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FIRE SERVICES DEPARTMENT
LICENSING & CERTIFICATION COMMAND
FIRE SERVICES HEADQUARTERS BUILDING,
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本處檔案 Our Ref.: **(43) in FP 314/07 IV**
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23 March 2004

To: Authorized Persons
Registered F.S.I. Contractors
Registered Ventilation Contractor
Registered Lift & Escalator Contractors
Fire Insurance Association of H.K.
The Association of Registered F.S.I. Contractors of Hong Kong
Structural Division, H.K.I.E.
Power Companies
The H.K. & China Gas Co.
The Lift & Escalator Contractors Association
Pacific Century Cyber Works Limited
Hong Kong Construction Association
Director of Architectural Services
Director of Buildings
Director of Housing
Petroleum Companies

Dear Sirs,

FSD Circular Letter No. 1/2004
Checklist for the Inspection of Fire Detection and Alarm Systems

Subsequent to the issue of FSD Circular Letter No.1/2002 for the adoption of Rules of the Loss Prevention Council and B.S. 5839 : Part 1 : 1988 for the Fire Detection and Alarm Systems for buildings, the Working Group for Fire Service Installations Inspection Procedures has been tasked to prepare a Checklist for the Inspection of Fire Detection and Alarm Systems. The task is now completed and the Checklist is attached.

The new Checklist for the Inspection of Fire Detection and Alarm Systems will replace the current one at Appendix 4 of the Codes of Practice for Minimum Fire Service Installations and Equipment and Inspection, Testing and Maintenance of Installations and Equipment for all projects completed after the effective date of FSD Circular Letter No. 1/2002 (i.e. 1 January 2003).

Yours faithfully,

(LAU Kwai-shan)
for Director of Fire Services

Checklist for Inspection of Fire Detection and Alarm Systems

APPENDIX 4

I. Reference

Project: …….. F.S.D. Ref : .....……...

Address: ……..

Type of building: Domestic/Industrial/Godown/Commercial/Office/Composite/Hotel/Hospital/

Others with/without basement ……

II. Type of Equipment

2.1 Alarm Annunciation Panel

Manufacturer/model no. of alarm annunciation panel:

(Main panel) .....

(Sub-panel/repeater panel, if any) .....

F.S.D. approved type : Yes/No

Type : Conventional type [ ]
Addressable type [ ]

2.2 Power Supplies

2.2.1 Mains supply : Supply Voltage/Phase/Hz ..……...

2.2.2 Emergency generator : Rating of generator (KVA) ..……...

: Fuel oil supply capacity (Litres of oil) ……..

2.2.3 Standby battery : Type of batteries ..……...

: Capacity of batteries (Ahr) ..……...

: Backup period for fire services (hr) ……..……..

2.3 Detectors

2.3.1 Heat detector : Manufacturer/model no. : ..……...

: F.S.D. approved type : Yes/No

: Type : Fixed temperature [ ]
Rate-of-rise temperature [ ]
Combination [ ]
Linear cable [ ]
Others [ ]
(please specify ..……..)

2.3.2	Smoke detector	: Manufacturer/model no.	:	.....	
		: F.S.D. approved type	:	Yes/No	
		: Type	:	Ionization	[ ]
				Optical	[ ]
				Point	[ ]
				Aspirating	[ ]
				Others	[ ]
				(please specify .....)	
2.3.3	Flame detector	: Manufacturer/model no.	:	.....	
		: F.S.D. approved type	:	Yes/No	
		: Type	:	Infra-red	[ ]
				Ultra-violet	[ ]
				Others	[ ]
				(please specify .....)	
2.3.4	Others	: Manufacturer/model no.	:	.....	
		: F.S.D. approved type	:	Yes/No	
		: Type	:	.....	

2.4 Manual Call Points

Manufacturer/model no.	:	.....	
F.S.D. approved type	:	Yes/No	
Type	:	Breakglass type	[ ]
		Others	[ ]
		(please specify .....)	

2.5 Alarm Sounders

Manufacturer/model no.	:	.....	
F.S.D. approved type	:	Yes/No	

2.6 Visual Fire Alarm Lamps

Manufacturer/model no.	:	.....	
F.S.D. approved type (only for those lamps integrated with alarm sounders)	:	Yes/No	

2.7 Fire Resistant Cables

Manufacturer/model no.	:	.....	
Type	:	BS 6387 Cat. AWX, AWY or AWZ	[ ]
		BS 6387 Cat. BWX, BWY or BWZ	[ ]
		BS 6387 Cat. CWX, CWY or CWZ	[ ]
		BS 6387 Cat. SWX, SWY or SWZ	[ ]
		MICS cable to BS 6207	[ ]
		Others with F.S.D.' s acceptance letter	[ ]
		(please specify .....)	

