2.4 AUTOMATED PEOPLE MOVER - ALTERNATIVE D

Alternative D would include two people mover systems: a Landside APM system and an APM system. These systems would become the primary connections between the landside facilities and the terminal facilities at LAX. The APM system would be continually monitored by security personnel utilizing video surveillance to identify potential threats. Redundancy would be an integral part of assuring the continued operation of the system in the event of a mechanical failure or threat. The CTA would be able to be accessed by passengers through a busing operation should it be necessary. **Figure 2.4-1** depicts the alignment of these systems.

2.4.1 LANDSIDE AUTOMATED PEOPLE MOVER SYSTEM

The Landside APM would be the primary mode of transportation for passengers and employees to access to the CTA. The system would provide service between the CTA and the GTC, ITC, and RAC. The Landside APM also provides a continuous connection between the MTA Green Line and the CTA.

2.4.1.1 LANDSIDE SYSTEM ROUTES

To balance the passenger loads, two Landside APM routes were designed to operate independently, with one route serving only the CTA and GTC and a second route serving the CTA, RAC, and ITC. Although a direct non-stop route connecting the ITC and CTA is desirable, it would require a fourth pair of guideways, which cannot be accommodated in the CTA.

2.4.1.1.1 CTA-GTC Route

Riders on CTA-GTC would include arriving and departing passengers who: (a) are dropped off or picked up by third parties, (b) park in the airport GTC parking garage, (c) use commercial transportation to arrive or depart at the airport, and (d) airport employees. Meeters/greeters, well-wishers and airport visitors would park at the GTC and ride the Landside APM to and from the CTA.

The CTA-GTC route would connect six stations, the four stations in the CTA and the two in the GTC. Starting in the CTA in Terminal 3, trains would go to the Terminal 4 station, then to the station in the South Pier of the GTC, then to the station at the North Pier and then return to the CTA to stations in Terminal 1 and Terminal 2. The train would return along this route in the opposite direction on the other track. The route is highlighted in **Figure 2.4-2.**

By repeating the route in the opposite direction, the Landside APM system would allow passengers to board the Landside APM at any

station and go to any station without concern about being on the correct side.

The proposed CTA-GTC route would have two guideways, providing redundancy and allowing for the most direct trip for all passengers. Also, if there is a failure at a station, or at one point along the guideway, a short loop or shuttle route would be implemented and would carry at least half the normal capacity.

Traveling from a west CTA station to the first GTC station would take about 5 minutes. Although the train length could be varied by operating period to meet the fluctuating passenger loads, the operating headway (time between trains) would remain at approximately 2 minutes during all periods, resulting in an average waiting time of 1 minute. Thus the total typical trip between the CTA and GTC would be less than 6 minutes.

