

# TAKE-OFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES

09015

## INSTRUMENT APPROACH PROCEDURE CHARTS

### IFR TAKE-OFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES

#### Civil Airports and Selected Military Airports

ALL USERS: Airports that have Departure Procedures (DPs) designed specifically to assist pilots in avoiding obstacles during the climb to the minimum enroute altitude , and/or airports that have civil IFR take-off minimums other than standard, are listed below. Take-off Minimums and Departure Procedures apply to all runways unless otherwise specified. Altitudes, unless otherwise indicated, are minimum altitudes in MSL.

DPs specifically designed for obstacle avoidance are referred to as Obstacle Departure Procedures (ODPs) and are described below in text, or published separately as a graphic procedure. If the (Obstacle) DP is published as a graphic procedure, its name will be listed below, and it can be found in either this volume (civil), or a separate Departure Procedure volume (military), as appropriate. Users will recognize graphic obstacle DPs by the term "(OBSTACLE)" included in the procedure title; e.g., TETON TWO (OBSTACLE). If not assigned a SID or radar vector by ATC, an ODP may be flown without ATC clearance to ensure obstacle clearance.

Graphic DPs designed by ATC to standardize traffic flows, ensure aircraft separation and enhance capacity are referred to as "Standard Instrument Departures (SIDs)". SIDs also provide obstacle clearance and are published under the appropriate airport section. ATC clearance must be received prior to flying a SID.

CIVIL USERS NOTE: Title 14 Code of Federal Regulations Part 91 prescribes standard take-off rules and establishes take-off minimums for certain operators as follows: (1) Aircraft having two engines or less - one statute mile. (2) Aircraft having more than two engines - one-half statute mile. These standard minima apply in the absence of any different minima listed below.

MILITARY USERS NOTE: Civil (nonstandard) take-off minima are published below. For military take-off minima, refer to appropriate service directives.

#### NAME TAKE-OFF MINIMUMS

##### APPLE VALLEY, CA

###### APPLE VALLEY

TAKE-OFF MINIMUMS: **Rwy 36**, 300-1 or std. with a min. climb gradient of 340' per NM until 5800.

**Rwy 8,18,26**, NA.

DEPARTURE PROCEDURE: Use EXCON ONE RNAV DEPARTURE. **Rwy 8,18,26**, NA.

##### AVALON, CA

###### CATALINA

DEPARTURE PROCEDURE: **Rwys 4,22**, climb straight ahead to 2300 then proceed on course.

##### BAKERSFIELD, CA

###### BAKERSFIELD MUNI

TAKE-OFF MINIMUMS: **Rwy 16**, 300-1 or std. with a min. climb of 230' per NM to 500. **Rwy 34**, 400-2 or std. with a min. climb of 400' per NM to 800.

DEPARTURE PROCEDURE: **Rwy 16**, turn right.

**Rwy 34**, turn left. All aircraft climb direct EHF VORTAC. Aircraft departing EHF R-120 CW R-360, climb on course, all others continue climb in EHF VORTAC holding pattern (NW, right turns, 144° inbound) to cross EHF at or above 4000, before proceeding on course.

NOTE: 120' powerlines on centerline, 2551' from departure end of runway 16.

#### NAME TAKE-OFF MINIMUMS

##### BAKERSFIELD, CA (CON'T)

###### MEADOWS FIELD

DEPARTURE PROCEDURE: All aircraft climbing right turn direct EHF VORTAC. Aircraft departing EHF R-180 CW R-350 climb on course. All others continue climb northwestbound via EHF R-324, then climbing left turn to cross EHF VORTAC at or above: EHF R-110 CW R-179 3000; EHF R-351 CW R-109 4000.

##### BIG BEAR CITY, CA

###### BIG BEAR CITY

TAKE-OFF MINIMUMS: **Rwy 8**, 1200-2 or std. with a min. climb of 282' per NM to 8000. **Rwy 26**, NA.

DEPARTURE PROCEDURE: Use OKACO RNAV DEPARTURE. **Rwy 26**, NA.

##### BLYTHE, CA

###### BLYTHE

TAKE-OFF MINIMUMS: **Rwy 26**, 700-2 or std. with a min. climb of 330' per NM to 1100.

DEPARTURE PROCEDURE: **Rwys 8,17,35**, turn right. **Rwy 26**, turn left, climb to 1500 via heading 180° and BLHR-120, then climbing left turn direct BLH VORTAC, MCA 2000.

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## BORREGO SPRINGS, CA

BORREGO VALLEY (L08)  
AMDT 2 08101 (FAA)  
DEPARTURE PROCEDURE: Use ZUNGU  
DEPARTURE (RNAV).

## BRAWLEY, CA

BRAWLEY MUNI  
TAKE-OFF MINIMUMS: **Rwy 26**, NA.  
DEPARTURE PROCEDURE: **Rwy 8**, turn right. Climb to  
3000 via IPL R-009 to IPL VORTAC, then climb on  
course.

## BURBANK, CA

BOB HOPE  
TAKE-OFF MINIMUMS: **Rwy 8**, Cats A,B 1500-2 or std.  
with 480' per NM to 2400. Cats C,D 2300-2 or std. with  
650' per NM to 3200. **Rwy 15**, 1300-2 or std. with 290'  
per NM to 2100. **Rwy 33**, 1100-2 or std. with 390' per  
NM to 2000.  
DEPARTURE PROCEDURE: **Rwy 26**, climb direct VNY  
VOR/DME. **Rwys 8,15**, climbing right turn. **Rwy 33**,  
climbing left turn direct to VNY VOR/DME. **All aircraft**  
continue climb to MEA. North/westbound via V326 to  
GINNA Int, south/eastbound via V186 to DARTS Int.

## CALIFORNIA CITY, CA

CALIFORNIA CITY MUNI  
DEPARTURE PROCEDURE: Use CALIFORNIA CITY  
(RNAV) DEPARTURE.

## CALIPATRIA, CA

CLIFF HATFIELD MEMORIAL  
DEPARTURE PROCEDURE: **Rwy 8**, climb runway  
heading to 400', then climbing right turn to 3000 via  
heading 200° and IPL R-336 to IPL VORTAC. **Rwy 26**,  
climb runway heading to 400', then climbing left turn to  
3000 via IPL R-336 to IPL VORTAC.

## CAMARILLO, CA

CAMARILLO  
TAKE-OFF MINIMUMS: **Rwy 8**, 1100-2 or std. with a  
min. climb of 250' per NM to 1500.  
DEPARTURE PROCEDURE: **Rwy 8**, climb to 2500 via  
CMA R-061. **Rwy 26**, climbing right turn to 2500 via  
CMA R-265. **All aircraft** climbing left turn direct CMA  
VOR/DME. Continue climb on course to assigned  
altitude.

## CAMP PENDLETON MCAS (MUNN FIELD) (KNFG)

OCEANSIDE, CA . . . . .09015  
**RWY 3**: Diverse departures not authorized.  
**RWY 21**: Cross DER 35' AGL/96' MSL or above.  
Diverse departure authorized between 199° to 226° CW  
– Civil standard with minimum obstacle climb of 500 ft/  
NM to 1000'; Military standard with minimum obstacle  
climb of 430 ft/NM to 800'. 800-2 ceiling and vis  
authorized in lieu of minimum climb rate.  
TAKE-OFF OBSTACLES: **RWY 3**: Multiple trees up to  
101' AGL/165' MSL, beginning 2180' from DER, 490' to  
700' right of centerline. Tree 66' AGL/141' MSL, 2209'  
from DER, 207' left of centerline. Tree 101' AGL/164'  
MSL, 2286' from DER, 506' right of centerline. Antenna  
276' MSL, 4525' from DER, 1233' left of centerline.  
Terrain 739' MSL, 4.02 NM from DER, 3721' left of  
centerline. **RWY 21**: Terrain 219' MSL, 3790' from  
DER, 815' left of centerline. Terrain 399' MSL, 5598'  
from DER, 1853' left of centerline. Terrain 530' MSL, 1.5  
NM from DER, 943' right of centerline. Antennas and  
Tower up to 50' AGL/623' MSL, beginning 1.5 NM from  
DER, 2390' to 2745' right of centerline. Multiple Pylons  
and Terrain up to 50' AGL/606' MSL, beginning 1.6 NM  
from DER, 1022' to 1605' right of centerline. TACAN 70'  
AGL/560' MSL, 1.75 NM from DER, 90' right of  
centerline. Trees 43' AGL/104' MSL, 552' from DER,  
182' right of centerline. Trees 63' AGL/124' MSL, 836'  
from DER, 714' left of centerline. Trees 40' AGL/101'  
MSL, 502' from DER, 273' left of centerline.

## CARLSBAD, CA

MCCLELLAN-PALOMAR  
TAKE-OFF MINIMUMS: **Rwy 6**, 1400-2 or std. with a  
climb of 260' per NM to 2100.  
DEPARTURE PROCEDURE: **Rwy 6**, climbing left turn  
to 3100 heading 245°. **Rwy 24**, climb runway heading to  
2800. **All aircraft** climb on course.

