LOS ANGELES TOWER
STANDARD OPERATING PROCEDURES

This Order prescribes air traffic control procedures and phraseology for use by all controllers staffing Los Angeles Tower. Controllers are required to be familiar with the provisions of this Order that pertain to their operational responsibilities and to exercise their best judgment if they encounter situations not covered by it.

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List of Changes

Version	Date	Explanation of Changes
ALL		Previous updates included formatting changes, SID removals, taxiway changes, updates to the miniroute and radar procedures, and initial headings.
5.40	2JUL24	Removed vestigial call signs, fixed typos.
5.50	8AUG24	Added KYLOW and STHBY Noise DPs
5.61	2NOV24	Added section on taxi configuration, removed outdated fix reference
5.70	13FEB25	Updated ground maps
5.75	27MAR25	Updated formatting in sections 1-1, 1-2 for clarity and consistency. Updated standardized taxi route names IAW LAX-LTA-19

TABLE OF CONTENTS

CHAPTER 1. GENERAL

1-1. FACILITY IDENTIFICATION

Controllers have the option of using “L-A” or “Los Angeles” for radiotelephony/facility identification.
Examples:

“L-A Ground…”
“Los Angeles Clearance Delivery…”
“L-A Tower…”

Controllers shall identify per the table in 1-2 for interphone communications.
Examples:

“South Ground…”
“Delivery…”
“North Local…”

1-2. RADIO FREQUENCY ASSIGNMENTS

The following frequencies are assigned for use at the Tower unless otherwise noted. Bold indicates the frequency to be used when a position is combined.

POSITION	POSITION ID	FREQUENCY	INTERPHONE
LC1	**2V**	**120.95**	**South Local**
LC2	2T	133.90	North Local
GC1	**2P**	**121.75**	**South Ground**
GC2	2P	121.65	North Ground
CD		**120.35**	**Delivery**
ATIS		**133.80**	

1-3. RUNWAY USE PROGRAM

West Traffic:
Arrive runways 24R/25L, depart runways 24L/25R. Runway 25L may be used for aircraft parked south of runway 25L.
Preferred operation.
East Traffic:
Arrive runways 06L/07R, Depart runways 06R/07L. Runway 07R may be used for aircraft parked south of runway 07R.
Use when the tailwind component on a West Traffic configuration exceeds 10 knots.
Over-Ocean Traffic:
Arrive runway 06R, depart runway 25R.
Noise abatement configuration between 0000L and 0630L

During periods of heavy arrival traffic, controllers should consider sending aircraft south of Runway 07R/25L to Runway 07L/25R instead to avoid excessive departure delays.

CHAPTER 2. CLEARANCE DELIVERY

2-1. GENERAL

a. Use primary frequency 120.35.
b. TEC routes must be issued to all aircraft arriving at airports covered by the TEC route system.
c. Reference the ZLA Initial Altitude Assignments SOP for proper initial altitude assignments.
d. In the event an aircraft is unable to accept a departure procedure, issue a routing over a published departure gate or transition on an appropriate departure procedure.

2-2. ROUTING

a. West Traffic
    1. Northwest bound departures toward the coast should be issued the SUMMR, DARRK, VTU, or MUELR departures, in descending order.
        a. The DARRK departure is the preferred departure over the SUMMR when W-289E and/or R-2519 are active.
        b. RNAV-capable turboprop aircraft should be issued the MOOOS departure.
    2. Northbound departures toward the Central Valley of California should be issued the LADYJ or GMN departures, in descending order.
        a. Neither the LADYJ departure nor the GMN departure is authorized between 2100-0700 local time.
            i. Reroute J class over GMN/OROSZ via the SUMMR, DARRK, VTU SID, or appropriate RNAV departure, and the appropriate routing to rejoin the filed route of flight.
        b. RNAV-capable turboprop aircraft should be issued the SKWRL departure.
    3. Northeast bound departures toward DAG/MISEN/LAS/BEALE should be issued the ORCKA, OSHNN, or SEBBY departures, in descending order.
        a. The ORCKA departure is not authorized between 2100-0700 local time.
            i. Reroute J class ORCKA via the OSHNN, SEBBY, or appropriate RNAV Departure.
        b. Aircraft requiring a reroute from the ORCKA to the OSHNN departure should be issued OSHNN# BEALE, even if ORCKA# LAS is the initial filed route.
        c. The MISEN transition on the ORCKA and OSHNN departures are for aircraft landing Las Vegas terminal airspace only (LAS, HND, VGT, BVU, LSV).
    4. Eastbound departures should be issued the DOTSS or LAXX departures, in descending order. Propeller-driven aircraft should be issued the SLI departure.
    5. South and southeast bound departures toward Mexican airspace should be issued the PNDAH or LAXX departures, in descending order. Propeller-driven aircraft should be issued the SLI departure.
    6. Oceanic departures should be issued the SUMMR, DARRK, ZILLI, VTU, LAXX, or PRCH departures, in descending order.
        a. The DARRK and VTU departures only have a DINTY transition. The LAXX and ZILLI departures only have a FICKY transition.
        b. The ZILLI departure has two transitions. The FICKY transition is used when both W-289 and W-290 are cold. The GROGU transition is used when W-289 and/or W-290 are hot.

