

Building Name Address	Use (as per FSA Annexed Table 1)	Date and Time of Incident	Structure and Stories Area	Extent of Damage (Damaged Area/ Total Area)	No. of Casualties
Seibu Department Store, Ltd.	Department Store (4)	Aug. 22, 1963	Fire resistant 8 stories above ground and 2 below	All, Half, Partial , Small	Fatalities 7
		Breakout at 17:30 (approx.)			
2-8 Higashi-Ikebukuro, Toshima-ku, TOKYO		Noticed at 13:11 Notified by emergency call	Total floor area 69,350 m ²		
		Extinguished by 20:35			

I. Summary of Fire Incident

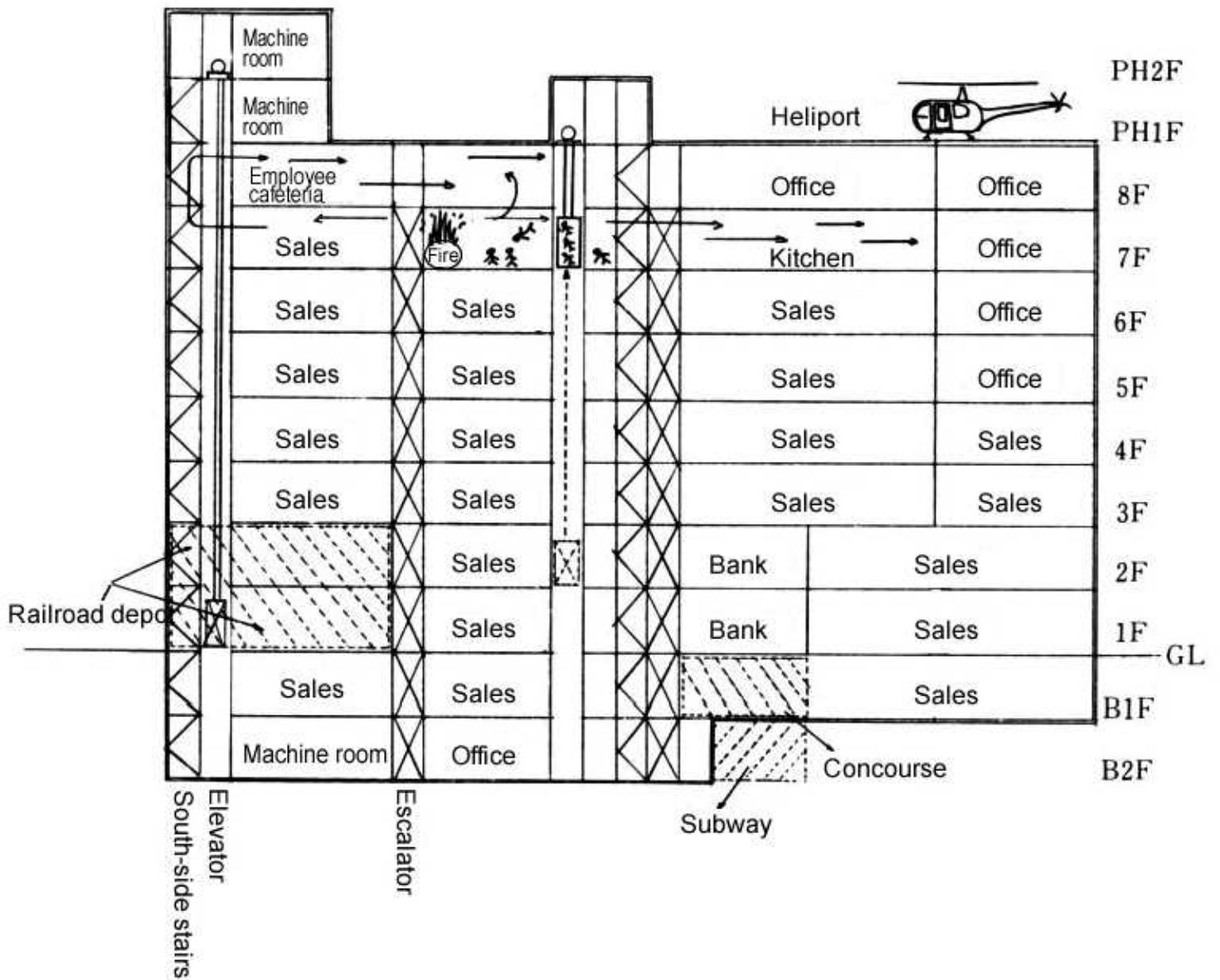
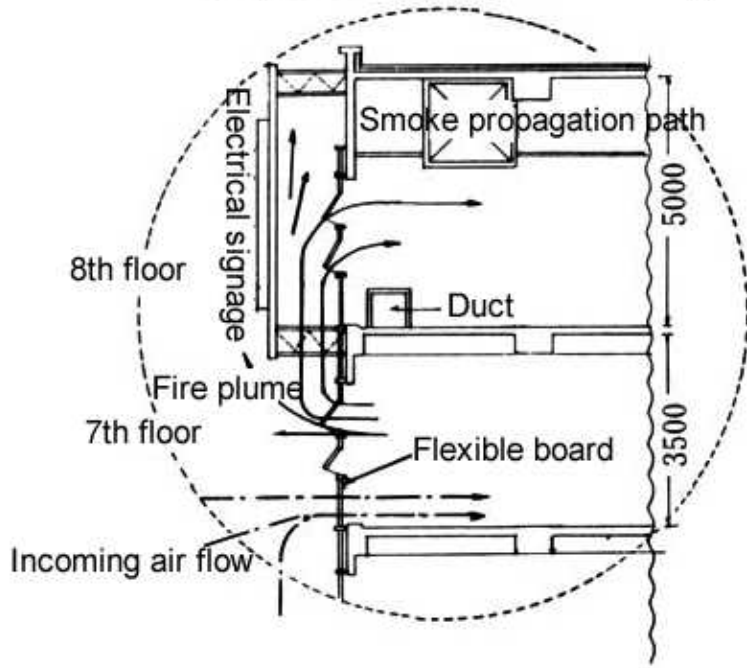
(1) Summary	Due to negligence of a renovation contractor who carried out insecticide treatment on the building during off-business hours, a highly flammable chemical caught fire and the fire spread instantly. Although the department store had maintained a fire prevention system, they failed to make an emergency call to the fire station. The delayed arrival of firefighters, heavy smoke and excruciating heat resulted in 7 fatalities and 216 injuries.							