## CHINA LAKE NAWS (ARMITAGE FLD)(KNID)

RIDGECREST, CA ..... 07130  
**Rwy 3, 8**, Diverse departure not authorized.  
**Rwy 14**, Diverse departures authorized 071° to 141°  
CW with minimum civil climb of 450'/NM to 6900,  
minimum military climb of 390'/NM to 6300. 141° to  
211° CW with minimum civil climb of 310'/NM to  
5400, minimum military climb of 290'/NM to 5100.  
**Rwy 21**, Diverse departures authorized 143° to 208°  
CW with minimum civil climb of 310'/NM to 5900,  
minimum military climb of 280'/NM to 5600.  
**Rwy 26**, Diverse departures authorized 143° to 200°  
CW with minimum civil climb of 300'/NM to 5900,  
minimum military climb of 280'/NM to 5600. Turn  
left on departure to assigned heading. Maximum  
departure speed 250 KIAS until established on  
assigned heading. **Rwy 32**, Diverse departures  
authorized 126° to 175° CW with minimum civil climb  
of 350'/NM to 6300, minimum military climb of 310'/NM  
to 5900. Turn left on departure to assigned heading.  
Maximum departure speed 250 KIAS until established on  
assigned heading.  
TAKE-OFF OBSTACLES: **Rwy 14**, Tower 176'  
AGL/2415' MSL, 5545' from DER, 246' right of  
centerline.

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CHINO, CA

CHINO

TAKE-OFF MINIMUMS: Rwy 3, std. with a min. climb of 270' per NM to 4800. Rwys 8L/R, std. with a min. climb of 270' per NM to 4800. Rwy 21, Cat A/B std. with a min. climb of 290' per NM to 4800, Cat C/D std. with a min. climb of 400' per NM 4800. Rwys 26L/R, Cat A/B std. with a min. climb of 270' per NM to 4800, Cat C/D std. with a min. climb of 410' per NM to 4800.

DEPARTURE PROCEDURE: Rwys 3, 8L/R, climbing right turn direct PDZ VORTAC. Rwys 21, 26L/R, climbing left turn direct PDZ VORTAC. All aircraft climb in PDZ VORTAC holding pattern (Hold E, right turns, 258° inbound) to the appropriate MEA.

NOTE: 108' AGL trees 1200' from departure end of runway 3, 600' left of centerline.

CORONA, CA

CORONA MUNI

TAKE-OFF MINIMUMS: Rwy 7, 1000-2 or std. with a min. climb of 310' per NM to 1700. Rwy 25, 600-2 or std. with a min. climb of 280' per NM to 1200.

DEPARTURE PROCEDURE: Rwy 7, climbing left turn. Rwy 25, climbing right turn. All aircraft continue climb direct to PDZ VORTAC. Aircraft departing PDZ R-091 CW R-140 and R-231 CW R-280 climb on course. All others continue climb in PDZ VORTAC holding pattern (Hold NE, right turns, 210° inbound) to cross PDZ VORTAC at or above: R-141 CW R-230 4000, R-281 CW R-090 6700.

DAGGETT, CA

BARSTOW-DAGGETT

TAKE-OFF MINIMUMS: Rwy 22, 1800-2 or std. with a min. climb of 380' per NM to 4000. Rwy 26, CAT C, D 2700-2 or std. with a min. climb of 380' per NM to 5000.

DEPARTURE PROCEDURE: Rwys 4, 8, climb direct DAG VORTAC. Rwys 22, 26, climbing right turn heading 090° and DAG R-223 to DAG VORTAC, then climb in DAG holding pattern (NE, right turns, 223° inbound) to 7500 before departing on course.

DELANO, CA

DELANO MUNI (DLO) AMDT 3A 08129 (FAA)

TAKE-OFF MINIMUMS: Rwy 32, 400-1 or std. with a min. climb rate of 390' per NM to 400.

DEPARTURE PROCEDURE: Rwy 14, Climb via heading 140° and EHF VORTAC R-324 to 3000 before proceeding on course. Rwy 32, climb via heading 320° and EHF VORTAC R-324 to 3000 before proceeding on course.

NOTE: 65' AGL tree 600' from departure end of runway, 500' left of centerline runway 14.

EDWARDS AF AUX NORTH BASE (9L2)

EDWARDS, CA

Rwy 6-24, climb on course, cross 15 NM from ARP at or above 4500.

EDWARDS AFB (KEDW)

EDWARDS, CA . . . . .08269

Rwy 4L/R, Radar Required, Climb 340/NM to 5500, track inbound on EDW R-223 to EDW VORTAC, then out EDW R-043. Climb as instructed, expect radar vectors after passing 4500 or climb on course, cross 15 NM from ARP at or above 4500. Rwy 22L/R, Radar and DME Required. CAT ABC track outbound EDW R-223. At 12 DME turn right heading 020, intercept EDW R-247 to EDW VORTAC. Climb as instructed, expect radar vectors after passing 4500 or climb on course, cross 15 NM from ARP at or above 4500. CAT DE track outbound EDW R-223. At 12 DME turn right, intercept EDW R-247 to EDW VORTAC. Climb as instructed, expect radar vectors after passing 4500 or climb on course, cross 15 NM from ARP at or above 4500.

EL CENTRO NAF (KNJK)

EL CENTRO, CA

Ackt assigned headings 220° CW to 300° std with min climb rate of 230'/NM to 7400(military), 240'/NM to 7400 (civil).

EL MONTE, CA

EL MONTE

TAKE-OFF MINIMUMS: Rwy 1, 600-1 or std. with a min. climb of 280' per NM to 1000. Rwy 19, 1200-2 or std. with min. climb of 230' per NM to 1900.

DEPARTURE PROCEDURE: Rwy 1, climbing right turn. Rwy 19, climb runway heading to 800 then climbing left turn. All aircraft intercept PDZ R-278 to PDZ VORTAC. Aircraft departing PDZ R-091 CW R-280 climb on course. All others continue climb in PDZ holding pattern (NE, right turns, 210° inbound) to cross PDZ VORTAC at or above: R-281 CW R-090, 6700.

FALLBROOK, CA

FALLBROOK COMMUNITY AIRPARK

TAKE-OFF MINIMUMS: Rwy 36, CAT A,B, 700-2 or std. with a min. climb of 340' per NM to 5000.

DEPARTURE PROCEDURE: Rwy 18, climb runway heading to 1200, then climbing left turn via heading 160° to join V208-458. Aircraft westbound proceed on course. Aircraft eastbound V208-458 proceed to VISTA Int and climb in holding pattern (E, left turns, 263° inbound) to 5000 before proceeding on course. Rwy 36, climb runway heading to 1500, then climbing right turn to intercept OCN VORTAC R-027 to TANNR Int before proceeding on course.

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## FULLERTON, CA

FULLERTON MUNI (FUL)  
AMDT 4A 08185 (FAA)

TAKE-OFF MINIMUMS: **Rwy 6**, std. with a min. climb of 230' per NM to 900, or 1100-2½ for climb in visual conditions. **Rwy 24**, std. with a min. climb of 320' per NM to 2300, or 1100-2½ for climb in visual conditions. DEPARTURE PROCEDURE: **Rwy 6**, climbing right turn to 2300 direct SLI VORTAC, or for climb in visual conditions: cross Fullerton Airport southwest bound at or above 1100, then climb to 2300 via SLI R-020 to SLI VORTAC. **Rwy 24**, climbing left turn to 2300 direct SLI VORTAC, or for climb in visual conditions: cross Fullerton Airport southwest bound at or above 1100, then climb to 2300 via SLI R-020 to SLI VORTAC.

NOTE: **Rwy 6**, obstruction light 109' from departure end of runway, 117' left of centerline, 22' AGL/118' MSL. Train 122' from departure end of runway, 106' left of centerline, 23' AGL/121' MSL. Multiple poles 58' to 1003' from threshold centerline to 373' right of centerline, 39' AGL/135' MSL. Hopper on building 977' from departure end of runway, 468' left of centerline, 36' AGL/132' MSL. Light pole 1247' from threshold, 143' left of centerline, 35' AGL/131' MSL. Tree 1463' from departure end of runway, 35' left of centerline, 72' AGL/168' MSL. Obstruction light 1620' from departure end of runway, 318' right of centerline, 50' AGL/146' MSL. Pole 2234' from departure end of runway, 754' left of centerline, 78' AGL/174' MSL. Pole 3597' from departure end of runway, 793' left of centerline, 102' AGL/198' MSL. Building 3208' from departure end of runway, 820' right of centerline, 112' AGL/217' MSL. Tower 1 NM from departure end of runway, 1937' left of centerline, 94' AGL/267' MSL. Pole 1.6 NM from departure end of runway, 1.5 NM left of centerline, 90' AGL/575' MSL. Tower 1.1 NM from departure end of runway, 1.7 NM left of centerline, 130' AGL/729' MSL. Tower 2 NM northwest of departure end of runway, 760' AGL/820' MSL. **Rwy 24**, road 82' from departure end of runway, on centerline, 15' AGL/99' MSL. Light 85' from departure end of runway, 260' right of centerline, 25' AGL/110' MSL. Light 217' from departure end of runway, 320' left of centerline, 104' AGL/122' MSL. Antenna on building 272' from departure end of runway, 278' left of centerline, 31' AGL/116' MSL. Trees 253' from departure end of runway, 228' right of centerline, 57' AGL/142' MSL. Obstruction light 400' from departure end of runway, on centerline, 18' AGL/103' MSL. Trees 1336' to 2492' from departure end of runway, 160' left of centerline to 419' right of centerline, 70' AGL/155' MSL. Tower 1.3 NM from departure end of runway, 5034' right of centerline, 684' AGL/750' MSL.