III. Zoning

3.1 Detectors

Zone No.	Location	Total no. of detectors	Detector type *	Remark

Total no. of detectors …… Total no. of detector zones ……

* S-smoke, H-heat, F-flame, O-others (please specify)

3.2 Alarm Sounders

Zone No.	Location	Total no. of sounders	Remark

Total no. of sounders …… Total no. of sounder zones ……

3.3 Manual Call Points

Zone No.	Location	Total no. of call points	Remark

Total no. of manual call points …… Total no. of call point zones ……

3.4 Visual Fire Alarm Signal Lamps

Zone No.	Location	Total no. of VFA signal lamps	Remark

Total no. of VFA signal lamps …… Total no. of VFA zones ……

(use separate sheets or computer printouts in full accordance with the above format if the space is not sufficient for inserting all the zones)

		Yes	No	N/A	Remark	Ref. LPC	BS	CL
IV.	**Visual Inspection**							
4.1	General							
4.1.1	All fire detection and equipment are conformed to F.S.D.' s requirements.	[ ]	[ ]	[ ]	……	2		1/2002, 2.2
4.1.2	All individual components of a fire alarm system are mutually compatible.	[ ]	[ ]	[ ]	……..		6.7	1/2002, 2.5
4.1.3	Operating instructions showing the fault indication or correct action that should be taken in the event of a fire are provided adjacent to the alarm annunciation panel.	[ ]	[ ]	[ ]	……		23.1	
4.1.4	Diagrammatic representation of the building, showing at least the building entrances, the circulation areas, the escape routes and the division of zones is provided on or adjacent to the alarm annunciation panel.	[ ]	[ ]	[ ]	……..		15.4.3	
4.1.5	As-fitted zoning schedule is provided adjacent to the alarm annunciation panel.	[ ]	[ ]	[ ]	……		23.1	
4.1.6	Log book is provided adjacent to the alarm annunciation panel.	[ ]	[ ]	[ ]	……..		23.1	
4.2	Detectors							
4.2.1	Appropriate types of detectors are provided in areas as indicated on the approved building plans.	[ ]	[ ]	[ ]	……	Code		
4.2.2	Detectors are provided in areas as indicated on the endorsed FSI plans.	[ ]	[ ]	[ ]	……	Code		
4.2.3	Detection zonings are properly labelled at the alarm annunciation panel.	[ ]	[ ]	[ ]	……..	Code		
4.2.4	In the floor where sleeping risk exists (e.g. hotel, hospital, etc.) :							
	(a) heat detector should be used in kitchen.	[ ]	[ ]	[ ]	……	Code		
	(b) smoke detector should be used in other areas except sprinkler protected toilets, bathrooms and staircases.	[ ]	[ ]	[ ]	……	Code		
4.2.5	Detectors are provided to entire basement (except car parking area, strong room & safe deposit vault).	[ ]	[ ]	[ ]	……	Code		
4.2.6	Intrinsically safe detector is used in the environment which may have the presence of explosive or flammable gas.	[ ]	[ ]	[ ]	……	Code		
4.2.7	The aggregate floor area covered by any single detection loop circuit is $\leqq$ 10,000 m^2 calculated on those portions of the premises installed with fire detectors.	[ ]	[ ]	[ ]	……	6(d)		1/2002, 2.4
4.2.8	The aggregate floor area covered by a single detection zone is $\leqq$ 2,000 m^2 calculated on those portions of the premises installed with fire detectors.	[ ]	[ ]	[ ]	……		7.2(a)	

		Yes	No	N/A	Remark	Ref. LPC	BS	CL
4.2.9	Remote indicator lamps are provided to show visually the position of the fire detection signal for search distance > 30 m.	[ ]	[ ]	[ ]	……		7.2(b)	
4.2.10	Remote indicator lamps outside doors (near door exit) are provided for detectors installed inside rooms if doors are likely to be locked.	[ ]	[ ]	[ ]	……		7.2(b)	
4.2.11	If the building consists of more than one storey, a single zone design is adopted for the total floor area is $\leqq$ 300 m^2.	[ ]	[ ]	[ ]	……		7.2(c)	
4.2.12	As the total floor area of the building is > 300 m^2, all zones are restricted to a single storey, except that :							
	(a) if the total floor area of a fire compartment is $\leqq$ 300 m^2, and any communication with other fire compartments is only at the lowest level of the building, then that fire compartment is considered as a single zone even though there may be more than one storey within it; and							
	(b) if detectors or call points are fitted in stairwells, lightwells, liftwells and other flue-like structures extending beyond one floor but within one fire compartment, then the volume of the well or shaft should be considered as one or more separate zones.	[ ]	[ ]	[ ]	……		7.2(d)	
4.3	<u>Alarm Sounders</u>							
4.3.1	An alarm sounder (weatherproof type) is installed at the external/outside of the building (near the main entrance).	[ ]	[ ]	[ ]	……		9.1	
4.3.2	An alarm sounder is provided near the control and indicating equipment.	[ ]	[ ]	[ ]	……		9.2	
4.3.3	One alarm sounder is provided at each hose reel point.	[ ]	[ ]	[ ]	……	Code extent		
4.3.4	All alarm sounder cases are painted in red colour and clearly marked 'FIRE ALARM' '**火警**' in white color. The height of all the English and Chinese wordings shall not be less than 10 mm and 15 mm respectively.	[ ]	[ ]	[ ]	……		9.1	1/2002, 2.16
4.3.5	A clearly labelled facility is available at or near the alarm annunciation panel for starting or restarting the fire alarm sounders. Operation of this facility is not dependent on the state of any silencing device.	[ ]	[ ]	[ ]	……		9.1	
4.3.6	For sounders used for simple ring circuits, the distribution wiring to each sounder circuit should be protected against overload due to short circuit by a fuse or similar device.	[ ]	[ ]	[ ]	……		6.6.4	
4.4	<u>Manual Call Points</u>							
4.4.1	Zoning of manual call points is at least one zone per floor or storey.	[ ]	[ ]	[ ]	……		7.2(f)	1/2002, 2.12

