

## LAWA breaks ground on LAX APM



From left to right: LAX APM Safety Manager Brian Pennington; LAMP Services Director Tom Hellwig; Supply Services Manager II Jamaal Avilez; LAWA Chief Financial Officer Ryan Yakubik; LAMP Senior Management Analyst-Inclusivity Manger Amber Meshack; LAWA Deputy Executive Director and LAMP Executive Officer Bernardo Gogna; City of Los Angeles City Attorney Eddie Angeles; Executive Advisor to LAWA CEO Takis Salpeas; LAWA CEO Deborah Flint; Deputy Executive Director, Environmental Planning Samantha Bricker; LAMP Deputy Executive Manager Jake Adams; LAMP Communications Director Stephanie Sampson; LAX APM Project Manager Eric Halvorson; LAX APM O&M Design Manager and Lea+Elliott Principal Ron Sheahan; LAX APM Deputy Project Manager Greg Orsolini; LAX APM Construction Manager Mike Grant; LAX APM Senior Scheduler Royce Jefferson  
Image credit: LAWA

LOS ANGELES – Los Angeles World Airports (LAWA) and Los Angeles Mayor Eric Garcetti broke ground on the Automated People Mover (APM) Mar. 14, 2019 at Los Angeles International Airport (LAX). The APM will connect travelers directly to the airport terminals from new pick-up and drop-off locations, L.A. Metro's regional transit system and the future Consolidated Rent-A-Car (ConRAC) facility. When completed the APM will transform the airport with convenient public transit access, reduce traffic congestion and deliver a world-class experience for travelers at LAX.

The Mayor was joined by Councilmember Mike Bonin, County Supervisors Janice Hahn and Mark Ridley-Thomas, Board of Airport Commissioners (BOAC) President Sean Burton, and Los Angeles World Airports (LAWA) CEO Deborah Flint, as well as community and labor leaders at the ground breaking ceremony. Lea+Elliott's Principal and Project Manager Ron Sheahan, P.E. was also in attendance.

Last year, the Los Angeles City Council approved the \$4.9 billion APM contract with LAX Integrated Express Solutions (LINXS) to design, build, finance, operate and maintain the system, which marked the

largest contract ever awarded in City history. The LAX APM will be the first people mover system to be delivered under a P3 model (Public-Private Partnership). The APM is the centerpiece of LAWA's Landside Access Modernization Program (LAMP) at LAX.

Lea+Elliott is the APM System Consultant and Program Management Advisor on the LAMP Management team, providing procurement and implementation services.



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# IN PROGRESS

## New Kahului Airport Tram to welcome airport passengers

MAUI – The Kahului Airport CONRAC project, slated for customer service in May 2019, includes a Tram system that provides an at-grade connection between the Airport’s arrival and ticketing areas and the new CONRAC facility. The Tram system, supplied by Schwager Davis, Inc., operates semi-automatically in a bypass shuttle configuration during peak periods. Along with providing a warm Maui welcome to passengers, Tram operators control the Tram’s movement and door operation. Lea+Elliott supported the initial planning efforts for the conveyance system and system design reviews during implementation.



OGG Tram

## Major Transit Authority leads Platform Station Door Pilot Program

SAN FRANCISCO – Lea+Elliott has been supporting Bay Area Rapid Transit’s (BART) plans to implement a Platform Screen Door (PSD) system at a pilot station.

BART is undergoing major system refurbishments, including investment in a new fleet, traction power upgrades and a new train control signaling system. These investments will further increase BART’s capacity to support transportation across the San Francisco Bay Area’s booming economy. PSDs, especially at the most heavily used stations, not only decrease crowding, but can dramatically improve passenger safety. In some cases, including a platform barrier, can also enable transit operators to increase speeds into and out of stations, thereby reducing trip times.

BART opened in 1972 and operates 5 lines, 48 stations and over 100 miles of track. The system averages more than 400,000 daily riders but can be particularly crowded at the core stations in downtown San Francisco and Oakland. Platforms can be crowded, and it can be a challenge to queue for a train during the evening commute from San Francisco’s Financial District.

