

## Hotel New Japan, Chiyoda ward, Tokyo



### **1. Characteristics of the fire**

This fire completely destroyed the 9th and 10th floors of a large hotel in the center of Tokyo, where 33 people died and 34 were injured. The severity of the fire was properly portrayed to the public, where it was reported that flames were coming out of guest rooms, the guests were attempting to escape via the balconies, and the firefighters were taking desperate measures to rescue them. It was pointed out that the hotel was in violation of fire prevention laws, and the fire in this hotel highlighted various social problems.

### **2. Overview of fire outbreak**

- (1) Time and date of emergence  
Around 03:24 on February 8, 1982 (Monday)
- (2) Time and date of detection (detection method)  
03:39 on February 8, 1982 (Monday) (119 call placed)
- (3) Time and date of extinguishment  
12:36 on February 8, 1982 (Monday)

### **3. Overview of fire origin**

- (1) Location  
2-13-8 Nagata-cho, Chiyoda ward, Tokyo
- (2) Name of building where the fire emerged  
Hotel New Japan, Ltd.

(3) Structure and configuration of building where the fire emerged

- ① Date of construction  
March 1960
- ② Status of structural extension and alteration  
November 1961      20m<sup>2</sup> added to 2nd floor  
August 1964        22 m<sup>2</sup> added to 2nd floor  
December 1975     A dining room on the 1st floor was converted into a store
- ③ Target use of the building  
Hotel (Article 5a)
- ④ Structure  
Fire-retardant, steel-reinforced concrete structure, 2 stories below ground and 10 stories above ground
- ⑤ Area (building area, total floor area)
  - (a) Building area      5,287.0 m<sup>2</sup>
  - (b) Total floor area    46,697.0 m<sup>2</sup>
- ⑥ Number of accommodated people
  - (a) Accommodated people    2,946    Guest rooms: 420
  - (b) Number of occupants at the time of the incident
    - Guests            352    (251 male, 101 female)
    - Staff              21     (18 male, 3 female)
    - Guards            5      (5 male)
- ⑦ Number of workers  
31, 5 guards
- ⑧ Tenants  
26 stores
- ⑨ Floor area and target use per floor of the building

Floor	Area	Use
6-10	3.485.0 m <sup>2</sup>	Guest rooms
4-5	3.593.0 m <sup>2</sup>	Dining room, Banquet hall, Wedding hall, Guest rooms
3	3.817.0 m <sup>2</sup>	Guest rooms
2	4.712.0 m <sup>2</sup>	Banquet hall, Kitchen
1	4.438.0 m <sup>2</sup>	Offices, Dining room, Shops, Parking
B1	3.159.0 m <sup>2</sup>	Dining room, Shops, Offices
B2	3.707.0 m <sup>2</sup>	Switch room, Mechanical room
Total	46.697.0 m <sup>2</sup>	(PH 1-4, 2.253 m <sup>2</sup> )

(4) Status of installed fire extinguishment and prevention facilities

Extinguishment facilities

Fire hydrants inside rooms, sprinklers (partial coverage), fire extinguishers, carbon dioxide-based fire extinguishment facilities

Alarm systems

Automatic fire alarm systems, emergency announcement system

Evacuation facilities

Evacuation equipment, guiding lights

(5) Status of fire prevention management

Fire prevention manager

Notification of selection      October 3, 1979

Fire prevention plans

Notification                      April 10, 1963

Amendment                      October 23, 1976

Evacuation drills

(a) In 1979              Partial drill: once; Basic drill: once

(b) In 1980              No notification of drills

(c) In 1981              Partial drill: once

#### 4. Weather conditions

(1) Weather

Clear

(2) Wind direction, speed

NNW, speed 3.1 m/s

(3) Temperature, humidity

Temperature: -0.7°C, humidity: 40%

(4) Weather warnings, bulletins, etc.