		Yes	No	N/A	Remark	Ref. LPC	BS	CL
4.4.2	One manual call point is located at each of the following equipment/location. (a) hose reel point; (b) adjacent to all storey exits; (c) adjacent to all exits to open air.	[ ]	[ ]	[ ]	……		10.2	1/2002, 2.23
4.4.3	The travel distance for finding a manual call point is ≦ 30 m.	[ ]	[ ]	[ ]	……		10.2	
4.4.4	Manual call points are fixed at a height of about 1.2m above the finished floor level.	[ ]	[ ]	[ ]	……		10.2	1/2002, 2.24
4.5	Visual Fire Alarm Signals							
4.5.1	VFA signal lamps are labelled 'FIRE ALARM' '**火警**'. The height of English and Chinese characters is not less than 10 mm and 15 mm, respectively.	[ ]	[ ]	[ ]	……			4/2001, Pt. I, Para. 4
4.5.2	Visual alarm signal is in the form of red flashing light.	[ ]	[ ]	[ ]	……			4/2001, Pt. I, Para. 4
4.5.3	Each compartment is provided with at least one VFA signal lamp.	[ ]	[ ]	[ ]	……			4/2001, Pt. I, Para. 4
4.5.4	Areas to be covered by VFA are in full compliance with the approved building plans.	[ ]	[ ]	[ ]	……			4/2001, Pt. I, Para. 4
4.5.5	The design of the VFA system conforms to : (a) Section 4 – 4, NFPA 72 : 1999, or (b) Clause 9.7, BS 5839 : Part 1 : 1988.	[ ] [ ]	[ ] [ ]	[ ] [ ]	…… ……			4/2001, Pt. I, Para. 4
4.6	Time Related Systems and Transmission Delay Units							
4.6.1	Time related system and/or transmission delay unit are/is provided.	[ ]	[ ]	[ ]	……			4/2001
4.6.2	Time related system and/or transmission delay unit are/is approved by F.S.D..	[ ]	[ ]	[ ]	……		14.6	1/2002, 2.33
4.6.3	An indicator light is provided on or adjacent to the control and indicating equipment showing the working or silent hours state of the system.	[ ]	[ ]	[ ]	……		14.6	
4.6.4	A manual override switch is provided on or adjacent to the control equipment for de-activating the time related system when the building is unoccupied.	[ ]	[ ]	[ ]	……		14.6	
4.7	Control and Indicating Equipment							
4.7.1	The alarm annunciation panel is located in an area on the ground floor and in the immediate vicinity of the building entrance easily to be accessed by the F.S.D. or in the building's Fire Control Centre/Room.	[ ]	[ ]	[ ]	……		15.3.2	
4.7.2	Repeater panels are provided at different entrances or other points of entry to be used by the F.S.D. in accordance with the approved building plans.	[ ]	[ ]	[ ]	……		15.3.2	

