

Risk Assessment

Aviation Risk Assessment

October 2024



This is a special report to assess risks related to the City's Aviation Department operations at the Austin-Bergstrom International Airport. We evaluated risks across 13 different categories within the control of the Aviation Department. For a summary of these categories, see Appendix A.

Based on our work, the top three risk areas facing the Aviation Department are:

1. contract and vendor management
2. asset management and maintenance
3. emergency management and safety

Although we are not issuing recommendations in this report, these top risk areas will be considered in our annual audit planning process, which may result in future audits.

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Cover: The Airport entrance sign at nighttime, City of Austin.

Objective

Identify possible audit projects for the 2025 and future audit plans based on an assessment of the top risk areas facing the City of Austin's Aviation Department.

Background

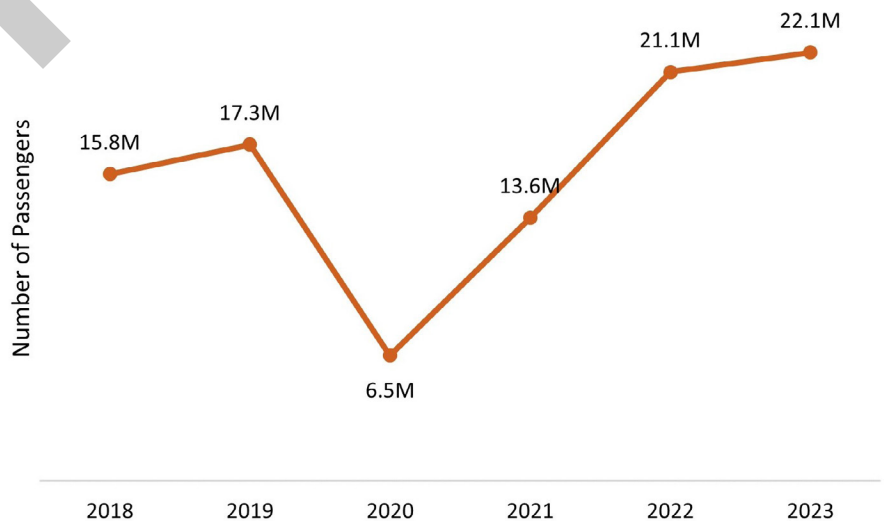
The Aviation Department markets Austin's Airport as AUS.

The City of Austin owns the Austin-Bergstrom International Airport (Airport). The Aviation Department operates the Airport with a fiscal year 2024 budget of approximately \$343 million and 674 full-time employees. In addition to City of Austin employees, Aviation staff reported that around 8,000 airline, construction, concession, and other contracted employees work at the Airport. The Aviation Department is an enterprise department that generates its own revenue to cover operating costs instead of using local tax dollars.

The Federal Aviation Administration classifies airports into categories based on their traffic volume and activities. Large hub airports like AUS receive 1% or more of the annual U.S. commercial passenger enplanements.

The Airport opened in 1999 with the capacity to accommodate 11 million travelers, annually. However, the Airport has significantly outgrown its capacity, recently transitioning from a medium to a large airport. In 2020, the Airport experienced a dip in the number of traveling passengers due to the COVID-19 pandemic. However, this figure began rebounding in 2021 and continues to rise year over year, with over 22 million travelers in 2023.

Exhibit 1: Annual passenger traffic at the Airport has recovered since the COVID-19 pandemic, surpassing pre-pandemic levels



Note: Travelers decreased significantly in 2020 due to the COVID-19 pandemic.
Source: OCA analysis of Airport passenger data, August 2024

Over the last few years, the Aviation Department has struggled to meet this growing demand and stabilize operations following the pandemic. The pandemic saw many senior-level Aviation employees retire or leave the department. The department continues to experience challenges recruiting, hiring, and retaining staff at all levels, including its top leadership. Between fiscal years 2020 and 2023, the Aviation Department's employee vacancy rate more than doubled from 17.5% to 36.4% and it is now around 20%. In 2023, multiple safety incidents, including two worker fatalities and a near miss between two planes, sparked concern from local and federal government officials over staffing and safety at the Airport.

