U.S. Terminal Procedures Publication
Southwest (SW) Vol 2 of 4

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Consult the Change Notice (CN) effective 28 DEC 2023 for revised Instrument Procedure Charts for this volume

Consult NOTAMs for latest information
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CORRECTIONS, COMMENTS AND/OR PROCUREMENT

FOR CHARTING ERRORS, OR FOR CHANGES, ADDITIONS, RECOMMENDATIONS ON PROCEDURAL
ASPECTS CONTACT:
FAA, Aeronautical Information Services
1305 East-West Highway
SSMC 4, Room 4531
Silver Spring, MD 20910-3281
Telephone: 1-800-638-8972
https://www.faa.gov/air_traffic/flight_info/aeronav/aero_data/

For inquiries regarding military charts, please contact aerohelp@nga.mil

FOR PROCUREMENT:
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https://www.faa.gov/air_traffic/flight_info/aeronav/print_providers/

Frequently asked questions (FAQ) are answered on our website at: https://www.faa.gov/go/ais
See the FAQs prior to contact via toll free number or email.

Request for the creation or revisions to Airport Diagrams should be in accordance with FAA Order 7910.4
INOPERATIVE COMPONENTS OR VISUAL AIDS TABLE  
(For Civil Use Only)

Straight-in and Sidestep landing minimums published on instrument approach procedure charts are based on full operation of all components and visual aids (see exception below for ALSF 1 & 2) associated with the particular approach chart being used. Higher minimums are required with inoperative components or visual aids as indicated below. If more than one component is inoperative, each minimum is raised to the highest minimum required by any single component that is inoperative. ILS glideslope inoperative minimums are published on the instrument approach charts as localizer minimums. This table applies to approach categories A thru D and is to be used unless amended by notes on the approach chart. Such notes apply only to the particular approach category(ies) as stated. Category E inoperative notes will be specified when published on civil charts. The inoperative table does not apply to Circling minimums. See legend page for description of components indicated below.

Full Operation Exception: For ALSF 1 & 2 operated as SSALR, or when the sequenced flashing lights are inoperative, there is no effect on visibility for ILS lines of minima.

1. ILS, PAR, LPV, GLS minima

<table>
<thead>
<tr>
<th>Inoperative Component or Visual Aid</th>
<th>Increase Visibility</th>
</tr>
</thead>
<tbody>
<tr>
<td>All ALS types (except ODALS)</td>
<td>¼ mile</td>
</tr>
</tbody>
</table>

2. ILS, LPV, GLS with visibility minima of RVR 1800†/2000*/2200*

<table>
<thead>
<tr>
<th>Inoperative Component or Visual Aid</th>
<th>Increase Visibility</th>
</tr>
</thead>
<tbody>
<tr>
<td>ALSF 1 &amp; 2, MALSR, SSALR</td>
<td>To RVR 4000†</td>
</tr>
<tr>
<td></td>
<td>To RVR 4500*</td>
</tr>
<tr>
<td>TDZL or RCLS</td>
<td>To RVR 2400#</td>
</tr>
<tr>
<td>RVR</td>
<td>To ½ mile</td>
</tr>
</tbody>
</table>

*For ILS, LPV, GLS procedures with a 200 foot HAT, RVR 1800 authorized with use of FD or AP or HUD to DA.

3. All Approach Types and all lines of minima other than (1) & (2) above

<table>
<thead>
<tr>
<th>Inoperative Component or Visual Aid</th>
<th>Increase Visibility</th>
</tr>
</thead>
<tbody>
<tr>
<td>ALSF 1 &amp; 2, MALSR, SSALR</td>
<td>½ mile</td>
</tr>
<tr>
<td>MALSF, MALS, SSALF, SSALS, SALS, SALS</td>
<td>¼ mile</td>
</tr>
</tbody>
</table>

4. Sidestep minima (CAT C-D)

<table>
<thead>
<tr>
<th>Inoperative Component or Visual Aid</th>
<th>Increase Visibility</th>
</tr>
</thead>
<tbody>
<tr>
<td>ALSF 1 &amp; 2, MALSR, SSALR</td>
<td>½ mile</td>
</tr>
</tbody>
</table>

5. All Approach Types, All lines of minima

<table>
<thead>
<tr>
<th>Inoperative Component or Visual Aid</th>
<th>Increase Visibility</th>
</tr>
</thead>
<tbody>
<tr>
<td>ODALS (CAT A-B)</td>
<td>¼ mile</td>
</tr>
<tr>
<td>ODALS (CAT C-D)</td>
<td>½ mile</td>
</tr>
</tbody>
</table>
TERMS/LANDING MINIMA DATA

IFR LANDING MINIMA

The United States Standard for Terminal Instrument Procedures (TERPS) is the approved criteria for formulating instrument approach procedures. Landing minima are established for six aircraft approach categories (ABCDE and COPTER). In the absence of COPTER MINIMA, helicopters may use the CAT A minimums of other procedures.

LANDING MINIMA FORMAT

In this example airport elevation is 1179, and runway touchdown zone elevation is 1152.

<table>
<thead>
<tr>
<th>CATEGORY</th>
<th>DA</th>
<th>Aircraft Approach Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>S-ILS 27</td>
<td>1352/24</td>
<td>200 (200-1/2)</td>
</tr>
<tr>
<td>S-LOC 27</td>
<td>1440/24</td>
<td>288 (300-1/2)</td>
</tr>
<tr>
<td>CIRCLING</td>
<td>1540</td>
<td>641 (400-1)</td>
</tr>
<tr>
<td>361 (400-1)</td>
<td>461 (500-1)</td>
<td>461 (500-1½)</td>
</tr>
<tr>
<td>561 (600-2)</td>
<td>1740-2</td>
<td></td>
</tr>
</tbody>
</table>

MDA: Minimum Descent Altitude
HAA: Highest Altitude of Approach

Visibility in Statute Miles

COPTER MINIMA ONLY

<table>
<thead>
<tr>
<th>CATEGORY</th>
<th>COPTER</th>
</tr>
</thead>
<tbody>
<tr>
<td>H-176°</td>
<td>680-1/2</td>
</tr>
<tr>
<td>363</td>
<td>(400-1/2)</td>
</tr>
</tbody>
</table>

Copter Approach Direction

Height of MDA/DA Above Landing Area (HAL)

NOTE: The symbol indicates outages of the WAAS vertical guidance may occur daily at this location due to initial system limitations. WAAS NOTAMS for vertical outages are not provided for this approach. Use LNAV minima for flight planning at these locations, whether as a destination or alternate. For flight operations at these locations, when the WAAS avionics indicate that LNAV/VNAV or LPV service is available, then vertical guidance may be used to complete the approach using the displayed level of service. Should an outage occur during the procedure, reversion to LNAV minima may be required. As the WAAS coverage is expanded, the symbol will be removed.

RNAV minimums are dependent on navigation equipment capability, as stated in the applicable AFM, AFMS, or other FAA approved document. See AIM paragraph 5-4-5, AC 90-105 and AC 90-107 for detailed requirements for each line of minima.

COLD TEMPERATURE AIRPORTS

NOTE: A symbol indicates a cold temperature altitude correction is required at this airport when reported temperature is at or below the published temperature. See the following Cold Temperature Error Table to make manual corrections. Advise ATC with altitude correction. Advising ATC with altitude corrections is not required in the final segment. See Aeronautical Information Manual (AIM), Chapter 7, for guidance and additional information. For a complete list, see the "Cold Temperature Airports" link under the Additional Resources heading at the bottom of the following page: http://www.faa.gov/air_traffic/flight_info/aeronav/digital_products/dtpp/search/

| REPORTED TEMP °C | 200 | 300 | 400 | 500 | 600 | 700 | 800 | 900 | 1000 | 1500 | 2000 | 3000 | 4000 | 5000 |
|------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|------|------|------|------|------|
| +10              | 10  | 10  | 10  | 10  | 10  | 20  | 20  | 20  | 20  | 30   | 40   | 60   | 80   | 90   |
| -10              | 20  | 30  | 40  | 50  | 60  | 70  | 80  | 90  | 100  | 150  | 200  | 290  | 390  | 490  |
| -20              | 30  | 50  | 60  | 70  | 90  | 100 | 120 | 130 | 140  | 210  | 280  | 420  | 570  | 710  |
| -30              | 40  | 60  | 80  | 100 | 120 | 140 | 150 | 170 | 190  | 280  | 380  | 570  | 760  | 950  |
| -40              | 50  | 80  | 100 | 120 | 150 | 170 | 190 | 220 | 240  | 360  | 480  | 720  | 970  | 1210 |
| -50              | 60  | 90  | 120 | 150 | 180 | 210 | 240 | 270 | 300  | 450  | 590  | 890  | 1190 | 1500 |

COLD TEMPERATURE ERROR TABLE

HEIGHT ABOVE AIRPORT IN FEET

AIRCRAFT APPROACH CATEGORIES

Aircraft approach category indicates a grouping of aircraft based on a speed of VREF, if specified, or if VREF not specified, 1.3 VSO at the maximum certificated landing weight. VREF, VSO, and the maximum certificated landing weight are those values as established for the aircraft by the certification authority of the country of registry. Helicopters are Category A aircraft. An aircraft shall fit in only one category. When necessary to operate the aircraft at an airspeed in excess of the maximum airspeed of its certified aircraft approach category, pilots should use the applicable higher category minima.

For additional options and to ensure the aircraft remains within protected airspace, consult the AIM. See following category limits:

<table>
<thead>
<tr>
<th>MANEUVERING TABLE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
<tr>
<td>Speed (Knots)</td>
</tr>
</tbody>
</table>

TERMS/LANDING MINIMA DATA
### TERMS/LANDING MINIMA DATA

#### CIRCLING APPROACH OBSTACLE PROTECTED AIRSPACE

The circling MDA provides vertical obstacle clearance during a circle-to-land maneuver. The circling MDA protected area extends from the threshold of each runway authorized for landing following a circle-to-land maneuver for a distance as shown in the tables below. The resultant arcs are then connected tangentially to define the protected area.

#### STANDARD CIRCLING APPROACH MANEUVERING RADIUS

Circling approach protected areas developed prior to late 2012 used the radius distances shown in the following table, expressed in nautical miles (NM), dependent on aircraft approach category. The approaches using standard circling approach areas can be identified by the absence of the ☐ symbol on the circling line of minima.

<table>
<thead>
<tr>
<th>Circling MDA in feet MSL</th>
<th>Approach Category and Circling Radius (NM)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>CAT A</td>
</tr>
<tr>
<td>All Altitudes</td>
<td>1.3</td>
</tr>
</tbody>
</table>

#### EXPANDED CIRCLING APPROACH MANEUVERING AIRSPACE RADIUS

Circling approach protected areas developed after late 2012 use the radius distance shown in the following table, expressed in nautical miles (NM), dependent on aircraft approach category, and the altitude of the circling MDA, which accounts for true airspeed increase with altitude. The approaches using expanded circling approach areas can be identified by the presence of the ☑ symbol on the circling line of minima.

<table>
<thead>
<tr>
<th>Circling MDA in feet MSL</th>
<th>Approach Category and Circling Radius (NM)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>CAT A</td>
</tr>
<tr>
<td>1000 or less</td>
<td>1.3</td>
</tr>
<tr>
<td>1000-3000</td>
<td>1.3</td>
</tr>
<tr>
<td>3001-5000</td>
<td>1.3</td>
</tr>
<tr>
<td>5001-7000</td>
<td>1.3</td>
</tr>
<tr>
<td>7001-9000</td>
<td>1.4</td>
</tr>
<tr>
<td>9001 and above</td>
<td>1.4</td>
</tr>
</tbody>
</table>

#### Comparable Values of RVR and Visibility

The following table shall be used for converting RVR to ground or flight visibility. For converting RVR values that fall between listed values, use the nearest lower RVR value; do not interpolate. For example, when converting 4800 RVR, use 5000 RVR with the resultant visibility of 1 mile.

<table>
<thead>
<tr>
<th>RVR (feet)</th>
<th>Visibility (SM)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1600</td>
<td>1/2</td>
</tr>
<tr>
<td>1800</td>
<td>1/2</td>
</tr>
<tr>
<td>2000</td>
<td>2/5</td>
</tr>
<tr>
<td>2200</td>
<td>3/5</td>
</tr>
</tbody>
</table>

#### RADAR MINIMA

**Rwy GP/TCH/RPI**  
**Cat DA/ MDA-VIS**  
**HAT HAA CEIL-VIS**  
**Cat DA/ MDA-VIS**  
**HAT HAA CEIL-VIS**

<table>
<thead>
<tr>
<th>RWY GP/TCH/RPI</th>
<th>Cat DA/ MDA-VIS</th>
<th>HAT HAA CEIL-VIS</th>
<th>Cat DA/ MDA-VIS</th>
<th>HAT HAA CEIL-VIS</th>
</tr>
</thead>
<tbody>
<tr>
<td>PAR</td>
<td>ABCD</td>
<td>195/ 16</td>
<td>100</td>
<td>100 - ¼</td>
</tr>
<tr>
<td>10</td>
<td>2.5°/42/1000</td>
<td>ABCD</td>
<td>187/ 16</td>
<td>100 - ¼</td>
</tr>
<tr>
<td>28</td>
<td>2.5°/48/1068</td>
<td>AB</td>
<td>560/40</td>
<td>600/50</td>
</tr>
<tr>
<td>ASR</td>
<td>ABCD</td>
<td>560/40</td>
<td>560/50</td>
<td>560/50</td>
</tr>
<tr>
<td>10</td>
<td>AB</td>
<td>560/40</td>
<td>560/50</td>
<td>560/50</td>
</tr>
<tr>
<td>28</td>
<td>AB</td>
<td>600/50</td>
<td>600/50</td>
<td>600/50</td>
</tr>
<tr>
<td>CIR</td>
<td>AB</td>
<td>600/50</td>
<td>600/50</td>
<td>600/50</td>
</tr>
<tr>
<td>10</td>
<td>AB</td>
<td>600/50</td>
<td>600/50</td>
<td>600/50</td>
</tr>
<tr>
<td>28</td>
<td>AB</td>
<td>600/50</td>
<td>600/50</td>
<td>600/50</td>
</tr>
</tbody>
</table>

Radar Minima:

1. Minima shown are the lowest permitted by established criteria. Pilots should consult applicable directives for their category of aircraft.
2. The circling MDA and weather minima to be used are those for the runway to which the final approach is flown - not the landing runway. In the above RADAR MINIMA example, a category C aircraft flying a radar approach to runway 10, circling to land on runway 28, must use an MDA of 560 feet with weather minima of 500-1/₂.

Note: Military RADAR MINIMA may be shown with communications symbology that indicates emergency frequency monitoring capability by the radar facility as follows: (E) VHF and UHF emergency frequencies monitored  
(U) VHF emergency frequency (121.5) monitored  
(V) VHF emergency frequency (243.0) monitored

Additionally, unmaintained frequencies which are available on request from the controlling agency may be annotated with an "x".

Alternate Minimums not standard. Civil users refer to tabulation. USA/USN/USAF pilots refer to appropriate regulations.

Airport is published in the Takeoff Minimums, (Obstacle) Departure Procedures, and Diverse Vector Area (Radar Vectors) tabulation.

### TERMS/LANDING MINIMA DATA
GENERAL INFORMATION

This publication is issued every 56 days and includes Standard Instrument Approach Procedures (SIAPs), Standard Instrument Departures (SIDs), Standard Terminal Arrivals (STARs), IFR Takeoff Minimums and (Obstacle) Departure Procedures (ODPs), IFR Alternate Minimums, and Radar Instrument Approach Minimums for use by civil and military aviation. The organization responsible for SIAPs, Radar Minimums, SIDs, STARs and graphic ODPs is identified in parentheses in the top margin of the procedure; e.g., (FAA), (FAA-O), (USA), (USAF), (USN). SIAPs with the (FAA) and (FAA-O) designation are regulated under 14 CFR, Part 97. SIAPs with the (FAA-O) designation have been developed under Other Transaction Agreement (OTA) by private providers and have been certified by the FAA. See 14 CFR, Part 91.175 (a) and the AIM for further details. 14 CFR, Part 91.175 (g) and the Special Notices section of the Chart Supplement contain information on civil operations at military airports.

The FAA uses an internal numbering system on all charts in the TPP. This Approach and Landing (AL) number is located on the top center margin of the chart followed by the organization responsible for the procedure in parentheses, e.g., AL-18 (FAA), AL-11919 (FAA-O). Military procedures do not show AL number, but do show the appropriate authority for the procedure, e.g., (USAF).

CHART CURRENCY INFORMATION

Date of Latest Revision 09365

The Date of Latest Revision identifies the Julian date the chart was added or last revised for any reason. The first two digits indicate the year, the last three digits indicate the day of the year (001 to 365/6) in which the latest revision of any kind has been made to the chart.

FAA Procedure Amendment Number Orig 31DEC09 Procedure Amendment Effective Date Amdt 28 12MAR09

The FAA Procedure Amendment Number represents the most current amendment of a given procedure. The Procedure Amendment Effective Date represents the AIRAC cycle date on which the procedure amendment was incorporated into the chart. Updates to the amendment number & effective date represent procedural/criteria revisions to the charted procedure, e.g., course, fix, altitude, minima, etc. On Departure Procedures and Standard Terminal Arrivals, procedural revisions to the current chart are indicated by an upnumber to the procedure title with the procedure amendment effective date following. On Radar Minima, Takeoff Minimums and (Obstacle) Departure Procedures and Diverse Vector Areas, the FAA Procedure Amendment Number, Procedure Effective Date, and the Julian Date of Last Revision will be shown on the same line, e.g., AMDT 2 10DEC15 (15344).

MISCELLANEOUS

* Indicates a non-continuously operating facility, see Chart Supplement.

For Civil (FAA) instrument procedures, "RADAR REQUIRED" in the planview of the chart indicates that ATC radar must be available to assist the pilot when transitioning from the en route environment. "Radar required" in the pilot briefing portion of the chart indicates that ATC radar is required on portions of the procedure outside the final approach segment, including the missed approach. Some military procedures also have equipment requirements such as "Radar Required", but do not conform to the same charting application standards used by the FAA.

Distances are in nautical miles (except visibility in statute miles and Runway Visual Range in hundreds of feet). Runway dimensions are in feet. Elevations are in feet, Mean Sea Level (MSL). Ceilings are in feet above airport elevation. Radials/bearings/headings/courses are magnetic. Horizontal Datum: Unless otherwise noted on the chart, all coordinates are referenced to North American Datum 1983 (NAD 83), which for charting purposes is considered equivalent to World Geodetic System 1984 (WGS 84).

Terrain is scaled within the neat lines (planview boundaries) and does not accurately underlie not-to-scale distance depictions or symbols.
GENERAL INFO 23334

STANDARD TERMINAL ARRIVALS AND DEPARTURE PROCEDURES

The use of the associated codified STAR/DP and transition identifiers are requested of users when filing flight plans online. It must be noted that when filing a STAR/DP with a transition, the first three coded characters of the STAR and the last three coded characters of the DP are replaced by the transition code. Examples: ACTON SIX ARRIVAL, file (AQN.AQN6); ACTON SIX ARRIVAL, EDNAS TRANSITION, file (EDNAS.AQN6); FREEHOLD THREE DEPARTURE, file (FREH3.RBV), FREEHOLD THREE DEPARTURE, ELWOOD CITY TRANSITION, file (FREH3.EWC).

PROCEDURE PBN/EQUIPMENT REQUIREMENTS

Users will begin to see Performance-Based Navigation (PBN) Requirements and Equipment Requirements on Instrument Approach Procedures (IAPs), RNAV STARs and RNAV DPs prominently displayed in separate, standardized notes boxes. For procedures with PBN elements, the PBN box will contain the procedure's navigation specification(s); and, if required: specific sensors or infrastructure needed for the navigation solution; any additional or advanced functional requirements; the minimum Required Navigation Performance (RNP) value and any amplifying remarks. Items listed in this PBN box are REQUIRED for the procedure's PBN elements. The Equipment Requirements Box will list non-PBN requirements. On charts with both PBN elements and equipment requirements, the PBN requirements box will be listed first. The publication of these notes will continue incrementally until all charts have been amended to comply with the new standard.

IAP PBN/Equipment Requirements Notes Box

From WINRZ, UBGE: RNAV-1 GPS, RNAV-1GPS from MAP to YARKU.
DME required for LOC only.

Circling to Rwy 25 NA at night.
# For inop MALSR increase S-ILS 16R all cats visibility to 2½ SM.

RNAV STAR and DP PBN/Equipment Requirements Notes Box

RNAV 1 - DME/DME/IRU or GPS
RADAR required

PILOT CONTROLLED AIRPORT LIGHTING SYSTEMS

Reference the Chart Supplement for detailed information on pilot controlled lighting (PCL) systems.

Available FAA standard approach lighting systems are charted as a negative symbol to indicate pilot controlled lighting, e.g.,  or .

Available airport lighting systems that are charted as notes, e.g. REIL, MIRL, are shown with a negative "" symbol beside the name to indicate pilot controlled lighting.

To activate lights, use frequency indicated in the communication section of the chart with a or the appropriate lighting system identification e.g., UNICOM 122.8 or .

KEY MIKE
7 times within 5 seconds  Highest intensity available
5 times within 5 seconds  Medium or lower intensity (Lower REIL or REIL-off)
3 times within 5 seconds  Lowest intensity available (Lower REIL or REIL-off)

FUNCTION
### ABBREVIATIONS

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>AAUP</td>
<td>Attention All Users Page</td>
</tr>
<tr>
<td>ADF</td>
<td>Automatic Direction Finder</td>
</tr>
<tr>
<td>ADIZ</td>
<td>Air Defense Identification Zone</td>
</tr>
<tr>
<td>AFIS</td>
<td>Automatic Flight Information Service</td>
</tr>
<tr>
<td>ALS</td>
<td>Approach Light System</td>
</tr>
<tr>
<td>ALSF</td>
<td>Approach Light System with Sequenced Flashing Lights</td>
</tr>
<tr>
<td>AOB</td>
<td>At or Below</td>
</tr>
<tr>
<td>AP</td>
<td>Autopilot System</td>
</tr>
<tr>
<td>APCH</td>
<td>Approach</td>
</tr>
<tr>
<td>APP CON</td>
<td>Approach Control</td>
</tr>
<tr>
<td>AR</td>
<td>Authorization Required</td>
</tr>
<tr>
<td>ASOS</td>
<td>Automated Surface Observing System</td>
</tr>
<tr>
<td>ASR/PAR</td>
<td>Published Radar Minimums at this Airport</td>
</tr>
<tr>
<td>ASSC</td>
<td>Airport Surface Surveillance Systems</td>
</tr>
<tr>
<td>ATIS</td>
<td>Automated Terminal Information Service</td>
</tr>
<tr>
<td>AUNICOM</td>
<td>Automated UNICOM</td>
</tr>
<tr>
<td>AWOS</td>
<td>Automated Weather Observing System</td>
</tr>
<tr>
<td>AZ</td>
<td>Azimuth</td>
</tr>
<tr>
<td>BC</td>
<td>Back Course</td>
</tr>
<tr>
<td>BND</td>
<td>Bound</td>
</tr>
<tr>
<td>C</td>
<td>Circling</td>
</tr>
<tr>
<td>CAT</td>
<td>Category</td>
</tr>
<tr>
<td>CCAW</td>
<td>Counter Clockwise</td>
</tr>
<tr>
<td>CDI</td>
<td>Course Deviation Indicator</td>
</tr>
<tr>
<td>Chan</td>
<td>Channel</td>
</tr>
<tr>
<td>CIFP</td>
<td>Coded Instrument Flight Procedures</td>
</tr>
<tr>
<td>CIR</td>
<td>Circling</td>
</tr>
<tr>
<td>CLNC DEL</td>
<td>Clearance Delivery</td>
</tr>
<tr>
<td>CNF</td>
<td>Computer Navigation Fix</td>
</tr>
<tr>
<td>CPDLC</td>
<td>Controller Pilot Data Link Communication</td>
</tr>
<tr>
<td>CTAF</td>
<td>Common Traffic Advisory Frequency</td>
</tr>
<tr>
<td>CW</td>
<td>Clockwise</td>
</tr>
<tr>
<td>D-ATIS</td>
<td>Digital-Automated Terminal Information Service</td>
</tr>
<tr>
<td>DA</td>
<td>Decision Altitude</td>
</tr>
<tr>
<td>DER</td>
<td>Departure End of Runway</td>
</tr>
<tr>
<td>DH</td>
<td>Decision Height</td>
</tr>
<tr>
<td>DME</td>
<td>Distance Measuring Equipment</td>
</tr>
<tr>
<td>DTHR</td>
<td>Displaced Threshold</td>
</tr>
<tr>
<td>DVA</td>
<td>Diverse Vector Area</td>
</tr>
<tr>
<td>Elev</td>
<td>Elevation</td>
</tr>
<tr>
<td>EMAS</td>
<td>Engineered Material Arresting System</td>
</tr>
<tr>
<td>FAF</td>
<td>Final Approach Fix</td>
</tr>
<tr>
<td>FD</td>
<td>Flight Director System</td>
</tr>
<tr>
<td>FM</td>
<td>Fan Marker</td>
</tr>
<tr>
<td>FMS</td>
<td>Flight Management System</td>
</tr>
<tr>
<td>GBAS</td>
<td>Ground Based Augmentation System</td>
</tr>
<tr>
<td>GCO</td>
<td>Ground Communications Outlet</td>
</tr>
<tr>
<td>GLS</td>
<td>Ground based Augmentation System Landing System</td>
</tr>
<tr>
<td>GP</td>
<td>Glidepath</td>
</tr>
<tr>
<td>GPI</td>
<td>Ground Point of Interception</td>
</tr>
<tr>
<td>GPS</td>
<td>Global Positioning System</td>
</tr>
<tr>
<td>GS</td>
<td>Glide Slope</td>
</tr>
<tr>
<td>HAA</td>
<td>Height above Airport</td>
</tr>
<tr>
<td>HAL</td>
<td>Height above Landing</td>
</tr>
<tr>
<td>HAT</td>
<td>Height above Touchdown</td>
</tr>
<tr>
<td>HATh</td>
<td>Height above Threshold</td>
</tr>
<tr>
<td>HCH</td>
<td>Heliport Crossing Height</td>
</tr>
<tr>
<td>HGS</td>
<td>Heads-up Guidance System</td>
</tr>
<tr>
<td>HIIRL</td>
<td>High Intensity Runway Lights</td>
</tr>
<tr>
<td>HUD</td>
<td>Head-up Display</td>
</tr>
<tr>
<td>IAF</td>
<td>Initial Approach Fix</td>
</tr>
<tr>
<td>ICAO</td>
<td>International Civil Aviation Organization</td>
</tr>
<tr>
<td>IF</td>
<td>Intermediate Fix</td>
</tr>
<tr>
<td>IM</td>
<td>Inner Marker</td>
</tr>
<tr>
<td>INOP</td>
<td>Inoperative</td>
</tr>
<tr>
<td>INT</td>
<td>Intersection</td>
</tr>
<tr>
<td>K</td>
<td>Knots</td>
</tr>
<tr>
<td>KIAS</td>
<td>Knots Indicated Airspeed</td>
</tr>
<tr>
<td>LAAS</td>
<td>Local Area Augmentation System</td>
</tr>
<tr>
<td>LDA</td>
<td>Localizer Type Directional Aid</td>
</tr>
<tr>
<td>Ldg</td>
<td>Landing</td>
</tr>
<tr>
<td>LIRL</td>
<td>Low Intensity Runway Lights</td>
</tr>
<tr>
<td>LNAV</td>
<td>Lateral Navigation</td>
</tr>
<tr>
<td>LOC</td>
<td>Localizer</td>
</tr>
<tr>
<td>LP</td>
<td>Localizer Performance</td>
</tr>
<tr>
<td>LPV</td>
<td>Localizer Performance with Vertical Guidance</td>
</tr>
<tr>
<td>LR</td>
<td>Lead Radial. Provides at least 2 NM (Copter 1 NM) of lead to assist in turning onto the intermediate/final course.</td>
</tr>
<tr>
<td>MAA</td>
<td>Maximum Authorized Altitude</td>
</tr>
<tr>
<td>MAL</td>
<td>Medium Intensity Approach Light System</td>
</tr>
<tr>
<td>MALSF</td>
<td>Medium Approach Lighting System with Sequenced Flashers</td>
</tr>
<tr>
<td>MALSR</td>
<td>Medium Intensity Approach Light System with RAIL</td>
</tr>
<tr>
<td>MAP</td>
<td>Missed Approach Point</td>
</tr>
<tr>
<td>MDA</td>
<td>Minimum Descent Altitude</td>
</tr>
<tr>
<td>MIRL</td>
<td>Medium Intensity Runway Lights</td>
</tr>
<tr>
<td>MM</td>
<td>Minimum Reception Altitude</td>
</tr>
<tr>
<td>MRA</td>
<td>Minimum Not Applicable</td>
</tr>
<tr>
<td>NA</td>
<td>Not Authorized</td>
</tr>
<tr>
<td>NDB</td>
<td>Non-directional Radio Beacon</td>
</tr>
<tr>
<td>NM</td>
<td>Nautical Mile</td>
</tr>
<tr>
<td>NoPT</td>
<td>No Procedure Turn Required (Procedure Turn shall not be executed without ATC clearance)</td>
</tr>
<tr>
<td>NoPT</td>
<td>No Procedure Turn Required (Procedure Turn shall not be executed without ATC clearance)</td>
</tr>
</tbody>
</table>

**Abbreviation Examples:**

- **NoPT**: No Procedure Turn Required
- **NDB**: Non-directional Radio Beacon
- **LIRL**: Low Intensity Runway Lights
- **LNAV**: Lateral Navigation
- **KIAS**: Knots Indicated Airspeed
- **MIRL**: Medium Intensity Runway Lights
- **MCA**: Minimum Compatibility Altitude
- **MCP**: Minimum Crossing Point
- **MCP**: Minimum Crossing Point
- **MCC**: Minimum Crossing Course
- **MCA**: Minimum Compatibility Altitude
- **MCP**: Minimum Crossing Point
<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ODALS</td>
<td>Omnidirectional Approach Light System</td>
</tr>
<tr>
<td>ODP</td>
<td>Obstacle Departure Procedure</td>
</tr>
<tr>
<td>OM</td>
<td>Outer Marker</td>
</tr>
<tr>
<td>PAR</td>
<td>Precision Approach Radar</td>
</tr>
<tr>
<td>PDC</td>
<td>Pre-Departure Clearance</td>
</tr>
<tr>
<td>PRM</td>
<td>Precision Runway Monitor</td>
</tr>
<tr>
<td>R</td>
<td>Radial</td>
</tr>
<tr>
<td>RA</td>
<td>Radio Altimeter setting height</td>
</tr>
<tr>
<td>RAIL</td>
<td>Runway Alignment Indicator Lights</td>
</tr>
<tr>
<td>RCLS</td>
<td>Runway Centerline Light System</td>
</tr>
<tr>
<td>REIL</td>
<td>Runway End Identifier Lights</td>
</tr>
<tr>
<td>RF</td>
<td>Radius-to-Fix</td>
</tr>
<tr>
<td>RLLS</td>
<td>Runway Lead-in Light System</td>
</tr>
<tr>
<td>RNAV</td>
<td>Area Navigation</td>
</tr>
<tr>
<td>RNP</td>
<td>Required Performance Navigation</td>
</tr>
<tr>
<td>RPI</td>
<td>Runway Point of Intercept(ion)</td>
</tr>
<tr>
<td>RRL</td>
<td>Runway Remaining Lights</td>
</tr>
<tr>
<td>Rwy</td>
<td>Runway</td>
</tr>
<tr>
<td>S</td>
<td>Straight-in</td>
</tr>
<tr>
<td>SALS</td>
<td>Short Approach Light System</td>
</tr>
<tr>
<td>SALSF</td>
<td>Short Approach Lighting System with Sequenced Flashing Lights</td>
</tr>
<tr>
<td>SSALF</td>
<td>Simplified Short Approach Lighting System with Sequenced Flashers</td>
</tr>
<tr>
<td>SSALR</td>
<td>Simplified Short Approach Light System with RAIL</td>
</tr>
<tr>
<td>SSALS</td>
<td>Simplified Short Approach Lighting System</td>
</tr>
<tr>
<td>SDF</td>
<td>Simplified Directional Facility</td>
</tr>
<tr>
<td>SM</td>
<td>Statute Mile</td>
</tr>
<tr>
<td>SOIA</td>
<td>Simultaneous Offset Instrument Approach</td>
</tr>
<tr>
<td>SR-SS</td>
<td>Sunrise-Sunset</td>
</tr>
<tr>
<td>TAA</td>
<td>Terminal Arrival Area</td>
</tr>
<tr>
<td>TAC</td>
<td>TACAN</td>
</tr>
<tr>
<td>TCH</td>
<td>Threshold Crossing Height (height in feet above ground level)</td>
</tr>
<tr>
<td>TDZ</td>
<td>Touchdown Zone</td>
</tr>
<tr>
<td>TDZE</td>
<td>Touchdown Zone Elevation</td>
</tr>
<tr>
<td>TDZ/CL</td>
<td>Touchdown Zone and Runway Centerline Lighting</td>
</tr>
<tr>
<td>TDZL</td>
<td>Touchdown Zone Lights</td>
</tr>
<tr>
<td>THR</td>
<td>Threshold</td>
</tr>
<tr>
<td>TODA</td>
<td>Takeoff Distance Available</td>
</tr>
<tr>
<td>TORA</td>
<td>Takeoff Run Available</td>
</tr>
<tr>
<td>TR</td>
<td>Track</td>
</tr>
<tr>
<td>VASI</td>
<td>Visual Approach Slope Indicator</td>
</tr>
<tr>
<td>VCOA</td>
<td>Visual Climb over Airport</td>
</tr>
<tr>
<td>VDA</td>
<td>Vertical Descent Angle</td>
</tr>
<tr>
<td>VDP</td>
<td>Visual Descent Point</td>
</tr>
<tr>
<td>VGSI</td>
<td>Visual Glide Slope Indicator</td>
</tr>
<tr>
<td>VNAV</td>
<td>Vertical Navigation</td>
</tr>
<tr>
<td>WAAS</td>
<td>Wide Area Augmentation System</td>
</tr>
<tr>
<td>WP/WPT</td>
<td>Waypoint (RNAV)</td>
</tr>
</tbody>
</table>
**LEGEND**

**INSTRUMENT APPROACH PROCEDURES (CHARTS)**

**PLANVIEW SYMBOLS**

**ROUTES**
- Procedure Track
- Feeder Route
- Missed Approach
- Visual Flight Path

**HOLDING PATTERNS**
Hold-in-lieu of Procedure Turn

**ALTITUDES**
- **5500** Mandatory Altitude
- **3000** Recommended Altitude
- **2500** Minimum Altitude
- **5000** Mandatory Block
- **4300** Maximum Altitude
- **3000** Altitude

**INDICATED AIRSPEED**
- **175K** Mandatory Airspeed
- **120K** Minimum Airspeed
- **250K** Maximum Airspeed
- **180K** Recommended Airspeed

**RADIO AIDS TO NAVIGATION**
- Underline indicates No Voice transmitted on this frequency
- ○ VOR
- ○ VORTAC
- ○ TACAN
- ○ VOR/DME
- ○ DME
- ○ NDB
- ○ NDB/DME
- ○ LOM (Compass locator at Outer Marker)
- Marker Beacons that are not specifically part of the procedure.
- Localizer Front Course (LOC/LDA)
- Right side shading: Front course
- Localizer Back Course (LIM)
- Left side shading: Back course
- SDF Course
- ○ LOC/LDA/SDF Transmitter
- ○ LOC/DME (shown when installation is offset from its normal position off the end of the runway.)

**FIXES/ATC REPORTING REQUIREMENTS**
- △ Reporting Point
- ○ Waypoint
- MAP WP (Flyby)
- MAP WP (Flyover)
- ○ Flyover Point
- X (CFTSP) Computer Navigation Fix (CNF)-No ATC Function

**RECOMMENDED ALTITUDES**

<table>
<thead>
<tr>
<th>Mileage</th>
<th>Arrival</th>
<th>Mandatory Block</th>
<th>Minimum Route Altitude</th>
<th>Mandatory Altitude</th>
<th>Minimum Altitude</th>
<th>Maximum Altitude</th>
<th>Maximum Route Altitude</th>
</tr>
</thead>
<tbody>
<tr>
<td>4 NM</td>
<td>090°</td>
<td>270°</td>
<td>3100 NoPT to LOM</td>
<td>045°</td>
<td>10000</td>
<td>8000</td>
<td>10000</td>
</tr>
<tr>
<td>1 min</td>
<td>090°</td>
<td>270°</td>
<td>4300</td>
<td>2500</td>
<td>2500</td>
<td>2500</td>
<td>2500</td>
</tr>
</tbody>
</table>

**LOC/LDA/SDF Transmitter**
- Chan 59
- SKE (112.2)

**TACAN or DME NAVAID**
- Chan 92
- AKRON
- 362 AK
- VHF Paired Frequency

**COMPUTER NAVIGATION FIX (CNF) - NO ATC FUNCTION**

- R-198 Radial line and value
- LR-198 Lead Radial
- LB-198 Lead Bearing

**23334**
LEGEND 23334 STANDARD TERMINAL ARRIVAL (STAR) CHARTS

RADIO AIDS TO NAVIGATION

Compulsory:

- VOR
- VORTAC
- DME
- NDB/DME

Non-Compulsory:

- VOR
- VORTAC
- DME
- NDB/DME

Marker Beacon

LOC (Compass locator at outer marker)

Localizer Front Course

Localizer Back Course (Shading on left)

TACAN or DME NAV-AID Box

SCOTT Chan 59 SKE (112.2)

VHF Paired Frequency

Underline indicates no voice transmitted on this frequency

(Y) TACAN must be placed in "Y" mode to receive distance information

FIXES/ATC REPORTING REQUIREMENTS

→ Unnamed DME fix

▲ Reporting Point (Compulsory)

△ Reporting Point (Non-Compulsory)

→ Obvious DME (DME mileage matches route mileage)

75 DME Mileage (when not obvious)

Waypoint (Compulsory)

Waypoint (Non-Compulsory)

▼ Flyover Point

(CFTSP) Computer Navigation Fix (CNF) - No ATC Function

AIRPORTS

- Civil
- Military
- Joint (Civil-Military)

Airports not served by the procedure shown in screened color

- Civil
- Military
- Joint (Civil-Military)

OPTM FL200 Maximum Authorized Altitude
4500 MEA-Minimum Enroute Altitude
3500 MOCA-Minimum Obstruction Clearance Altitude

270° Arrival Route

(65) Mileage between Radio Aids, Reporting Points, and Route Breaks

R-275 Transition Route

Radial line and value

HOLDING Pattern

 vagy érthető

Lost Comm Holding Pattern

Special Use Airspace

R-Restricted

W-Warning

P-Prohibited

A-Alert

MOA-Military Operations Area

Mileage between Radio Aids, Reporting Points,
and Route Breaks

5500 Mandatory Altitude (Cross at)

2300 Minimum Altitude (Cross at or above)

4800 Maximum Altitude (Cross at or below)

15000 Block Altitude

12000 Altitude change at other than Radio Aids to Navigation

Indicated Airspeed

175K Mandatory Airspeed

120K Minimum Airspeed

250K Maximum Airspeed

Miscellaneous

Changeover Point

Air Defense Identification Zone

N Indicates True North is not aligned to the top of the page

Ldg KLAS and KHND

Ldg Rwys 16L/C/R

Terminus identifier
DEPARTURE PROCEDURE (DP) CHARTS

RADIO AIDS TO NAVIGATION

Compulsory:
- VOR
- VOR/DME
- TACAN
- DME
- NDB/DME

Non-Compulsory:
- VOR
- VOR/DME
- TACAN
- DME
- NDB
- LOC
- LOC/DME

Markers:
- Marker Beacon
- Localizer Back Course
- Localizer Front Course
- LOM (Compass locator at outer marker)

(T) indicates frequency protection range
(Y) TACAN must be placed in "Y" mode to receive distance information
Underline indicates no voice transmitted on this frequency

FIXES/ATC REPORTING REQUIREMENTS

- Unnamed DME fix
- Reporting Point (Compulsory)
- Reporting Point (Non-Compulsory)
- Obvious DME (DME mileage matches route mileage)
- Waypoint (Compulsory)
- Waypoint (Non-Compulsory)
- Flyover Point
- Computer Navigation Fix (CFTSP) - No ATC Function

BACK COURSE

ROUTES

- MEA-Minimum Enroute Altitude
- MOCA-Minimum Obstruction Clearance Altitude
- Transition Route
- R-275
- Lost Communications Track
- Visual Flight Path
- Airway/Route Identification

SPECIAL USE AIRSPACE

- R-Restricted
- W-Warning
- P-Prohibited
- A-Alert
- MOA-Military Operations Area

ALTIMETRIES

- Mandatory Altitude (Cross at or above)
- Top Altitude: 5000
- Minimum Altitude (Cross at or below)
- Block Altitude

INDICATED AIRSPEED

- Mandatory Airspeed
- Minimum Airspeed
- Maximum Airspeed

AIRPORTS

- Civil
- Military
- Heliport
- Joint (Civil-Military)

MINIMUM SAFE ALTITUDE (MSA)

- Facility Identifier
- Airport Identifier

Miscellaneous:
- Changeover Point
- Distance not to scale
- International Boundary
- Sector Boundary
- Air Defense Identification Zone
- Takeoff Minimums and (Obstacle) Departure Procedures entry published.

Special Use Airspace:

- SW-2, 30 NOV 2023 to 25 JAN 2024

Legend:

- 23334
### Instrument Approach Procedures (Charts)

**Legend**

<table>
<thead>
<tr>
<th>Runways</th>
<th>Hard Surface</th>
<th>Other Than Hard Surface</th>
<th>Stopways, Taxiways, Parking Areas</th>
<th>Metal Surface</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**ARRESTING GEAR:** Specific arresting gear systems; e.g., BAK12, MA-1A etc., shown on airport diagrams, not applicable to Civil Pilots. Military Pilots refer to appropriate DOD publications.

**REFERENCE FEATURES**
- Displaced Threshold
- Hot Spot
- Runway Holding Position Markings
- Buildings
- Self-Serve Fuel ##
- Tanks
- Obstructions
- Airport Beacon #
- Runway Radar Reflectors
- Bridges
- Control Tower #
- Wind Cone
- Landing Tee
- Tetrahedron
- Runway Holding Position Markings
- Displaced Threshold

**ARRESTING SYSTEM** (EMAS)
- uni-directional
- bi-directional
- Jet Barrier

**Positional accuracy within 600 feet unless otherwise noted on the chart.**

**Conversion Formula**
- Runway Slope: \( \frac{\text{TDZE} - \text{ELEV}}{\text{Runway length}} \times 100 \)%

**EMAS Location**
- U.S. Navy Optical Landing System (OLS) "OLS" location is shown because of its height of approximately 7 feet and proximity to edge of runway may create an obstruction for some types of aircraft.

**Approach light symbols** are shown in the Flight Information Handbook.

**Airport diagram scales** are variable.

**True/magnetic North orientation** may vary from diagram to diagram.

**Coordinate values** are shown in 1 or ½ minute increments. They are further broken down into 6 second ticks, within each 1 minute increments.

**Positional accuracy** within ±600 feet unless otherwise noted on the chart.

**Runway length** depicted is the physical length of the runway (end-to-end, including displaced thresholds if any) but excluding areas designated as stopways.

A **D** symbol is shown to indicate runway declared distance information available, see appropriate Chart Supplement for distance information.

**NOTE:** All new and revised airport diagrams are shown referenced to the World Geodetic System (WGS) (noted on appropriate diagram), and may not be compatible with local coordinates published in DoD FLIP. (Foreign Only)

The airport sketch box includes the final approach course or final approach course extended.

**LEGEND**

- **Runways**
- **Hard Surface**
- **Other Than Hard Surface**
- **Stopways, Taxiways, Parking Areas**
- **Metal Surface**
- **Runway**
- **Closed Runway**
- **Surface**
- **Hard Surface**
- **Other Than Hard Surface**
- **Under Construction**
- **Water Runway**
- **ARRESTING SYSTEM** (EMAS)

**Runway Slope**
- Down (0.3% - 0.8%)
- Up (0.8% - 1.8%)

**Runway TDZ elevation**
- TDZE 123

**Airport Diagram/Airport Sketch**
- Helicopter Alighting Areas
- Negative Symbols used to identify Copter Procedures landing point
- **NOTES:**
  - Landmark features depicted on Copter Approach insets and sketches are provided for visual reference only.
  - Runway TDZ elevation.............TDZE 123
  - Runway Slope........... 0.3% Down......0.8% UP  
    (shown when rounded runway slope is ≥ 0.3%)
  - Runway Slope measured to midpoint on runways 8000 feet or longer.
  - U.S. Navy Optical Landing System (OLS) "OLS" location is shown because of its height of approximately 7 feet and proximity to edge of runway may create an obstruction for some types of aircraft.

**Approach light symbols** are shown in the Flight Information Handbook.

**Airport diagram scales** are variable.

**True/magnetic North orientation** may vary from diagram to diagram.

**Coordinate values** are shown in 1 or ½ minute increments. They are further broken down into 6 second ticks, within each 1 minute increments.

**Positional accuracy** within ±600 feet unless otherwise noted on the chart.

**Runway length** depicted is the physical length of the runway (end-to-end, including displaced thresholds if any) but excluding areas designated as stopways.

A **D** symbol is shown to indicate runway declared distance information available, see appropriate Chart Supplement for distance information.

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The airport sketch box includes the final approach course or final approach course extended.

**LEGEND**

- **Runways**
- **Hard Surface**
- **Other Than Hard Surface**
- **Stopways, Taxiways, Parking Areas**
- **Metal Surface**
- **Runway**
- **Closed Runway**
- **Surface**
- **Hard Surface**
- **Other Than Hard Surface**
- **Under Construction**
- **Water Runway**
- **ARRESTING SYSTEM** (EMAS)

**Runway Slope**
- Down (0.3% - 0.8%)
- Up (0.8% - 1.8%)

**Runway TDZ elevation**
- TDZE 123

**Airport Diagram/Airport Sketch**
- Helicopter Alighting Areas
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- **NOTES:**
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  - Runway Slope........... 0.3% Down......0.8% UP  
    (shown when rounded runway slope is ≥ 0.3%)
  - Runway Slope measured to midpoint on runways 8000 feet or longer.
  - U.S. Navy Optical Landing System (OLS) "OLS" location is shown because of its height of approximately 7 feet and proximity to edge of runway may create an obstruction for some types of aircraft.

**Approach light symbols** are shown in the Flight Information Handbook.

**Airport diagram scales** are variable.

**True/magnetic North orientation** may vary from diagram to diagram.

**Coordinate values** are shown in 1 or ½ minute increments. They are further broken down into 6 second ticks, within each 1 minute increments.

**Positional accuracy** within ±600 feet unless otherwise noted on the chart.

**Runway length** depicted is the physical length of the runway (end-to-end, including displaced thresholds if any) but excluding areas designated as stopways.

A **D** symbol is shown to indicate runway declared distance information available, see appropriate Chart Supplement for distance information.

**NOTE:** All new and revised airport diagrams are shown referenced to the World Geodetic System (WGS) (noted on appropriate diagram), and may not be compatible with local coordinates published in DoD FLIP. (Foreign Only)

The airport sketch box includes the final approach course or final approach course extended.

**LEGEND**

- **Runways**
- **Hard Surface**
- **Other Than Hard Surface**
- **Stopways, Taxiways, Parking Areas**
- **Metal Surface**
- **Runway**
- **Closed Runway**
- **Surface**
- **Hard Surface**
- **Other Than Hard Surface**
- **Under Construction**
- **Water Runway**
- **ARRESTING SYSTEM** (EMAS)
## Approach Lighting System - United States

Approach lighting and visual glide slope systems are indicated on the airport sketch by an identifier, e.g., \(\text{\textbullet}\), \(\text{\circ}\), etc.

A dot \(\text{\textbullet}\) portrayed with approach lighting letter identifier indicates sequenced flashing lights (F) installed with the approach lighting system e.g., \(\text{\textbullet}\). Negative symbology, e.g., \(\text{\textbullet}\), \(\text{\circ}\), indicates Pilot Controlled Lighting (PCL).

### Category I

**Approach Lighting System**

- **ALSF-1**
  - Length: 1500 feet
  - Sequenced flashing lights

### Category II

**Approach Lighting System**

- **ALSF-2**
  - Length: 2400/3000 feet
  - Sequenced flashing lights

### Short Approach Lighting System

- **SALS/SALSF**
  - Length: 1500 feet

### Simplified Short Approach Lighting System

- **SSALR**
  - Length: 2400 feet

### Medium Intensity Approach Lighting System

- **MALS**
  - Length: 1500 feet

### Medium Intensity (MALS and MALSF) or Simplified Short (SSALS and SSALF) Approach Lighting Systems

### Omnidirectional Approach Lighting System

- **ODALS**

### Runway Touchdown Zone and Centerline Lighting Systems

- **TDZ/CL**
  - Length: 1400 feet
  - Sequenced flashing lights for MALSF/SSALF only

*Note: Civil ALSF-2 may be operated as SSALR during favorable weather conditions.*

- **Availability of TDZ/CL will be shown**
  - **Note in Sketch** e.g., "TDZ/CL Rwy 15"
Approach lighting and visual glide slope systems are indicated on the airport sketch by an identifier, 

A dot * * portrayed with approach lighting letter identifier indicates sequenced flashing lights (F) installed with the approach lighting system e.g., . Negative symbology, e.g., , indicates Pilot Controlled Lighting (PCL).

**PRECISION APPROACH PATH INDICATOR**

**PAPI**

- Too low
- Slightly low

On correct approach path

- Slightly high
- Too high

Legend: White Red

**VISUAL APPROACH SLOPE INDICATOR**

**VASI**

VISUAL APPROACH SLOPE INDICATOR WITH STANDARD THRESHOLD CLEARANCE PROVIDED.

- All lights white — Too high
- Far lights red
- Near lights white — On glide slope
- All lights red — Too low

- VASI 2
- VASI 4

Threshold

- VASI 12

Threshold

**TRI-COLOR VISUAL APPROACH SLOPE INDICATOR**

**TRCV**

Above Glide Path

On Glide Path

Below Glide Path

Green

Amber

Red

Amber

Red

CAUTION: When the aircraft descends from green to red, the pilot may see a dark amber color during the transition from green to red.