		Yes	No	N/A	Remark	Ref. LPC	BS	CL
4.7.3	Where the control and indicating equipment is installed in a severe weather environment, a weatherproof protective enclosure with adequate ventilation is provided to protect it from being damaged by high humidity and water.	[ ]	[ ]	[ ]	……		15.3.7	1/2002, 2.41
4.7.4	All the alarm indications are displayed in both Chinese and English so that the origin of the alarm position in relation to this building can be easily, quickly and unambiguously identified.	[ ]	[ ]	[ ]	……		15.4.1	1/2002, 2.42
4.7.5	The method of indication of the origin of alarms is by means of :							
	(a) a display of letters and/or numbers.	[ ]	[ ]	[ ]	……			
	(b) a permanent mimic diagram.	[ ]	[ ]	[ ]	……			
	(c) a display of a mimic diagram on a visual display unit (VDU) and (a) or (b) above or a second VDU or a printer.	[ ]	[ ]	[ ]	……			
	(d) by other suitable means. (please specify ……)	[ ]	[ ]	[ ]	……			
		[ ]	[ ]	[ ]	……		15.4.3	
4.7.6	The operation of all manual controls and isolating devices should be limited to authorized personnel. It may be provided by restricting access to the equipment by means of the following : -	[ ]	[ ]	[ ]	……			
	(a) the use of a lock.	[ ]	[ ]	[ ]	……			
	(b) a key-operated switch.	[ ]	[ ]	[ ]	……			
	(c) in a disciplined environment, by the use of a list of authorized personnel.	[ ]	[ ]	[ ]	……			
	(d) other acceptable means. (please specify ……)	[ ]	[ ]	[ ]	……		15.5	
4.7.7	No silencing switch device is installed as a single component. This device is incorporated in either the main fire services control panel or a repeater panel.	[ ]	[ ]	[ ]	……		9.11	
4.8	<u>Power Supplies</u>							
4.8.1	Permanent electricity supply is connected.	[ ]	[ ]	[ ]	……	Code		
4.8.2	Battery powered standby supply is connected.	[ ]	[ ]	[ ]	……	Code		
4.8.3	Battery power supply is provided. (Voltage:…… DC volts:….. Ahr:…..)	[ ]	[ ]	[ ]	……	Code		
4.8.4	The battery charger is capable of recharging the batteries from fully discharged to fully charged within 24 hours.	[ ]	[ ]	[ ]	……		16.3.2.1	
4.8.5	Connections to the mains supply is via an isolating protective device (e.g. an isolating switch-fuse) reserved solely for all the fire service installations.	[ ]	[ ]	[ ]	……		16.2	1/2002, 2.44

		Yes	No	N/A	Remark	Ref. LPC	BS	CL
4.8.6	Every isolator, switch and protective device that can supply for the fire alarm system is properly labelled as appropriate : (a) 'FIRE ALARM' '**火警警報**'; (b) ' FIRE ALARM DO NOT SWITCH OFF' '**火警警報切勿切斷電源**'; or (c) ' WARNING: THIS SWITCH ALSO CONTROLS THE SUPPLY TO THE FIRE ALARM SYSTEM' '**警告: 此電掣乃供應火警警報系統電源**'. All warning labels are engraved in white letter/ character with red colour background. The height of all the English and Chinese wordings is not less than 10 mm and 15 mm respectively.	[ ]	[ ]	[ ]	.....		16.2	1/2002, 2.45
4.8.7	Normal and standby battery supplies can each be capable of supplying the maximum alarm load irrespective of the condition of the other supply.	[ ]	[ ]	[ ]	.....		16.4.1	
4.8.8	Power supply equipment for multiple occupancy buildings is sited in an area of common access.	[ ]	[ ]	[ ]	.....		16.7.3	
4.9	<u>Cables, Wiring and Other Interconnections</u>							
4.9.1	Cables used for the interconnections between VFA signaling devices, sounders, control and indicating equipment and power supplies are suitable for prolonged operation during a fire or can resist fire for at least 30 minutes.	[ ]	[ ]	[ ]	.....		9.7 & 17.2	
4.9.2	Cables requiring prolonged operation during a fire should be: (a) MICS cable complying with BS6207; or (b) complying with BS6387, meeting with the requirements for Cat. AWX or SWX; or (c) embedded in the structure of the building and protected by the equivalent of at least 12 mm of plaster; or (d) separated from any significant fire risk by a wall, partition or floor having at least 30 minutes fire resistance; or (e) by other acceptable means as stipulated in relevant F.S.D. Circular Letters.	[ ]	[ ]	[ ]	.....		17.4.2	3/2002
4.9.3	Cables other than MICS cable complying with BS 6207 or sheathed steel-wire-armoured cable complying with BS 6346 or BS 5467 should be mechanically protected if : (a) they are not monitored; or (b) they are less than 2.25 m above the floor; or (c) physical damage or rodent attack is likely.	[ ]	[ ]	[ ]	.....		17.5.2	