To help accommodate passenger growth, the Aviation Department has begun a \$4 billion, multi-year Airport Expansion and Development Program as part of its 20-year master plan. The program aims to increase the Airport's capacity to meet current and future needs by expanding the main terminal, building a new concourse, and adding more gates and security checkpoints, among other projects.

What We Found

Summary

This is a special report to assess risks related to the City's Aviation Department operations at the Austin-Bergstrom International Airport. We evaluated risks across 13 different categories within the control of the Aviation Department. For a summary of these categories, see Appendix A.

Based on our work, the top three risk areas facing the Aviation Department are:

1. contract and vendor management
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Although we are not issuing recommendations in this report, these top risk areas will be considered in our annual audit planning process, which may result in future audits.

Risk Area 1: Contract and vendor management

In a survey of nine peer airports, six identified contract and vendor management as either a strategic priority or a challenge to their airport. Peer airports also reported various methods for vendor and contract management. See Appendix B for survey results.

Proposed Audit Topic	Proposed Objective
Aviation Department: Contract and Vendor Management	Are Aviation Department contracts effectively administered and monitored to ensure all contracted deliverables are received and contractors comply with contract requirements?
Aviation Department: Contract Development and Award Process	Is the Aviation Department's process to develop and award contracts equitable, and how does this compare to best practices?

In recent years, the total number of contracts and contractors at the Airport has increased. Management of these contracts is split between Aviation Department staff and staff in other City departments, even though the contractors operate at the Airport. This includes the large construction projects related to the Airport Expansion and Development Program. In total, if these multibillion-dollar contracts are not administered and monitored effectively, the City and Airport customers may experience both direct and unintended impacts. These include cost overruns, timeline delays, poorly planned or constructed projects, lawsuits, and reduced customer satisfaction.

The Aviation Department faces increased resource risks for both vendor and construction management activities. Specifically, there may not be enough contractors to do the work or enough qualified and experienced staff to effectively monitor these contracts. Given limited monitoring by City staff, key tools like policies, procedures, and performance measures help the Aviation Department ensure consistent oversight, especially for vendor contracts. However, we noted some Aviation Department policies and procedures may be outdated and performance measures may be unreliable. This makes it harder to know if contract terms are being followed, deliverables are provided, and payments are correct and timely. The City also faces challenges in meeting Minority- and Women-Owned Business Enterprise goals.

We identified audits that could evaluate whether the City's process to develop, award, administer, and monitor Aviation contracts is adequate to ensure needs are being met at the Airport. These audits could also identify ways to improve the contract and vendor management processes moving forward.

Risk Area 2: Asset management and maintenance

Proposed Audit Topic	Proposed Objective
Aviation Department: Built Asset Management	Is the Aviation Department maintaining built assets, including roads and structures, effectively and efficiently? How does this approach compare to peer airports?
Aviation Department: Vehicle and Equipment Lifecycle Management	Is the Aviation Department effectively managing and monitoring vehicles and equipment throughout their lifecycle, and how does this approach compare to best practices?

In a survey of nine peer airports, eight reported managing assets, including building lifecycle management and maintenance, as a strategic priority or challenge to their airport. Asset management and maintenance was the most highly reported strategic priority and challenge among peer airports.

The increases in passenger numbers and staffing challenges have made it hard for Aviation staff to effectively manage and maintain its existing assets. For some time, operations at the Airport have significantly exceeded the capacity of its existing infrastructure. This may lead to long-term problems, including unplanned costs due to repairs and possible unsafe conditions for workers and passengers. Given the current focus on development, Aviation staff may be prioritizing new projects aimed at upgrading infrastructure over fixing existing assets which may be nearing the end of their useful life.

We did not see a clear strategy for the Aviation Department to maintain their assets. There also appeared to be limited review and oversight of these assets. Aviation staff reported their work order system is outdated with some issues being documented on paper. Also, some Aviation divisions may not have sufficient workspace or space for training, meetings, or storage. Staff also described various passenger and work areas as cramped and congested.

In our discussions with staff, it appeared some assets may need repairs due to delayed preventive maintenance. For other assets, staff are finding temporary solutions such as fixing something that should be replaced. We also noted some repairs may be rushed to meet timelines. Also, the Aviation Department may not have enough skilled workers or contractors to perform specialized maintenance work. In addition, staff may be assigned to make repairs on equipment that is outside their specific trade or expertise.