	(2) Conditions per Floor	FL	Gross area	Damaged area	Use (Purpose)	No. of persons	No. of fatalities	Fire escape equipment
		m ²	m ²		4 inside the ELV		8 sets of inside stairs	Fire extinguishers
RH ₂		117.0					1 set of outside stairs	Indoor fire hydrants
RH ₁		284.4			12			
8		6,983.5	4,387	Office, Hall	95		7 sets of escape chutes on 3rd to 7th floors	Automatic fire detection system
⑦		7,250.1	5,863	Sales, Restaurant	76	7		
6		7,250.1		Sales	1			
5		7,250.1		Sales	15			
4		7,250.1		Sales				
3		7,250.1		Sales	1			
2		6,631.9		Sales	26			
1		6,653.2		Sales	21			
B1		7,159.6		Sales	2			
B2	5,269.9		Machine room	41				
Total	63,350.0	10,250		294	7		Water pipe connections	
(3) Origin of Fire	(Floor, Room, Part, Combustibles, <u>Habitable</u> /Non-habitable rooms, <u>Present</u> /Absent)				(4) Cause of Fire	The store was closed for the day and a few contractors were spraying pesticide in the restaurant on the 7th floor. During a break, one of the contractors lit a cigarette and threw a burning match away on the floor. The match ignited the pesticide solution (highly flammable liquid, equivalent of gasoline) that someone spilled on the floor earlier while refilling the sprayer.		