Lea+Elliott previously worked on a feasibility study for BART and is now developing a Preliminary Engineering Design RFP package with PGH Wong for a pilot program. Lea+Elliott’s efforts have addressed several challenges, including integration with both BART’s existing fixed-block signaling system and the future CBTC system in development. BART’s system also requires that the PSD system accommodates multiple train car generations and consist lengths. Lea+Elliott and BART have hosted several interested suppliers from North America, Europe and Asia eager to address these challenges.

Ultimately, when deployed, these PSDs would be the first of their kind in North America for a system the size of BART. This will be a major milestone for both BART and Lea+Elliott!

## Dulles Metrorail Silver Line Phase 2 on track

WASHINGTON, D.C. – The Phase 2 Dulles Metro Rail project recently completed a major milestone. The first Metro vehicles powered from the traction power system appeared on the Phase 2 tracks, and in March, 184 safe braking tests were successfully concluded in the project’s test area 1.

The Washington Metropolitan Area Transit Authority (WMATA) Automatic Train Control System is a “fixed block” system. The entire length of track is divided into a series of “blocks”, each with a track circuit that monitors for train presence and can send speed codes to the head end of the train. Intrinsic to the safety of the fixed block design is the requirement that at any valid speed code the train must be able to brake and come to a stop before it enters a block where another train or an obstruction is located. The block design which sets the block length and the speed codes and takes into account the topography of the track is the design instrument upon which the safety of train operation depends.

To verify the block design a test train was equipped with special test equipment that controls the speed of the train and initiates a full-service brake when tripped by an external sensor. The actual test run begins with placing reflective markers at the beginning of the block, the train is then run into the test block at the prescribed speed where the test equipment initiates braking and the train is monitored to assure that it stops short of the necessary stopping point. This test run is repeated for all the required blocks and speed codes up and down the line.

Lea+Elliott oversaw the review and approval of the block design, the development of the safe braking test procedures and the pre-printed data sheets for the tests. We are continuing to monitor and witness the tests and review and approve the test reports.



### Gregory Love receives GOAA's Employee Recognition



ORLANDO — In January, **Lea+Elliott Senior Associate Gregory Love** received recognition from the Greater Orlando Aviation Authority (GOAA). Gregory was recognized by GOAA CEO Phil Brown and COO Stan Thornton for actively providing on-site technical support and assisting GOAA in getting the new South

APM back in service, which was out of service due to an outage.

GOAA's Employee Recognition Program encourages the airport community to recognize employees for their performance to demonstrate the Common Purpose and/or Behaviors of the service framework.

### Don Wiles receives Silver Star Partner Award



WASHINGTON, D.C. — **Lea+Elliott Senior Associate Don Wiles** received the Metropolitan Washington Airports Authority (MWAA) Silver Star Partner award in October. This award recognizes individuals on the Capital Rail Constructors team who demonstrate dedication to project goals and whose

actions inspire a positive and effective work environment.

Don is the project manager for Lea+Elliott's work on the MWAA's Dulles Metrorail Silver Line Phase 2 project.

### Jane White promoted to Controller



WASHINGTON, D.C. — **Jane White** was recently promoted to Controller for the company. Jane will continue to head the Accounting Department and will be responsible for financial statements, general ledger, cost accounting, accounts payable, accounts receivable, budgeting, tax compliance, and various

special analyses. Previously, Jane held the title of manager of financial services, which she held since December 2014 when she took over lead responsibility for the Accounting Department with the retirement of Mona Hayford who led the department for almost 30 years. Jane joined the firm in 2002 and has seen the company grow in size and in the complexity as we have added staff and new offices in the US and overseas.

### Opening the Door to Greater Transit Safety



This past March the Massachusetts Department of Transportation (MassDOT) and the Massachusetts Bay Transportation Authority (MBTA)

released a draft of their Focus40 Plan which lays out their joint transit commitments through 2040. One of their goals is to add platform barriers and doors to enhance safety and efficiency for transit stations. Their decision represents a growing interest in technology we have used with APM systems for 45+ years.

MBTA is one of three U.S. transit authorities that have looked seriously at the concept of installing platform doors. New York City Transit (NYCT) and BART are the other two. Elsewhere in North America, Toronto's Metrolinx installed platform doors for both the Union Pearson Express and the Toronto underground subway system.