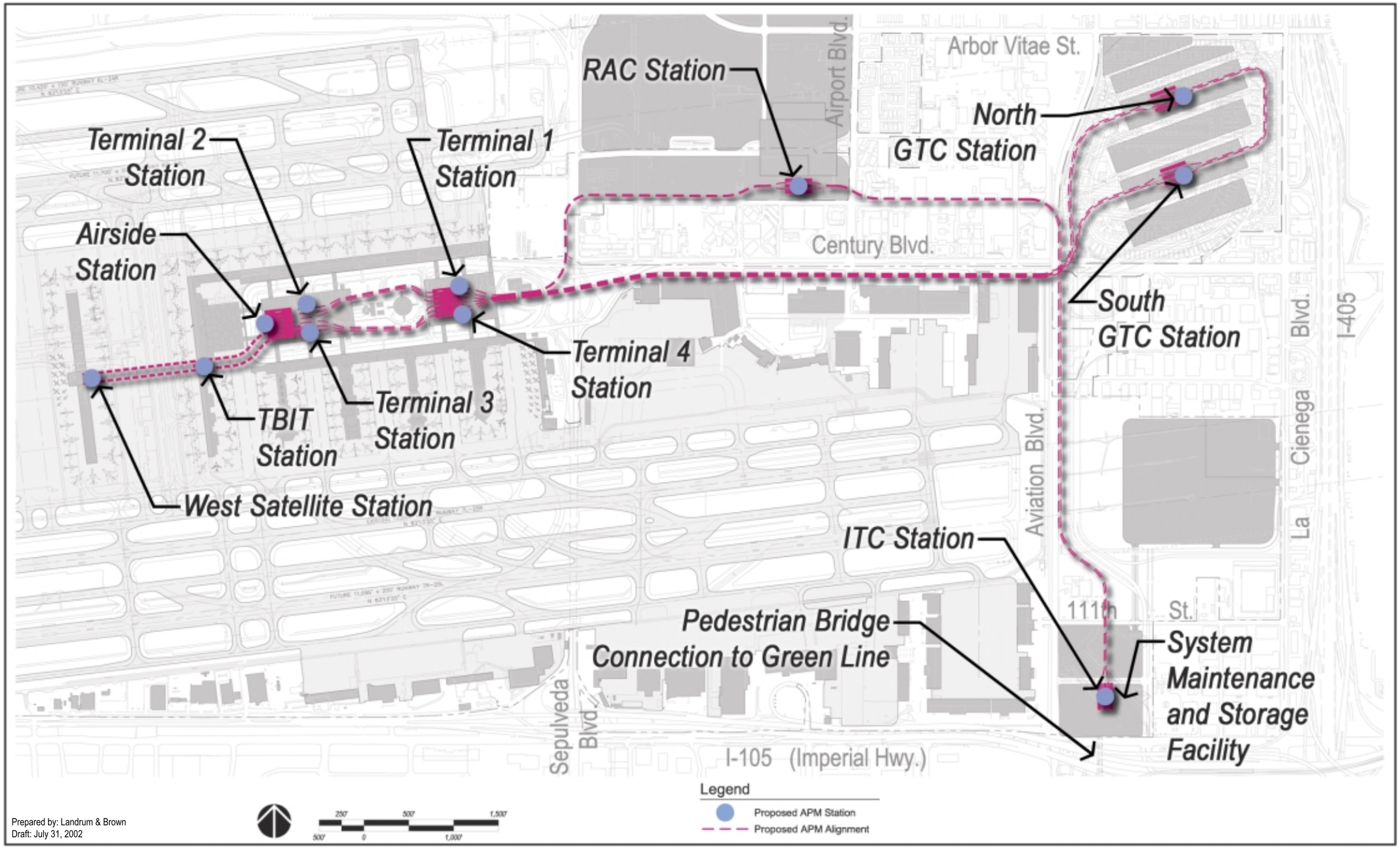
2.4.1.1.2 CTA-RAC-ITC Route

Riders on this route would include arriving and departing air passengers who are: (a) parking at the ITC, (b) using the Green Line light rail transit system or regional buses to the ITC station (c) parked in the long-term surface lot west of La Cienega Boulevard and are shuttled by buses to and from the ITC, (d) charter bus users, and (e) airport employees. Meeters and greeters who park at the ITC or use the Green Line would also ride the system.

Arriving air passengers renting cars would ride the system from the CTA to the RAC, and passengers returning rental cars would ride the system to the CTA to catch a departing flight. A potential collector APM serving the hotels and other businesses along 98th Street might be part of the future development in the Century Boulevard corridor.

The CTA-RAC-ITC route would run from a western station between the new landside Terminals 2 and 3 to a second CTA station between Terminals 1 and 4, then on to the RAC and ITC. There, trains would reverse and return to the CTA stations via the RAC. This would give direct service to the RAC users and service to the ITC with one intermediate stop. The route described is highlighted in **Figure 2.4-3.** In addition, airport and airline employees working in the CTA would take the Landside APM after being shuttled by a bus to the RAC station from the employee parking lot at Avion Drive and Century Boulevard.

The scheduled travel time between the western CTA station and the ITC would be about 7.5 minutes. Again, the train length would vary by operating period and the operating headway would remain about 2 minutes during all periods, resulting in an average wait time of 1 minute. A typical trip time between the ITC and western CTA station, including headway, would be less than 9 minutes.



