



TRAFFIC GENERATION REPORT

[Los Angeles International Airport / August 2019]



Los Angeles
World Airports

Prepared by Planning and Development Group
November 2019

Executive Summary:

As part of the LAX Specific Plan, Appendix A, Monitoring and Reporting, states: “*LAWA shall prepare and submit annual reports [including a Traffic Generation Report] to the Board of Airport Commissioners, the Department of City Planning, Los Angeles Department of Transportation and Los Angeles City Council.*” This report is intended to assist in fulfilling this commitment for 2019.

The typical design day used for LAX planning is a Friday in August. The results of the August 2019 traffic volume study reveal that there were **15,117** trips recorded at LAX during the 8 am to 9 am peak hour, **17,497** trips in the 11 am to noon airport peak hour and **15,975** trips in the 5 pm to 6 pm peak hour.

Methodology:

The following methodology was used in calculating the overall traffic volumes accessing and egressing LAX. The Land Use and Development Section of the Los Angeles Department of Transportation (LADOT) approved this methodology, which has been used consistently for the annual LAX Traffic Generation reports since 2005.

LAX Central Terminal Area (CTA) Roadways:

All traffic entering and exiting the LAX CTA is recorded by LAWA’s Traffic and Automated Vehicle Identification System (TRAVIS), which include electro-magnetic loop detectors imbedded in each travel lane of the roadways. Traffic information is continuously recorded on this database and is retrievable by LAWA staff for a variety of time intervals, including hourly counts. Vehicle type is not distinguished by the loop sensors; therefore, each vehicle regardless of size is considered as a single trip either into or out of the LAX CTA. A “trip” is defined as the entrance or exit of a vehicle from the airport or airport-related property.

Traffic counts for Fridays in August 2019 were retrieved from the database and averaged for the morning (8 am to 9 am), airport (11 am to noon) and evening (5 pm to 6 pm) peak hours. **Table 1** shows the number of inbound and outbound trips for the three peak hours, along with the average number of trips for each peak hour.

LAX Central Terminal Area - Traffic Volumes by Direction

Date	Inbound			Outbound		
	8-9 AM	11AM- Noon	5-6 PM	8-9 AM	11AM- Noon	5-6 PM
8/02/19	5,348	5,621	4,851	4,741	1,857	4,425
8/09/19	5,101	5,602	5,085	5,055	5,397	5,078
8/16/19	5,340	5,692	5,010	5,129	5,455	5,339
8/23/19	4,979	5,530	4,530	4,654	5,633	4,940
8/30/19	5,242	5,624	5,065	4,885	5,841	5,190
Average	5,202	5,614	4,909	4,893	5,437	4,994

Table 1

The total number of trips into and out of the LAX CTA on each of the Fridays in August 2019, along with their averages, is summarized in **Table 2**.

LAX Central Terminal Area - Total Traffic Volumes

Date	Total		
	8-9 AM	11AM- Noon	5-6 PM
8/02/19	10,090	10,478	9,279
8/09/19	10,156	10,999	10,163
8/16/19	10,469	11,147	10,349
8/23/19	9,633	11,163	9,470
8/30/19	10,127	11,465	10,255
Average	10,095	11,050	9,903

Table 2

World Way West:

All traffic eastbound and westbound on World Way West east of Pershing Drive was recorded through the use of automated traffic counters temporarily installed by the City of Los Angeles Department of Transportation at LAWA's request. The volumes recorded on World Way West account for traffic heading to and leaving airport facilities on the west side of LAX. A summary of the volumes are included in **Table 8**.

Driveways

Traffic during the three peak hours was counted at over 60 airport-related driveways, the majority of which were conducted by Quality Traffic Data, a privately owned and operated traffic data collection company under contract by LAWA. Individual counts were required at these locations because traffic volumes are not recorded by the automated, loop-detector system. Traffic entering and exiting a roadway or driveway was counted using three vehicular categories – cars, trucks and shuttles. See **Figure 1** for a map of the facilities at which driveway counts were recorded and see **Table 8** for the Trip Generation Table for these facilities.

Cargo/Ancillary Facilities:

Quality Traffic Data recorded traffic at the following cargo facility driveways on Friday, August 2, 2019, with the exception of the north leg of California Street and Imperial Highway, which was counted on Friday, August 09, 2019:

Aviation Blvd (west leg of intersection) locations:

- 104th Street
- 111th Street

Century Blvd (south leg of intersection) locations:

- Avion Drive
- Airport Blvd
- Postal Road
- International Road

Imperial Highway (north leg of intersection) locations:

- Imperial Terminal
- California Street
- Hughes Way
- Unsignalized driveway east of Hughes Way
- Kilroy Center Drive
- Douglas Street
- Unsignalized driveway between Kilroy Center Drive and Aviation Blvd

Five driveways along the north side of Imperial Highway and one driveway along the south side of Century Blvd have very limited traffic volumes throughout the day. For the purposes of this study, a total of 50 vehicles were added to the cargo/ancillary traffic volumes recorded for each peak hour to account for the traffic using these six driveways. Because traffic entering and exiting these minor driveways is infrequent, this estimate represents a conservatively high volume of traffic for these six driveways.