	<ul style="list-style-type: none"> The fire emerged from the hallway in front of the escalator shutter that was located in front of the restaurant on the 7th floor. At that time, 17 to 18 people (contractors, restaurant staff and shutter maintenance workers) were working in the vicinity with canned pesticide solution and sprayers. 							

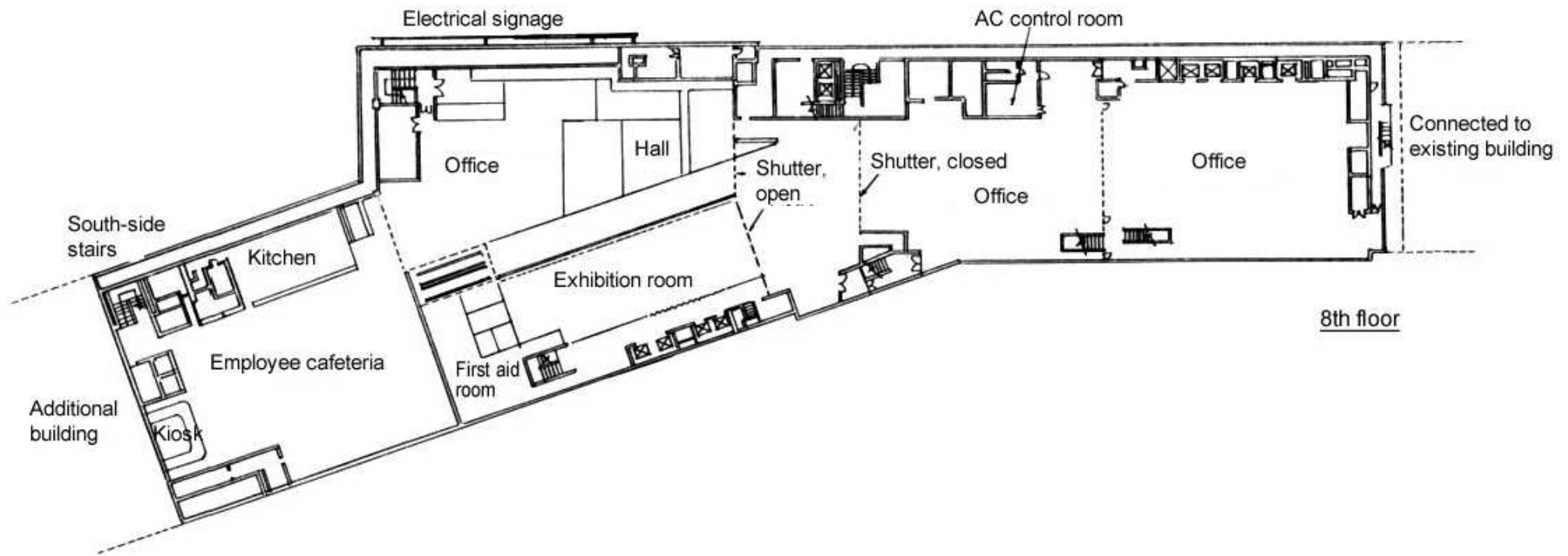
(5) Fire Propagation Path	(Location of Fire Source)	(Propagation from Source)	(Propagation to Other Floors)											
	The hallway in front of the escalator shutter located in front of the restaurant on the 7th floor	Ignited the flammable pesticide and spread instantly to other sections of the floor through the fire shutters that were open for pesticide treatment	The flame that blasted out of the windows of the 7th floor ignited electrical signage outside the 7th floor, spreading fire spread to the 8th floor.											
