(AIRCRAFT ACCIDENT INVESTIGATION: THE SECOND INTERIM REPORT)

JAPAN COAST GUARD
BOMBARDIER DHC-8-315, JA722A
and
JAPAN AIRLINES CO., LTD.
AIRBUS A350-941, JA13XJ

December 25, 2025
By the Japan Transport Safety Board

The Japan Transport Safety Board (JTSB) has been conducting an investigation since January 2024 to determine the cause of the aircraft accident, a runway collision that occurred on January 2, 2024, at Haneda International Airport in Tokyo, Japan, involving a Bombardier DHC-8-315, JA722A, operated by Japan Coast Guard and an Airbus A350-941, JA13XJ, operated by Japan Airlines Co., Ltd.

On December 25, 2024, the JTSB released the first interim report on this aircraft accident (hereinafter referred to as "the First Interim Report"); In light of the significant public concern surrounding this fatal accident involving a scheduled passenger flight and in accordance with the Paragraph 4, Article 25, the Act for the Establishment of the Japan Transport Safety Board, before two years have passed since the day on which the accident occurred, the JTSB reports on the progress of the investigation over the past year since the First Interim Report as follows:

However, the contents of this interim report may be revised in the future as latest information becomes available.

In addition, this investigation has been conducted in accordance with the Act for the Establishment of the Japan Transport Safety Board and Annex 13 to the ICAO Convention on International Civil Aviation to determine the cause of the aircraft accident and the damage caused by the accident, and to prevent future accidents and incidents and reduce the damage. It is not the purpose of this investigation to apportion blame or liability for this accident.

1. Outline of the Aircraft Accident

On Tuesday, January 2, 2024, a Bombardier DHC-8-315*1, JA722A (hereinafter referred to as "Aircraft A"), operated by the Japan Coast Guard stopped on Runway 34R (hereinafter referred to as "Runway C") at Tokyo International Airport (hereinafter referred to as "Haneda Airport") and an Airbus A350-941, JA13XJ (hereinafter referred to as "Aircraft B"), operated by Japan Airlines Co., Ltd., which landed on Runway C, collided on Runway C.

Aircraft A was destroyed by the collision with Aircraft B and the fire occurred at the same time as it collided with Aircraft B. There were six persons on board Aircraft A, consisting of the pilot in command (hereinafter referred to as "PIC A") and five other flight crew members. The PIC A sustained a serious injury and five other crew members sustained fatal injuries.

A fire broke out under the fuselage of Aircraft B at the same time as the collision with Aircraft A, and then Aircraft B continued landing roll, went off the runway and came to a stop in a grassy area near the threshold of the runway 34R. All crew and passengers evacuated from Aircraft B after it came to a stop. Aircraft B was destroyed by the collision and the fire. There was a total of 379 people on board Aircraft B, consisting of the Pilot in Command (hereinafter referred to as "PIC B")), eleven other crew members and 367 passengers, but one passenger sustained a serious injury, four passengers suffered minor injuries and twelve passengers were examined by a doctor for feeling unwell.

2. Outline of the Accident Investigation

2.1 Investigation Organization

On January 2, 2024, the Japan Transport Safety Board (JTSB), upon receiving information about the occurrence of the accident, designated an investigator-in-charge and five other investigators to investigate this accident. Three investigators were additionally designated on January 5, 2024, and one investigator on January 10, 2024. On January 18, 2024, the Investigator-General for Aircraft Accident was additionally designated, and the investigator-in-charge was changed to the Investigator-General for Aircraft Accident. A further investigator was appointed on July 1, 2024, and three others on August 28, 2025.

2.2 Representatives from Relevant State

Please see section 1.2.2 of the First Interim Report.

*1 At the time of the aircraft's manufacture, Bombardier was the type certificate holder for the aircraft, which is now held by de Havilland Canada.

