



**LAX IS HAPPENING™**

## FACTS ABOUT MODERNIZING LAX



## LAX MODERNIZATION AT A GLANCE

Los Angeles World Airports (LAWA) is in the midst of a \$14 billion Capital Improvement Program at Los Angeles International Airport (LAX), projected to last through 2023. The LAX modernization program is considered the largest public works program in the history of the City of Los Angeles. Begun in 2009, the overall program is expected to create more than 121,000 annual construction-related jobs.

Among the completed projects, the centerpiece of the program, the New Tom Bradley International Terminal (New TBIT), includes new aircraft gates and concourse areas, and a Great Hall for premier dining, retail and other guest amenities. The new terminal opened in September 2013. Also completed or well underway are several major airfield and facility projects, including a replacement Central Utility Plant, new taxiways and taxilanes, and major renovations and infrastructure upgrades in all of the other terminals.

The largest projects still to come include the Landside Access Modernization Program (LAMP) which will feature an Automated People Mover (APM), a Consolidated Rent-a-Car center (ConRAC), and a stop linking to the regional public rail system. Another major program is a new Midfield Satellite Concourse (MSC). Phase I of the state-of-the-art facility will open with 12 gates and be located in the central part of the LAX airfield, west of the Tom Bradley International Terminal.

### ■ LANDSIDE ACCESS MODERNIZATION PROGRAM (LAMP)

Traffic into and on the roadways in the LAX Central Terminal Area is a major concern, with an estimated 50 percent of air travelers driving to and from the airport by car. The number of vehicles is expected to increase as annual passenger volume continues to break records. The \$5.5-billion program will give airport guests choices that provide a first-class, swift, convenient, and reliable way to access LAX. The program includes five major program elements: a 2.25-mile Automated People Mover (APM) that will connect three on-airport stations to Metro Rail

and transit services – finally providing a seamless connection to public transportation; a Consolidated Rent-A-Car center; two Intermodal Transportation Facilities for additional parking, ground transportation services, and meeter-greeter activities; and roadway improvements. LAMP provides the solution to the CTA traffic congestion, and its major elements are scheduled to be delivered by 2023.

### ■ MIDFIELD SATELLITE CONCOURSE (NORTH GATES)

Featuring 12 new aircraft gates, including many for Group V and VI aircraft like the Airbus A380 and the Boeing 747-8, the first phase of the Midfield Satellite Concourse project will also include new taxiways/taxilanes and utility improvements. It will provide additional flexibility when other gates are taken out of service and reduce use of the LAX remote gates, where passengers are now bused to board aircraft. Substantial completion of the North Gates phase of the project is anticipated in late 2019, with operational activities to begin soon thereafter. Coupled with a companion Baggage Optimization Project (BOP), the MSC North Gates construction cost is estimated at \$1.6 billion.

### ■ TERMINAL 1 RENOVATION

The \$515.8-million renovation of the 32-year-old Terminal 1 will improve its interior, its outdoor aircraft parking ramp area, and the traffic flow through the Central Terminal Area. Terminal 1 opened in 1984 and is in need of modernization to accommodate the needs of a technology-rich, post-9/11 world. The upgrades include: a new state-of-the-art, consolidated security screening checkpoint; a fully automated checked baggage inspection and sorting system; an integrated passenger waiting room/concessions program; refurbished arrivals/ baggage claim area; replacement of the passenger boarding bridges; renovations to airline support office space; relocation of the main entrances towards the west end of the building to ease traffic congestion;

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new ramp pavement and hydrant fuel system improvements. The project is expected to be completed in late 2018.

### ■ TERMINALS 7 & 8 RENOVATION

This \$573-million renovation of Terminals 7 and 8 promises to deliver a superior experience for customers at LAX. When completed, the project will refurbish virtually all of its public space in the terminals and offer more of the conveniences and amenities that passengers value. The new-look terminals and gate areas will feature a modern design with relaxed and inviting spaces, including a variety of comfortable seating options and abundant charging stations for travelers' electronic devices. The expansive ticketing lobby will incorporate the latest technology such as self-tagging baggage kiosks. These technologies, along with an upgraded security-screening checkpoint, will enable travelers to move quickly and efficiently from curb to gate. The project is expected to be completed in spring 2018.