		Yes	No	N/A	Remark	Ref. LPC	BS	CL
4.9.4	Mechanical protection is provided to the cables by one of the following methods : (a) installation in conduit, ducting or trunking; (b) by laying the cable in a channel; (c) using MICS cable complying with BS 6207 or sheathed steel-wire-armoured cable complying with BS 6346 or BS 5467.	[ ]	[ ]	[ ]	……		17.5.2	
4.9.5	Conductors carrying fire alarm power or signals are separated from conductors used for other systems by one or more of the followings :							
	(a) installation in conduit, ducting, trunking or a channel reserved for fire alarm conductors;	[ ]	[ ]	[ ]	……			
	(b) a mechanically strong, rigid and continuous partition of non-combustible material;	[ ]	[ ]	[ ]	……			
	(c) mounting at a distance of at least 300 mm from conductors of other systems;	[ ]	[ ]	[ ]	……			
	(d) wiring in cables complying with BS 7629;	[ ]	[ ]	[ ]	……			
	(e) wiring in MICS cable with an insulating sheath or barrier. The exposed-to-touch rating of the IEE Wiring Regulations should not be exceeded.	[ ]	[ ]	[ ]	……		17.10	
4.9.6	For cable which should be segregated from cables of other services but is not enclosed in ducting, trunking or a channel reserved for fire alarm circuits, it is suitably marked or labelled at intervals not exceeding 2 m to indicate its function and the need for segregation.	[ ]	[ ]	[ ]	……		17.10	
4.9.7	DTL is mechanically protected in accordance with the methods mentioned in item 4.9.4 above.	[ ]	[ ]	[ ]	……		17.11	
4.9.8	Cabling and wiring installation is in accordance with the latest edition of the EE Code.	[ ]	[ ]	[ ]	……		24.4.1	1/2002, 2.53
4.9.9	Any joint in a cable is enclosed in a suitable and accessible junction box labelled ' FIRE ALARM' '**火警警報**' engraved in white letter/character with red colour background. The height of all the English and Chinese wordings is not less than 10 mm and 15 mm respectively to avoid confusion with other services.	[ ]	[ ]	[ ]	……		17.9 & 24.4.3	1/2002, 2.54

V Testing

5.1 <u>Detectors</u>

5.1.1	Upon actuation of any detector in the building, the correct audio/ visual warning device for the fire alarm and detection system is initiated.	[ ]	[ ]	[ ]	……		26.5	
5.1.2	The sensitivity of all heat/smoke/flame detectors is correctly adjusted/ set and checked in full accordance with the manufacturer's recommendations.	[ ]	[ ]	[ ]	……		Code	
5.1.3	The zoning of detectors is correct.	[ ]	[ ]	[ ]	……		Code	

		Yes	No	N/A	Remark	Ref. LPC	BS	CL
5.2	Alarm Sounders							
5.2.1	Upon the actuation of the detector, alarm should be given by alarm sounder installed at the building external near the entrance.	[ ]	[ ]	[ ]	……		9.2	
5.2.2	Background noise (N) likely to persist for a period longer than 30 seconds.	…….. dB(A)			……		9.4.1	1/2002, 2.19
5.2.3	For domestic building, the minimum sound level of alarm sounders is measured at 3 m from the inside of the main entrance door with all doors shut off at all flats and the result is, …… dB(A) which is : (a) ≧ 60 dB(A); and (b) ≧ [5 dB(A) + ……. (background noise, N at item 5.2.2)] = …….. dB(A)	[ ]	[ ]	[ ]	……		9.4.1	1/2002, 2.19
5.2.4	For building other than domestic building, the minimum sound level of alarm sounders is measured at 3 m from the inside of the main entrance door with all doors shut off at all rooms/ premises and the result is, …… dB(A) which is : (a) ≧ 65 dB(A); and (b) ≧ [5 dB(A) + ……. (background noise, N at item 5.2.2)] = …….. dB(A)	[ ]	[ ]	[ ]	……		9.4.1	1/2002, 2.19
5.2.5	The primary sounders should meet the required sound level when the machine noise ceases and the secondary sounders are out of service.	[ ]	[ ]	[ ]	……		9.4.5(a)	
5.2.6	Where secondary sounders are installed, the primary sounders in those parts of the premises without noisy machines are distinctly audible at all times when operated.	[ ]	[ ]	[ ]	……		9.4.5(b)	
5.2.7	Failure of the power supply to the secondary sounders is either : (a) resulted in silencing of the noisy machines; or (b) in the giving of an audible and visible fault warning at the control and indicating equipment.	[ ]	[ ]	[ ]	……		9.4.5(c)	
5.2.8	Sounding sequence of alarm sounder operation complies with requirements stipulated in F.S.D. Circular Letter No. 4/96, Part VIII. Item 4.	[ ]	[ ]	[ ]	……		9.5	1/2002, 2.20
5.3	Manual Call Points							
5.3.1	The zoning of manual call points is correct.	[ ]	[ ]	[ ]	……	Code		
5.3.2	Upon actuation of any manual call point in the building, the fixed fire pump comes into operation regardless of the zoning of the manual call point.	[ ]	[ ]	[ ]	……	Code 5.14(b)		

