRCULAR LETTER NO. 52208.

5) FIRE DETECTION SYSTEM

A) FIRE DETECTION SYSTEM SHALL BE PROVIDED TO ALL PLANT ROOMS AT B/F ONLY.

B) FIRE DETECTION SYSTEM SHALL BE INSTALLED IN ACCORDANCE TO BS5839-1:2002 + A2-2008 AND FSD CIRCULAR LETTER NO. 1/2000 AND 3/2010.

C) A FIRE DETECTION ANNUNCIATOR PANEL SHALL BE PROVIDED AS INDICATED ON PLAN.

D) FIRE DETECTION SYSTEM AND FIRE ALARM SYSTEM SHALL BE CONNECTED TO FIRE SERVICES COMMUNICATION CENTRE BY DIRECT LINK. *D2*

E) VENTILATION (AIR CONDITIONING CONTROL SYSTEM

WHEN A VENTILATION/AIR CONDITIONING CONTROL SYSTEM TO A BUILDING IS PROVIDED, IT SHALL STOP MECHANICALLY INDUCED AIR MOVEMENT WITHIN A DESIGNATED FIRE COMPARTMENT.

7) EMERGENCY GENERATOR

EMERGENCY GENERATOR WILL NOT BE PROVIDED. HOWEVER, SECONDARY SUPPLY FOR ESSENTIAL SERVICES AND EMERGENCY LIGHTING WILL BE GIVEN UPSTREAM OF THE MAIN ELECTRICAL SWITCH OF EACH HOUSE.

8) FLAME SPREAD

ALL LININGS FOR ACOUSTIC AND THERMAL INSULATION PURPOSES IN DUCTINGS AND CONCEALED LOCATIONS SHALL BE CLASS 1 OR 2 RATE OF SURFACE SPREAD OF FLAME AS PER BRITISH STANDARD 476 PART 7 OR ITS INTERNATIONAL EQUIVALENT. OR BE BROUGHT UP TO THAT STANDARD BY USE OF AN APPROVED FIRE RETARDANT PRODUCT.

ALL LININGS FOR ACOUSTIC, THERMAL INSULATION AND DECORATIVE PURPOSES WITHIN PROTECTED MEANS OF ESCAPE SHALL BE OF CLASS 1 OR 2 RATE OF SURFACE SPREAD OF FLAME AS PER BRITISH

STANDARD 476 PART 7 OR ITS INTERNATIONAL EQUIVALENT, OR BE BROUGHT UP TO THAT STANDARD BY USE OF AN APPROVED FIRE RETARDANT PRODUCT.

9) DANGEROUS GOODS

ANY INTENDED STORAGE OR USE OF DANGEROUS GOODS AS DEFINED IN CHAPTER 296 OF THE LAWS OF HONG KONG SHOULD BE NOTIFIED TO DIRECTOR OF FSD.

10) VISUAL FIRE ALARM SYSTEM

VISUAL FIRE SYSTEM WILL NOT BE PROVIDED AS THE BUILDING IS SOLELY FOR PRIVATE USE.

11) SPRINKLER SYSTEM (ENHANCEMENT PROVISION)

A) AUTOMATIC SPRINKLER SYSTEM WILL BE PROVIDED TO COVER ALL PARTS AT B/F EXCEPT E & M PLANT ROOMS, PIPE DUCTS, ELECTRICAL DUCTS AND LIFT LOBBY.

B) THE SPRINKLER SYSTEM IS CLASSIFIED AS ORDINARY HAZARD GROUP III. *GROUP III*

C) THE AUTOMATIC SPRINKLER SYSTEM WILL BE PROVIDED AND INSTALLED IN ACCORDANCE WITH LPC RULES INCORPORATING BS EN 12845:2003 AND FSD CIRCULAR LETTER NO. 3/2005 AND 3/2012. *70m³*

D) 1 NO. EACH OF 70 CU/M SPRINKLER TANK TO BE PROVIDED FOR EACH OF THE HOUSE ON B/F AS INDICATED ON PLANS. THE WATER SUPPLY IS SINGLE END FEED.

E) A DIRECT LINK CONNECTION TO BE PROVIDED TO THE FIRE SERVICE'S COMMUNICATION CENTRE. *DL*

F) A SPRINKLER ANNUNCIATOR PANEL TO BE PROVIDED AS INDICATED ON PLAN.

G) SPRINKLER HEADS COVERING THE B/F SHALL OF FAST RESPONSE TYPE. *PRT*

H) SPRINKLER INLET, SPRINKLER CONTROL VALVE, SPRINKLER PUMP TO BE PROVIDED AS INDICATED ON PLAN.

Example 2

Amended Version – AP's representative was allowed to make amendments by pasting a cover sheet at FSD's office.

FIRE SERVICES NOTES

1) FIRE HYDRANT & HOSE REEL SYSTEM

A) 1 NO. EACH OF 9 CU M. F.S. WATER TANK TO BE PROVIDED TO SERVE THE FIRE HYDRANT & HOSE REEL SYSTEM FOR EACH OF THE HOUSE.

~~B) NO FIRE HYDRANT WILL BE PROVIDED AS INDICATED ON PLANS.~~

C) HOSE REEL TO BE PROVIDED FOR THE ENTIRE DEVELOPMENT AS SHOWN ON PLAN TO COVER 30M TO EVERY POINT ^{IN ACCORDANCE WITH BR 5839-1:2002 + AS 2008 FSD CL 1/2009.}

2) MANUAL FIRE ALARM

A) MANUALLY OPERATED FIRE ALARM SYSTEM WILL BE PROVIDED FOR EACH ONLY AND WILL BE INCORPORATED IN THE FIRE ALARM SYSTEM IN ACCORDANCE WITH BS 5839-1:2002 + AS 2008 FSD CL 1/2009. ONE ACTIVATING POINT AND ONE AUDIO WARNING DEVICE TO BE LOCATED AT EACH HOSE REEL POINT. THIS ACTIVATING POINT SHALL INCLUDE FACILITIES FOR FIRE PUMP START AND AUDIOVISUAL WARNING DEVICE INITIATION WITHIN THE PREMISES.

3) PORTABLE EXTINGUISHERS

PORTABLE EXTINGUISHERS WILL BE PROVIDED.

4) EMERGENCY LIGHTING AND EXIT SIGN

EMERGENCY LIGHTING WILL BE PROVIDED TO ALL THE B&P AREA IN ACCORDANCE WITH BS 5266 PART 1:2011 & BS 1838 : 1999.

EXIT SIGNS WILL BE PROVIDED TO ALL EXIT ROUTES FROM B&P IN ACCORDANCE WITH FSD CIRCULAR LETTER NO. 5/2008.