b. East Traffic
    1. Northwest bound departures toward the coast should be issued the TRTON or VTU departures, in descending order. The CHATY departure should be issued to non-turbojet aircraft.
    2. Northbound departures toward the Central Valley of California should be issued the WNNDY or GMN departures, in descending order.
    3. Northeast bound departures toward DAG/MISEN/LAS/BEALE should be issued the GARDY departure. Non-RNAV aircraft should be issued radar vectors to DAG.
    4. Eastbound departures should be issued the LAXX departure. Non-turbojet aircraft should be issued the SLI departure.
    5. Southeast bound departures toward Mexican airspace should be issued the LAXX departure. Non-turbojet aircraft should be issued the SLI departure.
    6. Oceanic departures should be issued the TRTON, VTU, or PRCH departures, in descending order.
        a. Note that the VTU departure only has a DINTY transition published.
c. Over Ocean Traffic
    1. Reroute J class OSHNN SID aircraft via the STHBY SID, BEALE transition, MISEN transition for KLAS jets, SEBBY SID, or the appropriate departure.
    2. Reroute J class DOTTS SID aircraft via the STHBY SID, CLEEE or CNERY transitions, LAXX SID, or the appropriate departure.
    3. Reroute J class PNDAH SID aircraft via the STHBY SID, TCATE or OTAYY transitions, LAXX SID, or the appropriate departure.
    4. Reroute J class SUMMR/DARKK SID aircraft via the KYLOW SID, DINTY, MCKEY, STOKD, or SCTTR transition, VTU SID or appropriate departure.
    5. Reroute J class ZILLI SID aircraft via the KYLOW SID, FICKY and GROGU transitions, LAXX SID, or the appropriate departure.
    6. Ensure any departure heading 210° followed by a KYLOW/STHBY SID will have 5 MIT.

2-3. INITIAL ALTITUDES

a. West Traffic
    i. Assign all aircraft “Climb via SID except maintain 5000” (or requested altitude if lower)
    ii. Assign all aircraft not on a SID “maintain 3000”
b. East Traffic
    i. Assign all aircraft “Climb via SID except maintain 3000”
    ii. Assign all aircraft not on a SID to "maintain 3000"

2-4. VFR DEPARTURES

a. Issue the following departures as appropriate for P and Q class aircraft:

Traffic	Direction of Flight	Route	Description
West	South	B1	Cleared out of Bravo airspace to the south, fly runway heading, turn left at the shoreline, exit Bravo airspace, maintain VFR, squawk 1200.
West	North	B2	Cleared out of Bravo airspace to the north, fly runway heading, turn right at the shoreline, exit Bravo airspace, maintain VFR, squawk 1200.
East	North	B3	Cleared out of Bravo airspace to the north, turn left at the departure end of the runway, exit Bravo airspace, maintain VFR, squawk 1200.
East	South	B4	Cleared out of Bravo airspace to the south, turn right at the departure end of the runway, remain west of the San Diego Freeway, exit Bravo airspace, maintain VFR, squawk 1200.

b. Issue the appropriate clearance for the direction of flight for J and M class aircraft:

Traffic	Direction of Flight	Route	Description
West	South	TC1	Cleared out of Bravo airspace to the south, fly runway heading for vectors, maintain VFR at or below 3000, departure frequency xxx.xx, squawk xxxx.
West	North	TC2	Cleared out of Bravo airspace to the north, fly runway heading for vectors, maintain VFR at or below 3000, departure frequency xxx.xx, squawk xxxx.
East	North	TC2	Cleared out of Bravo airspace to the north, fly runway heading for vectors, maintain VFR at or below 3000, departure frequency xxx.xx, squawk xxxx.
East	South	TC1	Cleared out of Bravo airspace to the south, fly runway heading for vectors, maintain VFR at or below 3000, departure frequency xxx.xx, squawk xxxx.