2.3 Implementation of Investigation

January 2 through 3, 2024	On-site investigation
Since January 2024	The following investigation was conducted: ・ Examination of the recovered aircraft wreckage ・ Interviews with relevant parties ・ Analysis of the Flight Data Recorder and Cockpit Voice Recorder data ・ Inspection of relevant parties' facilities ・ Gathering information from passengers on board Aircraft B and from witnesses to the accident.
December 25, 2024	The JTSB released the First Interim Report, which indicated major factual information found from the 2024 investigation, and the direction of the investigation and analysis: (Released URL: https://jtsb.mlit.go.jp/eng-air_report/interim20241225-JA722A_JA13XJ.pdf)
Since January 2025	See 3. below.

3. Status of the Accident Investigation since the First Interim Report

In accordance with the “Direction of Future Investigation and Analysis” described in the First Interim Report, and with a view to preventing future accidents from recurring and damage mitigation, the JTSB continues to analyze the factors behind the following four points, clarify the cause and consider recurrence prevention measures based on the information obtained from the investigations conducted to date, while conducting the investigations, such as interviews with relevant parties, gathering information on similar domestic and international accidents, and acquiring data through various verification experiments, as well as exchanging opinions with accident investigation authorities in relevant States.

3.1 Status of Analysis Regarding Aircraft A

With regard to the fact that Aircraft A understood having received clearance from the air traffic controller to enter Runway 34R, then entered and stopped on Runway 34R, the following items have been added to the analysis items listed in 3.2.2 of the First Interim Report, and analyses are currently underway regarding the psychological factors that influenced the

perception and judgment of the pilots of Aircraft A, the state of communication between the pilots of Aircraft A and with air traffic control facilities, and the measures of visual assistance for determining whether or not to enter the runway, etc.

(1) Fatigue and labor management of the pilot in command of Aircraft A

(2) The pilot in command of Aircraft A had not flown the same type of aircraft as the accident aircraft within 30 days prior to the accident.

(3) While the first officer of Aircraft A correctly read back the air traffic control instructions to proceed to the holding point of the runway, the first officer of Aircraft A also performed the Before Takeoff Checklist, which is required after receiving clearance to enter the runway.

(4) The sterile cockpit rule[*2] was not introduced in the Japan Coast Guard's Haneda Air Station.

(5) There is a possibility that a mutual confirmation was not conducted on board Aircraft A to ensure that there were no other aircraft on the final approach course before Aircraft A entered Runway 34R.

3.2 Status of Analysis Regarding Air Traffic Control

Regarding the fact that Tokyo Airport Traffic Control Tower (hereinafter referred to as "Haneda Tower") did not recognize that Aircraft A had entered Runway 34R and had been holding on Runway 34R, the following items have been added to the analysis items described in 3.3.2 of the First Interim Report, and analyses are currently underway regarding the status of continuous monitoring by air traffic controllers, the history of the introduction of support system for air traffic controllers, and the actual implementation of rules, contents of training, etc.

(1) The introduction and implementation of the Runway Occupancy Monitoring Support System have commonalities with those of the CNF (Conflict Alert), which is considered one of the underlying factors in the JA8904 accident[*3].

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*2 "The sterile cockpit rule" is a rule that prevents any conduct that distracts the flight crew from concentrating on safety-related tasks, such as conversations that are not necessary for flight operations, during important safety phases such as takeoff and landing.

*3 In the aircraft accident involving JA8904 that occurred over the sea near Yaizu City, Shizuoka Prefecture in January 2001 (seven passengers and two cabin crew were injured due to the aircraft shaking while trying to avoid a collision with another aircraft), the aircraft accident investigation report (https://jtsb.mlit.go.jp/aircraft/rep-acci/2002-5-JA8904.pdf) pointed out that, regarding the handling when a CNF (Conflict Alert) is activated, "there were no established rules regarding how air traffic controllers should handle an activated CNF while performing their duties, neither were they informed that there might be cases where the CNF does not activate according to the expected conditions" (Section 2.12.4.2), etc.

(2) The effectiveness of the Civil Aviation Bureau's safety management system (e.g., systems for improving the system based on post-implementation evaluations and gathering feedback from the front-line air traffic controllers) regarding the introduction and implementation of the Runway Occupancy Monitoring Support System.