## HAWTHORNE, CA

JACK NORTHROP FIELD/HAWTHORNE MUNI

TAKE-OFF MINIMUMS: **Rwy 7**, 300-2 or std. with a min. climb of 363' per NM to 500. **Rwy 25**, 200-1 or std. w/a min. climb of 289' per NM to 300.

DEPARTURE PROCEDURE: **Rwy 7**, turn right, climb via heading 240°. **Rwy 25**, turn left, climb via heading 210°. **All runways** climb to 3000 via LAX R-170 to LIMBO Int.

NOTE: **Rwy 7**, multiple transmission towers beginning 5428' from departure end of runway, 205' left of centerline, up to 247' AGL/307' MSL. Antenna on building 1.1 NM from departure end of runway, 2020' left of centerline, 244' AGL/305' MSL. Multiple trees, poles, light poles and buildings beginning 130' from departure end of runway, 12' left of centerline, up to 266' AGL/327' MSL. Multiple trees, poles, signs and OL lights beginning 73' from departure end of runway, 90' right of centerline, up to 184' AGL/245' MSL. **Rwy 25**, OL light on tank 4471' from departure end of runway, 1311' left of centerline, 227' MSL. Multiple antennas on buildings, trees and poles 91' from departure end of runway, 64' left of centerline, up to 93' AGL/154' MSL. Multiple trees and poles beginning 309' from departure end of runway, 162' right of centerline, up to 84' AGL/149' MSL.

## HEMET, CA

HEMET-RYAN

TAKE-OFF MINIMUMS: **Rwys 4,22**, N/A-restricted to glider operations. **Rwy 5**, std. with a min. climb of 526' per NM to 5200, or 1400-2½ for climb in visual conditions. **Rwy 23**, std. with a min. climb of 414' per NM to 3200, or 1400-2½ for climb in visual conditions. DEPARTURE PROCEDURE: **Rwy 5**, climbing left turn via HDF VOR R-084 to HDF VOR, thence...or climb in visual conditions to cross Hemet-Ryan Airport westbound at or above 2900, then climb via HDF VOR R-093 to HDF VOR, thence... **Rwy 23**, climbing right turn via HDF VOR R-108 to HDF VOR, thence...or climb in visual conditions to cross Hemet-Ryan Airport westbound at or above 2900, then climb via HDF VOR R-093 to HDF VOR, thence...

....climb in HDF VOR holding pattern, (SE, right turns, 315° inbound), to cross HDF VOR at or above MEA/MCA for direction of flight.

NOTE: **Rwy 5**, road and vehicle 200' from departure end of runway, on centerline, 15' AGL/1534' MSL. **Rwy 23**, road and vehicle 394' from departure end of runway, 545' left of centerline, 15' AGL/1524' MSL. Tree 1.4 NM from departure end of runway, 2613' right of centerline, 100' AGL/1979' MSL.

## IMPERIAL, CA

IMPERIAL COUNTY

DEPARTURE PROCEDURE: **Rwys 8, 32**, turn right.

**Rwy 14**, climb runway heading. **Rwy 26**, turn left.

**All aircraft** climb direct IPL VORTAC.

## IMPERIAL BEACH NOLF (REAM FIELD) (NRS)

IMPERIAL BEACH, CA

Diverse departures not authorized.

RWY 27: Minimum ATC climb rate of 560 ft/NM until 800'. Climb via hdg 272° to intercept NRS R-270.

Cross 1.5 DME at 800', then climb to 2000 via NRS R-270. Runways 8,9,26 departures not authorized.

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## INYOKERN, CA

### INYOKERN

TAKE-OFF MINIMUMS: **Rwys 2, 10, 15, 28, 33, NA.**  
DEPARTURE PROCEDURE: **Rwy 20**, use LAKE  
HUGHES RNAV DEPARTURE.

## LA VERNE, CA

### BRACKETT FIELD

TAKE-OFF MINIMUMS: **Rwys 26L, 26R**, 300-1.  
DEPARTURE PROCEDURE: **Rwys 8L, 8R**, climb via  
heading 079° to 1500, then climbing right turn via  
heading 195° and POM R-164 to PRADO Int. **Rwys**  
**26L, 26R**, climb via heading 259° to 1400, then climbing  
left turn via heading 130° and POM R-164 to PRADO  
Int.

Aircraft departing PRADO Int heading 141° clockwise  
290° climb on course. All others climb in PRADO Int  
holding pattern (hold north, right turn, 164° inbound) to  
depart PRADO Int at or above: 291° clockwise 340°,  
4500; 341° clockwise 050°, 6800; 051° clockwise 090°,  
5200; 091° clockwise 140°, 4200.

NOTE: **Rwy 26L**, multiple trees and antenna beginning  
370' from departure end of runway, 269' left of centerline  
up to 100' AGL/1116' MSL. Multiple trees beginning  
896' from departure end of runway, 70' right of  
centerline, up to 100' AGL/1010' MSL. Multiple  
buildings and tanks beginning 2732' from departure end  
of runway, 416' right of centerline, up to 50' AGL/1230'  
MSL. **Rwy 26R**, hangar 241' from departure end of  
runway, 326' right of centerline, 35' AGL/994' MSL.  
Multiple trees beginning 1473' from departure end of  
runway, 807' left of centerline, up to 100' AGL/1116'  
MSL. Tank and trees beginning 2510' from departure  
end of runway, 503' right of centerline, up to 100' AGL/  
1289' MSL.

## LANCASTER, CA

### GENERAL WILLIAM J. FOX AIRFIELD

DEPARTURE PROCEDURE: Climb southeastbound on  
R-299 to PMD VORTAC. Depart PMD at published  
MCA for direction of flight.

## LOMPOC, CA

### LOMPOC

TAKE-OFF MINIMUMS: **Rwy 7**, std. with a min. climb of  
425' per NM to 1400, or 1000-3 for climb in visual  
conditions.

DEPARTURE PROCEDURE: **Rwy 7**, climbing right  
turn. For climb in visual conditions: cross Lompoc  
Airport eastbound at or above 1200 MSL. **Rwy 25**, turn  
right heading 130°.

All aircraft climb to 6000 via GVO R-278 to GVO  
VORTAC. Aircraft departing GVO R-120 CW R-020  
climb on course, all others climb in GVO holding pattern  
(NW, right turns, 127° inbound) to depart GVO  
VORTAC at or above MEA for route of flight.

NOTE: **Rwy 7**, trees 3583' from departure end of runway,  
2.3 NM right of centerline, 50' AGL/889' MSL. Trees  
1.2 NM from departure end of runway, 2.2 NM right of  
centerline, 50' AGL/791' MSL. Trees 1.6 NM from  
departure end of runway, 1.9 NM right of centerline, 50'  
AGL/743' MSL.

## LONG BEACH, CA

### LONG BEACH (DAUGHTERTY FIELD)

TAKE-OFF MINIMUMS: **Rwy 16L**, 400-1½ or std. w/ min  
climb of 321' per NM to 500. **Rwy 16R**, 400-1 or std. w/  
min. climb of 518' per NM to 500. **Rwy 25L**, std. w/ min.  
climb of 225' per NM to 2300. **Rwy 25R**, std. w/ min.  
climb of 223' per NM to 2200. **Rwys 34L, 34R**, NA-  
Environmental and noise abatement.

DEPARTURE PROCEDURE: **Rwys 7L, 7R**, climb  
heading 076° to 800, then climbing right turn direct SLI  
VORTAC and SLI R-210 to PADDR INT. **Rwy 12**, climb  
heading 121° to intercept SLI VORTAC R-210 to  
PADDR INT. **Rwys 16L, 16R**, climb heading 166° to  
800, then climbing right turn heading 180° and SLI  
VORTAC R-210 to PADDR INT. **Rwys 25L, 25R**, climb  
heading 256° to 800, then climbing left turn heading 200°  
and LAX VORTAC R-145 to PADDR INT. **Rwy 30**,  
climb heading 301° to 800, then climbing left turn  
heading 200° and LAX VORTAC R-145 to PADDR INT.