2-5. PUSHBACK REQUIREMENTS

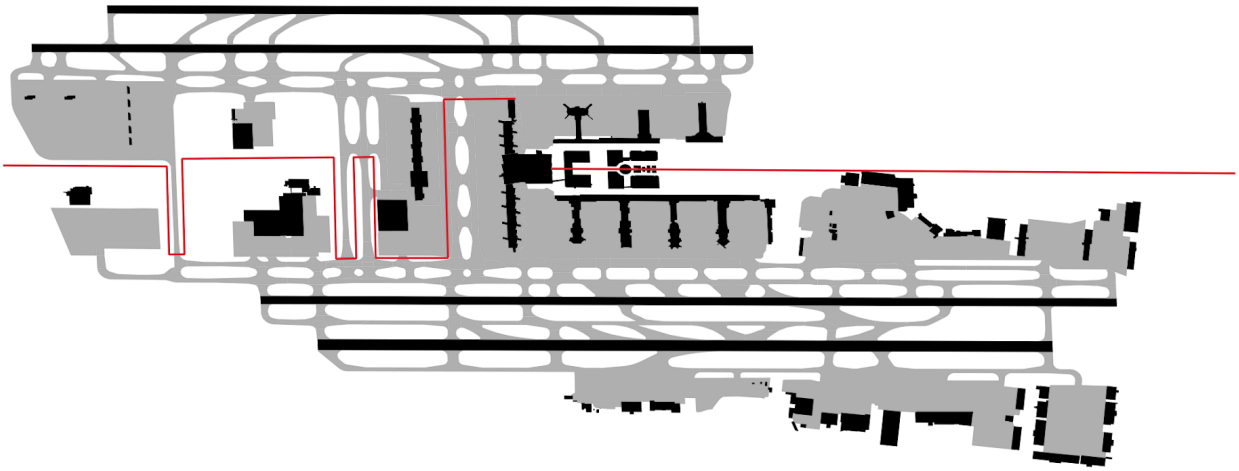
a. Due to airport geography, aircraft parked in certain locations may require pushback onto active taxiways. Clearance delivery should instruct aircraft parked at the following gates to advise the appropriate ground controller when ready for pushback and startup:
   i. West remote gates 411-419 (Taxiway Y)
   ii. Aircraft parked at northernmost gates at Terminals 1-3 (Taxiway D)
   iii. Aircraft parked at southernmost gates at Terminals 4-8 (Taxiway C)
   iv. Aircraft parked at certain TBIT gates (Taxilane K and Taxilane L)