		Yes	No	N/A	Remark	Ref. LPC	BS	CL
							Code	
5.3.3	Upon actuation of any manual call point in the building, the correct audio/ visual warning device for the fire alarm and detection system is initiated.	[ ]	[ ]	[ ]	.....			
5.3.4	The delay between operation of a call point and the giving of the general alarm is ≦ 3 seconds.	[ ]	[ ]	[ ]	.....		10.1	
5.4	Visual Fire Alarm Signals							
5.4.1	The power supply of the VFA system is from :							
	(a) DC supply source with back-up supply by battery; or	[ ]	[ ]	[ ]	.....			
	(b) AC supply source with secondary supply from emergency generator; or	[ ]	[ ]	[ ]	.....			
	(c) AC supply source with secondary AC supply from the main electricity supply obtained from before the consumer side main power supply switch.	[ ]	[ ]	[ ]	.....			4/2001, Para. 4(ii)
5.4.2	All VFA flashing light is visible to normal eyesight in the required protected areas when the fire alarm system is actuated.	[ ]	[ ]	[ ]	.....			4/2001, Para. 4(iv)(b)
5.4.3	VFA signal is clearly distinguishable from any other non-fire services visual signals used in the premises.	[ ]	[ ]	[ ]	.....		9.7	
5.5	Time Related Systems and Transmission Delay Units							
5.5.1	Repeated switch operations to delay the automatic changeover to more sensitive state should not extend > 6 minutes after the last operation of the switch.	[ ]	[ ]	[ ]	.....		14.6	1/2002, 2.34
5.5.2	The alarm is automatically transmitted to FSCC after a fixed delay period ≦ 1 minute, unless a manual override operation has been carried out.	[ ]	[ ]	[ ]	.....		14.7	1/2002, 2.38
5.5.3	Automatic transmission of alarm to FSCC/ Chubb Centre or remote manned center is delayed for an initial period ≦ 1 minute.	[ ]	[ ]	[ ]	.....			4/2001, Pt. II
5.5.4	Transmission of alarm is further delayed for a period ≦ 5 minutes after the manual operation is performed at the control equipment.	[ ]	[ ]	[ ]	.....			4/2001, Pt. II
5.5.5	During any delay period, a manual operation at the control panel or the operation of a manual call point causes the immediate sounding of the fire alarm and transmission of the alarm.	[ ]	[ ]	[ ]	.....			4/2001, Pt. II
5.5.6	The sounding of the fire alarm and transmission of the alarm is not delayed or prevented by the operation of a manual call point or the actuation of a sprinkler flow switch at any time.	[ ]	[ ]	[ ]	.....			4/2001, Pt. II
5.5.7	The manual override switch is only capable of de-activating the system from the time related system but cannot re-activate the system again.	[ ]	[ ]	[ ]	.....		14.6	

		Yes	No	N/A	Remark	Ref. LPC	BS	CL
5.5.8	The system is not capable of permitting the action of the manual override switch to be temporarily or permanently cancelled by any automatic function.	[ ]	[ ]	[ ]	……		14.6	
5.6	Control and Indicating Equipment							
5.6.1	Audio, visual alarms for the fire detection and alarm system, signals for system/ detector/ manual call point/ sounder fault and signals to all the ancillary equipment are given correctly at the control and indicating equipment.	[ ]	[ ]	[ ]	……		Code 26.5	
5.6.2	DTL to the FSCC/ Chubb Centre is functioning properly. (please state DTL no.: ……)	[ ]	[ ]	[ ]	……		Code	
5.6.3	The following panel functions and switches are working properly :							
	(a) alarm silence and reset switches.	[ ]	[ ]	[ ]	……			
	(b) normal supply and standby battery supply.	[ ]	[ ]	[ ]	……			
	(c) Power on/failure indicator.	[ ]	[ ]	[ ]	……			
	(d) DTL failure indicator.	[ ]	[ ]	[ ]	……			
	(e) zone alarm/fault indicator.	[ ]	[ ]	[ ]	……		Code	
5.6.4	Two simultaneous faults should not remove fire alarm protection from an aggregate area greater than 10,000 m^2 calculated on those portions of the premises installed with fire detectors.	[ ]	[ ]	[ ]	……		6.6.2	1/2002, 2.8
5.6.5	Removal of a detector is causing a ' fault' signal to be generated at the control equipment.	[ ]	[ ]	[ ]	……		6.6.2	
5.6.6	A facility/provision is provided so that individual detector can be tested without either sounding an alarm or requiring the complete system to be disabled to prevent such an alarm.	[ ]	[ ]	[ ]	……		6.6.2	1/2002, 2.9
5.6.7	The operation of a silencing device :							
	(a) requires a manual operation;	[ ]	[ ]	[ ]	……			
	(b) causes an audible signal to be given in the control and indicating equipment with a distinctive sound different from any alarm and control sounder;	[ ]	[ ]	[ ]	……			
	(c) should not cancel any visual signal of the alarm at the control equipment;	[ ]	[ ]	[ ]	……			
	(d) should not prevent the proper receipts of alarm from any zones(s) not already providing an alarm;	[ ]	[ ]	[ ]	……			
	(e) should not prevent the correct operation of any control for starting or restarting the alarm sounders;	[ ]	[ ]	[ ]	……		9.6.2 & 9.11	
	(f) should not prevent the transmission of an alarm to a remote manned centre.	[ ]	[ ]	[ ]	……			
5.6.8	A fault warning signal is generated at the control and indicating equipment when any sounder is disconnected.	[ ]	[ ]	[ ]	……		6.6.3	
5.6.9	A fault warning is given in the event of failure on microprocessors for program controlled system.	[ ]	[ ]	[ ]	……		6.9(d)	