NOTE: **Rwy 7L**, sign 287' from departure end of runway,  
173' left of centerline, 8' AGL/45' MSL. Vehicle on road  
320' from departure end of runway, 248' left of centerline,  
13' AGL/50' MSL. Light 468' from departure end of  
runway, 307' left of centerline, 19' AGL/56' MSL. Tree  
1326' from departure end of runway, 75' left of centerline,  
60' AGL/97' MSL. Trees beginning 579' from departure  
end of runway, 7' right of centerline, up to 71' AGL/108'  
MSL. Hangar 347' from departure end of runway, 416'  
right of centerline, 13' AGL/50' MSL. **Rwy 7R**, hangar  
260' from departure end of runway, 498' left of centerline,  
31' AGL/64' MSL. Multiple trees beginning 1408' from  
departure end of runway, 1' left of centerline, up to 64'  
AGL/94' MSL. Light 459' from departure end of runway,  
581' right of centerline, 14' AGL/44' MSL. Antenna  
obstruction light 1473' from departure end of runway,  
822' right of centerline, 88' AGL/115' MSL. **Rwy 12**,  
multiple trees beginning 1431' from departure end of  
runway, 469' left of centerline, up to 66' AGL/86' MSL.  
Light 1127' from departure end of runway, 606' left of  
centerline, 36' AGL/56' MSL. Multiple trees beginning  
970' from departure end of runway, 392' right of  
centerline, up to 64' AGL/87' MSL. Spire 3095' from  
departure end of runway, 1183' right of centerline, 92'  
AGL/115' MSL. **Rwy 16L**, terrain beginning 155' from  
departure end of runway, 152' left of centerline, up to 40'  
MSL. Multiple trees beginning 427' from departure end  
of runway, 136' left of centerline, up to 32' AGL/109'  
MSL. Multiple lights, buildings and lights on buildings  
beginning 285' from departure end of runway, 256' left of  
centerline, up to 113' AGL/159' MSL. Multiple flag poles  
1165' from departure end of runway, 8' left of centerline,  
up to 60' AGL/116' MSL. Rising terrain beginning 156'  
from departure end of runway, 100' right of centerline 40'  
MSL. Multiple trees beginning 296' from departure end  
of runway, 149' right of centerline, up to 38' AGL/218'  
MSL. Multiple buildings beginning 2057' from  
departure end of runway, 253' right of centerline, up to  
30' AGL/91' MSL.

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LONG BEACH (DAUGHERTY FIELD) (CONT)

Rwy 16R, rising terrain beginning 29' from departure end of runway on centerline, up to 209' MSL. Multiple trees beginning 835' from departure end of runway, 46' left of centerline, up to 112' AGL/156' MSL. Sign 1453' from departure end of runway, 139' left of centerline, 50' AGL/94' MSL. Pole 3034' from departure end of runway, 302' left of centerline, 91' AGL/135' MSL. Light on tank 4079' from departure end of runway, 114' left of centerline, 108' AGL/152' MSL. Multiple tower antennas beginning 8017' from departure end of runway, 1913' left of centerline, up to 291' AGL/335' MSL. Antenna on hangar 352' from departure end of runway, 399' right of centerline, 38' AGL/82' MSL. Multiple trees beginning 787' from departure end of runway, 319' right of centerline, 32' AGL/293' MSL. Multiple poles beginning 2028' from departure end of runway, 295' right of centerline, up to 241' AGL/248' MSL. Chimney on building, 4661' from departure end of runway, 1553' right of centerline, 33' AGL/353' MSL. Rwy 25L, multiple trees beginning 2407' from departure end of runway, 111' left of centerline, up to 38' AGL/117' MSL. Obstruction light on tower 2493' from departure end of runway, 503' left of centerline, 69' AGL/152' MSL. Rising terrain beginning 110' on centerline, up to 66' MSL. Obstruction light rod on hangar, 1149' from departure end of runway, 793' right of centerline, 109' AGL/169' MSL. Antenna 3821' from departure end of runway, 439' right of centerline, 66' AGL/155' MSL. Rwy 25R, Ford sign beginning 551' from departure end of runway, 27' right of centerline, up to 100' AGL/159' MSL. Railroad beginning 202' from departure end of runway, 3' left of centerline, 66' AGL/155' MSL. Multiple lights and light poles beginning 321' from departure end of runway, 111' left of centerline, up to 32' AGL/92' MSL. Sign 1142' from departure end of runway, 33' left of centerline, 35' AGL/104' MSL. Multiple trees beginning 1142' from departure end of runway, 9' left of centerline, up to 67' AGL/146' MSL. Multiple obstruction lights beginning 67' from departure end of runway, 59' right of centerline, up to 202' AGL/260' MSL. Multiple trees beginning 1246' from departure end of runway, 1' right of centerline, up to 87' AGL/145' MSL. Rwy 30, railroad beginning 647' from departure end of runway, on centerline, up to 27' AGL/91' MSL. Multiple antennas, rods, vents and lights on buildings beginning 356' from departure end of runway, 289' left of centerline, up to 27' AGL/87' MSL. Multiple poles beginning 2061' from departure end of runway, 312' left of centerline, up to 51' AGL/124' MSL. Railroad beginning 207' from departure end of runway, 485' right of centerline, up to 25' AGL/81' MSL. Multiple obstruction lights and poles beginning 632' from departure end of runway, 240' right of centerline, up to 66' AGL/142' MSL. Multiple trees beginning 1701' from departure end of runway, 136' right of centerline, up to 73' AGL/146' MSL. Building 2617' from departure end of runway, 802' right of centerline, 63' AGL/136' MSL.

LOS ALAMITOS AAF (KSLI)

LOS ALAMITOS, CA

... Rwy 22L/R, 300-1\*

\* Or standard with minimum climb of 230/NM to 400. Rwy 4L/R climbing right turn; Rwy 22L/R climbing left turn. All aircraft climb direct SLI VORTAC. Aircraft departing SLI VORTAC R-040 CW 345 climb on course. All others continue climb via the SLI R-171 southbound then climbing right turn direct SLI VORTAC to cross at or above 4600'.

LOS ANGELES, CA

LOS ANGELES INTL (LAX)

AMDT 12 08325 (FAA)

TAKE-OFF MINIMUMS: Rwy 6R, 200-1 1/4 or std. with a min. climb of 275 per NM to 400.

DEPARTURE PROCEDURE: Rwys 6L/R, 7L/R, climb to 2000 heading 070°, then climbing right turn, thence... Rwys 24L/R, climb to 2000 heading 250°, then climbing left turn, thence... Rwys 25L/R, turbojet climb to 2000 heading 250°, then climbing left turn, thence... non-turbojet climb to 2000 heading 250°, at the SMOR-154 turn left heading 200°, thence...

...climb direct SLI VORTAC, then climb on course.

NOTE: Rwy 6L, buildings and signs beginning 1693' from departure end of runway, 339' left of centerline, up to 50' AGL/201' MSL. Rwy 6R, antenna on building 560' from departure end of runway, 479' right of centerline, 18' AGL/127' MSL, obstruction light on building 5550' from departure end of runway, 1791' right of centerline, 202' AGL/306' MSL, obstruction light on sign and sign beginning 1866' from departure end of runway, 920' left of centerline, up to 49' AGL/161' MSL. Rwy 7L, obstruction light on blast fence 168' from departure end of runway, 33' left of centerline, 14' AGL/106' MSL, poles beginning 1290' from departure end of runway, 505' left of centerline, up to 55' AGL/147' MSL, antenna on building 1576' from departure end of runway, 315' left of centerline, 55' AGL/147' MSL, sign and railroad beginning 351' from departure end of runway, 10' left of centerline, up to 29' AGL/124' MSL, railroad 275' from departure end of runway, 500' right of centerline, 23' AGL/115' MSL, approach light and obstruction light on LOC beginning 979' from departure end of runway, on runway centerline, up to 27' AGL/119' MSL. Rwy 7R, trees and building beginning 790' from departure end of runway, 606' right of centerline, up to 58' AGL/157' MSL. Rwy 24L, bush 956' from departure end of runway, 600' left of centerline, 40' AGL/148' MSL. Light poles beginning 273' from departure end of runway, 425' left of centerline, up to 10' AGL/120' MSL, antenna on pole 1357' from departure end of runway, 286' right of centerline, 36' AGL/144' MSL, light poles and bushes beginning 239' from departure end of runway, 321' right of centerline, up to 8' AGL/116' MSL. Rwy 24R, obstruction light on glideslope 212' from departure end of runway, 399' left of centerline, 39' AGL/151' MSL. Rwy 25L, tree and pole beginning 2366' from departure end of runway, 764' left of centerline, up to 80' AGL/197' MSL, transmission towers beginning 2800' from departure end of runway, 926' left of centerline, up to 71' AGL/192' MSL, bush 133' from departure end of runway, 397' left of centerline, 4' AGL/123' MSL.

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## LOS ANGELES, CA (CON'T)

### WHITEMAN

TAKE-OFF MINIMUMS: **Rwys 12, 30**, 2900-2 or std. with a min. climb of 350' per NM to 4300.