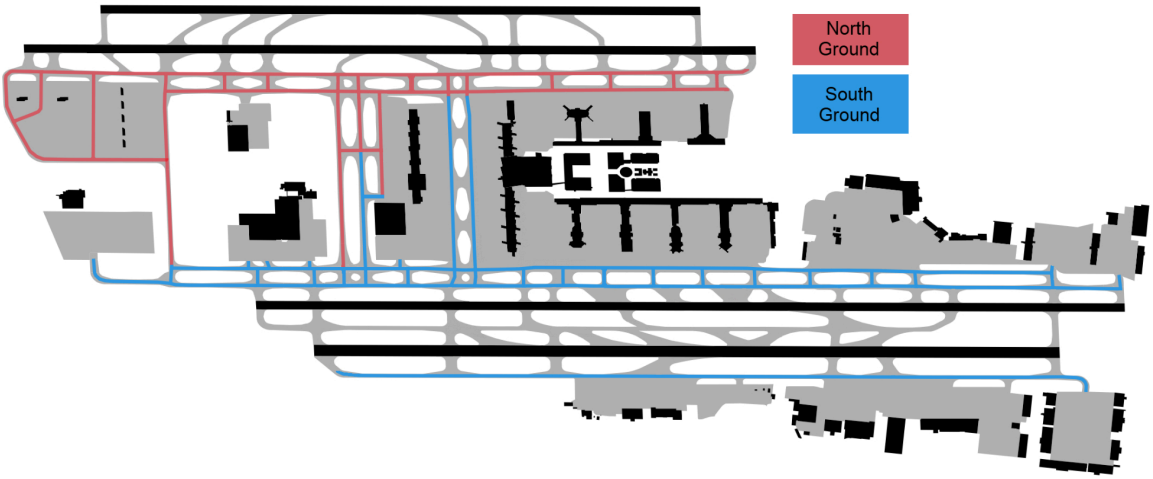
CHAPTER 3. GROUND CONTROL

3-1. GENERAL

a. Primary frequencies:
   i. GC1 - 121.75
   ii. GC2 - 121.65

b. Airspace
   i. Ground control owns all ground movement areas of LAX, including all taxiways and inactive or closed runways, with the exception of taxiways between Runways 25L/R and 24L/R
   ii. When ground control is split, taxiway delegation is depicted in the following diagram. GC2 is delegated all taxiways north of the red line, GC1 is delegated all taxiways south of the red line.





3-2. TAXI CONFIGURATION

a. “Easy” means that departing aircraft are taxied to the closest runway for departure.
b. “Correct” means that departing aircraft are taxied to the runway determined by the SID or aircraft performance, minimizing the amount of crossover departures. (e.g., SUMMR and LADYJ departures are taxied to RWY 24L.)
c. During events or high traffic, “correct” configuration shall be used. Exceptions for pilot requests should be minimized.

3-3. STANDARDIZED TAXI FLOWS

a. To improve efficiency of aircraft movement on the ground, the following taxi flows are recommended. Deviations from this can be accomplished through proper controller coordination.
    i. Taxiways Y and P will flow southbound.
    ii. Taxilane K and Taxilane L will flow northbound.
    iii. Taxiways B and E will flow toward the runway in use (i.e., during west operations the two taxiways will flow eastbound).
    iv. Taxiways A, C, and D will flow in both directions.
    v. All other taxiways may be used as appropriate to transition between the above listed taxiways.
b. The following taxi routes are published in some chart packages and **available to the public at this link**. Use of these coded routes is discretionary, as most pilots will be unfamiliar with them.
    i. Checkpoints
        1. Checkpoint 1 - Point on Taxiway N equidistant between Taxiways C and D.
        2. Checkpoint 2 - Point on Taxiway P equidistant between Taxiways C and D.
        3. Checkpoint 3 - Point on Taxiway Y equidistant between Taxiways C and D.
    ii. North Route
        1. Taxi via Taxiway C or B towards Taxiway N, taxi northbound on Taxiway N and at Checkpoint 1. Contact Ground Control on frequency 121.65, hold short of Taxiway N2.
    iii. South Route
        1. Taxi via Taxiway E or Taxiway D towards Taxiway P, taxi southbound on Taxiway P, and at checkpoint 2 contact Ground Control on frequency 121.75, hold short of Taxiway C.
    iv. Coastal Route
        1. Taxi towards Taxiway Y, taxi southbound on Taxiway Y and at Checkpoint 3 contact Ground Control on frequency 121.75, hold short of Taxiway C.
    v. Sunset Route
        1. Taxi westbound on Taxiway C towards Taxiway Y, hold short of Taxiway Y. Contact Ground Control on frequency 121.65 when number one approaching Taxiway Y.

3-4. SPECIAL INSTRUCTIONS

a. Aircraft must be issued an IFR clearance or VFR Bravo clearance prior to taxi.
b. Before issuing taxi instructions, aircraft must squawk normal to comply with the ASDE-X Surveillance System.
c. When issuing taxi instructions, all aircraft must be given the altimeter setting.
d. Aircraft requesting closed traffic should be coordinated with Local Control prior to taxi instructions being issued.

e. When the duties of Local Control are being fulfilled by another controller (i.e. Socal or LA Center) a departure notification must be sent to the controller in the following format as an aircraft is reaching its departure runway: (callsign) (runway) (scratchpad).