		Yes	No	N/A	Remark	Ref. LPC	BS	CL
5.6.10	The operation of microprocessors for program controlled system is automatically reset after the system has been restarted.	[ ]	[ ]	[ ]	……		6.9(d)	
5.6.11	Following reinitialization, repair of any fault, or restoration of any power supply failure, all program controlled systems should be capable of : (a) sounding a general alarm within 30 seconds; and (b) within a further period of 10 minutes of attaining normal operating conditions without further manual intervention. (Remark: The silencing of any fault warning is not regarded as manual intervention)	[ ]	[ ]	[ ]	……		6.9(f)	
5.6.12	The audible indications of the control and indicating equipment are easily heard in its vicinity.	[ ]	[ ]	[ ]	……		15.3.4	
5.7	<u>Power Supplies</u>							
5.7.1	Both the normal supply and the standby supply is capable of continually supplying the largest load under normal, fire and fault conditions.	[ ]	[ ]	[ ]	……		16.1	
5.7.2	A green lamp when lit indicates normal condition of power supply.	[ ]	[ ]	[ ]	……		16.1	
5.7.3	For systems supervised at intervals of $\leqq$ 12 hours, or that having a link over which a warning of failure of the normal supply can be given to a remote manned centre, the battery supply is capable of maintaining the system in operation for at 1east 24 hours, after which sufficient capacity should remain to provide an evacuation alarm in all zones for at least 30 minutes.	[ ]	[ ]	[ ]	……		16.5.1.2	
5.7.4	For systems not supervised, the battery supply is capable of automatically maintaining the system in normal operation for a period of not less than 24 hours after the detection of a fault in the normal supply and the initiation of remedial action.	[ ]	[ ]	[ ]	……		16.5.1.3	
5.7.5	For unoccupied building with systems not supervised for periods > 24 hours, facilities are provided to give protection for a period of at least 24 hours after reoccupation, with sufficient capacity at the end of that time to sound an evacuation alarm in all zones for at least 30 minutes.	[ ]	[ ]	[ ]	……		16.5.1.3	
5.7.6	For systems backed up by standby generators, the battery supply is capable of maintaining operation for a period of not less than 6 hours, after which sufficient capacity should remain to provide an evacuation alarm in all zones for at least 30 minutes.	[ ]	[ ]	[ ]	……		16.5.1.4	

		Yes	No	N/A	Remark	Ref. LPC	BS	CL
5.8	Cables, Wiring and Other Interconnections							
5.8.1	Insulation test of all installed cables and wiring is made at 500 V DC and all insulation resistance are $\geqq 0.5\ M\Omega$.	[ ]	[ ]	[ ]	……		26.3 EECoP, 21B(6)	
5.8.2	The completed circuit is tested at a voltage recommended by the equipment manufacturer.	[ ]	[ ]	[ ]	……		26.3	
5.8.3	Earth continuity and earth-loop impedance is tested and the results are in compliance with the EE Code.	[ ]	[ ]	[ ]	……		26.4	1/2002, 2.58