<p>Since the fire broke out in the hallway and ignited a highly flammable pesticide, flames spread rapidly to the ceiling and toward the restaurant, which resulted in the fire emerging from the west-side windows of the 7th floor at the early stage of the fire. The fire spread to the sports section and to the north side of the restaurant section through fire shutters that remained opened. The flames emerging from the west-side windows of the 7th floor reached the windows on the 8th floor via electrical signage. With the radiating heat, the flames spread from the upper side of the windows of the 8th floor to the ceiling of the office and then to the employee cafeteria and exhibition room through a fire shutter that remained open.</p>														
<p>○ Main Reasons for the Propagation of the Fire</p> <ul style="list-style-type: none"> ○ The pesticide solution which ignited was highly flammable, instantly spreading the fire. ○ During the pesticide treatment and construction work, the workers opened some of the fire shutters, and these fire shutters became the path for the fire to spread. <p>○ Smoke Propagation Path</p> <p>At that time, the fire doors and shutters for the vertical shafts were all closed as the store was closed for the day and thus did not become propagation paths. The smoke propagated from the 7th to the 8th floor generally along the same path as the flames.</p>														
II. Summary of the Building														
(1) Built	Construction, Completion and Major Renovations (Completion, First-phase) Dec 1951, (Completion, 5th and 6th phases) Jan 1960,													
Fire Prevention Management	(2) Vertical Shafts		(3) Fire Prevention											
	<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%;">Stairs</td> <td style="width: 10%; text-align: center;"><input checked="" type="checkbox"/></td> <td style="width: 50%;">Duct Space</td> <td style="width: 10%; text-align: center;"><input checked="" type="checkbox"/></td> </tr> <tr> <td>Elevator</td> <td style="text-align: center;"><input checked="" type="checkbox"/></td> <td>Pipe Shaft</td> <td style="text-align: center;"><input checked="" type="checkbox"/></td> </tr> <tr> <td>Escalator</td> <td style="text-align: center;"><input checked="" type="checkbox"/></td> <td>Other ()</td> <td style="text-align: center;">[]</td> </tr> </table> <p>Each vertical shaft was partitioned by fire doors or fire shutters.</p>	Stairs	<input checked="" type="checkbox"/>	Duct Space	<input checked="" type="checkbox"/>	Elevator	<input checked="" type="checkbox"/>	Pipe Shaft	<input checked="" type="checkbox"/>	Escalator	<input checked="" type="checkbox"/>	Other ()	[]	<ul style="list-style-type: none"> ○ In order to raise awareness of fire prevention, the fire-prevention manager and store security office provided fire-prevention training to new employees and other responsible personnel on how to use firefighting equipment. Each sales section carried out a fire drill more than twice per year under supervision of the security manager. ○ The store provided fire safety guidelines for contractors in accordance with bylaws and took preventive measures with respect to smoking manners and handling of fire extinguishers. ○ On the day the fire broke out, the store was closed, and a team of 20 security members was patrolling areas of the site in small groups to ensure fire safety.
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(4) Fire Compartments		(5) Firefighting Equipment												
Each sales floor was partitioned by fire shutters (5 compartments), and all the fire shutters were closed because the store was closed, except for the shutters on the 7th and 8th floors, which were mostly open to allow for pesticide treatment and construction work.		The store adequately maintained the firefighting equipment, but did not use it effectively upon the outbreak of fire because most of the people present did not know how to use it or mishandled it.												