(3) In the Haneda Tower, the Flight Monitor position in charge of monitoring aircraft movements was, in principle, responsible for monitoring aircraft movements on Runway A, and not on Runway C.

(4) Utilization of the awareness of air traffic controllers other than the air traffic controller who is assigned the duty of that position.

These analyses are being conducted while taking into account on-the-spot confirmation of the visibility of aircraft and various lights from the Haneda Tower (described in 4.4 below).

3.3 Status of Analysis Regarding Aircraft B

Regarding the fact that aircraft B failed to recognize aircraft A, which was stationary on the runway 34R, until just before the collision, we are currently conducting data collection through verification experiments and other means on the matters described in 3.4.2 of the First Interim Report, while also investigating and analyzing the following points:

(1) Nighttime visibility of Aircraft A from the approach course

(2) The influence on external monitoring of the fact that both flight crew members in the cockpit of Aircraft B were using Head-Up Displays (HUD)

(3) Other factors that affected the recognition and judgment of Aircraft B's flight crew

This analysis is being conducted taking into account the results of verification experiments conducted last year using an A350 simulator and verification experiments conducted this year at Chubu Centrair International Airport (as described in 4.1).

3.4 Status of Analysis Regarding Damage Mitigation

Regarding the damage resulting from the collision between Aircraft A and Aircraft B, the analysis focuses on damage mitigation, with regard to the matters described in 3.5, 3.6, and 3.7 of the First Interim Report.

(1) Damage to Aircraft B's airframe structure, electrical power system, and engine control system, as well as the status of engine shutdown and related conditions

(2) The impact of item (1) on the operation of emergency systems including cockpit panels, switches, and the passenger address (PA) system

(3) The development and spread of the fire on Aircraft B

(4) The cabin conditions from the start to the completion of the emergency evacuation on Aircraft B, and the impact of item (1) through (3) on the evacuation

(5) Response actions, including rescue and firefighting (RFF), on-board search for remaining occupants, post-evacuation passenger guidance and control, and other related measures.

These analyses are being carried out concurrently with verification experiments regarding the on-board use of the portable megaphones carried on Aircraft B (described below in 4.2) and component analysis of the smoke and odor generated with the cabin by the fire on Aircraft B (described below in 4.3), among other activities.

4. Verification Experiments and Related Activities Conducted This Year

In conducting the above investigations and analyses, the main verification experiments and related activities carried out this year are as follows:

4.1 Verification Experiment Regarding Visibility from the Approach Course of an Aircraft of the Same Type as Aircraft A Positioned on the Runway at Night

As described in 2.18.2 of the First Interim Report, a verification experiment was conducted in 2024 using an A350 simulator to collect data such as HUD display during final approach to Runway 34R, confirmation of the relative positions of the runway, airport lighting, and aircraft on the runway, as well as pilot's eye movements during flight.

In addition to this verification experiment, to collect data necessary for analyzing Aircraft A's visibility from the approach path, a verification experiment was conducted by positioning an aircraft of the same type as Aircraft A (DHC-8-315) on the runway at Chubu Centrair International Airport at night from March 26 to 27, 2025, under conditions with no moonlight, similar to the day of the accident, and taking photographs from aircraft on final approach. For this verification experiment, the same exterior lights as at the time of the accident were turned on, and the airport lighting was set to the same brightness as at the time of the accident. Aerial photography was also conducted using a small fixed-wing aircraft and a helicopter (see Figure 1).

In addition, at the time of the accident, all exterior lights on Aircraft A that were visible from the rear were white. The area where Aircraft A was stopped was illuminated with white runway centerline lights and white runway touchdown zone lights embedded in the runway surface. Therefore, additional experiments were conducted to verify the visibility of the same

type aircraft of Aircraft A if the color of its exterior lights was changed to red, and if the position of Aircraft A was offset from the runway centerline lights.