5) FIRE DETECTION SYSTEM

A) FIRE DETECTION SYSTEM SHALL BE PROVIDED TO ALL B&P ROOMS ^{EXCEPT ONLY CAR PARKING AREAS, STORAGE ROOM AND SAFE DEPOSIT ROOMS}

B) FIRE DETECTION SYSTEM SHALL BE INSTALLED IN ACCORDANCE TO BS 5839-1:2002 + A2:2008 AND FSD CIRCULAR LETTER NO. 1/2009 AND 3/2010.

C) A FIRE DETECTION ANNUNCIATOR PANEL SHALL BE PROVIDED AS INDICATED ON PLAN.

E) FIRE DETECTION SYSTEM AND FIRE ALARM SYSTEM SHALL BE CONNECTED TO FIRE SERVICES COMMUNICATION CENTRE BY DIRECT LINK.

6) VENTILATION /AIR CONDITIONING CONTROL SYSTEM

WHEN A VENTILATION/AIR CONDITIONING CONTROL SYSTEM TO A BUILDING IS PROVIDED, IT SHALL STOP MECHANICALLY INDUCED AIR MOVEMENT WITHIN A DESIGNATED FIRE COMPARTMENT.

7) EMERGENCY GENERATOR

EMERGENCY GENERATOR WILL NOT BE PROVIDED. HOWEVER, SECONDARY SUPPLY FOR ESSENTIAL SERVICES AND EMERGENCY LIGHTING WILL BE GIVEN UPSTREAM OF THE MAIN ELECTRICAL SWITCH OF EACH HOUSE.

8) FLAME SPREAD

ALL LININGS FOR ACOUSTIC AND THERMAL INSULATION PURPOSES IN DUCTINGS AND CONCEALED LOCATIONS SHALL BE CLASS 1 OR 2 RATE OF SURFACE SPREAD OF FLAME AS PER BRITISH STANDARD 476: PART 7 OR ITS INTERNATIONAL EQUIVALENT. OR BE BROUGHT UP TO THAT STANDARD BY USE OF AN APPROVED FIRE RETARDANT PRODUCT.

ALL LININGS FOR ACOUSTIC, THERMAL INSULATION AND DECORATIVE PURPOSES WITHIN PROTECTED MEANS OF ESCAPE SHALL BE OF

STANDARD 476: PART 7 OR ITS INTERNATIONAL EQUIVALENT. OR BE BROUGHT UP TO THAT STANDARD BY USE OF AN APPROVED FIRE RETARDANT PRODUCT.

9) DANGEROUS GOODS

ANY INTENDED STORAGE OR USE OF DANGEROUS GOODS AS DEFINED IN CHAPTER 295 OF THE LAWS OF HONG KONG SHOULD BE NOTIFIED TO DIRECTOR OF FSD.

10) VISUAL FIRE ALARM SYSTEM

VISUAL FIRE SYSTEM WILL NOT BE PROVIDED AS THE BUILDING IS SOLELY FOR PRIVATE USE.

11) SPRINKLER SYSTEM (ENHANCEMENT PROVISION)

A) AUTOMATIC SPRINKLER SYSTEM WILL BE PROVIDED TO COVER ALL PARTS AT LGF ONLY FOR HOUSE 1 AND 2 AND ALL FLOORS FOR HOUSE 3 EXCEPT E & M PLANT ROOMS, PIPE DUCTS, ELECTRICAL DUCTS AND ST LOBBY.

B) THE SPRINKLER SYSTEM IS CLASSIFIED AS ORDINARY HAZARD GROUP II FOR LGF HOUSE 1 AND 2 AND ORDINARY HAZARD GROUP I FOR 1F & 2F FOR HOUSE 3.

C) THE AUTOMATIC SPRINKLER SYSTEM WILL BE PROVIDED AND INSTALLED IN ACCORDANCE WITH LPC RULES INCORPORATING BS EN 12945:2003 AND FSD CIRCULAR LETTER NO. 3/2008 AND 3/2012.

D) ~~1 NO. EACH OF 20 CU M. SPRINKLER TANK TO BE PROVIDED FOR EACH OF THE HOUSES~~ AS INDICATED ON PLANS. THE WATER SUPPLY IS SINGLE END FEED. ^{102m² - H13 LGF} ~~1 NO. EACH OF 105 CU M. SPRINKLER TANK TO BE PROVIDED FOR EACH HOUSE~~

E) A DIRECT LINK CONNECTION TO BE PROVIDED TO THE FIRE SERVICES COMMUNICATION CENTRE.

F) A SPRINKLER ANNUNCIATOR PANEL TO BE PROVIDED AS INDICATED ON PLAN.

G) SPRINKLER HEADS COVERING THE LGF SHALL OF FAST RESPONSE TYPE.

H) SPRINKLER INLET, SPRINKLER CONTROL VALVE, SPRINKLER PUMP TO BE PROVIDED AS INDICATED ON PLAN.

42) STREET FIRE HYDRANT SYSTEM

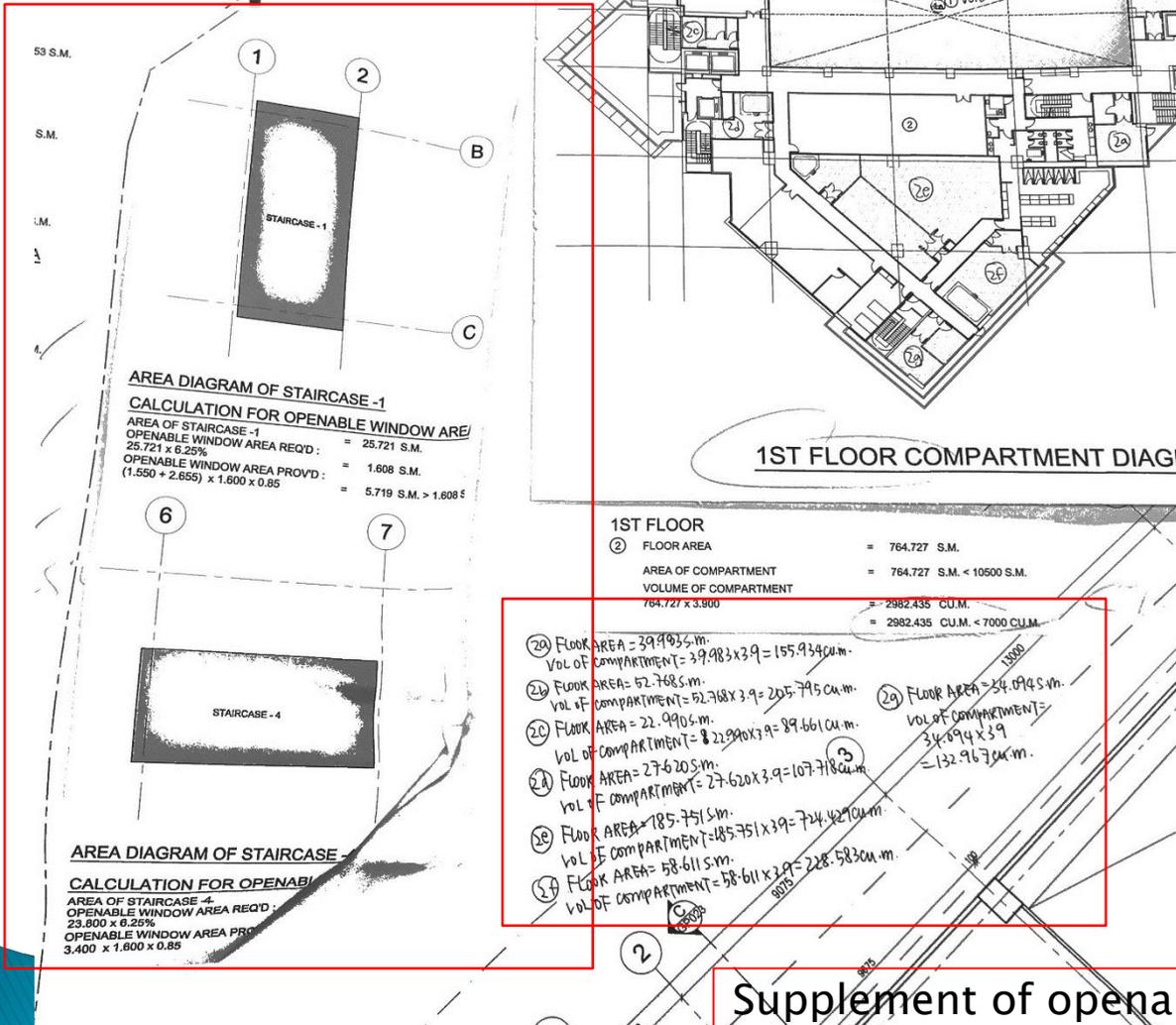
A) A 245m³ STREET FIRE HYDRANT TANK WITH DUTY AND STANDBY-FIXED FIRE PUMPS TO BE PROVIDED AS INDICATED ON PLANS.