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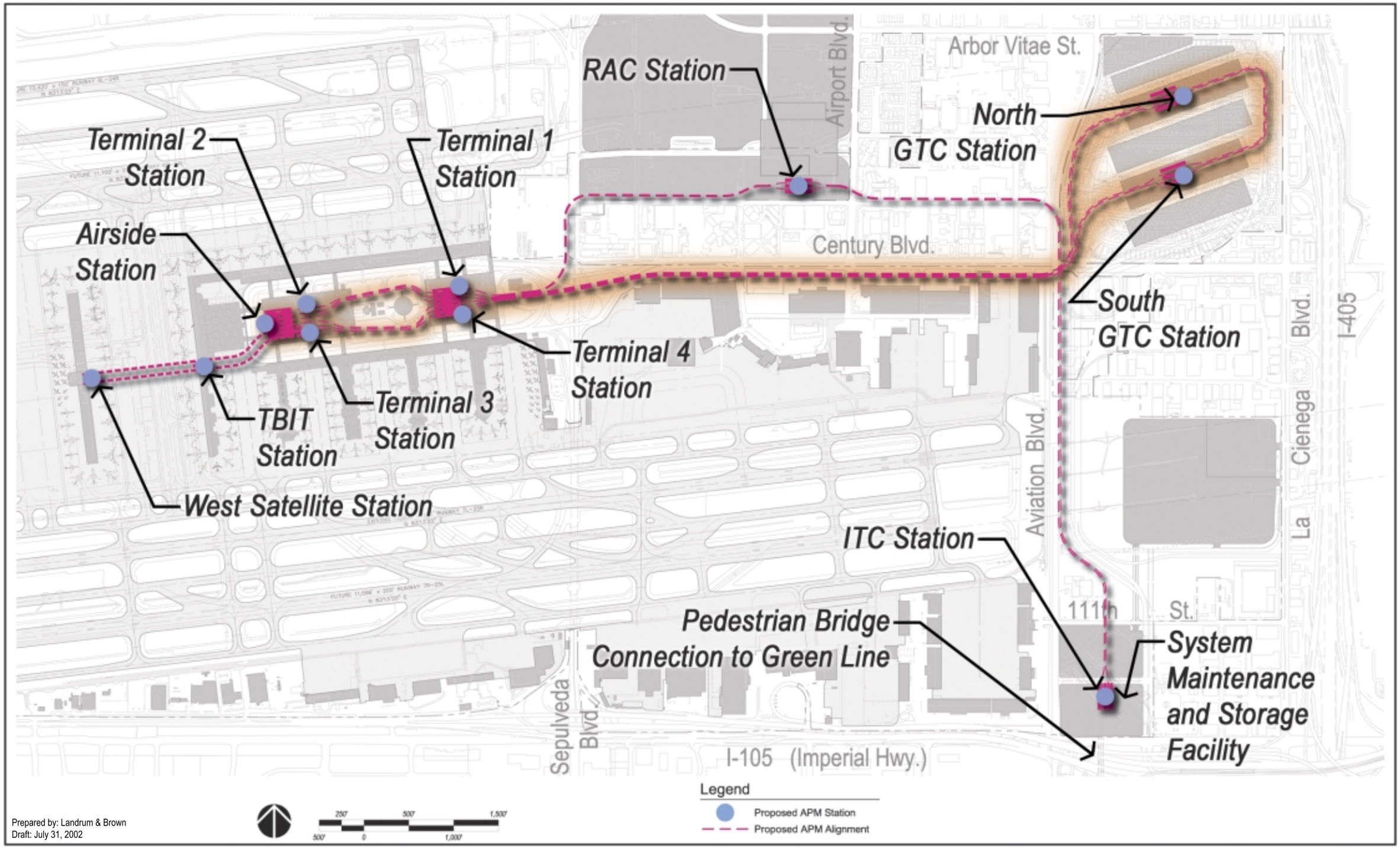
Draft: July 31, 2002

Los Angeles International Airport Master Plan	Alternative D Automated People Mover Systems	Figure 2.4-1