III. Actions Taken after the Fire was Detected										
(1) First Detected	<ul style="list-style-type: none"> ◦ Detected by (Contractor who threw away the match) ◦ How and why (Sound of fire and flames) ◦ Action taken (Contractor tried to put it out with certain items) 									
	<p>After contractor K threw away the match, he heard an unusual sound and saw flames. With two of his colleagues, he tried to put out the fire with certain items and moved the cans containing the pesticide solution. However, the fire was already out of control. Therefore, he alerted Team Leader N who was working near the bathroom on the south-side stairs. When N came back to the site, the flames were already spreading to the ceiling and K and N called the security office from the emergency phone located on the stairway.</p>									
(2) Emergency Call	<table border="0" style="width: 100%;"> <tr> <td style="width: 20%;">Emergency Call</td> <td style="width: 30%;">Yes [] ()</td> <td style="width: 50%;">Time elapsed since the discovery () minutes</td> </tr> <tr> <td></td> <td>No [X] (Notified by a train station worker nearby)</td> <td></td> </tr> </table>	Emergency Call	Yes [] ()	Time elapsed since the discovery () minutes		No [X] (Notified by a train station worker nearby)				
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	<p>No-one made a 119 call from the store. A station employee at Ikebukuro Station (JNR) who was at the platform noticed black smoke pouring out of the 7th floors of the Seibu Department Store and made a 119 call (1st call to the fire station at 13:11).</p> <p>* The receptionist at the security office of the store received the emergency call from the contractors on the 7th floor and made a 119 call; however, her call did not get through and she gave up. Although there was an MM-type fire alarm, which directly sends a distress signal to the fire station at just the push of a button, no-one activated it before going to check the location of the fire.</p>									
(3) Initial Firefighting Activities	<table border="0" style="width: 100%;"> <tr> <td style="width: 20%;"></td> <td style="width: 30%;">Successful [] Failed [X]</td> <td style="width: 50%;">(Reasons or Conditions)</td> </tr> <tr> <td>Initiated</td> <td> <ul style="list-style-type: none"> ◦ Extinguished time [] ◦ Firefighting difficulties [] ◦ Firefighting method [] </td> <td> <ul style="list-style-type: none"> ◦ Contractor K tried to extinguish the fire with his colleagues but failed to do so because the flames from the flammable liquid (Category 1, petroleum-like substance) spread instantly. </td> </tr> <tr> <td>Not Initiated</td> <td> <ul style="list-style-type: none"> ◦ Extinguished time [] ◦ Firefighting difficulties [] ◦ Firefighting method [] ◦ Other [] </td> <td> <ul style="list-style-type: none"> ◦ Other contractors who were working near the fire location tried to use the fire extinguishers and the indoor fire hydrants, but did not know how to use them or were unaware that they were supposed to depress the run button. </td> </tr> </table>		Successful [] Failed [X]	(Reasons or Conditions)	Initiated	<ul style="list-style-type: none"> ◦ Extinguished time [] ◦ Firefighting difficulties [] ◦ Firefighting method [] 	<ul style="list-style-type: none"> ◦ Contractor K tried to extinguish the fire with his colleagues but failed to do so because the flames from the flammable liquid (Category 1, petroleum-like substance) spread instantly. 	Not Initiated	<ul style="list-style-type: none"> ◦ Extinguished time [] ◦ Firefighting difficulties [] ◦ Firefighting method [] ◦ Other [] 	<ul style="list-style-type: none"> ◦ Other contractors who were working near the fire location tried to use the fire extinguishers and the indoor fire hydrants, but did not know how to use them or were unaware that they were supposed to depress the run button.
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(4) Summary of Firefighting Activities	<p>(Obstacles or Difficulties in Fire Control)</p> <ul style="list-style-type: none"> ◦ In this high-rise building fire, firefighting operations were affected by various adverse conditions: the 3 sides of the department store were physically inaccessible (rail-tracks on the west side, ongoing construction on the south side and in another building (Marubutsu Department Store) on the north side) and therefore, most of the firefighters and the equipment were gathered on the east side of the building. In addition, the transit wires of the trolley bus were a big obstacle for the ladder trucks to reach over to the 7th floor (source of the fire). ◦ The building was partitioned into the smaller compartments with few openings and was not equipped with any smoke exhausting system. Therefore, the smoke and heat drifted inside the building for a long period, completely hampering firefighting operations. ◦ In addition, the firefighters first on the scene could not enter the building due to the locked fire doors and shutters. 									