B) STREET FIRE HYDRANT SHALL BE CAPABLE OF DELIVERING 4000L/M OF WATER AT A MINIMUM OF 170KPA WITH 2 OUTLETS OPERATING SIMULTANEOUSLY TO BE PROVIDED AS INDICATED ON PLANS.

Recent Observations

- ▶ Common irregularities encountered
 - Omission of mandatory EVA requirements
 - Omission of window / compartment calculations
 - Fire Service Notes not tally with the building use
 - Omission of major FSIs
 - Omission of previous amendments
- 

Omission of window / compartment calculations



Supplement of openable windows and compartment calculation during plan amendment

Fire Service Notes not tally with the building use

Proposal : A 24-storey domestic building with clubhouse on top of a 3-level podium used as shops, restaurants and bank

A 24-storey domestic building with clubhouse on top of a 3-level podium used as shops, restaurants and bank

Minimum Fire Service Installations and Equipment (April 2012 Version) (the Code):-

- (i) Fire service installations or equipment shall be provided in accordance with paragraphs 4.14, 4.23 and 4.31 of the Code;
- (ii) A proper set of FS Notes that tally with the layout plans shall be provided;**
- (iii) All duplicated contents in FS Notes shall be erased;
- (iv) The stated occupancy for the design of sprinkler hazard group does not tally with the information provided on plans;
- (v) The set of FS inlet and sprinkler inlet shall be relocated to a prominent position on the exterior of the building.

Fire Service Notes not tally with the building use

3.0 FIRE DETECTION AND ALARM SYSTEM

3.1 A FIRE DETECTION AND ALARM SYSTEM WILL BE PROVIDED FOR THE ENTIRE PODIUM AND BASEMENT AREA NOT COVERED BY AUTOMATIC SPRINKLER SYSTEM IN ACCORDANCE WITH THE FSD CIRCULAR LETTER

NO. 1/2009, NO. 3/2010, NO. 2/2012 AND BS 5839-1 : 2002 + A2 : 2008 FOR AUTOMATIC FIRE ALARM INSTALLATION.

3.2 A MANUAL FIRE ALARM INCORPORATED IN THE FH/HR SYSTEM WILL BE PROVIDED FOR PODIUM.

3.3 HEAT DETECTORS WILL BE PROVIDED AT ELECTRICAL AND MECHANICAL ROOMS.



No Basement!!!

A SECTION
SCALE 1:200

Fire Service Notes not tally with the building use

THE LOCATION OF THE EMERGENCY GENERATOR ROOM IS SHOWN ON THE PLANS.

EL
8.0 EMERGENCY LIGHTINGS

8.1 EMERGENCY LIGHTING SHALL BE PROVIDED AND INSTALLED IN ACCORDANCE WITH BS5266 ENTIRE DEVELOPMENT AND ALL EXIT ROUTES LEADING TO GROUND LEVEL.

~~8.2 EMERGENCY LIGHTING SHALL NOT BE PROVIDED TO CABLE DUCTS, PIPE DUCTS, TELEPHONE~~
8.3 FOR CINEMA, THE EMERGENCY LIGHTING SHALL BE MAINTAINED FOR A PERIOD OF NOT LESS THAN 1 HOUR BY A CENTRAL BATTERY DC SUPPLY OR A DEDICATED VPS SYSTEM. ?

9.0 EXIT SIGNS AND DIRECTIONAL SIGN

9.1 SUFFICIENT EXIT SIGNS AND DIRECTIONAL SIGNS SHALL BE PROVIDED AS INDICATED ON PLAN IN ACCORDANCE WITH THE H.K.F.S.D. REQUIREMENTS SO THAT ALL EXIT ROUTES WITHIN THE PREMISE ARE CLEARLY IDENTIFIED.

9.2 ALL EXIT SIGNS AND DIRECTIONAL SIGNS WILL BE BACKED UP BY EMERGENCY GENERATOR OR SELF-CONTAINED BATTERY.

10.0 FS CONTROL CENTRE

10.1 THE FS CONTROL ROOM AT G/F AND 6/F AS INDICATED ON PLANS WILL BE APPLIED AS THE FS CONTROL ROOM.

VAC
11.0 VENTILATION / AIR-CONDITIONING CONTROL (VAC) SYSTEM

11.1 THE VENTILATION / AIR CONDITIONING CONTROL SYSTEM WILL BE PROVIDED TO STOP MECHANICAL EXHAUST FROM A DESIGNATED FIRE COMPARTMENT IN ACCORDANCE WITH THE H.K.F.S.D. REQUIREMENTS.

11.2 ALL PLANT ROOM WITH LOUVERS FACING THE PRIVATE LANE, ALL RELEVANT PLANT ROOM SHALL BE PROVIDED WITH SELF-CONTAINED BATTERY OPERATED EMERGENCY EXHAUST UPON ACTUATION OF THE PLANT ROOM MULTI-SENSOR DETECTORS. ?