3-5. GROUND MOVEMENT RESTRICTIONS

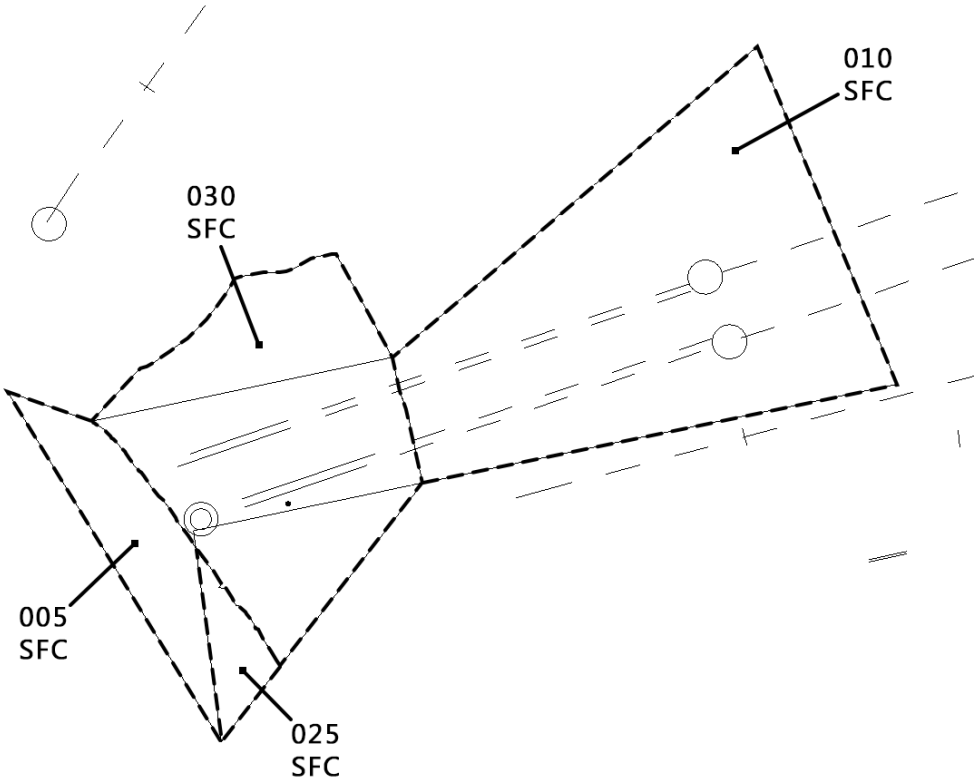
a. ADG-VI aircraft:
    i. A388, A124, A225, B748, C5
b. ADG-VI aircraft are impacted from certain operations due to their size at LAX.
    i. Runway restrictions
        1. ADG-VI aircraft are prohibited from departing or arriving Runway 07L/25R. All other runways can be used, with the exception of runway 06L/24R for A388 departures.
        2. Aircraft may not depart or arrive Runway 07L/25R when an ADG-VI aircraft is on Taxiway B east of Taxiway Q, or when an ADG-VI aircraft is facing east/west on taxiway H.
    ii. For the above reasons, it is highly recommended that ADG-VI aircraft operate exclusively on the north complex, unless Runway 07R/25L is required for operational reasons by the aircraft.

CHAPTER 4. LOCAL CONTROL

4-1. GENERAL

a. Primary Frequencies:
   i. LC1 (2V): 120.95
   ii. LC2 (2T): 133.90

b. Airspace
   i. LC1 is responsible for all operations on Runways 7/25 and taxiways between parallel Runways 7/25.
   ii. LC2 is responsible for all operations on Runways 6/24 and taxiways between parallel Runways 6/24.
   iii. Los Angeles Tower is delegated the following airspace:



   iv. During times where Local Control is split, LC2 shall be responsible for all VFR helicopter and fixed-wing transitions through the delegated airspace. LC2 will notify LC1 of all aircraft transitioning bravo airspace.

4-2. RADAR SERVICE

a. LA Local controllers may provide radar service in order to simulate real-world operations. This allowance is optional and is neither tested nor required for certification. Local controllers choosing to provide radar service may do so as described in this section.
b. LA Local controllers providing radar service must familiarize themselves, at minimum, with radar identification methods, acquiring a track and dropping a tracked target.
c. Provide Class B/Class D services as directed in FAA JO 7110.65.
d. Provide all radar identified aircraft/helicopters appropriate radar services. Advise the aircraft when:
    1. Radar contact is established or when radar contact is lost.
    2. Radar services are terminated.
    3. Leaving the Los Angeles Class B airspace.
e. All aircraft/helicopters operating in LAX Tower Class B airspace at or above 1000 ft and helicopters on the Harbor Route during west traffic must be radar identified prior to entering Class B airspace.
f. VFR aircraft shall be instructed to join approved VFR transitions or routes but shall not be vectored.
g. The LC2 controller must radar identify Mini Route aircraft and ensure radar separation from arrival aircraft. Prior to exiting LAX Tower Class B airspace, terminate radar service; drop the radar track; advise the aircraft they are leaving the Los Angeles Class B airspace; and provide a frequency change outside SMO's or HHR's Class D surface areas.