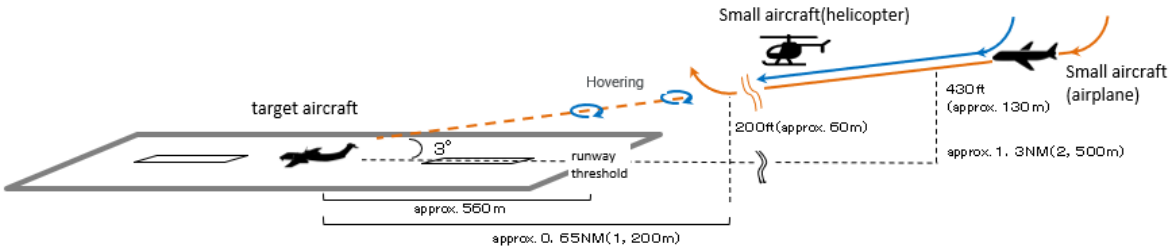

Figure 1: Verification experiment on the visibility of an Aircraft of the same type as Aircraft A on the runway at night (Image)

Chubu Centrair International Airport, where this verification experiment was conducted, has a Category III precision approach runway capable of landing even in low visibility conditions, similar to Runway 34R at Haneda Airport. Therefore, while there are differences in the sequenced flashing lights and runway centerline lights on front side of the runway threshold, the area beyond the runway threshold where the same type of aircraft as Aircraft A was positioned which is important for conducting the verification experiment, uses the same airport lighting manufacturer and layout as Haneda Airport's Runway 34R, except for the difference in runway light interval (see Table 1, Figure 2).

Table 1: Comparison of Airport Lighting Beyond the Runway Approach Threshold (Haneda Airport Runway 34R, Chubu Centrair International Airport Runway 36)

	Haneda 34R	Chubu 36
Airport light arrangement	Category III precision approach	
PAPI installation location	416m from the runway threshold	
	right side	left side
runway centerline lights	15m interval	
runway lights	30m interval	60m interval
light manufacturer (embedded type, exposed type)	same manufacturer	

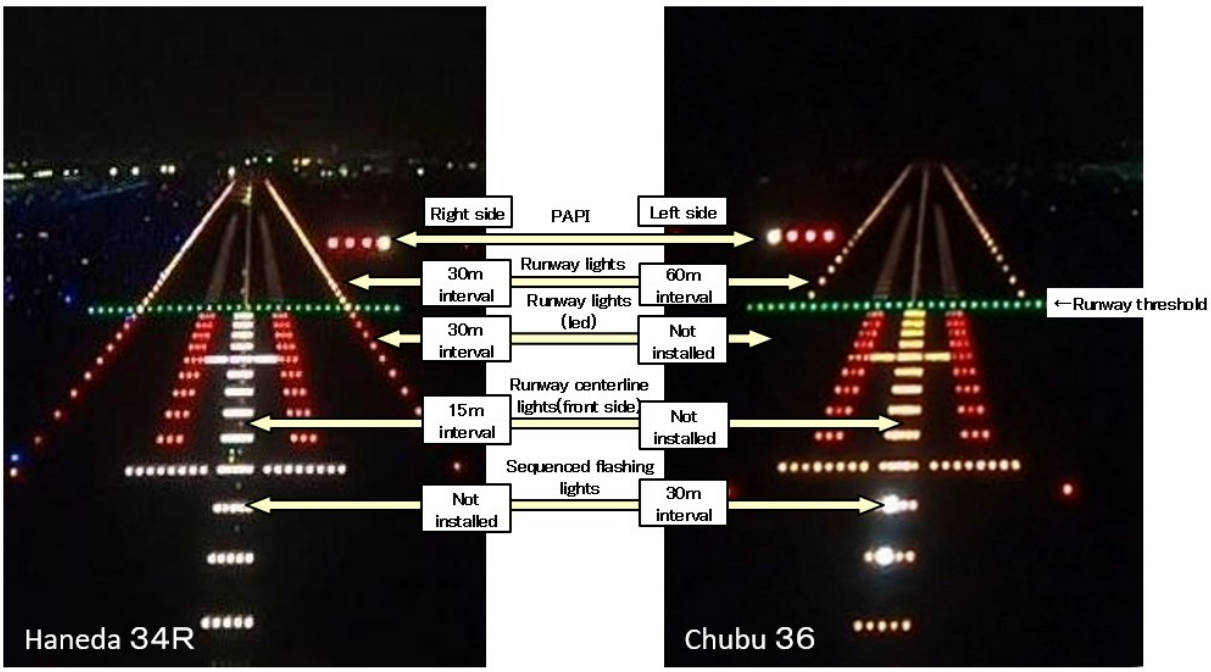

Figure 2: Comparison of Airport Lighting Images (Haneda Airport Runway 34R and Chubu Centrair International Airport Runway 36)