None

#### 5. Causes of the emergence of fire

(1) Ignition source

Cigarette (assumed)

(2) Route

Emerging from a discarded cigarette end

(3) Ignited substances

Bed mattress or blanket

#### 6. Fire damage

(1) People

Fatalities    33 (22 male, 11 female)

Injured      34 (28 male, 6 female)

(2) Property

Building where the fire emerged

(a) Degree of burning: 4,186 m<sup>2</sup> out of 46.697 m<sup>2</sup> completely burned

(b) Burned area: 4,186 m<sup>2</sup> between the 7th and 10th floors, including rooftop structures

Breakdown

▪ 7th floor	21 m <sup>2</sup>
▪ 9th floor	1,870 m <sup>2</sup>
▪ 10th floor	2,201 m <sup>2</sup>
▪ Rooftop structures	94 m <sup>2</sup>
Total	4,186 m <sup>2</sup>

Others: Some walls on the 5th and 6th floors, 8 m<sup>2</sup> of the ceiling, and 7 m<sup>2</sup> of walls on the 8th floor

(c) Cost of damage: 1,726,126,000 yen

Structures to which the fire spread

None

## 7. Fire route (progression)

1) Overview of outbreak location

Room 938 on the 9th floor (a guest from the UK)

(2) Situation up until the outbreak

It is considered that the fire emerged in the vicinity of the bed in room 938 due to an unattended lit cigarette

(3) Progression up to fire detection

Staff A, who was working at the front desk, was going to the 9th floor to sleep. While in the elevator, Staff A smelled smoke, and after getting off the elevator on the 9th floor, noticed fire in room 938 through a gap in the door.

(4) Notification of fire department

Staff A, who detected the fire, returned to the 1st floor and gave instructions to 2 other staff members working at the front desk. One of them informed the fire department by subscription telephone.

(5) Initial firefighting attempts

Room service staff were informed by Staff A that there was a fire on the 9th floor. They then went to the 9th floor, took the fire extinguishers installed in the elevator hall and entered room 938. Although they used the extinguishers around the wardrobe and bed, they were unsuccessful at extinguishing the fire.

After returning to the front desk on the 1st floor and returning again to the 9th floor, Staff A opened the door to the internal fire hydrant, pressed the start button and extended the hose.

However, they were unable to use the hydrant.

(6) Fatalities

As the corridor in the building formed a trident, the location of the staircases was unclear, which obstructed the evacuation process.

There were a large number of foreigners and guests who were unfamiliar with the internal configuration of the building.

Since there was no partitioning in the shafts of the building, the smoke spread rapidly and the fire quickly propagated to the upper floors.

(7) Evacuation

At the time when the fire emerged, there were 27 persons on the 10th floor, 76 on the 9th floor and 249 on the 8th floor. Regarding the evacuation guidance for guests on the 9th floor, Staff A instructed several of the guests who had gathered in the corridor around the room with the fire to evacuate themselves via the elevator. Also, a guard who then arrived at the site guided several guests who had gathered in front of the service area to the evacuation staircase. On the 10th floor, another guard instructed several guests to evacuate via the stairs, and staff members working at the front desk guided 2 people to the stairs.

(8) Firefighting group activities

Evacuation guidance was performed as mentioned above

After the initial attempts to extinguish the fire with fire extinguishers and internal fire hydrants failed, there were no further additional systematic efforts.

(9) Propagation of the fire

The fire expanded rapidly due to the following reasons:

There was no sprinkler system

Fire-retardant partitioning was incomplete

Doors of guest rooms were made of wood

There were gaps in the partitioning walls between rooms above the ceiling

Parts of the partitioning walls between rooms (area 32cm × 140 cm around the windows) was made of wood

In guest bathrooms, backfilling of ventilation ducts and pipes leading to pipe and duct shafts was incomplete

Backfilling of part of the fire-retardant partitions in pipe and duct shafts was incomplete

Partitioning of the upper parts of the elevator frame was incomplete

Combustible materials were widely used for a large portion of the internal construction (rooms, walls in the corridors, and foundations)

Even though the thermal fuses of the fire prevention doors installed for area partitioning (1500 m<sup>2</sup>) had melted, the doors were still open

## 8. Firefighting activities undertaken by the fire department

Dispatched units

Pump cars from fire stations and fire groups	48
Hook-and-ladder trucks	12
Rescue trucks	8
Ambulances	22
Air supply truck	6
Others	27
(Including 2 helicopters)	
Total	123

Dispatched personnel

Firefighters	627
Firefighting group members	22
Total	649

(2) Firefighting and rescue activities

When the fire department arrived, the 9th floor was engulfed in flames. Several guests from the 9th floor were rescued via the windows, etc.