Platform screen doors (PSDs) and platform edge doors (PEDs) are being added to new and existing transit systems worldwide. They are consistently seen in newer Asian and European metro systems. In fact, they're currently in use for transit stations in about 30 countries.

We expect the platform door trend to grow significantly. Certainly, the potential exists. Consider that, in North America alone, there are almost 700 subway stations; and public interest in adding these doors is growing. Passenger safety is the main factor, as the doors eliminate accidental or intentional falls. They also improve efficiency in passenger boarding and potentially eliminate trash accumulation on the tracks, a common problem that can result in track fires and subsequent system delays.

As more manufacturers come into the market, and as technology improves, we believe that these doors will ultimately become prevalent in the U.S. and bring greater safety and quality to the American transit experience.

With that in mind, we're proud that Lea+Elliott is uniquely able to help transit authorities make smart choices and wise investments. We've provided our expertise for literally thousands of automatic platform screen door projects. Our work has run the gamut, from concept design, evaluation and design reviews through implementation, testing and startup services. We also manage systems integration involving vehicles, automatic train controls, communications, common-cause failures (CCFs), etc.

If you have questions about the viability and value of PSDs and PEDs, let me know. Our experts probably already have the knowledge you can use to make informed decisions.

Jack Norton



# LEA ■ ELLIOTT

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## About Lea+Elliott

Lea+Elliott is a transportation consulting firm offering a broad range of planning, engineering, program management, and construction management services for clients worldwide. These services are provided to public transit authorities, airports and private sector owners for new transit systems and the refurbishment of existing systems. We have expertise in all modes of transit, including high-speed and intercity rail, rapid transit, commuter rail, light rail, automated guideway transit, personal rapid transit, and conventional and advanced technology buses. The firm is especially well known for its creative structuring of procurements for a wide range of delivery options that include DBOM and P3.

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## Meet Guadalupe Murillo, P.E.



MIAMI – **Guadalupe Murillo, P.E.** is a senior associate at Lea+Elliott with over 20 years here at our firm. He reviews and verifies all aspects of APM vehicle designs to make sure they comply with specifications. He’s an ideal person to do this for our airport clients since he knows specifications better than most people could. Guadalupe has served on the ASCE 21 APM Standards Committee for the past 12 years and currently serves as the committee’s vice chair. The committee updates the APM standards about every few years in order to keep them current and appropriate to technology changes and to the state of industry design. “Our main priority, though, is to establish minimum safety and performance requirements,” Guadalupe says.

Guadalupe began his career as an intern at Lea+Elliott, when he was a mechanical engineering student at the University of Texas at Arlington. Upon graduation, he joined the firm’s team in North Texas, then moved to Seattle and now lives in Miami. Each move allowed him to work on new and interesting APM systems.

The diversity of Guadalupe’s skills is evident in the variety of work he performs. He often provides technical support during APM system procurement and participates in operating system testing and commissioning by reviewing test procedures and verifying that those procedures affirm the design intent.

“My work is always interesting because I do something different every day and something different for every project,” he says. “Each airport has its uniqueness; so, each brings different challenges and different problems to solve.” He says he’s never run across a challenge he couldn’t resolve. “We work here as a team,” he explains. *“Everyone at Lea+Elliott has different expertise and experience so we collaborate—and we provide better service to our clients as a result. I can call on anyone in the company and they help; we all help each other; we really work as a group.”*

As an APM systems engineer, Guadalupe feels privileged to get to see an APM system evolve: first, as a drawing on a computer; then the system is put into specifications; then he works with contractors to finalize the details that lead to breaking ground. “You see the stations develop, you see the cars coming in; it’s all incremental,” he says. “But what excites me most is getting to the end of a project—then it becomes personally satisfying for me. You see all the problems solved and everyone’s happy and that’s what’s really rewarding.”

When he’s not working, Guadalupe is playing. He loves time with his wife and two children, ages 5 and 8. He is often called on to provide his expertise on Lea+Elliott projects in other locations, so he cherishes the time he has at home. In younger years, he enjoyed building model planes and trains, but he’s traded those past times in for Lego adventures with his son. “I spend as much time with my family as I can,” he says. “We like putting together puzzles, making art ... it’s the simple things that matter.”