Airport Operated Public Parking Lots

In early 2018, the LAWA-owned Parking Lot C was significantly reduced in size and the former entrance driveway from Westchester Parkway was permanently closed to accommodate construction of the future Automated People Mover. In 2019 Jenny Avenue was permanently closed to all traffic south of Westchester Parkway. Lot E opened to the public this year as an economical public parking lot replacing some of the traffic that used to go to the closed Lot C. The traffic counts were provided by the gates' reports for the various time intervals. The Location is:

- Two driveways for Lot E Economy Lot north side of 111th Street

Airport Operated Employee Parking Lots

Traffic counts were conducted at the LAWA-operated Employee Lots East and West using automated gate readers that are part of the parking lot operating system. Since Employee Lot South has 18% fewer parking stalls than at Employee Lot East, it was assumed that the traffic volumes for Employee Lot South were 82% of those recorded at Employee Lot East. The individual driveway locations for these three parking lots are as follows:

- Employee Lot West Entrance/Exit Driveway on Westchester Parkway
- Employee Lot East Entrance/Exit Driveway on Jenny Ave n/o Westchester Pkwy
- Employee Lot South Entrance/Exit Driveway on new “A” Street south of Westchester Parkway. This lot was relocated in 2018 to make room for the construction of the future Automated People Mover.

Rental Car Locations:

There are twelve car rental companies that are allowed to provide shuttle service between the LAX CTA and their individual facility. The number of autos and shuttles entering and exiting the following locations were recorded at the following locations on two Fridays, in August 2019. Traffic for MCar¹ Rental was not recorded since they operate their business at the same site as a hotel and obtaining traffic volumes exclusive to their rental car business was not practical. As a result, 30 vehicle trips were added to each peak hour to account for traffic generated by this rental car company. This is considered a conservatively high number that would account for MCar's traffic activity. This year, Jenny Ave between Westchester Parkway and 96th St was closed due to the APM construction. This removed three driveways used in the previous surveys. This is factor contributed to reduced traffic count.

Advantage Rent a Car – Manchester Blvd between Isis Ave and Hindry Ave

- Car return driveway on Isis Ave south of Manchester Blvd
- Driveway on Manchester Blvd east of Isis Ave

Alamo and National – Aviation Blvd and Hillcrest Blvd, SE corner:

- Three driveways on Aviation Blvd south of Hillcrest Blvd
- Car return driveway on Hillcrest Blvd east of Aviation Blvd
- Exit Driveway on Isis Ave s/o Hillcrest St

Avis – Airport Blvd/Westchester Pkwy/Jenny Ave:

- Driveway on Airport Blvd south of Westchester Parkway

Budget – Airport Blvd and 98th Street, NW corner:

- Driveway on Airport Blvd
- Driveways on 96th Place
- Driveway on 98th Street

Dollar – Arbor Vitae Street, north side, east of Bellanca Ave:

- Exit driveway on Isis Avenue, W/S, north of Arbor Vitae Street
- Two driveways on Aviation Boulevard, E/S, north of Arbor Vitae Street

Enterprise – Bellanca Ave between Manchester Ave and Arbor Vitae St:

¹ MCar-6151 W. Century Blvd

- Five driveways on Bellanca Ave

Fox/Payless – Century Blvd, south side, between Aviation Blvd and Concourse Way:

- Driveway at 5500 West Century Blvd
- Exit driveway on 102nd St

Hertz – Airport Blvd between Interceptor Street and Arbor Vitae Street:

- Shuttle entrance driveway on Airport Blvd north of Arbor Vitae Street
- Driveway on Interceptor Street east of Airport Blvd
- Two exit driveways on Arbor Vitae Street

Thrifty – Century Blvd, south side, between Aviation Blvd and Concourse Way:

- Driveway on Century Blvd
- Driveway on Concourse Way south of Century Blvd

Sixt Rental Car

- Two driveways on Bellanca Avenue

Off-Airport Rental Car Company Lot:

Off-airport car rental companies are not permitted to drop off or pickup customers in the CTA. Instead, a pickup and drop-off location for the patrons of these companies is located at the southeast corner of Airport Boulevard and Century Boulevard. This facility is used only by a few off-airport rental car companies. Driveway counts were not recorded at this facility since the driveways are shared with the US Postal Facility. Therefore, for purposes of this report, six (6) rental car trips per peak hour were added to the rental car facilities trip generation totals. This is considered a conservatively high number that would account for the rental car shuttles using this facility.