4-3. INITIAL DEPARTURE HEADINGS / DIVERSE VECTOR AREA

a. Local Control is responsible for initial separation of departures
b. Normal Operations
    i. Initial heading
        1. For aircraft <u>not</u> on a SID, Local Control shall issue the following headings. All such headings must be issued at the shoreline. If the shoreline is likely not to be visible to the pilot, LA Tower should issue heading 251, and then vector the aircraft on the appropriate heading once the aircraft is over the shoreline.
            a. J Class Aircraft
                i. Heading 221 if departing Runways 25L/R southbound
                ii. Heading 251 if departing Runways 24L/R southbound
            b. J Class Aircraft, first fix LAX/KLIPR
                i. Heading 236 if departing Runways 25L/R
                ii. Heading 251 if departing Runways 24L/R
            c. M,P,Q Aircraft
                i. Southbound: heading 201
                ii. Northbound: heading 271
        2. In rare circumstances, Local Control may coordinate the above headings for aircraft on a SID. Such headings must be coordinated with and approved by the appropriate departure controller.
    ii. Go-arounds
        1. Runways 25L/R: Heading 251 until the shoreline, then turn left heading 236, climb and maintain 2000'
        2. Runways 24L/R: Heading 251, climb and maintain 2000'
c. East Operations
    i. Initial heading
        1. J Class Aircraft

            a. Runways 7L/R: Heading 071
            b. Runways 6L/R: Heading 056 at the LAX 3 DME
        2. M,P,Q Class Aircraft
            a. Runways 7L/R: Heading 071
            b. Runways 6L/R: Heading 041
    ii. Go-arounds
        1. Runways 7L/R: Heading 071, climb and maintain 3000’
        2. Runways 6L/R: Heading 056 at the LAX 3 DME, climb and maintain 3000’
d. Noise abatement operations
    i. Initial heading
        1. All departures must be issued heading 211 at the shoreline.
        2. Tower should apply visual separation between Runway 6R arrivals and Runway 25R departures. If visual separation is not possible, local control must ensure that departures will be separated by 3 miles from incoming arrivals.
e. Crossover Departures
    i. Aircraft that need to “cross over” the adjacent complex (North Complex ORCKAs, South Complex SUMMRs, alternate headings, etc) must be coordinated with LC1/LC2 as well as the appropriate departure controller(s).

4-4. MINI ROUTE OPERATIONS

a. When staffed, LC2 controls Mini Route operations.
b. Aircraft transition both north and south along the Mini Route, defined by the SMO 128 radial at 2,500’.
c. Aircraft may be assigned 3000 ft to de-conflict opposite direction traffic on the Mini Route or helicopters. **NOTE: Assign 2500 ft to the maximum extent possible.**
d. The Mini Route is available when LAX is in a west or over ocean configuration reporting a ceiling of at least 3,500’ and visibility of at least three miles; the weather minima for HHR and SMO must be the same.
e. Only fixed-wing, non-turbojet aircraft may fly the Mini Route. If an aircraft does not call with the current ATIS code, provide the altimeter.
f. Mini route operations southbound will be handled by Santa Monica Tower during times when it is online. Similarly, Hawthorne Tower will handle northbound Mini Route operations when it is online.
g. Northbound and southbound transitions familiar with the mini route will be given the following instructions upon contact:
    i. Prior to Class B entry: "Cleared through the Los Angeles Bravo airspace via the Mini Route northbound/southbound, maintain VFR at 2,500, Los Angeles altimeter <altimeter setting>"
        1. If simulating radar service and the aircraft is radar identified, prefix the clearance with “RADAR CONTACT.”
    ii. Prior to Class B exit: “Leaving Los Angeles Bravo airspace north/south. Contact Santa Monica Tower/Hawthorne Tower xxx.xx.”
        1. If simulating radar service, add “RADAR SERVICE TERMINATED” prior to frequency change. Aircraft leaving the Mini Route should keep their assigned beacon code. Handoff the data tag to SMO or HHR.
    iii. Note that some pilots on VATSIM may be unfamiliar with the miniroute, and may require the following alternate instructions:
        1. Northbound: “Cleared through the Los Angeles Bravo airspace, proceed direct to overfly the midpoint of runway 25L, then the numbers runway 24R, then direct

Santa Monica Airport. Maintain VFR at 2,500. Los Angeles altimeter <altimeter setting>".

