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Ensuring smooth delivery of passenger loading bridges

Comprehensive and thoughtful approach can help you ensure seamless airport operations

Whether building new to satisfy growing demands for additional gates or replacing old due to age, maintenance issues or aircraft fleet compatibility, passenger loading bridges are forcing airport owners to make important decisions that can have an impact on the future of their facilities.

Designing a successful and operational efficient aircraft gate requires a holistic approach. This includes partnering with a designer who has a specialized and diverse skill set and developing a comprehensive design package that defines the features, operations, equipment and finishes to meet the needs of the owner, operator and users.

Here are a few keys to success:

Phasing. PLB construction should be phased. Coordinating with seasonal flight schedules to limit disruptions while maximizing the available gates for construction is critical.

Cost benefit. Performing a cost-benefit analysis will help determine whether to refurbish PLB components or replace the entire unit. Having clear documentation of the infrastructure and condition that is existing will help with this analysis and identify any deficiencies.

Flexibility. Addressing the changing needs of an airport and aging infrastructure is crucial. For example, if a designer is in the planning process on one PLB and another breaks down, work should seamlessly shift to address the critical issue.

Standardization. Having a standardized bridge and equipment agreed upon saves costs and is easier to maintain. This allows for efficiencies in maintenance, spare parts, training and operation.

Foundations. Preserving as much of the existing foundation as possible saves money and reduces construction and gate closure duration.

With only modifications needed to a foundation, an existing PLB can be swapped out in as little as 7-10 days. However, if new foundations are required, the timeline can increase to more than a month.

If modifying a foundation, it is important to try and identify issues like ground utilities surrounding a bridge as early as possible so that it is a consideration during programming and design. Airports also should strongly consider performing utility locates and strategically pothole when needed to verify there are no conflicts.

Future planning. PLBs need to have the necessary infrastructure to meet current and future technology needs. It's important to keep in mind projects that are planned for an airport's future to understand infrastructure needs and future equipment, especially ones that could introduce the use of new technology. This will ensure adequate cabling or conduit can be provided and that the PLB controls have the capability to interface with future equipment and building systems.

Planning also should consider existing and anticipated fleet mix when deciding what PLB model to choose. With ever-changing airline fleet needs, designing the PLB to the widest practical range of aircraft while meeting ADA requirements will provide future gate flexibility.

Aesthetics and passenger experience. Separate from the mechanics and infrastructure, airports should consider the look and feel of passenger boarding bridges. Do refurbished bridges fit with new



Ryan Carson, PE
Senior Project Engineer
HNTB Corporation

ABOUT THE AUTHOR

Carson is a senior project engineer in HNTB's Seattle office. Over the past 10 years, he has been a part of passenger loading bridge replacement and gate layout and aircraft movement planning work at major airports, including Seattle, Los Angeles, San Diego and Salt Lake City.

Contact him at (425) 450-2573 or rcarson@hntb.com



James Long, PE
Aviation Project Manager
and Associate Vice President
HNTB Corporation

ABOUT THE AUTHOR

Long is an aviation project manager and associate vice president at HNTB. In his career, he has served as the primary design engineer for gate layouts and passenger loading bridges on multiple projects, including the Tom Bradley International Terminal and the United Airlines LAX Terminal Redevelopment programs.

Contact him at (310) 846-1815 or jalong@hntb.com

buildings? Should PLBs match existing ones so customers have a similar experience each time they fly, regardless of airline? Simply installing new flooring, wall boards and lighting to coordinate aesthetics between the terminal and the bridge can be enough to address these questions and improve the customer experience. Whether installing new or undertaking refurbishment, passenger loading bridges play a multi-faceted role within airport operations. Through proper planning and thoughtful execution, PLBs can generate opportunities for increased efficiencies and reliability, greater flexibility for the future, as well as creating a more pleasant, uniform passenger experience. ■