(5) Evacuation	Means of Escape (No. of Persons)	Obstacles to Evacuation
	<ul style="list-style-type: none"> ◦ Stairs [X] () ◦ Elevator/Escalator [X] (20) ◦ Escape equipment [] () ◦ Directly to the ground from windows or openings [] () ◦ Rescued [X] (2) ◦ Other (by helicopter) [X] (15) 	<ul style="list-style-type: none"> ◦ No windows [] ◦ Barred openings [] ◦ Locked emergency doors (Exits) [] ◦ Alarm system [] (Poorly controlled, Malfunctioned, Not installed) ◦ Power outage [] ◦ Other [X]
<ul style="list-style-type: none"> ◦ Among the evacuees who were on the 7th floor, two contractors ran to the south-side stairs and jumped onto the scaffolding being used in the construction work. One security personnel and one contractor ran to one set stairs but the path was blocked by a fire shutter. They just managed to escape to an open-air area, and were rescued by a ladder truck 30 minutes later. Over 70 persons ran to one set stairs in a group and evacuated the building. ◦ From the 8th floor, approximately 70 persons who were separated into two groups escaped through the stairs on the north and south sides (among them, approximately 40 ran up to the rooftop). Approximately 20 persons escaped via an elevator (6 who became trapped in the elevator managed to reach the 8th floor and ran to the rooftop). ◦ From a total of 55 persons (including those who came from the 8th floor) who evacuated to the rooftop, 15 were rescued by helicopter and the remainder ran down the outside stairs to the ground. 		
(6) Casualties	Healthy individuals 7 (Drunk persons) Individuals in need of assistance Infants Elderly Handicapped Patients/ill persons	Obstacles to Evacuation
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<ul style="list-style-type: none"> ◦ Resulted in 7 casualties (all male, 4 on the 7th floor and 3 inside the elevator shaft). ◦ When the fire broke out, all the shutters were closed except for those that has been opened intentionally. Presumably, the 4 persons on the 7th floor were trapped by the black smoke from the combustion of the flammables. (One person was found near the closed shutter, 3 persons were found in the kitchen; they may found out about the fire much later). ◦ As for the 3 persons who died inside the elevator shaft, initially 9 persons entered the elevator on the 2nd floor. As soon as the elevator door was opened on the 7th floor, heavy smoke flowed in. Since they could not close the door and the elevator was no longer working, they opened the ceiling hatch to climb up to the 8th floor. Six of them safely reached the 8th floor, while the body of 1 person was found hanging off the bracket and 2 persons who might have become unconscious due to smoke were found at the bottom of the elevator shaft. 		
IV. Issues and Lessons Learned		
<ol style="list-style-type: none"> 1. The store failed to prepare for the initial reaction to a fire. Despite the fire prevention training provided, the in-house firefighters were preoccupied with internal communication and gave up preventing the fire from spreading on the initial attempt. 2. The store failed to enforce the fire safety guidelines effectively for contractors. 3. Although there were 300 people on the building when the fire broke out, no-one made a 119 call. A significant amount of time had elapsed before the train station worker made the first 119 call after witnessing flames and smoke coming out of the building. 4. The store failed to utilize the early notification system. The automatic fire detection system was to be used to explicitly inform of a fire. However, the store staff members were scrambling to confirm the fire and no one activated the MM-type fire alarm. 5. The fire compartment shutters on the 7th and 8th floors were partly open due to the ongoing construction work and no one closed the shutters before starting to evacuate. Therefore, the shutters did not function as designed and thus fire spread to other areas. <ol style="list-style-type: none"> (1) The store was a terminal building immediately next to the rail tracks. The opposite side of the building was also undergoing large-scale construction for underground parking and the track wires for a trolley bus extended all over the area. (2) There were no windows on one part of the front side of the building, which trapped the smoke inside the building. This smoke not only interfered with the firefighters' operations but also resulted in the flames breaking the common glass windows on the opposite side of the building and spreading to the upper floors by consuming the combustibles of the electrical signage. (3) Firefighting operations were very difficult because inside the building was a maze of small compartments that consisted of non-fireproofed interiors (ceiling, walls, partition walls). There were only a few openings and no smoke exhausting system. This created conditions whereby flames spread quickly and smoke became trapped very easily. (4) There was no sprinkler system installed. 		

Probable path of the fire spread to the upper floor





(Railroad tracks)