The first priority for the fire department was rescue operations with the aid of ladder trucks and specialized rescue teams. As a result, a total of 63 persons were rescued

By floor	Rescued people			Rescue method					
	Total	Male	Female	To the ground via a ladder truck	To the ground via a 3-strand ladder	To the rooftop of 3rd floor via a 3-strand ladder	To the rooftop with a rescue rope	To the 3rd floor with a rescue rope	Internal staircases
Rooftop of 2nd floor	9	7	2	4	1				4
Rooftop of 3rd floor	9	7	2	4					5
8th floor	4	2	2						4
9th floor	41	30	11	12		1	2	6	20

**9. Problems, lessons learned**

(1) Fire prevention management

The managing director had limited awareness of fire prevention, did not provide education and training related to fire prevention to the employees, and did not establish any notification and initial fire extinguishment systems.

(2) Fire extinguishment facilities

Virtually no sprinklers were installed. Curtains, carpets, and other furnishings parts of the building were not fire-resistant.

TA failure in the emergency announcement system was neglected, and no inspections were performed on the fire extinguishment facilities.

(3) Building structure

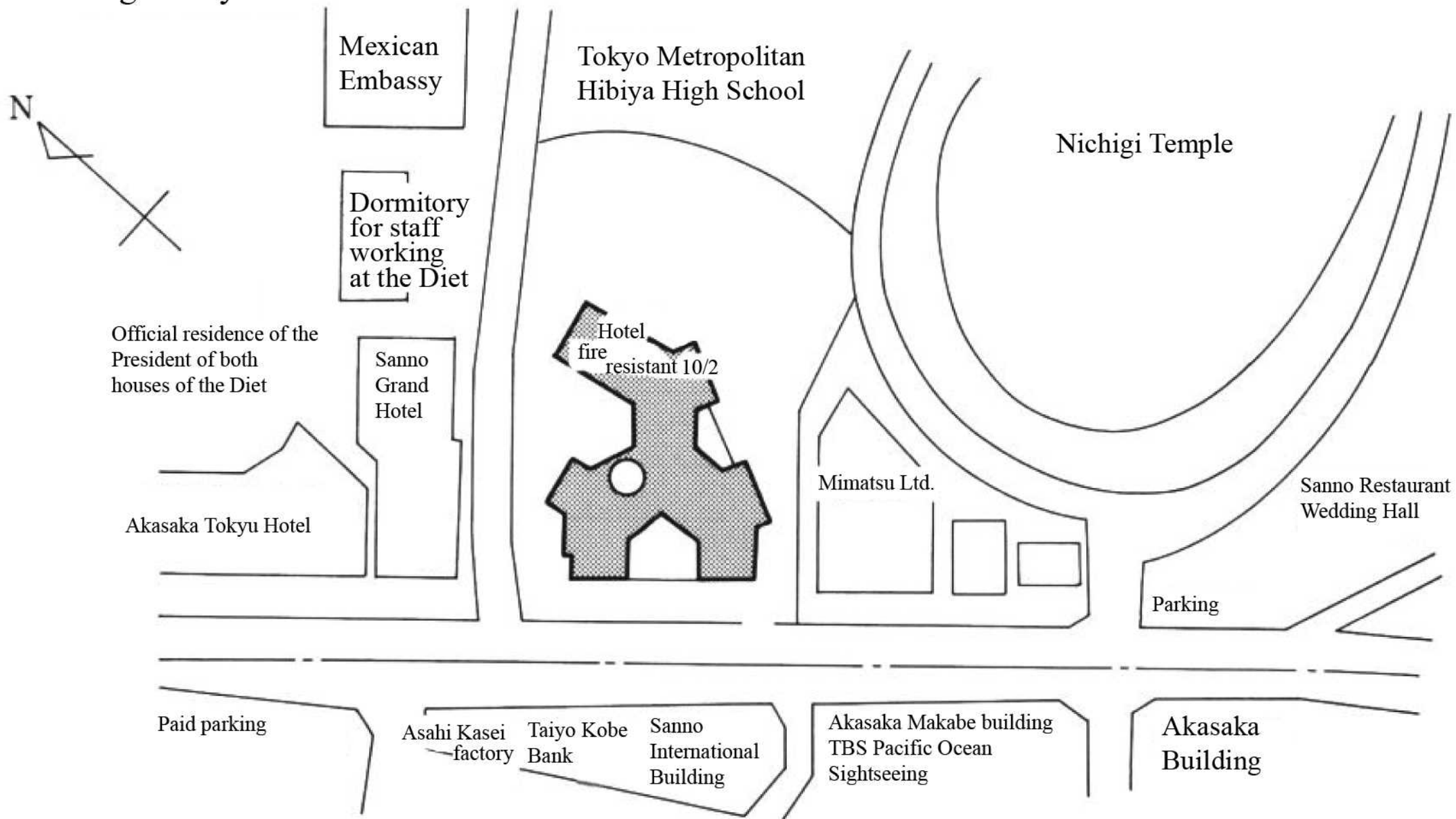
The fire-retardant partitioning (especially the backfilling of shaft partitioning) was incomplete, which caused the fire to spread rapidly.

