# AIRPORT CASE STUDY: Magnetic-Base Stanchions

How 3 Leading Airports Have Improved Queue Management and Passenger Flow Using Magnetic-Mounted Stanchions from Lavi Industries

ATLANTA INTERNATIONAL SAN FRANCISCO INTERNATIONAL DALLAS FORT-WORTH



## Highlights



#### The Problem:

Airport-wide, queuing is a necessary part of the passenger journey. Effective queue management supports airport goals to promote passenger safety, maintain operational efficiency, and improve the overall passenger experience.

In reaching their goals, airports face a number of challenges:

- ✓ Utilizing space efficiently and aesthetically.
- Maintaining control of queue configurations despite maintenance, cleaning, and operational changes throughout the day.
- Continuing operations with minimal disruption to the passenger experience during equipment upgrades or installations.

In this case study, we explore how three leading U.S. airports are using magnetic-base stanchions from Lavi Industries to successfully address these challenges.

### **Solution Summary**

Magnetic base stanchions offer an ideal solution to create and maintain orderly queues. With floor plates securely in place, stanchions can be removed and effortlessly returned to the same location for optimal control and consistent placement. Queue reconfiguration is also a breeze when stanchion layout conforms to standard grid patterns. Finally, since stanchions are not core-drilled into place, installation is quick, minimally invasive, and hassle-free.

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The contemporary design of magnetic stanchion bases lend themselves to today's modern airport environments. Sleek and space-saving, the queuing area is maximized for the convenience of passengers. Durable yet semipermanent, stanchions are easily removed during cleaning or maintenance, and are simply returned to their same position maintaining a neat and orderly queue.

Importantly, installation is minimally invasive. Steel floor plates are simply glued into place, maintaining the integrity of floor surfaces.

#### **Atlanta International Airport**

The installation of Lavi Industries' magnetic-base stanchions at Atlanta International Airport (ATL) was among a series of projects under an ongoing renovation initiative the airport is calling, "ATLNext." The entire effort is undertaken to boost capacity, renew and replace existing facilities, and enhance ATL's aesthetic appeal.<sup>1</sup>

Lavi Industries was chosen to supply approximately 1,000 stanchions within the main security area of the domestic terminal. The stanchions were installed in a 4x4 grid pattern, mounted to the floor with magnetic bases. This massive configuration allows the airport to maintain the integrity of the brand new flooring it had installed as part of the renovation while creating a robust and flexible queuing area. The magnetic base solution allows airport management to easily and quickly modify the queue patterns within the 4x4 configuration to accommodate a wide range of queue configurations depending on passenger flow and security needs.



In addition to other benefits, ATL management cite the low profile of the magnetic stanchion bases as a key benefit in maximizing space and helping the airport meet ADA guidelines. Also, the magnet ensures the posts themselves stay in place even after a very busy period and after nightly floor cleaning, which means the queue is able to remain looking clean and fresh.

ATL chose Lavi's double retractable belts to join the stanchions. The double belt provides a more certain barrier within the queue to keep passengers flowing smoothly. Furthermore, ATL added custom sublimation printing to the belts to achieve a clean, uniform, branded look.

The installation of the new queue took place in four phases. The process was unobtrusive and allowed normal operations to continue, despite other ongoing renovations in the terminal.

<sup>1</sup> http://next.atl.com/



### San Francisco International Airport

San Francisco International Airport (SFO) chose Lavi Industries to supply magnetic base stanchion solutions for security checkpoints throughout the airport. The primary challenge was to increase queuing capacity within these crowded areas. An additional challenge was to preserve the flooring in the checkpoint areas which consisted of carpet and terrazzo floor areas. Airport managers did not want to tear out the carpet, nor did they want core drilling of stanchions into the floor. Furthermore, they required the ability to reconfigure lines and remove the posts to clean the flooring while ensuring the queue is correctly put back in order. Prior to installation, management would have to reconfigure and replace the stanchions to their appropriate place every morning after nightly cleaning.

SFO was attracted by the small footprint of the Lavi Industries magnetic base solution. Airport managers also appreciated that the same solution could be utilized in the carpeted area and the terrazzo floor area without damaging the integrity of the flooring.



During the installation, Lavi Industries' public guidance experts trained the installation crew and then remained on site during the week to supervise the installation. The installation process was phased over the course of the week to avoid having to shut down the entire area.

After the renovation of the security checkpoints, SFO reported positive passenger feedback. Passengers reported feeling more at ease because of the orderliness and cleanliness of the security checkpoints. They felt the security queue was more efficient and consistent. And they reported having an overall more pleasant experience after the remodel.



#### **Dallas Fort-Worth Airport**

Dallas Fort-Worth Airport (DFW) was one of the earliest adopters of Lavi Industries' magnetic-base stanchions. They chose the solution as part of an overarching initiative to improve the passenger experience throughout the airport. After recognizing the benefits of its initial installation, DFW expanded the installation of magnetic stanchion bases throughout the entire airport.

Prior to adopting the magnetic base solution, airport managers reported issues with maintaining queues in the security area. Agents and cleaning crews would take it upon themselves to reconfigure the queues to what they thought it should be. While well-intentioned, the lack of consistency would result in unorganized queues.

Additional motivations behind the airport's selection of magnetic bases included a desire to make the queue "disappear" in the minds of airport travelers. DFW wanted to remove as much clutter in the queuing areas as possible and sought a design that would blend into the overall aesthetic of the airport. The low profile, satin finish of the magnetic base stanchions combined with the satin finish rigid rails has helped make the queue blend into the background as intended.



In total, DFW has installed approximately 1,000 magnetic-base stanchions throughout five terminals and 13 gates. To maintain their budget, DFW uses magnetic bases only on the perimeter of their queues and relies on standard stanchion bases on the inside of the queue. The magnetic-base stanchion exterior effectively keeps the queue structure in place and forms the alignment for the interior posts.

Since the installation, DFW reports significant satisfaction with the small footprint of the base. The small footprint allows luggage carts, wheelchairs, and roller bags to easily roll over the base without impeding passenger flow. And notably, the small footprint of the base which is 7 inches in diameter has increased queue capacity by an astounding 25% while still meeting ADA standards.

#### **Key Results:**

No stress queues

Aesthetic value

Improved passenger experience

 Increase queue capacity

# **Summary of Benefits**

As a result of Lavi's installations, the airports featured in this case study have realized the following key benefits:

Posts are kept firmly in place, maintaining an orderly and consistent queue		Stanchions quickly remove from floor plate when needed		<ul> <li>Easy, simple installation</li> <li>—No bolts or core drilling required</li> </ul>		
<ul> <li>Installation is discreet with minimal to no disruption of</li> </ul>	Floor be pe remo marri	plates can rmanently ved without ng surface	Small footprir maximizes flo queuing space	nt ior/ e	<ul> <li>Clean, modern look enhances airport aesthetics</li> </ul>	
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