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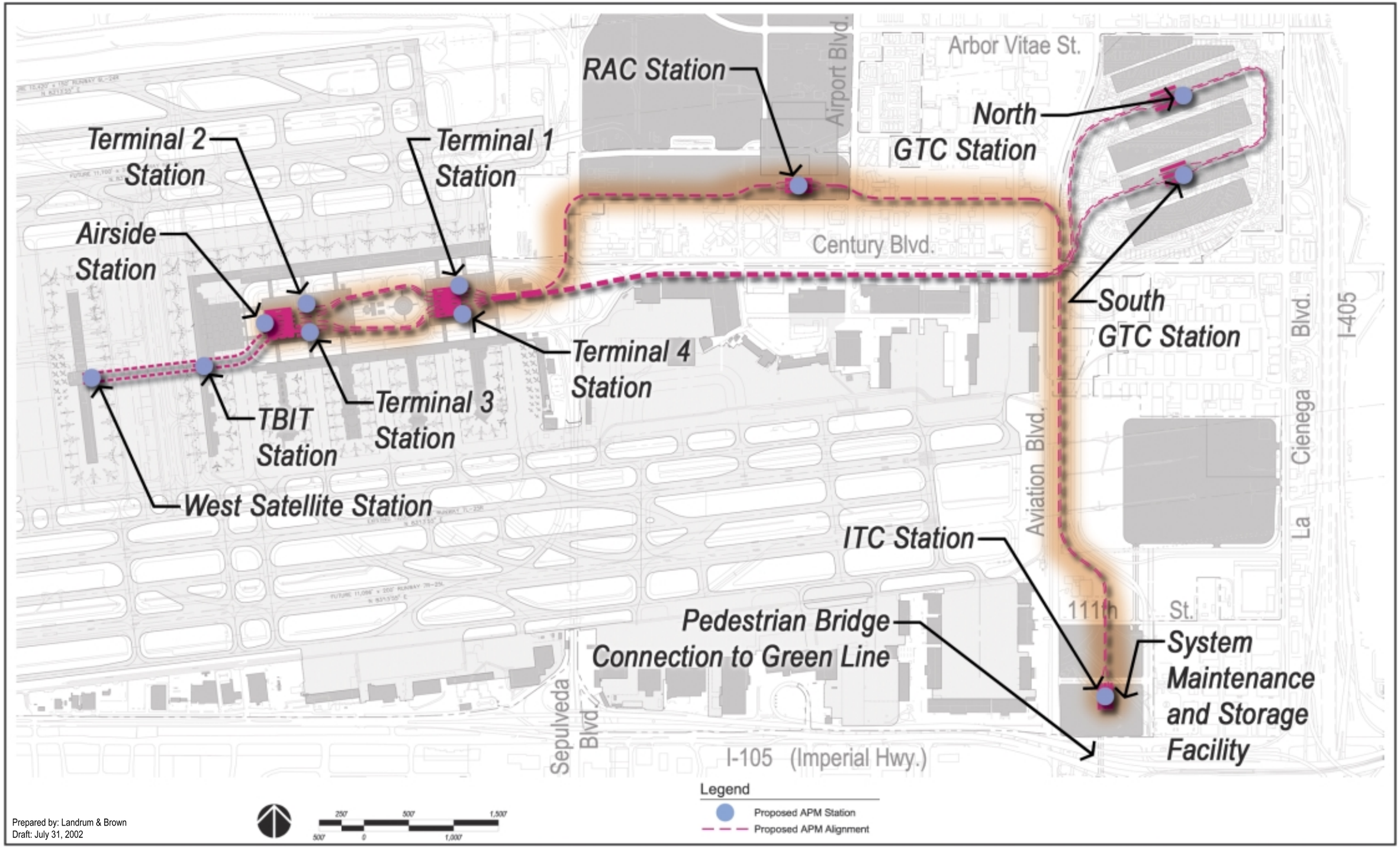
Los Angeles International Airport Master Plan	Alternative D Landside APM System CTA-GTC Route	Figure 2.4-2



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Los Angeles International Airport Master Plan

Alternative D Landside APM System
CTA-RAC-ITC Route

Figure
2.4-3

2.4.1.2 LANDSIDE SYSTEM CAPACITY

The Landside APM capacity requirements were developed based on the number of passengers that would be riding the system in the peak period. The results of the analysis determined that three pairs of guideways would be required to serve the CTA. Combining the GTC and RAC riders would overload a CTA-RAC-GTC route, and a route serving the CTA-ITC would operate well below capacity.

The CTA-GTC route would be designed to carry up to 13,500 passengers in the peak hour with full baggage loads, and 19,500 passengers with carry-on baggage in a six-car train. The RAC-CTA route capacity would be about 8,700 passengers in the peak hour. The CTA-RAC-ITC route would be designed for 9,600 passengers in the peak hour.

