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Hearing on
"Addressing Close Calls to Improve Aviation Safety"

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On behalf of the Air Line Pilots Association, International (ALPA), I want to thank you for inviting me to testify on Addressing Close Calls to Improve Aviation Safety. My name is Jason Ambrosi, and I am a current and qualified international captain on the Boeing 767 at Delta Air Lines and serve as the president of ALPA. ALPA is the largest pilot union in the world as well as the largest nongovernmental aviation safety organization, with a history of safety advocacy spanning more than 90 years.

While the U.S. aviation system remains the safest in the world, this outcome is not guaranteed. The recent spike in close calls reminds all of us that safety is a matter of relentless vigilance. To improve our safety, particularly with regard to close call incidents, it is imperative that we continue to mitigate risk through data analysis, the installation of surface safety systems, modernization of the National Airspace System (NAS), and continued cooperation between industry stakeholders and regulators.

The Aviation System is Safe but More Work Needs to be Done

Despite an increase in the number of close calls reported earlier this year, the United States aviation system continues to operate at a very high level of safety. This success stems from decades of industry-wide work and commitment to collaboration, data collection and analysis, hazard identification and mitigation, as well as critical changes to the regulatory framework governing pilot qualification and training, fatigue, airline operations and maintenance, and technology. Professional pilots, flight attendants, air traffic controllers and Air Traffic Control (ATC) system technicians, among other aviation employees, play a central role in keeping our skies safe. Two highly trained and well-rested pilots are an important contributing factor to system safety. As just one example, in early February, when FedEx 1432 was on approach to land on the same runway that Southwest Airlines flight 708 was using for takeoff at Austin Bergstrom International Airport, if not for the actions of the FedEx pilots the incident could have been an accident.

While it is important to be cognizant of today's high level of system safety, even one runway incursion is one too many. Thankfully, we are not discussing accidents, but instead near-miss events in an environment of more than 52 million takeoffs and landings a year. It is clear the system is under strain, and we need to aggressively pursue solutions to stop these events.

The Return to Normal is Not Complete

With demand returning significantly quicker than anticipated, the post-COVID return to air travel changed the compositional makeup of the workforce, created a massive training and reallocation of pilot labor, and created strains on incumbent employees across the system. To ensure these dynamics do not interfere with system safety, it is important that a "back to basics" philosophy continue to be a core part of industry culture.

For pilots, the combination of "early out" retirement inducement programs, carrier allocation of pilots during COVID, and record mainline hiring in 2022 created changes in experience, pilot availability, and movement between seat and aircraft. While the "early out" retirements have drawn considerable attention, the main effect was to reduce carrier costs during COVID, accelerate retirements relative to the baseline for 2021-2023, and enable younger pilots to remain in the system. With the approximately 3,800 early retirements in 2020 primarily for pilots between the ages of 62 to 65, there was some ripple effect down the ranks as pilots backfilled those positions, particularly for long-haul routes. However, most of the early out pilots would be retired by this point, so the effect is near its end, as retirements begin to stabilize and return to their pre-pandemic, forecasted levels.

More significantly, carrier decisions during COVID on pilot utilization related to aircraft and fleet management created a large training event across the pilot ecosystem. Given low demand, most carriers parked planes, bumped pilots off larger aircraft to smaller aircraft fleets and types, furloughed during the lapse of the first Payroll Support Program (PSP), and placed pilots on inactive status. Given pilots are a seniority-structured profession, this resulted in a massive, across-the-board reallocation of pilots. At the time, such decisions likely seemed reasonable to carriers as the industry, manufacturers, and analysts predicted an approximately three- to five-year recovery lag. However, because demand returned significantly quicker than predicted, airlines had to reverse these decisions and effectively retrain nearly every pilot, sometimes back to the equipment they flew prior to the pandemic, while accommodating *new* pilot hiring due to substantial post-COVID growth. By not keeping all of their pilots up to date on recurrent training requirements and allowing pilots' currency to lapse due to their inactivity, pressure was put on other pilots who were working hard to support the needs of the airlines. The massive retraining episode shuffled pilots between aircraft fleets and types to accommodate relatively junior pilots replacing senior positions and incoming pilots to accommodate carrier growth. This dynamic has played out across the industry, as new hire ramp workers, flight attendants, controllers, mechanics, and other safety critical personnel enter the industry.

