

## Aviation Construction Reaching New Heights

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COVID-19 has presented unique challenges to the aviation industry. From 2019 to 2020, the industry saw a 60 percent reduction in passengers worldwide, according to the International Civil Aviation Organization (ICAO), representing a \$371 billion loss of gross passenger operating revenues. The pandemic has also brought many construction projects and improvement plans at airports to a standstill.

However, aviation is a resilient industry, and demand for travel appears to be moving in a positive direction. As we look to the future of American airports, contractors must rethink the way they build and design to meet today's new realities and expectations. While challenging, this moment presents a rare window of opportunity for airports to consider how to bring new system efficiencies, technology and environmentally friendly changes into the future of the aviation era – beyond conventional thinking.

### A MORE SUSTAINABLE FUTURE

This year, the Biden Administration proposed a new infrastructure program, the American Jobs Plan, which could potentially offset the loss of revenue from decreased passenger travel. Within this \$2 trillion-plus bill, \$25 billion would be directed toward airports across the country and for use to improve airports' environmental friendliness and sustainability.



There is a significant opportunity to invest in energy-efficient technologies and strategies that promote long-term energy resilience and savings for more sustainable industry recovery. For example, to reduce the aviation industry's carbon footprint and launch more sustainable airport operations, including upgrading old facilities to be more energy-efficient; incorporating alternative power sources; creating multi-modal, car-free access to airports; using electric vehicles (EV) in place of diesel and gas-operated ground support equipment; video analytics, the internet of things and autonomous vehicles and handling; cargo digitization and biometric solutions to add increased security and efficiency.

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## POST-PANDEMIC CHANGES

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The pandemic has forever transformed best practices when designing and building airports, starting with adopting a digital-first mindset to create a process to get travelers onto planes as smoothly and seamlessly as possible. Like many other industries, the integration of online tools such as Zoom and Microsoft Teams has been incredibly impactful across construction teams, which previously relied on in-person meetings to do business. In addition, it allowed construction companies to collaborate more closely across engineering, contracting, and architecture, which have been formerly siloed and operated separately.

On the design side, airports are reconsidering the materials used in construction, including opting for easy-to-sanitize, non-porous flooring in areas once carpeted and upgrading HVAC systems to hospital-grade, with enhanced air filtration virus-eliminating technology like UV lights.

The pandemic has also changed our expectations as passengers as we prioritize and desire more personal space, such as roomier waiting areas. Technology that enables touchless journeys will also become the standard in time.

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## A CASE STUDY: CALIFORNIA AVIATION

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One region where changes may occur sooner rather than later is in California, a growing aviation market. For instance, Los Angeles is a prime location for one of the country's sport epicenters, hosting 2022 Super Bowl LVI, possibly the FIFA World Cup in 2026, and the 2028 Summer Olympics. As tourism returns and increases around these mega sporting events, the city is working rapidly to improve its infrastructure, including the ongoing expansion of its mass transportation network and the expansion and modernization of the Los Angeles International Airport (LAX). More recently, the Los Angeles Board of Airport Commissioners approved the acquisition of more than \$1 billion in terminal improvements.

Even with these opportunities, there are still challenges ahead. For years, the construction workforce has been experiencing a labor shortage, exacerbated even more by the pandemic and the increasing number of people retiring. This means it is even more critical to attract and train new talent to the industry. Construction firms must also continue to embrace new technologies and design processes to improve efficiencies and leverage data and analytics, remote technology, virtual reality, and collaborative tools to ensure construction teams can meet the demand as the aviation sector grows.

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## INNOVATION BY NECESSITY

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While construction's digital transformation had already been underway in recent years, shepherded by forward-thinking, tech-savvy contractors, and disruptive start-ups, the pandemic accelerated the need to innovate. As a result, we are living in a period of substantial change but also unprecedented opportunity. The construction industry is well-positioned and prepared to help the aviation sector reach new heights by optimizing smart operations and maintenance processes to increase performance through new technologies. 



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### About the Article

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