Cell Phone Waiting Lot:

The LAX Cell Phone Waiting Lot is located on the northwest corner of 96th Street and Vicksburg Avenue. Drivers in private vehicles are permitted to wait in this lot before coming into the CTA to pick up passengers. Driveway counts were not recorded at this facility since this traffic is counted when they enter and exit the CTA to pick up their party at the terminal.

Private Airport Parking Facilities:

Traffic was recorded at the following private parking facility driveways. These facilities are exclusively used for parking and are not affiliated with a hotel or office building. It was conservatively assumed that all traffic entering or exiting these facilities is airport related. Since these facilities cater to customers unrelated to the airport, the traffic volumes used in this report are likely to be somewhat inflated.

Park One² – Sepulveda Blvd from Century Blvd to 96th Street:

- Two driveways on 96th Street west of Alverstone Ave (this is a joint use driveway with the airport police parking lot)
- Driveway on "Little" Century Blvd
- Alley south of 96th Street West of Alverstone Avenue (Exit Driveway)

Parking Spot – Bellanca Ave from Century Blvd to 98th Street:

- Two driveways on Bellanca Ave
- Driveway on 98th Street
- Car entrance driveway on Century Blvd

Parking Spot – Sepulveda Blvd/Westchester Pkwy/Sepulveda Eastway:

- Driveway on Sepulveda Westway
- Driveway on Westchester Pkwy

Quik Park at LAX – 98th Street west of Vicksburg Avenue

Wally Park Express – Sepulveda Blvd and 96th Street, SE corner:

- Driveway on 96th Street east of Sepulveda Blvd
- Driveway on Vicksburg Ave south of 96th Street

Wally Park – Bellanca Ave, east side, north of 98th Street:

- Two driveways on Bellanca Ave

Other Private Airport Parking Facilities:

² The Park One property was purchased by LAWA in July 2009. However, a private parking operator continues to conduct business on this site. March 2019, 30% of the area was removed from the leasehold for the "LAX-it" pickup area,

Similar to the private parking facilities referenced above, other off-airport, private parking operators also provide shuttle service for their customers to and from LAX terminals. However, these parking operators also cater to customers who park in their facilities but who are not going to the airport. Therefore, the following methodology was established to estimate the volume of airport trips at these joint-use parking facilities where manual traffic counts were not conducted.

Using the volume of car trips and the volume of shuttle trips manually recorded at the driveways of Park One, the two Parking Spot locations, Wally Park, Wally Park Express and Quik Park at LAX, the following trip generation factors were calculated:

Private Parking Car Trips per Inbound Shuttle

AM	187 trips/ 69 shuttles = 2.71 trips/shuttle
AP	128 trips/ 47 shuttles = 2.72 trips/shuttle
PM	89 trips/ 62 shuttles = 1.44 trips/shuttle

Private Parking Car Trips per Outbound Shuttle

AM	44 trips/ 59 shuttles = .75 trips/shuttle
AP	111 trips/ 55 shuttles = 2.02 trips/shuttle
PM	112 trips/ 50 shuttles = 2.24 trips/shuttle

The number of shuttles recorded in the LAX CTA on the five Fridays in August 2019 by the joint-use parking businesses was obtained from the TRAVIS (Commercial Vehicle Count) database. It is assumed that the same number of car trips per shuttle trip made by facilities such as Wally Park or Quik Park would also be generated by other off-airport parking facilities. The total number of shuttle trips made during each peak hour on Fridays in August 2019 by the joint-use, off-airport parking facilities is shown in **Table 3**.

In/Out Shuttle Trips by Other Off-Airport Parking Facilities

Date	Peak Hour		
	AM	AP	PM

8/02/19	39	36	34
8/09/19	31	31	35
8/16/19	32	37	42
8/23/19	38	39	42
8/30/19	43	37	46
Rounded Average	37	36	40

Table 3

In January 2017, private parking shuttles began operating exclusively on the upper (departures) level roadway of the CTA. Hotel shuttles began operating exclusively on the lower (arrivals) level roadway. Providers who had previously operated both as a dual purpose (private parking and hotel) shuttle were forced to choose to operate as either a hotel or a private parking shuttle. All the previously dual-branded shuttles chose to operate as a hotel shuttle on the lower level.