With all the changes and newly emerging challenges in the post-COVID operating environment, it is clear that there is a need to re-focus on key aspects of the operations. Put simply, there is a need to get back to the basics. Many of the near misses can be avoided when all parties adhere to the fundamental principles taught in training, such as focusing on the task at hand, minimizing distractions, and using all available resources. Given the large number of new hires, in particular, a "back to basics" mentality has emerged as part of the training and onboarding of many new employees industry wide.

How the Safety System Works

Safety tracking and risk identification and mitigation systems are at work at the airline, airport and enterprise level. At the airline level the focus is on safety management systems (SMS). SMS is used to identify, address, and reduce organizational and systemic risks. The goal of SMS is to identify active failures and inadequate defenses so that hazards can be contained while preventative measures can be reinforced. SMS adds value to an organization's safety structure by identifying hazards and mitigating risks before they develop into full accidents. The systems are complex and require assessments of human factors and their relation to other workplace components. The most successful SMS incorporates a collaborative effort between the organization, labor, regulator, manufacturers, and other stakeholders to build a robust and diverse SMS team.

One of the foundational activities in SMS is the use of voluntary disclosure programs, where pilots and other front-line workers can anonymously raise safety concerns through an aviation safety action program report. Airlines with a healthy and positive safety culture will receive a significant volume of reports. On a recurring basis the airline management, pilots, and an FAA representative review all reports to determine what lessons can be learned and how to address the safety risk identified. It is this continuous evaluation of new risks and hazards that is core to safety management systems. Within the context of the FAA reauthorization, Senator Capito's efforts to expand protections for deidentified volunteer reports across all voluntarily submitted flight safety information sent to the FAA would both increase the volume and depth of data for identification and risk mitigation.

The safety system is at work at the airport level where collaboration between air traffic controllers, pilots, airport leadership, the FAA and others takes place regularly. At each airport with an operating air traffic control tower, Runway Safety Action Teams (RSAT) review operational issues, concerns and risks. These meetings are FAA led, and ALPA participates as a partner. Airports with commercial airline services are just now beginning to implement Safety Management Systems due to the FAA's Final Rule on Airport Safety Management Systems promulgated in February of 2023. Requiring certain airport certificate holders to develop, implement, maintain, and adhere to an airport SMS we believe will further increase airport safety.

At the national airspace level there are multiple activities focused on improving system safety, including:

- Commercial Aviation Safety Team (CAST). ALPA continues to collaborate on consensus plans to eliminate safety hazards in partnership with the FAA and airlines. Collaboration allows for identifying improvements in training, procedural designs, and other aspects of an operation.
- Aviation Safety Information Analysis and Sharing (ASIAS). This safety group expands upon the commercial aviation focus of the CAST and includes both airlines and business aviation representatives. The key attribute of ASIAS is "big data" analysis. Using many different data streams, including in-flight developments, inputs from airlines, manufacturers, dispatchers, Air Traffic Control, and airports. Information is compiled and fused together so that data mining and analysis can be conducted. A critical aspect of this process is that data is deidentified so that individuals are not singled out. Instead, the focus is on trends, early warning signs, and being ready to take immediate action when

the data shows that there is an issue that needs to be addressed. The FAA and industry evaluate trends monthly and will meet more frequently if needed. As part of ASIAS, the group will also initiate special focus projects that look at key recent events across the airspace system.

- Beyond CAST and ASIAS, there are numerous FAA headquarters and regional safety risk mitigation panels to address specific operational changes occurring on a daily basis. ALPA pilots bring real world experience to relay critical information directly to decision makers to ensure that risks and hazards are appropriately addressed. For example, this process at the FAA also includes the needed risk assessments for new entrant and commercial space operations.

These broad system-level safety activities are foundational to prevent near misses from becoming accidents. In some cases, these activities overlap. While that may seem duplicative, overlap is actually a critical piece of the safety net when the same operational change is discussed in two or three different forums. The continued efforts to ensure that safety data is evaluated for new risks and to ensure that the identified risks are adequately mitigated is very important.