We identified audits that could evaluate whether the Aviation Department effectively manages and maintains assets throughout their lifecycle. These audits could also identify ways to improve asset management processes moving forward.

Risk Area 3: Emergency management and safety

Proposed Audit Topic	Proposed Objective
Aviation Department: Emergency Planning and Preparedness	Are the Aviation Department's emergency planning and preparedness efforts adequately resourced and developed in a way to respond and maintain operations effectively in major or emergency situations?
Aviation Department: Emergency Planning and Preparedness for People of All Abilities	Does the Aviation Department's emergency planning and preparedness efforts meet the needs of people of all abilities and comply with laws?
Aviation Department: Worker Safety	Is the Aviation Department proactively approaching worker safety, including contractors and vendors, and how does this approach compare to best practices?

Emergency responses at the Airport call for a high degree of communication, coordination, and hierarchy. The Aviation Department has emergency response plans and a training program. Also, Aviation conducts full-scale emergency exercises every three years in compliance with Federal

In a survey of nine peer airports, only two reported emergency management as a major strategic priority or challenge.

Aviation Administration (FAA) standards. Staff noted Aviation engages in various emergency scenarios to maintain readiness.

Effective emergency response efforts need to be adequately resourced with clearly defined roles and responsibilities. Given the Aviation Department's staffing challenges, some staff reported frequently working outside their regular duties. Also, we noted Aviation has limited staff solely dedicated to emergency management. For airfield incidents, the FAA requires a tabletop or simulated exercise be conducted afterward. The Aviation Department is responsible for creating an after-action report to identify areas for improvement. These reports may take time to complete, especially with limited staff. In addition, staff said it can be difficult to coordinate with all of Aviation's partners due to the number of stakeholders involved. We also noted several safety incidents in the last few years.

We identified audits that could evaluate whether the Aviation Department's emergency planning and preparedness efforts are in line with requirements, designed to result in an effective response for all people, and adequately resourced to ensure safety. These audits could also identify ways to improve emergency management and safety processes moving forward.

Additional Observation

The Aviation Department previously had a team of internal auditors, but this group has not been staffed since 2011. Aviation management reported they are working to reclass one or two Aviation positions through the City's Human Resources Department to staff the internal audit function, again. These staff members are expected to conduct airport-specific audits looking at various topics, including construction. These internal audits will also be supplemented with audits conducted by external auditors.

Exhibit 2: Most peer airports except Austin reported having a staffed internal audit function

Airport	Audit Function
Austin	No
Charlotte-Douglas*	Yes
Dallas-Fort Worth	Yes
Denver	Yes
Houston**	Yes
Los Angeles**	Yes
Philadelphia	Yes
Portland	Yes
San Jose	Yes
Seattle-Tacoma	Yes

*Charlotte-Douglas Airport reported using dedicated staff time from their City's internal audit function for airport audits, but these staff are not located within their aviation department.

**Surveyed entity oversees multiple airports in the surrounding area.

Source: OCA survey of 9 peer airports and interviews with Aviation staff, July 2024