**ALIGNMENT OF ELEMENTS SYSTEMS**

**APAP**

Above glide path

On glide path

Below glide path

Painted panels which may be lighted at night.

To use the system the pilot positions the aircraft so the elements are in alignment.

CAUTION: When viewing the pulsating visual approach slope indicators in the pulsating white or pulsating red sectors, it is possible to mistake this lighting aid for another aircraft or a ground vehicle. Pilots should exercise caution when using this type of system.
### FREQUENCY PAIRING TABLE

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See the Chart Supplement for a complete listing.
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**INDEX**

23334
TAKEOFF MINIMUMS, (OBSTACLE) DEPARTURE PROCEDURES, AND DIVERSE VECTOR AREA (RADAR VECTORS)

IFR TAKEOFF 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 takeoff minimums other than standard, are listed below. Takeoff Minimums and Departure Procedures apply to all runways unless otherwise specified. An entry may also be listed that contains only Takeoff Obstacle Notes. 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 textually described below, or published separately as a graphic procedure. If the ODP is published as a graphic procedure, its name will be listed below, and it can be found in either this volume (civil), or the applicable military volume, as appropriate. Users will recognize graphic obstacle DPs by the term "(OBSTACLE)" included in the procedure title; e.g., TETON TWO (OBSTACLE). If not specifically assigned an ODP, SID, or RADAR vector as part of an IFR clearance, an ODP may be required to be flown for obstacle clearance, even though not specifically stated in the IFR clearance. When doing so in this manner, ATC should be informed when the ODP being used contains a specified route to be flown, restrictions before turning, and/or altitude restrictions.

Some ODPs, which are established solely for obstacle avoidance, require a climb in visual conditions to cross the airport, a fix, or a NAVAID in a specified direction, at or above a specified altitude. These procedures are called Visual Climb Over Airport (VCOA). To ensure safe and efficient operations, the pilot must verbally request approval from ATC to fly the VCOA when requesting their IFR clearance.

At some locations where an ODP has been established, a diverse vector area (DVA) may be created to allow RADAR vectors to be used in lieu of an ODP. DVA information will state that headings will be as assigned by ATC and climb gradients, when applicable, will be published immediately following the specified departure procedure.

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 takeoff rules and establishes takeoff minimums for certain operators as follows: (1) For aircraft, other than helicopters, having two engines or less – one statute mile visibility. (2) For aircraft having more than two engines – one-half statute mile visibility. (3) For helicopters – one-half statute mile visibility. These standard minima apply in the absence of any different minima listed below.

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

ALTURAS, CA

ALTURAS MUNI (AAT)

TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES

AMDT 2  10APR08  (08101)  (FAA)

DEPARTURE PROCEDURE:
Use BACHS DEPARTURE.

AMEDEE AAF (KAHC)

HERLONG, CA

TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES

AMDT 2  30JAN20  (20030)

TAKEOFF MINIMUMS:

Rwy 9, std. w/min. climb of 350’ per NM to 9500, or 4100-3 for VCOA.

Rwy 27, std. w/min. climb of 390’ per NM to 8500, or 4100-3 for VCOA.

DEPARTURE PROCEDURE:

Rwy 9, climbing right turn on a heading between 086° CW to 266° from DER.

Rwy 27, climbing left turn on a heading between 086° CW 266° from DER.

VCOA:

All runways, obtain ATC approval for VCOA When requesting IFR clearance. Climb in visual Conditions to cross AMEDEE AAF at or above 8000 before proceeding on course.
Takeoff Minimums, (Obstacle) Departure Procedures, and Diverse Vector Area (Radar Vectors)

ARCATA-EUREKA, CA
CALIFORNIA REDWOOD COAST—HUMBOLDT COUNTY (ACV)
TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES
AMDT 8 12OCT17 (17285) (FAA)

Takeoff Minimums:
Rwy 1, std. w/min. climb of 360' per NM to 500 or 1100-2.5 for VCOA.
Rwy 14, 400-2.5 or std. w/min. climb of 382' per NM to 600.

Departure Procedures:
Rwy 1, 32, climbing left turn to intercept ACV R-250 to HOCUT INT and continue climb to MEA on V27.
Rwy 14, 19, climbing right turn to intercept ACV R-250 to HOCUT INT and continue climb to MEA on V27.

VCOA:
Rwy 1, obtain ATC approval for VCOA when requesting IFR clearance. Climb in visual conditions to cross California Redwood Coast-Humboldt County airport westbound at or above 1200 to intercept ACV R-250 to HOCUT INT and continue climb to MEA on V27.

Takeoff Obstacle Notes:
Rwy 1, runway lights 10' from DER, 54' left and right of centerline, 1' AGL/209' MSL.
Fence beginning 150' from DER, 397' right of centerline, up to 9' AGL/217' MSL.
Tree, fence, pole beginning 222' from DER, 158' right of centerline, up to 260' MSL.
Tree 276' from DER, 491' left of centerline, 245' MSL.
Trees beginning 310' from DER, 198' left of centerline, up to 248' MSL.
Tree 383' from DER, 408' right of centerline, 316' MSL.
Trees beginning 385' from DER, 0' left of centerline, up to 179' AGL/325' MSL.
Trees beginning 371' from DER, 34' left of centerline, up to 192' AGL/369' MSL.
Trees beginning 3722' from DER, 51' left of centerline, up to 197' AGL/372' MSL.
Trees beginning 3763' from DER, 1' left of centerline, up to 202' AGL/375' MSL.
Trees beginning 4016' from DER, 567' right of centerline, 367' MSL.
Trees beginning 4017' from DER, 67' right of centerline, up to 197' AGL/373' MSL.
Trees beginning 6044' from DER, 852' left of centerline, up to 163' AGL/379' MSL.
Tree 1.1 NM from DER, 48' right of centerline, 385' MSL.
Trees beginning 1.2 NM from DER, 1220' right of centerline, up to 416' MSL.
Trees beginning 1.7 NM from DER, 2648' right of centerline, up to 602' MSL.
Tree 1.8 NM from DER, 3460' right of centerline, 605' MSL.

Rwy 14, runway lights 9' from DER, 54' left and right of centerline, 1' AGL/223' MSL.
Tree 621' from DER, 591' left of centerline, 256' MSL.
Tree, antenna, pole, beginning 733' from DER, 378' left of centerline, up to 262' MSL.
Tree 1086' from DER, 716' right of centerline, 277' MSL.
Trees beginning 1110' from DER, 717' right of centerline, up to 290' MSL.
Tree 1701' from DER, 860' left of centerline, 283' MSL.
Trees beginning 1843' from DER, 875' left of centerline, up to 307' MSL.
Trees, beginning 2568' from DER, 801' left of centerline, up to 321' MSL.
Trees beginning 3085' from DER, 565' left of centerline, up to 329' MSL.
Tree 3807' from DER, 1202' left of centerline, 374' MSL.
Trees, beginning 3827' from DER, 794' left of centerline, up to 392' MSL.
Trees, beginning 4152' from DER, 813' left of centerline, up to 420' MSL.
Trees, beginning 4514' from DER, 1245' left of centerline, up to 443' MSL.
Trees, beginning 4700' from DER, 880' left of centerline, up to 446' MSL.
Trees, beginning 5176' from DER, 1028' left of centerline, up to 447' MSL.
Trees, beginning 5712' from DER, 1337' left of centerline, up to 467' MSL.
Trees, beginning 1.1 NM from DER, 1618' left of centerline, up to 515' MSL.
Trees, beginning 1.2 NM from DER, 1929' left of centerline, up to 565' MSL.
Tree 1.7 NM from DER, 3238' left of centerline, 568' MSL.
Trees beginning 1.8 NM from DER, 1864' left of centerline, up to 588' MSL.

Rwy 19, runway lights 9' from DER, 55' left and right of centerline, 189' MSL.
Vegetation 15' from DER, 270' right of centerline, 191' MSL.
Tree 776' from DER, 696' right of centerline, 77' AGL/215' MSL.

Rwy 32, fence, beginning 91' from DER, 476' right of centerline, up to 196' MSL.
Fence 132' from DER, 221' left of centerline, 8' AGL/188' MSL.
Tree, fence, bush beginning 183' from DER, 202' left of centerline, up to 195' MSL.
Fence, beginning 268' from DER, 176' right of centerline, up to 13' AGL/197' MSL.
Obs light DME, NAVAID, beginning 580' from DER, 258' right of centerline, up to 29' AGL/203' MSL.
Tree 1022' from DER, 624' right of centerline, 256' MSL.
Trees, beginning 1036' from DER, 448' right of centerline, up to 267' MSL.
ATWATER, CA
CASTLE (MER)
TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES
AMDT 1A 15DEC11 (11349) (FAA)
TAKEOFF MINIMUMS:
Rwy 13, std. w/ min. climb of 250’ per NM to 2500 or 2200-3 for climb in visual conditions.
DEPARTURE PROCEDURE:
Rwy 13, climb heading 126° to 2500 before turning left. For climb in visual conditions, cross Castle Airport at or above 2200 before proceeding on course.
Rwy 31, climb heading 306° to 1100 before turning right.
TAKEOFF OBSTACLE NOTES:
Rwy 13, tree 2539’ from DER, 1005’ right of centerline, 89’ AGL/261’ MSL.
Rwy 31, tree 1274’ from DER, 829’ left of centerline, 20’ AGL/224’ MSL.
Trees beginning 2909’ from DER, 542’ right of centerline, 65’ AGL/269’ MSL.

AUBURN, CA
AUBURN MUNI (AUN)
TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES
AMDT 1A 15DEC11 (11349) (FAA)
TAKEOFF MINIMUMS:
Rwy 7, 300-1 w/ min. climb of 387’ per NM to 2500, or 1100-3 for climb in visual conditions.
DEPARTURE PROCEDURE:
Rwy 7, climbing left turn to 5000 heading 310°, and MYV VOR/DME R-083 to MYV VOR/DME, then via MYV VOR/DME R-263 to YUBBA INT before proceeding on course, or for climb in visual conditions: cross Auburn Muni airport at or above 2500, continue climb to 5000 via heading 275° and MYV VOR/DME R-094 to MYV VOR/DME, then via MYV VOR/DME R-263 to YUBBA INT before proceeding on course.
Rwy 25, climbing right turn to 5000 via heading 310° and MYV VOR/DME R-083 to MYV VOR/DME, then via MYV VOR/DME R-263 to YUBBA INT before proceeding on course.
TAKEOFF OBSTACLE NOTES:
Rwy 7, trees beginning 1117’ from DER, 504’ right of centerline, up to 40’ AGL/1708’ MSL.
Pole 1365’ from DER, 600’ right of centerline, 59’ AGL/1679’ MSL.
Tree 3791’ from DER, 700’ right of centerline, 40’ AGL/1639’ MSL.
Rwy 25, tree 37’ from DER, 479’ left of centerline, 40’ AGL/1528’ MSL.
Tree 86’ from DER, 461’ right of centerline, 40’ AGL/1532’ MSL.
Pole 1365’ from DER, 600’ right of centerline, 40’ AGL/1679’ MSL.
Tree 86’ from DER, 461’ right of centerline, 40’ AGL/1532’ MSL.
Fence 301’ from DER, 244’ right of centerline, 8’ AGL/1508’ MSL.
Trees beginning 660’ from DER, 249’ right of centerline, up to 40’ AGL/1559’ MSL.

BEALE AFB (KBAB)
MARYSVILLE, CA
TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES
AMDT 2, 29MAY14 (14149)
DEPARTURE PROCEDURE:
Rwy 15, Climb on a heading between 100° CW to 325° from DER.
Rwy 33, Climb on a heading between 100° CW to 325° from DER.
TAKEOFF OBSTACLE NOTES:
Rwy 33, terrain 118’ MSL, 62’ from DER, 500’ right of centerline.
Terrain 118’ MSL, 3’ from DER, 517’ right of centerline.
Aircraft tail 16’  GL/134’ MSL, 39’ from DER, 533’ right of centerline.
Aircraft tail 16’ AGL/134’ MSL, 129’ from DER, 525’ right of centerline.

BECKWOURTH, CA
NERVINO (O02)
TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES
ORIG-A 17OCT13 (13290) (FAA)
TAKEOFF MINIMUMS:
Rwys 8, 26, 3500-3 for climb in visual conditions.
DEPARTURE PROCEDURE:
Rwys 8, 26, for climb in visual conditions: cross Nervino Airport at or above 8300 before proceeding on course.
TAKEOFF OBSTACLE NOTES:
Rwy 8, road 58’ from DER, 469’ right of centerline, 15’ AGL/4920’ MSL.
Pole 310’ from DER, 522’ right of centerline, 49’ AGL/4925’ MSL.
Pole 528’ from DER, 522’ right of centerline, 39’ AGL/4924’ MSL.
Tree 1.47 NM from DER, 727’ right of centerline, 100’ AGL/6193’ MSL.
Tree 1.9 NM from DER, 2534’ right of centerline, 100’ AGL/5499’ MSL.
Bush 2.03 NM from DER, 2126’ right of centerline, 4’ AGL/5406’ MSL.
Rwy 26, tree 8856’ from DER, 1984’ right of centerline, 100’ AGL/5339’ MSL.
Tree 1.25 NM from DER, 2439’ right of centerline, 100’ AGL/5420’ MSL.
Tree 2.07 NM from DER, 3302’ left of centerline, 100’ AGL/5570’ MSL.
BISHOP, CA
BISHOP (BIH)
TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES
AMDT 4A  29MAR18  (18088)  (FAA)
TAKEOFF MINIMUMS:
Rwy 8, 12, 17, 9000-3 for VCOA.
Rwy 26, std. w/ min. climb of 280’ per NM to 10400’, or 9000-3 for VCOA.
Rwys 30, 35, std. w/ min. climb of 285’ per NM to 10500’, or 9000-3 for VCOA.
DEPARTURE PROCEDURE:
Rwys 26, 30, climbing right turn on heading 360, thence…
Rwy 35, climbing left turn on heading 290, thence…
…all aircraft intercept BIH R-322 to NIKOL INT/BIH 38.46 DME. Aircraft departing NIKOL on V244 westbound cross NIKOL at or above 13100; aircraft departing NIKOL on V381 southeast bound cross NIKOL at or above 13000; aircraft departing NIKOL on T298 westbound or T259 westbound cross NIKOL at or above 12200; all other aircraft cross NIKOL at or above 11000.
VCOA:
All Rwys, obtain ATC approval for VCOA when requesting IFR clearance. Climb in visual conditions to cross Bishop airport at or above 13000 before proceeding on course.
TAKEOFF OBSTACLE NOTES:
Rwy 26, trees and bushes beginning 69’ from DER, 150’ right of centerline, up to 4197’ MSL.
Trees beginning 925’ from DER, 32’ left of centerline, up to 4167’ MSL.
Rwy 35, trees beginning 238’ from DER, 31’ left of centerline, up to 4146’ MSL.
Trees beginning 215’ from DER, 146’ right of centerline, up to 4146’ MSL.

BYRON, CA
BYRON (C83)
TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES
AMDT 2  17AUG17  (17229)  (FAA)
TAKEOFF MINIMUMS:
Rwy 23, NA - obstacles.
Rwy 30, 200-1½ or std. with a min. climb of 245’ per NM to 300, or alternatively, with standard takeoff minimums and normal 200’ per NM climb gradient, takeoff must occur no later than 1900’ prior to DER.
DEPARTURE PROCEDURE:
Rwy 5, climbing left turn heading 010°, thence…
Rwy 12, climbing left turn heading 360°, thence…
Rwy 30, climbing right turn heading 065°, thence…
…on LIN VOR/DME R-227 to LIN VOR/DME before proceeding on course.
TAKEOFF OBSTACLE NOTES:
Rwy 5, bush 17’ from DER, 67’ right of centerline, 6’ AGL/52’ MSL.
Rwy 12, multiple trees and bush beginning 240’ from DER, 286’ right of centerline, up to 39’ AGL/76’ MSL.
Rwy 30, multiple poles, building, and terrain beginning 66’ from DER, 228’ left of centerline, up to 65’ AGL/225’ MSL.
Multiple poles beginning 949’ from DER, 28’ right of centerline, up to 42’ AGL/103’ MSL.

CHICO, CA
CHICO RGNL (CIC)
TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES
AMDT 7  21MAY20  (23054)  (FAA)
DEPARTURE PROCEDURE:
Rwys 13L/R, climbing right turn heading 230° to intercept V-23/T-261.
Rwys 31L/R, climbing left turn heading 230° to intercept V-23/T-261.
TAKEOFF OBSTACLE NOTES:
Rwy 13L, terrain 298’ from DER, 537’ left of centerline, 216’ MSL.
Trees, pole beginning 947’ from DER, 560’ left of centerline, up to 241’ MSL.
Rwy 13R, vehicles on road beginning at DER, left and right of centerline, up to 225’ MSL.
Rwy 31L, vehicles on road beginning at DER, left and right of centerline, up to 235’ MSL.
Tower 611’ from DER, 349’ right of centerline, 35’ AGL/267’ MSL.
Rwy 31R, tree 1124’ from DER, 612’ right of centerline, 282’ MSL.
Tree 1363’ from DER, 788’ left of centerline, 280’ MSL.
TAKEOFF MINIMUMS, (OBSTACLE) DEPARTURE PROCEDURES, AND DIVERSE VECTOR AREA (RADAR VECTORS)

CLOVERDALE, CA
CLOVERDALE MUNI (O60)
TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES
AMDT 2 17JUN21 (21168) (FAA)
TAKEOFF MINIMUMS:
Rwy 14, 300-1 w/min. climb of 475' per NM to 1400, or 3900-3 for VCOA.
Rwy 32, 3900-3 for VCOA.
DEPARTURE PROCEDURE:
Rwy 14, climb on a heading between 120° CW to 150° from DER to 4500 before proceeding on course.
VCOA:
All runways, obtain ATC approval for VCOA when requesting IFR clearance. Climb in visual conditions to cross Cloverdale Muni airport at or above 4000 before proceeding on course.
TAKEOFF OBSTACLE NOTES:
Rwy 14, tree 38' from DER, 411' right of centerline, 305' MSL.
Vegetation 61' from DER, 307' left of centerline, 276' MSL.
Vegetation beginning 80' from DER, 90' left of centerline, up to 9' AGL/279' MSL.
Trees beginning 95' from DER, 18' right of centerline, up to 43' AGL/310' MSL.
Tree 391' from DER, 29' left of centerline, 31' AGL/291' MSL.
Tree 396' from DER, 154' left of centerline, 40' AGL/298' MSL.
Tree 416' from DER, 80' left of centerline, 37' AGL/299' MSL.
Trees beginning 419' from DER, 20' left of centerline, up to 43' AGL/303' MSL.
Tree 448' from DER, 207' left of centerline, 58' AGL/329' MSL.
Tree pole beginning 611' from DER, 30' right of centerline, up to 314' MSL.
Trees, ag equip beginning 662' from DER, 20' left of centerline, up to 369' MSL.
Trees beginning 1046' from DER, 325' right of centerline, up to 352' MSL.
Trees, stack, buildings beginning 1483' from DER, 41' right of centerline, up to 373' MSL.
Buildings, pipeline pipes, poles, trees, ag equip, transmission lines beginning 1907' from DER, 8' right of centerline, up to 142' AGL/427' MSL.
Ag equip, tree beginning 2902' from DER, 37' left of centerline, up to 5' AGL/371' MSL.
Tree 2970' from DER, 291' left of centerline, 48' AGL/380' MSL.
Ag equip beginning 2979' from DER, 87' left of centerline, up to 5' AGL/386' MSL.
Antenna, trees, ag equip, pole beginning 3082' from DER, 70' left of centerline, up to 19' AGL/403' MSL.
Tree, buildings beginning 4785' from DER, 503' left of centerline, up to 31' AGL/426' MSL.
Tree 4878' from DER, 415' left of centerline, 37' AGL/428' MSL.
Tree 4916' from DER, 511' left of centerline, 52' AGL/446' MSL.
Ag equip beginning 1 NM from DER, 1806' right of centerline, up to 6' AGL/448' MSL.
Tree 1 NM from DER, 1969' right of centerline, 496' MSL.
Trees beginning 1.1 NM from DER, 1127' right of centerline, up to 534' MSL.
Tree 1.5 NM from DER, 2973' right of centerline, 549' MSL.
Tree 1.6 NM from DER, 2150' right of centerline, 529' MSL.
Trees beginning 1.6 NM from DER, 1753' right of centerline, up to 719' MSL.
Trees beginning 1.7 NM from DER, 393' right of centerline, up to 814' MSL.
Trees beginning 2.2 NM from DER, 8' right of centerline, up to 772' MSL.
Tree 2.2 NM from DER, 59' left of centerline, 620' MSL.
Tree 2.5 NM from DER, 1452' right of centerline, 780' MSL.
Rwy 32, tree 32' from DER, 497' right of centerline, 288' MSL.
Ag equip 35' from DER, 371' left of centerline, 6' AGL/283' MSL.
Tree 51' from DER, 252' left of centerline, 297' MSL.
Tree, fences beginning 71' from DER, 67' right of centerline, up to 313' MSL.
Trees, ag equip, fences beginning 96' from DER, 62' left of centerline, up to 30' AGL/322' MSL.
Tree 419' from DER, 477' right of centerline, 329' MSL.
Tree 450' from DER, 372' left of centerline, 341' MSL.
Trees beginning 806' from DER, 505' right of centerline, up to 331' MSL.
Trees beginning 889' from DER, 293' left of centerline, up to 363' MSL.
Tree 2895' from DER, 965' right of centerline, 349' MSL.
Tree, building beginning 2967' from DER, 1241' left of centerline, up to 393' MSL.
Trees beginning 3274' from DER, 173' right of centerline, up to 374' MSL.
Trees beginning 1.6 NM from DER, 292' right of centerline, up to 581' MSL.
Tree, building beginning 2.2 NM from DER, 221' right of centerline, up to 652' MSL.
Tree 2.3 NM from DER, 276' right of centerline, 672' MSL.
Tank 2.4 NM from DER, 3970' left of centerline, 680' MSL.
COALINGA, CA

NEW COALINGA MUNI (C80)

TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES

ORIG 05OCT23 (23278) (FAA)

TAKEOFF MINIMUMS:

Rwys 1, 19, NA-Environmental.

DEPARTURE PROCEDURE:

Rwys 12, 30, use AVENAL DEPARTURE.

TAKEOFF OBSTACLE NOTES:

Rwy 12, vehicle on road beginning 9’ from DER, 362’ left of centerline, up to 614’ MSL.
NAVAID 15’ from DER, 125’ right of centerline, 2’ AGL/603’ MSL.

Vehicle on road beginning 76’ from DER, 506’ right of centerline, up to 614’ MSL.

Rwy 30, NAVAID 14’ from DER, 125’ left of centerline, 1’ AGL/626’ MSL.

Terrain 43’ from DER, 472’ right of centerline, 627’ MSL.

Vehicle on road beginning 145’ from DER, 456’ right of centerline, up to 645’ MSL.

Vehicle on road 202’ from DER, 446’ left of centerline, 643’ MSL.

Vehicle on road 330’ from DER, 376’ right of centerline, 646’ MSL.

Vehicle on road beginning 384’ from DER, 1’ left of centerline, up to 644’ MSL.

Vehicle on road 532’ from DER, 362’ right of centerline, 647’ MSL.

Vehicle on road beginning 655’ from DER, on and left of centerline, up to 646’ MSL.

Vehicle on road beginning 679’ from DER, on and right of centerline, up to 648’ MSL.

Vehicle on road beginning 731’ from DER, 113’ left of centerline, up to 648’ MSL.

COLUMBIA, CA

COLUMBIA (O22)

TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES

AMDT 2 30JAN20 (20030) (FAA)

TAKEOFF MINIMUMS:

Rwys 11, 29, NA - Environmental.

Rwy 35, NA - ATC.

DEPARTURE PROCEDURE:

Rwy 17, use FICHU RNAV DEPARTURE.

TAKEOFF OBSTACLE NOTES:

Rwy 17, bush 31’ from DER, 196’ right of centerline, 2083’ MSL.

Tree 148’ from DER, 387’ right of centerline, 2108’ MSL.

Trees beginning 354’ from DER, 240’ left of centerline, up to 2127’ MSL.

Tree, rd (n), pole, grd, bush beginning 414’ from DER, 46’ right of centerline, up to 2188’ MSL.

Tree 456’ from DER, 325’ left of centerline, 2130’ MSL.

Trees beginning 492’ from DER, 109’ left of centerline, up to 2133’ MSL.

Trees beginning 725’ from DER, 26’ left of centerline, up to 2171’ MSL.

Trees beginning 1260’ from DER, 56’ left of centerline, up to 2181’ MSL.

Tree 1527’ from DER, 893’ right of centerline, 2205’ MSL.

Tree 1619’ from DER, 860’ right of centerline, 2220’ MSL.

Trees beginning 1664’ from DER, 896’ right of centerline, up to 2238’ MSL.

Tree 2152’ from DER, 982’ left of centerline, 2244’ MSL.

Tree 2195’ from DER, 987’ left of centerline, 2262’ MSL.

Tree 2195’ from DER, 987’ left of centerline, 2273’ MSL.

Tree, tower beginning 5842’ from DER, 410’ left of centerline, up to 2339’ MSL.

Tree 5936’ from DER, 557’ left of centerline, 2239’ MSL.

Building, vehicles on roads, trees beginning 437’ from DER, 57’ right of centerline, up to 31’ AGL/80’ MSL.

Trees beginning 803’ from DER, 145’ right of centerline, up to 103’ MSL.

Buildings beginning 168’ from DER, 444’ right of centerline, up to 22’ AGL/70’ MSL.

Tree 239’ from DER, 533’ left of centerline, 90’ MSL.

Building 358’ from DER, 323’ right of centerline, 22’ AGL/71’ MSL.

CONT

COLUMBUS, CA

COLUMBUS COUNTY (O08)

TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES

ORIG-B 20APR23 (23110) (FAA).

DEPARTURE PROCEDURE:

Rwy 13, climb on heading 137° to 1800 before proceeding on course.

Rwy 31, climbing left turn direct ILA VORTAC before proceeding on course.

TAKEOFF OBSTACLE NOTES:

Rwy 13, vehicles on road 1’ from DER, 350’ right of centerline, up to 60’ MSL.

Vehicle on road, fence, sign beginning 23’ from DER, 233’ right of centerline, up to 62’ MSL.

Vegetation beginning 40’ from DER, 455’ left of centerline, up to 67’ MSL.

Vehicle on road beginning 95’ from DER, 472’ left of centerline, up to 68’ MSL.

Tree, fence, vehicle on road beginning 139’ from DER, 347’ left of centerline, up to 77’ MSL.

Buildings, fence, vehicle on road beginning 194’ from DER, 196’ right of centerline, up to 14’ AGL/63’ MSL.

Building, vehicles on roads, trees beginning 437’ from DER, 57’ right of centerline, up to 31’ AGL/80’ MSL.

Trees beginning 803’ from DER, 145’ right of centerline, up to 103’ MSL.

Buildings beginning 1477’ from DER, 429’ left of centerline, 61’ AGL/107’ MSL.

Rwy 31, building, fence beginning 92’ from DER, 253’ left of centerline, up to 13’ AGL/63’ MSL.

Buildings beginning 168’ from DER, 444’ right of centerline, up to 22’ AGL/70’ MSL.

Tree 239’ from DER, 533’ left of centerline, 90’ MSL.

Building 358’ from DER, 323’ right of centerline, 22’ AGL/71’ MSL.

CONT
COLUSA, CA (CON’T)

COLUSA COUNTY (O08) (CON’T)

Rwy 31 (CON’T), building, tank beginning 369’ from DER, 413’ right of centerline, up to 27’ AGL/76’ MSL.

Vehicles on road beginning 486’ from DER, left and right of centerline, up to 15’ AGL/64’ MSL.

Tower 1396’ from DER, 91’ right of centerline, 55’ AGL/105’ MSL.

Tree 2836’ from DER, 195’ right of centerline, 120’ MSL.

CONCORD, CA

BUCHANAN FLD (CCR)

TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES

AMDT 3  22JUN17  (21112)  (FAA)

TAKEOFF MINIMUMS:

Rwys 1L/R, std. w/min. climb of 330’ per NM to 1000 or 3700-3 for VCOA.

Rwys 14L/R, std. w/min. climb of 420’ per NM to 2700 or 3700-3 for VCOA.

Rwys 19L/R, std. w/min. climb of 490’ per NM to 3900 or 3700-3 for VCOA.

Rwys 32L/R, std. w/min. climb of 330’ per NM to 1000 or 3700-3 for VCOA.

DEPARTURE PROCEDURE:

Rwys 1L/R, 14L/R, 19L/R, climbing left turn direct CCR VOR/DME, thence...

Rwys 32L/R, climbing right turn direct CCR VOR/DME, thence...

...aircraft departing on CCR VOR/DME R-150 clockwise R-110, climb on course.

All others, climb in CCR VOR/DME holding pattern (hold N, left turns, 191° inbound) to cross CCR VOR/DME at or above 3400 before proceeding on course.

VCOA:

All Rwys, obtain ATC approval for VCOA when requesting IFR clearance. Climb in visual conditions to cross Buchanan Fld airport at or above 3600 before proceeding on course.

TAKEOFF OBSTACLE NOTES:

Rwy 1L, fence 116’ from DER, 1’ right of centerline, 29’ MSL.

Building 639’ from DER, 381’ right of centerline, 2’ AGL/48’ MSL.

Vegetation 675’ from DER, 96’ left of centerline, 38’ MSL.

Trees and poles beginning 1261’ from DER, 19’ right of centerline, up to 78’ MSL.

Flagpole 1520’ from DER, 753’ left of centerline, 71’ MSL.

Tree, camera, and general utility beginning 1860’ from DER, 48’ right of centerline, up to 98’ MSL.

Tree 1906’ from DER, 120’ left of centerline, 51’ AGL/72’ MSL.

Sign 1996’ from DER, 812’ left of centerline, 78’ MSL.

Tree 2392’ from DER, 83’ left of centerline, 83’ MSL.

Rwy 1R, pole 1551’ from DER, 97’ right of centerline, 43’ AGL/67’ MSL.

Pole 1864’ from DER, 357’ left of centerline, 96’ MSL.

Tree 1927’ from DER, 222’ right of centerline, 131’ MSL.

Tree 2110’ from DER, 981’ right of centerline, 133’ MSL.

Rwy 14L, vehicles on road and fences beginning 82’ from DER, 29’ left of centerline, up to 40’ MSL.

Building and trees beginning 731’ from DER, 191’ left of centerline, up to 51’ MSL.

Trees and buildings beginning 840’ from DER, 93’ left of centerline, up to 77’ MSL.

Trees, poles, and buildings beginning 942’ from DER, 13’ left of centerline, up to 102’ MSL.

Trees, buildings, and poles beginning 1116’ from DER, 10’ right of centerline, up to 40’ AGL/71’ MSL.

Tree 1465’ from DER, 112’ right of centerline, 73’ MSL.

Trees beginning 1496’ from DER, 121’ right of centerline, up to 84’ MSL.

Trees beginning 1648’ from DER, 62’ right of centerline, up to 91’ MSL.

Trees and building beginning 1750’ from DER, 30’ left of centerline, up to 105’ MSL.

Tree 2570’ from DER, 93’ right of centerline, 92’ MSL.

Buildings beginning 5413’ from DER, 99’ left of centerline, up to 177’ MSL.

Buildings 5456’ from DER, 138’ left of centerline, 146’ AGL/179’ MSL.

Rwy 14R, windsock 411’ from DER, 451’ right of centerline, 31’ AGL/51’ MSL.

Control tower 1140’ from DER, 315’ right of centerline, 61’ AGL/84’ MSL.

Electrical system, tree, pole, and antenna beginning 1140’ from DER, 167’ right of centerline, up to 98’ MSL.

Tree 2744’ from DER, 886’ left of centerline, 102’ MSL.

Building 3149’ from DER, 946’ right of centerline, 92’ AGL/125’ MSL.

Buildings beginning 3253’ from DER, 846’ right of centerline, up to 103’ AGL/136’ MSL.

Rwy 19L, tree 2132’ from DER, 376’ left of centerline, 90’ MSL.

Tree 2257’ from DER, 27’ left of centerline, 97’ MSL.

Tree 2543’ from DER, 384’ right of centerline, 87’ MSL.

Tree 3111’ from DER, 946’ right of centerline, 106’ MSL.

Rwy 19R, terrain 43’ from DER, 397’ left of centerline, 25’ MSL.

Fence 123’ from DER, 502’ left of centerline, 30’ MSL.

Tree 603’ from DER, 489’ right of centerline, 44’ MSL.

Pole and trees beginning 844’ from DER, 152’ right of centerline, up to 94’ MSL.

Tree 1023’ from DER, 81’ left of centerline, 59’ MSL.

Pole and trees beginning 1201’ from DER, 568’ left of centerline, up to 77’ MSL.

Building and trees beginning 1275’ from DER, 114’ left of centerline, up to 97’ MSL.

Tree 2129’ from DER, 447’ right of centerline, 106’ MSL.

Tree 2755’ from DER, 216’ left of centerline, 108’ MSL.

Rwy 32L, building 7’ from DER, 321’ left of centerline, 18’ AGL/35’ MSL.

Vehicles on road and hangar beginning 259’ from DER, 300’ left of centerline, up to 37’ MSL.

Vehicles on road beginning 560’ from DER, 3’ right of centerline, up to 34’ MSL.

CON’T
TAKEOFF MINIMUMS, (OBSTACLE) DEPARTURE PROCEDURES, AND DIVERSE VECTOR AREA (RADAR VECTORS)

CONCORD, CA (CONT’)

BUCHANAN FLD (CONT’)

Rwy 31L (CONT’), vehicles on road 627’ from DER, 609’ left of centerline, 38’ MSL.
Vehicles on road beginning 631’ from DER, 63’ left of centerline, up to 38’ MSL.
Buildings 633’ from DER, 253’ right of centerline, 17’ AGL/35’ MSL.
Vehicles on road 699’ from DER, 8’ right of centerline, 38’ MSL.
Vehicles on road beginning 715’ from DER, 37’ right of centerline, up to 39’ MSL.
Vehicles on road beginning 720’ from DER, 2’ left of centerline, up to 39’ MSL.
Vehicles on road beginning 730’ from DER, 137’ right of centerline, up to 42’ MSL.
Vehicles on road beginning 798’ from DER, on centerline, up to 42’ MSL.
Tree 824’ from DER, 135’ left of centerline, 40’ MSL.
Vehicles on road beginning 891’ from DER, 488’ right of centerline, up to 43’ MSL.
Vehicles on road 920’ from DER, 642’ right of centerline, 44’ MSL.

SW-2, 30 NOV 2023 to 25 JAN 2024

CRESCENT CITY, CA

JACK MC NAMARA FLD (CEC)

TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES

AMDT 2A 03JAN19 (22139) (FAA)

TAKEOFF MINIMUMS:

Rwy 12, 300-2½ or std. w/min. climb of 254’ per NM to 300, or alternatively, with std. takeoff minimums and a normal 200’ per NM climb gradient, takeoff must occur no later than 2200’ prior to DER.

Rwy 18, 300-1 or std. w/min. climb of 308’ per NM to 400.

Rwy 36, 300-1 or std. w/min. climb of 443’ per NM to 300.

DEPARTURE PROCEDURE:

Rwys 12, 18, climbing right turn, thence...

Rwys 30, 36, climbing left turn, thence...

...Climb directed CEC VORTAC. Aircraft departing CEC R-144 CW R-350 climb on course. All others continue climb in CEC VORTAC holding pattern (hold south, left turn, 346° inbound) to cross CEC VORTAC at or above:

R-351 CW R-048, 2900;
R-049 CW R-113, 4300;
R-114 CW R-143, 2900.

TAKEOFF OBSTACLE NOTES:

Rwy 12, terrain 7’ from DER, 6’ right of centerline, 54’ MSL.

Terrain 9’ from DER, 15’ left of centerline, 54’ MSL.

NAVAID and tree beginning 12’ from DER, 117’ left of centerline, up to 4’ AGL/57’ MSL.

Tree 798’ from DER, 378’ left of centerline, 149’ MSL.

Trees beginning 828’ from DER, 437’ left of centerline, up to 151’ MSL.

Tree 1075’ from DER, 398’ right of centerline, 101’ MSL.

Trees beginning 1162’ from DER, 75’ left of centerline, up to 163’ MSL.

Trees beginning 1185’ from DER, 156’ right of centerline, up to 123’ MSL.

Tree and pole beginning 1332’ from DER, 215’ right of centerline, up to 149’ MSL.

Trees beginning 1458’ from DER, 2’ left of centerline, up to 169’ MSL.

Tree and pole beginning 1532’ from DER, 93’ right of centerline, up to 150’ MSL.

CONT’
TAKEOFF MINIMUMS, (OBSTACLE) DEPARTURE PROCEDURES, AND DIVERSE VECTOR AREA (RADAR VECTORS)

CRESCENT CITY, CA (CON’T)
JACK MC NAMARA FLD (CEC) (CON’T)

Rwy 12 (CON’T), trees beginning 1914’ from DER, 83’ right of centerline, up to 152’ MSL.
Trees beginning 2058’ from DER, 155’ right of centerline, up to 156’ MSL.
Trees beginning 2353’ from DER, 182’ right of centerline, up to 159’ MSL.
Trees beginning 2549’ from DER, 604’ right of centerline, up to 173’ MSL.
Trees beginning 2656’ from DER, 108’ right of centerline, up to 175’ MSL.
Trees beginning 2986’ from DER, 73’ right of centerline, up to 189’ MSL.
Tree 5151’ from DER, 211’ right of centerline, 216’ MSL.
Tree 5184’ from DER, 47’ left of centerline, 195’ MSL.
Antenna 1.8 NM from DER, 2439’ left of centerline, 320’ AGL/333’ MSL.

SW-2, 30 NOV 2023 to 25 JAN 2024

Rwy 18, terrain 27’ from DER, 12’ left of centerline, 52’ MSL.
Structure 35’ from DER, 113’ right of centerline, 7’ AGL/57’ MSL.
Structure 35’ from DER, 116’ left of centerline, 4’ AGL/54’ MSL.
Trees beginning 183’ from DER, 384’ right of centerline, up to 59’ MSL.
Vehicle beginning 319’ from DER, 570’ left of centerline, 60’ MSL.
Tree 412’ from DER, 166’ left of centerline, 64’ MSL.
Trees beginning 445’ from DER, 188’ right of centerline, up to 66’ MSL.
Terrain 4897’ from DER, 1653’ right of centerline, 202’ MSL.
Terrain 4973’ from DER, 1722’ right of centerline, 242’ MSL.

Rwy 30, NAVAID and terrain beginning 4’ from DER, 5’ right of centerline, up to 1’ AGL/58’ MSL.
Trees beginning 29’ from DER, 374’ right of centerline, up to 65’ MSL.
Tree 153’ from DER, 332’ left of centerline, 65’ MSL.
Tree 164’ from DER, 439’ left of centerline, 73’ MSL.

Rwy 36, terrain 6’ from DER, 317’ left of centerline, 77’ MSL.
Tree 104’ from DER, 467’ right of centerline, 77’ MSL.
Tree 143’ from DER, 201’ left of centerline, 84’ MSL.
Tree and vegetation beginning 185’ from DER, 92’ right of centerline, up to 86’ MSL.
Tree and vegetation beginning 405’ from DER, 197’ right of centerline, up to 97’ MSL.
Tree 663’ from DER, 30’ left of centerline, 86’ MSL.
Tree 762’ from DER, 97’ left of centerline, 94’ MSL.
Tree 791’ from DER, 155’ left of centerline, 96’ MSL.
Tree 843’ from DER, 227’ left of centerline, 105’ MSL.

Trees beginning 981’ from DER, 100’ left of centerline, up to 117’ MSL.
Trees beginning 1081’ from DER, 35’ left of centerline, up to 135’ MSL.
Tree 1273’ from DER, 60’ right of centerline, 111’ MSL.
Trees beginning 1352’ from DER, 100’ right of centerline, up to 112’ MSL.
Trees beginning 1550’ from DER, 25’ right of centerline, up to 129’ MSL.
Tree 1629’ from DER, 425’ left of centerline, 149’ MSL.
Trees beginning 1654’ from DER, 473’ left of centerline, up to 151’ MSL.
Trees beginning 1824’ from DER, 192’ left of centerline, up to 159’ MSL.
Trees beginning 1961’ from DER, 78’ left of centerline, up to 164’ MSL.
Trees beginning 2056’ from DER, 978’ right of centerline, up to 150’ MSL.
Tree 2322’ from DER, 75’ right of centerline, 155’ MSL.

Trees beginning 2322’ from DER, 35’ right of centerline, up to 176’ MSL.
Tree 2590’ from DER, 908’ right of centerline, 179’ MSL.
Tree 2591’ from DER, 1044’ right of centerline, 189’ MSL.
Trees beginning 2644’ from DER, 367’ right of centerline, up to 192’ MSL.
Trees beginning 2696’ from DER, 70’ right of centerline, up to 195’ MSL.
Trees beginning 2928’ from DER, 135’ left of centerline, up to 174’ MSL.
Trees beginning 2933’ from DER, 37’ right of centerline, up to 196’ MSL.
Trees beginning 3318’ from DER, 75’ left of centerline, up to 181’ MSL.
Trees beginning 3587’ from DER, 132’ left of centerline, up to 182’ MSL.

DAVIS, CA
UNIVERSITY (EDU)
TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES
AMDT 3 07MAY09 (09127) (FAA)

DEPARTURE PROCEDURE:
Rwy 17, climbing right turn via heading 200° and ILA R-151 to EMBER INT/ILA 48 DME before proceeding on course.

Rwy 35, climbing left turn via heading 320° and ILA R-145 to ILA VORTAC before proceeding on course.

TAKEOFF OBSTACLE NOTES:
Rwy 17, trees beginning 1353’ from DER, 31’ right of centerline, up to 40’ AGL/109’ MSL.
Rwy 35, tree 24’ from DER, 433’ left of centerline, 40’ AGL/104’ MSL.
Vehicle 288’ from DER, on centerline, 15’ AGL/74’ MSL.
**TAKEOFF MINIMUMS, (OBSTACLE) DEPARTURE PROCEDURES, AND DIVERSE VECTOR AREA (RADAR VECTORS)**

**DAVIS/WOODLAND/WINTERS, CA**

YOLO COUNTY (DWA)

TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES

AMDT 2 19JUL18 (18200) (FAA)

DEPARTURE PROCEDURE:

- Rw 16, climb heading 164° to 2200 before turning right.
- Rw 34, climb heading 344° to 1500 before turning left.

TAKEOFF OBSTACLE NOTES:

- Rw 16, tree 462' from DER, 543' right of centerline, 139' MSL.
- Tree 733' from DER, 566' right of centerline, 147' MSL.
- Trees beginning 1162' from DER, 434' left of centerline, up to 195' MSL.
- Tree 2760' from DER, 217' right of centerline, 197' MSL.
- Rw 34, tree 367' from DER, 574' right of centerline, 135' MSL.
- Tree, pole beginning 544' from DER, 473' left of centerline, up to 166' MSL.
- Tree 1010' from DER, 541' left of centerline, 206' MSL.

**EUREKA, CA**

MURRAY FLD (EKA)

TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES

AMDT 4 27AUG09 (21196) (FAA)

TAKEOFF MINIMUMS:

- Rw 12, std. w/min. climb of 465' per NM to 1800 or 3800-3 for climb in visual conditions.

DEPARTURE PROCEDURE:

- Rw 12, climbing right turn heading 265° to intercept V27. For climb in visual conditions: cross Murray Fld airport at or above 3700 before proceeding on course.
- Rw 30, climbing left turn heading 265° to intercept V27.

TAKEOFF OBSTACLE NOTES:

- Rw 12, bush 50' from DER, 82' left of centerline, 6' AGL/16' MSL.
- Multiple trees beginning 1.5 NM from DER, 2993' left of centerline.
- Multiple trees beginning 1.6 NM from DER, 2318' right of centerline.
- Rw 30, multiple trees, beginning 443' from DER, 389' right of centerline, up to 93' AGL/103' MSL.
- Tree 664' from DER, 587' left of centerline, 46' AGL/56' MSL.
- Pole 753' from DER, 155' right of centerline 27' AGL/37' MSL.
- Railroad 786' from DER, 4' left of centerline 23' AGL/31' MSL.
- Road beginning 602' from DER, 4' left of centerline up to 15' AGL/23' MSL.
- Bush 566' from DER, 69' left of centerline, 8' AGL/18' MSL.

**FIREBAUGH, CA**

FIREBAUGH (F34)

TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES

AMDT 2 20SEP12 (12264) (FAA)

TAKEOFF MINIMUMS:

- Rw 12, climbing right turn heading 134° to intercept the PXN VORTAC R-061 to MENDO INT. Aircraft departing MENDO INT heading 230° CW 150°, climb on course. All others, climb in MENDO INT holding pattern (hold NE, right turns, 241° inbound) to cross MENDO INT at or above 3000 before proceeding on course.
- Rw 30, climbing left turn heading 180° to intercept PXN VORTAC R-061 to PXN VORTAC, continue climb in PXN VORTAC holding pattern (SW, right turns, 049° inbound) to cross PXN VORTAC at or above airway MEA/MCA for route of flight.

TAKEOFF OBSTACLE NOTES:

- Rw 30, poles beginning 921' from DER, 525' left of centerline, up to 65' AGL/203' MSL.
- Elevator 1941' from DER, 739' right of centerline, 97' AGL/242' MSL.

**FORTUNA, CA**

ROHNERVILLE (FOT)

TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES

AMDT 3 23OCT86 (86296) (FAA)

TAKEOFF MINIMUMS:

- Rw 11, NA.

DEPARTURE PROCEDURE:

- Climb direct FOT VORTAC. Continue climb in holding pattern (hold N, right turns, 161° inbound) to cross FOT VORTAC at or above 3000.
TAKEOFF MINIMUMS, (OBSTACLE) DEPARTURE PROCEDURES, AND DIVERSE VECTOR AREA (RADAR VECTORS)

FRESNO, CA

FRESNO CHANDLER EXEC (FCH)

TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES

AMDT 3 10OCT19 (21168) (FAA)

DEPARTURE PROCEDURE:

Rwy 12, climb on a heading between 101° CW to 290° from DER.

Rwy 30, climb on a heading between 111° CW to 338° from DER.

TAKEOFF OBSTACLE NOTES:

Rwy 12, sign 9’ from DER, 125’ left of centerline, 3’ AGL/282’ MSL.

Pole, traverse way, fence, vegetation, trees beginning 32’ from DER, 125’ right of centerline, up to 20’ AGL/300’ MSL.

Tree 94’ from DER, 310’ right of centerline, 317’ MSL.

Trees, traverse way, vegetation, fence beginning 95’ from DER, 60’ right of centerline, up to 323’ MSL.

Trees, poles, traverse ways, fence, transmission line, building beginning 154’ from DER, right of centerline, up to 326’ MSL.

Vegetation, fence beginning 250’ from DER, 14’ left of centerline, up to 292’ MSL.

Trees, vegetation, traverse way beginning 344’ from DER, 14’ left of centerline, up to 294’ MSL.

Traverse way, tree beginning 390’ from DER, 10’ left of centerline, up to 296’ MSL.

Pole, trees, vegetation, traverse way beginning 408’ from DER, 9’ left of centerline, up to 31’ AGL/311’ MSL.

Trees, poles, transmission line, building beginning 476’ from DER, 93’ right of centerline, up to 341’ MSL.

Trees, traverse ways, vegetation beginning 499’ from DER, 47’ left of centerline, up to 323’ MSL.

Trees, poles, traverse way, transmission line, building beginning 615’ from DER, 36’ left of centerline, up to 332’ MSL.

Trees, poles, buildings beginning 630’ from DER, 4’ right of centerline, up to 346’ MSL.

Trees beginning 904’ from DER, 15’ left of centerline, up to 340’ MSL.

Trees, poles beginning 934’ from DER, 38’ left of centerline, up to 346’ MSL.

Trees, pole beginning 966’ from DER, 7’ right of centerline, up to 347’ MSL.

Poles, tree beginning 1093’ from DER, 263’ left of centerline, up to 63’ AGL/348’ MSL.

Trees, poles beginning 1118’ from DER, 12’ left of centerline, up to 349’ MSL.

Trees, poles beginning 1133’ from DER, 2’ right of centerline, up to 355’ MSL.

Trees, vegetation, traverse way beginning 1349’ from DER, 13’ left of centerline, up to 363’ MSL.

Trees, pole beginning 1640’ from DER, 88’ left of centerline, up to 372’ MSL.

Trees beginning 1756’ from DER, 57’ left of centerline, up to 375’ MSL.

Trees beginning 1816’ from DER, 31’ right of centerline, up to 376’ MSL.

Tree 3069’ from DER, 146’ left of centerline, 377’ MSL.

Tree 3792’ from DER, 172’ left of centerline, 378’ MSL.

Trees beginning 3938’ from DER, 356’ left of centerline, up to 391’ MSL.

Rwy 30, traverse way 7’ from DER, 341’ right of centerline, 294’ MSL.

Sign 21’ from DER, 120’ left of centerline, 2’ AGL/279’ MSL.

Pole, traverse way beginning 72’ from DER, 374’ left of centerline, up to 28’ AGL/305’ MSL.

Tree, fences, traverse way beginning 114’ from DER, 122’ right of centerline, up to 296’ MSL.

Pole 140’ from DER, 427’ left of centerline, 38’ AGL/315’ MSL.

Trees, vegetation, traverse way, poles beginning 174’ from DER, 43’ left of centerline, up to 326’ MSL.

Electrical system, traverse way beginning 377’ from DER, 7’ right of centerline, up to 19’ AGL/297’ MSL.

Tree 1412’ from DER, 799’ left of centerline, 358’ MSL.

Poles beginning 1419’ from DER, 158’ right of centerline, up to 41’ AGL/320’ MSL.

Tree 1539’ from DER, 644’ left of centerline, 389’ MSL.