DEPARTURE PROCEDURE: **Rwy 12**, climbing right turn direct VNY VOR/DME. **Rwy 30**, climbing left turn heading 260°. All aircraft climb to 4500 via VNY R-325, then climbing left turn direct VNY VOR/DME.

## MARCH ARB (KRIV),

RIVERSIDE, CA . . . . . AMDT 1, 08353

Rwy 14, 32, 10, 300-3\*

2300-3\*\*

3300-3\*\*\*

### Rwy 14, Diverse Departure:

Runway 14 appropriate departure procedure.

\* Or standard, climb direct HDF VOR then outbound HDF R-135 with a minimum climb rate of 400'/NM to 14,000', leaving 4100' diverse departure headings authorized. Standard, proceed direct HDF VOR, then right turn to sector diverse departure between 155 degrees clockwise to 181 degrees only. Maximum 250 KIAS.

### VCOA route SKYES intersection:

\*\* Climb in visual conditions within 6 NM of March ARB, cross March ARB at or above 3700 MSL, then climb and maintain 6000 direct HDF VOR, then via HDF R-152 to HDF R-152/PDZ R-130, direct SKYES INT. Do not exceed 250 KIAS until passing SKYES. Aircraft shall advise ATC prior to executing VCOA.

### VCOA route PDZ VORTAC:

\*\* Climb in visual conditions within 9 NM of March ARB, cross March ARB at or above 3700 MSL, then climb and maintain 5000 direct PDZ VORTAC. Do not exceed 350 KIAS until passing PDZ. Aircraft shall advise ATC prior to executing VCOA.

### Rwy 32, Diverse Departure:

Runway 32 appropriate departure procedure.

\* Or standard, cross departure end at or above 35' AGL/1570' MSL, then climb with a minimum rate of 620'/NM to 14,000'. Standard, cross departure end at or above 35' AGL/1570' MSL then left turn to sector diverse departure between 150 degrees to 135 degrees counter-clockwise only. Maximum 250 KIAS. Standard, cross departure end at or above 35' AGL/1570' MSL then left turn to sector diverse departure between 269 degrees to 249 degrees counter-clockwise only. Maximum 250 KIAS.

\*\*\* Or standard with a minimum climb rate of 250'/NM to 5800', cross departure end at or above 35' AGL/1570' MSL, leaving 2100' turn left to sector diverse departure between 156 degrees to 149 degrees counter-clockwise only, Maximum 270 KIAS.

### VCOA route SKYES intersection:

\*\* Cross departure end at or above 35' AGL/1570' MSL climb in visual conditions within 6 NM of March ARB, cross March ARB at or above 3700 MSL, then climb and maintain 6000 direct HDF VOR, then via HDF R-152 to HDF R-152/PDZ R-130, direct SKYES INT. Do not exceed 250 KIAS until passing SKYES. Aircraft shall advise ATC prior to executing VCOA.

### VCOA route PDZ VORTAC:

\*\* Cross departure end at or above 35' AGL/1570' MSL climb in visual conditions within 8 NM of March ARB, cross March ARB at or above 3700 MSL, then climb and maintain 5000 direct PDZ VORTAC. Do not exceed 350 KIAS until passing PDZ. Aircraft shall advise ATC prior to executing VCOA.

## MARCH ARB (CON'T)

TAKE-OFF OBSTACLES: **Rwy 14**, Aircraft 65' AGL/1550' MSL, 28' inward of DER, 541' left of centerline. Aircraft 30' AGL/1516' MSL, 32' inward of DER, 297' left of centerline. Tree 150' AGL/2470' MSL, 3.5 NM from DER, 2.2 NM left of centerline. Tree 150' AGL/2568' MSL, 3.6 NM from DER, 2.6 NM left of centerline. Tree 150' AGL/2466' MSL, 3.6 NM from DER, 2.7 NM left of centerline. Use caution when departing Rwy 14, rapid rising terrain within 3.5 NM SE of March ARB. **Rwy 32**, Aircraft 65' AGL/1600' MSL, 30' from DER, 526' right of centerline. Aircraft 30' AGL/1565' MSL, 6' from DER, 282' right of centerline.

## MIRAMAR MCAS (MITSCHER FLD) (KNKX)

SAN DIEGO, CA

06299

**Rwy 6LR** 340° through 150° CW-Civil standard with minimum climb of 315'/NM to 5400'; Military, standard with minimum climb of 290'/NM to 6300. **Rwy 24LR** 340° through 100° CW-Civil standard with minimum climb of 290'/NM to 7600'; Military, standard with minimum climb of 270'/NM to 7600.

## MOJAVE, CA

MOJAVE (MHV)

AMDT 1 08157 (FAA)

TAKE-OFF MINIMUMS: **Rwys 4, 8, 12**, NA-restricted airspace. **Rwys 22, 26**, std. with a min. climb of 415' per NM to 6800 or 4200-3 for climb in visual conditions. **Rwy 30**, std. with a min. climb of 485' per NM to 6300 or 4200-3 for climb in visual conditions.

DEPARTURE PROCEDURE: **Rwy 22**, climb to 8000 via heading 218° and LHS R-023 to LHS VORTAC or for climb in visual conditions: cross Mojave Airport southwest bound at or above 6800, then climb to 8000 via LHS R-023 to LHS VORTAC. **Rwys 26, 30**, climbing left turn to 8000 via heading 190° and LHS R-023 to LHS VORTAC or for climb in visual conditions: cross Mojave Airport southwest bound at or above 6800, then climb to 8000 via LHS R-023 to LHS VORTAC.

NOTE: **Rwy 30**, vehicle on road 3181' from departure end of runway, 22' right of centerline, 17' AGL/2896' MSL. Train 1441' from departure end of runway, 351' right of centerline, 23' AGL/2882' MSL.

## MURRIETA/TEMECULA, CA

FRENCH VALLEY

TAKE-OFF MINIMUMS: **Rwy 18**, NA. **Rwy 36**, 700-2 or std. with a min. climb of 340' per NM to 2200. DEPARTURE PROCEDURE: **Rwy 36**, climb runway heading to 2200, then climbing left turn via HDF R-145 to HDF VOR. Aircraft departing HDF VOR 065° CW 352° climb on course. Aircraft departing northeastbound, climb in HDF holding pattern, (SE, right turns, 315° inbound) to depart HDF VOR at or above: 353° CW 054°, 6800; 055° CW 064°, 5800; before proceeding on course.

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# TAKE-OFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES





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**NEEDLES, CA****NEEDLES**DEPARTURE PROCEDURE: **Rwys 2, 29**, turn right.**Rwy 20**, turn left. **All aircraft** climb direct EED VORTAC, then continue climb on course. Departures on V12, J6, and J8 cross EED VORTAC at or above 2600.**NORTH ISLAND NAS (HALSEY FIELD)  
(KNZY)**

SAN DIEGO, CA 06243

**Rwy 11** diverse departures authorized 129° CW 182°. Make immediate right turn to assigned heading within 1.4 DME of NZY TACAN to avoid overflying the City of Coronado.**Rwy 18** diverse departures authorized 129° CW 182°.**Rwy 29** diverse departures not authorized.**Rwy 36** departures not authorized.**TAKEOFF OBSTACLES:****Rwy 11:** Trees 54' MSL (30' AGL), 994' past DER, 733' left of centerline.**Rwy 29:** Twin Twrs, 534' MSL (145' AGL), 8365' past DER, 2645' left of centerline; Twr, 479' MSL (259' AGL), 9064' past DER, 2009' left of centerline; Twr, 455' MSL (100' AGL), 9136' past DER, 2054' left of centerline.**OCEANSIDE, CA****OCEANSIDE MUNI**TAKE-OFF MINIMUMS: **Rwy 6**, 400-1 or std. with a min. climb of 320' per NM to 500. **Rwy 24**, 300-1 or std. with a min. climb of 670' per NM to 300.DEPARTURE PROCEDURE: **Rwy 6**, climbing right turn. **Rwy 24**, climbing left turn. **All aircraft** climb via heading 235° to 1500, then climbing right turn direct OCN VORTAC.**ONTARIO, CA****ONTARIO INTL**TAKE-OFF MINIMUMS: **Rwys 8L, 8R**, CAT C, D 1000-2 or std. with a min. climb of 220' per NM to 2200.DEPARTURE PROCEDURE: **Rwys 8L, 8R**, climbing right turn. **Rwys 26L, 26R**, climbing left turn. **All aircraft** climb direct PDZ VORTAC. Aircraft departing PDZ R-091 CW R-140 and R-231 CW R-280 climb on course. All others continue climb in PDZ holding pattern (NE, right turns, 210° inbound) to cross PDZ VORTAC at or above: R-281 CW R-090, 6700; R-141 CWR-230, 4000.**OXNARD, CA****OXNARD**TAKE-OFF MINIMUMS: **Rwy 7**, 2100-5 or std. with a min. climb of 290' per NM to 2600.DEPARTURE PROCEDURE: **Rwy 7**, climbing left turn.**Rwy 25**, climb runway heading. **All aircraft** continue climb to 6000 (or assigned altitude) via CMA R-249 to SQUID Int. Aircraft departing SQUID Int 040° CW 300° climb on course. All others continue climb in SQUID holding pattern (Hold W, right turns, 069° inbound) to cross SQUID INT at or above 2300.NOTE: **Rwy 7**, 59' AGL tree 527' from departure end of runway, 501' left of centerline.**PALM SPRINGS, CA****BERMUDA DUNES**TAKE-OFF MINIMUMS: **Rwy 28**, CAT A, B 1200-2 or std. with a min. climb of 450' per NM to 1400. CAT C, D 2100-2 or std. with a min. climb of 490' per NM to 3400.DEPARTURE PROCEDURE: **Rwy 10**, climbing right turn heading 150°. **Rwy 28**, climbing left turn heading 090°. **All aircraft** continue climb via TRM R-304 to TRM VORTAC. Aircraft departing TRM R-095 CW R-165 climb on course. All others continue climb in TRM holding pattern (E, right turns, 289° inbound) to cross TRM VORTAC at or above: R-166 CW 290°, 6500; 291° CW R-310, 4900; R-311 CW 094°, 3200.**JACQUELINE COCHRAN RGNL**TAKE-OFF MINIMUMS: **Rwy 30**, CAT C, D 3400-2 or std. with a min. climb of 410' per NM to 3700. **Rwy 35**, CAT A, B 400-2 or std. with a min. climb of 210' per NM to 400. CAT C, D 3400-2 or std. with a min. climb of 410' per NM to 3700.DEPARTURE PROCEDURE: **Rwys 12, 17**, climbing left turn. **Rwys 30, 35**, climbing right turn heading 150°. Aircraft departing TRM R-101 CW R-139, climb on course. All others continue climb east-bound via the TRM R-109 then climbing right turn to cross TRM VORTAC at or above: R-304 CW R-100, 4000; R-140 CW R-199, 4700; R-200 CW R-303, 6600.