PTL
12.0 FIRE DIRECT LINK

12.1 FIRE ALARM SIGNALS INCLUDING DETECTORS, SPRINKLER FLOW SWITCHES AND BREAKGLASS UNIT SHALL BE PROVIDED TO THE COMMUNICATION CENTRE VIA A FIRE SERVICES DIRECT TELEPHONE LINE.

13.0 OTHER REQUIREMENTS FOR ELECTRICAL AND MECHANICAL SYSTEM

SCHEDULE OF REQUIREMENT

STOREY	COMPARTMENT	LOCATION / USE	U.F.
		No Cinema!!!	
TOWER (TYPICAL)	-	ALL FLAT UNITS (LARGEST TYPICAL FLOOR)	
3/F	-	MUSIC ROOM COMPUTER ROOM GYM POOL DECK SWIMMING POOL	
2/F	C	BANK OFFICE ARCADE BANK STORE	
1/F	B	BANK BANK OFFICE ARCADE RESTAURANT KIT FLAT ROOF (DINNING AREA)	
G/F	A	BANK SHOP 01 SHOP 02 SHOP 03 SHOP 04 SHOP 05 SHOP 06	

NOTES : (*) DIRECT EXIT TO OPEN AIR

Fire Service Notes not tally with the building use

10.0 FS CONTROL CENTRE

10.1 THE FS CONTROL ROOM AT G/F AND 6/F AS INDICATED ON PLANS WILL BE APPLIED AS THE FS CONTROL CENTRE.

VAC 11.0 VENTILATION / AIR-CONDITIONING CONTROL (VAC) SYSTEM

11.1 THE VENTILATION / AIR CONDITIONING CONTROL SYSTEM WILL BE PROVIDED TO STOP MECHANICALLY INDUCED AIR MOVEMENT WITHIN A DESIGNATED FIRE COMPARTMENT IN ACCORDANCE WITH THE H.K.F.S.D. REQUIREMENTS.

11.2 ALL PLANT ROOM WITH LOUVERS FACING THE PRIVATE LANE, ALL RELEVANT PLANT ROOM VENTILATION SYSTEM SHALL BE SHUT DOWN UPON ACTUATION OF THE PLANT ROOM MULTI-SENSOR DETECTORS. ?

bTL 12.0 FIRE DIRECT LINK

12.1 FIRE ALARM SIGNALS INCLUDING DETECTORS, SPRINKLER FLOW SWITCHES AND BREAKGLASS UNTIL WILL BE LINKED TO THE FIRE SERVICES COMMUNICATION CENTRE VIA A FIRE SERVICES DIRECT TELEPHONE LINE.

13.0 OTHER REQUIREMENTS FOR ELECTRICAL AND MECHANICAL SYSTEM

13.1 INDEPENDENTLY POWERED GENERATORS OF SUFFICIENT ELECTRICAL CAPACITY TO MEET THE ESSENTIAL SERVICES FOR TOWER AND PODIUM WILL BE PROVIDED AT 6/F.

13.2 ELECTRICAL CIRCUITS WILL BE PROVIDED BY MINIATURE CIRCUIT BREAKERS OR HRC CARTRIDGE FUSES.

13.3 SELF-CONTAINED EMERGENCY LIGHTING WITH 2-HOUR BATTERY BACK-UP WILL BE PROVIDED IN ACCORDANCE WITH BS 5266 PART 1:2001 AND BS EN 1838:2013 THROUGHOUT THE ENTIRE PODIUM AND ALL EXIT ROUTES LEADING TO GROUND LEVEL.

Fire Control Centre was located on G/F only, instead of on 6/F.

Fire Service Notes not tally with the building use

SPR

OH1

54m³
for Inlet

2.0 AUTOMATIC SPRINKLER SYSTEM

- 2.1 THE AUTOMATIC SPRINKLER SYSTEM WILL BE PROVIDED IN ACCORDANCE TO FSD CIRCULAR LETTER NO. 3/2006, 3/2012 AND LPC RULES INCORPORATING BS EN 12845:2003.
- 2.2 THE HAZARD CLASSIFICATION IS ORDINARY HAZARD GROUP I.
- 2.3 INDEPENDENT AUTOMATIC SPRINKLER SYSTEM WILL BE PROVIDED TO SERVE TOWER'S OPEN KITCHEN TOGETHER WITH 3/F CLUB HOUSE.
- 2.4 THE 3/F CLUB HOUSE & TOWER SPRINKLER SYSTEM SHALL EQUIPPED WITH A 54,000L SPRINKLER WATER TANK ON 6/F. SPRINKLER PUMP ROOM AS SHOWN ON PLAN.
- 2.5 THE TOWER SPRINKLER SYSTEM SHALL EQUIPPED WITH A 54,000L SPRINKLER WATER TANK ON 6/F. SPRINKLER PUMP SETS (DUTY & STANDBY) SHALL BE PROVIDED ON R/F. SPRINKLER PUMP ROOM AS SHOWN ON PLAN.
- 2.6 SPRINKLER CONTROL VALVES AND INLETS WILL BE PROVIDED AT G/F AT POSITIONS AS INDICATED ON PLANS.
- 2.7 A SPRINKLER ANNUNCIATOR PANEL TO BE PROVIDED AT FIRE CONTROL CENTRE.
- 2.8 THE ALARM OF AUTOMATIC SPRINKLER SYSTEM WILL BE CONNECTED TO THE FIRE CONTROL CENTRE (F.S.C.C.) USING THE SAME DIRECT LINE PROVIDED FOR THE TOWER.
- 2.9 THE SPRINKLER SYSTEM WILL BE PROVIDED TO COVER THE TOWER EXCEPT THE TRANSFORMER ROOM.

Refuge areas stated on FS notes but no Refuge Floor on plan!!!