FRESNO YOSEMITE INTL (FAT)

TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES

AMDT 9 10OCT19 (19283) (FAA)

TAKEOFF MINIMUMS:

Rwys 11L/R, 29L/R, std. w/min. climb of 250’ per NM to 5000 or 5800 - 3 for VCOA.

DEPARTURE PROCEDURE:

Rwys 11L/R, climb heading 112° to 2500, then climbing left turn heading 040° to intercept FRA VORTAC R-150 to FRA VORTAC. Cross FRA VORTAC at or above 6000, thence...

Rwys 29L/R, climb heading 292° to 2500, then climbing right turn heading 350° to intercept FRA VORTAC R-230. Cross FRA VORTAC at or above 6000, thence...

...continue climb in FRA VORTAC holding pattern (hold south, left turn, 350° inbound) to cross FRA VORTAC at or above MEA/ MCA for route of flight.

VCOA:

All runways, obtain ATC approval for VCOA when requesting IFR clearance. Climb in visual conditions to cross Fresno Yosemite Intl airport at or above 6000, then on FRA R-180 to FRA VORTAC before proceeding on course.

TAKEOFF OBSTACLE NOTES:

Rwy 11L, lighting beginning 108’ from DER, on centerline, up to 4’ AGL/336’ MSL.

Pole 648’ from DER, 542’ left of centerline, 16’ AGL/349’ MSL.

Electrical system 1223’ from DER, 662’ right of centerline, 30’ AGL/363’ MSL.

Pole 1229’ from DER, 664’ right of centerline, 33’ AGL/365’ MSL.

Tree, pole beginning 1414’ from DER, 668’ right of centerline, up to 377’ MSL.

Sign, transmission line beginning 1694’ from DER, 862’ right of centerline, up to 51’ AGL/383’ MSL.

Rwy 11R, lighting 10’ from DER, 55’ right of centerline, 1’ AGL/331’ MSL.

General utility 159’ from DER, 433’ left of centerline, 3’ AGL/334’ MSL.

Pole 329’ from DER, 280’ left of centerline, 21’ AGL/349’ MSL.

Tower 664’ from DER, 274’ left of centerline, 34’ AGL/362’ MSL.

Pole 1205’ from DER, 659’ right of centerline, 54’ AGL/382’ MSL.

Pole 1458’ from DER, 393’ right of centerline, 54’ AGL/384’ MSL.

Pole 1598’ from DER, 294’ right of centerline, 55’ AGL/385’ MSL.

CON’T
TAKEOFF MINIMUMS, (OBSTACLE) DEPARTURE PROCEDURES, AND DIVERSE VECTOR AREA (RADAR VECTORS)

FRESNO, CA (CON’T)
FRESNO YOSEMITE INTL (FAT) (CON’T)
Rwy 11R (CON’T), electrical system, pole beginning 1598’ from DER, 262’ right of centerline, up to 57’ AGL/386’ MSL.
Tree 2648’ from DER, 442’ right of centerline, 398’ MSL.
Lighting 10’ from DER, 54’ right of centerline, 1’ AGL/331’ MSL.
Transmission line, pole beginning 997’ from DER, 620’ left of centerline, up to 55’ AGL/385’ MSL.
Tree, transmission line beginning 1132’ from DER, 189’ left of centerline, up to 396’ MSL.
Rwy 29L, lighting 9’ from DER, 55’ left of centerline, up to 396’ MSL.

GRASS VALLEY, CA
NEVADA COUNTY (GOO)
TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES
AMDT 1A 29MAR18 (18088) (FAA)
TAKEOFF MINIMUMS:
Rwy 7, NA.
DEPARTURE PROCEDURE:
Rwy 25, climb via MYV R-058 to 6000 then continue climb on course.

GROVELAND, CA
PINE MOUNTAIN LAKE (E45)
TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES
AMDT 1 10NOV16 (16315) (FAA)
TAKEOFF MINIMUMS:
Rwy 9, 600-2¾ or std. w/min. climb of 400’ per NM to 4000.
DEPARTURE PROCEDURE:
Rwy 9, turn right.
Rwy 27, turn left.
All aircraft climb direct LIN VOR/DME. Cross LIN VOR/DME at or above 5000.

HALF MOON BAY, CA
HALF MOON BAY (HAF)
TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES
AMDT 2 15JUN23 (23166) (FAA)
TAKEOFF MINIMUMS:
Rwy 12, std. w/min. climb of 375’ per NM to 3200.
DEPARTURE PROCEDURE:
Rwy 12, climb on heading 122° to 3000, then climbing left turn direct OSI VOR/DME. Continue climb in OSI holding pattern (hold southeast, left turns, 321° inbound) to cross OSI VOR/DME at or above 5100 on V25-87 before proceeding on course.
Rwy 30, use SEEMS DEPARTURE.
TAKEOFF OBSTACLE NOTES:
Rwy 12, tree 2557’ from DER, 212’ left of centerline, 90’ AGL/114’ MSL.
Rwy 30, trees beginning 1248’ from DER, 83’ left of centerline, up to 160’ MSL.
Tree 1263’ from DER, 628’ right of centerline, 156’ MSL.
Trees and poles beginning 1490’ from DER, 102’ right of centerline, up to 160’ MSL.
Trees beginning 1921’ from DER, 161’ left of centerline, up to 172’ MSL.
Trees beginning 2234’ from DER, 23’ left of centerline, up to 192’ MSL.
DIVERSE VECTOR AREA (RADAR VECTORS)
ORIG 16OCT14 (14289) (FAA)
Rwy 12, heading as assigned by ATC.

TAKEOFF MINIMUMS, (OBSTACLE) DEPARTURE PROCEDURES, AND DIVERSE VECTOR AREA (RADAR VECTORS)
HANFORD, CA
HANFORD MUNI (HJO)
TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES
AMDT 1A 15SEP16 (16259) (FAA)
DEPARTURE PROCEDURE:
Rwy 14, climbing left turn heading 050° to intercept V-23.
Rwy 32, climbing right turn heading 050° to intercept V-23.
TAKEOFF OBSTACLE NOTES:
Rwy 14: fence 9’ from DER, 298’ left of centerline, 244’ MSL.
Catenary 1293’ from DER, 1293’ left of centerline, 39’ AGL/287’ MSL.
Poles beginning 1679’ from DER, crossing centerline, up to 52’ AGL/296’ MSL.
Trees beginning 2224’ from DER, 391’ left of centerline up to 313’ MSL.
Rwy 32: fence 168’ from DER, 9’ left of centerline, 245’ MSL.
Pole 588’ from DER, 588’ left of centerline, 25’ AGL/278’ MSL.
Sign 614’ from DER, 151’ right of centerline, 9’ AGL/261’ MSL.
Trees and poles beginning 592’ from DER, 3’ left of centerline, up to 300’ MSL.
Poles beginning 1127’ from DER, 222’ right of centerline, up to 40’ AGL/293’ MSL.
Tree 2159’ from DER, 434’ right of centerline, 299’ MSL.

HAYWARD, CA
HAYWARD EXEC (HWD)
TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES
AMDT 1 13JAN11 (21140) (FAA)
DEPARTURE PROCEDURE:
Rwys 10L, 10R, climbing right turn direct OSI VORTAC.
Rwys 28L, 28R, climbing left turn direct OSI VORTAC.
TAKEOFF OBSTACLE NOTES:
Rwy 10L, hangars, trees and buildings beginning 625’ from DER, 67’ left of centerline, up to 100’ AGL/155’ MSL.
Trees beginning 2050’ from DER, 1’ right of centerline, up to 60’ AGL/107’ MSL.
Rwy 10R, trees, poles, and buildings beginning 21’ from DER, 61’ left of centerline, up to 100’ AGL/155’ MSL.
Windsock, blast fence, trees, buildings and pole beginning 23’ from DER, 38’ right of centerline, up to 74’ AGL/119’ MSL.
Rwy 28L, trees beginning 899’ from DER, 141’ left of centerline, up to 93’ AGL/108’ MSL.
Antennas, road, and trees beginning 108’ from DER, 68’ right of centerline, up to 87’ AGL/102’ MSL.
Rwy 28R, antenna and trees beginning 728’ from DER, 28’ left of centerline, up to 87’ AGL/102’ MSL.
Trees beginning 391’ from DER, 4’ right of centerline, up to 95’ AGL/125’ MSL.

HOLLISTER, CA
HOLLISTER MUNI (CVH)
TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES
AMDT 1 05JUN08 (08157) (FAA)
TAKEOFF MINIMUMS:
Rwy 6, NA-obstacles.
Rwy 24, NA-ATC.
Rwy 13, std. w/ min. climb of 391’ per NM to 3500, or 3100-3 for climb in visual conditions.
Rwy 31, std. w/ min climb of 209’ per NM to 2300, or 3100-3 for climb in visual conditions.
DEPARTURE PROCEDURE:
Rwy 13, climbing right turn to heading 332° and via SJC R-121 direct SJC VOR/DME to 6000 before proceeding on course or for climb in visual conditions: cross Hollister Muni Airport at or above 3100 MSL before proceeding on course.
Rwy 31, climbing heading 307° and via SJC R-121 direct SJC VOR/DME to 6000 before proceeding on course or for climb in visual conditions: cross Hollister Muni Airport at or above 3100 MSL before proceeding on course.
TAKEOFF OBSTACLE NOTES:
Rwy 13, terrain beginning 992’ from DER, 348’ left of centerline, up to 289’ MSL.
Terrain beginning 2467’ from DER, 154’ right of centerline, up to 309’ MSL.
Trees beginning 1277’ from departure end of runway, 348’ left of centerline, up to 309’ MSL.
Trees beginning 2467’ from DER, 153’ right of centerline, up to 270’ MSL.
Rwy 31, terrain beginning 76’ from DER, 392’ left of centerline, up to 247’ MSL.
Terrain beginning 14’ from DER, 179’ right of centerline, up to 231’ MSL.
JACKSON, CA
WESTOVER FLD AMADOR COUNTY (JAQ)
TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES
AMDT 2 02NOV23 (23306) (FAA)
TAKEOFF MINIMUMS:
Rwy 1, 300-1 or std w/min climb of 672’/NM to 2000.

DEPARTURE PROCEDURE:
Rwy 1, climbing left turn direct LIN VOR/DME, continue climbing on course.
Rwy 19, climbing right turn direct LIN VOR/DME, continue climbing on course.

TAKEOFF OBSTACLE NOTES:
Rwy 1, terrain, utility building beginning 55’ from DER, 169’ right of centerline, up to 1701’ MSL.
Terrain beginning 188’ from DER, 193’ right of centerline, up to 1702’ MSL.
Terrain beginning 263’ from DER, 252’ right of centerline, up to 1703’ MSL.
Tree 314’ from DER, 170’ left of centerline, 1692’ MSL.
Vehicles on road 359’ from DER, 76’ left of centerline, 1693’ MSL.
Terrain, vehicles on road beginning 456’ from DER, 50’ right of centerline, up to 1706’ MSL.
Agricultural equipment, vehicles on road beginning 664’ from DER, 265’ right of centerline, up to 6’ AGL/1730’ MSL.
Tree 666’ from DER, 194’ left of centerline, 1701’ MSL.
Tree 697’ from DER, 56’ left of centerline, 1703’ MSL.
Building, vehicles on road, tree beginning 734’ from DER, 8’ right of centerline, up to 16’ AGL/1741’ MSL.
Poles, vehicles on road, fence beginning 779’ from DER, 400’ right of centerline, up to 45’ AGL/1752’ MSL.
Tree 1088’ from DER, 392’ right of centerline, 1756’ MSL.
Pole 1123’ from DER, 610’ right of centerline, 39’ AGL/1762’ MSL.
Tree 1123’ from DER, 740’ left of centerline, 1764’ MSL.
Trees, pole, vehicles on road beginning 1243’ from DER, 331’ right of centerline, up to 1772’ MSL.
Trees, terrain, pole, transmission line, vehicles on road beginning 1406’ from DER, 254’ right of centerline, up to 1785’ MSL.
Tree 1538’ from DER, 876’ right of centerline, 1789’ MSL.
Tree 1561’ from DER, 456’ right of centerline, 1802’ MSL.
Trees, vehicles on road beginning 1619’ from DER, 254’ right of centerline, up to 1812’ MSL.
Trees, building beginning 1806’ from DER, 633’ right of centerline, up to 1828’ MSL.
Tree, building, terrain beginning 1954’ from DER, 188’ right of centerline, up to 1833’ MSL.
Tree, building beginning 2037’ from DER, 547’ right of centerline, up to 1855’ MSL.
Trees, terrain beginning 2093’ from DER, 188’ right of centerline, up to 1855’ MSL.
Rwy 19, light poles 9’ from DER, 39’ left of centerline, 1’ AGL/1692’ MSL.
Building, antenna beginning 56’ from DER, 158’ right of centerline, up to 20’ AGL/1697’ MSL.
Light poles, tank beginning 80’ from DER, 104’ left of centerline, up to 5’ AGL/1695’ MSL.
Tower 269’ from DER, 411’ right of centerline, 63’ AGL/1714’ MSL.

LAKEPORT, CA
LAMPSON FLD (1O2)
TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES
AMDT 1 08APR10 (21336) (FAA)
TAKEOFF MINIMUMS:
Rwy 10, std. w/min. climb of 400’ per NM to 4500, do not exceed 210K until intercepting the ENI R-073 or 3200-3 for climb in visual conditions.
Rwy 28, NA-Rapidly rising terrain.

DEPARTURE PROCEDURE:
Rwy 10, climbing left turn to 6000 via heading 310° and ENI R-073 to ENI VORTAC before proceeding on course, or for climb in visual conditions: cross Lampson Fld at or above 4400 MSL before proceeding on course.

TAKEOFF OBSTACLE NOTES:
Rwy 10, vehicle on road 347’ from DER, 7’ right of centerline, 15’ AGL/1394’ MSL.
Trees beginning 280’ from DER, 201’ left of centerline, up to 100’ AGL/1479’ MSL.
Trees beginning 494’ from DER, 219’ right of centerline, up to 100’ AGL/1479’ MSL.

LEMOORE NAS (REEVES FIELD) (KNLC)
LEMOORE, CA
TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES
AMDT 1 15JUN23 (23166) (USN)
TAKEOFF MINIMUMS:
Rwys 32L/R, std. w/min. climb of 220’ per NM to 6400.

DEPARTURE PROCEDURE:
Rwy 32L, climb on hdg between 142° to 283° from DER.
Rwy 32R, climb on hdg between 142° to 281° from DER.

DIVERSE VECTOR AREA (RADAR VECTORS)
ORIG 17JUN21 (21168) (USN)
Rwys 32L/R, 32R, hdgs as assigned by ATC.
TAKEOFF MINIMUMS, (OBSTACLE) DEPARTURE PROCEDURES, AND DIVERSE VECTOR AREA (RADAR VECTORS)

LINCOLN, CA
LINCOLN RGNL/KARL HARDER FLD (LHM)
TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES
AMDT 3  20JUL95  (21140)  (FAA)
DEPARTURE PROCEDURE:
Rwy 15, climbing right turn.
Rwy 33, climbing left turn.
All aircraft climb direct MYV VOR/DME, then climb on course.

DIVERSE VECTOR AREA (RADAR VECTORS)
ORIG  05FEB15  (15036)  (FAA)
Rwys 15,33, headings as assigned by ATC.

LITTLE RIVER, CA
LITTLE RIVER (LLR)
TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES
AMDT 3  20JUL95  (21140)  (FAA)
DEPARTURE PROCEDURE:
Rwy 15, climbing right turn.
Rwy 33, climbing left turn.
All aircraft climb direct MYV VOR/DME, then climb on course.

LIVERMORE, CA
LIVERMORE MUNI (LVK)
TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES
AMDT 4  22JUN17  (17173)  (FAA)
DEPARTURE PROCEDURE:  Use LIVERMORE DEPARTURE.

LODI, CA
LODI (1O3)
TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES
AMDT 2A  10NOV16  (16315)  (FAA)
TAKEOFF MINIMUMS:
Rwys 12, 30, NA-Environmental.
DEPARTURE PROCEDURE:
Rwy 8, climb heading 076° to 600 then climbing right turn on LIN R-290 to LIN VOR/DME, thence...
Rwy 26, climb heading 256° to 800 climbing right turn on heading 080° to intercept LIN R-290 to LIN VOR/DME, thence...
...continue climb in hold (hold Southeast, right turns, 326° inbound) to MCA or MEA for route of flight.
TAKEOFF OBSTACLE NOTES:
Rwy 8, hangars, buildings, and vehicles on roadways beginning at DER, left and right of centerline, up to 25’ AGL/84’ MSL.
Power lines beginning at 4.9 NM from DER, left and right of centerline, up to 160’ AGL/220’ MSL.
Rwy 26, vehicles on roadway beginning 7’ from DER, 265’ right of centerline, up to 15’ AGL/69’ MSL.
Trees beginning 15’ from DER, left and right of centerline, up to 100’ AGL/154’ MSL.
Power lines beginning at 4.6 NM from DER, left and right of centerline, up to 160’ AGL/220’ MSL.

LOS BANOS, CA
LOS BANOS MUNI (LSN)
TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES
AMDT 2  17DEC09  (09351)  (FAA)
DEPARTURE PROCEDURE:
Rwy 14, climbing right turn heading 080° to intercept V-230.
Rwy 30, climbing right turn heading 110° to intercept V-230.

MADERA, CA
MADERA MUNI (MAE)
TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES
AMDT 5A  31DEC20  (20366)  (FAA)
TAKEOFF MINIMUMS:
Rwy 12, std. w/ min. climb of 250’ per NM to 2000.
DEPARTURE PROCEDURE:
Rwy 12, climbing left turn heading 080° to intercept V-230.
Rwy 30, climbing right turn heading 110° to intercept V-230.
TAKEOFF MINIMUMS, (OBSTACLE) DEPARTURE PROCEDURES, AND DIVERSE VECTOR AREA (RADAR VECTORS)

MAMMOTH LAKES, CA
MAMMOTH YOSEMITE (MMH)
TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES
AMDT 2  05MAR15  (15064)  (FAA)
DEPARTURE PROCEDURE:
Use NIKOL DEPARTURE.

MARINA, CA
MARINA MUNI (OAR)
TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES
AMDT 2  11FEB10  (22139)  (FAA)
TAKEOFF MINIMUMS:
Rwy 11, std. w/min. climb of 307' per NM to 4500, or 2000-2½ for climb in visual conditions.
DEPARTURE PROCEDURE:
Rwy 11, climb heading 108° and SNS VORTAC R-252 to SNS VORTAC, thence,...
or for climb in visual conditions: cross Marina Muni Airport at or above 2100, then proceed on SNS VORTAC R-261 to SNS VORTAC, thence...
Rwy 29, climb via heading 288° to 1200', then climbing right turn direct SNS VORTAC, thence...
...all aircraft continue climb in SNS holding pattern (west, left turns, 084° inbound) to cross SNS VORTAC at or above MEA/MCA for direction of flight before proceeding on course.
TAKEOFF OBSTACLE NOTES:
Rwy 11, windsock 32' from DER, 386' left of centerline, 8' AGL/148' MSL.
Rwy 29, bush 158' from DER, 272' right of centerline, 10' AGL/142' MSL.

MARIPOSA, CA
MARIPOSA-YOSEMITE (MPI)
TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES
ORIG  20JAN05  (05020)  (FAA)
TAKEOFF MINIMUMS:
Rwy 8, N/A-Obstacles
DEPARTURE PROCEDURE:
Rwy 26, climb via heading 265° to 3000, then climbing left turn to 7000 direct FRA VORTAC before proceeding on course.
TAKEOFF OBSTACLE NOTES:
Rwy 26, tree 10' from DER, 313' left of centerline, 100' AGL/2265' MSL.
Tree 1146' from DER, 303' left of centerline, 100' AGL/2298' MSL.

MARYSVILLE, CA
YUBA COUNTY (MYV)
TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES
AMDT 1A  27JUN13  (13178)  (FAA)
DEPARTURE PROCEDURE:
All runways, climb direct ILA VORTAC.
TAKEOFF OBSTACLE NOTES:
Rwy 5, tree 750' from DER, 239' right of centerline, 44' AGL/109' MSL.
Tower 966' from DER, 258' left of centerline, 46' AGL/108' MSL.
Tree 1737' from DER, 191' left of centerline, 70' AGL/134' MSL.
Tree 2792' from DER, 607' left of centerline, 81' AGL/145' MSL.
Rwy 23, railroad 822' from DER, 1' right of centerline, 23' AGL/85' MSL.
Building 903' from DER, 387' right of centerline, 29' AGL/89' MSL.
Rwy 32, pole 1040' from DER, 717' left of centerline, 32' AGL/94' MSL.
Tree 2487' from DER, 586' left of centerline, 75' AGL/134' MSL.
Tree 3135' from DER, 672' right of centerline, 93' AGL/157' MSL.

MERCED, CA
MERCED YOSEMITE RGNL (MCE)
TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES
AMDT 5B  10DEC15  (22363)  (FAA)
DEPARTURE PROCEDURE:
Rwy 12, climbing right turn to 3000 via heading 330° and MOD R-120 to MOD.
Rwy 30, climb to 3000 via heading 300° and MOD R-120 to MOD.
TAKEOFF OBSTACLE NOTES:
Rwy 12, tree 1321' from DER, 785' left of centerline, 50' AGL/190' MSL.
Rwy 30, bush 183' from DER, 490' right of centerline, 20' AGL/161' MSL.
Bush 486' from DER, 604' left of centerline, 20' AGL/170' MSL.
Tree 2457' from DER, 263' left of centerline, 50' AGL/220' MSL.
TAKEOFF MINIMUMS, (OBSTACLE) DEPARTURE PROCEDURES, AND DIVERSE VECTOR AREA (RADAR VECTORS)

MODESTO, CA
MODESTO CITY-COUNTY-HARRY SHAM FLD (MOD)
TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES
AMDT 5A 10JAN13 (21168) (FAA)
DEPARTURE PROCEDURE:
Rwys 28L/R, climb on a heading between 256° CW to 109° from DER, or min. climb of 230' per NM to 5000 for all other courses.
TAKEOFF OBSTACLE NOTES:
Rwy 10R, trees beginning 169' from DER, 37° right of centerline, up to 91' AGL/195' MSL. Sign 57' from DER, 211' right of centerline, 15' AGL/89' MSL. Sign 16' from DER, 135' left of centerline, 4' AGL/87' MSL. Trees beginning 823' from DER, 79' left of centerline, up to 89' AGL/148' MSL.
Rwy 10L, trees beginning 15' from DER, 65' right of centerline, up to 68' AGL/172' MSL. Vehicles on road beginning 178' from DER, 17' left of centerline, up to 15' AGL/96' MSL. Trees beginning 1413' from DER, 184' left of centerline, up to 63' AGL/126' MSL.
Rwy 28R, vehicles on road beginning 47' from DER, 332' right of centerline, up to 15' AGL/114' MSL. Multiple poles, trees, and buildings beginning 128' from DER, 34' left of centerline, up to 102' AGL/196' MSL.

MONTAGUE, CA
SISKIYOU COUNTY (SIY)
TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES
AMDT 2A 09JAN14 (14009) (FAA)
TAKEOFF MINIMUMS:
Rwy 17, CAT A,B 2400-2 or std. with a min. climb of 350' per NM to 5500. CAT C,D 4100-2 or std. with a min. climb of 350' per NM to 7400.
Rwy 35, 4000-2 or std. with a min. climb of 300' per NM to 7000.
DEPARTURE PROCEDURE:
Rwy 17, climb direct MOG NDB. Continue climb to 10000 in MOG holding pattern (hold N, right turns, 176° inbound).
Rwy 35, climb to 7000 via runway heading and 356° bearing from MOG NDB, then climbing right turn to 10000 direct MOG NDB.
All aircraft depart MOG NDB at or above MEA for route of flight.

MONTEREY, CA
MONTEREY RGNL (MRY)
TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES
AMDT 8 10DEC15 (15344) (FAA)
TAKEOFF MINIMUMS:
Rwy 10L, std. w/min. climb of 449' per NM to 1800, or 1700-2½ for climb in visual conditions.
Rwy 10R, std. w/min. climb of 459' per NM to 1800, or 1700-2½ for climb in visual conditions.
Rwy 28L, std. w/min. climb of 218' per NM to 3300, or 1700-2½ for climb in visual conditions.
Rwy 28R, std. w/min. climb of 205' per NM to 3300, or 1700-2½ for climb in visual conditions.
DEPARTURE PROCEDURE:
Rwy 10L, climbing left turn heading 045.00 and SNS VORTAC R-225 to SNS VORTAC, climb in SNS holding pattern (hold W, LT, 084° inbound) to cross SNS VORTAC at or above MEA/MCA for route of flight.
Rwy 10R, climbing left turn heading 045° and SNS VORTAC R-225 to SNS VORTAC, climb in SNS holding pattern (hold W, LT, 084° inbound) to cross SNS VORTAC at or above MEA/MCA for route of flight.
Rwy 28L, climbing right turn heading 045° and SNS VORTAC R-260 to SNS VORTAC, climb in SNS holding pattern (hold W, LT, 084° inbound) to cross SNS VORTAC at or above MEA/MCA for route of flight.
Rwy 28R, climbing right turn heading 045.00 and SNS VORTAC R-260 to SNS VORTAC, climb in SNS holding pattern (hold W, LT, 084° inbound) to cross SNS VORTAC at or above MEA/MCA for route of flight.
VCOA:
Obtain ATC approval for climb in visual conditions when requesting IFR clearance. Climb in visual conditions to cross Monterey RGNL at or above 1800, then on SNS VORTAC R-231 to SNS VORTAC. Climb in SNS holding pattern (hold W, LT, 084° inbound) to cross SNS VORTAC at or above MEA/MCA for route of flight.
TAKEOFF OBSTACLE NOTES:
Rwy 10L, NAVALD 556' from DER, 217° right of centerline, 30' AGL/272' MSL. Bushes beginning 1.6 NM from DER, 1186' left of centerline up to 9' AGL/729' MSL. Trees beginning 1.7 NM from DER, 923' left of centerline up to 102' AGL/764' MSL. Trees beginning 1.6 NM from DER, 1993' right of centerline up to 90' AGL/923' MSL. Bushes beginning 1.9 NM from DER, 2497' right of centerline up to 9' AGL/781' MSL. Tower 2 NM from DER 3305' left of centerline, 27' AGL/767' MSL.
CON'T
MONTEREY, CA (CON’T)
MONTEREY RGNL (MRY) (CON’T)

**Rwy 10R**, ground 11’ from DER, 358’ left of centerline 258’ MSL.
Tree 230’ from DER 388’ left of centerline 21’ AGL/265’ MSL.
Bushes beginning 1.5 NM from DER, 2381’ left of centerline, up to 9’ AGL/648’ MSL.
Trees beginning 1.7 NM from DER, 388’ left of centerline up to 76’ AGL/629’ MSL.
Bushes beginning 1.8 NM from DER, 2005’ right of centerline up to 9’ AGL/741’ MSL.
Trees beginning 1.5 NM from DER, 1749’ right of centerline up to 90’ AGL/843’ MSL.

**Rwy 28L**, terrain abeam DER, 198’ left of centerline, up to 163’ MSL.
Trees beginning 797’ from DER, 678’ left of centerline, up to 83’ AGL/228’ MSL.
Tree 1008’ from DER, 616’ left of centerline, 100’ AGL/195’ MSL.
Pole 1128’ from DER, 716’ left of centerline, 54’ AGL/195’ MSL.
Tree 1372’ from DER, 755’ left of centerline, 93’ AGL/227’ MSL.

**DIVERSE VECTOR AREA (RADAR VECTORS)**
**AMDT 1 23JUN16 (16175) (FAA)**
- **Rwy 10L**, heading as assigned by ATC; requires min. climb of 360’ per NM to 2900.
- **Rwy 10R**, heading as assigned by ATC; requires min. climb of 370’ per NM to 2800.
- **Rwy 28L**, heading as assigned by ATC; requires min. climb of 310’ per NM to 1100.
- **Rwy 28R**, heading as assigned by ATC; requires min. climb of 250’ per NM to 1100.

MOUNTAIN VIEW, CA

**MOFFETT FEDERAL AIRFIELD (NUQ)**
**TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES**
**AMDT 2 18OCT12 (21168) (FAA)**

**TAKEOFF MINIMUMS:**
- **Rwys 14L/R**, std. w/min. climb of 550’ per NM to 4000 or 1700-2½ for climb in visual conditions.
- **Rwys 32L/R**, std. w/min. climb of 285’ per NM to 3500 or 1700-2½ for climb in visual conditions.

**DEPARTURE PROCEDURE:**
- **Rwys 14L/R**, climbing right turn direct OSI VORTAC, thence...
  or for climb in visual conditions cross Moffett Federal Airfield at or above 1600 then on OSI R-066 to OSI VORTAC, thence...
- When executing VCOA notify ATC prior to departure.
- **Rwys 32L/R**, climb heading 322° to 700, then climbing left turn heading 230° until receiving OSI VORTAC, then direct OSI VORTAC, thence...
  or for climb in visual conditions cross Moffett Federal Airfield at or above 1600 then on OSI R-066 to OSI VORTAC, thence...
- When executing VCOA notify ATC prior to departure.
  ...continue climb in OSI VORTAC holding pattern (hold southeast, left turns, 321° inbound) to cross OSI VORTAC at or above MEA for route of flight.

**TAKEOFF OBSTACLE NOTES:**
- **Rwy 32R**, light support structures abeam DER, 76’ left and 76’ right of centerline, up to 3’ AGL/7’ MSL.
- Vehicles on road beginning 5’ from DER, 92’ left of centerline, up to 15’ AGL/20’ MSL.
- Vehicles on road beginning 512’ from DER, 158’ right of centerline, up to 15’ AGL/20’ MSL.
- Fence 134’ from DER, left and right of centerline, up to 8’ AGL/12’ MSL.
- **Rwy 32L**, light support structures abeam DER, 76’ left and 76’ right of centerline, up to 1’ AGL/5’ MSL.
- Navaid 449’ from DER, 315’ right of centerline, up to 17’ AGL/21’ MSL.
- Tree 1632’ from DER, 934’ left of centerline, up to 100’ AGL/129’ MSL.
- **Rwy 14L**, light support structure 13’ from DER, 126’ right of centerline, up to 4’ AGL/34’ MSL.
- Vehicles on road beginning 770’ from DER, 547’ right of centerline, 15’ AGL/53’ MSL.
- Rail car on railroad beginning 774’ from DER, 261’ right of centerline, up to 23’ AGL/60’ MSL.
- Trees beginning 1191’ from DER, 71’ right of centerline, up to 100’ AGL/171’ MSL.
- Trees beginning 1922’ from DER, 109’ left of centerline, up to 100’ AGL/153’ MSL.
- **Rwy 14R**, light support structures abeam DER, 77’ right and 77’ left of centerline, up to 3’ AGL/37’ MSL.
- Fence, 187’ from DER, 488’ right of centerline, up to 8’ AGL/49’ MSL.
- Vehicles on road beginning 207’ from DER, 520’ right of centerline, 15’ AGL/55’ MSL.
- Rail car on railroad beginning 955’ from DER, 342’ left of centerline, up to 23’ AGL/60’ MSL.
- Trees beginning 1066’ from DER, 34’ left of centerline, up to 100’ AGL/153’ MSL.

NAPA, CA

**NAPA COUNTY (APC)**
**TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES**
**AMDT 4 03JUN10 (10154) (FAA)**
**DEPARTURE PROCEDURE:**
Use NAPA AIRPORT DEPARTURE.
TAKEOFF MINIMUMS, (OBSTACLE) DEPARTURE PROCEDURES, AND DIVERSE VECTOR AREA (RADAR VECTORS)

NOVATO, CA

GNOSO FLD (DVO)

TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES

AMDT 2  02MAY13  (21224)  (FAA)

TAKEOFF MINIMUMS:

Rwy 13, 400-2½° or std. w/min. climb of 580' per NM to 500.

Rwy 31, 600-2½° w/min. climb of 285' per NM to 1500 or std. w/min. climb of 679' per NM to 800 or 2000-2½° for climb in visual conditions...

DEPARTURE PROCEDURE:

Rwy 13, climb heading 132° to 600 then turn left direct SGD VORTAC before proceeding on course.

Rwy 31, climbing right turn direct SGD VORTAC before proceeding on course.

For climb in visual conditions, cross Gnoss Fld at or above 1900' MSL then proceed direct SGD VORTAC before proceeding on course. When executing VCOA, notify ATC prior to departure.

TAKEOFF OBSTACLE NOTES:

Rwy 13, trees beginning 2633' from DER, 627' left of centerline, up to 50' AGL/346' MSL.

Rwy 31, trees beginning 3630' from DER, 1274' right of centerline, up to 50' AGL/369' MSL.

OAKDALE, CA

OAKDALE (O27)

TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES

AMDT 1  10NOV16  (16315)  (FAA)

DEPARTURE PROCEDURE:

Rwy 10, climbing left turn via heading 020° and LIN VOR/DME R-124 to WRAPS INT/LIN 16.66 DME. Climb in WRAPS holding pattern (Northwest, right turn, 124° inbound) to cross WRAPS INT at or above MEA for direction of flight.

Rwy 28L/R, climb heading 276° and LIN VOR/DME R-146 to LIN VOR/DME to cross LIN VOR/DME at or above MEA for direction of flight.

TAKEOFF OBSTACLE NOTES:

Rwy 10, terrain beginning 388' from DER, up to 279' MSL.

Rwy 28, power line 3447' from DER, 407' right of centerline, 115' AGL/329' MSL.

OAKLAND, CA

METRO OAKLAND INTL (OAK)

TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES

AMDT 7  17OCT13  (21168)  (FAA)

DEPARTURE PROCEDURE:

Rwys 10L/R, 12, 15, 30, climbing right turn to intercept V107-301, thence ...

Rwys 28L/R, climbing left turn to intercept V107-301, thence ...

... to cross COMMO INT at or above 4000, continue climb-in-hold (hold E, right turns, 288° inbound) to 4000 before proceeding on course.

TAKEOFF OBSTACLE NOTES:

Rwy 10L, building, hanger and road beginning 225' from DER, 554' left of centerline, up to 37' AGL/42' MSL.

Trees beginning 1644' from DER, 309' left of centerline, up to 59' AGL/67' MSL.

Rwy 10R, runway lights 9' from DER, 26' left and right of centerline, 1' AGL/9' MSL.

Sign 63' from DER, 251' left of centerline, 4' AGL/10' MSL.

Signs, fence and poles beginning 361' from DER, 540' right of centerline up to 35' AGL/44' MSL.

Signs and trees beginning 1160' from DER, 177' right of centerline, up to 36' AGL/50' MSL.

Rwy 12, runway end and ALS lights beginning 11' from DER, 9' left and right of centerline, 1' AGL/10' MSL.

Rwy 15, ATCT 3613' from DER, 1017' left of centerline, 88' AGL/101' MSL.

Obstruction light on WSK 813' from DER, 577' right of centerline, 24' AGL/27' MSL.

Rwy 28L, rising terrain beginning 8' from DER, crossing centerline, up to 9' MSL.

Multiple trees beginning 105' from DER, 35' left of centerline, up to 64' AGL/80' MSL.

Traffic lights and poles beginning 895' from DER, 164' left of centerline, up to 29' AGL/37' MSL.

Substation 1593' from DER, 871' left of centerline, 37' AGL/53' MSL.

Fence 95' from DER, 410' left of centerline, 6' AGL/13' MSL.

Multiple trees beginning 994' from DER, 55' right of centerline, up to 91' AGL/96' MSL.

Rwy 28R, multiple trees beginning 1745' from DER, 23' left of centerline, up to 91' AGL/96' MSL.

Multiple trees beginning 2053' from DER, 88' right of centerline, up to 109' AGL/111' MSL.

Rwy 30, light pole 582' from DER, 483' left of centerline, 16' AGL/26' MSL.

Rwy 33, multiple trees, buildings and poles beginning 256' from DER, 497' left of centerline, up to 41' AGL/45' MSL.

Multiple trees, buildings, poles and towers beginning 762' from DER, 267' right of centerline, up to 39' AGL/51' MSL.

DIVERSE VECTOR AREA (RADAR VECTORS)

ORIG  16OCT14  (14289)  (FAA)

Rwy 10L, headings as assigned by ATC; requires min. climb of 340' per NM to 2300.

Rwy 10R, headings as assigned by ATC; requires min. climb of 330' per NM to 2300.

Rwys 12, 15, headings as assigned by ATC.

Rwys 28L/R, 30, headings as assigned by ATC; requires min. climb of 240' per NM to 2400.

Rwy 33, headings as assigned by ATC; requires min. climb of 210' per NM to 2400.
ORLAND, CA

HAIGH FLD (O37)

TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES

AMDT 2 21MAY20 (21336) (FAA)

DEPARTURE PROCEDURE:

Rwy 15, climb to 1000 then climbing left turn heading 100° to intercept RBL VORTAC R-140 to 5000 before proceeding on course.

Rwy 33, climb to 1000, then climbing right turn heading 020° to intercept RBL VORTAC R-140 to 5000 before proceeding on course.

TAKEOFF OBSTACLE NOTES:

Rwy 15, fence 6’ from DER, 383’ right of centerline, 6’ AGL/214’ MSL.
Fence 15’ from DER, 397’ left of centerline, 6’ AGL/214’ MSL.
Pole 88’ from DER, 443’ left of centerline, 29’ AGL/237’ MSL.
Pole 1198’ from DER, 661’ right of centerline, 35’ AGL/247’ MSL.
Pole beginning 1262’ from DER, 173’ right of centerline, up to 45’ AGL/258’ MSL.
Tree 1370’ from DER, 824’ left of centerline, 29’ AGL/237’ MSL.
Tree 1464’ from DER, 661’ right of centerline, 273’ MSL.
Trees beginning 1480’ from DER, 399’ right of centerline, up to 313’ MSL.

Rwy 33, tree, traverse way beginning 78’ from DER, 224’ left of centerline, up to 237’ MSL.
Pole beginning 358’ from DER, 298’ right of centerline, up to 24’ AGL/241’ MSL.
Pole 955’ from DER, 256’ left of centerline, 31’ AGL/249’ MSL.
Tree 1202’ from DER, 791’ left of centerline, 281’ MSL.
Tree 1807’ from DER, 695’ left of centerline, 308’ MSL.
Tree 2388’ from DER, 383’ right of centerline, 324’ MSL.

OROVILLE, CA

OROVILLE MUNI (OVE)

TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES

AMDT 4 22JUN17 (17173) (FAA)

TAKEOFF MINIMUMS:

Rwy 2, std. w/ min. climb of 280’ per NM to 1500, or 1000-2½ for VCOA.

Rwy 31, 300-1½ or std. w/ min. climb of 245’ per NM to 600.

DEPARTURE PROCEDURE:

Rwy 2, 31, climbing left turn to 5000 on heading 200° direct ILA VORTAC before proceeding on course.

Rwys 13, 20, climbing right turn to 5000 on heading 210° direct ILA VORTAC before proceeding on course.

VCOA:

Obtain ATC approval for VCOA when requesting IFR clearance. Climb in visual conditions to cross Oroville Municipal airport south-westbound at or above 1000, then direct ILA VORTAC before proceeding on course.

TAKEOFF OBSTACLE NOTES:

Rwy 2, ground 170’ from DER, 475’ right of centerline, 189’ MSL.
Ground 191’ from DER, 489’ right of centerline, 190’ MSL.
Tree 511’ from DER, 600’ left of centerline, 231’ MSL.
Tree 513’ from DER, 603’ left of centerline, 236’ MSL.
NAVAID 1143’ from DER, 348’ right of centerline, 215’ MSL.
Pole 1364’ from DER, 740’ right of centerline, 255’ MSL.
Poles beginning 1365’ from DER, 537’ right of centerline, up to 256’ MSL.

Rwy 13, poles beginning 128’ from DER, 292’ right of centerline, up to 29’ AGL/203’ MSL.
Vertical structure 177’ from DER, 493’ left of centerline, 184’ MSL.
Vehicles on road 210’ from DER, 515’ left of centerline, 189’ MSL.
Tree 312’ from DER, 554’ left of centerline, 205’ MSL.

Rwy 20, vehicles on road 819’ from DER, 376’ left of centerline, 203’ MSL.
Poles beginning 902’ from DER, 655’ right of centerline, up to 36’ AGL/217’ MSL.

Rwy 31, sign 32’ from DER, 325’ left of centerline, 195’ MSL.
Ground beginning 100’ from DER, 410’ right of centerline, up to 200’ MSL.
Trees beginning 641’ from DER, 621’ left of centerline, up to 244’ MSL.
Tree 1380’ from DER, 466’ left of centerline, 264’ MSL.
T-L tower 1.3 NM from DER, 1826’ right of centerline, 144’ AGL/444’ MSL.

PALO ALTO, CA

PALO ALTO (PAO)

TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES

ORIG-B 15OCT15 (15288) (FAA)

DEPARTURE PROCEDURE:

Rwy 13, turn left.

Rwy 31, turn right.

All aircraft climb direct SJC VOR/DME before proceeding on course.

TAKEOFF OBSTACLE NOTES:

Rwy 13, building with ship mast 1325’ from DER, 450’ left of centerline, 60’ AGL/67’ MSL.
PETALUMA, CA

PETALUMA MUNI (O69)

TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES

AMDT 2 13NOV14 (22307) (FAA)

TAKEOFF MINIMUMS:

Rwy 11, std. w/min. climb of 235’ per NM to 1500.
Rwy 29, 300-1½ or std. w/min. climb of 276’ per NM to 400.

DEPARTURE PROCEDURE:

Rwy 11, climb heading 108° to 1500 then continue climb direct SGD VORTAC.
Rwy 29, climb heading 289° to 1500 then climbing left turn to 3000 direct SGD VORTAC.

All aircraft continue climb to MEA for route of flight.

TAKEOFF OBSTACLE NOTES:

Rwy 11, tree 1095’ from DER, 779’ right of centerline, 55’ AGL/116’ MSL.
Sign 69’ from DER, 141’ right of centerline, 9’ AGL/80’ MSL.
Vertical structure 8’ from DER, 248’ left of centerline, 10’ AGL/81’ MSL.
Trees 172’ from DER, beginning 399’ left of centerline, up to 46’ AGL/111’ MSL.
Trees 40’ from DER, beginning 465’ left of centerline, up to 40’ AGL/111’ MSL.
Rwy 29, trees 1091’ from DER, beginning 151’ right of centerline, up to 91’ AGL/172’ MSL.
Vertical structure 194’ from DER, 248’ right of centerline, up to 19’ AGL/98’ MSL.
Trees 121’ from DER, beginning 282’ right of centerline, up to 51’ AGL/132’ MSL.
Trees and buildings 88’ from DER, beginning 292’ left of centerline, up to 40’ AGL/121’ MSL.
Trees 1363’ from DER, 462’ left of centerline, up to 96’ AGL/177’ MSL.
Pole 1262’ from DER, 90’ left of centerline, 41’ MSL/122’ AGL.
Poles 2508’ from DER, beginning 87’ left of centerline, up to 94’ AGL/175’ MSL.

PLACERVILLE, CA

PLACERVILLE (PVF)

TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES

AMDT 3 15NOV12 (12320) (FAA)

TAKEOFF MINIMUMS:

Rwy 5, NA-obstacles.

DEPARTURE PROCEDURE:

Rwy 23, climb to 5000 on HNW R-226 then climbing right turn on HNW R-276 to HNW VOR/DME. Aircraft departing HNW VOR/DME R-180 CW R-303 climb on course; all others climb in HNW VOR/DME holding pattern (hold SW, right turns, 048° inbound) to cross HNW VOR/DME at or above MEA/MCA for direction of flight before proceeding on course.

TAKEOFF OBSTACLE NOTES:

Rwy 23, hangar 20’ from DER, 340’ right of centerline, 27’ AGL/2586’ MSL.

PORTERVILLE, CA

PORTERVILLE MUNI (PTV)

TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES

AMDT 2A 06DEC18 (18340) (FAA)

TAKEOFF MINIMUMS:

Rwy 12, std. w/min. climb of 220’ per NM to 600.

DEPARTURE PROCEDURE:

Rwy 12, climbing right turn thence . . .
Rwy 30, climbing left turn thence . . .
...climb direct TTE VOR/DME. Aircraft departing TTE VOR/DME R-146 CW R-330 climb on course. All other aircraft climb in TTE VOR/DME holding pattern (hold northwest, right turn, 143° inbound) to cross TTE R-331 CW R-060, 8600; R-061 CW R -145, 7000.

TAKEOFF OBSTACLE NOTES:

Rwy 12, tree 618’ from DER, 241’ right of centerline, 460’ MSL.
Trees beginning 776’ from DER, 193’ left of centerline, up to 467’ MSL.
Pole 906’ from DER, 588’ left of centerline, 43’ AGL/491’ MSL.
Rwy 30, fence 176’ from DER, 499’ right of centerline, 6’ AGL/436’ MSL.

RED BLUFF, CA

RED BLUFF MUNI (RBL)

TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES

AMDT 4 10FEB11 (11041) (FAA)

DEPARTURE PROCEDURE:

Rwy 15, climb direct RBL VORTAC, thence...
Rwy 33, climbing right turn direct RBL VORTAC, thence...
...continue climb in RBL holding pattern (S, right turns, 341° inbound) to cross RBL VORTAC at or above MEA for route of flight.

TAKEOFF OBSTACLE NOTES:

Rwy 15, WSK 9’ from DER, 258’ right of centerline, 18’ AGL/361’ MSL.
Tree 2065’ from DER, 879’ left of centerline, 100’ AGL/449’ MSL.
Rwy 33, trees beginning 468’ from DER, 563’ left of centerline, up to 54’ AGL/387’ MSL.
Trees beginning 587’ from DER, 493’ right of centerline, up to 73’ AGL/393’ MSL.
TAKEOFF MINIMUMS, (OBSTACLE) DEPARTURE PROCEDURES, AND DIVERSE VECTOR AREA (RADAR VECTORS)

REDDING, CA
BENTON FLD (085)
TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES
ORIG 05OCT23 (23278) (FAA)
DEPARTURE PROCEDURE:
Use REDDING DEPARTURE.
TAKEOFF OBSTACLE NOTES:
   Rwy 16, trees beginning 75’ from DER, 319’ left of centerline, up to 30’ AGL/732’ MSL.
      Vehicle on road 273’ from DER, 537’ right of centerline, 730’ MSL.
   Tree 771’ from DER, 613’ right of centerline, 747’ MSL.
   Tree 1105’ from DER, 324’ right of centerline, 755’ MSL.
   Trees beginning 1207’ from DER, 162’ right of centerline, up to 51’ AGL/762’ MSL.
   Rwy 34, building 2’ from DER, 455’ left of centerline, 724’ MSL.
   Pole, sign beginning 63’ from DER, 179’ right of centerline, up to 749’ MSL.
   NAVAID, trees, pole beginning 84’ from DER, 260’ left of centerline, up to 748’ MSL.
   Trees, fence, poles beginning 116’ from DER, 182’ right of centerline, up to 46’ AGL/756’ MSL.
   Pole, beginning 1556’ from DER, 272’ left of centerline, up to 757’ MSL.
   Trees beginning 1766’ from DER, 870’ left of centerline, up to 779’ MSL.

REDDING, CA (CON’T)
REDDING RGNL (RDD)
TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES
AMDT 5C 30JAN20 (23110) (FAA)
DEPARTURE PROCEDURE:
   Rwy 12, climb on heading 126° and RBL R-344 to RBL VORTAC to 3000 before proceeding on course.
   Rwy 16, climbing left turn heading 114° and RBL R-344 to RBL VORTAC to 3000 before proceeding on course.
   Rwys 30, 34, climbing right turn heading 114° and RBL R-344 to RBL VORTAC to 3000 before proceeding on course.
TAKEOFF OBSTACLE NOTES:
   Rwy 12, trees beginning 45’ from DER, 359’ left of centerline, up to 23’ AGL/515’ MSL.
   Trees, fence, general utility, transmission line beginning 281’ from DER, 314’ left of centerline, up to 49’ AGL/542’ MSL.
   Transmission line 1920’ from DER, 677’ right of centerline, 60’ AGL/543’ MSL.
   Tree 3470’ from DER, 541’ left of centerline, 109’ AGL/590’ MSL.
   Rwy 16, tree 152’ from DER, 463’ right of centerline, 12’ AGL/495’ MSL.
   Tree 347’ from DER, 584’ right of centerline, 46’ AGL/527’ MSL.
   Rwy 30, terrain 27’ from DER, 249’ right of centerline, 502’ MSL.
   Aircraft on taxiway, pole, and trees beginning 32’ from DER, 68’ right of centerline, up to 44’ AGL/544’ MSL.
   Tree 1410’ from DER, 211’ left of centerline, 44’ AGL/545’ MSL.
   Tree 1556’ from DER, 417’ right of centerline, 57’ AGL/558’ MSL.
   Building and trees beginning 1584’ from DER, 267’ right of centerline, up to 60’ AGL/563’ MSL.
   Trees beginning 1672’ from DER, 431’ right of centerline, up to 69’ AGL/572’ MSL.
   Trees beginning 1793’ from DER, 4’ right of centerline, up to 74’ AGL/576’ MSL.
   Trees beginning 1794’ from DER, 78’ left of centerline, up to 60’ AGL/561’ MSL.
   Trees beginning 1882’ from DER, 95’ right of centerline, up to 74’ AGL/577’ MSL.
   Trees beginning 2093’ from DER, 227’ right of centerline, up to 82’ AGL/583’ MSL.
   Trees beginning 2340’ from DER, 399’ right of centerline, up to 99’ AGL/600’ MSL.
   Tree 2788’ from DER, 984’ left of centerline, 113’ AGL/613’ MSL.
   Tree 3256’ from DER, 912’ right of centerline, 94’ AGL/601’ MSL.
   Rwy 34, electrical system 37’ from DER, 130’ right of centerline, 2’ AGL/506’ MSL.
   Sign 38’ from DER, 125’ right of centerline, 4’ AGL/508’ MSL.
   Sign 39’ from DER, 13’ left of centerline, 4’ AGL/508’ MSL.
   Signs beginning 98’ from DER, 252’ left of centerline, up to 5’ AGL/510’ MSL.
   Tree 2322’ from DER, 1015’ left of centerline, 67’ AGL/576’ MSL.
   Tree 2386’ from DER, 934’ left of centerline, 74’ AGL/583’ MSL.
   Tree 2455’ from DER, 1120’ left of centerline, 83’ AGL/583’ MSL.
   Trees beginning 2662’ from DER, 767’ left of centerline, up to 83’ AGL/594’ MSL.
   Trees beginning 2817’ from DER, 479’ left of centerline, up to 86’ AGL/596’ MSL.
   Trees beginning 2906’ from DER, 828’ left of centerline, up to 87’ AGL/598’ MSL.
   Trees beginning 2967’ from DER, 794’ left of centerline, up to 89’ AGL/600’ MSL.
   Trees beginning 3137’ from DER, 867’ left of centerline, up to 96’ AGL/608’ MSL.
   Trees beginning 3168’ from DER, 792’ left of centerline, up to 103’ AGL/615’ MSL.
   Tower 3312’ from DER, 1032’ left of centerline, 108’ AGL/622’ MSL.
   Antenna 3312’ from DER, 1031’ left of centerline, 105’ AGL/619’ MSL.
TAKEOFF MINIMUMS, (OBSTACLE) DEPARTURE PROCEDURES, AND DIVERSE VECTOR AREA (RADAR VECTORS)

REEDLEY, CA

REEDLEY MUNI (O32)
TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES
ORIG 03JAN19 (19003)  (FAA)

DEPARTURE PROCEDURE:
Rwy 16, climb on a heading between 132° CW to 323° from DER.
Rwy 34, climb on a heading between 156° CW to 320° from DER.