Action Needed to Eliminate Close Calls at Airports

Many of the recent close call events have been in and around the airport operating environment and more focus is needed to mitigate such events moving forward. ALPA is primarily concerned with the close calls in the movement area of the airport, where FAA air traffic controllers manage the movement of aircraft and other surface vehicles. The following steps, at a minimum, must be taken:

- Surface safety systems need to be installed at all airports as soon as possible, regardless of the costs, given the urgency of the current situation. In the Fall of 2003, the Airport Surveillance Detection Equipment, Model X (ASDE-X) was deemed suitable for widespread deployment. It is unacceptable that 20 years later a surface surveillance system like ASDE-X is only installed at 35 airports around the country. That is woefully inadequate. Our air traffic controller workforce needs these capabilities at all airports. We rely on their complete understanding of the operations, and they must have the tools to fulfill their critical safety role. We strongly urge the Committee to eliminate whatever barriers the FAA identifies to rapidly expand surface surveillance to all airports with an air traffic control tower.
- Another legacy system that works extremely well is the Runway Status Lights (RWSL) system. Runway Status Lights tell pilots and vehicle operators to stop when runways are not safe. Embedded in the pavement of runways and taxiways, the lights automatically turn red when other traffic makes it dangerous to enter, cross, or begin takeoff. The lights provide direct, immediate alerts and require no input from controllers. Runway Status Lights are operational at 20 airports across the U.S. There is a critical need for expanding Runway Status Lights to more airports and to more runways. While the cost is high, if we are going to prevent near misses as well as accidents, the cost-benefit decision-making process must be reconsidered to aggressively pursue these safety advancements. For

example, ALPA has identified 15 airports that currently have RWSL but do not have them installed at key runways and five airports that would benefit from the installation of an RWSL system.

FAA Call to Action and NTSB Surface Safety Roundtable Offer Possibilities

ALPA was selected as a co-chair of a new aviation rulemaking committee that will look at aircraft systems that can be used for increasing surface safety, wrong-surface landings and other safety risks that were the focus of the FAA safety summit. For example, flight deck enhancements are important for flight crews to increase situational awareness and receive alerts early enough to take action to avoid a near miss or an accident. The new rulemaking committee is just getting underway, and recommendations will go to the FAA after further evaluation and dialogue. The charge for the committee's work is that no stone should go unturned as we look to advancements in technology to help address these near miss events.

The NTSB's roundtable this May also represented an important opportunity to discuss safety with a diverse cross section of the industry and I thank Chair Homendy for her diligence on this topic. The NTSB highlighted that surface safety remains one of the longest outstanding recommendations for the FAA, that "back to basics" is a key piece of its future actions list, and expanding ATC and flight deck technology must be done without delay.

FAA Reauthorization Provides Opportunities

This Committee's bipartisan Federal Aviation Administration (FAA) Reauthorization Act of 2023 includes a number of important provisions to improve safety and prevent near miss incidents. First and foremost, the bill not only provides funding and stability for the FAA and FAA programs, but also for the latest safety technology on runways, for the hiring of more air traffic controllers, for workforce development, and a host of technological additives related to this hearing. Notable provisions of the legislation related to aviation safety, modernization, and expansion of additional capabilities for more airports, include:

- *Flight profile optimization (Sec. 405).* By developing predictable, reliable and repeatable flight profiles that airline pilots can expect to receive, there are reduced safety risks because of an absence of the use of unpredictable routes and unanticipated operational changes.
- *STARS Remote Surveillance Displays (Sec. 406).* By adding a remote surveillance display as a minimum level of equipment to all air traffic control towers, including FAA contract towers, safety will be improved.
- *ADS-B OUT Equipage Study; Vehicle to Vehicle Link Program (Sec. 410).* By expanding the incentives for all aircraft in the airspace to equip with Automatic Dependent Surveillance-Broadcast (ADS-B) and to broadcast their position and other important information, safety will be improved.
- *NEXTGEN Equipage Plan (412).* By identifying the needed upgrades to aircraft avionics, safety of operations can improve due to the increased quality of onboard navigation capabilities that pilots can utilize. Some of the airline aircraft need upgrades,

and this section is key to identify what those upgrades should be. However, the provision fails to include pilot representatives as a stakeholder. Since pilots are using the NextGen equipage, we hope this can be remedied.

- *PBN Report and Utilization Plan (Sec. 413).* Safety improves if Performance Based Navigation (PBN) can be utilized as the "baseline" navigation capability in the airspace. However, until aircraft equipage including necessary upgrades to certain aircraft can be accomplished, it will be virtually impossible to make this transition. Investment in a minimum level of equipage for the NextGen capabilities is a critical step and then the safety benefits will follow.

The system safety improvements that have created a much safer airline industry over the last 10 years did not come about by accident. They represent a vigilant commitment between government, industry and labor to identify risk, mitigate it, and ensure the legal and regulatory framework is based on safety. The proliferation of near miss incidents requires continued resolve and collaboration based on a back-to-basics framework for the workforce, the immediate deployment of necessary runway, surface, and flight deck technologies, and the greater use of data, data sharing, and industry collaboration for hazard identification and risk mitigation.