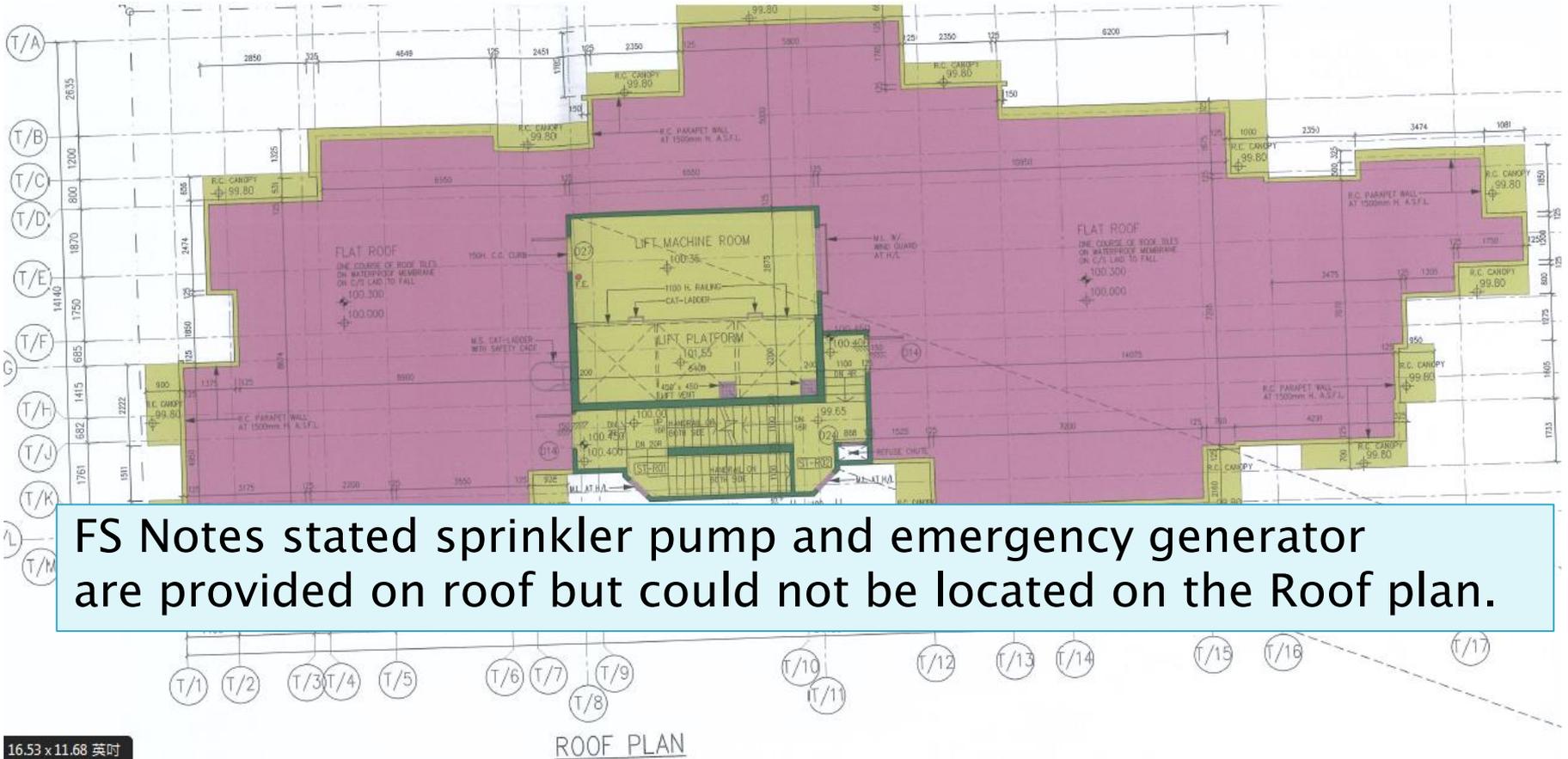
- 4.6 STANDARD FSD REQUIREMENT FOR TRANSFORMER ROOM, SHALL BE COMPLIED WITH.
- 4.7 LIFT MARKED "A" ON PLANS WILL BE ARRANGED AS FIREMAN'S LIFT.
- 4.8 SELF-CONTAINED EMERGENCY LIGHTING WITH 2-HOUR BATTERY BACK-UP INSTALLED IN ACCORDANCE WITH BS5266 PART 1:2011 AND BS EN 1838:2013 SHALL BE PROVIDED TO ALL STAIRCASE, PASSAGES AND PUBLIC AREAS INCLUDING LIFT LOBBIES ON ALL FLOORS AND REFUGE AREAS IN THE RESIDENTIAL TOWER & CLUB HOUSE.
- 4.9 ANY INTENDED STORAGE OR USE OF DANGEROUS GOODS AS DEFINED IN CHAPTER 295 OF THE LAWS OF HONG KONG SHOULD BE NOTIFIED TO THE DIRECTOR OF FIRE SERVICES.
- 4.10 A SECONDARY ELECTRICAL SUPPLY FROM EMERGENCY GENERATOR AT R/F AT LOCATION AS INDICATED ON PLANS WILL BE PROVIDED TO MAINTAIN ALL ESSENTIAL SERVICES OF PODIUM AND THE RESIDENTIAL TOWER (I.E. LIGHTING FOR ALL ESCAPE PASSAGE AND STAIRCASES, ILLUMINATION OF ALL EXIT SIGNS, OPERATION OF FIRE PROTECTION SYSTEMS, LIFT HOMING FOR ALL NON-FIREMAN'S LIFTS AND FIREMAN'S LIFTS) IN THE EVENT OF MAINS POWER FAILURE.

A

PO

EG

Fire Service Notes not tally with the building use



16.53 x 11.68 英尺

ROOF PLAN

Omission of previous amendments indicated in the reply letter

The following additional/modified Fire Services requirements shall be incorporated in and clearly noted on your plans before the required certificate to be issued: -

- (i) Amendment in last submission should be incorporated;
- (ii) Fire detection system should be provided to E&M plant rooms;
- (iii) Sprinkler system should be provided with water tank of 124 cu. metre; and
- (iv) Pressurization of staircase should be provided unless the aggregate area of openable windows of the rooms/units of the building exceed 6.25% of the floor area of those rooms/units, calculated on a floor by floor basis.

I should be grateful if you would re-submit two sets of plans incorporating the above requirements through the Centralized Processing System to this Department for formal approval. Meanwhile, one set of the plans is retained for record. The other set is ready for your collection at the New Projects Division, Fire Services Headquarters Building, 10th floor, No. 1, Hong Chong

Amendments made in previous submission were not incorporated in the re-submission, plan rejected.

Please bring along the original copy of this letter with you when collecting the building plan(s). Your attention is invited to paragraph 4 of Appendix B of PNAP ADM-2 (Rev. 5/2011) in that if you do not collect the building plan(s) within 3 months from the date of this letter, the uncollected plan(s) will be deemed to be no longer required by you and will be disposed of without further notification.

Re-submission required

The building plans in respect of the above project have been examined and Fire Services Certificate (F.S. 161) under Section 16(1)(b) of the Buildings Ordinance cannot be issued due to non-compliance with the following requirements in accordance with the current *Code of Practice for Minimum Fire Service Installations and Equipment (April 2012 Version)* (the Code):-

- (i) Fire service installations or equipment shall be provided in accordance with paragraphs 4.15 and 4.26 of the Code;
- (ii) The designed Hazard Group of the sprinkler system shall be stated clearly in FS Notes;
- (iii) The sprinkler tank size shall be provided in accordance with the LPC Rules incorporating BS EN 12845:2003 and the FSD Circular Letter 3/2006 for the designed Hazard Group;
- (iv) The sprinkler inlets and sprinkler valve shall be indicated on plans;
- (v) The FS tank shall be indicated on plans;
- (vi) Intermediate booster pumps shall be provided for building where the height between the topmost hydrant and the lowest FS inlet is in excess of 60m;

A series of uncorrectable irregularities, plan rejected.