### ■ ELEVATOR, ESCALATOR, AND MOVING WALKWAY MODERNIZATION

This \$270-million project will replace or refurbish 212 outdated systems with modern units throughout the airport. New escalators, elevators, and walkways will speed travelers to their gates and baggage-claim areas in a safe and efficient manner with energy-saving, sustainable technology. Replacement of all units is scheduled for completion in 2016.

### ■ IN-LINE BAGGAGE HANDLING AND SCREENING SYSTEM PROGRAM

The In-Line Baggage Handling and Screening System Program will improve and automate the security screening of checked baggage at all LAX terminals and will make travel through LAX safer, faster and more convenient. The total cost of the program covering all nine LAX terminals is estimated at \$613 million, with reimbursement expected to total \$460 million from the Transportation Security Administration. LAWA is responsible for the projects at Terminal 3 and the Tom Bradley International

Terminal. The airlines in Terminals 1, 4, 5, 6, 7 and 8 will pay for their respective systems. The TBIT, T-2, T-3, T-5, T-6 and T-7-8 projects are completed.

### ■ CURBSIDE APPEAL PROJECT

The \$118-million Curbside Appeal and Roadway Improvement Project will provide a new, dramatically upgraded look for LAX with the installation of modern LED (light emitting diode) street lighting, wayfinding components, and a new canopy for Terminal 4. The project will also include traffic safety and roadway improvement measures including an Upper/Departures Level retrofit and traffic improvements to World Way South and Center Way. Project components include: installation of custom-made art deco LED light poles; sleek, metallic silver canopies in front of terminal façades evoking the glory days of aviation; an LED light band running the length of the Central Terminal Area and covering a portion of the upper roadway edge. The program will enhance the appearance of LAX and improve vehicular movement and safety on the roadway. The project is expected to be completed in June 2016.

### ■ LAX RUNWAY CONSTRUCTION

The federal government is requiring airports to improve the Runway Safety Area (RSA) zone at the ends of each of their runways. These mandated improvements will provide an extra margin of safety for landing and departing aircraft. RSAs provide a buffer zone should an aircraft overshoot, overrun or veer off a runway while landing or taking off. Work has already been completed to expand the RSAs on Runway 7R-25L and Runway 6L-24R, and is currently taking place on the west end of Runway 6R-24L. Work is expected to start on Runway 7L-25R in October 2016.

### --- COMPLETED PROJECTS ---

### ■ TERMINAL 2 IMPROVEMENT PROGRAM

LAWA initiated the Terminal 2 Improvement Program designed to significantly improve the level of service  
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and appearance of the 30-year-old building. The project is designed to bring cohesion to Terminal 2, so it will have a complimentary appearance throughout. The improvements include major upgrades to the ticketing lobby, baggage screening, baggage-claim area, and concourses, as well as construction of all new concessions and upgrades of all systems (electrical, mechanical, communication, etc.) that serve the terminal. The project was completed in the spring of 2017.

### ■ TERMINAL 6 RENOVATION

The first phase of work, completed in summer 2012 at a cost of \$238 million, increased lobby space, replaced traditional ticketing counters with new check-in kiosks, bag-check stations, and a behind-the-scenes in-line baggage-handling system. Additional security-screening checkpoints were added to facilitate quicker screening, and the number of gates increased. Alaska Airlines also made improvements to its branding and décor, as well as to its club lounge. A second, \$70.5 million phase of work, completed in 2016, included renovation and expansion of concessions space.

### ■ TERMINAL 4 CONNECTOR

This \$148.5-million project consisted of the design and construction of a multi-use, multi-level facility providing a secure connection between Tom Bradley International Terminal to Terminal 4. Connecting the two terminals will allow passengers easier access to those needing to reach connecting flights. The new space will include a Checked Baggage Inspection System, South Matrix Interline Baggage Transfer facility, and a four-lane Passenger Security Screening Checkpoint. A Public Plaza on the Upper/Departures Level provides outdoor seating.

### ■ RUNWAY STATUS LIGHTS PROJECT

This \$7-million, state-of-the-art system increases airfield safety by using a series of lights embedded in the pavement to warn pilots if it is unsafe to cross or enter a runway, or to take off. The installation of this system significantly reduces the possibility of airfield incursions, making LAX

much safer for the traveling public. A prototype system was installed in June 2009 with this full system completed in 2014.