Appendix A: Risk Assessment Summary

Risk	Category Explanation and Significance	What We Learned	Proposed Future Audits
Contracts	The Aviation Department (Aviation) manages many vendors and contractors operating at the Airport. Contracts may not be adequately overseen, and agreed upon services may not be delivered. This could result in financial loss, construction delays, and services impacts.	Aviation staff reported being able to review only a subset of their contracts each year. Aviation experiences challenges to provide adequate oversight in this area because management of contracts is split between staff in Aviation and other City departments. Staff reported specific challenges enforcing deliverables, ensuring payments are timely, and making contractors aware of all contract terms. Due to Aviation staffing challenges, contracted staff currently play a larger and more central role in delivering airport services. Also, the City's Small and Minority Business Resources staff said there are challenges meeting Minority- and Women-Owned Business Enterprise goals.	<ul style="list-style-type: none"> • <i>AviationDepartment: Contract and Vendor Management</i>
Monitoring	Oversight of Airport processes is necessary to ensure service quality remains consistent and high. A lack of monitoring activity could lead to substandard services and limit the information available for decision-makers for planning purposes.	Aviation has numerous controls in place to monitor its overall quality and efficiency, including performance measures, feedback methods, and self-review. However, those controls may not assess all areas or be applied and implemented consistently across all divisions.	<ul style="list-style-type: none"> • <i>AviationDepartment: Contract Development and Award Process</i>
Finance	Aviation's financial system underpins all its operations. Strong financial controls are needed to sustain operations and ensure adequate funding for capital projects.	Aviation's financial system appears to have reliable controls. In the future, there may be financial pressure associated with high operating costs for airlines. Also, there may be issues with outdated City financial policies, systems, and analysis tools.	
Asset Management and Maintenance	Aviation manages and maintains many Airport campus assets, including all structures, roads and runways, vehicles, and other equipment. Appropriate management is essential for continued operation and safety of passengers and staff. Failure to do so could result in facilities that are inadequate for increasing passenger numbers and could lead to costly repairs, service interruptions, and potential injury.	The continued rapid growth of Airport passenger numbers along with staffing challenges have made it difficult for Aviation to manage existing spaces and keep up with maintenance issues. Some maintenance issues are being resolved with temporary solutions, such as fixing something that should be replaced, due to time and staffing constraints. Some assets appear to need repair and there may not be enough preventative maintenance being done. Also, Aviation may have difficulties balancing new development with existing maintenance priorities. Also, there may be issues with lifecycle planning, asset oversight, and appropriate leveraging of work systems to meet goals.	<ul style="list-style-type: none"> • <i>AviationDepartment: Built Asset Management</i> • <i>AviationDepartment: Vehicle and Equipment Lifecycle Management</i>
Planning and Development	Aviation plans and develops its own capital projects. These projects include new construction and maintenance of existing infrastructure. A lack of planning and development controls could result in poorly designed new facilities, deterioration of existing infrastructure, and associated costs.	Aviation has been operating significantly over the capacity of its existing infrastructure. Planning and development are guided by a robust airport development plan and capital improvement plan. However, the successful execution of these plans hinges on contractor availability and performance. The strain on the current infrastructure, compounded by passenger growth, has caused some assets to need replacement sooner. Given the current focus on development, Aviation staff may be prioritizing new projects aimed at upgrading infrastructure over fixing existing assets which may be nearing the end of their useful life. Aviation staff said expansion efforts should address some issues with existing infrastructure that have not been fully addressed.	