In this verification experiment, aircraft were positioned on the runway, and other aircraft flew final approach. To ensure a safe approach, a large aircraft like Aircraft B was not used, and instead a small fixed-wing aircraft and a helicopter -neither equipped with HUD- were used.

We are currently conducting the analysis described in Section 3.3, using the data obtained from these verification experiments.

4.2 Verification Experiments Regarding the Onboard Use of Portable Megaphones Carried on Aircraft B

As described in 2.1.3 of the First Interim Report, there were no serious injuries during the emergency evacuation from Aircraft B, but the passenger address system was inoperable.

On board aircraft, portable megaphones are carried for use in emergency and abnormal situations to facilitate communication among crew members and to provide instructions and guidance to passengers both within the cabin and following evacuation, outside the aircraft (see Figure 3). Four portable megaphones were carried in the cabin of Aircraft B, and some of the cabin crew used them after the emergency evacuation began. However, some of these crew members stopped using the megaphones because they did not seem to be effective. The results of interviews regarding the transmission of emergency evacuation instructions are shown in Figure 4.

Figure 3: Portable megaphone of the same type as that carried on Aircraft B (output: 2W)

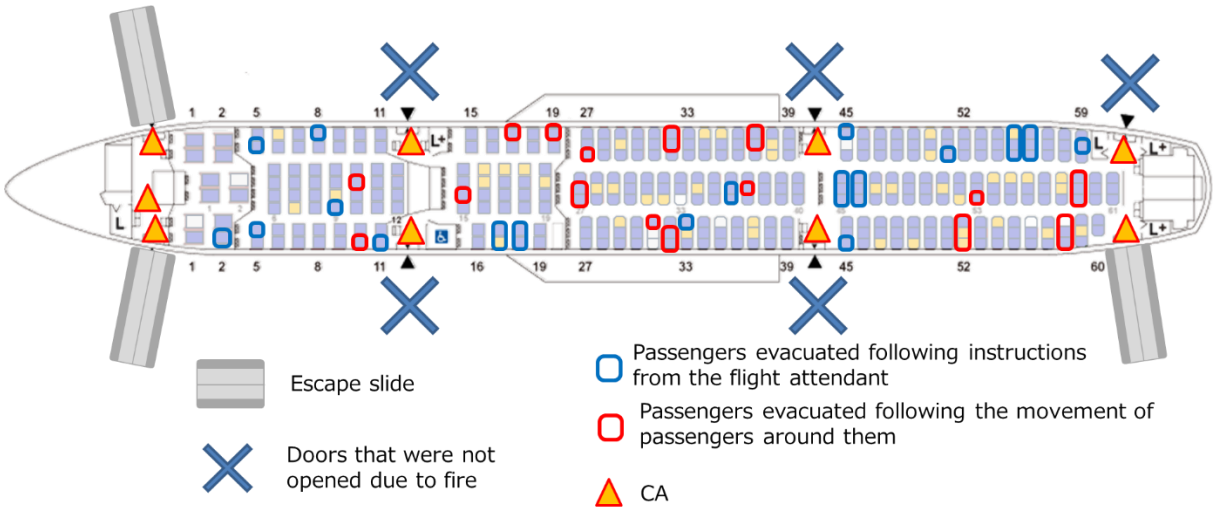

Figure 4: Crew evacuation instructions transmitted (interview with some passengers) (from the First Interim Report)

During the emergency evacuation of Aircraft B, smoke filled the cabin over time, reducing visibility and making voice communication critical. Taking these facts into consideration, verification experiments using a portable megaphone were carried out on board an aircraft of the same type as Aircraft B (A350-941) on May 26, 2025, to serve as a reference for analyzing communication in situations where the passenger address system was not operational. For these verification experiments, a portable megaphone was operated in the forward cabin, and the sound levels were measured using microphones installed in six locations. Evaluations were also conducted by cabin crew and investigators acting as passengers positioned throughout the cabin (see Figures 5-7). Furthermore, since the right engine continued to run during the emergency evacuation and the cabin crew were carrying out panic control measures to calm passengers, these acoustic environments were also simulated during the verification experiments, while varying conditions such as the source location of the voices and the use or

not of portable megaphones.