- (ix) The set of FS inlet near Hung To Road shall be relocated to a prominent position on the exterior of the building;

Please also be reminded that EVA provision shall comply with the *Code of Practice for Fire Safety in Buildings 2011* and APP-136 – Building (Planning) Regulation 41D Emergency Vehicular Access.

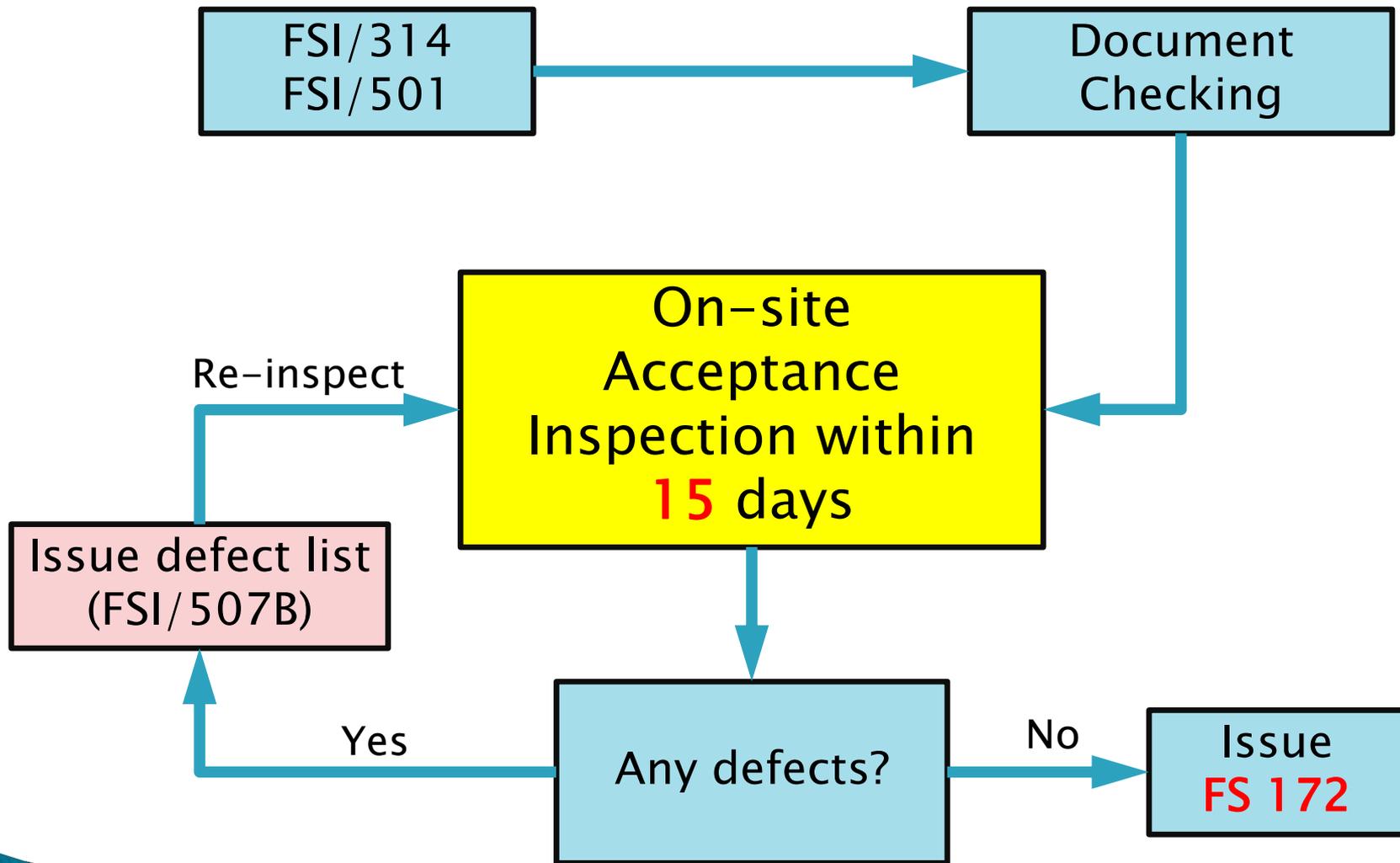
Acceptance Inspection of FSIs

Deputy Chief Fire Officer (Licensing & Certification)

Mr. CHENG Sui-on

- ▶ **Procedures for Acceptance Inspection of FSIs**
- ▶ **Experience Sharing**
 - Documentary Submission
 - FSI Acceptance Inspection
- ▶ **Way forward**

Workflow for FSI Acceptance Inspection



FSD Circular Letter No. 1 /2015

- ❑ **Form FSI/501** : Application Form
- ❑ **Form FSI/314** with two sets of as-fitted FSI layout plans*
- ❑ Testing and Commissioning **(T&C) Checklists**
- ❑ **FSIs Equipment List** & relevant supporting documents

* Smoke Control Systems required prior approval

Form FSI/501 – Part A sign by RFSIC

Part A :

The above installations / equipment **have been installed** at (address of premises)

Sample

Peace Commercial Building, No. 28 Happy Lane, Lamma Island

have been installed

and the installation work was completed on 20/09/2017. I hereby **certify that** such

installations / equipment in accordance with the FSI plans submitted under the cover of FSI/314 (Rev. 08) dated 07/10/2017 **have been inspected and are in efficient working order.**

* Copies of completed checklist, equipment test reports and catalogue/data sheets are attached

certify that such installations / equipment

Office address : 18/F, ABC Building, No. 38 Hong Chong Road, Tsim Sha Tsui, Kowloon

Name in Full: Char
(Class 1 & 2)

have been inspected and are in efficient working order

Signature :

Registration no. : RC1/ 8899 RC2/ 8899 RC3/ 7788

Date : 07/10/2017

Office Chop :



Form FSI/501 – Part B sign by AP

Sample

Part B : I, Lee Mei Lai, Authorized Person, **certify that** the above **installations have been installed** in accordance **with the approved building plans** stamped by FSD on 1/8/2017 & 2/10/2017 and, in my opinion they are **ready for inspection**

The Fire Service Completion Advice from Water Supplies Department in respect of Fire Service Installations (**copy attached*) requiring Government water mains connection has

certify that installations have been installed

service with normal telephone provision pending the connection of direct telephone link for the fire service installation(s) is attached herewith.

in accordance with the approved building plans

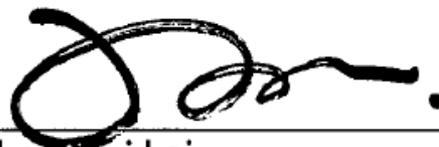
telephone no. 33445566 for collection.