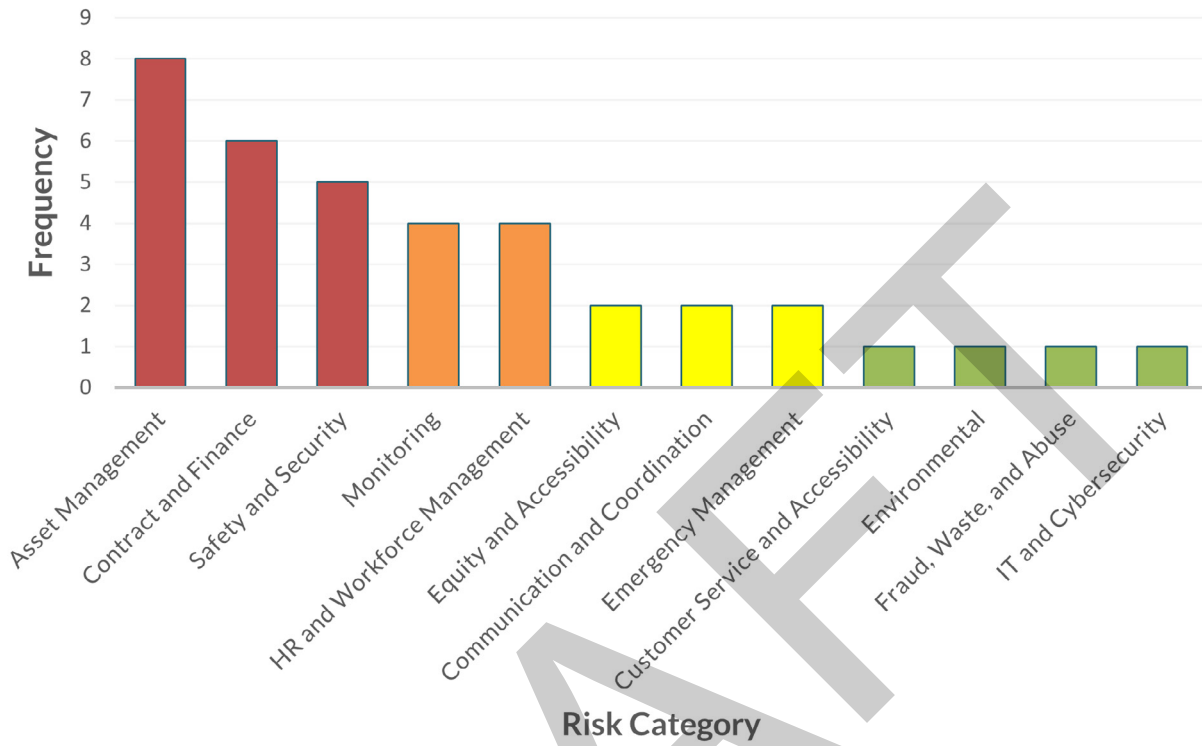
Appendix A: Risk Assessment Summary

Risk	Category Explanation and Significance	What We Learned	Proposed Future Audits
Emergency Management and Operations	There are numerous emergency situations that could occur at any airport, and as such, Aviation manages emergency planning and response efforts. It is vital to have appropriate plans and resources dedicated to this area to help ensure the safety of all travelers and workers.	Aviation’s emergency responses call for a high degree of communication and hierarchy. Given Aviation’s staffing challenges, some staff reported frequently working outside their regular duties. After-action reports show opportunities for improvement in both coordination and clarity of roles. Aviation has limited staff dedicated solely to emergency management and planning. Also, staff said it can be difficult to coordinate with all of Aviation’s partners due to the number of stakeholders involved. Aviation has several controls in place for how it would communicate with travelers, staff, external entities, and the media in emergency situations.	<ul style="list-style-type: none"> • Aviation Department: Emergency Planning and Preparedness • Aviation Department: Emergency Planning and Preparedness for People of All Abilities
Safety and Security	Aviation has significant responsibilities pertaining to airport safety and security, including complying with numerous federal requirements. Safety and security issues may result in serious consequences including injury, liability, loss of federal funding, and loss of reputation.	Aviation has many controls in place to ensure safety and security at the Airport. Currently, Aviation is in the process of receiving and implementing several new technology solutions for increased safety on runways and taxiways. Aviation has plans in place to respond to incidents, but could improve the clarity of procedures and staff training. While Aviation’s process ensures continual work to mitigate and address challenges, limited resources may result in efforts being reactive. Related to safety, we noted two worker deaths in 2023, as well as numerous on-the-job injuries. Muscle strains appear to be the most common and recurrent workplace injury.	<ul style="list-style-type: none"> • Aviation Department: Worker Safety
HR and Workforce Management	Aviation hires, trains, and manages many employees, both for their own department and other airport entities. City and Aviation recruiting, hiring, and retention practices may create barriers to finding and keeping qualified employees. A lack of adequate staff could hinder operations, impact staff morale, and lower overall service quality.	Aviation has had significant challenges with their staffing levels over the past few years, as have peer airports. Staff reported issues with a lengthy hiring process and non-competitive compensation. Many key employees are nearing or past retirement eligibility, and there appears to be a lack of clear succession planning. Current staff reported taking on additional duties and working overtime to fill gaps. Due to these challenges, Aviation has become increasingly reliant on third-party contractors to deliver airport services. However, Aviation has limited control in this area since they follow the rules and processes defined by the City’s Human Resources Department.	None currently proposed
IT and Cybersecurity	The Airport is home to numerous systems used for storing data, processing transactions, and facilitating operations. It is important these systems are not compromised, which could impact service delivery and result in financial loss. Efficient operations rely on secure systems.	Overall, systems at the Airport have controls in place to mitigate threats. Some Aviation systems may be old and divisions may not have all the tools they need. Also, staff noted a need for additional training in certain areas. In addition, our office has a team that assesses IT risks citywide. Any risks from those assessments may lead to audits on our audit plan.	None currently proposed from this project. Future audits may be identified through our citywide IT risk assessment.