TAKEOFF OBSTACLE NOTES:
Rwy 16, vehicles on road, terrain, building and vegetation beginning 26' from DER, 309' left of centerline, up to 15' AGL/402' MSL.
Tree 155' from DER, 778' right of centerline, 431' MSL.
Tree 1648' from DER, 893' left of centerline, 481' MSL.
Tree 1737' from DER, 210' right of centerline, 434' MSL.
Tree 2010' from DER, 189' left of centerline, 453' MSL.
Trees beginning 2033' from DER, 615' left of centerline, up to 482' MSL.
Tree 2894' from DER, 630' left of centerline, 483' MSL.
Rwy 34, tree 116' from DER, 376' right of centerline, 403' MSL.
Tree 166' from DER, 499' right of centerline, 406' MSL.
Vehicles on road and tree beginning 289' from DER, 329' right of centerline, up to 407' MSL.

RIO VISTA, CA

RIO VISTA MUNI (O88)
TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES
AMDT 2 05DEC19 (19339)  (FAA)

DEPARTURE PROCEDURE:
Rwy 7, climbing left turn direct SAC VORTAC. Continue climb in SAC VORTAC holding pattern (hold, south, right turn, 016° inbound) to cross SAC VORTAC at or above MEA for route of flight.
Rwy 15, climbing right turn direct SAC VORTAC. Continue climb in SAC VORTAC holding pattern (hold, south, right turn, 016° inbound) to cross SAC VORTAC at or above MEA for route of flight.
Rwy 25, climbing right turn direct SAC VORTAC. Continue climb in SAC VORTAC holding pattern (hold, south, right turn, 016° inbound) to cross SAC VORTAC at or above MEA for route of flight.
Rwy 33, climbing right turn direct SAC VORTAC. Continue climb in SAC VORTAC holding pattern (hold, south, right turn, 016° inbound) to cross SAC VORTAC at or above MEA for route of flight.

TAKEOFF OBSTACLE NOTES:
Rwy 7, lighting 10' from DER, 107' right of centerline, 2' AGL/24' MSL.
Terrain 111' from DER, 491' left of centerline, 27' MSL.
Rwy 15, pole 9' from DER, 19' left of centerline, 2' AGL/22' MSL.
Terrain 42' from DER, 270' right of centerline, 23' MSL.
Pole, vehicles on road, building beginning 112' from DER, 438' right of centerline, up to 33' AGL/55' MSL.
Poles, vehicles on road beginning 292' from DER, 25' left of centerline, up to 52' MSL.
Wind indicator, tree, vehicles on road, buildings, pole beginning 345' from DER, 1' right of centerline, up to 35' AGL/58' MSL.
Pole 1462' from DER, 99' left of centerline, 33' AGL/60' MSL.
Rwy 25, terrain, lighting beginning 0' from DER, 79' left of centerline, up to 26' MSL.
Poles, vehicles on road, trees beginning 287' from DER, 186' left of centerline, up to 54' MSL.
Tree 940' from DER, 201' left of centerline, 26' AGL/55' MSL.
Trees beginning 957' from DER, 3' left of centerline, up to 27' AGL/56' MSL.
Tree 1015' from DER, 308' right of centerline, 47' MSL.
Rwy 33, lighting 10' from DER, 100' right of centerline, 3' AGL/24' MSL.
Trees beginning 124' from DER, 252' right of centerline, up to 24' AGL/30' MSL.
Pole 1601' from DER, 846' left of centerline, 43' AGL/66' MSL.
Pole 1639' from DER, 891' left of centerline, 44' AGL/68' MSL.
Trees, building beginning 1912' from DER, 792' left of centerline, up to 66' AGL/92' MSL.

SACRAMENTO, CA

SACRAMENTO EXEC (SAC)
TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES
ORIG-A 20JUN19 (21112)  (FAA)

TAKEOFF OBSTACLE NOTES:
Rwy 2, multiple trees 1128' from DER, 108' left of centerline, up to 76' AGL/96' MSL.
Antenna 1376' from DER, 663' left of centerline, 51' AGL/71' MSL.
Trees 1858' from DER, 137' right of centerline, 73' AGL/93' MSL.
Rwy 12, multiple trees 518' from DER, 26' left of centerline, up to 83' AGL/98' MSL.
Light pole 507' from DER, 356' left of centerline, 37' AGL/52' MSL.
Transmission pole 397' from DER, 647' left of centerline, 130' AGL/154' MSL.
Multiple trees 475' from DER, 476' right of centerline up to 97' AGL/112' MSL.
Light poles 711' from DER, 241' right of centerline, 36' AGL/51' MSL.
Rwy 20, multiple trees beginning 850' from DER, 626' left of centerline, up to 92' AGL/107' MSL.
Multiple trees beginning 714' from DER, 515' right of centerline, up to 66' AGL/81' MSL.
Rwy 30, obstruction light on hangers 460' from DER, 360' right of centerline, 25' AGL/43' MSL.
Multiple trees beginning 631' from DER, 195' right of centerline, up to 56' AGL/74' MSL.
Multiple trees beginning 1331' from DER, 247' left of centerline, up to 90'/110' MSL.
Antenna on building 1543' from DER, 442' left of centerline, 47' AGL/67' MSL.
TAKEOFF MINIMUMS, (OBSTACLE) DEPARTURE PROCEDURES, AND DIVERSE VECTOR AREA (RADAR VECTORS)

SACRAMENTO, CA (CON’T)
SACRAMENTO INTL (SMF)
TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES
AMDT 1A 21MAY20 (20142) (FAA)
DEPARTURE PROCEDURE:
Rwy 17L, climb heading 168° to 700 before turning east.
Rwy 17L, vehicles on road, 225’ from DER, crossing runway centerline, 10’ AGL/31’ MSL
Rwy 35L, tree 3656’ from DER, 1296’ left of centerline, 98’ AGL/123’ MSL.
Rwy 35R, pole 1786’ from DER, 945’ right of centerline, 46’ AGL/73’ MSL.

SACRAMENTO MATHER (MHR)
TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES
ORIG 06JAN94 (94006) (FAA)
DEPARTURE PROCEDURE:
Rwys 4L, 4R, climbing right turn direct SAC VORTAC.
Rwys 22L, 22R climb direct SAC VORTAC.

SALINAS, CA
SALINAS MUNI (SNS)
TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES
AMDT 5 19MAY22 (22139) (FAA)
DEPARTURE PROCEDURE:
Rwy 8, climbing right turn to intercept SNS VORTAC R-124 to 5500 before proceeding on course.
Rwy 13, climbing left turn to intercept SNS VORTAC R-124 to 5500 before proceeding on course.
Rwy 26, climbing right turn to intercept SNS VORTAC R-264 to 5000 before proceeding on course.
Rwy 31, climbing left turn to intercept SNS VORTAC R-264 to 5000 before proceeding on course.
TAKEOFF OBSTACLE NOTES:
Rwy 8, fence 195’ from DER, 409’ left of centerline, 5’ AGL/92’ MSL.
Transmission line 1801’ from DER, 761’ left of centerline, 30’ AGL/171’ MSL.
Rwy 26, pole, vehicle on road, tree beginning 110’ from DER, 266’ left of centerline, up to 34’ AGL/98’ MSL.
Pole, vehicle on road beginning 137’ from DER, 281’ right of centerline, up to 33’ AGL/100’ MSL.
Poles beginning 910’ from DER, 233’ right of centerline, up to 35’ AGL/102’ MSL.
Tree 1646’ from DER, 351’ left of centerline, 119’ MSL.
Building 1943’ from DER, 435’ left of centerline, 60’ AGL/128’ MSL.
Tower 2769’ from DER, 32’ right of centerline, 81’ AGL/145’ MSL.
Transmission line 2974’ from DER, 739’ right of centerline, 93’ AGL/150’ MSL.
Rwy 31, trees, building beginning 171’ from DER, 390’ right of centerline, up to 133’ MSL.
Vehicle on road 206’ from DER, 201’ left of centerline, 97’ MSL.
Tree 282’ from DER, 436’ left of centerline, 120’ MSL.
Trees, pole, transmission line beginning 1043’ from DER, 5’ left of centerline, up to 172’ MSL.
Fence, transmission line, poles beginning 1141’ from DER, 202’ right of centerline, up to 60’ AGL/145’ MSL.

SAN ANDREAS, CA
CALAVERAS CO-MAURY RASMUSSEN FIELD (CPU)
TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES
AMDT 1 10NOV16 (16315) (FAA)
TAKEOFF MINIMUMS:
Rwy 13, 1800-5 or std. w/min. climb of 300’ per NM to 3700.
DEPARTURE PROCEDURE:
Rwy 13, climb runway heading to 3100, then climbing right turn via LIN R-085 to LIN VOR/DME.
Rwy 31, climb via heading 311° to 3000, then climbing left turn via Linden (LIN) VOR/DME R-029 to LIN VOR/DME.
TAKEOFF OBSTACLE NOTES:
Rwy 13, windsock 4’ from DER, 129’ right of centerline, 14’ AGL/1341’ MSL.
Lights 4’ from DER, 68’ right of centerline, up to 2’ AGL/1330’ MSL.
Bush 24’ from DER, 140’ right of centerline, 3’ AGL/1331’ MSL.
Tree 43’ from DER, 287’ right of centerline, up to 8’ AGL/1336’ MSL.
Bush 26’ from DER, 96’ left of centerline, up to 1’ AGL/1329’ MSL.
Rwy 31, tree 19’ from DER, 242’ left of centerline, up to 30’ AGL/1335’ MSL.
Trees 220’ from DER, 375’ right of centerline, up to 40’ AGL/1345’ MSL.
Pole 667’ from DER, 653’ left of centerline, 23’ AGL/1326’ MSL.
Trees 1010’ from DER, 651’ right of centerline, up to 46’ AGL/1351’ MSL.
TAKEOFF MINIMUMS, (OBSTACLE) DEPARTURE PROCEDURES, AND DIVERSE VECTOR AREA (RADAR VECTORS)

SAN CARLOS, CA
SAN CARLOS (SQL)

TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES

AMDT 2 10AUG23 (23222) (FAA)

TAKEOFF MINIMUMS:

Rwy 12, 300-1/2 or std w/min climb of 240'/NM to 300.
Rwy 30, 300-1/2 or std w/min climb of 290'/NM to 400.

DEPARTURE PROCEDURE:

Rwy 12, climb on heading 123° to 500, then climbing left turn direct SJC VOR/DME before proceeding on course.
Rwy 30, climb on heading 303° to 600, then climbing right turn direct SJC VOR/DME before proceeding on course.

TAKEOFF OBSTACLE NOTES:

Rwy 12, pole 9' from DER, 267' right of centerline, 25' MSL.
Tree, pole, building beginning 9' from DER, 266' right of centerline, up to 51' AGL/57' MSL.
Dam, terrain, light poles beginning 109' from DER, 58' left of centerline, up to 3' AGL/12' MSL.
Building, pole beginning 295' from DER, 266' right of centerline, up to 59' MSL.
Buildings, poles, electrical system, tree, sign beginning 472' from DER, 267' right of centerline, up to 61' MSL.
Transmission line 1689' from DER, 734' right of centerline, 92' AGL/94' MSL.
Poles, tree beginning 2409' from DER, 735' right of centerline, up to 106' MSL.
Transmission line 1.1 NM from DER, 2196' left of centerline, 200' AGL/208' MSL.
Rwy 30, pole 15' from DER, 286' right of centerline, 20' AGL/25' MSL.
Wind indicator, vehicle on road, sign beginning 18' from DER, 250' right of centerline, up to 26' MSL.
Poles, tree beginning 46' from DER, 283' left of centerline, up to 36' MSL.
Pole 79' from DER, 511' right of centerline, 36' MSL.
Electrical system, pole, vehicle on road, building, tree beginning 852' from DER, on centerline, up to 48' MSL.
Tree, building beginning 1178' from DER, 347' right of centerline, up to 54' MSL.
Building, tree beginning 1342' from DER, 497' right of centerline, up to 76' MSL.
Poles, tower beginning 1891' from DER, 736' left of centerline, up to 112' MSL.
Tree, buildings beginning 2126' from DER, 809' right of centerline, up to 89' MSL.
Buildings, trees beginning 2454' from DER, 508' right of centerline, up to 102' MSL.
Buildings, trees beginning 2990' from DER, 514' right of centerline, up to 109' MSL.
Electrical system 3393' from DER, 737' left of centerline, 117' MSL.
Buildings beginning 3562' from DER, 363' right of centerline, up to 113' MSL.
Pole 15' from DER, 286' right of centerline, 20' AGL/25' MSL.
Wind indicator, vehicle on road, sign beginning 18' from DER, 250' right of centerline, up to 26' MSL.
Pole, tree beginning 46' from DER, 283' left of centerline, up to 36' MSL.
Pole 79' from DER, 511' right of centerline, 36' MSL.
Electrical system, pole, vehicle on road, building, tree beginning 852' from DER, on centerline, up to 48' MSL.
Tree, building beginning 1178' from DER, 347' right of centerline, up to 54' MSL.
Building, tree beginning 1342' from DER, 497' right of centerline, up to 76' MSL.
Poles, tower beginning 1891' from DER, 736' left of centerline, up to 112' MSL.
Tree, buildings beginning 2126' from DER, 809' right of centerline, up to 89' MSL.
Buildings, trees beginning 2454' from DER, 508' right of centerline, up to 102' MSL.
Buildings, trees beginning 2990' from DER, 514' right of centerline, up to 109' MSL.
Electrical system 3393' from DER, 737' left of centerline, 117' MSL.
Buildings beginning 3562' from DER, 363' right of centerline, up to 113' MSL.
Pole 15' from DER, 286' right of centerline, 20' AGL/25' MSL.
Wind indicator, vehicle on road, sign beginning 18' from DER, 250' right of centerline, up to 26' MSL.
Pole, tree beginning 46' from DER, 283' left of centerline, up to 36' MSL.
Pole 79' from DER, 511' right of centerline, 36' MSL.
Electrical system, pole, vehicle on road, building, tree beginning 852' from DER, on centerline, up to 48' MSL.
Tree, building beginning 1178' from DER, 347' right of centerline, up to 54' MSL.
Building, tree beginning 1342' from DER, 497' right of centerline, up to 76' MSL.
Poles, tower beginning 1891' from DER, 736' left of centerline, up to 112' MSL.
Tree, buildings beginning 2126' from DER, 809' right of centerline, up to 89' MSL.
Buildings, trees beginning 2454' from DER, 508' right of centerline, up to 102' MSL.
Buildings, trees beginning 2990' from DER, 514' right of centerline, up to 109' MSL.
Electrical system 3393' from DER, 737' left of centerline, 117' MSL.
Buildings beginning 3562' from DER, 363' right of centerline, up to 113' MSL.

DIVERSE VECTOR AREA (RADAR VECTORS)

ORIG 26MAY16 (16147) (FAA)

Rwy 12, headings as assigned by ATC; requires minimum climb of 470' per NM to 3400.
SAN FRANCISCO, CA
SAN FRANCISCO INTL (SFO)
TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES
AMDT 9 24JUL14 (14205) (FAA)
TAKEOFF MINIMUMS:
Rwys 19L, 19R, std. w/min. climb of 575’ per NM to 2000.
Rwys 28L, 28R, std. w/min. climb of 351’ per NM to 1300.

DEPARTURE PROCEDURE:
Rwys 1L, 1R, climb heading 014° to 2000, thence ...
Rwys 10L, 10R, climbing left turn heading 053° to intercept SFO R-090 eastbound to 2300; thence ...  
Rwys 19L, 19R, climbing left turn heading 053° to intercept SFO R-090 eastbound to 2600; thence ...
Rwys 28L, 28R, climb heading 284° to 2000, thence ...  continue climb on course.

TAKEOFF OBSTACLE NOTES:
Rwy 1 L, ships beginning 1646’ from DER, right and left of centerline, up to 150’ AGL/150’ MSL.
Rwy 1R, ships beginning 1173’ from DER, right and left of centerline, up to 150’ AGL/150’ MSL.
Rwy 10L, sign 62’ from DER, 300’ left of centerline, 4’ AGL/15’ MSL.
Building and road on building 257’ from DER, 560’ left of centerline, up to 14’ AGL/24’ MSL.

Rwy 19L, multiple poles beginning 548’ from DER, 46’ left of centerline, up to 20’ AGL/480’ MSL.
Multiple poles and signs beginning 652’ from DER, 337’ right of centerline, up to 20’ AGL/38’ MSL.

Multiple buildings, transmission towers, poles, trees, signs, electrical system beginning 937’ from DER, 11’ left of centerline, up to 100’ AGL/127’ MSL.

Multiple buildings, transmission towers, poles, trees, signs, electrical system beginning 887’ from DER, 61’ right of centerline, up to 100’ AGL/128’ MSL.

Multiple buildings 3831’ from DER, 1138’ left of centerline, up to 105’ AGL/127’ MSL.

Multiple buildings and trees beginning 3831’ from DER, 74’ right of centerline up to 100’ AGL/167’ MSL.

Rwy 19R, multiple poles, trees, electrical system beginning 454’ from DER, 82’ right of centerline, up to 40’ AGL/60’ MSL.

Multiple transmission towers, trees beginning 918’ from DER, 7’ left of centerline, up to 80’ AGL/96’ MSL.
Poles and electrical system 1188’ from DER, 1’ right of centerline, 44’ AGL/50’ MSL.

Multiple transmission towers, trees beginning 1617’ from DER, 16’ right of centerline, up to 80’ AGL/85’ MSL.

Rwy 28L, sign 19’ from DER, 500’ right of centerline, 5’ AGL/9’ MSL.
Obstruction lights on DME beginning 277’ from DER, 162’ left of centerline, up to 16’ AGL/26’ MSL.
Obstruction light on localizer beginning 219’ from DER, on centerline, up to 10’ AGL/17’ MSL.

Multiple poles, electrical system beginning 824’ from DER, 300’ left of centerline, up to 40’ AGL/56’ MSL.

Multiple buildings, transmission towers, tank and pole beginning 1305’ from DER, 370’ left of centerline, up to 95’ AGL/103’ MSL.

Rwy 28R, multiple signs, beginning 23’ from DER, 140’ right of centerline, up to 5’ AGL/10’ MSL.
Terrain beginning 58’ from DER, 146’ right of centerline, up to 10’ MSL.
Sign, 63’ from DER, 250’ left of centerline 5’ AGL/8’ MSL.
Terrain beginning 130’ from DER, 235’ left of centerline, up to 10’ MSL.

Antenna on building, obstruction light on DME, tree, beginning 556’ from DER, 268’ right of centerline, up to 35’ AGL/43’ MSL.

Multiple poles beginning 918’ from DER, 698’ left of centerline, up to 22’ AGL/35’ MSL.

Multiple buildings, trees beginning 1487’ from DER, 683’ right of centerline, up to 60’ AGL/68’ MSL.

Multiple buildings, transmission towers, trees and electrical system beginning 1826’ from DER, 123’ left of centerline, up to 95’ AGL/103’ MSL.

DIVERSE VECTOR AREA (RADAR VECTORS)
AMDT 1 20AUG15 (15232) (FAA)

Rwys 1L, 1R, headings as assigned by ATC; requires min. climb of 420’ per NM to 2600.
Rwys 10L, 10R, headings as assigned by ATC.

SAN JOSE, CA
NORMAN Y MINETA SAN JOSE INTL (SJC)
TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES
AMDT 6C 21JUL16 (16203) (FAA)

TAKEOFF MINIMUMS:
Rwys 12L/R, 400-2½ or std. w/min. climb of 261’ per NM to 500.

DEPARTURE PROCEDURE:
Rwys 12L/R, climbing right turn to 2000 on Heading 318° and on OAK R-135 to OAK VOR/DME before proceeding on course.

Rwys 30L/R, climb via heading 315° to 2000, then via OAK R-132 to OAK VOR/DME before proceeding on course.

TAKEOFF OBSTACLE NOTES:
Rwy 12L, fence 156’ from DER, 57’ left of centerline, 14’ AGL/73’ MSL.
Ol on blast fence. 156’ from DER, 57’ left of centerline, 73’ MSL.
Pole 191’ from DER, 81’ left of centerline, 34’ AGL/93’ MSL.
Trees beginning 286’ from DER, 161’ right of centerline, up to 107’ MSL.
T-L twr, pole beginning 466’ from DER, 228’ left of centerline, up to 46’ AGL/105’ MSL.
Tree 1281’ from DER, 529’ left of centerline, 117’ MSL.
T-L twr 1731’ from DER, 729’ left of centerline, 86’ AGL/156’ MSL.

Tree 1799’ from DER, 273’ left of centerline, 144’ MSL.
Tree 1887’ from DER, 88’ right of centerline, 124’ MSL.
T-L twr 3047’ from DER, 543’ left of centerline, 73’ AGL/147’ MSL.

Building 1.2 NM from DER, 630’ left of centerline, 170’ AGL/250’ MSL.

CON’T
TAKEOFF MINIMUMS, (OBSTACLE) DEPARTURE PROCEDURES, AND DIVERSE VECTOR AREA (RADAR VECTORS)

SW-2, 30 NOV 2023 to 25 JAN 2024

SAN JOSE, CA (CON’T)
NORMAN Y MINETA SAN JOSE INTL (SJC) (CON’T)

Rwys 12L (CON’T), building 1.3 NM from DER, 1051’ left of centerline, 265’ MSL.
Building 1.3 NM from DER, 445’ left of centerline, 217’ AGL/301’ MSL.
Buildings beginning 1.3 NM from DER, 51’ left of centerline, 228’ AGL/309’ MSL.
Buildings beginning 1.3 NM from DER, 81’ left of centerline, up to 312’ MSL.
Building 1.5 NM from DER, 975’ left of centerline, 262’ AGL/351’ MSL.
Building 1.5 NM from DER, 1591’ left of centerline, 268’ AGL/358’ MSL.
Buildings beginning 1.5 NM from DER, 82’ left of centerline, up to 365’ MSL.
Buildings beginning 1.6 NM from DER, 280’ right of centerline, up to 346’ MSL.
Buildings beginning 1.6 NM from DER, 350’ right of centerline, up to 260’ AGL/350’ MSL.
Building 1.6 NM from DER, 1977’ left of centerline, 286’ AGL/368’ MSL.
Buildings beginning 1.6 NM from DER, 81’ left of centerline, up to 312’ MSL.

Rwy 12R, Ol on loc 10’ from DER, on centerline, 68’ MSL.
Ol on blast fence 45’ from DER, 115’ right of centerline, 75’ MSL.

DIVERSE VECTOR AREA (RADAR VECTORS)

AMDT 1 21JUL16 (16203) (FAA)

Rwys 12L/R, heading as assigned by ATC; requires min. climb of 470’ per NM to 5600.
Rwys 30L/R, heading as assigned by ATC; requires min. climb of 490’ per NM to 5600 and do not exceed 210 KTS until established on assigned heading.
SAN JOSE, CA (CON’T)
REID-HILLVIEW OF SANTA CLARA COUNTY (RHV)
TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES
TAKEOFF MINIMUMS:
Rwys 13L, 13R, NA - environmental.
DEPARTURE PROCEDURE:
Use DECO T DEPARTURE.

SAN MARTIN, CA
SAN MARTIN (E16)
TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES
AMDT 2 05NOV20 (20310) (FAA)
TAKEOFF MINIMUMS:
Rwy 32, 3600-3 for VCOA.
DEPARTURE PROCEDURE:
Rwy 14, climb on heading 141° to 5000 and SNS R-355 to SNS VORTAC before proceeding on course.
VCOA:
Rwy 32, obtain ATC approval for VCOA when requesting IFR clearance. Climb in visual conditions to cross San Martin Airport at or above 3700 before proceeding on course.
TAKEOFF OBSTACLE NOTES:
Rwy 14, traverse way, vegetation beginning 50’ from DER, 104’ left of centerline, up to 291’ MSL. Pole, traverse way, fence, trees beginning 259’ from DER, 81’ left of centerline, up to 30’ AGL/308’ MSL. Traverse way 344’ from DER, 17’ right of centerline, up to 286’ MSL. Antenna 1568’ from DER, 620’ left of centerline, 55’ AGL/319’ MSL. Trees beginning 1571’ from DER, 601’ right of centerline, up to 71’ AGL/338’ MSL.
Rwy 32, traverse way 73’ from DER, 429’ right of centerline, 300’ MSL. Traverse way 127’ from DER, 321’ right of centerline, 301’ MSL. Tree 169’ from DER, 537’ right of centerline, 303’ MSL. Pole, traverse way, trees beginning 213’ from DER, 173’ right of centerline, up to 37’ AGL/321’ MSL. Traverse way 387’ from DER, 575’ left of centerline, 300’ MSL. Trees, pole, traverse way beginning 545’ from DER, 46’ left of centerline, up to 321’ MSL. Traverse way beginning 1171’ from DER, 71’ right of centerline, up to 323’ MSL. Traverse way, trees beginning 1172’ from DER, 188’ right of centerline, up to 327’ MSL. Tree 1486’ from DER, 668’ left of centerline, 335’ MSL. Trees beginning 1573’ from DER, 297’ left of centerline, up to 337’ MSL. Tree 1670’ from DER, 655’ right of centerline, 330’ MSL. Tree 1708’ from DER, 87’ right of centerline, 331’ MSL. Tree 1837’ from DER, 328’ left of centerline, 342’ MSL. Trees beginning 1880’ from DER, 177’ right of centerline, up to 340’ MSL. Trees beginning 2045’ from DER, 331’ left of centerline, up to 350’ MSL. Tree 2146’ from DER, 888’ right of centerline, 341’ MSL. Trees beginning 2217’ from DER, 194’ right of centerline, up to 72’ AGL/364’ MSL. Trees beginning 2319’ from DER, 342’ left of centerline, up to 357’ MSL. Tree 2984’ from DER, 1021’ left of centerline, 378’ MSL. Tree 3137’ from DER, 946’ left of centerline, 381’ MSL.

CON’T

SANTA ROSA, CA
CHARLES M SCHULZ-SONOMA COUNTY (STS)
TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES
AMDT 8 17JUN21 (21168) (FAA)
TAKEOFF MINIMUMS:
Rwy 2, std. w/min. climb of 300’ per NM to 2100 or 1500-3 for VCOA.
Rwy 14, std. w/min. climb of 285’ per NM to 2500 or 1500-3 for VCOA.
Rwy 20, std. w/min. climb of 265’ per NM to 2200 or 1500-3 for VCOA.
Rwy 32, std. w/min. climb of 375’ per NM to 2200 or 1500-3 for VCOA.
DEPARTURE PROCEDURE:
Rwy 2, climbing left turn to 2100 on a heading between 200° CW to 305° from DER before proceeding on course.
Rwy 14, climb to 2500 on a heading between 110° CW to 315° from DER before proceeding on course.
Rwy 20, climb to 2200 on a heading between 100° CW to 250° from DER before proceeding on course.
Rwy 32, climbing left turn to 2200 on a heading between 145° CW to 315° from DER before proceeding on course.
VCOA:
Obtain ATC approval for VCOA when requesting IFR clearance.
Rwys 2, 14, 20, 32 climb in visual conditions to cross Charles M Schulz- Sonoma County airport at or above 1400 before proceeding southbound on PYE R-349 to PYE VOR/DME.
TAKEOFF OBSTACLE NOTES:
Rwy 2, tree 515’ from DER, 561’ right of centerline, 145’ MSL. Tree, pole beginning 629’ from DER, 19’ right of centerline, up to 156’ MSL. Tree 971’ from DER, 369’ left of centerline, 42’ AGL/148’ MSL. Tree 985’ from DER, 216’ left of centerline, 149’ MSL. Trees beginning 1053’ from DER, 215’ left of centerline, up to 150’ MSL. Trees beginning 1153’ from DER, 146’ left of centerline, up to 156’ MSL. Trees beginning 1328’ from DER, 478’ right of centerline, up to 168’ MSL. Trees beginning 1604’ from DER, 693’ left of centerline, up to 166’ MSL.

CON’T

TAKEOFF MINIMUMS, (OBSTACLE) DEPARTURE PROCEDURES, AND DIVERSE VECTOR AREA (RADAR VECTORS)
TAKEOFF MINIMUMS, (OBSTACLE) DEPARTURE PROCEDURES, AND DIVERSE VECTOR AREA (RADAR VECTORS)

SANTA ROSA, CA (CON’T)

CHARLES M SCHULZ-SONOMA COUNTY (STS) (CON’T)

Rwy 2 (CON’T), trees beginning 1638’ from DER, 786’ right of centerline, up to 184’ MSL.
Trees beginning 1846’ from DER, 619’ left of centerline, up to 65’ AGL/174’ MSL.
Trees beginning 2145’ from DER, 344’ right of centerline, up to 190’ MSL.
Trees beginning 2299’ from DER, 342’ right of centerline, up to 191’ MSL.

Rwy 14, pole 6’ from DER, 40’ left of centerline, 121’ MSL.
Tree 409’ from DER, 602’ left of centerline, 138’ MSL.
Tree 778’ from DER, 649’ left of centerline, 146’ MSL.
Tree 972’ from DER, 629’ left of centerline, 147’ MSL.
Trees beginning 1202’ from DER, 599’ left of centerline, up to 155’ MSL.
Tree 1336’ from DER, 759’ left of centerline, 167’ MSL.
Tree 2136’ from DER, 778’ right of centerline, 174’ MSL.
Tree 2194’ from DER, 1033’ right of centerline, 180’ MSL.

Rwy 20, pole 107’ from DER, 461’ right of centerline, 40’ AGL/162’ MSL.
Trees beginning 1497’ from DER, 731’ right of centerline, up to 248’ MSL.
Tree 1595’ from DER, 482’ left of centerline, 171’ MSL.
Tree 1679’ from DER, 404’ left of centerline, 187’ MSL.
Tree 1693’ from DER, 934’ right of centerline, 137’ AGL/269’ MSL.
Trees beginning 1705’ from DER, 566’ right of centerline, up to 144’ AGL/274’ MSL.
Tree 2840’ from DER, 1174’ left of centerline, 228’ MSL.

Rwy 32, pole 88’ from DER, 472’ left of centerline, 147’ MSL.
Trees beginning 263’ from DER, 425’ left of centerline, up to 153’ MSL.
Tree 642’ from DER, 430’ right of centerline, 143’ MSL.
Tree 700’ from DER, 548’ right of centerline, 158’ MSL.
Trees beginning 797’ from DER, 470’ left of centerline, up to 154’ MSL.
Trees beginning 902’ from DER, 609’ right of centerline, up to 172’ MSL.

SOUTH LAKE TAHOE, CA

LAKE TAHOE (TVL)

TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES

AMDT 8 13SEP18 (18256) (FAA)

TAKEOFF MINIMUMS:

Rwy 18, std. w/min. climb of 810’ per NM to 10800, or alternatively, 1600-3 w/min. climb of 765’ per NM to 10800, or 5100-5 for VCOA.

DEPARTURE PROCEDURE:

Rwy 18, climb heading 177° to 7900 then climbing right turn to intercept and climb on SWR R-133 to SWR VOR/DME thence...

Rwy 36, climb heading 357° to intercept and climb on SWR R-113 to SWR VOR/DME thence...

VCOA:

Rwy 18, obtain ATC approval for VCOA when requesting IFR clearance. Climb in visual conditions to cross South Lake Tahoe Airport at or above 11200’ MSL then intercept and proceed on SWR R-127 to SWR VOR/DME.

TAKEOFF OBSTACLE NOTES:

Rwy 18, pole 10’ from DER, 40’ left of centerline, 2’ AGL/6270’ MSL.

Vehicles on road, sign beginning 16’ from DER, 247’ right of centerline, up to 6282’ MSL.

Trees beginning 19’ from DER, 378’ left of centerline, up to 88’ AGL/6354’ MSL.

Trees, vehicles on road, vegetation, terrain, pole beginning 140’ from DER, 20’ right of centerline, up to 88’ AGL/6355’ MSL.

Pole, trees beginning 263’ from DER, 4’ left of centerline, up to 102’ AGL/6369’ MSL.

Trees beginning 917’ from DER, 1’ left of centerline, up to 111’ AGL/6388’ MSL.

Trees beginning 1095’ from DER, 8’ right of centerline, up to 107’ AGL/6392’ MSL.

Trees beginning 1700’ from DER, on centerline, up to 6403’ MSL.

Trees beginning 1960’ from DER, 6’ left of centerline, up to 98’ AGL/6412’ MSL.

Trees, poles beginning 2021’ from DER, 1’ right of centerline, up to 6416’ MSL.

Trees beginning 2392’ from DER, 8’ left of centerline, up to 113’ AGL/6418’ MSL.

Trees, buildings beginning 2441’ from DER, 1’ left of centerline, up to 6419’ MSL.

Trees, buildings, vehicles on road, poles, antenna, vegetation beginning 2712’ from DER, on centerline, up to 91’ AGL/6420’ MSL.

Tree 2.5 NM from DER, 1451’ left of centerline, 7837’ MSL.

Rwy 36, sign 9’ from DER, 212’ left of centerline, 4’ AGL/6256’ MSL.

Vehicle on road 18’ from DER, 360’ left of centerline, 6266’ MSL.

Trees, vehicle on road beginning 51’ from DER, 330’ right of centerline, up to 47’ AGL/6296’ MSL.

Trees, pole, terrain, fence beginning 142’ from DER, 236’ right of centerline, up to 50’ AGL/6302’ MSL.

Trees beginning 175’ from DER, 210’ right of centerline, up to 44’ AGL/6312’ MSL.

Trees beginning 225’ from DER, 173’ right of centerline, up to 47’ AGL/6319’ MSL.

Trees beginning 459’ from DER, 181’ right of centerline, up to 58’ AGL/6328’ MSL.

Trees, vehicles on road beginning 933’ from DER, 52’ right of centerline, up to 59’ AGL/6330’ MSL.

Trees, vehicles on road beginning 768’ from DER, 84’ right of centerline, up to 71’ AGL/6340’ MSL.

CONT’
SOUTH LAKE TAHOE, CA (CON’T)

TAKEOFF MINIMUMS, (OBSTACLE) DEPARTURE PROCEDURES, AND DIVERSE VECTOR AREA (RADAR VECTORS)

LAKE TAHOE (TVL) (CON’T)

Rwy 36 (CON’T), trees, vehicles on road beginning 953’ from DER, 143’ right of centerline, up to 67’ AGL/6348’ MSL.

Trees, vehicles on road beginning 1116’ from DER, 703’ right of centerline, up to 6436’ MSL.

Trees beginning 1 NM from DER, 1100’ right of centerline, up to 134’ AGL/6420’ MSL.

STOCKTON, CA

STOCKTON METRO (SCK)

TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES

AMDT 1 20JUN19 (21168) (FAA)

TAKEOFF MINIMUMS:

Rwy 29R, 200-1 1/4 or std. w/min. climb of 215’ per NM to 300 or alternatively, with std. takeoff minimums and a normal 200’ per NM climb gradient, takeoff must occur no later than 1400’ prior to DER.

TAKEOFF OBSTACLE NOTES:

Rwy 11L, building 231’ from DER, 401’ left of centerline, 8’ AGL/39’ MSL.

Rwy 11R, traverse way 61’ from DER, 486’ right of centerline, 43’ MSL.

Lighting 122’ from DER, 415’ left of centerline, 2’ AGL/29’ MSL.

Rwy 29L, traverse way, aircraft parking, electrical system beginning 132’ from DER, 235’ left of centerline, up to 45’ MSL.

Buildings beginning 424’ from DER, 369’ left of centerline, up to 61’ MSL.

Rwy 29R, fence, trees beginning 181’ from DER, 5’ right of centerline, up to 18’ AGL/41’ MSL.

Fence, trees, traverse way, pole beginning 208’ from DER, 1’ left of centerline, up to 17’ AGL/41’ MSL.

Poles, traverse way beginning 255’ from DER, 35’ right of centerline, up to 32’ AGL/55’ MSL.

Poles beginning 528’ from DER, 305’ left of centerline, up to 31’ AGL/54’ MSL.

Pole 653’ from DER, 515’ left of centerline, 32’ AGL/58’ MSL.

Pole 834’ from DER, 693’ left of centerline, 38’ AGL/60’ MSL.

Pole 1587’ from DER, 857’ left of centerline, 48’ AGL/69’ MSL.

Elevator 4480’ from DER, 868’ right of centerline, 122’ AGL/141’ MSL.

Stack, buildings beginning 4599’ from DER, 827’ right of centerline, up to 150’ AGL/171’ MSL.

Rwy 8, tree 472’ from DER, 198’ left of centerline, 50’ AGL/194’ MSL.

Fence 167’ from DER, 8’ right of centerline, 25’ AGL/178’ MSL.

Vehicle on road 241’ from DER, 412’ left of centerline, 15’ AGL/183’ MSL.

Vehicles on roads starting 241’ from DER, 7’ right of centerline, up to 15’ AGL/189’ MSL.

Poles starting 403’ from DER, 204’ left of centerline, up to 54’ AGL/208’ MSL.

Poles starting 727’ from DER, 49’ right of centerline, up to 54’ AGL/212’ MSL.

Rwy 12, trees starting 436’ from DER, 251’ right of centerline, up to 72’ AGL/253’ MSL.

Conveyor 1998’ from DER, 504’ left of centerline, 66’ AGL/270’ MSL.

CON’T

SUSANVILLE, CA

SUSANVILLE MUNI (SVE)

TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES

ORIG 25DEC03 (03359) (FAA)

DEPARTURE PROCEDURE: Use AMDEE DEPARTURE.

TRACY, CA

TRACY MUNI (TCY)

TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES

AMDT 3 22OCT09 (09295) (FAA)

TAKEOFF MINIMUMS:

Rwy 26, 700-3 or std. w/ a min. climb of 320’ per NM to 1000.

DEPARTURE PROCEDURE:

Rwy 8, climb to 3000 via heading 073° and MOD VOR/DME R-264 to MOD VOR/DME before proceeding on course.

Rwy 12, climbing left turn to 3000 to intercept MOD VOR/DME R-264 to MOD VOR/DME before proceeding on course.

Rwy 26, climbing right turn to 3000 via heading 150° and MOD VOR/DME R-264 to MOD VOR/DME before proceeding on course.

Rwy 30, climbing right turn to 3000 via heading 150° to intercept MOD VOR/DME R-264 to MOD VOR/DME before proceeding on course.

TAKEOFF OBSTACLE NOTES:

Rwy 8, tree 472’ from DER, 198’ left of centerline, 50’ AGL/194’ MSL.

Fence 167’ from DER, 8’ right of centerline, 25’ AGL/178’ MSL.

Vehicle on road 241’ from DER, 412’ left of centerline, 15’ AGL/183’ MSL.

Vehicles on roads starting 241’ from DER, 7’ right of centerline, up to 15’ AGL/189’ MSL.

Poles starting 403’ from DER, 204’ left of centerline, up to 54’ AGL/208’ MSL.

Poles starting 727’ from DER, 49’ right of centerline, up to 54’ AGL/212’ MSL.

Rwy 12, trees starting 436’ from DER, 251’ right of centerline, up to 72’ AGL/253’ MSL.

Conveyor 1998’ from DER, 504’ left of centerline, 66’ AGL/270’ MSL.

CON’T
TRACY, CA (CON’T)

TRACY MUNI (TCY) (CON’T)

Takeoff Minimums, (Obstacle) Departure Procedures, and Diverse Vector Area (Radar Vectors)

Rwy 12 (CON’T), poles starting 832’ from DER, 396’ right of centerline, up to 56’ AGL/240’ MSL.
Obstruction light on hopper 1934’ from DER, 74’ AGL/255’ MSL.
Vegetation on road starting 133’ from DER, 272’ left of centerline, up to 15’ AGL/206’ MSL.
Fence 32’ from DER 405’ left of centerline, 25’ AGL/194’ MSL.

Rwy 26, tree 1173’ from DER, 180’ right of centerline, 35’ AGL/234’ MSL.
Trees starting 1067’ from DER, 125’ left of centerline, up to 35’ AGL/794’ MSL.
Vehicle on road 236’ from DER, 150’ left of centerline, 15’ AGL/214’ MSL.
Fence 69’ from DER, 133’ left of centerline, 23’ AGL/203’ MSL.
Rising terrain 11105’ from DER, 2814’ left of centerline, up to 739’ MSL.

TRAVIS AFB (KSUU)

FAIRFIELD, CA

Takeoff Minimums and (Obstacle) Departure Procedures

Amdt 6  29Dec22  (22363)  (FAA)

Takeoff Minimums:
All Rwys, std. w/min climb of 305’ per NM to 4000, or 2400-3 for VCOA

VCOA:
All Rwys, obtain ATC approval for VCOA when requesting IFR clearance. Climb in visual conditions to cross Travis AFB airport at or above 2300 before proceeding on course.

Takeoff Obstacle Notes:
Rwy 3L, potential acft 23’ to 1290’ from DER, 500’ left of cntrln, 65’ AGL/120’ MSL.
Potential acft 620’ to 1925’ from DER, 600’ right of cntrln, 65’ AGL/125’ MSL.

TRUCKEE, CA

TRUCKEE-TAHOE (TRK)

Takeoff Minimums and (Obstacle) Departure Procedures

Amdt 6  29Dec22 (22363) (FAA)

Takeoff Minimums:
All Rwys, std. w/min climb of 305’ per NM to 4000, or 2400-3 for VCOA

VCOA:
All Rwys, obtain ATC approval for VCOA when requesting IFR clearance. Climb in visual conditions to cross Travis AFB airport at or above 2300 before proceeding on course.

Takeoff Obstacle Notes:
Rwy 2, trees, electrical system beginning 32’ from DER, 189’ left of centerline, up to 5934’ MSL.

Rwys 2, 29, use TRUCK DEPARTURE.

Takeoff Obstacle Notes:
Rwy 2, trees beginning 32’ from DER, 189’ left of centerline, up to 5934’ MSL.

Tree 1.1 NM from DER, 2002’ right of centerline, 6145’ MSL.

Tree 1.1 NM from DER, 1540’ right of centerline, up to 6130’ MSL.

Tree 1.1 NM from DER, 1920’ right of centerline, 6125’ MSL.

Tree 1.1 NM from DER, 1765’ right of centerline, up to 6078’ MSL.

Tree 1.1 NM from DER, 1765’ right of centerline, up to 6078’ MSL.

Tree 1.1 NM from DER, 1920’ right of centerline, 6125’ MSL.

Tree 1.1 NM from DER, 1540’ right of centerline, up to 6130’ MSL.

Tree 1.1 NM from DER, 1540’ right of centerline, up to 6130’ MSL.

Tree 1.1 NM from DER, 1302’ right of centerline, up to 6182’ MSL.

Tree 1.1 NM from DER, 1302’ right of centerline, up to 6182’ MSL.

Tree 1.1 NM from DER, 1302’ right of centerline, up to 6182’ MSL.

Tree 1.1 NM from DER, 1302’ right of centerline, up to 6182’ MSL.

Tree 1.1 NM from DER, 1115’ right of centerline, up to 6242’ MSL.

Tree 1.1 NM from DER, 1115’ right of centerline, up to 6242’ MSL.

Tree 1.1 NM from DER, 1067’ right of centerline, up to 6248’ MSL.

Tree 1.1 NM from DER, 1147’ right of centerline, up to 6253’ MSL.

Tree 1.1 NM from DER, 1351’ right of centerline, up to 6266’ MSL.

Tree 1.1 NM from DER, 1351’ right of centerline, up to 6266’ MSL.

Tree 1.2 NM from DER, 929’ right of centerline, up to 6272’ MSL.

Tree 1.2 NM from DER, 929’ right of centerline, up to 6272’ MSL.

Tree 1.2 NM from DER, 818’ right of centerline, up to 6280’ MSL.

Tree 1.3 NM from DER, 1744’ right of centerline, up to 6281’ MSL.

Tree 1.3 NM from DER, 639’ right of centerline, up to 6288’ MSL.

Tree 1.3 NM from DER, 639’ right of centerline, up to 6288’ MSL.

Tree 1.3 NM from DER, 433’ right of centerline, up to 6305’ MSL.

Tree 1.3 NM from DER, 433’ right of centerline, up to 6305’ MSL.

Tree 1.4 NM from DER, 1200’ right of centerline, up to 6315’ MSL.

Tree 1.5 NM from DER, 17’ left of centerline, 6137’ MSL.

Rwy 29, sign 23’ from DER, 157’ left of centerline, 3’ AGL/5902’ MSL.

Trees beginning 73’ from DER, 400’ right of centerline, up to 5968’ MSL.

Pole 1.14’ from DER, 217’ left of centerline, 8’ AGL/5905’ MSL.

Trees beginning 206’ from DER, 55’ right of centerline, up to 5971’ MSL.

Tree 213’ from DER, 546’ left of centerline, 5923’ MSL.

Tree 637’ from DER, 81’ left of centerline, up to 6005’ MSL.

Tree 5956’ from DER, 542’ right of centerline, 6058’ MSL.

Trees beginning 1.6 NM from DER, 1356’ left of centerline, up to 6153’ MSL.

CON’T

Takeoff Minimums, (Obstacle) Departure Procedures, and Diverse Vector Area (Radar Vectors)
TRUCKEE, CA (CON’T)

TRUCKEE-TAHOE (TRK) (CON’T)

Rwy 29 (CON’T), trees beginning 1.6 NM from DER, 1384’ left of centerline, up to 6197’ MSL.

Trees, water tower beginning 1.6 NM from DER, 1738’ left of centerline, up to 6206’ MSL.

Trees, pole beginning 1.6 NM from DER, 249’ left of centerline, up to 6268’ MSL.

Tree 1.8 NM from DER, 3070’ right of centerline, 6192’ MSL.

Tree 1.8 NM from DER, 2728’ right of centerline, 6197’ MSL.

Tree 1.8 NM from DER, 1614’ right of centerline, 6204’ MSL.

Trees beginning 1.8 NM from DER, 1108’ right of centerline, up to 6211’ MSL.

Tree 1.8 NM from DER, 2581’ right of centerline, 6259’ MSL.

Trees beginning 1.8 NM from DER, 2144’ right of centerline, up to 6265’ MSL.

Tree 1.9 NM from DER, 3540’ right of centerline, 6308’ MSL.

Tree 1.9 NM from DER, 3135’ right of centerline, 6351’ MSL.

Trees beginning 1.9 NM from DER, 307’ right of centerline, up to 6379’ MSL.

Tree 2 NM from DER, 3583’ right of centerline, 6391’ MSL.

Trees beginning 2 NM from DER, 1301’ right of centerline, up to 6458’ MSL.

Trees beginning 2 NM from DER, 535’ right of centerline, up to 6468’ MSL.

Tree 2 NM from DER, 639’ left of centerline, 6270’ MSL.

Tree 2.1 NM from DER, 2242’ left of centerline, 6315’ MSL.

Trees beginning 2.1 NM from DER, 50’ left of centerline, up to 6332’ MSL.

Tree 2.1 NM from DER, 2881’ right of centerline, 6502’ MSL.

Trees beginning 2.1 NM from DER, 214’ right of centerline, up to 6505’ MSL.

Tree 2.1 NM from DER, 2769’ left of centerline, 6439’ MSL.

Trees beginning 2.1 NM from DER, 259’ left of centerline, up to 6440’ MSL.

Tree 2.1 NM from DER, 3037’ right of centerline, 6547’ MSL.

Trees beginning 2.1 NM from DER, 636’ right of centerline, up to 6573’ MSL.

Trees beginning 2.2 NM from DER, 1171’ right of centerline, up to 6583’ MSL.

Trees beginning 2.2 NM from DER, 733’ left of centerline, up to 6460’ MSL.

Trees, building beginning 2.2 NM from DER, 20’ left of centerline, up to 6549’ MSL.

Trees beginning 2.2 NM from DER, 525’ right of centerline, up to 6612’ MSL.

Trees beginning 2.3 NM from DER, 1111’ right of centerline, up to 6657’ MSL.

Tree beginning 2.3 NM from DER, 2179’ right of centerline, up to 6682’ MSL.

Trees beginning 2.3 NM from DER, 412’ right of centerline, up to 6731’ MSL.

Trees beginning 2.4 NM from DER, 371’ right of centerline, up to 6776’ MSL.

Tower 2.5 NM from DER, 2714’ right of centerline, 93’ AGL/6817’ MSL.

Antenna, trees beginning 2.5 NM from DER, 73’ right of centerline, up to 88’ AGL/6822’ MSL.

TULARE, CA

MEFFORD FLD (TLR)

TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES

AMDT 1  24MAR22  (22083)  (FAA)

DEPARTURE PROCEDURE:

Rwy 13, climb on heading 135° and TTE R-294 to TULE (TTE) VOR/DME, thence...