I also certify that the building gross floor area as defined under the Buildings Ordinance is 12,340 m² and the type of building is ~~domestic~~ / non-domestic.*

Office name : Lee Mei Lai Tel. : 33445566

Office address : 38/ **ready for inspection** Hong Kong Island

Signature of Authorized Person :



Full Name of Authorized Person : Lee Mei Lai

Date : 07/10/2017

(Rev. 01/2012)

Form FSI/314 – Part I sign by AP

Sample

Appendix A

FSI/314

To : Director of Fire Services

Fire Service Installation Plans for Building at

certify that the fire service installation plans

Part I

This is to certify that the attached fire service installation plans are identical to the building plans approved by you on 01/08/2017 . Your file reference is *FP 8 / 43 / 12345

identical to the building plans approved

Part II

This is to certify that the details and specifications of all installations shown on the attached fire service installation

Form FSI/314 – Part II sign by RFSIC

Part II

This is to **certify that the details and specifications of all installations** shown on the attached fire service installation plans **are as prescribed** by the Fire Services Department and in accordance with the **relevant Rules and Codes of Practice** as listed below :-

- Rules of Fire Offices' Committee for :
 - Automatic Sprinkler Installations (29th Edition)

certify that the details and specifications of all installations

- Codes of National Fire Protection Association for :
 - Carbon Dioxide Extinguishing Systems (Standard 12)
 - Clean Agent Fire Extinguishing Systems (Standard 2001)
 - Water Spray Fixed Systems for Fire Protection (Standard 15)
- Codes of Practice for Minimum Fire Service Installations and Equipment - Fire Services

are as prescribed by FSD Relevant Rules and Codes of Practice

- Smoke Extraction Systems
- Staircase Pressurization Installations
- Others
Visual Fire Alarm System, Street Fire Hydrant System

Signed

Chen

Date 07/10/2017

Full Name of FSI Contractor/Consultant ABC Engineering Company Limited

Correspondence Address 18/F, ABC Building, No. 38 Hong Chong Road, Tsim Sha Tsui, Kowloon

Application for Acceptance Inspection

Years	FSI/501	No.	%
2016	received	560	–
	rejected	184	33
	withdrawn	62	11
2017*	received	508	–
	rejected	137	27
	withdrawn	68	13

* From Jan to Oct

Reasons for Application **Rejection**

Items	2016		2017	
	No.	%	No.	%
Incomplete / Mistakenly-filled Form	85	46	64	47
Outstanding/Incomplete T&C Checklist	73	40	54	39
Outstanding/Incomplete Equipment List or Supporting Documents	26	14	19	14
Total:	184	–	137	–

Incomplete Input of Form FSI/501

- ▶ **FSIs System not listed out /specified**
- ▶ **No approved GBP date**
- ▶ **Missing AP/RFSIC Name**
- ▶ **AP signature date earlier than FSI completion date**
- ▶ **Date of GBP not tally with approved one**
- ▶ **Not an original signature**

Outstanding/Incomplete T&C Checklists

- ▶ **Actuation Devices and Operation of Fire Shutter**
- ▶ **CO₂/Clean Agent Extinguishing System**
- ▶ **Emergency Generator Installation**
- ▶ **Fire Detection and Fire Alarm System**
- ▶ **Fire Hydrant and Hose Reel System**
- ▶ **Staircase Pressurization System**
- ▶ **Street Fire Hydrant System**

Outstanding/Incomplete Equipment List or Supporting Documents

- ▶ Without signature on the list
- ▶ Missing information of systems or equipment
- ▶ Non-FSI load to emergency generator
- ▶ Approval of fuel tank room
- ▶ Insufficient FSI plans

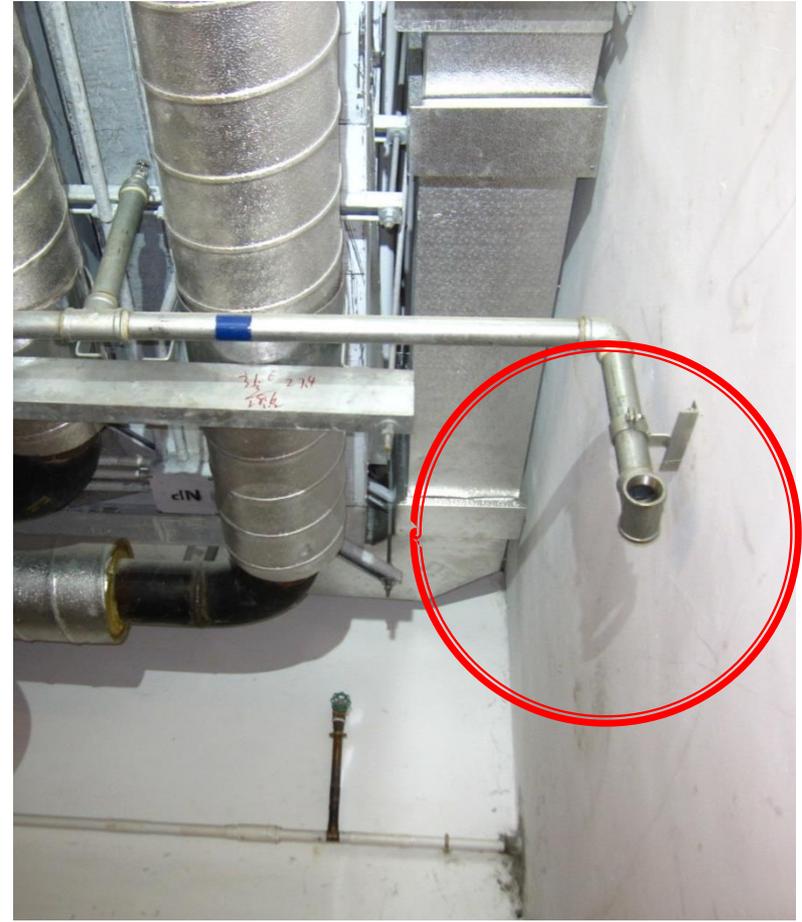
Factors making Acceptance Inspection/ Functional Test **IMPOSSIBLE**

- ▶ Electricity power supply for FSIs unavailable
- ▶ Water for water-based FSIs unavailable*
- ▶ Incomplete installation of FSIs
- ▶ Numerous defects of FSIs