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## PALM SPRINGS, CA (CON'T)

PALM SPRINGS INTL (PSP)

AMDT 5 08101 (FAA)

TAKE-OFF MINIMUMS: **Rwy 13L**, minimum climb of 440' per NM to 2300' or 5900-3 for climb in visual conditions. **Rwy 13R**, minimum climb of 422' per NM to 2300' or 5900-3 for climb in visual conditions. **Rwy 31L**, minimum climb of 386' per NM to 4500' or 5900-3 for climb in visual conditions. **Rwy 31R**, minimum climb of 405' per NM to 4500' or 5900-3 for climb in visual conditions.

DEPARTURE PROCEDURE: **Rwys 13L/R**, climbing left turn heading 090° to intercept TRM R-304 to TRM VORTAC or for climb in visual conditions cross Palm Springs Intl airport at or above 6300 then direct PSP VORTAC thence ... **Rwy's 31L/R**, climbing right turn direct PSP VORTAC thence ..., or for climb in visual conditions cross Palm Springs Intl airport at or above 6300 then direct PSP VORTAC thence ... via PSP R-124 and TRM R-304 to TRM VORTAC.

All **Rwys** if not at MEA/MCA at TRM VORTAC, climb in TRM holding pattern (hold E, right turns, 289° inbound) until reaching MEA/MCA for assigned route of flight.

NOTE: **Rwy 13L**, trees beginning 299' from departure end of runway, 530' left of centerline, up to 66' AGL/465' MSL. HGR 935' from departure end of runway, 552' left of centerline, 31' AGL/440' MSL. **Rwy 13R**, trees beginning 1170' from departure end of runway, 239' right of centerline, up to 100' AGL/599' MSL. Poles beginning 815' from departure end of runway, 209' right of centerline, up to 44' AGL/433' MSL. Light 843' from departure end of runway, 441' right of centerline, 38' AGL/427' MSL. Antenna 1642' from departure end of runway, 26' right of centerline, 53' AGL/442' MSL. **Rwy 31L**, poles beginning 1641' from departure end of runway, 125' right of centerline, up to 31' AGL/550' MSL. Towers beginning 2418' from departure end of runway, 402' left of centerline, up to 59' AGL/560' MSL. Tree 3016' from departure end of runway, 66' right of centerline, 43' AGL/562' MSL. **Rwy 31R**, multiple trees and bushes beginning 305' from departure end of runway, 233' right of centerline, up to 48' AGL/507' MSL. Vent on building 919' from departure end of runway, 399' right of centerline, 15' AGL/474' MSL.

## PALMDALE, CA

PALMDALE RGNL/USAF PLANT 42

TAKE-OFF MINIMUMS: **Rwy 22**, 1000-1 or std. with a min. climb of 260' per NM to 4200.

DEPARTURE PROCEDURE: **Rwys 4, 7**, turn left.

**Rwy 22, 25**, turn right. Eastbound V12, J6 climb on course. All others climb on R-298 to FISCH Int. (northwestbound climb in holding pattern SE, left turns, 298° inbound. Depart at 8100), continue climb direct PMD VORTAC to depart at or above published MCA.

## PASO ROBLES, CA

PASO ROBLES MUNI

DEPARTURE PROCEDURE: All departures maintain 250 kts or less until inbound to PRB. **Rwy 1**, climb to 3000 via heading 280° to intercept PRB R-326 outbound. V248 northbound climb on course. All others climbing right turn to 4500 direct PRB. **Rwy 13**, climb to 3000 via heading 160° to intercept PRB R-133 outbound. V25 southbound continue climb on course. All others climbing right turn to 4500 direct PRB. **Rwy 19**, climb to 3000 via heading 150° to intercept PRB R-179 outbound. V113 southbound continue climb on course. All others climbing left turn to 4500 direct PRB. **Rwy 31**, climb to 3000 via heading 340° to intercept PRB R-326 outbound. V248 northbound climb on course. All others climbing right turn to 4500 direct PRB.

## POINT MUGU NAS (NAVAL BASE VENTURA CO) (KNTD)

OXNARD, CA 06215

**Rwy 3**: Diverse departures authorized 210° to 250° CW. Turn left to assigned heading within 3 DME of NTD TACAN. Do not exceed 310 KIAS until established on assigned heading.

**Rwy 9**: Diverse departures not authorized.

**Rwy 21**: Diverse departures authorized 150° to 250° CW.

**Rwy 27**: Diverse departures authorized 150° to 250° CW. Turn left to assigned heading.

Expect RADAR vectors for other assigned departure headings. **Rwy 3-21** Obstacle Identification Surface begins 10' above departure end of rwy.

CAUTION: Mountainous terrain NW thru SE.

TKOF OBSTACLES: **Rwy 3**: 90' MSL (77' AGL) Tower, 3005' past DER, 1237' left of centerline. **Rwy 21**: 42' MSL (31' AGL) Bldg, 1228' past DER, 782' right of centerline.

## RAMONA, CA

RAMONA

TAKE-OFF MINIMUMS: **Rwy 9**, CAT A, B 1100-2 or 700-1 with min. climb of 260' per NM to 2700. CAT C 2800-2 or 700-2 with a min climb of 360' per NM to 4600. **Rwy 27**, 800-2 or std. with a min. climb of 280' per NM to 2400.

DEPARTURE PROCEDURE: **Rwy 9**, turn left. **Rwy 27**, turn right. Climb to 5000 via OCN R-100 to intercept MZB R-007 to BONDO Int. Continue climb via V208/458 to at or above MEA.

## REDLANDS, CA

REDLANDS MUNI

TAKE-OFF MINIMUMS: **Rwy 8**, NA. **Rwy 26**, 1700-2 or std. with a min. climb of 300' per NM to 4000.

DEPARTURE PROCEDURE: Climbing left turn direct PDZ VORTAC. Aircraft departing PDZ VORTAC R-091 CW R-140 and R-231 CW R-280 climb on course. All others continue in PDZ VORTAC holding pattern (hold NE, right turns, 210° inbound) to cross PDZ VORTAC at or above, R-281 CW R-090, 7700; R-141 CW R-230, 4900.

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## RIALTO, CA

### RIALTO MUNI-MIRO FIELD

TAKE-OFF MINIMUMS: **Rwys 17, 35, NA.**

DEPARTURE PROCEDURE: **Rwy 6**, climbing right turn. **Rwy 24**, climbing left turn. **All aircraft** climb via PDZ R-012 to PDZ VORTAC. Aircraft departing PDZ R-091 CW R-140 and R-231 CW R-280 climb on course. All others continue climb in PDZ holding pattern (NE, right turns, 210° inbound) to cross PDZ VORTAC at or above: R-281 CW R-090, 6700; R-141 CWR-230, 4000.

## RIVERSIDE, CA

### RIVERSIDE MUNI

TAKE-OFF MINIMUMS: **Rwy 9, CAT A,B** 1200-2 or std. with a min. climb of 210' per NM to 2300. CAT C,D 2100-2 or std. with a min. climb of 240' per NM to 3500. **Rwy 16, NA. Rwy 27, CAT C,D** 2400-2 or std. with a min. climb of 230' per NM to 3800. **Rwy 34, CAT A,B** 700-2 or std. with a min. climb of 400' per NM to 1600. CAT C,D 1600-2 or std. with a min. climb of 400' per NM to 2600.