2.4.1.3 LANDSIDE SYSTEM STATIONS

Landside APM stations would be designed as flow-through stations to separate passengers entering and exiting the trains. This station layout would minimize cross flow of passengers and congestion at the train doors. It would also shorten the station dwell time and would best accommodate baggage carts as passengers travel between airside and landside facilities. **Figure 2.4-4** depicts typical station layout options. The flow-through option at the top of the figure would be the station layout for the landside system.

Station widths would be adequate to accommodate passenger queuing at platform doors and vertical circulation elements. Station lengths would be based on the ultimate train length, which could be up to 300 feet long, plus circulation space. Vertical circulation would be provided to accommodate level changes between the stations and ticketing, baggage claim and curbside. Elevators, escalators, ramps and stairs would be used for vertical circulation.

2.4.1.4 LANDSIDE SYSTEM ALIGNMENT

Both Landside APM routes would be designed to minimize interference with both existing facilities, and with existing and planned roadways. The two routes would include three pairs of guideways at-grade in the CTA. As the CTA-GTC guideway transitions out of the CTA, it would be elevated above Sepulveda Boulevard and continue elevated for the remainder of its route. This guideway would run along Century Boulevard to Aviation Boulevard and turn north into the GTC complex. **Figure 2.4-5** depicts potential APM views from Century Boulevard.

The CTA-RAC-ITC guideway would run north along Sepulveda Boulevard and then east along 98th Street to the RAC station. From the RAC station, the guideway would continue along 98th Street and

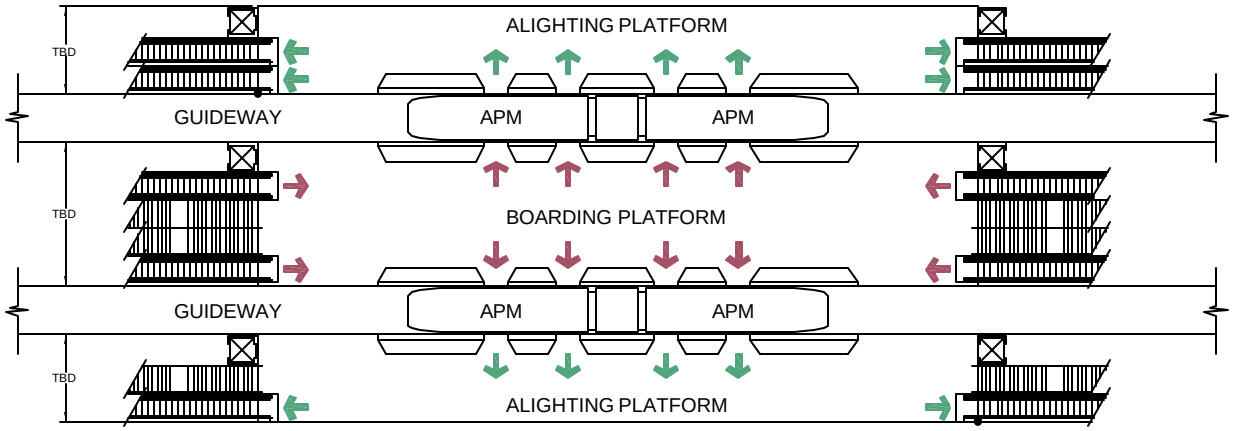
turn south along Aviation Boulevard. As the guideway approaches the ITC, it would split into an upper and lower pair of guideways. The upper guideways would serve the ITC station and the pedestrian link to the MTA Green Line. The lower guideway would serve the Landside APM maintenance and storage facility.

Approximately six traction power substations with a footprint area of approximately 30 by 50 feet would be located along the guideway at 5,000-foot intervals.