Rwy 31, climb on heading 315° to 1500, then climbing left turn to intercept TTE R-294 to TULE (TTE) VOR/DME, thence...

...cross TTE VOR/DME at or above 3000 and climb on course

TAKEOFF OBSTACLE NOTES:

Rwy 13, trees beginning 71’ from DER, 13’ right of centerline, up to 60’ AGL/349’ MSL.

Fence 370’ from DER crossing extended runway centerline, 6’ AGL/280’ MSL.

Hangers 200’ from DER, 525’ right of centerline up to 28’ AGL/287 MSL.

Trees beginning 85’ from DER, 27’ left of centerline, up to 60’ AGL/349’ MSL.

Rwy 31, vehicle on road 53’ from DER, 340’ right of centerline, 279’ MSL.

Vehicle on road beginning 210’ from DER, 376’ right of centerline, up to 280’ MSL.

Vehicle on road 343’ from DER, 415’ left of centerline, 280’ MSL.

Vehicle on road 492’ from DER, 395’ left of centerline, 281’ MSL.

Vehicle on road 544’ from DER, 416’ right of centerline, 281’ MSL.

Vehicle on road 684’ from DER, 458’ left of centerline, 283’ MSL.

Sign 793’ from DER, 424’ left of centerline, 13’ AGL/286’ MSL.

Pole 1141’ from DER, 547’ left of centerline, 26’ AGL/298’ MSL.

Sign 1422’ from DER, 542’ right of centerline, 37’ AGL/311’ MSL.

Tower 3586’ from DER, 580’ left of centerline, 110’ AGL/383’ MSL.

UKIAH, CA

UKIAH MUNI (UKI)

TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES

AMDT 3  03NOV22  (22307)  (FAA)

TAKEOFF MINIMUMS:

Rwy 15, std. w/min. climb of 687’ per NM to 3900 or 4000-3 for climb in visual conditions.

Rwy 33, std. w/min. climb of 350’ per NM to 5000 or 4000-3 for climb in visual conditions.

DEPARTURE PROCEDURE:

Rwy 15, climb on heading 155° to 3800 before proceeding on course.

Rwy 33, climb on heading 335° to 4000, then climbing left turn direct ENI VORTAC, continue climb in ENI holding pattern (hold S, right turns, 022° inbound) to cross ENI VORTAC at or above MEA for route of flight.

CON’T
TAKEOFF MINIMUMS, (OBSTACLE) DEPARTURE PROCEDURES, AND DIVERSE VECTOR AREA (RADAR VECTORS)

UKIAH, CA (CON’T)
UKIAH MUNI (UKI) (CON’T)

VCOA:

All runways, obtain ATC approval for VCOA when requesting IFR clearance. Climb in visual conditions to cross Ukiah Muni airport at or above 4500 before proceeding on course.

TAKEOFF OBSTACLE NOTES:

Rwy 15, general utility 13’ from DER, 118’ right of centerline, 6’ AGL/610’ MSL.

General utility 13’ from DER, 115’ left of centerline, 4’ AGL/606’ MSL.

Building, road beginning 34’ from DER, 245’ right of centerline, up to 18’ AGL/625’ MSL.

Tree, road beginning 112’ from DER, 124’ left of centerline, up to 629’ MSL.

Building, road beginning 116’ from DER, 246’ right of centerline, up to 628’ MSL.

Pole 275’ from DER, 357’ right of centerline, 28’ AGL/634’ MSL.

Tree, pole, road building beginning 294’ from DER, 4’ right of centerline, up to 30’ AGL/636’ MSL.

Tree, pole building 527’ from DER, 283’ left of centerline, up to 647’ MSL.

Tree, pole, building 530’ from DER, 150’ right of centerline, up to 40’ AGL/645’ MSL.

Tree, pole, building 555’ from DER, 28’ right of centerline, up to 696’ MSL.

Tree, pole building 1026’ from DER, 338’ left of centerline, up to 670’ MSL.

Trees beginning 2193’ from DER, 33’ left of centerline, up to 674’ MSL.

Trees beginning 2543’ from DER, 418’ right of centerline, up to 712’ MSL.

Tree 2755’ from DER, 31’ left of centerline, 698’ MSL.

Rwy 33, general utility 1’ from DER, 137’ left of centerline, 3’ AGL/621’ MSL.

Pole, road, tree beginning 27’ from DER, 157’ right of centerline, up to 27’ AGL/635’ MSL.

Terrain 130’ from DER, 471’ left of centerline, 623’ MSL.

Terrain, pole, road building beginning 269’ from DER, 154’ right of centerline, up to 36’ AGL/645’ MSL.

Tree 461’ from DER, 555’ left of centerline, 654’ MSL.

Pole, road, tree beginning 543’ from DER, 12’ left of centerline, up to 53’ AGL/679’ MSL.

Pole beginning 572’ from DER, 505’ right of centerline, up to 41’ AGL/647’ MSL.

Transmission line, sign, tree beginning 894’ from DER, 288’ left of centerline, up to 65’ AGL/691’ MSL.

Transmission line, building, tree beginning 931’ from DER, 411’ right of centerline, up to 61’ AGL/667’ MSL.

Tree, pole, sign beginning 961’ from DER, 9’ left of centerline, up to 693’ MSL.

Tree, transmission line, pole beginning 1357’ from DER, 161’ right of centerline, up to 668’ MSL.

Trees beginning 1970’ from DER, 407’ right of centerline, up to 679’ MSL.

Trees beginning 2593’ from DER, 906’ left of centerline, up to 708’ MSL.

Trees beginning 2788’ from DER, 878’ left of centerline, up to 709’ MSL.

Tree 5383’ from DER, 1848’ left of centerline, 752’ MSL.

Tree 5948’ from DER, 1814’ left of centerline, 767’ MSL.

VACAVILLE, CA
NUT TREE (VCB)

TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES

AMDT 5 17AUG17 (17229) (FAA)

TAKEOFF MINIMUMS:

Rwy 20, std. w/ min. climb of 410’ per NM to 1600, or 1200-2½ for VCOA.

DEPARTURE PROCEDURE:

Rwy 2, climbing right turn to intercept SAC R-242 to SAC VORTAC to 2000 before proceeding on course.

Rwy 20, climbing left turn to intercept SAC R-242 to SAC VORTAC to 2000 before proceeding on course.

VCOA:

Rwy 20, obtain ATC approval for VCOA when requesting IFR clearance. Climb in visual conditions to cross Nut Tree airport eastbound at or above 1300 then climb to 2000 on SAC R-242 TO SAC VORTAC, proceed on course.

TAKEOFF OBSTACLE NOTES:

Rwy 2, parking lot, pole beginning 51’ from DER, 290’ right of centerline, up to 15’ AGL/119’ MSL.

Fence beginning 99’ from DER, 210’ left of centerline, up to 118’ MSL.

Pole, parking lot beginning 137’ from DER, 417’ left of centerline, up to 148’ MSL.

Tree 948’ from DER, 732’ right of centerline, 141’ MSL.

Pole 1099’ from DER, 612’ left of centerline, 149’ MSL.

Rwy 20, terrain beginning 8’ from DER, 253’ right of centerline, up to 117’ MSL.

Tree 61’ from DER, 411’ left of centerline, 51’ AGL/163’ MSL.

Terrain 140’ from DER, 432’ right of centerline, 124’ MSL.

Tree 144’ from DER, 538’ left of centerline, 85’ AGL/197’ MSL.

Pole, terrain, fence beginning 206’ from DER, 167’ right of centerline, up to 12’ AGL/130’ MSL.

Tree 259’ from DER, 506’ left of centerline, 211’ MSL.

Pole, ant, tree beginning 362’ from DER, 497’ left of centerline, up to 125’ AGL/239’ MSL.

Tree 544’ from DER, 454’ right of centerline, 135’ MSL.

Tree, road (north) beginning 710’ from DER, 393’ right of centerline, up to 164’ MSL.

Tree, pole, ant, terrain, chimney/smokestack, sign beginning 825’ from DER, 22’ left of centerline, up to 264’ MSL.

Tree, pole beginning 1576’ from DER, 344’ right of centerline, up to 190’ MSL.

T-l tower, pole beginning 1860’ from DER, 82’ right of centerline, up to 55’ AGL/191’ MSL.

Terrain 2985’ from DER, 1295’ right of centerline, 195’ MSL.

Terrain 2985’ from DER, 1146’ right of centerline, 198’ MSL.

Terrain 3090’ from DER, 1303’ right of centerline, 210’ MSL.

Terrain beginning 3155’ from DER, 1128’ right of centerline, up to 217’ MSL.

Tree, terrain beginning 3252’ from DER, 535’ right of centerline, up to 241’ MSL.

Terrain beginning 3635’ from DER, 54’ right of centerline, up to 248’ MSL.

Terrain 4068’ from DER, 111’ right of centerline, 264’ MSL.

CONT

TAKEOFF MINIMUMS, (OBSTACLE) DEPARTURE PROCEDURES, AND DIVERSE VECTOR AREA (RADAR VECTORS)
TAKEOFF MINIMUMS, (OBSTACLE) DEPARTURE PROCEDURES, AND DIVERSE VECTOR AREA (RADAR VECTORS)

VACAVILLE, CA (CON’T)

NUT TREE (VCB) (CON’T)

Rwy 20 (CON’T), terrain, tree beginning 4104’ from DER, 18’ right of centerline, up to 263’ MSL. Tree 5765’ from DER, 1605’ right of centerline, 264’ MSL.

VISALIA, CA

VISALIA MUNI (VIS)

TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES

AMDT 5  24MAR22  (22083)  (FAA)

DEPARTURE PROCEDURE:

Rwy 12, climb on heading 121° to 1500, then climbing right turn direct TTE VOR/DME thence...

Rwy 30, climb on heading 301° to 1600, then climbing left turn to intercept the TTE R-300 to TULE (TTE) VOR/DME thence...

...cross TTE VOR/DME at or above MEA for the route of flight before proceeding on course.

TAKEOFF OBSTACLE NOTES:

Rwy 12, vehicle on road 175’ from DER, 252’ right of centerline, 307’ MSL.

Vehicle on road 178’ from DER, 248’ left of centerline, 308’ MSL.

Tree 758’ from DER, 616’ right of centerline, 62’ AGL/356’ MSL.

Tree 1302’ from DER, 817’ left of centerline, 61’ AGL/356’ MSL.

Tree 3155’ from DER, 737’ left of centerline, 85’ AGL/380’ MSL.

Rwy 30, sign 17’ from DER, 249’ left of centerline, 3’ AGL/292’ MSL.

Fence beginning 59’ from DER, 416’ left of centerline, up to 7’ AGL/296’ MSL.

Trees, vehicle on road beginning 186’ from DER, 269’ left of centerline, up to 40’ AGL/330’ MSL.

Building 291’ from DER, 15’ right of centerline, 15’ AGL/305’ MSL.

Tree 2663’ from DER, 341’ left of centerline, 370’ MSL.

Tree 3035’ from DER, 415’ left of centerline, 379’ MSL.

WATSONVILLE, CA

WATSONVILLE MUNI (WVI)

TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES

AMDT 5A  13SEP18  (18256)  (FAA)

TAKEOFF MINIMUMS:

Rwy 27, NA - airport obstacles.

DEPARTURE PROCEDURE:

Rwys 2, 9, 20, use WATSONVILLE DEPARTURE.

TAKEOFF OBSTACLE NOTES:

Rwy 2, lighting 8’ from DER, 84’ left of centerline, 1’ AGL/159’ MSL.

Lighting 9’ from DER, 84’ right of centerline, 158’ MSL.

Pole 14’ from DER, 349’ left of centerline, 205’ MSL.

Pole, building, vehicles on road, tree and fence beginning 15’ from DER, 322’ left of centerline, up to 50’ AGL/213’ MSL.

Trees beginning 278’ from DER, 414’ right of centerline, up to 188’ MSL.

pole, vehicles on road, stack, tree and building beginning 429’ from DER, 157’ left of centerline, up to 58’ AGL/220’ MSL.

pole, building and tree beginning 808’ from DER, 22’ right of centerline, up to 40’ AGL/198’ MSL.

Tree and transmission line beginning 1021’ from DER, 137’ right of centerline, up to 222’ MSL.

Pole 1174’ from DER, 328’ right of centerline, 57’ AGL/224’ MSL.

Trees beginning 1275’ from DER, 298’ right of centerline, up to 242’ MSL.

Tree 1345’ from DER, 320’ left of centerline, 236’ MSL.

Tree 2249’ from DER, 371’ left of centerline, 264’ MSL.

Rwy 9, tree and pole beginning 1’ from DER, 152’ left of centerline, up to 157’ MSL.

Pole 65’ from DER, 301’ right of centerline, 31’ AGL/148’ MSL.

tree, fence, building, vehicles on road and pole beginning 74’ from DER, 251’ left of centerline, up to 160’ MSL.

Pole, tree, building, tank and stack beginning 210’ from DER, 139’ left of centerline, up to 177’ MSL.

Pole 231’ from DER, 250’ right of centerline, 32’ AGL/153’ MSL.

Trees beginning 312’ from DER, 560’ right of centerline, up to 173’ MSL.

Tower, pole and tree beginning 828’ from DER, 136’ left of centerline, up to 52’ AGL/181’ MSL.

Trees beginning 915’ from DER, 146’ right of centerline, up to 197’ MSL.

Tree 1815’ from DER, 365’ left of centerline, 215’ MSL.

Tower 4697’ from DER, 1365’ right of centerline, 189’ AGL/292’ MSL.

Rwy 20, tree 57’ from DER, 500’ left of centerline, 153’ MSL.

Fence 57’ from DER, 268’ right of centerline, 7’ AGL/143’ MSL.

Pole 95’ from DER, 467’ left of centerline, 175’ MSL.

pole, vehicles on road and tree beginning 96’ from DER, 377’ left of centerline, up to 50’ AGL/183’ MSL.

Transmission line 848’ from DER, 505’ left of centerline, 44’ AGL/184’ MSL.

Tree and transmission line beginning 919’ from DER, 520’ left of centerline, up to 190’ MSL.

Tree 1153’ from DER, 286’ right of centerline, 169’ MSL.

Tree 1207’ from DER, 615’ left of centerline, 197’ MSL.

Tree, and building and transmission line beginning 1267’ from DER, 318’ left of centerline, up to 203’ MSL.

Tree 1336’ from DER, 7’ right of centerline, 177’ MSL.

Tree 1337’ from DER, 46’ right of centerline, 192’ MSL.

Tree 2201’ from DER, 776’ right of centerline, 240’ MSL.
TAKEOFF MINIMUMS, (OBSTACLE) DEPARTURE PROCEDURES, AND DIVERSE VECTOR AREA (RADAR VECTORS)

WEED, CA

WEED (O46)
TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES
ORIG 22JUN17 (17173) (FAA)
DEPARTURE PROCEDURE:
Use FOBRO (RNAV) DEPARTURE.

WILLITS, CA

ELLS FLD/WILLITS MUNI (O28)
TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES
AMDT 1 05AUG04 (21336) (FAA)
DEPARTURE PROCEDURE:
Rwy 16, use MENDOCINO RNAV DEPARTURE.
Rwy 34, use FLUEN RNAV DEPARTURE.

WILLOWS, CA

WILLOWS/GLENN COUNTY (WLW)
TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES
AMDT 2 22JUN17 (22027) (FAA)
DEPARTURE PROCEDURE:
Rwy 13, climbing right turn heading 150 to 1000 thence...
Rwy 16, climbing left turn heading 145 to 1000 thence...
Rwy 31, climbing left turn heading 140 to 1000 thence...
Rwy 34, climbing right turn heading 150 to 1000 thence...
...all aircraft continue climb direct ILA VORTAC before proceeding on course.
TAKEOFF OBSTACLE NOTES:
Rwy 13, vehicles beginning 325’ from DER, 563’ left of centerline, up to 17’ AGL/146’ MSL.
Rwy 16, poles beginning 14’ from DER, 409’ right of centerline, up to 35’ AGL/172’ MSL.
Tree 232’ from DER, 436 left of centerline, 149’ MSL.
Rwy 34, tower 869’ from DER, 434’ right of centerline, 55’ AGL/196 MSL.
Pole 909’ from DER, 305 right of centerline, 24’ AGL/165’ MSL.

WOODLAND, CA

WATTS-WOODLAND (O41)
TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES
AMDT 3 07MAY09 (09127) (FAA)
DEPARTURE PROCEDURE:
Rwy 18, climb heading 185° and ILA R-151 to EMBER INT/ILA 48 DME before proceeding on course.
Rwy 36, climbing left turn via heading 320° and ILA R-145 to ILA VORTAC before proceeding on course.
TAKEOFF OBSTACLE NOTES:
Rwy 18, tree 2478’ from DER, 283’ right of centerline, 100’ AGL/249’ MSL.
Vehicle on road 192’ from DER, on centerline, 15’ AGL/144’ MSL.
Rwy 36, tree 453’ from DER, 69’ left of centerline, 100’ AGL/224’ MSL.
Vehicle on road 350’ from DER, on centerline, 15’ AGL/134’ MSL.
Tree 4489’ from DER, 1688’ left of centerline, 100’ AGL/234’ MSL.
Pilots must review the IFR Alternate Minimums Notes to determine alternate airport suitability. An NA designation on the approach chart means that pilots may not use that approach as an alternate due to unmonitored facility, absence of weather reporting service, or lack of adequate navigation coverage. Approaches with the NA designation are not listed in this section. A designation on the approach chart indicates that the approach procedure has non-standard minimums (for aircraft other than helicopters) or restrictions (for all users) for its use as an alternate.

Alternate Minima (ref: 14 CFR 91.169)

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**Note:** For alternate airport flight planning purposes, precision approach operations include: ILS, PAR, and GLS, and Non-Precision approach operations include: NDB, VOR, LOC, TACAN, LDA, SDF, ASR, RNAV (GPS) and RNAV (RNP).
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<td>³Categories A, B, 1700-2, Categories C, D, 1700-3.</td>
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<td>⁵Categories A, B, 900-2, Category C, 1100-3.</td>
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NAME ALTERNATE MINIMUMS
PLACERVILLE, CA       PLACERVILLE (PVF) ILS or LOC Rwy 3412 LOC BC Rwy 1613 RNAV (GPS) Rwy 1613 RNAV (GPS) Rwy 3413 VOR Rwy 3413 NA when local weather not available. 1NA when control tower closed. 2LOC, Category D, 900-2½; Category E, 900-3. 3Category D, 900-2¼; Categories A, B, 1200-2; Categories C, D, 1200-3. SACRAMENTO, CA       SACRAMENTO EXE (SAC) ILS or LOC Rwy 212 RNAV (GPS) Y Rwy 23 RNAV (GPS) Y Rwy 35R2 1LOC, Category D, 900-2½. 2Category D, 900-2¼. SACRAMENTO MATHER (MHR) ILS Y or Y LOC Rwy 22L12 ILS Z or Z LOC Rwy 22L23 RNAV (GPS) Y Rwy 22L34 RNAV (GPS) Y Rwy 22L45 RNAV (GPS) Rwy 22L24 RNAV (GPS) Rwy 22R24 1NA when control tower closed. 2NA when local weather not available. 3LOC, Category D, 800-2¼; Category E, 800-2½. 4Category D, 800-2¼.
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<td>RNAV (GPS) Rwy 13(^4)</td>
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LEMOORE NAS (REEVES FIELD)(KNLC), Leemore, CA Amdt 8

19MAY22 (22139) (USN)                                                                 ELEV 228

RADAR - (E) 125.95 270.8x 314.0x 317.575x 322.45x 323.15x 336.4x 346.375x 348.75x 353.55x
363.7x 370.875x 377.075x

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<th>DH/MDA-VIS</th>
<th>HAT/HATH/CEIL-VIS</th>
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<td>328-½</td>
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<td>ABCDE</td>
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<td>CAT</td>
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2When ALS inop, increase vis to ½ mile.
3When ALS inop, increase vis to 1 mile.
4Simultaneous approaches authorized.
5Pattern at 2800 ft.
6Caution: WCH group 4: 15 ft less than required 20 ft.
7Step Down Fix at 3 NM from thld, 1100 min.
8Circling authorized only from ASR.
**LAND AND HOLD-SHORT OPERATIONS (LAHSO)**

LAHSO is an acronym for "Land and Hold-Short Operations." These operations include landing and holding short of an intersection runway, an intersecting taxiway, or other predetermined points on the runway other than a runway or taxiway. Measured distance represents the available landing distance on the landing runway, in feet.

Specific questions regarding these distances should be referred to the air traffic manager of the facility concerned. The Aeronautical Information Manual contains specific details on hold-short operations and markings.

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<th>CITY/AIRPORT</th>
<th>LDG RWY</th>
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<td>24</td>
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<td>CHARLES M SCHULZ - SONOMA</td>
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HOT SPOTS

An "airport surface hot spot" is a location on an aerodrome movement area with a history or potential risk of collision or runway incursion, and where heightened attention by pilots/drivers is necessary.

A "hot spot" is a runway safety related problem area on an airport that presents increased risk during surface operations. Typically it is a complex or confusing taxiway/taxiway or taxiway/runway intersection. The area of increased risk has either a history of or potential for runway incursions or surface incidents, due to a variety of causes, such as but not limited to: airport layout, traffic flow, airport marking, signage and lighting, situational awareness, and training. Hot spots are depicted on airport diagrams as open circles or polygons designated as "HS 1", "HS 2", etc. and tabulated in the list below with a brief description of each hot spot. Hot spots will remain charted on airport diagrams until such time the increased risk has been reduced or eliminated.

<table>
<thead>
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<th>CITY/AIRPORT</th>
<th>HOT SPOT</th>
<th>DESCRIPTION</th>
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</thead>
<tbody>
<tr>
<td>ATWATER, CA CASTLE (MER)</td>
<td>HS 1</td>
<td>Twy A, Twy A1, Twy B, and Twy G complex int.</td>
</tr>
<tr>
<td></td>
<td>HS 2</td>
<td>Twy A and southeast ramp, traffic congestion.</td>
</tr>
<tr>
<td>BEALE AFB, CA BEALE AFB (BAB)</td>
<td>HS 1</td>
<td>Twy B, high-speed U-2 mobile traffic when Rwy 15 in use.</td>
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<tr>
<td></td>
<td>HS 2</td>
<td>Twy E, high-speed U-2 mobile traffic when Rwy 33 in use.</td>
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<tr>
<td></td>
<td>HS 3</td>
<td>Twy F, in the vicinity of Twy C, Twy L, and Twy K. Frequent U-2 and high speed mobile traffic, slope of the twy limits visibility in both directions.</td>
</tr>
<tr>
<td>CONCORD, CA BUCHANAN FLD (CCR)</td>
<td>HS 1</td>
<td>Rwy 32L and run-up area, Twy J.</td>
</tr>
<tr>
<td></td>
<td>HS 2</td>
<td>Complex int at Rwy 01R-19L, Twy J, Twy A, Twy C, and Twy K.</td>
</tr>
<tr>
<td></td>
<td>HS 3</td>
<td>Rwy 32L apch, Twy A.</td>
</tr>
<tr>
<td></td>
<td>HS 4</td>
<td>Rwy 32R, Twy B, Twy J, and the run up area.</td>
</tr>
<tr>
<td>FAIRFIELD, CA TRAVIS AFB (SUU)</td>
<td>HS 1</td>
<td>Twy G/H and Rwy 21R/03L intersection is vehicle crossing and single Rwy 21L/03R entry/exit point. Expect high vehicle and aircraft traffic.</td>
</tr>
<tr>
<td>HAYWARD, CA HAYWARD EXEC (HWD)</td>
<td>HS 1</td>
<td>Rwy 10L-28R, Twy E and Twy A.</td>
</tr>
<tr>
<td></td>
<td>HS 2</td>
<td>Area not visible from ATCT.</td>
</tr>
<tr>
<td></td>
<td>HS 3</td>
<td>Area not visible from ATCT.</td>
</tr>
<tr>
<td></td>
<td>HS 4</td>
<td>Area not visible from ATCT.</td>
</tr>
<tr>
<td></td>
<td>HS 5</td>
<td>Rwy 28L hold bars on Twy A1 and Twy Z1.</td>
</tr>
<tr>
<td>LIVERMORE, CA LIVERMORE MUNI (LVK)</td>
<td>HS 1</td>
<td>Rwy 25R, Twy B.</td>
</tr>
<tr>
<td></td>
<td>HS 2</td>
<td>Rwy 25L, Twy C.</td>
</tr>
<tr>
<td></td>
<td>HS 3</td>
<td>Rwy 07L, Twy H.</td>
</tr>
<tr>
<td></td>
<td>HS 4</td>
<td>Rwy 07R, Twy G.</td>
</tr>
<tr>
<td></td>
<td>HS 5</td>
<td>Rwy 25R, Twy G.</td>
</tr>
<tr>
<td></td>
<td>HS 6</td>
<td>Ints of Twy J, Twy A, and Twy G.</td>
</tr>
<tr>
<td>NAPA, CA NAPA COUNTY (APC)</td>
<td>HS 1</td>
<td>Twy A, Twy A2, Twy C, Twy E and the ramp.</td>
</tr>
<tr>
<td></td>
<td>HS 2</td>
<td>Rwy 24, Twy A.</td>
</tr>
<tr>
<td></td>
<td>HS 3</td>
<td>Rwy 24 and Rwy 01L.</td>
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<tr>
<td>OAKLAND, CA METRO OAKLAND INTL (OAK)</td>
<td>HS 1</td>
<td>Rwy 28R, Twy A and Twy B.</td>
</tr>
<tr>
<td></td>
<td>HS 2</td>
<td>Rwy 10L-28R, Twy H, Twy G, Twy C and Twy D.</td>
</tr>
<tr>
<td>SACRAMENTO, CA SACRAMENTO EXEC (SAC)</td>
<td>HS 1</td>
<td>Inbound Twy A and outbound Twy B.</td>
</tr>
<tr>
<td></td>
<td>HS 2</td>
<td>Portion of Twy E not visible from twr.</td>
</tr>
<tr>
<td>SACRAMENTO, CA SACRAMENTO INTL (SMF)</td>
<td>HS 1</td>
<td>Twy Y2 between Concourse A and Concourse B.</td>
</tr>
<tr>
<td></td>
<td>HS 2</td>
<td>Vehicle Service Road crossing Twy W and Twy Y.</td>
</tr>
<tr>
<td></td>
<td>HS 3</td>
<td>Twy A at the int of Twy A13, Twy G1 and Twy P.</td>
</tr>
</tbody>
</table>

* (SEE CONTINUATION PAGE FOR MORE LISTINGS)
<table>
<thead>
<tr>
<th>CITY/AIRPORT</th>
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<th>DESCRIPTION*</th>
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</thead>
<tbody>
<tr>
<td>SAN FRANCISCO, CA</td>
<td>HS 1</td>
<td>Complex int Twy B and Twy F.</td>
</tr>
<tr>
<td></td>
<td>HS 2</td>
<td>Rwy 01L-19R, Twy C and Twy E.</td>
</tr>
<tr>
<td></td>
<td>HS 3</td>
<td>Rwy 28R and Twy T.</td>
</tr>
<tr>
<td>SAN JOSE, CA</td>
<td>HS 1</td>
<td>Rwy 30L and Twy D “Run-up Area” near Active rwy.</td>
</tr>
<tr>
<td></td>
<td>HS 2</td>
<td>Numerous inbounds and outbounds at twy intersections Twy D, Twy Z, and Twy Y.</td>
</tr>
<tr>
<td></td>
<td>HS 3</td>
<td>Maintain vigilance when maneuvering at Twy Y, Twy Z, Twy A and Rwy 31R run-up area.</td>
</tr>
<tr>
<td>REID-HILLVIEW OF SANTA CLARA COUNTY (RHV)</td>
<td>HS 1</td>
<td>Twy A, Twy A5, Twy Z complex int in close proximity to Rwy 14-32.</td>
</tr>
<tr>
<td></td>
<td>HS 2</td>
<td>South run-up area not visible from the twr.</td>
</tr>
<tr>
<td></td>
<td>HS 3</td>
<td>North run-up area east of Twy A and Twy H int in close proximity of Rwy 20 Apch Hold.</td>
</tr>
<tr>
<td></td>
<td>HS 4</td>
<td>Wrong rwy departure risk.</td>
</tr>
<tr>
<td>STOCKTON, CA</td>
<td>HS 1</td>
<td>Area not visible from control twr.</td>
</tr>
<tr>
<td></td>
<td>HS 2</td>
<td>Closely spaced rwys on Twy H.</td>
</tr>
<tr>
<td>TRUCKEE, CA</td>
<td>HS 1</td>
<td>Simultaneous ops on Rwy 11-29 and Rwy 02-20.</td>
</tr>
</tbody>
</table>

*See appropriate Chart Supplement HOT SPOT table for additional information.
ARRIVAL ROUTE DESCRIPTION

RBUCL TRANSITION (RBUCL.AANET1)
SPAMY TRANSITION (SPAMY.AANET1)

From WDNSR on track 171° to cross AANET at or above 13000.

LANDING RUNWAY 12: From AANET on track 171° to cross RAIDR at 5000. Expect assigned instrument approach procedure.

NOTE: Chart not to scale.

NOTE: RADAR required.
NOTE: RNAV 1.
NOTE: DME/DME/IRU or GPS required.
NOTE: Corresponding STAR is WDNSR. Expect WDNSR when KOAK is landing Rwys 28L/R and 30.
ARRIVAL ROUTE DESCRIPTION

From over TULE (TTE) VOR/DME on TTE R-323 and FRIANT (FRA) VORTAC R-142 to ALTTA. Expect ILS or LOC RWY 29R approach. For Rwy 11L operations: Depart ALTTA heading 310° and expect RADAR vectors to LOC Y RWY 11L.

LOST COMMUNICATIONS: Rwy 11L: Proceed to FRA VORTAC on V459, then on V230, execute the LOC Y RWY 11L approach.
ALWYS TWO ARRIVAL (RNAV) Transition Routes

Northern California TRACON will assign landing runway.

NOTE: Expect "descend via" clearance from Oakland Center.

NOTE: DME/DME/IRU or GPS required.

NOTE: RNAV 1.

NOTE: RADAR required.

See following page for SW-2, 30 NOV 2023 to 25 JAN 2024
NOTE: RADAR required.
NOTE: RNAV 1.
NOTE: DME/DME/IRU or GPS required.
NOTE: Expect "descend via" clearance from Oakland Center. Northern California TRACON will assign landing runway.

NOTE: Chart not to scale.
ARRIVAL ROUTE DESCRIPTION

ADWAT TRANSITION (ADWAT.AMRVR2)

MINA TRANSITION (MVA.AMRVR2)

. . . . . From AMRVR on track 249° to cross GEKNE at or above 12200, then on track 250° to cross SAKOC at or above 9500, then on track 250° to cross JACII at or above 8000, then on track 249° to cross HNW VOR/DME at or above 7000. Expect ILS approach Runway 22L or visual approach.
ARRIVAL ROUTE DESCRIPTION

LANDING RUNWAY 12: From BANND on track 277° to cross SULRR at or below 13000, then on track 264° to cross KEENR at 8000, then on track 262° to cross LOHGN at 6000 and at 230K, then on track 261° to cross WHYEE at or above 5000, then on track 261° to cross HIRMO at 4000, then on track 261°. Expect RADAR vectors to final approach course.

NOTE: DME/DME/IRU or GPS required.

NOTE: RADAR required.

NOTE: RNAV 1.

NOTE: Chart not to scale.
ARRIVAL ROUTE DESCRIPTION

AMAKR TRANSITION (AMAKR.BDEGA3)

LEGGS TRANSITION (LEGGS.BDEGA3)

MLBEC TRANSITION (MLBEC.BDEGA3)

MRRLO TRANSITION (MRRLO.BDEGA3)

PEENO TRANSITION (PEENO.BDEGA3)

From LOZIT on track 126° to cross BDEGA at or below 13000, then on track 126° to cross CORKK at 11000 and at 250K, then on track 126° to BRIXX, then on track 140°. Expect RADAR vectors to final approach course.

NOTE: Chart not to scale.
NOTE: Turbojet aircraft only.

NOTE: Chart not to scale.

RADAR and DME REQUIRED

LOCALIZER 111.7
I-GWG
Chan 54

LOCALIZER 109.55
I-SFO
Chan 32 (Y)

BADLDR
Expect 10000 250K

WOODSIDE
113.9
OSI
Chan 86

MENLO

SKUNK
Expect 12000

ANJEE

CARME

SALINAS
117.3
SNS
Chan 120

BIG SUR
114.0
BSR
Chan 87

NOTE: Turbojet aircraft only.

NOTE: Chart not to scale.
NOTE: RADAR required.
NOTE: RNAV 1.
NOTE: GPS required.
NOTE: Turbojet and turboprop aircraft only.
NOTE: Landing KSUU: Expect RADAR vectors to Rwy 21L or 3L unless otherwise assigned by ATC.
NOTE: Landing KCCR: Expect Rwy 19R, unless otherwise assigned by ATC.

(NARRATIVE ON FOLLOWING PAGE)

Ldg KSUU and KCCR
ARRIVAL ROUTE DESCRIPTION

NURAY TRANSITION (NURAY.BMBER1)
PEMKE TRANSITION (PEMKE.BMBER1)
RPARK TRANSITION (RPARK.BMBER1)

LANDING KSUU, KCCR: From BMBER on track 265° to cross JOSBA between 10000 and 11000, then on track 267° to cross RAAAF at 6000 and at or below 230K, then on heading 303° or as assigned by ATC. Expect RADAR vectors to final approach course.

LOST COMMUNICATIONS
KSUU: From RAAAF, proceed on track 318° to cross SEATO at 6000. Execute ILS or LOC RWY 21L or TACAN RWY 3L approach. If unable, hold at SEATO as depicted, maintain 6000 feet.
KCCR: From RAAAF, proceed on track 312° to cross REJOY at 6000 and execute RNAV, LDA, or VOR RWY 19R approach.
ARRIVAL ROUTE DESCRIPTION

MENDOCINO TRANSITION (ENI.BRINY2): From over ENI VORTAC via ENI R-146 and PYE R-325 to PYE VOR/DME. Thence . . . .

MUSTANG TRANSITION (FMG.BRINY2): From over FMG VORTAC via FMG R-241 to ILA VORTAC then via ILA R-251 to ENI VORTAC, then via ENI R-146 to PYE VOR/DME. Thence . . . .

RED BLUFF TRANSITION (RBL.BRINY2): From over RBL VORTAC via RBL R-200 and ENI R-146 to PYE VOR/DME. Thence . . . .

. . . . From over PYE VOR/DME via PYE R-151 to BRINY INT/DME, then via OSI R-237 to OSI VOR/DME. Expect RADAR vectors to Rwy 12R final approach course.

NOTE: Chart not to scale.
ARRIVAL ROUTE DESCRIPTION

CHBLI TRANSITION (CHBLI.BRIXX3)

From BRIXX on track 144° to LUYTA, then on track 141° to JILNA, then on heading 105° or as assigned by ATC. Expect RADAR vectors to final approach course.
ARRIVAL ROUTE DESCRIPTION

From over CCR VOR/DME via CCR R-020 to ISYOH INT, then via MYV R-174 to ELKOE INT, then on heading 340°. Expect RADAR vectors to final approach course.
NOTE: RNAV 1.
NOTE: DME/DME/IRU or GPS required.
NOTE: Expect to receive "descend via" clearance from Oakland Center, Northern California
TRACON will assign landing runway.
NOTE: RADAR required for non-GPS equipped aircraft.

NOTE: Chart not to scale.
From DYAMD on track 247° to cross LAANE between FL220 and FL260 and at 280K, then on track 247° to ALWYS.

From DYAMD on track 248° to cross LAANE between FL220 and FL260 and at 280K, then on track 248° to ALWYS.

Expect assigned instrument approach procedure.

NOTE: DME/DME or GPS required from Oakland Center. Expect assigned landing runway.

TRACON will assign landing runway.
ARRIVAL ROUTE DESCRIPTION

RGOOD TRANSITION (RGGOOD.EMZOH3)

From EMZOH on track 304° to cross MYJAW at or above FL220 and at 280K, then on track 304° to cross SKIZM between 15000 and FL190.

LANDING RUNWAYS 28L/R: From SKIZM on track 303° to cross MYRIB between 9000 and 10000 and at 240K, then on track 304° to MYHIP, then on track 292° to cross MYNEE at 7000, then on track 292° to cross MYSHN at or above 6200, then on track 292° to cross CYMBL at 5300. Expect assigned instrument approach procedure.

LANDING RUNWAY 30: From SKIZM on track 303° to cross MYRIB between 9000 and 10000 and at 240K, then on track 304° to MYHIP, then on track 292° to cross MYNEE at 7000, then on track 292° to cross MYSHN at or above 6200, then on track 264° to cross FIGXME at or above 5200, then on track 264° to cross MYCAF at or above 5000, then on track 264° to cross BIGPD at or above 4500, then on track 264° to cross FRNNY at or above 4100. Expect assigned instrument approach procedure.
ARRIVAL ROUTE DESCRIPTION

GGULF TRANSITION (GGULF.FRLON2)

From FRLON on track 145° to cross STLER at 12000 and at 250K, then on track 145° to MNTNA, then on track 105° to cross MISSS at 7000, then on track 105° to cross PPEGs at 5500 and at 210K, then on track 140°. Expect RADAR vectors to final approach course.
ARRIVAL ROUTE DESCRIPTION

COALDALE TRANSITION (OAL.MOD9): From over OAL VORTAC on OAL R-246 and MOD R-064 to MOD VOR/DME. Thence... .

MINA TRANSITION (MVA.MOD9): From over MVA VORTAC on MVA R-204 and OAL R-246 and MOD R-064 to MOD VOR/DME. Thence... .

MUSTANG TRANSITION (FMG.MOD9): From over FMG VORTAC on FMG R-182 and MOD R-064 to MOD VOR/DME. Thence... .

. . . From over MOD VOR/DME on MOD R-245 to LEEFF, then on MOD R-245 to GROAN, then on MOD R-245 to CEDES, then on OSI VOR/DME R-056 to ARCHI, then on OSI R-056 to MEHTA. Expect RADAR vectors to final approach course.

LOST COMMUNICATIONS: Intercept and proceed on SFO RWY 28R localizer to CEPIN.

NOTE: RADAR required.

NOTE: DME required.

NOTE: Chart not to scale.
ARRIVAL ROUTE DESCRIPTION

From OAKES on track 244° to cross GRUDG between FL200 and FL230 and at 280K, then on track 244° to cross BANND at or below FL190.

LANDING RUNWAYS 28L/R: From BANND on track 244° to cross TOOOL between 11000 and 17000 and at 280K, then on track 250° to cross EVOLV between 7000 and 9000, then on track 249° to cross BBUBB at 5000. Expect assigned instrument approach procedure.

LANDING RUNWAY 30: From BANND on track 244° to cross TOOOL between 11000 and 17000 and at 280K, then on track 238° to cross FFIST between 7000 and 9000, then on track 251° to cross PRFCT at or above 5000, then on track 256° to cross PARBB at 4500, then on track 243°. Expect assigned instrument approach procedure.

NOTE: Chart not to scale.
ARRIVAL ROUTE DESCRIPTION

LIBBO TRANSITION (LIBBO.OSVEE2)
ROVUE TRANSITION (ROVUE.OSVEE2)
ZONSO TRANSITION (ZONSO.OSVEE2)

From MOLEN on track 057° to OCOVA.

LANDING RUNWAYS 3L, 21L/R: From OCOVA on track 057° to cross OSVEE at 7000, then on heading 023°. Expect RADAR vectors to final approach course.

LOST COMMUNICATIONS: From OSVEE, proceed direct SEATO. Execute ILS or LOC RWY 21L or TACAN RWY 3L approach. If unable, hold at SEATO as depicted, maintain 6000.

RNAV 1 - DME/DME/IRU or GPS.
RADAR required.

NOTE: Chart not to scale.
NOTE: Heavy glider activity over the Sierra Nevada mountain range.

ARRIVAL ROUTE DESCRIPTION

MINA TRANSITION (MVA.SWR1): From over MVA VORTAC on MVA R-273 and SWR R-093 to SWR VOR/DME, then on SWR R-236 to PEELS INT. Thence . . .

MUSTANG TRANSITION (FMG.SWR1): From over FMG VORTAC on FMG R-218 and SWR R-037 to SWR VOR/DME, then on SWR R-236 to PEELS INT. Thence . . .

LANDING RUNWAYS 3L/R: From over PEELS on heading 200°. Expect RADAR vectors to final approach course.

LANDING RUNWAYS 21L/R: From over PEELS on heading 175°. Expect RADAR vectors to final approach course.

LOST COMMUNICATIONS

RUNWAY 3L: From over PEELS proceed to SGD VORTAC. Expect ILS or LOC RWY 3L approach.

RUNWAY 21L: From over PEELS proceed to SAC VORTAC. Expect ILS or LOC RWY 21L approach.
ARRIVAL ROUTE DESCRIPTION

AVENAL TRANSITION (AVE.PXN6): From over AVE VOR/DME on AVE R-313 and PXN R-133 to PXN VORTAC. Thence. . . .

GORMAN TRANSITION (GMN.PXN6): From over GMN VORTAC on GMN R-305 and PXN R-124 to SRENA, then on PXN R-124 to PXN VORTAC. Thence. . . .

. . . . From over PXN VORTAC on PXN R-301 to SUNOL. Expect RADAR vectors to final approach course.

NOTE: RADAR required.
NOTE: DME required.
NOTE: Chart not to scale.
ARRIVAL ROUTE DESCRIPTION

From PEBLL on track 101° to cross WOMAS at or above 13000.

**LANDING RUNWAY 3L:** From WOMAS on track 101° to cross SEATO at 6000 and at 210K, then on heading 213°. Expect RADAR vectors to final approach course.

**LANDING RUNWAY 21L/R:** From WOMAS on track 101° to cross SEATO at 6000 and at 210K, then on heading 103°. Expect RADAR vectors to final approach course.

**LOST COMMUNICATIONS:** From SEATO, execute ILS or LOC RWY 21L or TACAN RWY 3L approach. If unable, hold at SEATO as depicted, maintain 6000.
NOTE: RADAR required.
NOTE: RNAV 1.
NOTE: GPS required.
NOTE: Turboprop aircraft only.
NOTE: Landing OAK expect Runway 28L/R unless otherwise assigned by ATC.
NOTE: Landing SFO expect Runway 28L/R or 30 unless otherwise assigned by ATC.

ARRIVAL ROUTE DESCRIPTION

ALCOA TRANSITION (ALCOA.PIRAT2)
CINNY TRANSITION (CINNY.PIRAT2)
HUNTS TRANSITION (HUNTS.PIRAT2)
PAINT TRANSITION (PAINT.PIRAT2)
PASIF TRANSITION (PASIF.PIRAT2)
WUSES TRANSITION (WUSES.PIRAT2)

LANDING KOAK/KSFO: From PIRAT on track 060° to cross BRINY at or below 12000 and at 250K, then on track 060° to cross ARGGG at 8000 and at 230K, then on track 060°. Expect RADAR vectors to assigned instrument approach.
NOTE: Chart not to scale.

NOTE: RADAR required.

NOTE: SACRAMENTO transition to be used only when assigned by ATC.

ARIVAL ROUTE DESCRIPTION

MENDOCINO TRANSITION (ENI.PYE3): From over ENI VORTAC on ENI R-146 and PYE R-325 to PYE VOR/DME. Thence . . . .

SACRAMENTO TRANSITION (SAC.PYE3): From over SAC VORTAC on SAC R-257 and PYE R-028 to PYE VOR/DME. Thence . . . .

. . . . From over PYE VOR/DME on PYE R-144 to HADLY, then on OSI R-256 to OSI VOR/DME. Expect RADAR vectors to final approach course.

POINT REYES THREE ARRIVAL (PYE.PYE3) 22JUN17

SAN FRANCISCO, CALIFORNIA
NOTE: Expect to receive transition (east/west) and "descend via" clearance from Oakland Center. Northern California TRACON will assign landing runway.

NOTE: Expect west transition unless otherwise advised.

NOTE: West transition indicates Rwys 30L/R.

NOTE: East transition indicates Rwys 12L/R.

Northern California TRACON will assign landing runway.

"descend via" clearance from Oakland Center.

NOTE: Expect west transition unless otherwise advised.

RNAV 1 - DME/DME/IRU or GPS
RADAR required

OAKLAND CENTER
121.25 327.0
NORCAL APP CON
126.475 317.775
D-ATIS
126.95
SAN JOSE TOWER*
124.0 257.6
GND CON
121.7
ARRIVAL ROUTE DESCRIPTION

From STUBL on track 250° to cross RAZRR between FL200 and FL220, then on track 249° to cross OUCHH between 16000 and FL190, then on track 249° to cross NIKKT between 10000 and 14000.

EAST TRANSITION LANDING RUNWAYS 12L/R: From NIKKT on track 240° to cross GOTEKE between 10000 and 12000 and at 280K, then on track 240° to SHIKK, then on track 281° to cross TRCOT at or above 9000 and at 240K, then on track 281° to cross GGUGL between 7000 and 8000, then on track 318° to cross GAARY at or above 5800, then on track 318° to cross EDMND at or above 5600, then on track 318° to cross JESEN at or above 4100, then on track 306° to cross HITIR at 4000, then on track 306°. Expect RADAR vectors to final approach course.

WEST TRANSITION LANDING RUNWAYS 30L/R: From NIKKT on track 265° to cross SEKKO between 8000 and 10000 and at 250K, then on track 265° to cross SCOPR between 5000 and 7000, then on track 265° to cross KLIDE at or above 4000 and at 230K. Expect assigned instrument approach or RADAR vectors to final approach course.

NOTE: Expect to receive transition (east/west) and "descend via" clearance from Oakland Center. Northern California TRACON will assign landing runway.

NOTE: West transition indicates Rwys 30L/R.
NOTE: East transition indicates Rwys 12L/R.
NOTE: Expect west transition unless otherwise advised.
(RISTI.RISTI1)20198

RISTI ONE ARRIVAL(RNAV)

SAN FRANCISCO, CALIFORNIA

AL-375 (FAA)

NORCAL APP CON
134.5 338.2

ORRCA

SFO D-ATIS
113.7 115.8 118.85
SJC D-ATIS
126.95

6100

32)
(

160°

TIPRE

HAIRE

6100

6)
(

161°

TRACY

6100

4)
(

159°

0
0
1
6

OOWEN

°
8
3
2
)
9
(

00
61 8°
215)
(

8°
21 6)

SAN FRANCISCO INTL

MOVDD

RISTI

(

0°
22

NOTE: RADAR required.

CEDES

NOTE: RNAV 1.

9000

NOTE: GPS required.
NORMAN Y MINETA
SAN JOSE INTL

NOTE: Chart not to scale.

ARRIVAL ROUTE DESCRIPTION
ORRCA TRANSITION (ORRCA.RISTI1)
TIPRE TRANSITION (TIPRE.RISTI1)
LANDING KSFO/KSJC: From RISTI on track 218° to cross CEDES at 9000, then on heading
220° or as assigned by ATC. Expect RADAR vectors to final approach course.

SAN FRANCISCO, CALIFORNIA

RISTI ONE ARRIVAL(RNAV)
(RISTI.RISTI1)22JUN17
Z30

SW-2, 30 NOV 2023 to 25 JAN 2024

(
32
)

18
7°

61
00

6100

5)
(

160°

SW-2, 30 NOV 2023 to 25 JAN 2024

BYRON


**ARRIVAL ROUTE DESCRIPTION**

**AVENAL TRANSITION (AVE.ROBIE5):** From over AVE VOR/DME on AVE R-276 to ROBIE. Thence . . . .

**SAN MARCUS TRANSITION (RZS.ROBIE5):** From over RZS VORTAC on RZS R-312 and SNS R-128 to ROBIE. Thence . . . .

. . . . From over ROBIE on SNS R-128 to SNS VORTAC. Then on SNS R-347 to GILRO. Expect the ILS RWY 30L approach.

**FOR RUNWAY 12 OPERATIONS:** Expect routing SNS direct SJC VOR/DME and RADAR vectors to final approach course.
ARRIVAL ROUTE DESCRIPTION

MENDOCINO TRANSITION (ENI.SEATO4): From over ENI VORTAC via ENI R-103 to SEATO INT. Thence . . . .

RED BLUFF TRANSITION (RBL.SEATO4): From over RBL VORTAC via RBL R-153 and ILA R-333 to ILA VORTAC, then via ILA R-157 to SEATO INT. Thence . . . .

SCAGGS ISLAND TRANSITION (SGD.SEATO4): From over SGD VORTAC via SGD R-030 to SEATO INT. Thence . . . .

. . . . From over SEATO INT:
RWY 3L/R: Expect RADAR vectors for ILS or LOC RWY 3L approach.
RWY 21L/R: Expect RADAR vectors for ILS or LOC RWY 21L approach.

LOST COMMUNICATIONS:
RWY 3L via SEATO then TACAN RWY 3L
RWY 21R via SEATO then TACAN RWY 21R.
ARRIVAL ROUTE DESCRIPTION

From SERFR on track 314° to cross NRRU at or above FL200 and at 280K, then on track 313° to cross WWAVS between 15000 and FL190 and at 280K, then on track 333° to cross EPICK between 10000 and 15000 and at 280K, then on track 329° to cross FOLET at or above 8000 and at 240K, then on track 329° to cross EDDYY at 6000 and at 240K. Expect assigned instrument approach (Rwy 28L/R).
ARRIVAL ROUTE DESCRIPTION

MRLET TRANSITION (MRLET.SHARR1)
RPARK TRANSITION (RPARK.SHARR1)
RUSME TRANSITION (RUSME.SHARR1)

LANDING OAK: From SHARR on track 232° to LOCKE, then on track 232°
to cross CATTY at 8000, then on heading 280° or as assigned by ATC.
Expect RADAR vectors to final approach course.

LANDING HWD: From SHARR on track 232° to LOCKE, then on track 232°
to cross CATTY at 8000, then on heading 232° or as assigned by ATC.
Expect RADAR vectors to final approach course.

NOTE: RADAR required.
NOTE: RNAV 1.
NOTE: DME/DME/IRU or GPS required.
NOTE: Turbojet and turboprop aircraft only.
NOTE: Landing OAK expect runway 10L/R and 12 unless otherwise assigned by ATC.
NOTE: Landing HWD expect runway 28L/R unless otherwise assigned by ATC.
NOTE: Expect to receive transition (north/south) and "descend via" clearance from Oakland Center. Northern California TRACON will assign landing runway.