Combustible materials were widely used in the foundations as well as in the construction of rooms and corridors.

The fire-retardant doors were poorly managed, and some did not close.

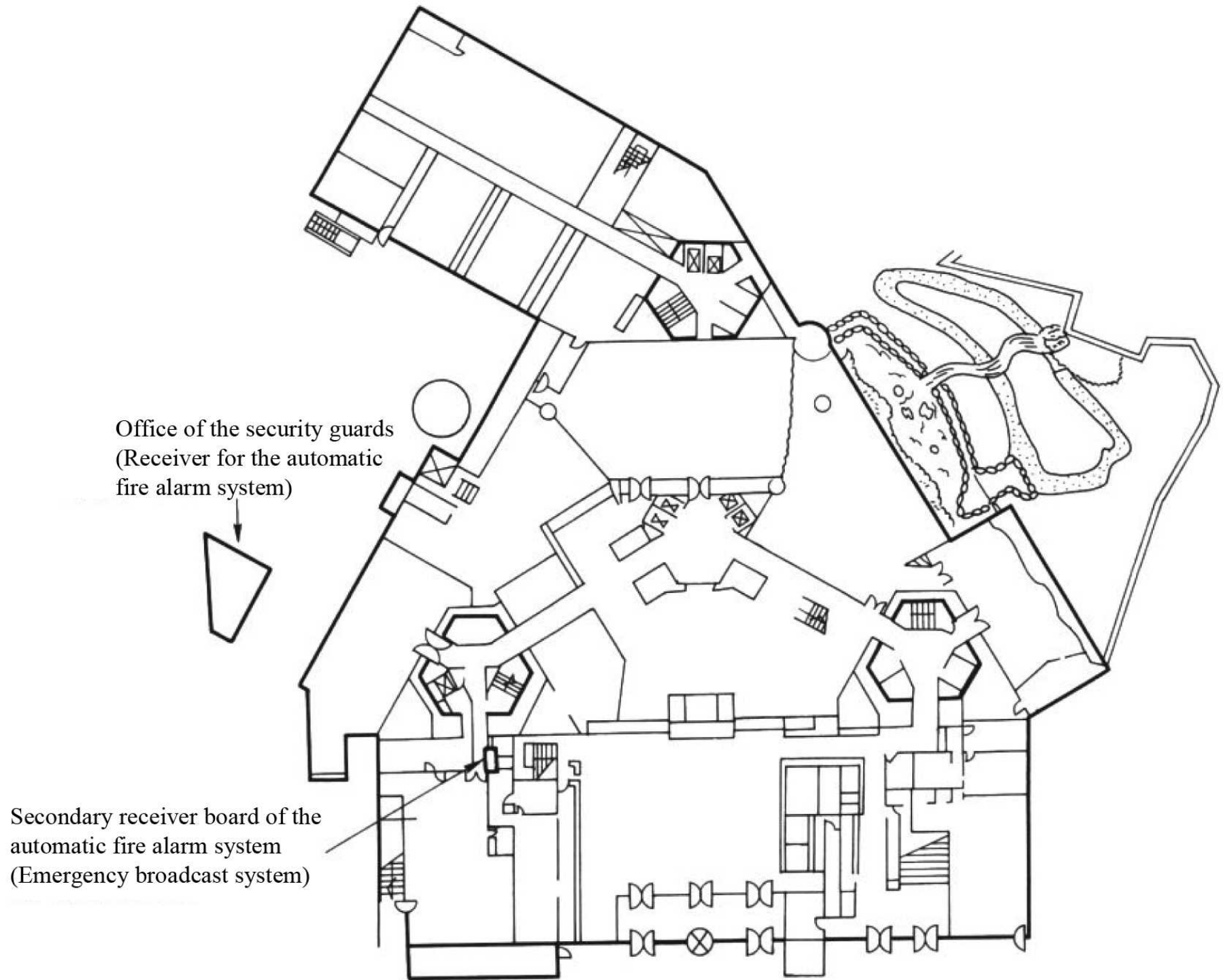
Regarding hotels with a large number of foreign guests, it is necessary to investigate appropriate methods for announcing information at times of emergency.