Analysis of the data obtained from these verification experiments is currently underway.

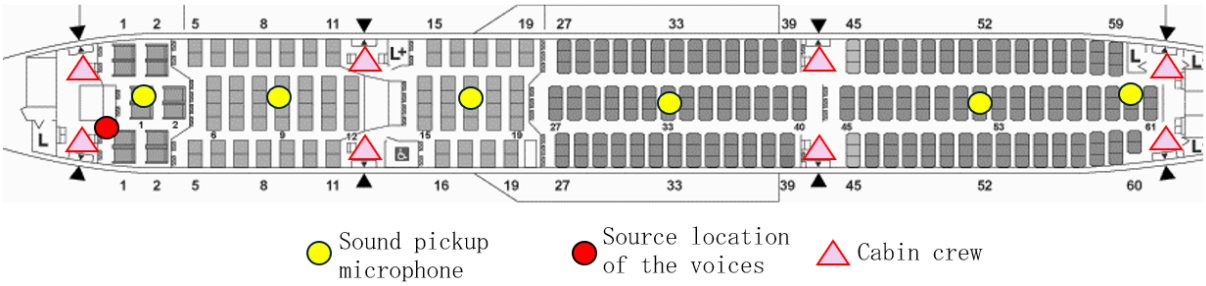

Figure 5: Verification Experiments Layout (Image)

Figure 6: Onboard Activities During the Verification Experiments

Figure 7: Sound Pickup Microphone Used During the Verification Experiments

4.3 Analysis of the Smoke and Odor Generated Inside the Cabin Due to the Fire on Aircraft B

As described in 2.1.3 of the First Interim Report, smoke was observed emanating from under the floor forward of the third exit from the front on the left side (L3) immediately after Aircraft B came to a stop. Accompanied by a pungent odor, smoke gradually became thicker in the cabin. Five minutes after the aircraft came to a stop, visibility was reduced to several meters around the source of the smoke.

From a damage-mitigation perspective, we are currently analyzing the smoke and odor

generated inside Aircraft B.

4.4 Confirmation of the Visibility of Aircraft and Various Lights from the Haneda Tower

Aircraft accident investigators conducted an on-the-spot confirmation of the visibility of aircraft and various lights from the Haneda Tower at night on January 6, 2024. Based on the factual information subsequently collected and the status of analysis, a further on-the-spot confirmation was conducted on September 19, 2025(see Figure 3).