NOTE: Landing north indicates Rwys 30L/R.
NOTE: Landing south indicates Rwys 12L/R.
NOTE: Expect landing north unless otherwise advised.

NOTE: Chart not to scale.
ARRIVAL ROUTE DESCRIPTION

TROXX TRANSITION (TROXX.SILCN6)

From SILCN on track 309° to cross VLLEY between 15000 and FL190 and at 280K.

SOUTH TRANSITION LANDING RUNWAYS 12L/R: From VLLEY on track 318° to cross BAXBE at or above 12000, then on track 318° to cross APLLE at or above 9000 and at 240K, then on track 318° to cross GGUGL between 7000 and 8000, then on track 318° to cross GAARY at or above 5800, then on track 318° to cross EDMND at or above 5600, then on track 318° to cross JESEN at or above 4100, then on track 306° to cross HITIR at 4000, then on track 306°. Expect RADAR vectors to final approach course.

NORTH TRANSITION LANDING RUNWAYS 30L/R: From VLLEY on track 328° to cross GUUYY at or above 11000, then on track 328° to cross WLSSN between 8000 and 11000 and at 250K, then on track 328° to cross GSTEE between 4200 and 7200, then on track 328° to cross KLIDE at or above 4000 and at 230K. Expect assigned instrument approach or RADAR vectors to final approach course.
ARRIVAL ROUTE DESCRIPTION

LANDING RUNWAY 12: From SKIZM on track 322° to cross EMAA between 11000 and 14000, then on track 322° to cross WNDML between 9000 and 10000 and at 240K, then on track 322° to cross WHYEE between 7000 and 8000 and at 230K, then on track 261° to cross HIRMO at 5000, then expect RADAR vectors to final approach course.

Northern California TRACON will assign landing runway.

NOTE: RADAR required.
NOTE: DME/DME/IRU or GPS required.
NOTE: Expect to receive "descend via" clearance from Oakland Center.
NOTE: Expect to receive "descend via" clearance from Oakland Center.

ARRIVAL ROUTE DESCRIPTION

MYJAW TRANSITION (MYJAW.SKIZM2)

论证过渡（MYJAW.SKIZM2）

RAYGUN TRANSITION (RGOOD.SKIZM2)

论证过渡（RGOOD.SKIZM2）

NOTE: Chart not to scale.
From SLMMR on track 239° to cross POZUR at or above 8000.

LANDING RUNWAYS 17L/R: From POZUR on track 238° to cross TENCO at 4000, then on track 255°. Expect RADAR vectors for assigned instrument approach procedure.

LANDING RUNWAYS 35L/R: From POZUR on track 240° to RICEE, then on track 219° to cross PKAAY at or above 6000 and at 210K, then on track 221° to THANN, then on track 168° to cross BANZA at 4000 and at 210K, then on track 168° . Expect RADAR vectors to final approach course.
ARRIVAL ROUTE DESCRIPTION

FORTUNA TRANSITION (FOT.STINS4): From over FOT VORTAC on FOT R-138 and PYE R-321 to LETHH, then on PYE R-321 to PYE VOR/DME. Thence . . .

MENDOCINO TRANSITION (ENI.STINS4): From over ENI VORTAC on ENI R-146 and PYE R-325 to PYE VOR/DME. Thence . . .

MUSTANG TRANSITION (FMG.STINS4): From over FMG VORTAC on FMG R-241 and ILA R-057 to ILA VORTAC, then on ILA R-196 and PYE R-016 to PYE VOR/DME. Thence . . .

RED BLUFF TRANSITION (RBL.STINS4): From over RBL VORTAC on RBL R-176 and PYE R-357 to GOWCH, then on PYE R-357 to PYE VOR/DME. Thence . . .

ROSEBURG TRANSITION (RBG.STINS4): From over RBG VOR/DME on RBG R-159 and ENI R-343 to ENI VORTAC, then on ENI R-146 and PYE R-325 to PYE VOR/DME. Thence . . .

. . . From over PYE VOR/DME on PYE R-144 to STINS, then on SFO R-287 to SFO VOR/DME. Expect RADAR vectors to final approach course.
ARRIVAL ROUTE DESCRIPTION

AMAKR TRANSITION (AMAKR.STLER3)
LEGGS TRANSITION (LEGGS.STLER3)
MLBEC TRANSITION (MLBEC.STLER3)
MRRLO TRANSITION (MRRLO.STLER3)
PEENO TRANSITION (PEENO.STLER3)

From LOZIT on track 175° to cross STLER at or above 8000.

LANDING RUNWAYS 19L/R: From STLER on track 087° to cross WESLA, then on track 002° to cross MVRKK at 7000 and at 210K, then on track 360°. Expect RADAR vectors to final approach course.

STLER THREE ARRIVAL (RNAV)
(LOZIT.STLER3) 13SEP18

NOTE: Chart not to scale.

NOTE: RADAR required.
NOTE: RNAV 1.
NOTE: DME/DME/IRU or GPS required.
NOTE: PEENO transition ATC-assigned only.
ARRIVAL ROUTE DESCRIPTION

OKNIE TRANSITION (OKNIE.SUTHU2)
TOCOS TRANSITION (TOCOS.SUTHU2)

From SUTHU on track 153° to EGUYU.

LANDING RUNWAY 3L: From EGUYU on track 153° to cross SEATO at 6000 and at 210K, then on heading 213°. Expect RADAR vectors to final approach course.

LANDING RUNWAYS 21L/R: From EGUYU on track 153° to cross SEATO at 6000 and at 210K, then on heading 103°. Expect RADAR vectors to final approach course.

LOST COMMUNICATIONS: From SEATO, execute ILS or LOC RWY 21L or TACAN Rwy 3L approach. If unable, hold at SEATO as depicted, maintain 6000.

NOTE: Chart not to scale.
**ARRIVAL ROUTE DESCRIPTION**

**NURAY TRANSITION (NURAY.SUUTR4)**

From SUUTR on track 308° to cross FOOLZ at FL210, then on track 308° to cross GLDDD at or below FL190, then on track 308° to cross WRAPS at or below 17000, then on track 308° to cross PNNEN between 12000 and 16000 and at 280K, then on tack 298° to SLUIC.

**LANDING RUNWAYS 17L/R:** From SLUIC on track 298° to cross AMADR at 9000, then on track 302° to cross NGGET between 7000 and 9000, then on track 309° to cross CHNEL at or above 5000, then on track 330° to cross OVOME at 4000 and at 210K, then on track 348°. Expect assigned instrument approach or RADAR vectors to final approach course.

**LANDING RUNWAYS 35L/R:** From SLUIC on track 298° to cross MYNRR at 9000, then on track 299°. Expect assigned instrument approach procedure or RADAR vectors to final approach course.

**NOTE:** Expect runway assignment prior to PNNEN.
TUDOR TWO ARRIVAL

NOTE: RADAR required.
NOTE: Expect RADAR vectors to final approach course.
NOTE: DME required.

(SACRAMENTO INTL (SMF)) SACRAMENTO, CALIFORNIA

TUDOR TWO ARRIVAL
(TUDOR.TUDOR2) 09FEB12

(Z43)
ARRIVAL ROUTE DESCRIPTION

KLAMATH FALLS TRANSITION (LMT.TUDOR2): From over LMT VORTAC via LMT R-163 and SAC R-339 to PIECH INT. Thence . . . .

LAKEVIEW TRANSITION (LKV.TUDOR2): From over LKV VORTAC via LKV R-185 and SAC R-339 to PIECH INT. Thence . . . .

RED BLUFF TRANSITION (RBL.TUDOR2): From over RBL VORTAC via RBL R-133 to PIECH INT. Thence . . . .

. . . . From PIECH INT via SAC R-339 to TUDOR INT/DME. Expect RADAR vectors.
ARRIVAL ROUTE DESCRIPTION

ANAHO TRANSITION (ANAHO.WEBGO2)
MINA TRANSITION (MVA.WEBGO2)

From WEBGO on track 227° to cross HOLDS at or above FL260, then on track 227° to cross NAMOE at or below FL210, then on track 227° to cross GHEER between 10000 and 12000, then on track 183° to cross IKARE at or below 9000.

LANDING RUNWAY 3L: From IKARE on track 183° to cross SEATO at 6000 and at 210K, then on heading 205°. Expect RADAR vectors to final approach course.

LANDING RUNWAYS 21L/R: From IKARE on track 183° to cross SEATO at 6000 and at 210K, then on heading 103°. Expect RADAR vectors to final approach course.

LOST COMMUNICATIONS: From SEATO, execute ILS or LOC RWY 21L or TACAN RWY 3L approach. If unable, hold at SEATO as depicted, maintain 6000.
ARRIVAL ROUTE DESCRIPTION

RBUCI TRANSITION (RBUCI.WNDSR2)

From WNDSR on track 159° to cross WEBRR between 9000 and 13000, then on track 159° to cross BOYYS at 7000, then on track 129° to cross HOPTA at 5000.

LANDING RUNWAYS 28L/R: From HOPTA on track 090° to cross AAAME at 5000 and at 210K, then on track 090°. Expect RADAR vectors to final approach course.

LANDING RUNWAY 30: From HOPTA on track 114° to cross ALLXX at 5000 and at 210K, then on track 114° to CRSEN, then on track 112°. Expect RADAR vectors to final approach course.
ARRIVAL ROUTE DESCRIPTION

From SERFR on track 314° to cross NRRLI at or above FL200 and at 280K, then on track 313° to cross WWAVS between 15000 and FL190 and at 280K.

LANDING RUNWAYS 19L/R: From WWAVS on track 306° to cross WPOUT at 11000 and at 250K, then on track 331° to cross THEEZ at or above 8000 and at 240K, then on track 331° to cross WESLA at 6000 and at 210K, then on track 002° to MVRKK, then on track 360°. Expect RADAR vectors to final approach course.

NOTE: RADAR required.

NOTE: RNAV 1.

NOTE: DME/DME/IRU or GPS required.
ARRIVAL ROUTE DESCRIPTION

From YOSEM on track 248° to SNORA, then on track 248° to cross ZOMER at/above FL270 and at 280K.

LANDING RUNWAYS 28L/R: From ZOMER on track 247° to cross FRIGG at/below FL190, then on track 249° to cross SOOIE between 11000 and 13000 and at 250K, then on track 248° to cross FAITH at 8000. Expect assigned instrument approach procedure, or expect RADAR vectors to final.

NOTE: RADAR required.
NOTE: RNAV 1.
NOTE: DME/DME/IRU or GPS required.
NOTE: YOSEM3 STAR ATC assigned only.

NOTE: Chart not to scale.
INTENTIONALLY

LEFT

BLANK
### RNAV (GPS) RWY 31

**SEATTLE CENTER**

**UNICOM**

**ALTURAS MUNI (AAT)**

**ASOS**

| 124.175 |

**SEATLE CENTER**

| 127.6 | 346.35 |

**UNICOM**

| 122.8 (CTAF) |

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**For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -23°C (-9°F) or above 54°C (130°F). Rwy 31 helicopter visibility reduction below 1 SM NA. Procedure NA at night.**

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**Procedure NA for arrivals at BACHS via V452 northwest bound.**

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**Category**

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<thead>
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<td>LPV DA</td>
<td>4830-1 3/9</td>
<td>452 (500-1 3/9)</td>
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<tr>
<td>LNAV/ VNAV DA</td>
<td>4880-1 3/9</td>
<td>502 (600-1 3/9)</td>
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<td>CIRCLING</td>
<td>5120-1</td>
<td>5200-1 1/4</td>
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**For Amdt 2, 01FEB18, SW-2, 30 NOV 2023 to 25 JAN 2024.**

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**RNAV (GPS) RWY 31**

**ALTURAS MUNI (AAT)**

**ELEV 4378**

**TDZE 4378**
**TAKEOFF MINIMUMS**

Rwy 3: Standard with minimum climb of 340° per NM to 5900.
Rwy 13: Standard with minimum climb of 230° per NM to 8200.
Rwy 21: Standard with minimum climb of 365° per NM to 6000.
Rwy 31: Standard with minimum climb of 450° per NM to 5800.

NOTE: GPS required.
NOTE: RNAV 1.

**TAKEOFF OBSTACLE NOTES**

Rwy 3: Trees, buildings, poles and a road with vehicles beginning 1' from DER, right and left of centerline, up to 100' AGL/4659' MSL.
Rwy 21: Trees and road with vehicles beginning 1' from DER, right and left of centerline, to 100' AGL/4469' MSL.
Rwy 13: Trees and a road with vehicles beginning 1' from DER, right and left of centerline, up to 100' AGL/4519' MSL.
Rwy 31: Trees and road with vehicles beginning 1' from DER, right and left of centerline, up to 100' AGL/4469' MSL.

NOTE: Chart not to scale.

**DEPARTURE ROUTE DESCRIPTION**

**TAKEOFF RUNWAY 3:** Climb to 9000 direct NARIC, then climbing left turn direct BACHS.
**TAKEOFF RUNWAY 13:** Climb to 9000 direct RUCOR, turn right via 226° track to BACHS.
**TAKEOFF RUNWAY 21:** Climb to 9000 direct MOMPE, then via 221° track to BACHS.
**TAKEOFF RUNWAY 31:** Climb to 9000 direct SIDTO, turn left via 215° track to BACHS.
TAKEOFF MINIMUMS
Rwy 3: Standard with minimum climb of 367' per NM to 11000.
Rwy 13: Standard with minimum climb of 389' per NM to 11000.
Rwys 21 and 31: NA - ATC.

NOTE: GPS required.
NOTE: RNAV 1

TAKEOFF OBSTACLE NOTES
Rwy 3: Trees, buildings, poles and a road with vehicles beginning 1’ from DER, right and left of centerline, up to 100’ AGL/4659’ MSL.
Rwy 13: Trees and road with vehicles beginning 1’ from DER, right and left of centerline, up to 100’ AGL/4519’ MSL.

NOTE: Chart not to scale.

DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAY 3: Climb to 11000 direct NARIC and via 030° track to NILIY and via 092° track to CHOIR, thence....

TAKEOFF RUNWAY 13: Climb to 11000 direct RUCOR and via 056° track to CHOIR, thence....

....climb in holding, (if required) before proceeding on course.
RNAV (GPS) RWY 1
CALIFORNIA REDWOOD COAST-HUMBOLDT COUNTY (ACV)

MISSING APPROACH: Climb to 3200 direct HIPGI and on track 295° to CULDU and hold.

For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -2°C or above 54°C. Circling NA northeast of Rwy 14-32.

VGS and RNAV glidepath not coincident (VGS Angle 3.00°/TCH 48)

**LPV** DA

870-2½ 666 (700-2½)

**LNAV/ VNAV** DA

838-2½ 634 (700-2½)

**RNAV** MDA

1080-1 876 (900-1)

1080-1½ 876 (900-1½)

**CIRCLING**

1080-1½ 858 (900-1½)

1080-2½ 858 (900-2½)

1080-2¾ 858 (900-2¾)

**MISSING APCH FIX**

4 NM CULDU

DIRECTION

WAAS

CH 63200

W01A

APP CRS 013°

Rwy Idg

TDZE 204

Apt Elev 222

4501

ELEV 222 D TDZE 204

SW-2, 30 NOV 2023 to 25 JAN 2024

Data from SW-2, 30 NOV 2023 to 25 JAN 2024
RNAV (GPS) RWY 14

CALIFORNIA REDWOOD COAST-HUMBOLDT COUNTY (ACV)

For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -2°C (29°F) or above 54°C (130°F). Circling NA northeast of Rwy 14-32. DME/DME RNP-0.3 NA. Rwy 14 helicopter visibility reduction below ¾ SM NA.

**MISSED APPROACH:** Climbing right turn to 3000 direct SEGVE and hold.

**ASOS**
118.525

**SEATTLE CENTER**
124.85 306.3

**UNICOM**
123.0 (CTAF)

Amdt 1B 12OCT17

**SW-2, 30 NOV 2023 to 25 JAN 2024**
MISSED APPROACH: Climb to 3000 direct CULDU and hold.

- Baro-VNAV NA. Circling NA northeast of Rwy 14-32.
- DME/DME RNP-0.3 NA.
- LNAV/MDA NA. Circling NA northeast of Rwy 14-32.

MARKER AERIAL REFERENCE:
The map has milestone markers at various points along the RW32 approach path.

**MISSED APCH FIX**
- 4 NM SW-2, 30 NOV 2023 to 25 JAN 2024
- 3.4 NM ELEV 222
- 2.1 NM TDZE 221
- 5 NM TDZE 221
- 5 NM to ULAMY
- 6.4 NM to ZUVKU
- 9.9 NM to VOMAC
- 18.7 NM to VOMAC (FAF)
- 23.0 NM to ARCATA
- 37.0 NM to JEBGA
- 47.0 NM to VOMAC
- 57.0 NM to VOMAC

**ASOS**
- 118.525

**SEATTLE CENTER**
- 124.85
- 306.3

**UNICOM**
- 123.0 (CTAF)
DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAYS 1 and 32: Climbing left turn on ACV R-250, thence...

TAKEOFF RUNWAYS 14 and 19: Climbing right turn on ACV R-250, thence...

. . . on (transition) or (assigned route).

CRESCENT CITY TRANSITION (HOCUT5.CEC): From over HOCUT INT on FOT R-341 and CEC R-166 to CEC VORTAC.

FORTUNA TRANSITION (HOCUT5.FOT): From over HOCUT INT on ACV R-250 to SEVLY INT, then via FOT R-326 to FOT VORTAC.

NOTE: Chart not to scale.
RNAV (GPS) RWY 13
CASTLE (MER)

For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -15°C or above 54°C. For inoperative ALS, increase LNAV/VNAV all Cats visibility to 1/3 SM, increase LNAV Cats A/B visibility to 1 SM, and increase LNAV Cat C/D visibility to 1/3 SM.

ATIS 124.475  NORCAL APP CON  120.95  269.45  CASTLE TOWER *  GND CON  133.575  UNICOM  122.95  123.0

ATWATER, CALIFORNIA

PATYY 2000 090° (9.7)
(VAF) DIGQY

VOLTA

2000 015° (1.3)

procedure NA for arrivals at AWALI on V23 southeast bound.

procedure NA for arrivals at PATYY on V111-113 southwest bound and on V113 northwest bound.

procedure NA for arrivals at VOLTA on V113 southeast bound.

Procedure NA for arrivals at AWALI on V23 southeast bound.

Procedure NA for arrivals at PATYY on V111-113 southwest bound and on V113 northwest bound.

Procedure NA for arrivals at VOLTA on V113 southeast bound.

procedure NA for arrivals at AWALI on V23 southeast bound.

procedure NA for arrivals at PATYY on V111-113 southwest bound and on V113 northwest bound.

procedure NA for arrivals at VOLTA on V113 southeast bound.

RNAV (GPS) RWY 13
CASTLE (MER)

For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -15°C or above 54°C. For inoperative ALS, increase LNAV/VNAV all Cats visibility to 1/3 SM, increase LNAV Cats A/B visibility to 1 SM, and increase LNAV Cat C/D visibility to 1/3 SM.

ATIS 124.475  NORCAL APP CON  120.95  269.45  CASTLE TOWER *  GND CON  133.575  UNICOM  122.95  123.0

ATWATER, CALIFORNIA

PATYY 2000 090° (9.7)
(VAF) DIGQY

VOLTA

2000 015° (1.3)

procedure NA for arrivals at AWALI on V23 southeast bound.

procedure NA for arrivals at PATYY on V111-113 southwest bound and on V113 northwest bound.

procedure NA for arrivals at VOLTA on V113 southeast bound.

procedure NA for arrivals at AWALI on V23 southeast bound.

procedure NA for arrivals at PATYY on V111-113 southwest bound and on V113 northwest bound.

procedure NA for arrivals at VOLTA on V113 southeast bound.
RNAV (GPS) RWY 31
CASTLE (MER)

- **Missed Approach**: Climb to 4000 direct WENIG and on track 031° to NEBBY and hold, continue climb-in-hold to 4000.

- **ATIS**: 124.475
- **NORCAL APP CON**: 120.95 269.45
- **CASTLE TOWER**: 118.175 (CTAF)
- **GND CON**: 133.575
- **UNICOM**: 122.95
- **123.00**

- **ALKF-1**

- **Category**
  - A
  - B
  - C
  - D

- **LPV DA**: 381 1/2 200 (200 1/2)
- **LNAV/VNAV DA**: 498 1/2 317 (400 1/2)
- **LNAV MDA**: 560 1/2 379 (400 1/2)
- **379 (400 1/2)**

- **Circling NA** southwest of Rwy 13-31. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -15°C or above 54°C. For inoperative ALS, increase LNAV/VNAV oil Cats visibility to 1/2 SM and LNAV Cats C/D visibility to 1 SM.

- **Procedure NA** for arrivals at VOLTA on V113 northwest bound.

- **Procedure NA** for arrival on PXN VORTAC airway radials 296 CW 061.
CAUTION: BE ALERT TO RUNWAY CROSSING CLEARANCES. READBACK OF ALL RUNWAY HOLDING INSTRUCTIONS IS REQUIRED.
RNAV (GPS) RWY 7
AUBURN MUNI (AUN)

**V**  
Circling Rwy 25 NA at night. Rwy 7 helicopter visibility reduction below ½ SM NA. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -18°C or above 54°C.

**MISSED APPROACH:** Climb to 5000 direct AVPEY and left turn on track 311° to EKUJA and on track 289° to MRGGO and hold.

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<td>LPV DA</td>
<td>1848-1½</td>
<td>316 (400-1¼)</td>
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<td>2200-1</td>
<td>662 (700-1)</td>
<td>2400-1½</td>
<td>862 (900-1¼)</td>
</tr>
</tbody>
</table>

AUBURN, CALIFORNIA  
Orig-B 19JUL18

**38°57'N-121°05'W**
* When ALS inop, increase CAT A8 RVR to 55 and vis to 1 mile, CAT CDE vis to 1 1/2 miles.
** Circling not authorized E of Rwy 15-33.

ATIS *
124.55 273.5

NORCAL APP CON
125.4 259.1

TOWER *
119.4 284.75

GND CON
121.6 257.75

EMERG SAFE ALT 100 NM 13,700

MARYSVILLE, CALIFORNIA
Amdt 5 20JUL17

39°08'N - 121°26'W

BEALE AFB (KBAB)

SW-2, 30 NOV 2023 to 25 JAN 2024

SW-2, 30 NOV 2023 to 25 JAN 2024
DEPARTURE ROUTE DESCRIPTION

TAKE-OFF RWY 15: Fly heading 145° until BAB TACAN 2.5 DME, turn left intercept SAC VORTAC R-345 to PYNUN. Cross BAB R-086 at or above 6000. Then via assigned route.

TAKE-OFF RWY 33: Fly heading 325° intercept SAC VORTAC R-345 to PYNUN. Then via assigned route.
RNAV (GPS) Y RWY 26
NERVINO (O02)

**Procedure NA at night. Use Reno/Stead altimeter setting; when not received, use Reno/Tahoe Intl altimeter setting and increase all MDA 180 feet. DME/DME RNP: 0.3 NA. 8, 26 Rwy helicopter visibility reduction below 1 SM NA.**

**MISSED APPROACH:** Climbing left turn to 10000 direct FITUN and hold.

**Procedure NA for arrivals at RAROC on V452 northwest bound.**
RNAV (GPS) Z RWY 26
NERVINO (O02)

Use Reno/Stead altimeter setting; when not received, use Reno/Tahoe Intl altimeter setting and increase DA 180 feet.
DME/DME RNP -0.3 NA.
Helicopter visibility reduction below 3/4 SM not authorized.

Transition on V452 northwest bound does not require holding.

VGSI and RNAV glidepath not coincident (VGSI Angle 3.5°/TCH 50).

Helicopter visibility reduction below 3/4 SM not authorized.

Use Reno/Stead altimeter setting; when not received, use Reno/Tahoe Intl altimeter setting and increase DA 180 feet.
DME/DME RNP -0.3 NA.
Helicopter visibility reduction below 3/4 SM not authorized.

Transition on V452 northwest bound does not require holding.
RNAV (RNP) RWY 30
BISHOP (BIH)

MISSED APPROACH: Climb to 13000 via 301° track to CASPU, right turn to GULSE, 350° track to HARVU, left turn to JARUT, 323° track to KIPSE, right turn to MOTSE, 345° track to NUBIC, left turn to GULSE, 278° track to NIKOL and hold.

For uncompensated Baro-VNAV systems, procedure NA below -12°C or above 54°C.
RNAV (GPS) Y RWY 12
Bishop (BIH)

Rw 12, helicopter visibility reduction below 3/4 SM NA.

Procedure NA for arrivals at Nikol on V244-T298 westbound and on V381 northwest bound.

Visual Segment - Obstacles.

Procedure NA for arrivals at Nikol on V244-T298 westbound and on V381 northwest bound.
RNAV (GPS) Z RWY 12
BISHOP (BIH)

**RNAV (GPS) Z RWY 12**

**BISHOP, CALIFORNIA**

**App CRS**
- 120°

**TDZE**
- 4123

**Apt Elev**
- 4124

**Rwy 12, helicopter visibility reduction below ¾ SM NA.**
Missed approach requires minimum climb of 325 feet per NM to 11000; if unable, see RNAV (GPS) Y RWY 12.

**ASOS**
- 119.025

**OAKLAND CENTER**
- 125.75
- 284.65

**UNICOM**
- 123.0 (CTAF)

**LNAV MDA**
- 4580-1 1/4

**CIRCLING**
- 6420-1 1/4

**MISSED APPROACH:** (Do not exceed 250 KIAS until NEBSE)
Climb to 13000 direct KUPLE and on track 160° to ROCOS and on track 115° to PULIE and on track 051° to WEBAT and on track 341° to TEVOC and on track 322° to NEBSE and on track 264° to BIH VOR/DME and hold.

**Procedure NA for arrivals at NIKOL on V244-T298 westbound and on V381 northwest bound.**

**CIMOS**
- 4 NM to HOSUM

**FOLMA**
- 1.7 NM to HOSUM

**HEGIT**
- 1.7 NM to FOLMA

**MIRL Rwys 8-26, 12-30, and 17-35**
- SW-2, 30 Nov 2023 to 25 Jan 2024

**REIL Rwys 12, 17, 30 and 35**
- 37°22′N-118°22′W

**Sw 2, 30 Nov 2023 to 25 Jan 2024**
Procedure NA for arrivals at NIKOL on V381 northwest bound. Use I-BIH DME when on the localizer course. MISS approach: Climbing right turn to 12500 on heading 355° and on BIH VOR/DME R-328 to JABIM INT/OAL 39.5 DME and hold.

**DME REQUIRED**

**ASOS**

| 119.025 |

**OAKLAND CENTER**

| 125.75 |

**UNICOM**

| 123.0 (CTAF) |

**BISHOP, CALIFORNIA**

Orig-D 15AUG19

37°22'N-118°22'W

**BISHOP (BIH)**

LDA RWY 17
ILS or LOC RWY 13L
CHICO RGNL (CIC)

**ATIS**
119.675

**OAKLAND CENTER**
132.2 350.3

**CHICO TOWER**
121.0 (CTAF) 239.3

**GND CON**
121.9

**UNICOM**
122.95

**DME required.**

Circling NA east of Rwy 13L/31R.

**CHICO, CALIFORNIA**

**LOC/DME I-CIC 111.3 Chan 50**

**APP CRS 131°**

**Rwy ldg TDZE 240**

**Apt Elev 240**

**MALS**

**MISSING APPROACH:** Climb to 1000 then climbing right turn to 6000 on heading 155° and RBL R-122 to DURHA INT/ RBL 34.2 DME and hold, continue climb-in-hold to 6000.

**ATIS**

**OAKLAND CENTER**

**CHICO TOWER**

**GND CON**

**UNICOM**

**DME required.**

Circling NA east of Rwy 13L/31R.

**ATIS**
119.675

**OAKLAND CENTER**
132.2 350.3

**CHICO TOWER**
121.0 (CTAF) 239.3

**GND CON**
121.9

**UNICOM**
122.95

**DME required.**

Circling NA east of Rwy 13L/31R.

**ATIS**
119.675

**OAKLAND CENTER**
132.2 350.3

**CHICO TOWER**
121.0 (CTAF) 239.3

**GND CON**
121.9

**UNICOM**
122.95

**DME required.**

Circling NA east of Rwy 13L/31R.
CHICO, CALIFORNIA

RNAV (GPS) RWY 13L
CHICO RGNL (CIC)

ATIS
119.675

OAKLAND CENTER
132.2 350.3

CHICO TOWER *
121.0 (CTAF) 239.3

GND CON
121.9

UNICOM
122.95

RNAV (GPS) RWY 13L

Circling NA east of Rwy 13L-31R. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -1.5°C or above 54°C. For inop ALS, increase LNAV/VNAV all Cats visibility to ½ SM, and increase LNAV Cats C/D visibility to 1 SM.

LNAV MDA
600-½ 360 (400-½) 700-1½ 360 (400-½)

LNAV/ VNAV DA
530-½ 290 (300-½)

LPV DA
440-½ 200 (200-½)

CIRCLING
400 (400-1) 460 (500-1) 460 (500-1½) 560 (600-2)

EXIT MSA RWY 13L 25 NM

MISSED APPROACH: Climb to 3600 direct UNJED and hold, continue climb-in-hold to 3600.

VORTAC airway radials 122 CW 185.

(Emergency) RED BLUFF RBL

R Tune 121.9
UNICOM 122.95
CHICO TOWER (CTAF) 121.0
ATIS 119.675

Procedure NA for arrival on Red Bluff VORTAC airway radials 122 CW 185.

LNAV Cats C/D visibility to 1 SM.

ALS, increase LNAV/VNAV all Cats visibility to ½ SM, and increase systems, LNAV/VNAV NA below -1.5°C or above 54°C. For inop ALS, increase LNAV/VNAV all Cats visibility to ½ SM, and increase LNAV Cats C/D visibility to 1 SM.

Direct UNJED and hold, continue climb-in-hold to 3600.

MISSED APPROACH: Climb to 3600 direct UNJED and hold, continue climb-in-hold to 3600.

VORTAC airway radials 122 CW 185.

(Emergency) RED BLUFF RBL

R Tune 121.9
UNICOM 122.95
CHICO TOWER (CTAF) 121.0
ATIS 119.675

Procedure NA for arrival on Red Bluff VORTAC airway radials 122 CW 185.
RNAV (GPS) RWY 31R

**CHICO RGNL (CIC)**

For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -15°C or above 48°C.

**ATIS** 119.675  **OAKLAND CENTER** 132.2 350.3  **CHICO TOWER** 121.0 (CTAF) 239.3  **GND CON** 121.9  **UNICOM** 122.95

**ELEV** 240  **TDZE** 226

**3000**  **ZOTWY**

* LNAV only

**VRP** DA 476-1 250 (300-1)

**LNAV/ VNAV** DA 733-1¾ 507 (500-1¾)

**LNAV MDA** 600-1 374 (400-1)

**RNAV (GPS) RWY 31R**
CAUTION: BE ALERT TO RUNWAY CROSSING CLEARANCES.
READBACK OF ALL RUNWAY HOLDING INSTRUCTIONS IS REQUIRED.

AR 13.7° E

CAUTION: BE ALERT TO RUNWAY CROSSING CLEARANCES.
READBACK OF ALL RUNWAY HOLDING INSTRUCTIONS IS REQUIRED.

TERMINAL ELEV 240

ELEV 227

ELEV 215

TWR 312

HANGARS

FIRE STATION

HANGARS

0.5% UP

313.7°

121°51.5'W

ELEV 3000 X 40

X 150

3000 X 60

TERMINAL

31L

31R

31L

31R

TERMINAL

240

ELEV

FIELD ELEV 240

312

HANGARS

3000 X 40

3000 X 60

0.4% UP

313.7°

0.5% UP

313.7°

121°51.5'W

0.1° W

ANNUAL RATE OF CHANGE

JANUARY 2020

S-12.5

PCN S-12.5

PCN 9 F/C/Y/T

S-63, D-100, 2S-127, 2D-170

PCN 20 F/B/X/T

RWY 13L-31R

RWY 13R-31L

CHICO, CALIFORNIA

CHICO RGNL (CIC)

AIRPORT DIAGRAM

23166

ATIS
119.675
CHICO TOWER*
121.0 239.3
GND CON
121.9

 AIRPORT DIAGRAM

23166

AL-557 (FAA)
CHICO RGNL (CIC)
CHICO, CALIFORNIA

34
Top Altitude: Assigned by ATC.

Note: Chart not to scale.

Departure Route Description

Takeoff Runways 13L/R: Climb on a heading between 140° CW 310° from departure end of runway to assigned altitude. Thence. . . .

Takeoff Runways 31L/R: Climb on a heading between 320° CCW 132° from departure end of runway to assigned altitude. Thence. . . .

. . . Radar vectors to assigned route. Maintain assigned altitude, expect filed altitude/flight level 10 minutes after departure.

Lost Communications

For aircraft assigned a heading between 120° CW through 250°: if not in contact with Oakland Center after reaching 3000, continue climb to 5000 or higher assigned altitude and proceed to ILA VORTAC, thence. . . .

For aircraft assigned a heading between 255° CW through 320°: if not in contact with Oakland Center after reaching 3000, continue climb to 5000 or higher assigned altitude and proceed to RBL VORTAC, thence. . . .

. . . Proceed on assigned route.
RNAV (GPS) RWY 32
CLOVERDALE MUNI (069)

Circling Cat C NA northeast of Rwy 14-32. Helicopter visibility reduction below 1 SM NA. Procedure NA at night. Use Santa Rosa altimeter setting.

MISSED APPROACH: Climbing left turn to 6000 direct NATIC and hold, continue climb-in-hold to 6000.

Procedure NA for arrivals at ROZZA on V301 north bound, V108 northwest bound and V494 west bound.

RNAV (GPS) RWY 32
CLOVERDALE MUNI (069)
COALINGA, CALIFORNIA

RNAV (GPS) RWY 30
NEW COALINGA MUNI (C80)

AWOS-3
119.275

OAKLAND CENTER
128.7  307.0

UNICOM
122.7 (CTAF)

- Circling to Rwy 1, 19 NA at night. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -16°C or above 54°C.
- MISSED APPROACH: Climb to 1200, then climbing right turn to 3000 direct OXOFE and hold.

Procedure NA for arrival on AVE VOR/DME airway radials 237 CW 313.

COALINGA, CALIFORNIA

Apt Elev 625
TDZE 610

LPV DA 936-1  326 (400-1)
LNAV/VNAV DA 1030-1  1/8  420 (500-1 1/8)
LNAV MDA 1140-1  530 (600-1)  1140-1 1/2  530 (600-1 1/2)
CIRCLING 1160-1  535 (600-1)  1320-1  1420-2  1/4  795 (800-2)  1075 (1000-3)

Category A B C D

NEW COALINGA MUNI (C80)
AVENAL ONE DEPARTURE (OBSTACLE)

TAKEOFF MINIMUMS
Rwys 1, 19: NA-Environmental.
Rwy 12: Standard.
Rwy 30: Standard with minimum climb of 310’ per NM to 2100 or 3000-3 for VCOA.

TAKEOFF OBSTACLE NOTES
Rwy 12: Vehicle on road beginning 9’ from DER, 362’ left of centerline, up to 614’ MSL.
Navaid 15’ from DER, 125’ right of centerline, 2’ AGL/603’ MSL.
Vehicle on road beginning 76’ from DER, 506’ right of centerline, up to 614’ MSL.
Rwy 30: Navaid 14’ from DER, 125’ left of centerline, 1’ AGL/626’ MSL.
Terrain 43’ from DER, 472’ right of centerline, 627’ MSL.
Vehicle on road beginning 145’ from DER, 456’ right of centerline, up to 645’ MSL.
Vehicle on road 202’ from DER, 446’ left of centerline, 643’ MSL.
Vehicle on road 330’ from DER, 378’ right of centerline, 646’ MSL.
Vehicle on road beginning 384’ from DER, 1’ left of centerline, up to 644’ MSL.
Vehicle on road 532’ from DER, 362’ right of centerline, 647’ MSL.
Vehicle on road beginning 655’ from DER, on and left of centerline, up to 646’ MSL.
Vehicle on road beginning 679’ from DER, on and right of centerline, up to 648’ MSL.
Vehicle on road beginning 731’ from DER, 113’ left of centerline, up to 648’ MSL.

NOTE: Chart not to scale.

DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAY 12: Climb on heading 116° to intercept AVE VOR/DME R-323 to AVE VOR/DME then proceed on course.

TAKEOFF RUNWAY 30: Climbing right turn to heading 110° to intercept AVE VOR/DME R-323 to AVE VOR/DME then proceed on course.

VCOA RUNWAY 30: Obtain ATC approval for VCOA when requesting IFR clearance. Climb in visual conditions to cross New Coalinga Muni Airport at or above 3500 before proceeding on course.
RNAV (GPS) RWY 35
COLUMBIA (022)

Circling NA to Rwy 11 and 29. Circling NA east of Rwy 17-35. Procedure NA at night. Rwy 35 helicoper visibility reduction below 1 SM NA.

MISSED APPROACH: Climbing left turn to 7000 direct HABXU and hold, continue climb-in-hold to 7000.

<table>
<thead>
<tr>
<th>AWOS-3</th>
<th>NORCAL APP CON</th>
<th>OAKLAND CENTER</th>
<th>UNICOM</th>
</tr>
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<tbody>
<tr>
<td>124.65</td>
<td>125.1 363.2 (NORTH/WEST)</td>
<td>121.25 327.0 (EAST/SOUTH)</td>
<td>122.975 (CTAF)</td>
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Visual Segment - Obstacles.

<table>
<thead>
<tr>
<th>CATEGORY</th>
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<th>B</th>
<th>C</th>
<th>D</th>
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</thead>
<tbody>
<tr>
<td>LNAV MDA</td>
<td>3140-1 1/4</td>
<td>3140-1 1/2</td>
<td>3140-3</td>
<td>NA</td>
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<tr>
<td>CIRCLING</td>
<td>1035 (1100-1 1/4)</td>
<td>1035 (1100-1 1/2)</td>
<td>1035 (1100-3)</td>
<td>NA</td>
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</table>

COLUMBIA, CALIFORNIA
Orig-C 30JAN20

38°02'N-120°25'W
TAKEOFF OBSTACLE NOTES
Rwy 17: Vegetation 31' from DER, 196' right of centerline, 2083' MSL.
  Tree 148' from DER, 387' right of centerline, 2108' MSL.
  Trees beginning 180' from DER, 287' left of centerline, up to 2126' MSL.
  Tree 262' from DER, 527' right of centerline, 2163' MSL.
  Trees beginning 353' from DER, 240' left of centerline, up to 2127' MSL.
  Trees, traverse way, pole, terrain, vegetation beginning 414' from DER, 46' right of centerline, up to 2188' MSL.
  Tree 456' from DER, 325' left of centerline, 2130' MSL.
  Trees beginning 492' from DER, 109' left of centerline, up to 2133' MSL.
  Trees beginning 725' from DER, 26' left of centerline, up to 2171' MSL.
  Trees beginning 1259' from DER, 57' left of centerline, up to 2181' MSL.
  Tree 1527' from DER, 892' right of centerline, 2205' MSL.
  Tree 1620' from DER, 859' right of centerline, 2220' MSL.
  Trees beginning 1665' from DER, 895' right of centerline, up to 2238' MSL.
  Tree 2151' from DER, 983' left of centerline, 2212' MSL.
  Trees, tower beginning 2195' from DER, 442' left of centerline, up to 2273' MSL.
  Tree 5936' from DER, 560' left of centerline, 2239' MSL.

NOTE: Chart not to scale.

DEPARTURE ROUTE DESCRIPTION
TAKEOFF RUNWAY 17: Climb on heading 174° to 2700, then climb direct to FICHU, then on track 174° to GONAQ, then on track 250° to HABXU, maintain 7000. Continue climb in hold in HABXU holding pattern to cross HABXU at or above MEA for route of flight.
Procedure NA for arrivals at JINGO on V23 northbound.

 Procedure NA for arrival on ILA VORTAC airway radials 251 CW 057.

**RNAV (GPS)-B**

**COLUSA COUNTY (O08)**

<table>
<thead>
<tr>
<th>CATEGORY</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
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</thead>
<tbody>
<tr>
<td><strong>CIRCLING</strong></td>
<td>600-1</td>
<td>551 (600-1)</td>
<td>620-1½</td>
<td>571 (600-1½)</td>
</tr>
</tbody>
</table>
RNAV (GPS) RWY 31
COLUSA COUNTY (O08)

For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -15°C (5°F) or above 54°C (130°F). Rwy 31 helicopter visibility reduction below 1 SM NA. Obtain local altimeter setting on CTAF; when not received, use Sacramento Intl altimeter setting: increase LPV DA to 382 feet, increase LNAV/VNAV DA to 350 feet and all visibilities 1/2 SM; increase all MDAs 100 feet and LNAV Cat C visibility 1/2 SM, Circling Cat C visibility 1/2 SM. Baro-VNAV NA with Sacramento Intl altimeter setting. Straight in Rwy 31 NA at night, Circling Rwy 31 NA at night.

OAKLAND CENTER
132.2 350.3

UNICOM
122.8 (CTAF)

Procedure NA for arrivals at ELEGY on V195 southbound.

Procedure NA for arrivals at GRIME on V23 southbound.

600 2600 VACIA

VGSI and RNAV glideslope not coincident (VGSI Angle 3.00/TCH 43).

KLORS, 30 NOV 2023 to 25 JAN 2024

RNAV (GPS) RWY 31
COLUSA COUNTY (O08)

Amdt 1A  03JAN19

COLUSA, CALIFORNIA

ELEV 49
TDZE 49

42

39°11'N-122°00'W
Obtain local altimeter setting on CTAF; when not received, use Sacramento Intl altimeter setting. Circling Rwy 31 NA at night.

MISSED APPROACH: Climb to 1400 then climbing left turn to 3500 direct ILA VORTAC.
RNAV (GPS) RWY 19R
BUCHANAN FLD (CCR)

ATIS 124.7  TRAVIS APP CON 119.9  322.325  CONCORD TOWER* 119.7 (CTAF) 257.8

GND CON 121.9  CLNC DEL 118.75  UNICOM 122.95

Procedure NA for arrivals at REJOY on V6 northeast bound.

Circling to Rwys 1L, 1R, 32R, 32L and 19L NA at night. Circling NA west of Rwys 1L and 19R. Rwy 19R helicopter visibility reduction below 3/4 SM NA. Inop table does not apply to LPV all Cats. For inop ALS, increase LNAV Cat C and D visibility to 3 SM.

MISSED APPROACH: (Do not exceed 190K until HASPS) Climb to 500 then climbing right turn to 3000 direct HASPS then on track 057° direct REJOY and hold.

For inop ALS, increase LNAV Cat C and D visibility to 3 SM.

RNAV APCH - GPS.

ELEV 26  TDZE 22

RNAV (GPS) RWY 19R
BUCHANAN FLD (CCR)

SW-2, 30 NOV 2023 to 25 JAN 2024
**LDA Rwy 19R**

**BUCHANAN FLD (CCR)**

---

**SCAGGS ISLAND**
112.1 SGD Chan 58

**CONCORD**
117.0 CCR Chan 117

**CONCORD TOWER**

**GND CON**
121.9

**CLNC DEL**
118.75

**UNICOM**
122.95

---

**LOC/DME I-CCR**

**APP CRS**
185°

**Rwy Idg**
4400

**TDZE**
22

**Apt Elev**
26

**MALS**

**MISSED APPROACH:** Climbing right turn to 3000 direct CCR VOR/DME then on CCR VOR/DME R-044 to REJOY/CCR 14.9 DME and hold.

*Missed approach requires minimum climb of 282 feet per NM to 1800.

---

**DME required.**

- Circling NA west of Rwy 1L-19R. Circling Rwy 1L, 1R, 19L, 32L, 32R NA at night. Rwy 19R helicopter visibility reduction below ½ SM NA.
- For inop ALS, increase S-19R Cats C/D visibility to 2 SM.
- *For inop ALS, increase S-19R Cats C/D visibility to 1½ SM.

---

**ATIS**
124.7

**TRAVIS APP CON**
119.9 322.325

**CONCORD TOWER**
119.7 (CTAF) 257.8

---

**CONCORD, CALIFORNIA**

**Amdt 9B 14JUL22**

**BUCHANAN FLD (CCR)**

**LDA RWY 19R**

---

**37°59'S-122°03'W**

---

**SW-2, 30 NOV 2023 to 25 JAN 2024**

---

**23334**
VOR RWY 19R
BUCHANAN FLD (CCR)

**Inop table does not apply.** Circling NA west of Rwy 11-19R. Circling Rwy 11, 1R, 19L, 32L, 32R NA at night. Rwy 19R helicopter visibility reduction below 3/4 SM NA. DME required.

**MISSING APPROACH:** Climbing right turn to 3000 direct CCR VOR/DME then on CCR VOR/DME R-044 to REJOY/CCR 14.9 DME and hold. Missed approach requires minimum climb of 320 feet per NM to 1700.

**ATIS**
124.7

**TRAVIS APP CON**
119.9 322.325

**CONCORD TOWER**
119.7 (CTAF) 257.8

**SCAGGS ISLAND**
112.1 SGD 112° Chan 58

**CONCORD, CALIFORNIA**

**S-19R**
640-1 618 (700-1) 640-1 618 (700-1)

**S-19R**
1020-1/4 998 (1000-1/4) 1020-1/2 998 (1000-1/2) 1020-3 998 (1000-3)

**CIRCLING**
1020-1/4 994 (1000-1/4) 1020-1/2 994 (1000-1/2) 1020-3 994 (1000-3) NA

**ELEV**
26

**TDZE**
22

**F3A**

37°59’N-122°03’W

**BUCHANAN FLD (CCR)**
CAUTION: BE ALERT TO RUNWAY CROSSING CLEARANCES. READBACK OF ALL RUNWAY HOLDING INSTRUCTIONS IS REQUIRED.
DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAYS 1L, 14L, 19R: Climbing left turn direct CCR VOR/DME, thence. . . .

TAKEOFF RUNWAY 32R: Climbing right turn direct CCR VOR/DME, thence. . . .

. . . . on (transition) or (assigned route).

CROIT TRANSITION (BCHN2.CROIT): From over CCR VOR/DME on CCR R-259 to CROIT INT.
PITTS TRANSITION (BCHN2.PITTS): From over CCR VOR/DME on CCR R-071 to PITTS INT.
REJOY TRANSITION (BCHN2.REJOY): From over CCR VOR/DME on CCR R-071 and SAC R-195 to REJOY INT.
SABLO TRANSITION (BCHN2.SABLO): From over CCR VOR/DME on CCR R-229 to SABLO INT.
SCAGGS ISLAND TRANSITION (BCHN2.SGD): From over CCR VOR/DME on CCR R-281 and SGD R-100 to SGD VORTAC.
Pilot Coffee Note:
DME required. S-ILS 12: 1/2 mile visibility authorized with use of FD or AP or HUD to DA. Inop table does not apply to S-ILS 12, except with use of FD or AP or HUD to DA. For inop MALSR, increase S-LOC 12 all Cats visibility 1/4 mile. When local altimeter setting not received, use Brookings altimeter setting and increase DA to 407 feet and all MDA 100 feet; increase S-LOC 12 Cat C/D, and Circling Cat D visibilities 1/4 mile. For inop MALSR, when using Brookings altimeter setting, increase S-ILS 12 all Cats visibility to 1 mile. Night Landing: Rwys 36 operational VGSI required, remain on or above VGSI glidepath until threshold. Circling to Rwy 18, 30 NA at night.

Asos 119.925
Seattle Center 124.85 306.3
Unicom 122.8 (CTAF)

Amdt 9 15OCT15

MISSED APPROACH: Climb to 700 then climbing right turn to 3000 on CEC VORTAC R-166 to CHIDE/CEC 11 DME and hold, continue climb-in-hold to 3000.

HIRL Rwy 12-30
REIL Rwys 18, 30 and 36
MIRL Rwy 18-36

AL-34 (FAA) 23138

CRESCENT CITY, CALIFORNIA

SW-2, 30 NOV 2023 to 25 JAN 2024

W-93 South

GS 3.00°
TCH 55

CATEGORY
A
B
C
D
S-ILS 12 310-3/4 250 (300-3/4)
S-LOC 12 380-3/4 320 (400-3/4)
CIRCLING 540-1 479 (500-1) 640-1/2 579 (600-1/2) 640-2 579 (600-2)

CRESCENT CITY, CALIFORNIA

Amdt 9 15OCT15

41°47'N 124°14'W
**RNAV (GPS) RWY 12**

**JACK MC NAMARA FLD (CEC)**

**ASOS**

<table>
<thead>
<tr>
<th>Airport</th>
<th>Temperature</th>
<th>Pressure</th>
</tr>
</thead>
<tbody>
<tr>
<td>CRESCENT CITY, CALIFORNIA</td>
<td>119.925</td>
<td>124.85</td>
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</table>

**UNICOM**

<table>
<thead>
<tr>
<th>Frequency</th>
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<tbody>
<tr>
<td>122.8 CTAF</td>
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**WAAS**

<table>
<thead>
<tr>
<th>CH 90310 W12A</th>
<th>Rwy Idg</th>
<th>TDZE</th>
<th>Ap Elev</th>
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<tr>
<td>5002</td>
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**Category**

<table>
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<tr>
<th>Category</th>
<th>LPV DA</th>
<th>LNAV/VNAV DA</th>
<th>LNAV MDA</th>
<th>CIRCLING</th>
</tr>
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<tbody>
<tr>
<td>A</td>
<td>310-3/4</td>
<td>387-3/4</td>
<td>460-3/4</td>
<td>540-1</td>
</tr>
<tr>
<td>B</td>
<td>250 (300-3/4)</td>
<td>327 (400-3/4)</td>
<td>400 (400-3/4)</td>
<td>479 (500-1)</td>
</tr>
<tr>
<td>C</td>
<td>640-1/2</td>
<td>579 (600-1/2)</td>
<td>579 (600-2)</td>
<td></td>
</tr>
<tr>
<td>D</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**MISSED APPROACH:**

Climb to 600 then climbing right turn to 3000 direct CHIDE and hold, continue climb-in-hold to 3000.