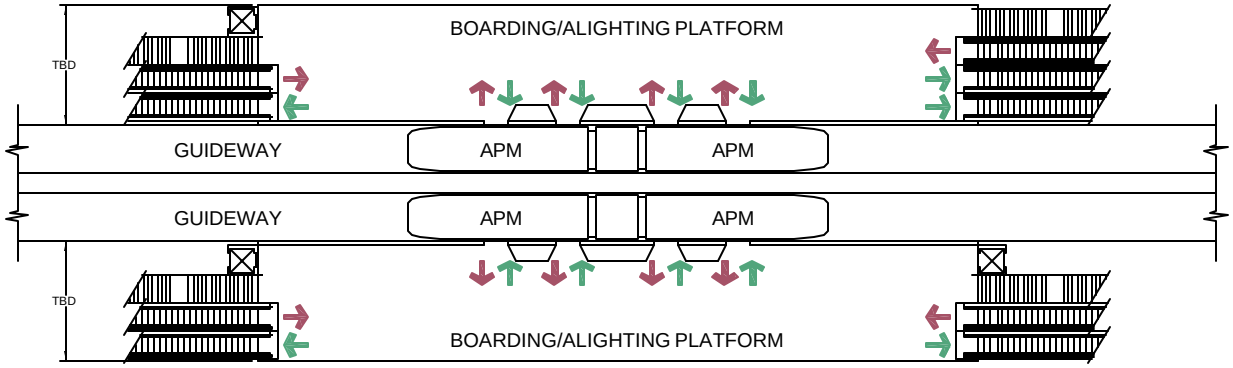
2.4.1.5 FLEET, MAINTENANCE AND STORAGE REQUIREMENTS

Assuming a typical 40-foot rubber tired Landside APM vehicle, up to 189 cars could be needed to meet the 2015 demand. At the peak hour, approximately 11 trains would be running between the CTA and GTC and 7 trains between the CTA, RAC, and ITC. The Landside APM maintenance and storage facility would be in the basement of the ITC containing vehicle maintenance, open shops, spare parts, tool and equipment storage and a cleaning area. Other functions of the facility include central control, offices, a traction power substation, loading dock with a shipping/receiving area and staff facilities.

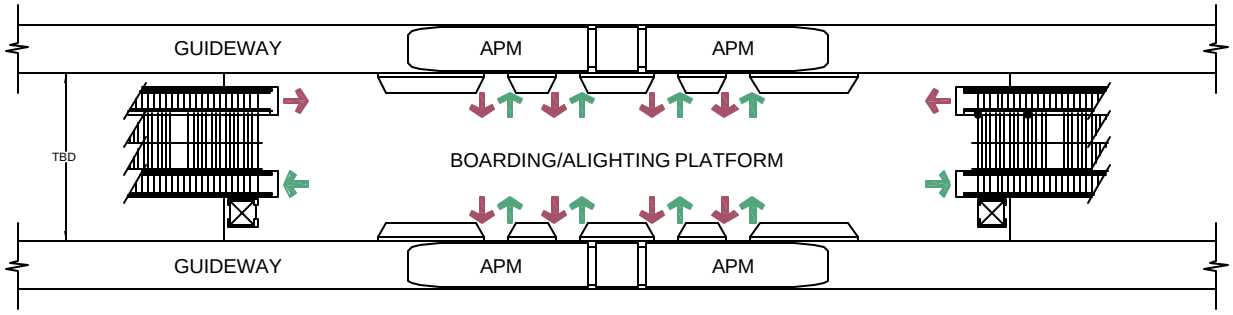
Flow-Through (Center-Side Platform) Configuration - CTA Stations