VI Documentation

6.1	The following equipment list and catalogues are provided.							
	(a) alarm annunciation panel;	[ ]	[ ]	[ ]	……			
	(b) repeater panels;	[ ]	[ ]	[ ]	……			
	(c) detectors;	[ ]	[ ]	[ ]	……			
	(d) manual call points;	[ ]	[ ]	[ ]	……			
	(e) alarm sounders;	[ ]	[ ]	[ ]	……			
	(f) visual fire alarm signal lamps;	[ ]	[ ]	[ ]	……			
	(g) fire resistant cables.	[ ]	[ ]	[ ]	……			
6.2	F.S.D. approval/acceptance letters for the following equipment are provided.							
	(a) alarm annunciation panel;	[ ]	[ ]	[ ]	……			
	(b) repeater panels;	[ ]	[ ]	[ ]	……			
	(c) detectors;	[ ]	[ ]	[ ]	……			
	(d) manual call points;	[ ]	[ ]	[ ]	……			
	(e) alarm sounders;	[ ]	[ ]	[ ]	……			
	(f) visual fire alarm signal lamps integrated with alarm sounders.	[ ]	[ ]	[ ]	……			
6.3	Test certificates on fire properties or F.S.D.'s prior acceptance letters for all the fire resistant cables used are provided.	[ ]	[ ]	[ ]	……			1/2002, 3.16
6.4	Noise measurement (including background noise) records for alarm sounders are provided.	[ ]	[ ]	[ ]	……			
6.5	Calculation showing the required battery capacity is provided.	[ ]	[ ]	[ ]	……			
6.6	Letter certifying the completion of the DTL to the FSCC/Chubb Centre is provided.	[ ]	[ ]	[ ]	……			
6.7	Confirmation or certification on the compatibility is given by the manufacturers of the fire alarm system for all individual components of a fire alarm system such as fire detectors, alarm devices, manual call points, power supplies, interfacing equipment, remote indication and control panels.	[ ]	[ ]	[ ]	……		6.7	1/2002, 2.5
6.8	F.S.D. approval letter on Time Related System/Transmission Delay Unit is provided.	[ ]	[ ]	[ ]	……			4/2001

		Yes	No	N/A	Remark	Ref. LPC	BS	CL
6.9	A method of test recommended by the supplier to predict the failure of the battery during the intervals between routine tests is provided.	[ ]	[ ]	[ ]	……		16.3.2.1	
6.10	As-fitted fire service installation drawings including the followings are provided :							
	(a) schematic power supply and distribution diagrams and layout plans showing the types, size and routing of all power supply cables, fire resistant cables and wiring for the fire alarm and detection system;							
	(b) wiring diagrams and layout plans of all junction boxes and distribution boards;							
	(c) floor layout plans showing the location of each fire detection zone, detectors and detector types, manual call points, VFA signal lamps, alarm sounders, alarm annunciation panel and repeater panels.	[ ]	[ ]	[ ]	……		26.1	

VII Measuring and Testing Instrument/ Equipment Calibration (Optional for record only)

7.1 Calibration certificates showing that the following (please specify) testing and measuring instruments or equipment have been calibrated in the past 12 months are provided.

	Type	Model No.	Serial No.				
(a)	……....	……	……	[ ]	[ ]	[ ]	……
(b)	……....	……	……	[ ]	[ ]	[ ]	…… .
(c)	……..	……	……	[ ]	[ ]	[ ]	……
(d)	……..	……	……	[ ]	[ ]	[ ]	……
(e)	……..	……	……	[ ]	[ ]	[ ]	……
(f)	……..	……	……	[ ]	[ ]	[ ]	……
(g)	……..	……	……	[ ]	[ ]	[ ]	……

Test witnessed by:

Signature : ……

Name of Responsible Engineer : ……

Name of FSI Contractor : ……

Company Chop : ……

Registration No. : RCI /…… Date: ……..

Abbreviations :

The following abbreviations shall be used in this checklist.

AC	-	Alternating Current
Ahr	-	Ampere-hour
BS	-	BS 5839 : Part 1 : 1988 – Fire Detection and Alarm Systems for Buildings, Part 1. Code of Practice for System Design, Installation and Servicing
Cat	-	Category
cd	-	Candela
CL	-	F.S.D. Circular Letter No.
dB(A)	-	Decibel (A-weighted)
DC	-	Direct Current
DTL	-	Direct Telephone Line
EE Code	-	Code of Practice for the Electricity (Wiring) Regulations issued by Electrical and Mechanical Services Department
FSCC	-	Fire Services Communication Centre
Code	-	Codes of Practice for Minimum Fire Service Installations and Equipment and Inspection, Testing and Maintenance of Installations and Equipment issued by Hong Kong Fire Services Department
FSI	-	Fire Service Installation
ft	-	Foot(Feet)
Hz	-	Hertz
F.S.D.	-	Hong Kong Fire Services Department
IEE	-	The Institution of Electrical Engineers
in	-	Inch(es)
KVA	-	Kilo-Volt-Ampere
LPC	-	Loss Prevention Council Rules for Automatic Fire Detection and Alarm Installations for the Protection of Property (Schedule for the use of BS 5839:Part 1:1988)
m	-	Metre(s)
MICS	-	Mineral-Insulated Copper-Sheathed
MΩ	-	Megaohm(s)
N/A	-	Not Applicable
NFPA 72 or NFPA	-	NFPA 72 : National Fire Alarm Code, 1999 Edition
RAM	-	Random Access Memory
Ref or ref	-	Reference(s)

VFA	-	Visual Fire Alarm
<	-	Less than
=	-	Less than/equal to
>	-	More than
=	-	More than/equal to