**ADVISORY:** Inop table does not apply to LPV all Cats. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below 0°C (32°F) or above 54°C (130°F). DME/DME RNP-0.3 NA. When local altimeter setting not received, use Brookings altimeter setting and increase LPV DA to 407 feet, LNAV/VNAV DA to 484 feet and all MDA 100 feet; increase LPV all Cats visibility to 3/4 mile, LNAV/VNAV all Cats visibility to 1 1/2 mile, LNAV Cat C/D to 1 mile, and Circling Cat C to 2 miles, Cat D to 2 1/2 miles. For inop MALSR, increase LNAV/VNAV all Cats visibility to 1 mile and LNAV Cat A/B visibility to 1 1/2 mile. For inop MALSR, when using Brookings altimeter setting, increase LPV all Cats visibility to 3/4 mile, LNAV/VNAV all Cats visibility to 1 1/2 mile, and LNAV Cat A/B to 1 mile, Cat C/D to 1 1/2 mile. VDP and Baro-VNAV NA when using Brookings altimeter setting.

Night landing: Rw 18, 30 NA. Night landing: Rw 36, operational VSI required, remain on or above VSI glidepath until threshold.

---

**CRESCENT CITY, CALIFORNIA**

Amdt 2 15OCT13

**JACK MC NAMARA FLD (CEC)**

**RNAV (GPS) RWY 12**

**41°47'N-124°14'W**
Baro-VNAV NA when using Brookings altimeter setting. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -15°C or above 54°C. When local altimeter setting not received, use Brookings altimeter setting and increase LPV DA to 406 and LNAV/VNAV DA to 505 and all MDA 100 feet; increase LPV all Cats and LNAV Cat C/D and Circling Cat D visibilities ½ SM, increase LNAV/VNAV all Cats visibility ½ SM, and Circling Cat C visibility ½ SM. RWy 36 helicopter visibility reduction below 1 SM NA. Straight-In RWy 36 at night, operational VSI required, remain on or above VSI glidepath until threshold. Circling RWy 18, 30 NA at night.

**MISSED APPROACH:** Climb to 1300 then climbing left turn to 2400 direct CIGCA and hold.
**VOR/DME RWY 12**

**JACK MC NAMARA FLD (CEC)**

**ASOS** 119.925  \( \text{SEATTLE CENTER} \) 124.85 306.3  \( \text{UNICOM} \) 122.8 (CTAF)

- **MALSR**  
  - Climbing right turn to 3000 on CEC VORTAC R-166 then right turn direct CEC VORTAC and hold.

- **MISSED APPROACH:**
  - Operational VGSI required, remain on or above VGSI glidepath until threshold.

- **Cats C/D visibility to 1 mile.**
- **Night Landing: Rwy 18, 30 NA.**
- **Night Landing: Rwy 36 NA**

**SW-2** 30 NOV 2023 to 25 JAN 2024

**CATEGORY** A  B  C  D

- **S-12** 480-3/4 420 (500-3/4)  480-1 420 (500-1)
- **CIRCLING** 540-1 479 (500-1)  540-1 579 (600-1/2)  579 (600-2)

**JACK MC NAMARA FLD (CEC)**

**VOR/DME RWY 12**

**CRESCENT CITY, CALIFORNIA**

**AL-34 (FAA)**

- **Chan 27**
- **Rwy Ldg** 5002
- **TDZE** 60
- **TAPUE** 61

**VOR** 109.0  \( \text{CEC} \)

**TDZE** 1081 330

**SW-2** 30 NOV 2023 to 25 JAN 2024
When local altimeter setting not received, use Brookings altimeter setting and increase all MDA 100 feet; increase S-36 Cat C/D and Circling Cat D visibilities ½ mile and Circling Cat C visibility ½ mile. Helicopter visibility reduction below 1 SM NA. Night landing: Rwy 36 operational VGSI required, remain on or above VGSI glidepath until threshold. Night landing: Rwy 18, 30 NA.

ASOS 119.925 | SEATTLE CENTER 124.85 306.3 | UNICOM 122.8 (CTAF)

MISSED APPROACH: Climb to 1000 then climbing left turn to 3000 direct CEC VORTAC and hold, continue climb-in-hold to 3000.

Remain within 10 NM
When local altimeter setting not received, use Brookings altimeter setting and increase all MDA 100 feet; increase S-12 Cat C/D visibility 3/4 mile, Circling Cat D visibility 1/4 mile and Circling Cat C visibility 1/2 mile. For inop MALSR increase S-12 Cat A/B visibility to 1 mile, and Cat C/D visibility to 1 1/4 mile. For inop MALSR when using Brookings altimeter setting, increase S-12 Cat A/B visibility to 1 mile, and Cat C/D visibility to 1 1/4 mile. Night Landing: Rwy 36 operational VGSI required, remain on or above VGSI glidepath until threshold. Night Landing: Rwy 18, 30 NA.

**CATEGORY**

<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
</tr>
</thead>
<tbody>
<tr>
<td>S-12</td>
<td>520-1/4</td>
<td>460 (500-3/4)</td>
<td>520-1</td>
</tr>
<tr>
<td>CIRCLING</td>
<td>540-1</td>
<td>479 (500-1)</td>
<td>640-1/2</td>
</tr>
</tbody>
</table>

Night Landing: Rwy 18, 30 NA.
DME/DME RNP - 0.3 NA. When local altimeter setting not received, use Travis AFB altimeter setting and increase all MDA 60 feet. Helicopter visibility reduction below 1 SM not authorized. Procedure NA at night.

MISSED APPROACH: Climbing right turn to 2000 direct CODRU and hold.

Procedure NA for arrivals at ILA VORTAC via V195 northbound.

Procedure NA for arrivals on SAC VORTAC airway radials 257 CW 329.

Procedure NA at night.

Helicopter visibility reduction below 1 SM not authorized.

Use Travis AFB altimeter setting and increase all MDA 60 feet.

DME/DME RNP - 0.3 NA.

LNAV MDA 520-1 456 (500-1) NA

CIRCLING 580-1 511 (600-1) NA

Category A: 1

Category B: 2

Category C: 3

Category D: 4

SW-2, 30 NOV 2023 to 25 JAN 2024
RNAV (GPS) RWY 16
YOLO COUNTY (DWA)

**AWOS-3P**

**125.775**

**TRAVIS APP CON**

**126.6 281.45**

**UNICOM**

**123.0 (CTAF)**

**MISSED APPROACH:** Climb to 3600 direct PROCAP and hold, continue climb-in-hold to 3600.

---

**RNAV (GPS) RWY 16**

**YOLO COUNTY (DWA)**

**AWOS-3P**

**125.775**

**TRAVIS APP CON**

**126.6 281.45**

**UNICOM**

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**YOLO COUNTY (DWA)**

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**126.6 281.45**

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**126.6 281.45**

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**YOLO COUNTY (DWA)**

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**126.6 281.45**

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**YOLO COUNTY (DWA)**

**AWOS-3P**

**125.775**

**TRAVIS APP CON**

**126.6 281.45**

**UNICOM**

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**YOLO COUNTY (DWA)**

**AWOS-3P**

**125.775**

**TRAVIS APP CON**

**126.6 281.45**

**UNICOM**

**123.0 (CTAF)**

**MISSED APPROACH:** Climb to 3600 direct PROCAP and hold, continue climb-in-hold to 3600.

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**YOLO COUNTY (DWA)**

**AWOS-3P**

**125.775**

**TRAVIS APP CON**

**126.6 281.45**

**UNICOM**

**123.0 (CTAF)**

**MISSED APPROACH:** Climb to 3600 direct PROCAP and hold, continue climb-in-hold to 3600.

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**YOLO COUNTY (DWA)**

**AWOS-3P**

**125.775**

**TRAVIS APP CON**

**126.6 281.45**

**UNICOM**

**123.0 (CTAF)**

**MISSED APPROACH:** Climb to 3600 direct PROCAP and hold, continue climb-in-hold to 3600.

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**RNAV (GPS) RWY 16**

**YOLO COUNTY (DWA)**

**AWOS-3P**

**125.775**

**TRAVIS APP CON**

**126.6 281.45**

**UNICOM**

**123.0 (CTAF)**

**MISSED APPROACH:** Climb to 3600 direct PROCAP and hold, continue climb-in-hold to 3600.
**RNAV (GPS) RWY 34**

**YOLO COUNTY**

**Davis/Woodland/Winters, California**

**Amdt 2C 15AUG19**

**RNAV (GPS) RWY 34**

**YOLO COUNTY (DWA)**

**AWOS-3P** 125.775

**TRAVIS APP CON** 126.6 281.45

**UNICOM** 123.0 (CTAF)

**FLIGHT DATA**

- **Category**: A
- **MIRL Rwy 16-34**: 344° to RW34
- **DAVIS/WOODLAND/WINTERS, CALIFORNIA**: 38°35'N-121°51'W
- **RNAV/RNAV visibility** all Cats ½ mile, and LNAV Cat C and D visibility ½ mile. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -15°C (5°F) or above 42°C (107°F). Baro-VNAV NA when using Travis AFB altimeter setting.
- **AWOS-3P SW-2, 30 Nov 2023 to 25 Jan 2024**: 57

**RNAV (GPS) RWY 34**

**YOLO COUNTY (DWA)**

**Davis/Woodland/Winters, California**

**Amdt 2C 15AUG19**

**RNAV (GPS) RWY 34**

**YOLO COUNTY (DWA)**

**AWOS-3P** 125.775

**TRAVIS APP CON** 126.6 281.45

**UNICOM** 123.0 (CTAF)

**FLIGHT DATA**

- **Category**: A
- **MIRL Rwy 16-34**: 344° to RW34
- **DAVIS/WOODLAND/WINTERS, CALIFORNIA**: 38°35'N-121°51'W
- **RNAV/RNAV visibility** all Cats ½ mile, and LNAV Cat C and D visibility ½ mile. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -15°C (5°F) or above 42°C (107°F). Baro-VNAV NA when using Travis AFB altimeter setting.
- **AWOS-3P SW-2, 30 Nov 2023 to 25 Jan 2024**: 57
**RNAV (GPS) RWY 12**

**EUREKA, CALIFORNIA**

**AL-5888 (FAA)**

**MURRAY FLD (EKA)**

---

**ACV ASOS**

118.525

**SEATTLE CENTER**

124.85 306.3

**UNICOM**

122.7 (CTAF)

---

**Procedure NA at night. Rwy 12 helicopter visibility reduction below 1 SM NA. Use Arcata altimeter setting, when not received use Crescent City altimeter setting and increase all MDA 100 feet and increase LNAV Cat C visibility 1/4 SM.**

---

**Final approach course offset 5.06°.**

---

**HOLD 8000 3000**

**MISA XUNXO 25 NM**

**7200**

**ELEV 11**

**TDZE 11**

---

**4 NM Holding Pattern**

**SCUPY**

**WAVLI**

**XUNXO**

---

**LNAV MDA**

<table>
<thead>
<tr>
<th>CATEGORY</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
</tr>
</thead>
<tbody>
<tr>
<td>760-1</td>
<td>749 (800-1)</td>
<td>749 (800-1 1/4)</td>
<td>749 (800-2 1/4)</td>
<td>NA</td>
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</tbody>
</table>

---

**RNAV (GPS) RWY 12**

**MURRAY FLD (EKA)**

---

**EUREKA, CALIFORNIA**

Orig-B 18JUL19

**40°48'N-124°07'W**

---

**SW-2, 30 NOV 2023 to 25 JAN 2024**
Procedure NA at night. Use Arcata altimeter setting when not received, use Crescent City altimeter setting and increase all MDA 100 feet. Circling Cat C NA when using Crescent City altimeter. Rwy 12, 30 helicopter visibility reduction below 1 SM NA.

**ACV ASOS**

<table>
<thead>
<tr>
<th>Category</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
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<tr>
<td>Circling</td>
<td>980-1/4</td>
<td>1220-1/2</td>
<td>1640-3</td>
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</table>

**SEATTLE CENTER**

**UNICOM**

122.7 (CTAF)

---

**RNAV (GPS)-B**

**MURRAY FLD (EKA)**

---

**EUREKA, CALIFORNIA**

Orig-B 15JUL21

---

**40°48'N-124°07'W**

---

**MURRAY FLD (EKA)**

---

**RNAV (GPS)-B**
When local altimeter setting not received, use Arcata altimeter setting. Circling NA for Cat D north of Rwy 11-29.

MISSED APPROACH: Climbing right turn to 3000 direct FOT VORTAC and hold.

AWOS 3 133.8  
SEATTLE CENTER 124.85 306.3  
CTAF 122.9  

GPS RWY 11
ROHNERVILLE (FOT)

ULINN

Procedure Turn NA

3000

JAYEF

RW11

5 NM  3000  5.1 NM

CATEGORY
S-11
CIRCLING

A  1140-1  1160-1½  1200-2½  1560-3
B  758 (800-1)  778 (800-1½)  818 (900-2½)  1178 (1200-3)
C  1360-1½  1720-3  1780-3
D  967 (1000-1½)  1327 (1400-3)  1387 (1400-3)

40°33'N 124°08'W

ROHNERVILLE (FOT)

GPS RWY 11

FORTUNA, CALIFORNIA

Orig-B 09SEP21

40°33'N-124°08'W
RNAV (GPS) RWY 12
FRESNO CHANDLER EXEC (FCH)

MISSED APPROACH: Climb to 800 then climbing right turn to 2000 direct FRAME and hold.

AWOS-3 135.225  FRESNO APP CON 119.0 323.25  CLNC DEL 119.0  UNICOM 123.0 (CTAF)

Circling Rwy 30 NA at night. Rwy 12 helicopter visibility reduction below ¾ SM NA.

For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -1°C or above 54°C.

Procedure NA for arrivals at NIVEE on V230 northeast bound.
RNAV (GPS) RWY 30
FRESNO CHANDLER EXEC (FCH)

Category A

LNAV MDA
800-1
520 (600-1)
800-1½
520 (600-1½)
NA

CIRCLING
960-1
680 (700-1)
960-2
680 (700-2)
NA

HOLD 6000
2000

RNAV (GPS) RWY 30 on V23 northbound.

NoPT for arrival at FRAME

MISSED APPROACH: Climb to 1000 then climbing left turn to
2000 direct FRAME and hold.

Straight-in RW 30 NA at night, Circling Rwy 30 NA at night.
Rwy 30 helicopter visibility reduction below 1 SM NA.
For inop ALS, increase S-ILS 29R Cat E visibility to RVR 5500. Hold in lieu of PT NA for Cat E aircraft.

MISSED APPROACH: Climb to 800 then climbing right turn to 5500 on heading 330° and FRA VORTAC R-222 to NIVEE INT/FRA 8 DME and hold, continue climb-in-hold to 5500.

Procedure NA for arrivals at FRA VORTAC on V230 northeast bound.

S-LOC 29R
700/24 367 (400-3/4)
700/35 367 (400-3/4)

SIDESTEP 29L
700/55 369 (400-1)
700-1/2 369 (400-1/2)
700-2 369 (400-2)

CIRCLING
820-1 484 (500-1)
920-1/2 584 (600-1/2)
920-2 584 (600-2)
1140-2 804 (900-2)

ZMIA 25 NM

I-FAT: 3.1
WILAB I-FAT: 3.1
I-FAT: 6.1

ILS Y or LOC Y RWY 29R
FRESNO YOSEMITE INTL (FAT)
ILS Y RWY 29R (SA CAT I)  
FRESNO YOSEMITE INTL (FAT)

### ATIS
121.35 273.6

### FRESNO APP CON
119.6 351.95

### FRESNO TOWER
118.2 251.1

### GND CON
121.7 348.6

### CLNC DEL
124.35 348.6

---

**ILS Y RWY 29R (SA CAT I)**  
FRESNO YOSEMITE INTL (FAT)

**ATIS**
121.35 273.6

**FRESNO APP CON**
119.6 351.95

**FRESNO TOWER**
118.2 251.1

**GND CON**
121.7 348.6

**CLNC DEL**
124.35 348.6

---

**LOC/DME** 1-FAT 111.3  
**APP CRS** 292°  
**Rwy Idg** TDZE 9227  
**Apt Elev** 336

**ALSF-2**

**MISSING APPROACH**: Climb to 800 then climbing right turn to 5500 on heading 330° and FRA VORTAC R-222 to NIVEE INT/FRA 8 DME and hold, continue climb-in-hold to 5500.

---

**REIL Rwy 11L and 11R**  
**HIRL Rwy 11L-29R**  
**MIRL Rwy 11R-29L**  
**TDZ/CL Rwy 29R**

**FRESNO, CALIFORNIA**  
Amdt 39A 24MAR22

**36°47'N-119°43'W**
**ILS Y RWY 29R (CAT II & III)**

**FRESNO YOSEMITE INTL (FAT)**

- **ATIS**: 121.35 273.6
- **FRESNO APP CON**: 119.6 351.95
- **FRESNO TOWER**: 118.2 251.1
- **GND CON**: 121.7 348.6
- **CLNC DEL**: 124.35 348.6

**Procedure NA for arrivals at FRA VORTAC on V230 northeast bound.**

**MISSED APPROACH**: Climb to 800 then climbing right turn to 5500 on heading 330° and FRA VORTAC R-222 to NIVEE INT/FRA 8 DME and hold, continue climb-in-hold to 5500.

**Category II & III ILS - Special Aircrew & Aircraft Certification Required**

**Terminal Area Reference Information**

- **LOC/DME**: FAT
- **APP CRS**: 111.3
- **TWR**: 9227
- **TDZE**: 333
- **Apt Elev**: 336

**Miscellaneous**

- **MSPEC, or LOA approval and use of autoland or HUD required**
- **Population**: 1800

**ATTENTION**

- **FRESNO**, **CALIFORNIA**
- **TDZ/CL Rwy 29R**
- **MIRL Rwy 11R-29L**
- **HIRL Rwy 11L-29R**
- **REIL Rwys 11L and 11R**
- **HIRL Rwy 11L-29R**
- **MIRL Rwy 11R-29L**
- **TDZ/CL Rwy 29R**

**Fresno Yosemite Int'l (FAT)**

**Amdt 39A 24MAR22**

**ILS and ILS glidepath not coincident (VGS Angle 3.00°/TCH 76)**

**One Minute Holding Pattern**

**Category II & III**

<table>
<thead>
<tr>
<th>CATEGORY</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
</tr>
</thead>
<tbody>
<tr>
<td>S-ILS 29R</td>
<td>CAT II RA 101/12 100 DA 433</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>S-ILS 29R</td>
<td>CAT III RVR 06</td>
<td></td>
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</tr>
</tbody>
</table>

**ILS Y RWY 29R (CAT II & III)**

**FRESNO, CALIFORNIA**

**SW-2, 30 NOV 2023 to 25 JAN 2024**
RNAV (GPS) RWY 11R
FRESNO YOSEMITE INTL (FAT)

Category A

- LPV DA: 584-3/4 251 (300-3/4)
- LNAV/VNAV DA: 620-7/8 287 (300-3/4)
- LNAV MDA: 700-1 367 (400-1)
- CIRCLING: 820-1 484 (500-1) 920-1 584 (600-1/2) 920-2 584 (600-2)

Procedure NA for arrivals at SIBOC on V459 southeast bound.

Missed approach: Climb to 2600 IPUJE and hold.
RNAV (GPS) RWY 29L
FRESNO YOSEMITE INTL (FAT)

ATIS 121.35  273.6
FRESNO APP CON 119.6  351.95
FRESNO TOWER 118.2  251.1
GND CON 121.7  348.6
CLNC DEL 124.35  348.6

For uncompensated Baro-VNAV systems, LNAV/VNAV NA below 0°C (32°F) or above 54°C (130°F). DME/DME RNP-0.3 NA. Helicopter visibility reduction below 1/4 SM NA.

MISSED APPROACH: Climb to 2000 direct WOSIM and hold.

Procedure NA for arrivals at FRA VORTAC on V230 northeast bound.

2000 WOSIM

* LNAV only. CUMUX 1.4 NM to RW29L
ZUDAB 1.800

CATEGORY A B C D
LPV DA 581-1/4 250 (300-3/4)
LNAV/ VNAV DA 667-1/8 336 (400-1/4)
LNAV MDA 760-1 429 (500-1)
820-1  484 (500-1)

CIRCLING 820-1  484 (500-1)

71 FRESNO, CALIFORNIA
Amndt 28  07DEC17

36°47'N-119°43'W

RNAV (GPS) RWY 29L
FRESNO YOSEMITE INTL (FAT)
For uncompensated Baro-VNAV systems, LNAV/VNAV NA below 0°C (32°F) or above 54°C (130°F). DME/DME RNP-0.3 NA.

Procedure NA for arrivals at FRA VORTAC on V230 northbound.

Procedure NA for arrivals at FRA VORTAC on V230 northbound.

RNAV (GPS) RWY 29R  
FRESNO YOSEMITE INTL (FAT)  

For uncompensated Baro-VNAV systems, LNAV/VNAV NA below 0°C (32°F) or above 54°C (130°F). DME/DME RNP-0.3 NA.

RNAV (GPS) RWY 29R  
FRESNO YOSEMITE INTL (FAT)  

For uncompensated Baro-VNAV systems, LNAV/VNAV NA below 0°C (32°F) or above 54°C (130°F). DME/DME RNP-0.3 NA.
FRESNO, CALIFORNIA
AL-162 [FAA]

LOC Y RWY 11L
FRESNO YOSEMITE INTL (FAT)

DME required.

ATIS 121.35 273.6
FRESNO APP CON 119.6 351.95
FRESNO TOWER 118.2 251.1
GND CON 121.7 348.6
CLNC DEL 124.35 348.6

MISSED APPROACH: Climb to 2000 then climbing right turn to 4900 on heading 300° and PXN VORTAC R-061 to BLEAR INT/PXN VORTAC 29.5 DME and hold.

REIL Rwys 11L and 11R
HIRL Rwy 11L-29R
MIRL Rwy 11R-29L
TDZ/CL Rwy 29R

FRESNO, CALIFORNIA
Amdt 3A 05DEC19

36°47'N-119°43'W
ANNUAL RATE OF CHANGE
JANUARY 2020

READBACK OF ALL RUNWAY HOLDING INSTRUCTIONS IS REQUIRED.

CAUTION: BE ALERT TO RUNWAY CROSSING CLEARANCES.
READBACK OF ALL RUNWAY HOLDING INSTRUCTIONS IS REQUIRED.

FRESNO, CALIFORNIA
AL-162 (FAA)
FORESTRY
U.S.

119°42'W
124.35  348.6
CLNC DEL

121.7  348.6
GND CON

118.2  251.1
FRESNO TOWER

121.35  273.6
ATIS

121.35  348.6
FRESNO YOSEMITE (FAT)

121.35  348.6
FRESNO YOSEMITE INTL (FAT)

121.35  348.6
119°43'W
119°44'W
36°46'N
36°47'N
119°42'W
119°43'W
DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAYS 11L/R: Climb heading 112° thence. . . .

TAKEOFF RUNWAYS 29L/R: Climb heading 292° thence. . . .

. . . . maintain ATC assigned altitude; expect clearance to filed altitude five minutes after departure.
DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAYS 11L/R: Climb on heading 112° to 2000', then climbing left turn to intercept FRA R-160 to FRA VORTAC, thence. . . .

TAKEOFF RUNWAYS 29L/R: Climb on heading 292° to 2000', then climbing right turn to intercept FRA R-205 to FRA VORTAC, thence. . . .

. . . .continue climb to 14300 on FRA VORTAC R-023 and MVA VORTAC R-204 to NIKOL INT and on OAL VORTAC R-250 to OAL VORTAC. Maintain ATC assigned altitude.

TAKEOFF MINIMUMS
Rwys 11L/R, 29L/R: Standard with minimum climb of 260' per NM to 10700.

NOTE: Chart not to scale.
DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAYS 11L/R: Climb heading 112°, thence...

TAKEOFF RUNWAYS 29L/R: Climb heading 292°, thence...

... maintain ATC assigned altitude; expect clearance to filed altitude five minutes after departure.

LOST COMMUNICATIONS: If not in contact with Fresno Departure Control within two minutes of takeoff, aircraft enroute to FRA, MVA, FMG and OAL proceed direct FRA VORTAC, cross FRA VORTAC at or above 9000, thence via assigned route to filed altitude.

NOTE: Chart not to scale.

NOTE: RADAR required.
RNAV (GPS) RWY 7
NEVADA COUNTY (GOO)

GRASS VALLEY, CALIFORNIA
Orig-D 22APR21

RNAV (GPS) RWY 7
NEVADA COUNTY (GOO)

Grass Valley, California
AL-6659 (FAA) 22195

RNAV (GPS) RWY 7
NEVADA COUNTY (GOO)

AWOS-3 121.325
NORCAL APP CON 125.4 259.1
UNICOM 122.725 (CTAF)

Procedure NA for arrivals at MRGGO on V332 northwest bound and V200 westbound.

MIRL Rwy 7-25

NW-2, 30 Nov 2023 to 25 Jan 2024

GRASS VALLEY, CALIFORNIA

39°13'N-121°00'W
Procedure NA at night; Rwy 9 helicopter visibility reduction below 1 SM NA. Use Columbia altimeter setting.

**MISSED APPROACH:** Climbing right turn to 7000 direct HOFED and hold, continue climb-in-hold to 7000.

- **O22 AWOS-3:** 124.65
- **OAKLAND CENTER:** 121.25 327.0
- **CTAF:** 122.9

---

**VGSIs and RNAV glidepath not coincident**
(VGSIs Angle 4.50/TCH 24).

- **UPCIM:** 4500
- **PIYHE:** 4500
- **JISAV:** 3159
- **HOFED:** 7000

---

**LNAV MDA**
- **GROVELAND, CALIFORNIA:** 4060-1¾ 1138 (1200-1¾)
- **MIRL Rwy 9-27:** NA

---

**GROVELAND, CALIFORNIA**
Orig-D 12AUG21
37°52'N-120°11'W
Rwy 12 helicopter visibility reduction below 3/4 SM NA. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -15° C or above 54° C.

<table>
<thead>
<tr>
<th>AWOS</th>
<th>NORCAL APP CON</th>
<th>UNICOM</th>
</tr>
</thead>
<tbody>
<tr>
<td>127.275</td>
<td>135.1 307.2</td>
<td>122.8 (CTAF)</td>
</tr>
</tbody>
</table>

**MISSING APPROACH:** Climb to 700 then climbing right turn to 4000 direct SEEMS and hold, continue climb-in-hold to 4000.

**LNAV/VNAV NA**

- **Baro-VNAV** systems, LNAV/VNAV NA below -15° C or above 54° C.
- For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -15° C or above 54° C.

**RNAV (GPS) RWY 12**

**HALF MOON BAY (HAF')**

**RNAV (GPS) RWY 12**

**HALF MOON BAY (HAF')**

**HALF MOON BAY, CALIFORNIA**

**Amdt 1A 18JUL19**
**RNAV (GPS) RWY 30**

**HALF MOON BAY (HAF)**

**AWOS-3** 127.275

**NORCAL APP CON** 135.1 307.2

**UNICOM** 122.8 (CTAF)

**MISSED APPROACH:** Climb to 4000 direct LAYKI and on track 267° to SEEMS and hold, continue climb-in-hold to 4000.

---

**RNP APCH:**

**WAAS CH 50302**

**APP CRS 302°**

**Rwy Ldg 4238**

**TDZE 54**

**Apt Elev 66**

**ELEV 66**

**TDZE 54**
TAKEOFF MINIMUMS
Rwy 30: Standard with minimum climb of 500’ per NM to 566.

TAKEOFF OBSTACLE NOTES
Rwy 30: Trees beginning 1248’ from DER, 83’ left of centerline, up to 160’ MSL.
Tree 1263’ from DER, 628’ right of centerline, 156’ MSL.
Trees and poles beginning 1490’ from DER, 102’ right of centerline, up to 160’ MSL.
Trees beginning 1921’ from DER, 161’ left of centerline, up to 172’ MSL.
Trees beginning 2234’ from DER, 23’ left of centerline, up to 192’ MSL.

DEPARTURE ROUTE DESCRIPTION
TAKEOFF RUNWAY 30: Climb on heading 302° to 566, then climbing left turn direct SEEEMS, continue climb in SEEEMS holding pattern to at/above 3500 before proceeding on course.
**RNAV (GPS) RWY 32**

**HANFORD MUNI (HJO)**

**ASOS**
134.75

**FRESNO APP CON**
123.9

**CLNC DEL**
123.9

**UNICOM**
122.8 (CTAF)

---

**Rwy 32 helicopter visibility reduction below 3/4 SM NA. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -3°C or above 54°C.**

**MISSED APPROACH:** Climb to 700 then climbing right turn to 2000 direct OYUGO and hold, continue climb-in-hold to 2000.

---

**ELEV**
240

**TDZE**
238

---

**CATEGORY**

<table>
<thead>
<tr>
<th></th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
</tr>
</thead>
<tbody>
<tr>
<td>LPV DA</td>
<td>488-3/4</td>
<td>250 (300-3/4)</td>
<td>NA</td>
<td></td>
</tr>
<tr>
<td>LNAV/ VNAV DA</td>
<td>488-3/4</td>
<td>250 (300-3/4)</td>
<td>NA</td>
<td></td>
</tr>
<tr>
<td>LNAV MDA</td>
<td>580-1</td>
<td>342 (400-1)</td>
<td>580-1/2</td>
<td>342 (400-1/2)</td>
</tr>
</tbody>
</table>
MISSED APPROACH: Climb to 3100 direct MAXKA and on track 122° to PIXEY and hold.

ASOS 134.75
FRESNO APP CON 123.9
CLNC DEL 123.9
UNICOM 122.8 (CTAF) 

HANFORD, CALIFORNIA
AL-5736 (FAA)

RNAV (GPS)-B
HANFORD MUNI (HJO)

HANFORD, CALIFORNIA
Amdt 1 15AUG19

36°19'N-119°38'W
RNAV (GPS) RWY 28L
HAYWARD EXEC (HWD)

Baro-VNAV NA. When local altimeter setting not received, use Oakland altimeter setting:
increase all DA/MDA 20 feet, and LNAV/VNAV all Cats and LNAV Cat C/D visibility ½ SM and Circling Cat D visibility ¼ SM. Circling NA north of Rwy 10L-28R. Rwy 28L: Helicopter visibility reduction below ½ SM NA.

MISSING APCH FIX

Procedure NA for arrivals at SUNOL on V301 northwest bound.

Procedure NA for arrivals at SJC VOR/DME on T259.

Procedure NA for arrivals at VINO on V107 southeast bound.

RNAV (GPS) RWY 28L
HAYWARD EXEC (HWD)

SW-2, 30 NOV 2023 to 25 JAN 2024

HAYWARD, CALIFORNIA
(Amdt 1D, 20 MAY 2021)
RNAV (GPS) RWY 31
HOLLISTER MUNI (CVH)

AWOS-3
120.425

NORCAL APP CON
124.525 348.675

UNICOM
123.0 (CTAF)

Circling to Rwy 6 NA at night. Rwy 31 helicopter visibility reduction below ½ SM NA. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -15°C or above 54°C.

MISSING APCH FIX

SANTY
7 NM

MISSED APPROACH: Climb to 1200, then climbing left turn to 7000 direct SANTY and hold, continue climb-in-hold to 7000.

ELEV 231
TDZE 231
When local altimeter setting not received, use Sacramento Exec altimeter setting.

MISSED APPROACH: Climb to 4500 on 006° course to VOHBO and hold.

AWOS-3 121.125

NORCAL APP CON 125.1 363.2

UNICOM 123.075 (CTAF)

---

**V**

**UNICOM**

**AWOS-3** 121.125

**NORCAL APP CON** 125.1 363.2

**UNICOM** 123.075 (CTAF)

---

**GPS RWY 1**

**WESTOVER FLD AMADOR COUNTY (JAQ)**

---

**ELEV 1694**

**TDZE 1690**

---

**Category**

**A**

**B**

**C**

**D**

**S-1**

2060-1 370 (400-1)

NA

**SACRAMENTO EXEC ALTIMETER SETTING MINIMUMS**

**S-1**

2380-1 690 (700-1)

NA
If local altimeter not received, use Sacramento Exec altimeter setting. Circling Rwy 19 NA at night.

**MISSING APPROACH:** Climbing left turn to 3000 via LIN R-012 to LIN VOR/DME.

- **AWOS-3** 121.125
- **NORCAL APP CON** 125.1 363.2
- **UNICOM** 123.075 (CTAF)

Diagram:
- **MIA LIN 25 NM**
- **VOR/DME RWY 1**
- **AIRPORT VOR/DME**
- **UNICOM**
- **SW-2, 30 NOV 2023 to 25 JAN 2024**
- **CIRCLING**

**SACRAMENTO EXEC ALTIMETER SETTING MINIMUMS**

- **S-1**
  - CATEGORY A: 2080-1
  - CATEGORY B: 390 (400-1)
  - CATEGORY D: NA
- **CIRCLING**
  - CATEGORY A: 2200-1
  - CATEGORY B: 506 (600-1)
  - CATEGORY D: NA
- **SACRAMENTO EXEC ALTIMETER SETTING MINIMUMS**

**VOR/DME RWY 1**

- **ELEV 1694**
- **TDZE 1690**

**JACKSON, CALIFORNIA**

Amdt 1D 15JUL21

38°23'N-120°48'W
Circling NA south of Rwy 10-28. DME/DME RNP 0.3 NA.
Procedure NA at night. When local altimeter setting not received, use Ukiah altimeter setting and increase all MDA 560 feet.

MISSED APPROACH:
Climbing left turn to 8000 direct WEPLO and hold.

Procedure NA for arrivals on ENI VORTAC airway radial 320 CW 073.

Use Ukiah altimeter setting and increase all MDA 560 feet.
Procedure NA at night. When local altimeter setting not received, Circling NA south of Rwy 10-28. DME/DME RNP 0.3 NA.

Circling NA south of Rwy 10-28. DME/DME RNP 0.3 NA.
Procedure NA at night. When local altimeter setting not received, use Ukiah altimeter setting and increase all MDA 560 feet.

MISSED APPROACH:
Climbing left turn to 8000 direct WEPLO and hold.
DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAY 10: Climb heading 103° to 1880, then climb on 033° course to CEVLA, then via 304° track to HEBLU, then via 238° track to ENI VORTAC, thence . . . .

. . . . via assigned route, expect clearance to filed altitude 10 minutes after departure.

NOTE: RNAV 1.

NOTE: Chart not to scale.

TAKEOFF MINIMUMS
Rwy 10: Standard with minimum climb of 496' per NM to 4500.
Rwy 28: NA- Rapidly rising terrain.

NOTE: GPS required.

NOTE: Takeoff Rwy 10: Do not exceed 175K until passing HEBLU.
Simultaneous approaches authorized.
LNAV procedure NA during simultaneous operations.
Use of FD or AP providing RNAV track guidance required during simultaneous operations.

For uncompensated Baro-VNAV systems, LNAV/VNAV procedure NA below -15° C(5° F) and above 54° C(129° F).
Simultaneous approaches authorized.
LNAV procedure NA during Simultaneous operations.
Use of FD or AP providing RNAV track guidance required during simultaneous operations.

For uncompensated Baro-VNAV systems, LNAV/VNAV procedure NA below -15° C (5° F) and above 54° C (129° F).
RNAV (GPS) RWY 32L

**ATIS**
121.575 327.15

**APP CON**
124.1 269.025 (N)
118.15 269.025 (S)

**TOWER**
128.3 340.2

**GND CON**
121.65 305.2

**CLNC DEL**
124.1 371.9

**ASR/PAR**

For uncompensated Baro-VNAV systems, LNAV/VNAV procedure NA below -15° C (-5° F) and above 54° C (129° F).

Simultaneous approaches authorized. LNAV procedure NA during Simultaneous operations. Use of FD or AP providing RNAV track guidance required during simultaneous operations.

**EMERG SAFE ALT 100 NM 16,500**

**ELEV** 228

**TDZE** 227

**CATEGORY**

<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
</tr>
</thead>
<tbody>
<tr>
<td>LPV DA</td>
<td>427-1/2</td>
<td>200</td>
<td>(200-1/2)</td>
</tr>
<tr>
<td>LNAV/ VNAV DA **</td>
<td>477-1/2</td>
<td>250</td>
<td>(300-1/2)</td>
</tr>
<tr>
<td>LNAV MDA **</td>
<td>660-1/2</td>
<td>433 (500-1/2)</td>
<td>660-3/4</td>
</tr>
<tr>
<td>CIRCLING</td>
<td>680-1</td>
<td>452 (500-1)</td>
<td>700-1/2</td>
</tr>
</tbody>
</table>

**CDFA**

| 322° to RW32L | 322° to RW32L |

**MCA**

1800

**HOLD**

**1800**

**HOL**

**1800**

**323°**

**4000**

**4000**

**323°**

**1800**

**1800**

**1800**

**4 NM Holding Pattern**

**GP 3.00**

**TCH 48**
**RNAV (GPS) RWY 32R**

**ATIS**

| 121.575 | 327.15 |

**APP CON**

| 124.1 | 269.025 (N) |
| 118.15 | 269.025 (S) |

**TOWER**

| 128.3 | 360.2 |

**GND CON**

| 121.65 | 305.2 |

**CLNC DEL**

| 124.1 | 371.9 |

**ASR/PAR**

| 300 |

---

**Simultaneous approaches authorized.**

**LNAV procedure NA during Simultaneous operations.**

**Use of FD or AP providing RNAV track guidance required during simultaneous operations.**

**For uncompensated Baro-VNAV systems, LNAV/VNAV procedure NA below -15°C (5°F) and above 54°C (129°F).**

---

**EMER SAFE ALT 100 NM 16,500**

**ELEV 228**

**TDZE 221**

---

**CATEGORY**

<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
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<tbody>
<tr>
<td>LPV DA</td>
<td>421-⅜</td>
<td>200</td>
<td>(200-¼)</td>
</tr>
<tr>
<td>LNAV/ VNAV DA</td>
<td>511-⅔</td>
<td>522-⅔</td>
<td>532-⅔</td>
</tr>
<tr>
<td>LNAV MDA</td>
<td>290 (300-¾)</td>
<td>301 (300-¾)</td>
<td>309 (400-¾)</td>
</tr>
<tr>
<td>LNAV MDA</td>
<td>660-1</td>
<td>439 (500-1)</td>
<td>660-1¼</td>
</tr>
<tr>
<td>CIRCLING</td>
<td>680-1</td>
<td>452 (500-1)</td>
<td>700-1½</td>
</tr>
</tbody>
</table>
### DEPARTURE ROUTE DESCRIPTION

**TAKE-OFF RUNWAYS 32L/32R:** Climb to 2000 via heading 322° then radar vectors to join assigned transition or route.

**CETTA TRANSITION (NLC1-CETTA):** From over EOCIN direct CETTA thence as filed. Cross CETTA at or above 15,000.

**COALDALE TRANSITION (NLC1-OAL):** From over EOCIN direct CETTA, direct CANDA, direct COALDALE VORTAC. Cross CETTA at or above 15,000.

**WADDE TRANSITION (NLC1-WADDE):** From over WADDE thence as filed. Cross WADDE at or above 11,000.

**LOST COMMUNICATIONS:** If no transmissions are received within 8 DME of NLC TACAN, fly departure heading to intercept NLC 10 DME arc, arc to respective departure radial then via departure radial to assigned departure fix. Then via assigned route. Once established on departure radial climb to filed altitude.

---

**Radar Required**

EMERG SAFE ALT 100 NM 16,500

**NOTE:** Chart not to scale
REEVES-FOUR DEPARTURE (REVES4 • NLC)

ATIS 121.575 327.15
CLNC DEL 124.1 327.9
GND CON 121.65 305.2
LEMOORE TOWER ✭ 128.3 340.2
(Way 14L, 32L)
128.3 360.2
(Way 14R, 33R)
LEMOORE DEP CON 124.1 318.8 (N)
118.15 318.8 (S)

---

EMERG SAFE ALT 100 NM 16,500
NOTE: Chart not to scale

▼

DEPARTURE ROUTE DESCRIPTION

TAKE-OFF RUNWAY 14L/14R: Climb to 2000 via heading 142° then radar vectors to join assigned transition or route.

CARRL TRANSITION (REVES4, CARRL): From over CARRL thence as filed. Cross CARRL at or above 11,000.

COALDALE TRANSITION (REVES4, OAL): From over BUMPI direct OMEGA, direct CANDA, direct COALDALE VORTAC. Cross OMEGA at or above 15,000.

OMEGA TRANSITION (REVES4, OMEGA): From over BUMPI direct OMEGA thence as filed.

LOST COMMUNICATIONS: If no transmissions are received within 8 DME of NLC TACAN, fly departure heading to intercept NLC 10 DME arc, arc to respective departure radial then via departure radial to assigned departure fix. Then via assigned route. Once established on departure radial climb to filed altitude.

REEVES-FOUR DEPARTURE (REVES4 • NLC)
Ampl 2 17JUN21

---

<table>
<thead>
<tr>
<th>Rwy</th>
<th>Knots</th>
<th>60</th>
<th>120</th>
<th>180</th>
<th>240</th>
<th>300</th>
<th>360</th>
</tr>
</thead>
<tbody>
<tr>
<td>↑ ✭ 14L/R V/V [Stm]</td>
<td>320</td>
<td>640</td>
<td>960</td>
<td>1280</td>
<td>1600</td>
<td>1920</td>
<td></td>
</tr>
<tr>
<td>↑ ✭ 14L/R V/V [Stm]</td>
<td>360</td>
<td>728</td>
<td>1092</td>
<td>1456</td>
<td>1820</td>
<td>2184</td>
<td></td>
</tr>
</tbody>
</table>

COALDALE
117° OAL :—:—:
Chan 124

LEMOORE
Chan 80 NLC

* Local military use only for Special Use Airspace entry.
RNAV (GPS) RWY 15

LINCOLN RGNL/KARL HARDER FLD (LHM)

For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -15°C or above 48°C. VDP and Baro-VNAV NA when using Beale AFB altimeter setting. When local altimeter setting not received, use Beale AFB altimeter setting and increase LPV DA to 361 feet; increase LNAV/VNAV DA to 492 feet; increase all MDAs 40 feet and increase Circling Cat D visibility 1/4 SM. For inop ALS when using Beale AFB altimeter setting, increase LNAV Cat D visibility to 1/4.

Procedure NA for arrival at YUBBA on V200 southwest bound and V23 northwest bound.

Missed Approach: Climb to 2500 direct MUCGU and on track 131° to ROZZY and hold.

ELEV 121
TDZE 121

LNAV/VNAV NA below -15°C or above 48°C. VDP and Baro-VNAV NA when using Beale AFB altimeter setting. When local altimeter setting not received, use Beale AFB altimeter setting and increase LPV DA to 361 feet; increase LNAV/VNAV DA to 492 feet; increase all MDAs 40 feet and increase Circling Cat D visibility 1/4 SM. For inop ALS when using Beale AFB altimeter setting, increase LNAV Cat D visibility to 1/4.

Procedure NA for arrival at YUBBA on V200 southwest bound and V23 northwest bound.

Missed Approach: Climb to 2500 direct MUCGU and on track 131° to ROZZY and hold.
**RNAV (GPS) RWY 33**

**LINCOLN RGNL/KARL HARDER FLD (LHM)**

**AWOS-3**
- 124.25

**NORCAL APP CON**
- 125.4 259.1

**UNICOM**
- 123.0 (CTAF)

**MISSED APPROACH:** Climb to 2000 direct WILLD and on track 300° to MYV VOR/DME and hold.

**Rwy 33** helicoper visibility reduction below 3/4 SM NA. When local altimeter setting not received, use Beale AFB altimeter setting and increase all MDA 40 feet, and increase LNAV Cat C/D visibility ½ mile. VDP NA with Beale AFB altimeter setting.

**Procedure NA for arrival at GRIME on V23 northwest bound.**

**Procedure NA for arrival at FOLLY on V6 northeast bound.**

**Category**
- A
- B
- C
- D

**LNAV MDA**
- 480-1
- 359 (400-1)

**LINE, CALIFORNIA**
Orig-B 07NOV19

**Lincoln, California**
AL-5850 (FAA)

**21140**

**2678**
Procedure NA for arrivals at ENI VORTAC on airway radials 305 CW 330.

AIRPORTS

AWOS-AV 121.125
OAKLAND CENTER 132.2 350.3

AUNICOM 122.7 (CTAF)

Circling NA northeast of Rwy 11-29.
Procedure NA at night.
Rwy 29 helicopter visibility reduction below 1 SM NA.

MISSED APPROACH: Climbing left turn to 6000 direct
AMAKR and hold, continue climb-in-hold to 6000.

Center APT

W29A 574

LITTLE RIVER, CALIFORNIA

AL-10390 (FAA)

RW29

RNAV (GPS) RWY 29
LITTLE RIVER (LLR)

RNAV (GPS) RWY 29
LITTLE RIVER (LLR)

RNAV (GPS) RWY 29
LITTLE RIVER (LLR)

RNAV (GPS) RWY 29
LITTLE RIVER (LLR)

RNAV (GPS) RWY 29
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RNAV (GPS) RWY 29
LITTLE RIVER (LLR)

RNAV (GPS) RWY 29
LITTLE RIVER (LLR)
TAKEOFF OBSTACLE NOTES
Rwy 11: Trees beginning 273’ from DER, left and right of centerline up 200’ AGL/799’ MSL.
Vehicles on road 383’ from DER, 2’ right of centerline, up to 15’ AGL/587’ MSL.
Rwy 29: Multiple trees beginning 95’ from DER, 18’ left and right of centerline up to 200’ AGL/719’ MSL.

TAKEOFF MINIMUMS
Rwy 11: 300-1 with minimum climb of 330’ per NM climb to 2100’.
Rwy 29: 300-1.

NOTE: Chart not to scale.
Amdt 9A  10SEP20

**ILS RWY 25R**

**LIVERMORE MUNI (LVK)**

**LOC/DME** I-LVK

**110.5**

**Chan 42**

**APP CRS**

**255°**

**Rwy Idg**

**5253**

**TDZE**

**400**

**Apt Elev**

**400**

**DME required.**

**ATIS**

**119.65**

**NORCAL APP CON**

**123.85 278.3**

**LIVERMORE TOWER**

**118.1 (CTAF)**

**GND CON**

**239.25**

**UNICOM**

**122.95**

**MISSED APPROACH:** Climb to 1200 then climbing right turn to 5000 on heading 020° and OAK VOR/DME R-060 to ALTAM/OAK VOR/DME 23.3 DME and hold, continue climb-in-hold to 5000.

*Missed approach requires a minimum climb of 358 feet per NM to 3600, if unable to meet climb gradient, see LOC RWY 25R.

**ELEV**

**400**

**TDZE**

**400**

**procedure NA for arrival on LIN VOR/DME airway radials 229 CW 251.**
RNAV (GPS) RWY 25R
LIVERMORE MUNI (LVK)
Circling to Rwy 25L NA at night. Inop table does not apply to S-25R Cats C/D. Circling NA north of Rwy 7L-25R. DME required.

MISSING APPROACH: Climb to 2000 then climbing right turn to 5000 on heading 020° and OAK VOR/DME R-060 to ALTAM/OAK VOR/DME 23.3 DME and hold, continue climb-in-hold to 5000.*Missed approach requires minimum climb of 235 feet per NM to 3600.

Procedure NA for arrivals at LIN VOR/DME on V108 eastbound.

CIRCLING NA north of Rwy 7L-25R.

Inop table does not apply to S-25R Cats C/D.

Circling to Rwy 25L NA at night.
CAUTION: BE ALERT TO RUNWAY CROSSING CLEARANCES.
READBACK OF ALL RUNWAY HOLDING INSTRUCTIONS IS REQUIRED.
DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAYS 7L/R: Climb heading 075° to 1000, then climbing left turn heading 340° and on SAC VORTAC R-177 to ALTAM, thence . . . .

TAKEOFF RUNWAYS 25L/R: Climb heading 255° to 1200, then climbing right turn heading 020° and on OAK VOR/DME R-060 to ALTAM, thence . . . .

VCOA ALL RUNWAYS: Obtain ATC approval for VCOA when requesting IFR clearance. Climb in visual conditions to cross Livermore Airport at or above 3100, thence . . . .

. . . . continue climb on course to the MEA/MCA for route of flight.

TAKEOFF MINIMUMS
Rwys 7L/R: Standard with minimum climb of 375’ per NM to 3500 or 2900-3 for VCOA.
Rwys 25L/R: Standard with minimum climb of 295’ per NM to 3400 or 2900-3 for VCOA.

NOTE: Chart not to scale.
TAKEOFF OBSTACLE NOTES

Rwy 7L: Sign 20’ from DER, 475’ right of centerline, up to 3’ AGL/403’ MSL.
Bush 48’ from DER, 501’ left of centerline, 403’ MSL.
Poles, buildings, electrical system, antenna on building, tree, and tanks beginning 447’ from DER, 567’ right of centerline, up to 42’ AGL/445’ MSL.
Hangar and building beginning 459’ from DER, 558’ left of centerline, up to 414’ MSL.
Tree 708’ from DER, 603’ left of centerline, 421’ MSL.
Trees beginning 711’ from DER, 567’ left of centerline, up to 439’ MSL.
Trees beginning 1623’ from DER, 690’ left of centerline, up to 450’ MSL.
Tree 1626’ from DER, 796’ left of centerline, 455’ MSL.
Trees beginning 1732’ from DER, 528’ right of centerline, up to 461’ MSL.
Tree 1767’ from DER, 816’ left of centerline, 463’ MSL.
Tree 2217’ from DER, 1040’ right of centerline, 465’ MSL.
Tree 2368’ from DER, 1027’ right of centerline, 466’ MSL.
Tree 3922’ from DER, 1480’ left of centerline, 528’ MSL.