DEPARTURE PROCEDURE: **Rwy 9**, climbing right turn. **Rwy 34**, climbing left turn. **Rwy 27**, climb heading 280° to 2000, then climbing left turn. **All aircraft** climb direct PDZ VORTAC. Aircraft departing PDZ R-091 CW R-140 and R-231 CW R-280 climb on course. All others continue climb in PDZ holding pattern (NE, right turns, 210° inbound) to cross PDZ VORTAC at or above: R-281 CW R-090, 6700; R-141 CWR-230, 4000; or Airway MEA.

## SAN BERNARDINO, CA

### SAN BERNARDINO INTL

TAKE-OFF MINIMUMS: **Rwy 6, CAT A,B** 2100-2 or std. with a min. climb of 340' per NM to 3700. CAT C,D 3100-2 or std. with a min. climb of 480' per NM to 4600. DEPARTURE PROCEDURE: **Rwy 6**, climbing right turn. **Rwy 24**, climbing left turn. **All aircraft** climb direct PDZ VORTAC. Aircraft departing PDZ R-091 CW R-140 and R-231 CW R-280 climb on course. All others continue climb in PDZ holding pattern (Hold NE, right turns, 210° inbound) to cross PDZ VORTAC at or above: R-281 CWR-090, 7700; R-141 CWR-230, 4900.

## SAN CLEMENTE ISLAND NALF (FREDERICK SHERMAN FLD) (NUC)

### SAN CLEMENTE ISLAND, CA

**Rwy 5:** Diverse departures authorized 090° to 233° CCW.

**Rwy 23:** Diverse departures authorized 160° to 053° CW.

TAKEOFF OBSTACLES: **Rwy 5, 197'** telephone pole, 44' past DER, 273' right of centerline.

## SAN DIEGO, CA

### BROWN FIELD MUNI (SDM)

#### AMDT 3A 08297 (FAA)

TAKE-OFF MINIMUMS: **Rwy 8L, CAT A,B** 1900-2 or std. w/min. climb of 460' per NM to 2600. Cat. C,D 3100-3 or std. w/min. climb of 520' per NM to 3900.

**Rwys 8R, 26L, NA - ATC.**

DEPARTURE PROCEDURE: **Rwy 8L**, climbing left turn. **Rwy 26R**, climbing right turn. **All aircraft**, climb heading 280° to intercept MZB R-160 northwestbound to MZB VORTAC.

NOTE: **Rwy 26R**, trees 2184' from departure end of runway, 778' left of centerline, 60' AGL/561' MSL.

### MONTGOMERY FIELD

TAKE-OFF MINIMUMS: **Rwy 5, 1500-2** or std. with a min. climb of 290' per NM to 1700.

DEPARTURE PROCEDURE: **Rwys 5, 10L/R**, climbing right turn. **Rwys 28L/R**, climbing left turn. **All aircraft** climb direct to MZB VORTAC. Aircraft departing MZB R-090 CW R-360 climb on course. All others climb in MZB holding pattern (W, right turns, 075° inbound) to cross MZB VORTAC at or above 1800.

### SAN DIEGO INTL

TAKE-OFF MINIMUMS: **Rwy 9, CAT A,B** 400-1 or 300-1 with a min. climb of 610' per NM to 600. CAT C,D 300-1 with a min. climb of 610' per NM to 2300. **Rwy 27, 300-1½** or std. with a min. climb of 317' per NM to 400.

DEPARTURE PROCEDURE: **Rwy 9**, climb runway heading to 600, then climbing left turn direct MZB VORTAC. **Rwy 27**, climb runway heading to 900, then climbing right turn direct MZB VORTAC. Aircraft departing MZB VORTAC R-180 CW R-360 climb on course. All others climb in MZB VORTAC holding pattern (W, right turns, 075° inbound) to cross MZB VORTAC at or above 2000.

NOTE: **Rwy 9**, trees 792' from departure end of runway, 142' left of centerline, 60' AGL/99' MSL. Antenna 740' from departure end of runway, 302' right of centerline, 62' AGL/82' MSL. Antenna 1946' from departure end of runway, 969' left of centerline, 126' AGL/192' MSL. Trees 1377' from departure end of runway, 285' left of centerline, 80' AGL/135' MSL. Trees 4625' from departure end of runway, 1414' left of centerline, 250' AGL/385' MSL. **Rwy 27**, trees 1 mile from departure end of runway, 685' right of centerline, 220' AGL/253' MSL. Trees 3118' from departure end of runway, 846' right of centerline, 120' AGL/149' MSL. Flagpole 2511' from departure end of runway, 700' left of centerline, 90' AGL/116' MSL.

## SAN DIEGO (EL CAJON), CA

### GILLESPIE FIELD

TAKE-OFF MINIMUMS: **Rwys 9L, 9R, 900-2** or std. with a min. climb of 1000' per NM to 1600. **Rwy 17, 500-1** or std. with a min. climb of 260' per NM to 800.

**Rwys 27L, 27R, CAT A,B** 500-1 or std. with a min. climb of 370' per NM to 900. CAT C,D 2500-2 or std. with a min. climb of 370' per NM to 2500. **Rwy 35, 1300-2** or std. with a min. climb of 460' per NM to 1800.

DEPARTURE PROCEDURE: **Rwy 9L, 9R, 27L, 27R**, climbing right turn. **Rwys 17, 35**, climbing left turn. **All aircraft** climb via heading 165° and MZB R-076 to MZB VORTAC.

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## SAN LUIS OBISPO, CA

### SAN LUIS COUNTY RGNL

TAKE-OFF MINIMUMS: **Rwys 7, 25**, NA. **Rwy 11**, 1800-2 or std. with a min. climb of 320' per NM to 2300. **Rwy 29**, 1200-2 or std. with a min. climb of 390' per NM to 1700.

DEPARTURE PROCEDURE: **Rwy 11**, climb runway heading to 900, then climbing right turn direct MQO VORTAC. **Rwy 29**, climb via runway heading and MQO R-050 to MQO VORTAC. **All aircraft** departing on MQO R-130 CW R-320 climb on course. All others continue climbing in MQO holding pattern (SE, left turns, 306° inbound) to cross MQO VORTAC at or above 4000.

## SAN NICOLAS ISLAND NOLF (NSI)

### SAN NICOLAS ISLAND, CA

Rwy 12: Diverse departures authorized 300° to 120° CW.

Rwy 30: Diverse departures not authorized. Rwy 30 climb heading 300° to 1300', then turn right to assigned heading.

Rwy 12-30 Obstacle identification surface begins 10 ft above departure end of runway.

TKOFF OBSTACLES: Rwy 30: 1076' MSL (589' AGL) Tower, 2805' past DER, 1882' left of centerline.

## SANTA ANA, CA

### JOHN WAYNE AIRPORT-ORANGE COUNTY

DEPARTURE PROCEDURE: **All runways** climb runway heading to 700. **Rwys 1L, 1R**, turn left. **Rwys 19L, 19R**, turn right. **All aircraft** climb direct SLI VORTAC. Aircraft departing SLI R-040 CW R-345 climb on course. All others continue climbing via SLI R-171 southbound then climbing right turn direct SLI VORTAC to cross at or above 4600.

## SANTA BARBARA, CA

### SANTA BARBARA MUNI

TAKE-OFF MINIMUMS: **Rwy 7**, std. with a min. climb of 280' per NM to 1200, or 1900-2½ for climb in visual conditions. **Rwy 33L, 33R**, NA-ATC.

DEPARTURE PROCEDURE: **Rwy 7**, climbing right turn via heading 170°, thence... or for climb in visual conditions: cross Santa Barbara Muni Airport southbound at or above 1900, thence... **Rwys 15L, 15R**, climb via heading 152°, thence... **Rwy 25**, climbing left turn via heading 155°, thence...

...then via RZS R-185 to GOLET INT, climb in GOLET INT holding pattern (SE, right turns, 307° inbound), to cross GOLET INT at or above MEA for route of flight, before proceeding on course.

NOTE: **Rwy 7**, obstruction light on DME antenna, road and numerous trees beginning 350' from departure end of runway, 101' right of centerline, up to 55' AGL/74' MSL. Antennas, poles, tower, and numerous trees beginning 194' from departure end of runway, 11' left of centerline, up to 79' AGL/98' MSL. **Rwy 15L**, numerous trees beginning 1242' from departure end of runway, 119' right of centerline, up to 100' AGL/159' MSL. **Rwy 15R**, sign and numerous trees beginning 29' from departure end of runway, 94' right of centerline, up to 100' AGL/159' MSL. Tree 1325' from departure end of runway, 243' left of centerline, 19' AGL/59' MSL. **Rwy 25**, trees beginning 1999' from departure end of runway, 793' right of centerline, up to 67' AGL/86' MSL.