Appendix A: Risk Assessment Summary

Risk	Category Explanation and Significance	What We Learned	Proposed Future Audits
Environmental	The Airport is required to comply with numerous federal, state, and local environmental regulations. For example, the daily use of facilities and heavy machinery contributes to a large carbon footprint. An inadequate response to environmental protection could result in long-term environmental consequences for the surrounding area as well as regulatory compliance issues.	Aviation administers numerous environmental plans, including for water runoff, green building, and responsible waste disposal. Though Aviation has many environmental controls in place, staff reported other focus areas, such as operations and finance, may be prioritized by Aviation and private partners. Also, we did not see a formal sustainability plan. While the handling of contaminated materials is an emergent environmental risk, there appear to be no uncontrolled environmental concerns at the Airport.	<i>None currently proposed</i>
Customer Service and Accessibility	Aviation is responsible for ensuring that customers, including those of all abilities, have a positive customer experience. Aviation also needs to ensure compliance with accessibility regulations.	Aviation has various initiatives, programs, and resources to ensure the Airport is accessible and customers have a good experience. There are numerous survey and feedback options in use, which have returned contrasting results regarding customer satisfaction. Aviation follows the Americans with Disabilities Act, and generally has language accessibility options, though it may lack resources for some populations.	<i>None currently proposed</i>
Communication and Coordination	Effective operations require that Aviation conduct consistent communication to ensure its services are coordinated and effective. This includes coordinating with federal and state agencies, other departments within Austin, as well as vendors to regulate or perform various airport operations.	Aviation appears to regularly communicate with stakeholders. Staff sometimes noted challenges coordinating with other City departments, which may negatively affect airport operations. Internal communication generally appeared effective. However, some staff identified unclear expectations as an issue. Aviation also regularly collaborates with federal regulatory and safety entities, and has frameworks for social media engagement and media outreach.	<i>None currently proposed</i>
Fraud, Waste, and Abuse	Aviation is a large department and there are numerous financial transactions at the Airport on a daily basis. It is essential that Aviation and their vendors operate with integrity at all levels to mitigate instances of fraud, waste, and abuse.	The audit team did not identify significant issues with fraud, waste, and abuse during this project. All allegations of fraud, waste, and abuse were referred to the City Auditor's Integrity Unit.	<i>None currently proposed</i>

Appendix B: Frequency of Strategic Priorities and Challenges Reported by Peer Airports



Source: OCA survey of peer airports, July 2024

Scope

The project scope includes risks related to the City of Austin Aviation Department's operation of the Austin-Bergstrom International Airport.

Methodology

To complete this risk assessment, we performed the following steps:

- reviewed federal, state, and local laws and regulations on airport operations
- reviewed City Council actions related to airport operations
- interviewed a member of the City's Airport Advisory Commission and reviewed the Commission's recommendations related to airport operations
- interviewed staff from the Aviation, Small and Minority Business Resources, and Law departments
- reviewed plans, policies, procedures, and other relevant documentation related to airport operations
- reviewed performance measures and funding information related to airport operations
- reviewed after-action reports and corrective plans from past emergency events and training exercises
- reviewed communication and outreach information specific to airport operations
- analyzed separation and vacancy data for Aviation Department staff from 2019 to 2024
- analyzed lost badge data for airport staff and vendors from May 2024 to learn about employee badging trends and access controls
- analyzed results of the City's 2023 community survey specific to airport operations
- reviewed results of the Aviation Department's Airport Service Quality passenger satisfaction report
- observed operations across divisions at the airport
- surveyed peer airports from Dallas-Fort Worth and Houston in Texas, as well as Los Angeles, CA; San Jose, CA; Denver, CO; Charlotte, NC; Portland, OR; Philadelphia, PA; and Seattle, WA
- conducted a risk assessment utilizing the information collected to prioritize and assess key risk areas

Project Standards

This project is not considered an audit. However, this project was conducted in accordance with the ethics, independence, competency, and quality provisions of the Government Auditing Standards.

The Office of the City Auditor was created by the Austin City Charter as an independent office reporting to City Council to help establish accountability and improve City services. We conduct performance audits to review aspects of a City service or program and provide recommendations for improvement.

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