Side Platform Configuration - GTC Stations

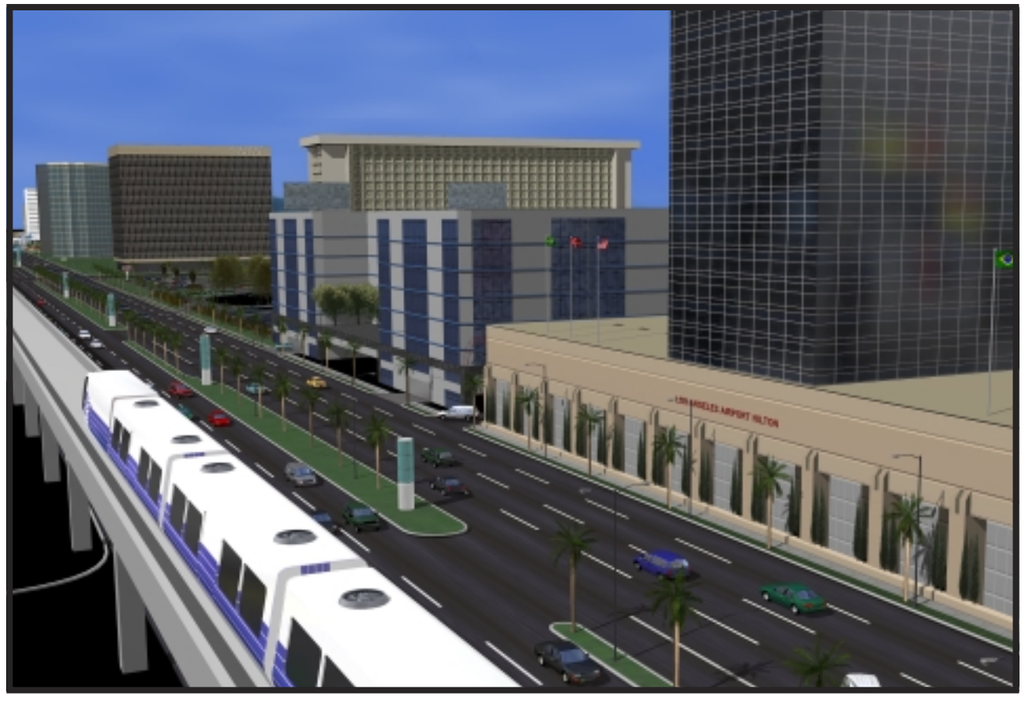


Center Platform Configuration - ITC Stations



Source: Lea+Elliot – 2000
Prepared by: Landrum & Brown
Draft: December 12, 2002

Los Angeles International Master Plan	Automated People Mover Typical Station Design	Figure 2.4-4



Overhead View of ITC Automated People Mover along Century Blvd.

Interior View of Automated People Mover

Prepared by: Landrum & Brown
Draft: June 2003

Los Angeles International Airport Master Plan	Alternative D Automated People Mover View	Figure 2.4-5

2.4.2 AIRSIDE AUTOMATED PEOPLE MOVER SYSTEM

The Airside APM system would be the primary means of access to the West Satellite Concourse. The Airside APM would consist of a dual lane shuttle system, with two trains connecting the CTA with the TBIT and the West Satellite Concourse. This system would be located in a tunnel, passing under the apron, taxiways and buildings with stations located beneath the facilities being served. This system would be used for access to/from aircraft gates and the CTA. Arriving passengers would use the system to reach baggage claim and public meeter/greeter areas. Depending upon the final configuration and location of FIS facilities, the Airside APM may also transport passengers headed to customs from the West Satellite Concourse to the CTA and TBIT.

2.4.2.1 AIRSIDE SYSTEM ROUTES

The route would be designed as a short distance system; with two trains operating in separate guideways to allow for low headways and high capacities. Riders would include ticketed passengers departing to/arriving from gates in the TBIT or the West Satellite Concourse, as well as the employees working in these facilities.

2.4.2.2 AIRSIDE SYSTEM CAPACITY

Depending on peak ridership, the trains could be up to six cars long, but would probably not be longer than four cars. Based on travel distance and speed, the trains would operate with headways of approximately 2.7 minutes. This would result in an average wait time of about 1.4 minutes and an average trip time just over 4 minutes. Using maximum length trains, this system could carry up to 9,000 passengers in a peak hour.

In this short distance and dual lane shuttle configuration, cable systems could be a viable alternative to self-propelled vehicles. An operating speed of 25 to 30 miles per hour has been assumed, which is within the range of both cable propelled systems and lower-speed self-propelled systems.