### ■ THE NEW TOM BRADLEY INTERNATIONAL TERMINAL

The architectural jewel of the LAX modernization program, this \$1.9-billion project provides greater capacity to the New TBIT with a total of 18 new gates, nine of which comfortably accommodates passenger loads for new-generation aircraft, and a Great Hall for premier dining and shopping. The first phase of this project, which encompassed the gates on the west side of the terminal, the Great Hall, and expanded federal customs and immigration screening area, was completed in Fall 2013. Phase 2, encompassing the East Gates, expanded areas for federal passenger security screening, airline lounges and other elements, was completed in 2015.

### ■ CENTRAL UTILITY PLANT REPLACEMENT

This \$424-million project replaced the dated, 50-year-old existing Central Utility Plant (CUP) with a modern, energy-efficient facility with state-of-the-art computerized management systems. The new CUP enhances passenger comfort, and reliability of utility service and safety within the newly renovated and modernized terminals. Project was completed in March 2015.

### ■ TERMINAL 5 RENOVATION

This \$250-million renovation of Terminal 5 project has improved passenger service and security with a new in-line baggage-screening system, as well as expansion and streamlining of the federal passenger-screening checkpoints and international passenger-processing facilities. A new baggage claim facility, new elevators and escalators, and new passenger amenities such as lounges and dining options reflecting Los Angeles culture and cuisine were also part of the undertaking. The project was completed in 2016.

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### ■ TAXILANES

Completed November 2011, Taxilane S created a 3,785-foot-long taxilane to connect Taxiway B on the south airfield and Taxiway E on the north airfield to provide ramp access for aircraft using the west gates of the New Tom Bradley International Terminal. Taxilane S also alleviates aircraft congestion and reduces delays that occur at existing taxiways during peak operational periods. The cost of the project was \$175 million.

### ■ LAX AIRPORT RESPONSE COORDINATION CENTER (ARCC)

Completed December 2010, the \$13.9-million Airport Response Coordination Center (ARCC) acts as a high-tech nerve center that streamlines operational efficiency and crisis management capabilities via one dedicated facility staffed by both airport and federal agency personnel. An adjacent room houses the Departmental Operations Center (DOC), that is activated in the event of a critical incident or airport emergency. The DOC acts as a command center and integrates all resources of responding airport divisions and local and federal agencies.

### ■ LAX LAFD AIRCRAFT RESCUE AND FIREFIGHTING (ARFF) STATION NO. 80

Completed November 2010, the \$13.5-million ARFF Station improves airfield safety by doubling the size of the original facility with seven bays to house and maintain rescue vehicles and emergency-response equipment, as well as accommodate 14 firefighters per shift. Station 80 is centrally located on the LAX airfield to respond immediately to emergencies on both the north and south runway complexes.

### ■ THEME BUILDING RENOVATION

Completed June 2010, this \$12.3-million project renovated the exterior of the iconic Theme Building and included a unique Tuned Mass Damper located on the roof of the

structure to seismically retrofit the building.

### ■ TOM BRADLEY INTERNATIONAL TERMINAL MODERNIZATION

Completed May 2010, this \$737-million project upgraded the former facility with a new in-line baggage-screening system and interior improvements to enhance customer service and convenience in LAX's primary international terminal. Among its most noticeable elements are upgraded information display systems; warmer, inviting ticketing lobby; a gleaming, redesigned Customs Hall; and unique video art installations in the Arrivals Lobby.

### ■ CROSSFIELD TAXIWAY PROJECT (TAXIWAY R)

Completed May 2010, the \$138-million Crossfield Taxiway Project connects the north and south airfield complexes at LAX and improves safety and efficiency. This project was one of the enabling projects needed to relocate aircraft movements away from construction zones associated with the New Tom Bradley International Terminal.

### ■ SOUTH AIRFIELD IMPROVEMENT PROJECT

Completed June 2008, this \$333-million project relocated Runway 25L/7R 55 feet to the south of its previous location to provide room for a new center taxiway to improve runway safety. The benefit of this project allows arriving aircraft to enter a center taxiway, slow down, and receive important instructions from the air traffic control tower before crossing an active runway.

\* *Detailed fact sheets on LAX's modernization program components can be found at [www.lawa.org/laxdev/projectfactsheet.aspx](http://www.lawa.org/laxdev/projectfactsheet.aspx)*