Fig. 1 Layout



Map of the neighbourhood

Fig. 2 Floor plan of 1st floor





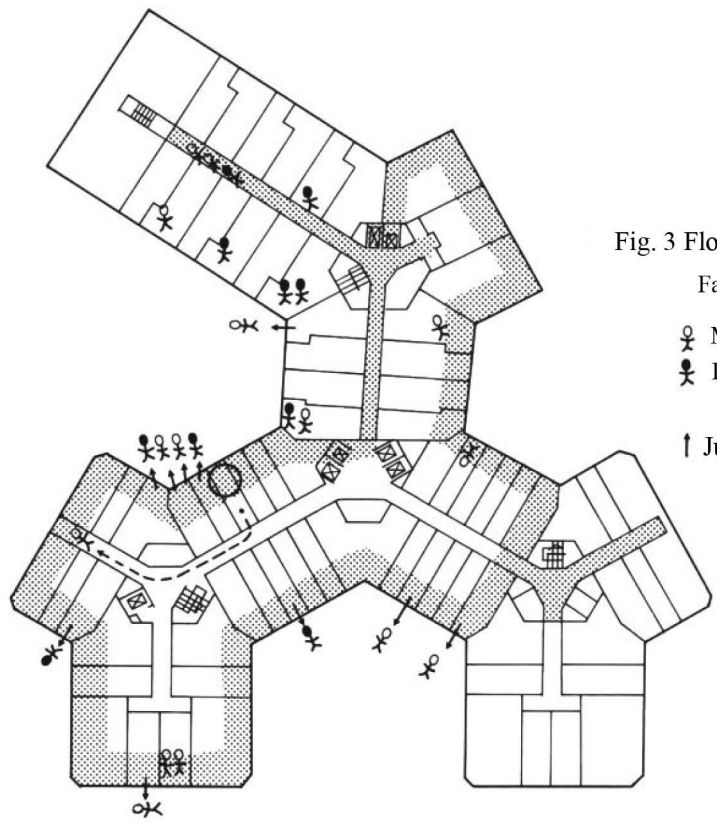


Fig. 3 Floor plan of 9th floor

Fatalities

♂ Male

♀ Female

↑ Jumped out

Burned area