In August, 2018, the private parking shuttle operators relocated from the upper level to the lower level roadway. Passengers are now dropped off and pick off at the same lower level commercial curb as the hotel shuttles.

Multiplying the calculated trips-per-shuttle ratios with the average number of shuttle trips attributable to the off-airport private parking facilities where driveways were not manually recorded results in the totals shown in **Table 4** below. This provides an estimate of the number of inbound and outbound car trips generated at the remaining parking facilities that are related to LAX.

Inbound Car Trips for Off-Airport Parking Facilities Where Driveways Were Not Counted

Peak Hour	Adjustment Factor (Trips per Shuttle)	X	Number of Shuttles	=	No. of Trips
AM	2.71	X	37	=	100
Airport	2.72	X	36	=	98
PM	1.44	X	40	=	58

Outbound Car Trips for Off-Airport Parking Facilities Where Driveways Were Not Counted

Peak	Adjustment Factor	X	Number of	No. of

Hour	(Trips per Shuttle)	X	Shuttles	=	Trips
AM	0.75	X	37	=	28
Airport	2.02	X	36	=	73
PM	2.24	X	40	=	90

Table 4

To avoid “double counting,” shuttle trips from private and public parking lots and from rental car facilities are only counted as they enter and exit the CTA. For example, a shuttle that exits the Wally Park facility and enters the CTA is counted as a single trip. The same shuttle exiting the CTA is counted as another single trip, but is not counted again as it enters the Wally Park driveway.

Projects Currently Under Construction:

The following airport-related projects are currently under construction:

- **Midfield Satellite Concourse (MSC)**

The MSC is being constructed west of the Tom Bradley International Terminal. No traffic lanes are closed during this construction. Peak hour trips to and from this construction site would have been included in the traffic counts taken on World Way West.

- **Delta Airlines Hangar**

Delta Airlines constructed a new aircraft hangar on the south side of World Way West east of Pershing Drive. No traffic lanes are closed during this construction. Peak hour trips to and from this construction site would have been included in the traffic counts taken on World Way West.

- **Terminal 1.5**

This project is constructing a new building between Terminals 1 and 2. The new facility will ease congestion and provide connectivity between the two terminals – both within the ticketing and check in portion as well as post-security screening. LAX Terminal 1.5’s post-security airside pedestrian connection means passengers connecting between the two terminals will no longer have to leave the secure area of the concourse, exit the building and go through security again to make a connection.

Summary of Peak Hour Counts:

While Subsection C, *Project Trip Generation*, of Section 12, *Transportation Regulations*, of the LAX Specific Plan³ uses the airport peak hour as its basis for trip generation reporting, a summary of the final traffic datum is presented for all three peak hours:

³ Ordinance Amendment: 185164, 9/8/17

Table 5 (AM Peak), **Table 6** (Airport Peak) and **Table 7** (PM Peak). The Airport Peak Hour traffic volumes for the last thirteen years are shown on **Figure 2**.

As expected, the Airport Peak Hour traffic count total of 17,497 trips is higher than the counts recorded for the AM and PM peak hours. The August 2019 AM peak hour volume is 15,117 trips and the August 2019 PM peak hour volume is 15,975 trips.

The aggregate volume decreased 6 percent after five years of an upward trend. There are too many factors to pinpoint the source(s). The largest shift was the Cargo category. The Airport Peak [11:00 – Noon] dropped 16% from the previous year. LAWA began a lot of construction projects this year. The cargo companies shifted their deliveries to offset construction traffic and rush hours. Traffic patterns in the CTA have shifted to accommodate reduced lanes and longer waiting time in the terminals.

FlyAway Program:

The LAX FlyAway is a low-cost shuttle service operating between a remote parking facility and LAX. While nine FlyAway sites started in 1975, four remain in operation. Two sites were closed this year due to low passenger volumes.

FlyAway Service History

	Start of Service	End of Service	Operating
Van Nuys	1975		Yes
Union Station	March 2006		Yes
Westwood/UCLA	June 2007	June 2019	
Irvine Transp. Ctr.	November 2009	Summer 2012	
Exposition Light Rail	Spring 2013	September 2014	
Santa Monica	July 2014	September 2016	
Hollywood	September 2014		Yes
Long Beach	December 2015		Yes
Orange Light Rail Line	December 2015	Jan 2019	

The ridership totals for the month of August during the last thirteen years are shown in **Figure 3**. Overall, FlyAway ridership has increased 254% from August 2005 (when there were 50,360 passengers on the single FlyAway site at Van Nuys) to August 2019 (with 178,458 passengers on the six FlyAway sites in operation in August 2019). The FlyAway program has helped to reduce the number of private vehicles into and out of the LAX CTA.