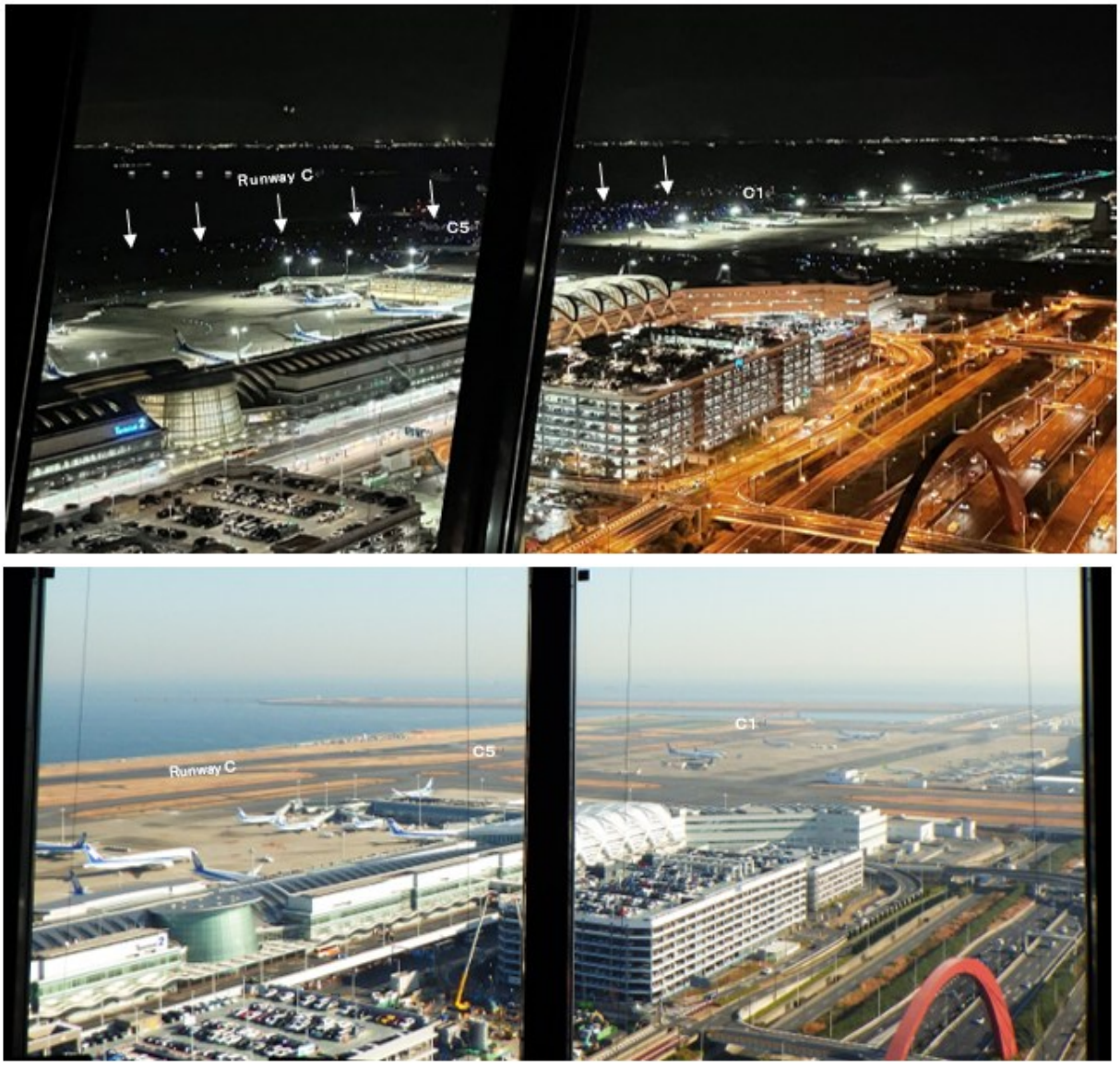

Figure 8: Image taken from the Haneda Tower (The photograph was taken from a different location than the Tower Control Position East, which was in charge of Runway 34R. The image below is a reference image taken during daytime hours.)

4.5 Opinion Exchange Meeting with Accident Investigation Authorities in Relevant States

As described in Section 1.2.2 of the First Interim Report, accredited representatives and advisors of Canada, the French Republic, the United Kingdom, the Federal Republic of Germany and the United States of America, as the States of Design and Manufacture of Aircraft, its Engine and so on, participated in the investigation. Between 9 and 11 September 2025, an Opinion Exchange Meeting was held for three days to share information on the status of the accident investigation and to discuss future analyses, including verification experiments. (Similar meetings were held in January and August 2024 to discuss the status of the on-site investigation and damage to aircraft systems, respectively.)

5. Future Accident Investigation

In order to determine the cause of the aircraft accident and the damage caused by the accident, and to consider measures to prevent recurrence, the JTSB concludes that further fact-finding and analysis should be conducted based on the information obtained from the investigations conducted to date, public hearings should also be held, and comments on the report should be invited from the parties relevant to the cause of the accident and the States.

The JTSB shall continue to investigate the causes of this aircraft accident and the damage caused by the accident based on the results obtained from the investigations and analyses conducted to date.