

Controlling the APM: *CITYFLO 650*

CITYFLO 650, by Bombardier Transportation, is a full-feature, cutting-edge solution designed for the railways of the future.

CITYFLO 650 is a communications-based train control system which utilizes a continuous bi-direction communications link between the train and the wayside equipment. It allows for driverless unattended operation of the APM.

CITYFLO 650 safely increases system capacity by reducing the space between trains (called headways). It also eliminates the need for physical vehicle detection systems, reducing lifecycle costs incurred by upgrading or maintaining such systems.

As part of a \$5.5 billion investment aimed at alleviating traffic congestion and passenger delays, Los Angeles World Airports (LAWA) selected LAX Integrated Express Solutions (LINXS), a joint venture, as the developer for the Los Angeles International Airport (LAX) Automated People Mover (APM) project. Following five years of design and construction, LINXS will also operate and maintain the system and related facilities for a 25-year period. The LAX APM will go into full service in 2023.

In order to meet the needs of the world's third busiest airport, 44 BOMBARDIER *INNOVIA* APM 300 vehicles will service the APM system. Specifically designed to serve airports and dense urban areas, the *INNOVIA* APM system is in operation at ten of the busiest airports in the United States. The trains are equipped with rubber tires, steerable axles and center guidance systems.

The latest generation *INNOVIA* APM 300 system, when combined with the BOMBARDIER *CITYFLO 650* Communication Based Moving Block Train Control Technology, offers outstanding benefits including driverless operation, increased passenger capacity, higher top speeds, aluminum carbody, reduced headways and increased operational flexibility meeting the increasing industry standards for safety, sustainability and operations.



1

**megawatt,
maximum output
of APM's
photovoltaic
generation
system**

10

**minutes,
end-to-end ride
duration on the
APM**

2

**minutes,
train frequency
during peak
hours
(9AM – 11PM)**



INNOVIA APM 300 Features

- Spacious modern interiors so as to accommodate travelers with large volumes of luggage
- Regenerative braking system converts kinetic energy lost when decelerating back into energy used for onboard vehicle power demands
- State-of-the-art aluminum shells are fully recyclable
- Other sustainable features include intelligent power management system, a photovoltaic generation system located at the Maintenance and Storage Facility, LED lighting and elimination of hazardous substances and toxic emissions

About the Automated People Mover

The Automated People Mover (APM) system will bring convenience and time-certainty for guests traveling to or from LAX. During peak hours, driverless trains will arrive at stations every two minutes. The trains will have wide doors for easy access with luggage, large windows for viewing, plenty of hand holds, and seats for those in need. Station platforms are open-air, light-filled and have escalators and elevators for quick, convenient access to the terminals. The APM is the centerpiece of LAX's Landside Access Modernization Program (LAMP), which also includes a Consolidated Rent-A-Car (ConRAC) facility, Intermodal Transportation Facilities and associated roadway improvements. The APM will reduce vehicle congestion in the Central Terminal Area, provide a connection with L.A. Metro's regional transportation system, create new locations for passenger pick-up and drop-off, reduce emissions and provide reliable access to the terminals.