* Functional test continues if temporary water supply available

Factors making Acceptance Inspection/ Functional Test **IMPOSSIBLE**

- ▶ Incomplete building works
 - e.g. missing of fire doors for staircase pressurization system
- ▶ Temporary structures
 - e.g. blockage of sprinkler heads by working platform



x Incomplete pipework of sprinkler system



x Incomplete pipework of sprinkler system



x Blockage of sprinkler head



x Incomplete installation of concealed type sprinkler head



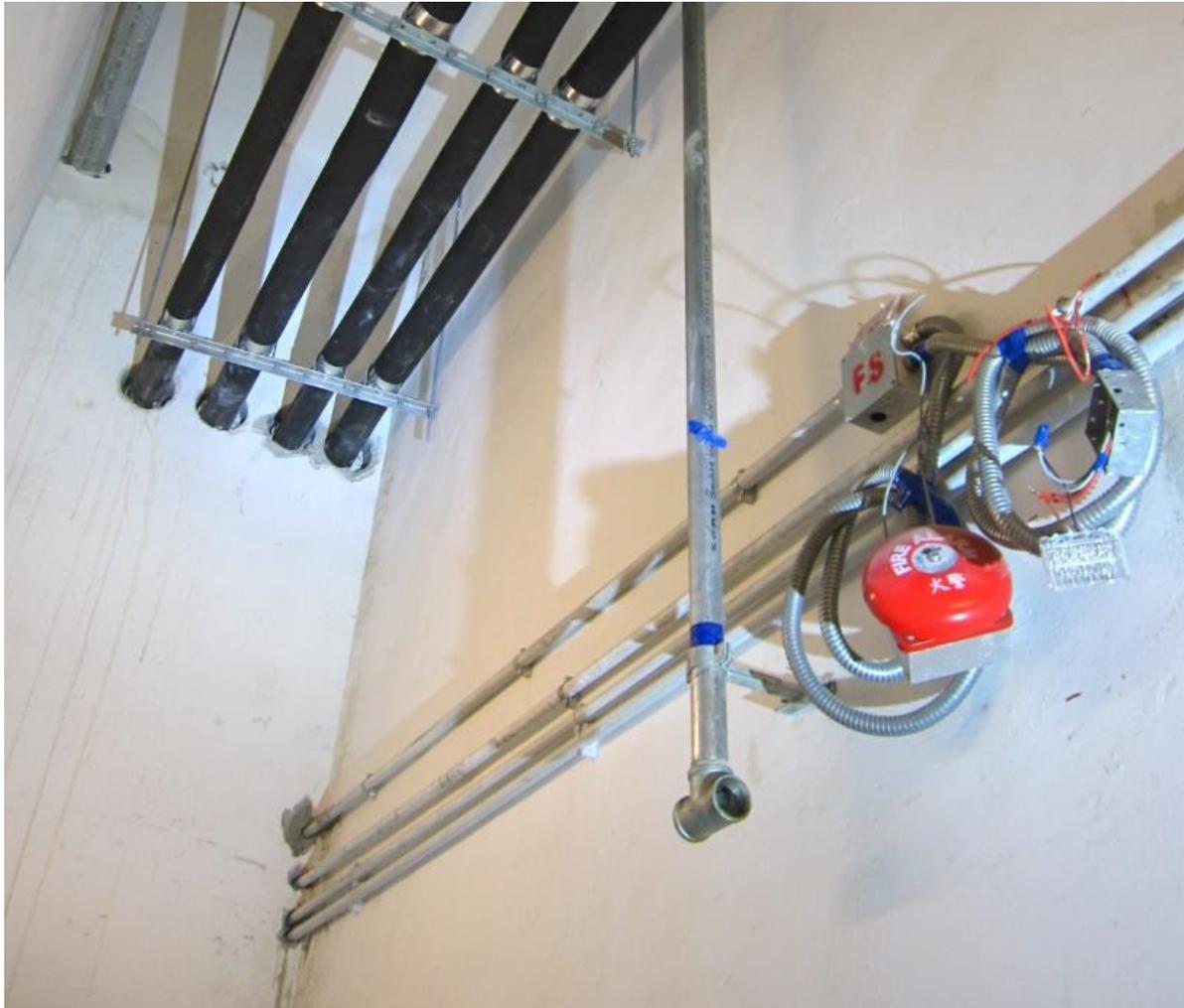
x Unavailable secondary power supply for FSIs and incomplete installation of supply power meter



✘ Unavailable secondary power supply for FSIs and incomplete installation of emergency generator



x Incomplete installation of smoke detectors



x Incomplete installation of audio/visual alarms system



x Incomplete Installation of FSIs



x Improper installation of FSIs



x Improper installation of emergency lighting

FSI Acceptance Inspection

Discrepancies noted :

- Issue Inspection report
- List all the defective/ outstanding items for rectifications/ clarifications
- Re-inspection First-come, first-served ASAP

SAMPLE Inspection report (FSI/507B)

FSI/507B-1 (7/2007)

Fire Service Department / Fire Protection Command

File No. 19/XXXX

Initial / Re-inspection Report on Fire Service Installation / VAC Control System / Smoke Extraction System / Pressurization of Staircase System Inspection and Testing

Part I

1. Building Address : XXX

2. Inspection Result : (Defects noted by Inspecting Officer) :-

2.1 DTL is not connected.
2.2 Construction letter of building name is not submitted.
2.3 Construction letter of Address & building Description is not submitted.
2.4 Understanding letter of VAC system (RFP to owner) is not submitted.
2.5 Appointment of FSI equipment list is required.
2.6 Appointment of FSI checklist is required.

Remark : AP/AP representative is confirmed that no lining material (F.S. notes 7.1 & 7.2) is installed in this project.
to be continued (Total 1 Sheets including this one)

3. A letter / memo confirming the above defects will / will not be sent

Signature : _____
Inspecting Officer : XXX XXX XXX
Date : XX / 19 / XXXX

Part II

4. I confirm that the defects as stated above have been brought to my attention

Authorized person (or representative)	XXX XXX XXX	Installation Contractor (or representative)	XXX XXX XXX
Signature	_____	Signature	_____
Dated	XX / 19 / XXXX	Dated	XX / 19 / XXXX

Note : Appointment for re-inspection should be made by AP by telephone to the Senior Building Services Inspector (telephone no. 2733 7549) after the above defects have been remedied. Fresh application for inspection (FSI/501) is not necessary unless it is so required in a refusal letter / memo.
If you have found the inspection report unjustified or wish to appeal any points made in this report, please contact Fire Staff Officer of Licensing and Certification Command at Telephone no. 2733 7605.

Way forward

Streamline the process of acceptance inspection

- ▶ **Pre-inspection meeting with AP & RFSIC**
 - **On need basis**
 - **Documents checking**
 - **Formulation of inspection schedule**

Way forward

- ▶ **Prepare Inspection checklist for consistency of FSI acceptance**
- ▶ **FS Certificate**
 - **Amendments of building plans**
 - **Further document submissions**

Way forward

- **Regular seminars for the trade, e.g. HKIA, FSIC & HKIE**
- **FAQ & Video in FSD website**
- **Letter to FSIC on FSD Circular Letter No.1 /2015**

Facilitation by AP / RFSIC

- ✓ **Observe FSD Circular Letter 1 / 2015**
- ✓ **Ensure Site Readiness and Safety**
- ✓ **Adopt Prescriptive Design Approach**
- ✓ **Provide Early Submission for Fire Engineering Design**

Thank You