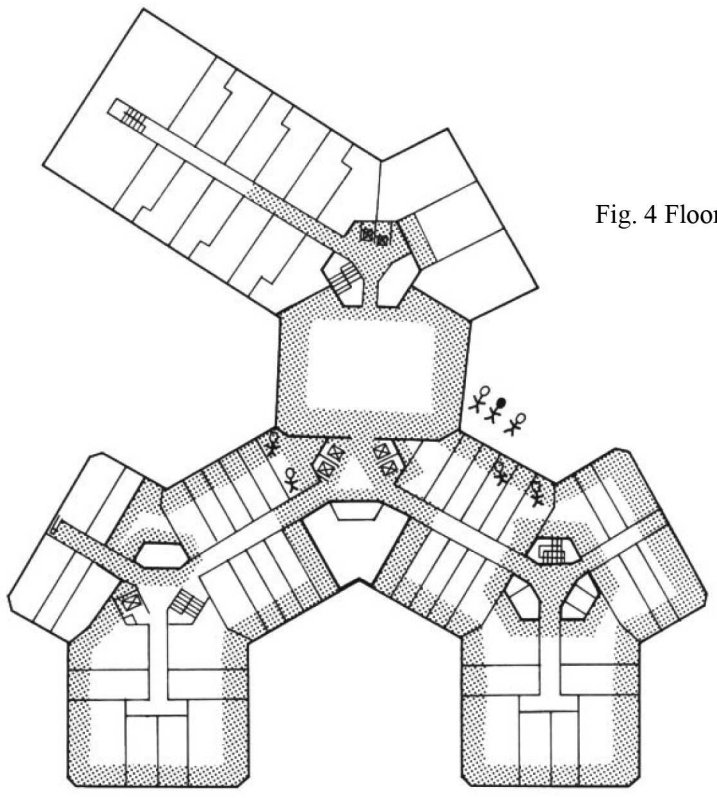


Fig. 4 Floor plan of 10th floor

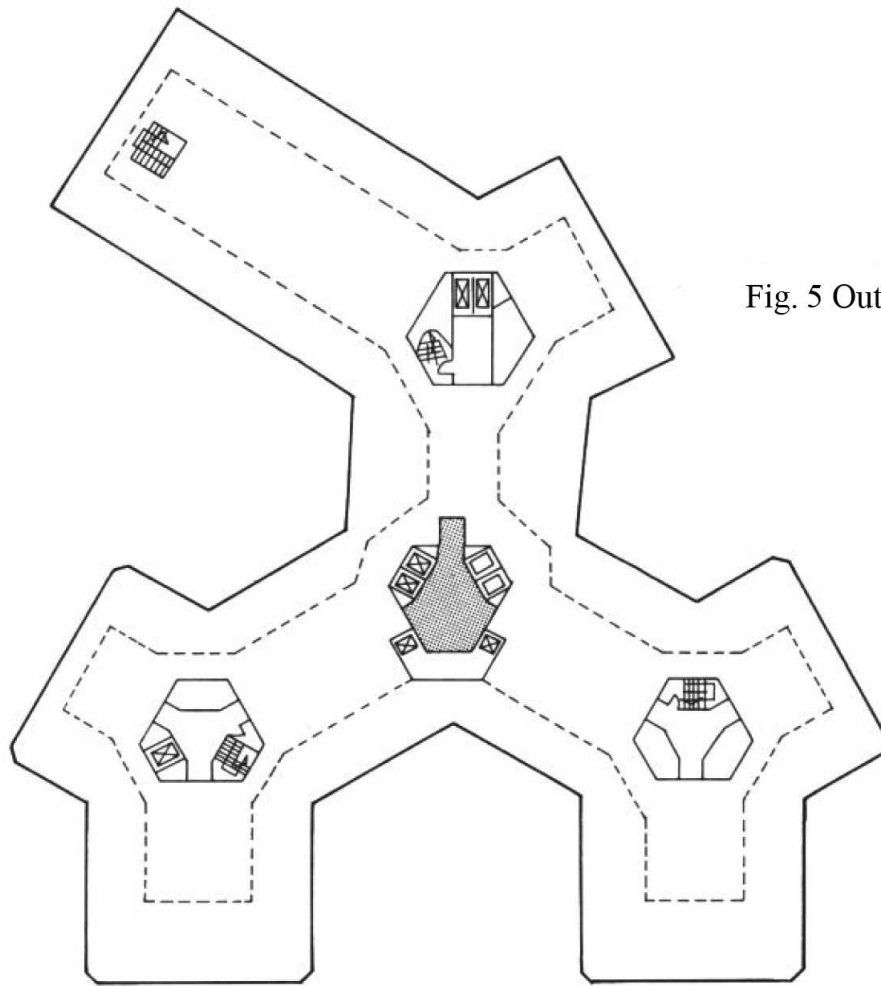


Fig. 5 Outline of rooftop

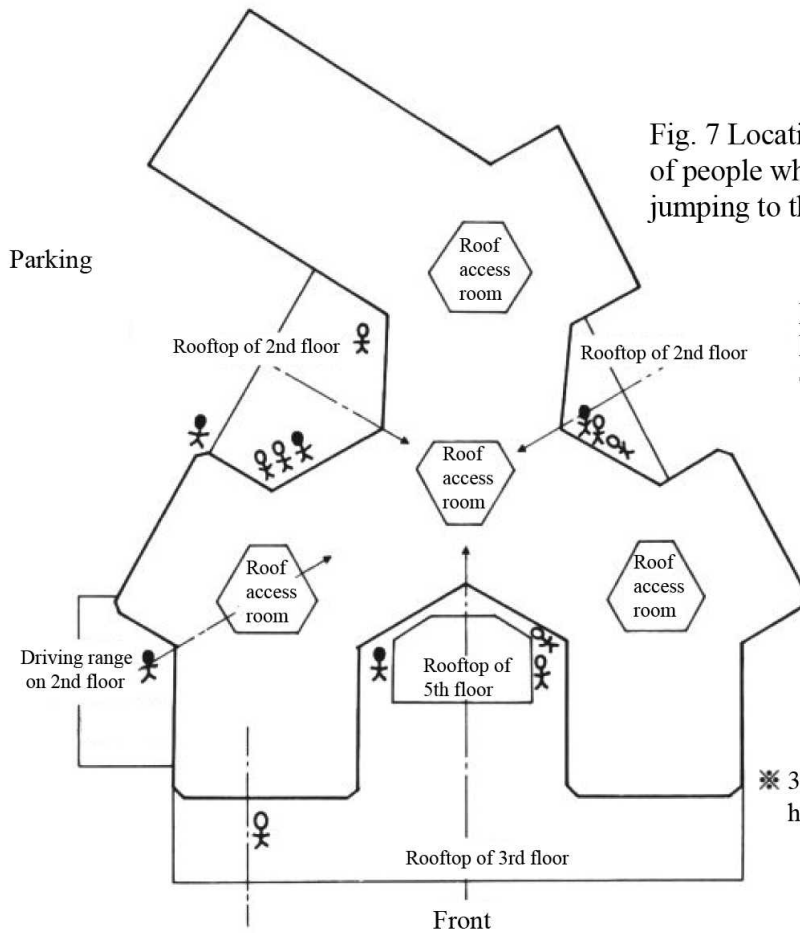


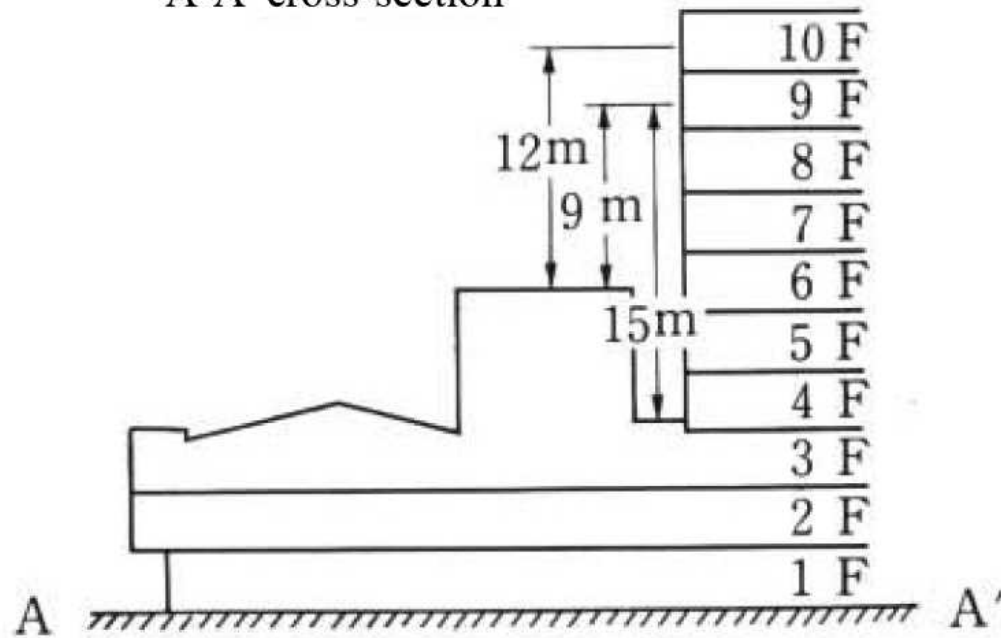
Fig. 7 Locations of bodies of people who died after jumping to the ground

Male	8
Female	5
Total	13

\* 32 people died after hospitalization

Fig. 8 Cross-section

A-A' cross-section



B-B' cross-section