2. Southbound: "Cleared through the Los Angeles Bravo airspace, proceed direct to overfly the numbers runway 24R, then the midpoint of runway 25L, then heading 130. Maintain VFR at 2,500. Los Angeles altimeter <altimeter setting>".

4-5. VFR HELICOPTER OPERATIONS

a. When staffed, LC2 controls helicopter operations.
b. VFR Helicopter Transitions
    i. Industrial Route: Sepulveda Blvd. south to Imperial Hwy (1500'). Offset east to join the MTA Green Line south to Redondo Beach Boulevard (900'). West traffic.
    ii. Imperial Route: Shoreline eastbound along Imperial Hwy (500'), to Sepulveda Blvd, continuing east to the Harbor Fwy (900'). West traffic.
    iii. Sepulveda Route North: Sepulveda Blvd and Imperial Highway intersection, north along Sepulveda to the San Diego Fwy to Slauson (1500'). West traffic.
    iv. Shoreline Route: Along the shoreline from Ballona Creek to the Twin Stacks (150'). West traffic.
    v. Harbor Route: North or south along the Harbor Fwy (west traffic—900'; east traffic—500').
    vi. Lincoln Route South: From Lincoln Blvd and Ballona Creek, follow Lincoln Blvd to the northern boundary of LAX. Cross the LAX runways midfield along Taxilane K (remain west of the control tower) to Imperial Hwy at 1500'. East traffic.
c. VFR Helicopter Arrivals/Departures
    i. Helicopters may depart from the South pads (located south of runway 25L). These helicopters should be told to fly westbound till the shoreline to join the shoreline route, restricted at or below 500' until joining the shoreline route, then at or below 150'.
    ii. The south helipad is considered a movement area.
    iii. Helicopter arrivals will be received on the Shoreline route. Shoreline route helicopters should fly the shoreline route till due west of the south/west pads. Then they will be told to proceed inbound and cleared to land. Winds may dictate that the helicopters over fly the pads then turn to land into the wind. This shall be approved at or below 500 feet while remaining clear of all runways.