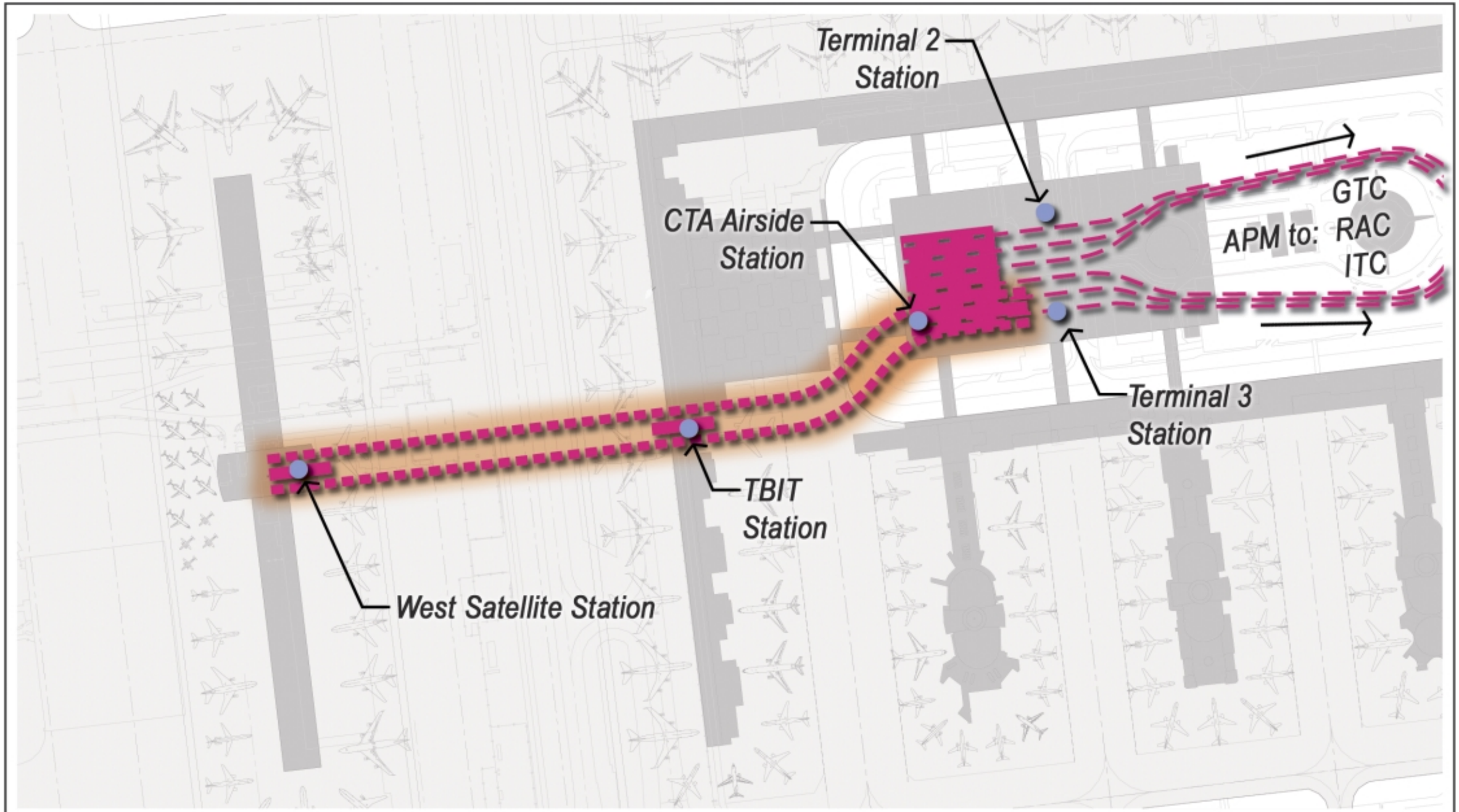
2.4.2.3 AIRSIDE SYSTEM STATIONS

Because this system is located entirely underground, access to and from the stations platforms would require significant vertical circulation elements. Elevators, escalators, ramps and stairs would be provided at every station. Station widths would be adequate to accommodate passenger queuing at platform doors and vertical circulation elements. Station lengths would depend on train length, but probably be about 200 feet long. Unlike the Landside APM, the

Airside APM would have center platform stations. As its passengers would have checked their bags and cleared security, they would only have carry-on bags, thus requiring less space in the vehicles and stations. This station configuration is depicted at the bottom of **Figure 2.4-6**.

2.4.2.4 FLEET, MAINTENANCE AND STORAGE REQUIREMENTS

An underground maintenance facility would be located at the west end of the guideway. The maintenance facility would be functionally similar to that of the Landside APM, though much smaller in scale.



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Los Angeles International Airport Master Plan

Alternative D
Airside APM System

Figure
2.4-6