## SANTA MARIA, CA

### SANTA MARIA PUBLIC/ CAPTAIN G. ALLAN HANCOCK FIELD

TAKE-OFF MINIMUMS: **Rwy 12**, CAT C,D 3400-2 or std. with a min. climb of 310' per NM to 3600. **Rwy 20**, CAT A,B 1300-2 or std. with a min. climb of 250' per NM to 1500; CAT C,D 1600-2 or std. with a min. climb of 250' per NM to 2100.

DEPARTURE PROCEDURE: **Rwys 2, 12**, climbing left turn. **Rwy 20**, climbing right turn. **Rwy 30**, climb via runway heading. **All aircraft** climb direct GLJ VOR. Continue climb via GLJ R-300 northwestbound to 2000, then continue climbing direct MQO VORTAC.

NOTE: 400' - 550' trees beginning ¾ mile from departure end of Rwy 12.

## SANTA MONICA, CA

### SANTA MONICA MUNI

TAKE-OFF MINIMUMS: **Rwy 3**, std. w/min. climb of 325' per NM to 1100, or 1200-3 for climb in visual conditions. **Rwy 21**, std. w/min. climb of 215' per NM to 4000, or 1200-3 for climb in visual conditions.

DEPARTURE PROCEDURE: **Rwy 3**, climbing right turn to 5000 via SMO R-210 and LAX R-276 to SADDE INT, or for climb in visual conditions: cross SMO VOR/DME at or above 1200 then continue climb to 5000 via SMO R-210 and LAX R-276 to SADDE INT. **Rwy 21**, climb to 5000 via SMO R-210 and LAX R-276 to SADDE INT, or for climb in visual conditions: cross SMO VOR/DME at or above 1200, then climb to 5000 via SMO R-210 and LAX R-276 to SADDE INT.

NOTE: **Rwy 3**, multiple signs and trees beginning 19' from departure end of runway, 300' right of centerline, up to 36' AGL/211' MSL, tower 5488' from departure end of runway, 1902' right of centerline, 150' AGL/325' MSL, light standard 19' from departure end of runway, 176' right of centerline, 6' AGL/181' MSL, multiple trees beginning 325' from departure end of runway, 227' left of centerline, up to 34' AGL/209' MSL, sign 56' from departure end of runway, 185' left of centerline, 6' AGL/181' MSL. **Rwy 21**, multiple trees and poles beginning 140' from departure end of runway, 247' right of centerline, up to 81' AGL/196' MSL, antenna on building 280' from departure end of runway, 486' right of centerline, 35' AGL/150' MSL, VOR 101' from departure end of runway, 255' left of centerline, 7' AGL/122' MSL.

## SANTA YNEZ, CA

### SANTA YNEZ

TAKE-OFF MINIMUMS: **Rwy 8**, CAT C,D 1100-2 or std. with a min. climb of 280' per NM to 2000.

DEPARTURE PROCEDURE: **Rwy 8**, turn left, climb to 6000 heading 260° and V27 to ORCUT Int. **Rwy 26**, climb to 6000 via RZS R-275 and V27 to ORCUT Int.

## SHAFTER, CA

### SHAFTER-MINTER FIELD

DEPARTURE PROCEDURE: **Rwys 12, 17**, turn right. **Rwys 30, 35**, turn left. Climb westbound to 4000 via V248. Westbound aircraft continue at 4000 on course. Eastbound aircraft turn right at 4000 direct EHF VORTAC.

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## TORRANCE, CA

### ZAMPERINI FIELD

TAKE-OFF MINIMUMS: **Rwys 11L, 11R**, 400-1 or std. with a min. climb of 325' per NM to 500.

DEPARTURE PROCEDURE: **Rwys 29L, 29R**, climb runway heading. **Rwys 11L, 11R**, climbing left turn to heading 290°. Both departures climb to 3000, intercept LAX R-170 to LIMBO Int.

## TWENTYNINE PALMS, CA

### TWENTYNINE PALMS

TAKE-OFF MINIMUMS: **Rwy 17, NA. Rwys 8, 26, 35**, std. with a min. climb of 280' per NM to 5500.

DEPARTURE PROCEDURE: **Rwys 8, 26, 35**, turn right direct TNP VORTAC. Eastbound on V264 continue climb on course. All others climb in TNP holding pattern (E, left turns, 255° inbound) to cross TNP VORTAC at or above 6000 before proceeding on course. Northeast bound on V514-538 cross TNP VORTAC at or above 7900.

## TWENTYNINE PALMS SELF (NXP)

### TWENTYNINE PALMS, CA ..... 07354

Diverse departure not authorized.

## UPLAND, CA

### CABLE

TAKE-OFF MINIMUMS: **Rwy 6**, 300-1 or std. with a min. climb of 240' per NM to 1900.

DEPARTURE PROCEDURE: **Rwy 6**, climbing right turn. **Rwy 24**, climbing left turn. All aircraft climb direct PDZ VORTAC. Aircraft departing PDZ R-091 CW R-140 and R-231 CW R-280 climb on course. All others continue climb in PDZ holding pattern (E, right turns, 258° inbound) to cross PDZ VORTAC at or above: R-281 CW R-090, 6700; R-141 CW R-230, 4000.

## VAN NUYS, CA

### VAN NUYS

TAKE-OFF MINIMUMS: **Rwys 16L, 16R**, 2500-2 or std. with a min. climb of 300' per NM to 3800. **Rwys**

**34L, 34R**, 3300-2 or std. with a min. climb of 425' per NM to 4500.

DEPARTURE PROCEDURE: **Rwys 16L, 16R**, climbing left turn. **Rwys 34L, 34R**, climbing right turn. All aircraft intercept VNY R-095 to DARTS Int. Aircraft eastbound via V186 and southeastbound via V459 climb on course. All others, continue climbing right turn direct VNY VOR/DME before proceeding on course.

## VANDENBERG AFB (KVBG)

### LOMPOC, CA ..... 07158

**Rwy 12**: GAVIATO ONE, 300-1.5\*

**Rwy 12/30**: All departures (GAVIATO ONE, VANDENBERG ONE, Diverse Departures Rwy 12/30, VCOA Rwy 12/30) CROSS DER AT OR ABOVE 35'.

**Rwy 12**: Diverse Departure Authorized: 6500-3 or standard with minimum climb rate of 310' NM to 8800, cross DER at or above 35' AGL/404' MSL.

**Rwy 30**: Diverse Departure Authorized: Standard, Cross DER at or above 35' AGL/274' MSL. Authorized between 185° CW to 314° only.

\* Or standard with minimum climb of 290 ft/NM to 2000.

TAKE-OFF OBSTACLES: **Rwy 12** trees 40' AGL/479' MSL, 3814' from DER, 1126' right of centerline. Road with possible vehicles 10' AGL/443' MSL, 2961' from DER, 360' right of centerline. Trees 200' AGL/594' MSL, 1.3 NM from DER, 795' right of centerline. Trees 200' AGL/600' MSL, 1.1 NM from DER, 2250' right of centerline. Trees 200' AGL/604' MSL, 1.0 NM from DER, 90' right of centerline. Trees 200' AGL/600' MSL, 1.4 NM from DER, 2665' left of centerline. Trees 200' AGL/620' MSL, 6051' from DER, 2044' left of centerline. Trees 50' AGL/1375' MSL, 3.2 NM from DER, 5.0 NM left of centerline. Trees 107' AGL/546' MSL, 4548' from DER, 1479' right of centerline.

**Rwy 12/30** VCOA: For climb in Visual Conditions 2200-3, remain within 6.5 NM from airport, cross Vandenberg airport at or above 2400, then proceed as filed. Maximum airspeed 250 kts. Note: Aircrews must notify ATC prior to executing this VCOA procedure.

## VICTORVILLE, CA

### SOUTHERN CALIFORNIA LOGISTICS

TAKE-OFF MINIMUMS: **Rwy 3**, std. w/min. climb of 266' per NM to 3500 or 5300-3 for climb in visual conditions.

DEPARTURE PROCEDURE: **Rwy 3**, climbing left turn heading 220°, thence... or for climb in visual conditions cross Southern California Logistics Airport at or above 8000 MSL before proceeding on course. **Rwys 17, 21**, climbing right turn heading 325°, thence... **Rwy 35**, climbing left turn heading 220°, thence...

... All aircraft climb via VCV VOR/DME R-269 to ETHER INT. Continue climb in ETHER holding pattern (NE PMD VORTAC, left turn, 247° inbound) to MEA for direction of flight.

NOTE: **Rwy 3**, pole 408' from departure end of runway, 511' right of centerline, 29' AGL/2873' MSL. Terrain beginning 153' from departure end of runway, 41' right of centerline, up to 3196' MSL. Terrain beginning 17' from departure end of runway, 104' left of centerline, up to 2855' MSL. Tree 2.1 NM from departure end of runway, 3735' right of centerline, 50' AGL/3269' MSL. **Rwy 17**, sign 248' from departure end of runway, 277' left of centerline, 14' AGL/2896' MSL. Antenna on building 701' from departure end of runway, 203' left of centerline, 20' AGL/2902' MSL.

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