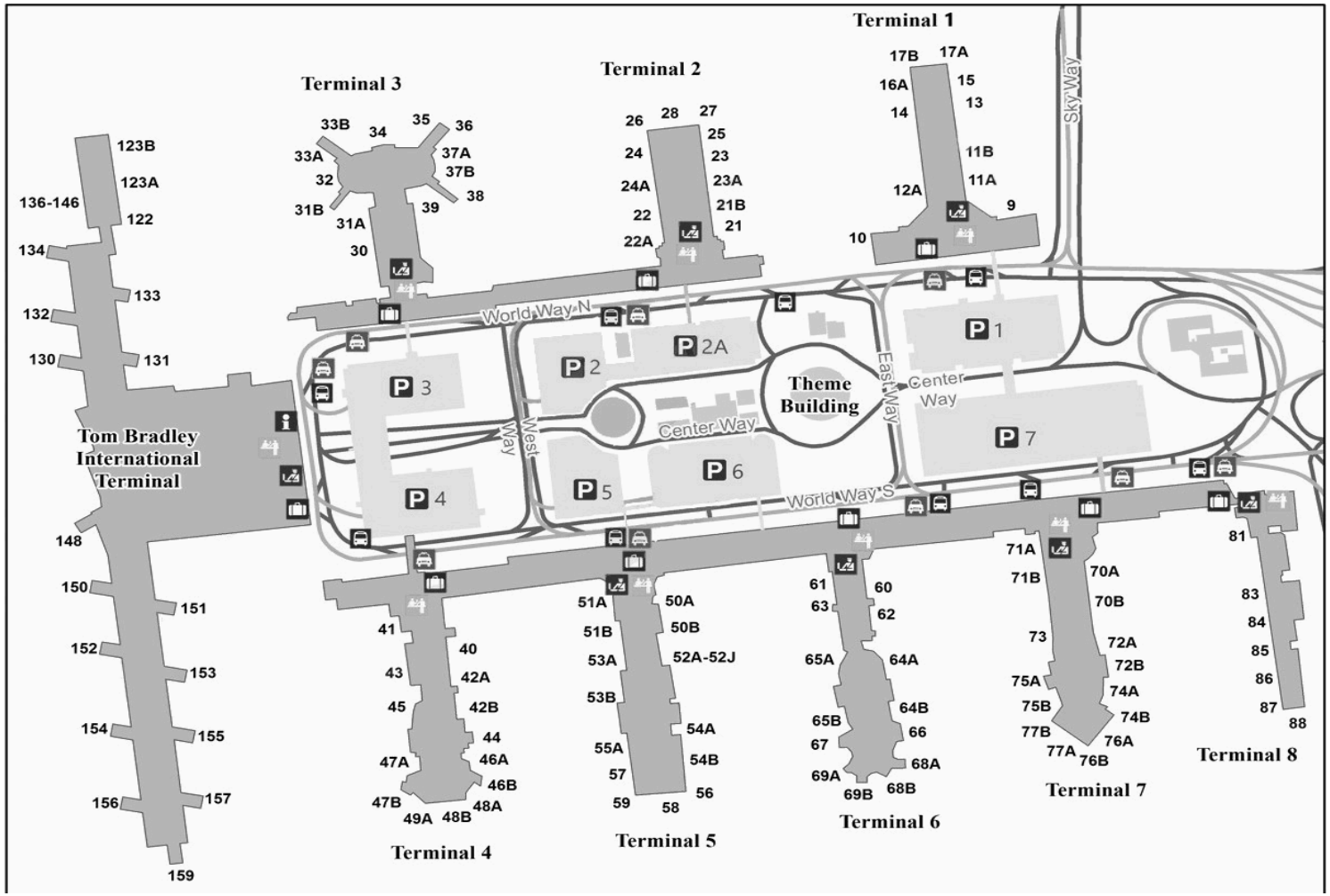
4-6. CLOSED TRAFFIC

1. During times when Santa Monica or Hawthorne Towers are online, closed traffic at Los Angeles is NOT authorized. These aircraft should be offered a departure to join the pattern at SMO or HHR as appropriate.
2. During times when any other tower in ZLA is staffed, closed traffic at Los Angeles is discouraged. Pilots requesting closed traffic should be encouraged to fly at Class C or D fields.
3. The recommended pattern altitude at Los Angeles is 1,000'.
4. Only runways 25L/7R and 24R/6L may be used for closed traffic. Runway 24R/6L is preferred over runway 25L/7R.
5. If closed traffic operations are approved by the overlying controller (SCT or CTR), LA Tower is delegated the entirety of Hawthorne's Class D airspace (for south patterns) or Santa Monica's Class D airspace (for north patterns). The overlying controller must coordinate with LA Tower if it needs to use this airspace for other traffic.

4-7. SMO IFR PROCEDURES

1. SMO Tower is required to obtain IFR release from LC2 (depending on runway configuration). When SMO Tower requests release, LC2 must obtain the release from SCT Malibu (or the controller covering Malibu).
2. LC2 must ensure initial separation of SMO and LAX departures.
    a. For J/M class SMO IFR departures, LC2 may not give 271 headings, and must ensure north complex and SMO departures are adequately separated.
    b. For P/Q class SMO IFR departures, LC2 shall stop Runway 24 departures until advised by SCT Malibu.
    c. SCT Malibu may also stop Runway 25 departures. This must be specified with the release.
3. LC2 is not required to immediately relay the release request from Santa Monica. This should only be done when there will not be an excessive delay for Los Angeles departures.
4. When the VOR-A approach is in use to Santa Monica, runway 24R and runway 24L departures may be held at specific times unless on a 221 heading. This will be relayed by Departure.

Appendix A - LAX Gate Numbers



Additional gates, numbered 52A-J, are located at the Regional Terminal east of Terminal 8. This terminal is known as the “Box”, as can be seen on the airport diagram, and is home to American Eagle. The West/Remote Ramp between taxiways Y and E17 is home to Gates 201-219, which are normally used for temporary or overnight storage of aircraft. A list of airline parking locations (current as of July 27, 2018) can be found at this link.

Appendix B - Intersection Departure and Runway Distances