Rwy 7R: Building 3’ from DER, 287’ right of centerline, 411’ MSL.
Terrain 3’ from DER, 9’ left of centerline, 396’ MSL.
Buildings beginning 29’ from DER, 287’ right of centerline, up to 412’ MSL.
Buildings and hangar beginning 137’ from DER, 287’ right of centerline, up to 413’ MSL.
Tower and navaid beginning 308’ from DER, 249’ left of centerline, up to 39’ AGL/432’ MSL.
Building 435’ from DER, 287’ right of centerline, 414’ MSL.
Buildings beginning 463’ from DER, 287’ right of centerline, up to 416’ MSL.
Building 668’ from DER, 287’ right of centerline, 417’ MSL.
Building 701’ from DER, 403’ right of centerline, 418’ MSL.
Buildings beginning 799’ from DER, 287’ right of centerline, up to 436’ MSL.
Tree 1146’ from DER, 399’ right of centerline, 438’ MSL.
Buildings and trees beginning 1169’ from DER, 344’ right of centerline, up to 445’ MSL.
Hangar and pole beginning 1402’ from DER, 66’ right of centerline, up to 446’ MSL.
Trees beginning 2349’ from DER, 672’ right of centerline, up to 467’ MSL.
Tree 3980’ from DER, 1563’ right of centerline, 497’ MSL.

Rwy 25L: Tree 388’ from DER, 532’ left of centerline, 442’ MSL.

Rwy 25R: Sign 34’ from DER, 203’ right of centerline, 5’ AGL/376’ MSL.
Terrain beginning 43’ from DER, 486’ right of centerline, up to 378’ MSL.
Fences beginning 169’ from DER, 413’ right of centerline, up to 379’ MSL.
Tree 305’ from DER, 298’ right of centerline, 385’ MSL.
Tree 369’ from DER, 580’ right of centerline, 411’ MSL.
Tree 436’ from DER, 50’ right of centerline, 417’ MSL.
Trees beginning 477’ from DER, 426’ right of centerline, up to 424’ MSL.
Pole 662’ from DER, 411’ left of centerline, 33’ AGL/400’ MSL.
Trees beginning 805’ from DER, 248’ right of centerline, up to 427’ MSL.
Trees beginning 1405’ from DER, 747’ right of centerline, up to 432’ MSL.
Tree 1426’ from DER, 186’ left of centerline, 411’ MSL.
Tree 1596’ from DER, 244’ left of centerline, 413’ MSL.
Tree 1719’ from DER, 127’ left of centerline, 421’ MSL.
Trees beginning 1946’ from DER, 50’ right of centerline, up to 436’ MSL.
NoPT for arrival on LIN VOR/DME airway radials 124 CW 158.
RNAV (GPS) RWY 14
LOS BANOS MUNI (LSN)

MISSED APPROACH: Climb to 6500 direct GEZJO and on track 154° to PXN VORTAC and hold, continue climb-in-hold to 6500.

**Rwy 14**
- Helicopter visibility reduction below 3/4 SM NA.
- For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -15°C or above 54°C.
- When local altimeter setting not received, use Merced Yosemite Rgnl altimeter setting and increase all DA/MDA 60 feet, and all visibility 1/4 SM.

**AWOS-3**
- 118.675

**NORCAL APP CON**
- 120.95
- 269.45

**UNICOM**
- 122.8

- **RNAV (GPS) RWY 14**
  - 1.2 NM to COGIS
  - 1.6 NM to RW14

**EGSOW (FAF)**
- 3300
- 156° (12)

**Patyy (IF)**
- 1800
- 137°

**FOSDI (IAF)**
- 3300
- 1800

**GEZJO**
- 6500
- 154°

**PXN**
- 360°

**PANOCH**
- 156°

**MISSED APCH FIX**
- GEZJO
- PXN

**Procedure NA for arrivals at PATYY on V111 northbound and V113 northwest bound.**

**Instruments**
- LPV DA
- LNAV/VNAV DA
- LNAV MDA

**Category**
- A
- B
- C
- D

**LPV DA**
- 455-1/4
- 334 (400-1 1/4)

**LNAV/VNAV DA**
- 519-1/2
- 398 (400-1 1/2)

**LNAV MDA**
- 520-1
- 399 (400-1)
- 520-1 1/8
- 399 (400-1 1/8)
- 520-1 1/4
- 399 (400-1 1/4)

**Los Banos, California**
- Orig-D 18JUL19
- 37°04'N-120°52'SW

**Los Banos Muni (LSN)**
- SW-2, 30 Nov 2023 to 25 Jan 2024
- SW-2, 30 Nov 2023 to 25 Jan 2024
- SW-2, 30 Nov 2023 to 25 Jan 2024
RNAV (GPS) RWY 32
LOS BANOS MUNI (LSN)

Amdt 1A 18JUL19

**Category**: B

**RNAV (GPS) RWY 32**

**AWOS**: 3

**118.675**

**NORCAL APP CON**: 120.95 269.45

**UNICOM**: 122.8 (CTAF)

---

**MISSING APCH FIX**

**VOLTA**

**1722**

**1880**

**907±**

**810±**

**MISSED APPROACH**: Climb to 3000 direct COGIS and on track 323° to VOLTA and hold.

**ELEV**: 121

**TDZE**: 121

**MIRL Rwy 14-32**

**REIL Rwy 14 and 32**

**Los Banos, California**

**Amdt 1A 18JUL19**

**37°04'N-120°52'W**

**Los Banos, California**

**AL-5819 (FAA)**

**22363**
RNP APCH - GPS.

For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -2°C or above 54°C.

MISSED APPROACH: Climb to 800 then climbing right turn to 2000 direct KITBY and hold.

MISSED APCH FIX

VGSI and RNAV glidepath not coincident (VGSI Angle 3.00/TCH 34).

Procedure NA for arrivals at BLEAR on V230 northeast bound.

MADERA, CALIFORNIA

WAAS

CH 62909
W12A

APP CRS 122°

Rwy Idg 5545

TDZE 253

Apt Elev 255

ASOS 134.725

FRESNO APP CON 119.45

CLNC DEL 119.45

UNICOM 122.8 (CTAF)

ELEV 255

TDZE 253

MADERA, CALIFORNIA

Amdt 2B 11AUG22

36°59'N-120°07'W

W12A

RNAV (GPS) RWY 12

MADERA MUNI (MAE)

Apt Elev 255

TDZE 253

Rwy 12

MISSED APPROACH: Climb to 800 then climbing right turn to 2000 direct KITBY and hold.

VGSI and RNAV glidepath not coincident (VGSI Angle 3.00/TCH 34).

Procedure NA for arrivals at BLEAR on V230 northeast bound.

NNA below -2°C or above 54°C.

For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -2°C or above 54°C.

Aspens

FRESNO APP CON

CLNC DEL

UNICOM

ELEV

TDZE

MISSED APCH FIX
RNAV (GPS) RWY 30
MADERA MUNI (MAE)

Amdt 2B 11AUG22

Category

LPV DA 505-3/4 250 (300-3/4) NA

LNAV/VNAV DA 505-3/4 250 (300-3/4) NA

LNAV MDA 640-3/4 385 (400-3/4) 640-7/8 385 (400-3/4) NA

CIRCLING 680-1 425 (500-1) 720-1 465 (500-1) 760-1 505 (600-1) NA

RNAV (GPS) RWY 30
MADERA MUNI (MAE)

For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -2°C or above 54°C. Inop table does not apply to LPV and LNAV/VNAV Cat A/B/C.

For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -2°C or above 54°C. Inop table does not apply to LPV and LNAV/VNAV Cat A/B/C.

Procedure NA for arrivals at BLEAR on V30 southwest bound.

LNAV/VNAV Category A/B/C.

Corrections below -2°C or above 54°C. Inop table does not apply to LPV and LNAV/VNAV Cat A/B/C.
**NIKOL TWO DEPARTURE (OBSTACLE)**

**TAKEOFF MINIMUMS**
- Rwy 9: Standard with minimum climb of 370’ per NM to 10500.
- Rwy 27: Standard with minimum climb of 500’ per NM to 12700.

**NOTE:** Do not exceed 250K until established on 054° heading.

**NOTE:** Rwy 27 NA at night.

**TAKEOFF OBSTACLE NOTES**
- **Rwy 9:** Vehicles on roadway beginning 11’ from DER, 460’ right of centerline, up to 17’ AGL/7078’ MSL. Trees beginning 1956’ from DER, 554’ left of centerline, up to 100’ AGL/7186’ MSL.
- **Rwy 27:** Vehicles on roadway and bushes beginning 178’ from DER, 269’ left of centerline, up to 17’ AGL/7160’ MSL. Terrain and trees beginning 1.9 NM from DER, 334’ right of centerline, up to 68’ AGL/7970’ MSL.

**NOTE:** Chart not to scale.

**DEPARTURE ROUTE DESCRIPTION**
- **TAKEOFF RUNWAY 9:** Climb on heading 094° to 9500, then climbing left turn heading 054° to intercept BIH R-322 to NIKOL INT. Maintain 13000.
- **TAKEOFF RUNWAY 27:** Climb on heading 274° to 8600, then climbing right turn heading 054° to intercept BIH R-322 to NIKOL INT. Maintain 13000.
DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAY 27: Climb heading 274° to 8600, then right turn direct to cross OGISE at or above 12300, then on track 113° to cross DUVBE at or above 14000, then on track 202° to cross TEPME at or above 16000, then on track 257° to cross CROLI at or above 16000 and at or below FL190, thence.

. . . . . on (transition) maintain 16000, expect filed altitude 10 minutes after departure.

SHAFTER TRANSITION (CROLI1.EHF)

FRIANT TRANSITION (CROLI1.FRA)

RBRTS TRANSITION (CROLI1.RBRTS)

NOTE: GPS required.
NOTE: RNAV-1

NOTE: Chart not to scale.

TAKEOFF MINIMUMS
Rwy 9: NA - Air Traffic.
Rwy 27: Standard with minimum climb of 500' per NM to 12300.

TOP ALTITUDE: ASSIGNED BY ATC

OAKLAND APP CON
125.75 284.65
UNICOM
122.8 (CTAF)
AWOS-3
118.05

CROLI ONE DEPARTURE (RNAV)
OENNS ONE DEPARTURE (RNAV)

DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAY 9: Climb heading 094° to 7635, then direct to cross SEDOC at or above 9300, then on depicted route to cross OENNS at or above 13100. Thence . . . .

. . . on (transition), maintain 16200, expect filed altitude 10 min after departure.

COALDALE TRANSITION (OENNS1.OAL)
FRIANT TRANSITION (OENNS1.FRA)
RBRTS TRANSITION (OENNS1.RBRTS)
SHAFTER TRANSITION (OENNS1.EHF)
RNAV (GPS) RWY 11
MARINA MUNI (OAR)

**RNAV (GPS) RWY 11**

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<td>383 (400-1)</td>
<td>NA</td>
<td>NA</td>
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<tr>
<td>CIRCLING</td>
<td>640-1</td>
<td>503 (600-1)</td>
<td>760-1</td>
<td>623 (700-1)</td>
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**Rwy 11 helicopter visibility reduction below 3/4 SM NA.**

**Procedure NA for arrivals at MOVER on V25:87 northwest bound.**

**Procedure NA for arrivals at PENNI on V27 northwest bound.**

**MISSED APPROACH:** Climb to 600, then climbing left turn to 2700 direct FOMET and hold, continue climb-in-hold to 2700.
MARINA, CALIFORNIA

RNAV (GPS) RWY 29
MARINA MUNI (OAR)

APP CRS
288°
Rwy Idg 3483
TDZE 137
Apt Elev 137

RNP APCH.

NA

AWOS-3PT
134.025

NORCAL APP CON
133.0 251.15

UNICOM
122.7 (CTAF)

MARINA, CALIFORNIA

MisSED APPROACH: Climb to 2700 direct FOMET and hold, continue climb-in-hold to 2700.

Procedure NA for arrivals at HAGRO on V25 southeast bound.

ELEV 137
TDZE 137

Amdt 2 10SEP20
Procedure NA for arrival at COGOL via V459 southeast bound.
### RNAV (GPS)-B

**MARIPOSA-YOSEMITE (MPI)**

- **AWOS-3**: 135.6
- **OAKLAND CENTER**: 121.25 327.0
- **UNICOM**: 122.7 (CTAF)

#### Procedure

- **DME/DME RNP-0.3 NA.**
  - Circling NA north of Rwy 8-26. Procedure NA at night.
  - When local altimeter setting not received, procedure NA.
- **MISSED APPROACH:** Climb to 7000 direct TOTOY and via 127° track to COGOL and hold.

### Map

- **Procedure NA for arrivals at HOFED via V459 northwestbound.**

### Notes

- **Orig-B 05NOV20**
- **MARIPOSA, CALIFORNIA**
- **AL-9969 (FAA)**
- **SW-2, 30 NOV 2023 to 25 JAN 2024**

**Table of Category CIRCLING**

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**MARIPOSA, CALIFORNIA**

**Orig-B 05NOV20**

37°31’N-120°02’W
Circling Rwy 5, 23 NA at night. Autopilot coupled approach NA below 695.

Procedure NA for arrivals at MRGGO on V200 northeast bound.

Procedure NA for arrivals at MRGGO on V200 northeast bound.

Circling Rwy 5, 23 NA at night. Autopilot coupled approach NA below 695.

Procedure NA for arrivals at MRGGO on V200 northeast bound.
For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -15°C (5°F) or above 54°C (130°F). DME/DME RNP-0.3 NA. Helicopter visibility reduction below ½ SM NA. Baro-VNAV and VDP NA when using Lincoln altimeter setting. When local altimeter setting not received, use Lincoln altimeter setting and increase LPV DA to 308 feet, LNAV/VNAV DA to 514 feet and all MDA 60 feet; increase LNAV/VNAV all Cats visibility ½ mile, LNAV Cats C/D visibility ¾ mile. Inop table does not apply to LPV all Cats. For inop MALSR increase LNAV Cats A/B visibility ¾ mile. Night landing: Rwy 5, 23 NA.

**RNAV (GPS) RWY 14**

**YUBA COUNTY (MYV)**

**ASOS**

118.475

**NORCAL APP CON**

125.4 259.1

**UNICOM**

123.05 (CTAF)
**RNAV (GPS) RWY 32**

**YUBA COUNTY (MYV)**

**For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -15°C (5°F) or above 54°C (130°F). DME/DME RNP-0.3 NA. When local altimeter setting not received, use Lincoln altimeter setting and increase LPV DA to 357 feet, LNAV/VNAV DA to 418 feet and all MDA 60 feet; increase LPV and LNAV/VNAV all Cats visibility ½ mile, LNAV Cats C/D visibility ⅓ mile. Night landing: Rwy 5, 23 NA. Baro-VNAV and VDP NA when using Lincoln altimeter setting.**

**MISSING APPROACH: Climb to 4000 direct HALOW and via track 295° to GRIDD and hold.**

**ASOS**  118.475  
**NORCAL APP CON**  125.4  259.1  
**UNICOM**  123.05 (CTAF)

---

**ELEV 64**  
**TDZE 63**

---

<table>
<thead>
<tr>
<th>CATEGORY</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
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<td>313-⅞</td>
<td>250 (300-⅞)</td>
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---

**MISSED APCH FIX**

**GRIDD**  232°  4 NM

**TUXUY**

**VUJOR**

---

**4000**

**HALOW**  295°

**GRIDD**  232°

**VUJOR**

**Procedure**

**Turn**

**NA**

---

**TCH 32**

---

**MARYSVILLE, CALIFORNIA**

Orig-D 12NOV15
**RNAV (GPS) RWY 12**

**MERCED YOSEMITE RGNL (MCE)**

**Rwy 12** helicopter visibility reduction below \( \frac{3}{4} \) SM NA. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -3°C or above 54°C.

**MISSED APPROACH:** Climb to 3600 direct CHOWA and hold.

---

### ASOS

<table>
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<tr>
<th>Location</th>
<th>Temperature</th>
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<tr>
<td>PATYY</td>
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### UNICOM

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**Chowchilla Airport (CHOWA)**

**TCH 53**

**GP 3.00°**

**Category**

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<tr>
<td>LNAV/ VNAV DA</td>
<td>B (&gt;= 3000)</td>
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<tr>
<td>LNAV MDA</td>
<td>C (&lt;= 3000)</td>
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**Rwy IDG**

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<td>2000</td>
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<tr>
<td>C</td>
<td>2000</td>
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<td>D</td>
<td>1100</td>
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**Apt Elev**

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<tr>
<td>B</td>
<td>365</td>
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---

** Procedure NA for arrivals at PATYY on V113 northwest bound.**

**Amdt 1 15AUG19**

**Baro-VNAV systems, LNAV/VNAV NA below -3°C or above 54°C.**

**Rwy 12** helicopter visibility reduction below \( \frac{3}{4} \) SM NA. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -3°C or above 54°C.
For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -3°C or above 54°C. For inoperative ALS, increase LNAV Cat C/D visibility to 1 1/2 SM. Circling NA northeast of Rwy 12-30.

Procedure NA for arrivals at EBTUW on V23 northwest bound.

Procedure NA for arrival on PXN VORTAC airway radials 296 CW 061.

For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -3°C or above 54°C. For inoperative ALS, increase LNAV Cat C/D visibility to 1 1/2 SM. Circling NA northeast of Rwy 12-30.

Procedure NA for arrivals at EBTUW on V23 northwest bound.

Procedure NA for arrival on PXN VORTAC airway radials 296 CW 061.

For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -3°C or above 54°C. For inoperative ALS, increase LNAV Cat C/D visibility to 1 1/2 SM. Circling NA northeast of Rwy 12-30.

Procedure NA for arrivals at EBTUW on V23 northwest bound.

Procedure NA for arrival on PXN VORTAC airway radials 296 CW 061.
LOC BC RWY 12
MERCED YOSEMITE RGNL (MCE)

DME or RADAR required.

Rwy 12 helicopter visibility reduction below 1/2 SM NA. Circling NA northeast of Rwy 12-30.

MISSED APPROACH: Climb to 1000 then climbing right turn to 3000 direct MOD VOR/DME and hold.

ASOS 132.175
NORCAL APP CON 120.95 269.45
UNICOM 122.7 (CTAF)

MISSED APCH FIX

BACK COURSE

ELEV 155
TDZE 155

Refl Rwy 12
HIRL Rwy 12-30

F AF to MAP 5 NM

Knots 60 90 120 150 180
Min:Sec 5:00 3:20 2:30 2:00 1:40

DISREGARD glide slope indications.

CATEGORY A B C D
S-12 640-1 485 (500-1) 640-1/3 485 (500-1/3)
CIRCLING 640-1 485 (500-1) 640-1/2 720-2

ZIPTO FIX MINIMUMS
S-12 520-1 365 (400-1)
CIRCLING 560-1 405 (500-1) 620-1 465 (500-1) 620-1/2 720-2

MERCE D, CALIFORNIA
Amdt 11 15AUG19

MISSED APCH FIX

MODESTO MOD 114.6 Chan 93

Disregard glide slope indications.

CATEGORY A B C D
S-12 640-1 485 (500-1) 640-1/3 485 (500-1/3)
CIRCLING 640-1 485 (500-1) 640-1/2 720-2

ZIPTO FIX MINIMUMS
S-12 520-1 365 (400-1)
CIRCLING 560-1 405 (500-1) 620-1 465 (500-1) 620-1/2 720-2

MERCE D, CALIFORNIA
Amdt 11 15AUG19

MISSED APCH FIX

MODESTO MOD 114.6 Chan 93

Disregard glide slope indications.

CATEGORY A B C D
S-12 640-1 485 (500-1) 640-1/3 485 (500-1/3)
CIRCLING 640-1 485 (500-1) 640-1/2 720-2

ZIPTO FIX MINIMUMS
S-12 520-1 365 (400-1)
CIRCLING 560-1 405 (500-1) 620-1 465 (500-1) 620-1/2 720-2

MERCE D, CALIFORNIA
Amdt 11 15AUG19

MISSED APCH FIX

MODESTO MOD 114.6 Chan 93

Disregard glide slope indications.

CATEGORY A B C D
S-12 640-1 485 (500-1) 640-1/3 485 (500-1/3)
CIRCLING 640-1 485 (500-1) 640-1/2 720-2

ZIPTO FIX MINIMUMS
S-12 520-1 365 (400-1)
CIRCLING 560-1 405 (500-1) 620-1 465 (500-1) 620-1/2 720-2

MERCE D, CALIFORNIA
Amdt 11 15AUG19
ILS or LOC RWY 28R
MODESTO CITY-COUNTY-HARRY SHAM FLD (MOD)

DME required for LOC only.

Autopilot coupled approach NA below 1080. DME from MOD VOR/DME. Simultaneous reception of I-MOD and MOD DME required. For inop ALS, increase S-LOC 28R Cat C/D visibility to 1/2 SM.

### ATIS
127.7

### NORCAL APP CON
120.95 269.45

### MODESTO TOWER
125.3 (CTAF) 257.8

### GND CON
121.7

### UNICOM
122.95

### LOCALIZER
111.9

### I-MOD
Chan 93

**Wraps**

2000 to ZELAT 107° [IAF]

ZELAT MOD 6

**HOLD**

3000 1800

**MOD**

R-107

**One Minute Holding Pattern**

GS 3.00° TCH 53

**CATEGORY**

A  B  C  D

S-ILS 28R  291½  200 (200½)

S-LOC 28R  580½  489 (500½)  580 489 (500-1)

CIRCLING  580  481 (500-1)  501 (600-1)  700 601 (700-1½)  820 721 (800-2½)

**MODESTO, CALIFORNIA**

AMDT 15 21MAY20

37°38’N-120°57’W

**CIRCLING**

580  481 (500-1)  501 (600-1)  700 601 (700-1½)  820 721 (800-2½)

**ILS or LOC RWY 28R**

**MODESTO CITY-COUNTY-HARRY SHAM FLD (MOD)**
MODESTO, CALIFORNIA

RNAV (GPS) RWY 28R
MODESTO CITY-COUNTY-HARRY SHAM FLD (MOD)

For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -1°C or above 54°C. For inoperative ALS, increase LNAV/VNAV all Cats visibility to ¾ SM.

ATIS
127.7

NORCAL APP CON
120.95 269.45

MODESTO TOWER
125.3 (CTAF) 257.8

GND CON
121.7

UNICOM
122.95

500 3000 SHELI

Procedure NA for arrival on PXN VORTAC airway radials 202 CW 314.

542
ZELAT

Procedure NA for arrival on PXN VORTAC airway radials 296 CW 061.

1800

STATEMENT:

- For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -1°C or above 54°C. For inoperative ALS, increase LNAV/VNAV all Cats visibility to ¾ SM.

- MISSED APPROACH: Climb to 500 then climbing left turn to 3000 direct SHELI and hold, continue climb-in-hold to 3000.

- For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -1°C or above 54°C. For inoperative ALS, increase LNAV/VNAV all Cats visibility to ¾ SM.

- MISSED APPROACH: Climb to 500 then climbing left turn to 3000 direct SHELI and hold, continue climb-in-hold to 3000.

- For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -1°C or above 54°C. For inoperative ALS, increase LNAV/VNAV all Cats visibility to ¾ SM.

- MISSED APPROACH: Climb to 500 then climbing left turn to 3000 direct SHELI and hold, continue climb-in-hold to 3000.

- For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -1°C or above 54°C. For inoperative ALS, increase LNAV/VNAV all Cats visibility to ¾ SM.

- MISSED APPROACH: Climb to 500 then climbing left turn to 3000 direct SHELI and hold, continue climb-in-hold to 3000.
CAUTION: BE ALERT TO RUNWAY CROSSING CLEARANCES.
READBACK OF ALL RUNWAY HOLDING INSTRUCTIONS IS REQUIRED.
Use Siskiyou County altimeter setting; when not available, use Montague-Yreka Rohrer Fld altimeter setting; when neither received, procedure not authorized. Circling NA for Cats C and D west of Rwy 17-35.

**Missed Approach:** Climbing right turn to 6800 direct MOG NDB and hold.

---

**FAF to MAP 2.7 NM**

**MONTAGUE, CALIFORNIA**

**Amdt 7B 09SEP21**

**CATEGORY**

<table>
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<th>A</th>
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<tr>
<td>CIRCLING</td>
<td>3760-1 1/4</td>
<td>3760-1 1/2</td>
<td>3980-3</td>
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<td>1109 (1200-1 1/4)</td>
<td>1109 (1200-1 1/2)</td>
<td>1329 (1400-3)</td>
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</table>

**ELEV**

| 2651 |

**UNICOM**

**MONTAGUE**

**MOG (MARBK)**

**KLAMATH FALLS**

**SISKIYOU COUNTY (SIY)**

**REIL Rwys 17 and 35**

**SIS3371**

**NDB or GPS-A**

**ASOS**

**SEATTLE CENTER**

**UNICOM**

**121.125**

**124.85 306.3**

**123.0 (CTAF)**
ILS or LOC RWY 10R
MONTEREY RGNL (MRY)

ILS unusable from 1.7 DME inbound.

One Minute Holding Pattern

GS 3.00°
TCH 45

CATEGORY
A
B
C
D
S-ILS 10R #
398/24
200 (200-1/2)
S-ILS 10R
583/35
385 (400-1/3)
S-LOC 10R
920/24
722 (700-1/3)
920-1 5/8
722 (700-1/3)
CIRCLING
920-1
663 (700-1)
1280-3
1023 (1100-3)
NA

MISSED APPROACH: Climb to 600 then climbing left turn to 5000 on heading 030° and on SNS VORTAC R-243 to SNS VORTAC and hold, continue climbing-to-5000.

# Missed approach requires minimum climb of 265 feet per NM to 1360.

For inop ALS, increase S-ILS 10R all Cats visibility to RVR 6000, and increase S-LOC 10R Cat C and D visibility to 2 SM.

MISSED APPROACH: Climb to 600 then climbing left turn to 5000 on heading 030° and on SNS VORTAC R-243 to SNS VORTAC and hold, continue climbing-to-5000.

# Missed approach requires minimum climb of 265 feet per NM to 1360.

Procedure NA for arrival on SNS VORTAC airway radials 167 CW 293.

For inop ALS, increase S-ILS 10R all Cats visibility to RVR 6000, and increase S-LOC 10R Cat C and D visibility to 2 SM.
RNAV (GPS) RWY 10R
MONTEREY RGNL (MRY)

ATIS: 119.25
NORCAL APP CON: 133.0 251.15 (001°-135°) 127.15 307.125 (136°-360°)
MONTEREY TOWER: 118.4 (CTAF) 257.8
GND CON: 120.875 348.6
CLNC DEL: 135.45
UNICOM: 122.95

Procedure NAVA for arrivals on SNS VORTAC airway radials 167 CW 293.

HOLD 6000 2600
(IF/IAF) ZEBED
4 NM

4 NM Holding Pattern
ZEBED
MINCK

1000 5000 SNS

* LNAV only

2.4 NM to RW10R

MONTEREY, CALIFORNIA
AL-271 (FAA)

RNAV (GPS) RWY 10R
MONTEREY RGNL (MRY)

Amdt 1A 10SEP20

MONTEREY, CALIFORNIA

36°35'N-121°51'W

145
RNAV (GPS) Y RWY 28L
MONTEREY RGNL (MRY)

Procedure NA for arrivals at SNS VORTAC.
AIRWAY RADIALS 068 CW 167.

Final approach course offset 16.76°

Procedure NA for arrivals at WIGGL.
AIRWAY RADIALS 068 CW 146.

Category A: LP MDA 1080/55 823 (900-1), 1120/55 863 (900-1)

Category B: LP MDA 1080/60 823 (900-1½), 1120/60 863 (900-1½)

Category C: LP MDA 1080-2½ 823 (900-2½), 1120-2½ 863 (900-2½)

Category D: LP MDA 1260-3 1003 (1100-3)

CIRCLING

MONTEREY, CALIFORNIA
Amdt 1 30APR15

SW-2, 30 NOV 2023 to 25 JAN 2024
DME required. DME or RADAR required for procedure entry. Circling NA south of Rwy 10R-28L. Rwy 28L helicopter visibility reduction below 3/4 SM NA.

Missed Approach: Climb to 3000 then climbing right turn to 5000 on heading 360° and SNS VORTAC R-264 to SNS VORTAC and hold.

Procedure NA for arrival on SNS VORTAC airway radials 083 CW 188.

Localizer 110.7
Channel 44

S-LOC 28L

Amdt 5 30 JAN 2023 to 25 JAN 2024
RACEWAY VISUAL RWY 28L

MONTEREY, CALIFORNIA

RACEWAY VISUAL APPROACH RWY 28L

PROCEDURE NOT AUTHORIZED AT NIGHT.

From the east, proceed to Salinas Municipal Airport, then proceed southwest, remaining east of State Highway 68 until abeam Laguna Seca Raceway.

From the southeast, proceed from CHRLE on 278° course to HUTAD (1 mile south of Laguna Seca Raceway).

RADAR REQUIRED

Weather Minimums: 3000 foot ceiling and 3 SM visibility.

Vertical Guidance Navaid and Angle: Rwy 28L PAPI (GS 3.50°)
CAUTION: BE ALERT TO RUNWAY CROSSING CLEARANCES.
READBACK OF ALL RUNWAY HOLDING INSTRUCTIONS IS REQUIRED.
**MONTEREY FIVE DEPARTURE**

**TOP ALTITUDE:**

**7000**

**TAKEOFF MINIMUMS**

- **Rwy 10L:** Standard with minimum climb of 360’ per NM to 1300.
- **Rwy 10R:** Standard with minimum climb of 390’ per NM to 1200.
- **Rwy 28L:** Standard with minimum climb of 310’ per NM to 1100.
- **Rwy 28R:** Standard.

**NOTE:** Chart not to scale.

**DEPARTURE ROUTE DESCRIPTION**

**TAKEOFF RUNWAYS 10L/R:** Climbing left turn heading 329°. Thence.

**TAKEOFF RUNWAYS 28L/R:** Climb heading 278° until leaving 1100 or as directed by Monterey Tower. Then climbing right turn heading 329°. Thence.

... intercept SNS R-264 westbound to SHOEY intersection. Maintain 7000 or assigned altitude. Expect clearance to filed altitude five minutes after departure.
TOP ALTITUDE: 7000

NOTE: Chart not to scale.

DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAYS 10L/R: Climbing left turn heading 060°. Expect vectors to filed route after passing SNS R-210. Maintain 7000 or assigned altitude. Expect clearance to filed altitude five minutes after departure.

LOST COMMUNICATIONS: If no transmissions are received within one minute after departure, climb direct SNS VORTAC, then via assigned fix/route. Maintain 7000.

NOTE: Takeoff Rwys 28L/R NA.

NOTE: Chart not to scale.
Procedure NA for arrivals at OAK VOR/DME on V25 and V87 northwest bound.

**RNAV (GPS) RWY 14L**

**MOFFETT FEDERAL AIRFIELD (NUQ)**

**MISSUED APPROACH:** Climb to 500 then climbing left turn to 3200 direct PEYIC and hold.

**ATIS**
124.175 283.0

**NORCAL APP CON**
120.1 290.25

**MOFFETT TOWER**
119.55 (CTAF) 259.65

**GND CON**
121.85 278.95

**CLNC DEL**
296.75

**RNAV (GPS) RWY 14L**

**MOFFETT FEDERAL AIRFIELD (NUQ)**

**ATIS**
124.175 283.0

**NORCAL APP CON**
120.1 290.25

**MOFFETT TOWER**
119.55 (CTAF) 259.65

**GND CON**
121.85 278.95

**CLNC DEL**
296.75

**RNAV (GPS) RWY 14L**

**MOFFETT FEDERAL AIRFIELD (NUQ)**

**ATIS**
124.175 283.0

**NORCAL APP CON**
120.1 290.25

**MOFFETT TOWER**
119.55 (CTAF) 259.65

**GND CON**
121.85 278.95

**CLNC DEL**
296.75

**RNAV (GPS) RWY 14L**

**MOFFETT FEDERAL AIRFIELD (NUQ)**

**ATIS**
124.175 283.0

**NORCAL APP CON**
120.1 290.25

**MOFFETT TOWER**
119.55 (CTAF) 259.65

**GND CON**
121.85 278.95

**CLNC DEL**
296.75
For uncompensated Baro-VNAV systems, LNAV/VNAV NA below 0°C or above 54°C.

Procedure NA for arrivals at OAK VOR/DME on V25 and V87 northwest bound.

MISSED APPROACH: Climb to 540 then climbing left turn to 3200 direct PEYIC and hold.

For uncompensated Baro-VNAV systems, LNAV/VNAV NA below 0°C or above 54°C.

Procedure NA for arrivals at OAK VOR/DME on V25 and V87 northwest bound.

MISSED APPROACH: Climb to 540 then climbing left turn to 3200 direct PEYIC and hold.
From south of NUQ depart the highway 85/237 interchange heading 300°, remain
2 NM west of the PAO runways and 1 NM north of Stanford Stadium. On an extended
west downwind, turn base at 2000 (recommended) after passing 1 NM north of
Stanford Stadium but prior to the Dumbarton Bridge. Remain south and east of the
Dumbarton Bridge, maintain 1100 (recommended) until clear of the PAO traffic
pattern and intercepting the NUQ Runway 14L centerline.
CAUTION: BE ALERT TO RUNWAY CROSSING CLEARANCES. READBACK OF ALL RUNWAY HOLDING INSTRUCTIONS IS REQUIRED.
TAKEDOFF MINIMUMS
Rwy 14R/L: Standard with the following minimum climb gradients:
  Rwy 14R: Obstacle climb of 314' per NM to 4900, ATC climb of 332' per NM to 6000.
  Rwy 14L: Obstacle climb of 314' per NM to 4900, ATC climb of 328' per NM to 6000.
Rwy 32R/L: NA, ATC.

NOTE: Chart not to scale.

DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAYS 14L/R: Climb via NUQ R-141 to cross HOOKS/NUQ 20 DME at 6000, thence. . . .
  . . . via transition.

VALLEY TRANSITION (HOOKS2.SNS): From over HOOKS DME on SNS R-316 to SNS VORTAC.
NOTE: Chart not to scale.

DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAYS 14L/R: Climb via NUQ R-140 to MEPVE/NUQ 7 DME, then right turn direct to cross OSI VOR/DME at 5000, thence . . . .

TAKEOFF RUNWAYS 32L/R: Climb via NUQ R-321 to EDOYE/NUQ 3 DME, then turn left direct to cross OSI VOR/DME at 4000, thence . . . .

. . . . via RADAR vectors or assigned route.

T

NOTE: TACAN required.

TAKEOFF MINIMUMS
Rwys 14L/R: Standard with minimum climb of 402' per NM to 5000.
Rwy 32R: Standard with minimum climb of 250' per NM to 4000.
Rwys 32L/R: Standard with minimum climb of 246' per NM to 4000.

NOTE: Chart not to scale.
RNAV (GPS) RWY 6
NAPA COUNTY (APC)

App CRS
062°

Rwy Idg 5008
TDZE 21
Apt Elev 36

Rwy 6 helicopter visibility reduction below ¾ SM NA.
Circling Cats A/B/C NA east of Rwy 19R and northwest of Rwy 24.
Circling Cat D NA east of Rwy 19L-1R.

Missed Approach: Climbing left turn to 5000 direct POPES and hold, continue climb-in-hold to 5000.
*Missed approach requires minimum climb of 410 feet per NM to 2200.

ATIS
124.05

Oakland Center
127.8 353.5

Napa Tower
118.7 (CTAF) 257.8

Gnd Con
121.7

Clnc Del
127.85

Unicom
122.95

Procedure NA for arrivals at ROZZA on V301 northbound, V108 northwest bound and V494 westbound.

Procedure NA for arrivals at SAU VOR/DME on V150.

Procedure NA for arrival on PYE VOR/DME airway radials 335 CW 144.

Procedure NA for arrivals at SAU VOR/DME on V150 westbound.

Circling Cats A/B/C NA east of Rwy 19R and northwest Rwy 6 helicopter visibility reduction below ¾ SM NA.

Circling Cat D NA east of Rwy 19L-1R.

RNP APCH-GPS.

Amdt 3 24MAR22

38°13′N-122°17′W

165
RNAV (GPS) Z RWY 1L
NAPA COUNTY (APC)

For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -4°C or above 54°C. Inop table does not apply to LPV minimums. For inop ALS, increase visibility LNAV/VNAV to ½ SM. Missed approach requires minimum climb of 420 feet per NM to 2200. If unable to meet climb gradient see RNAV (GPS) Y RWY 1L.

MISSED APPROACH: Climb to 5000 direct CIVDA and on track 326° to POPES and hold, continue climb-in-hold to 5000.

Procedure NA for arrivals at HABAP on V108 northwest bound.

Procedure NA for arrivals at MICRA on V107-301 northwest bound.

Procedure NA for arrivals at SAU on V195 southbound.

Procedure NA for arrivals at SAUSALITO on V107-301 northwest bound.

Category

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<td>543 (600-3/4)</td>
<td>560-1/8</td>
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CAUTION: BE ALERT TO RUNWAY CROSSING CLEARANCES. READBACK OF ALL RUNWAY HOLDING INSTRUCTIONS IS REQUIRED.
TAKEOFF MINIMUMS
Rwys 19L/R: Standard.
Rwy 1L: Standard with minimum climb of 310' per NM to 900 or 2400-3 for VCOA.
Rwy 1R: Standard with minimum climb of 360' per NM to 700 or 2400-3 for VCOA.
Rwy 6: Standard with minimum climb of 440' per NM to 1700 or 2400-3 for VCOA.
Rwy 24: 300-1½ or standard with minimum climb of 255' per NM to 300, or alternatively, with standard takeoff minimums and a normal 200' per NM climb gradient, takeoff must occur no later than 2100' prior to DER.

NOTE: Chart not to scale.

TAKEOFF RUNWAY 6: Climb on heading 062° to 700, then turn right direct SGD VORTAC, thence.

TAKEOFF RUNWAYS 1L/R, 24: Turn left direct SGD VORTAC, thence.

TAKEOFF RUNWAYS 19L/R: Turn right direct SGD VORTAC, thence.

VCOA RUNWAYS 1L/R, 6: Obtain ATC approval for VCOA when requesting IFR clearance. Climb in visual conditions to cross Napa County Airport at or above 2300, then direct SGD VORTAC, thence.

.. . .. aircraft departing SGD VORTAC on R-165 climb on course. All other aircraft continue climb on SGD VORTAC R-165 to 3000, then turn right direct SGD VORTAC before proceeding on course.
TAKEOFF OBSTACLE NOTES

Rwy 1L: Terrain beginning 7' from DER, 340' left of centerline up to 37' MSL. Lighting 10' from DER, 51' right of centerline, 1' AGL/30' MSL. Vehicles on road beginning 105' from DER, 317' right of centerline, up to 41' MSL. Vehicles on road and terrain, beginning 105' from DER, 298' left of centerline, up to 43' MSL. Vehicles on road 203' from DER, 300' left of centerline, 44' MSL. Vehicles on road beginning 363' from DER, 302' left of centerline, up to 45' MSL. Vehicles on road 559' from DER, 544' right of centerline, 44' MSL. Trees beginning 3205' from DER, 790' right of centerline, up to 124' MSL. Trees beginning 4610' from DER, 306' right of centerline, up to 168' MSL. Tree 1.1 NM from DER, 2025' right of centerline, 226' MSL. Trees beginning 1.1 NM from DER, 1674' right of centerline, up to 249' MSL. Tree 1.1 NM from DER, 1839' right of centerline, 253' MSL. Trees and terrain beginning 1.1 NM from DER, 1648' right of centerline, up to 282' MSL. Trees, terrain and fence beginning 1.1 NM from DER, 1634' right of centerline, up to 298' MSL. Tree and fence 1.7 NM from DER, 3269' right of centerline, up to 345' MSL. Electrical system, terrain, fence and tree beginning 1.8 NM from DER, 606' right of centerline, up to 129' AGL/446' MSL. Trees and terrain beginning 2 NM from DER, 542' right of centerline, up to 526' MSL. Terrain, fence and tree beginning 2 NM from DER, 1089' right of centerline, up to 528' MSL. Fence, trees, terrain and building beginning 2.1 NM from DER, 2007' right of centerline, up to 5' AGL/554' MSL. Terrain and terrain beginning 2.1 NM from DER, 2139' right of centerline, up to 581' MSL. Tree 2.2 NM from DER, 3913' right of centerline, 585' MSL. Trees, terrain and fence, beginning 2.2 NM from DER, 2013' right of centerline, up to 587' MSL. Trees and terrain beginning 2.3 NM from DER, 2566' right of centerline, up to 599' MSL.

Rwy 1R: Lighting 43' from DER, 493' right of centerline, 1' AGL/25' MSL. Sign 51' from DER, 420' left of centerline, 2' AGL/23' MSL. Poles and vehicles on road beginning 262' from DER, 63' right of centerline, up to 36' AGL/59' MSL. Vehicles on road 639' from DER, 436' left of centerline, 38' MSL. Vehicles on road beginning 640' from DER, 95' left of centerline, up to 39' MSL. Tree 812' from DER, 673' right of centerline, 70' MSL. Tree 1870' from DER, 470' right of centerline, 71' MSL. Tree 1.2 NM from DER, 2507' right of centerline, 240' MSL. Tree 1.2 NM from DER, 2314' right of centerline, 243' MSL. Trees beginning 1.2 NM from DER, 2143' right of centerline, up to 286' MSL. Trees, fence and terrain beginning 1.3 NM from DER, 2073' right of centerline, up to 309' MSL. Tree 1.3 NM from DER, 2552' right of centerline, 322' MSL. Trees and terrain beginning 1.3 NM from DER, 1204' right of centerline, up to 368' MSL. Trees, terrain and fence beginning 1.4 NM from DER, 1286' right of centerline, up to 391' MSL. Trees beginning 1.4 NM from DER, 1312' right of centerline, up to 400' MSL. Trees, terrain, building and fence beginning 1.4 NM from DER, 2008' right of centerline, up to 417' MSL. Electrical system, fence and terrain beginning 2.1 NM from DER, 2329' right of centerline, up to 129' AGL/446' MSL. Transmission line 2.2 NM from DER, 3214' right of centerline, 123' AGL/542' MSL. Electrical system, fence, pole, terrain and trees beginning 2.2 NM from DER, 1515' right of centerline, up to 116' AGL/544' MSL. Terrain and fence beginning 2.3 NM from DER, 2076' right of centerline, up to 551' MSL. Trees, fence, terrain and building beginning 2.3 NM from DER, 1494' right of centerline, up to 561' MSL. Terrain and tree beginning 2.4 NM from DER, 1626' right of centerline, up to 581' MSL. Terrain and tree beginning 2.4 NM from DER, 2067' right of centerline, up to 612' MSL. Terrain and trees beginning 2.4 NM from DER, 2564' right of centerline, up to 643' MSL. Tree 2.4 NM from DER, 3917' right of centerline, 671' MSL. Trees beginning 2.5 NM from DER, 1954' right of centerline, up to 687' MSL.

(CONTINUED ON FOLLOWING PAGE)
TAKEOFF OBSTACLE NOTES

Rwy 6: Pole 1' from DER, 59' left of centerline, 3' AGL/37' MSL.
Pole 2' from DER, 60' right of centerline, 2' AGL/36' MSL.
Pole 98' from DER, 480' left of centerline, 34' AGL/67' MSL.
Pole 333' from DER, 476' left of centerline, 34' AGL/68' MSL.
Pole and vehicles on road beginning 573' from DER, 0' left of centerline, up to 33' AGL/69' MSL.
Building 773' from DER, 660' right of centerline, 29' AGL/70' MSL.
Buildings and pole beginning 1104' from DER, 472' right of centerline, up to 37' AGL/80' MSL.
Trees beginning 1288' from DER, 516' left of centerline, up to 98' MSL.
Trees beginning 2082' from DER, 98' right of centerline, up to 113' MSL.
Trees beginning 2306' from DER, 53' right of centerline, up to 130' MSL.
Tree 4681' from DER, 1103' left of centerline, 180' MSL.
Trees beginning 4859' from DER, 1063' left of centerline, up to 187' MSL.
Terrains and fence beginning 5865' from DER, 1761' left of centerline, up to 211' MSL.
Trees, terrain and fence beginning 6068' from DER, 1419' right of centerline, up to 281' MSL.
Tree 1 NM from DER, 2035' left of centerline, 212' MSL.
Trees beginning 1 NM from DER, 1796' left of centerline, up to 224' MSL.
Tree 2 NM from DER, 2933' left of centerline, 340' MSL.
Tree 2 NM from DER, 2803' left of centerline, 359' MSL.
Trees beginning 2.1 NM from DER, 3827' right of centerline, up to 386' MSL.
Terrains 2.2 NM from DER, 3202' right of centerline, up to 405' MSL.
Terrain beginning 2.3 NM from DER, 911' right of centerline, up to 464' MSL.
Fence and terrain beginning 2.4 NM from DER, 3273' left of centerline, up to 4' AGL/452' MSL.
Terrain 2.4 NM from DER, 3353' left of centerline, 457' MSL.
Terrain and trees beginning 2.4 NM from DER, 61' left of centerline, up to 525' MSL.
Fence beginning 2.5 NM from DER, 100' right of centerline, up to 6' AGL/519' MSL.

Rwy 19L: Sign and terrain beginning 14' from DER, 125' left of centerline, up to 2' AGL/14' MSL.
Lighting 15' from DER, 429' right of centerline, 1' AGL/14' MSL.
Terrain 49' from DER, 483' left of centerline, 17' MSL.
Navaid 1278' from DER, 816' left of centerline, 35' AGL/52' MSL.
Tree 3852' from DER, 1304' left of centerline, 111' MSL.

Rwy 19R: Lighting 9' from DER, 4' left of centerline, 1' AGL/15' MSL.
Pole 10' from DER, 44' right of centerline, 1' AGL/15' MSL.
Lighting 10' from DER, 96' left of centerline, 3' AGL/17' MSL.
Vehicles on road beginning 350' from DER, 584' left of centerline, up to 34' MSL.
Tree 3158' from DER, 764' left of centerline, 101' MSL.
Tree 3503' from DER, 1006' left of centerline, 104' MSL.

Rwy 24: Vehicles on road and general utility beginning 56' from DER, 125' right of centerline, up to 21' MSL.
General utility 59' from DER, 122' left of centerline, 4' AGL/17' MSL.
Vehicles on road beginning 60' from DER, 18' left of centerline, up to 25' MSL.
Vehicles on road beginning 167' from DER, 9' right of centerline, up to 22' MSL.
Vehicles on road beginning 354' from DER, 259' right of centerline, up to 26' MSL.
Trees beginning 1455' from DER, 776' left of centerline, up to 76' MSL.
Trees beginning 2324' from DER, 540' left of centerline, up to 90' MSL.
Tree 2650' from DER, 527' left of centerline, 93' MSL.
Tree 4552' from DER, 554' left of centerline, 135' MSL.
Vehicles on road and bridge beginning 4943' from DER, 1631' right of centerline, up to 165' AGL/170' MSL.
TAKEOFF MINIMUMS
Rwy 6: NA-Obstacles.
Rwys 19L/R: Standard
Rwys 1L/R: Standard with minimum climb of 370’ per NM to 1200’.
Rwy 24: Standard with minimum climb of 255’ per NM to 3000’.

DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAYS 1L/R: Climbing left turn direct SGD VORTAC, proceed outbound on the SGD R-127 to LIZRD INT. Cross LIZRD INT at or above 3200. Thence.

TAKEOFF RUNWAYS 19L/R: Climb on heading 180° to intercept and proceed outbound on the SGD R-127 to LIZRD INT. Cross LIZRD INT at or above 3200. Thence.

TAKEOFF RUNWAY 24: Climbing left turn on heading 180° to intercept and proceed outbound on the SGD R-127 to LIZRD INT. Cross LIZRD INT at or above 3200. Thence.

. . . . on (transition) or (assigned route). Maintain ATC assigned altitude.

CROIT TRANSITION (LIZRD5.CROIT): From over LIZRD on PYE R-075 to CROIT.

OAKLAND TRANSITION (LIZRD5.OAK): From over LIZRD on SGD R-127 and OAK R-347 to OAK VOR/DME.

POINT REYES TRANSITION (LIZRD5.PYE): From over LIZRD on PYE R-075 to PYE VOR/DME.
**NOTE:** Chart not to scale.

**TOP ALTITUDE: ASSIGNED BY ATC**

**RED BLUFF**
- 115.7 RBL
- Chan 104

**WILLMANS**
- 114.4 ILA
- Chan 91

**SCAGGS ISLAND**
- 112.1 SGD
- Chan 58

**POINT REYES**
- 113.7 PYE
- Chan 84

**SAUSALITO**
- 116.2 SAU
- Chan 109

**MENDOCINO**
- 112.3 ENI
- Chan 70

**SACRAMENTO**
- 115.2 SAC
- Chan 99

**LINDEN**
- 114.8 LIN
- Chan 95

**CONCORD**
- 117.0 CCR
- Chan 117

**OAKLAND**
- 116.8 OAK
- Chan 115

**NAPA TOWER**
- 118.7 (CTAF)

---

**TAKEOFF MINIMUMS**

Rwy 1L: Standard with minimum climb of 420’ per NM to 2900.
Rwy 1R: Standard with minimum climb of 460’ per NM to 3000.
Rwy 6: Standard with minimum climb of 430’ per NM to 1600.
Rwy 19L: Standard with minimum climb of 320’ per NM to 1500.
Rwy 19R: Standard with minimum climb of 330’ per NM to 1600.
Rwy 24: Standard with minimum climb of 255’ per NM to 1300.

---

**TOP ALTITUDE: ASSIGNED BY ATC**

**RED BLUFF**
- 115.7 RBL
- Chan 104

**WILLMANS**
- 114.4 ILA
- Chan 91

**SCAGGS ISLAND**
- 112.1 SGD
- Chan 58

**POINT REYES**
- 113.7 PYE
- Chan 84

**SAUSALITO**
- 116.2 SAU
- Chan 109

**MENDOCINO**
- 112.3 ENI
- Chan 70

**SACRAMENTO**
- 115.2 SAC
- Chan 99

**LINDEN**
- 114.8 LIN
- Chan 95

**CONCORD**
- 117.0 CCR
- Chan 117

**OAKLAND**
- 116.8 OAK
- Chan 115

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**NOTE:** RADAR required.

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**NOTE:** Chart not to scale.
DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAYS 1L/R: Climb on heading 006° (or climbing left turn on ATC assigned heading 186° CW 006°); thence. . . .

TAKEOFF RUNWAY 6: Climbing right turn on assigned heading between 130° CW 242°; thence. . . .

TAKEOFF RUNWAYS 19L/R: Climb on heading 186° (or ATC assigned heading 130° CW 270°); thence. . . .

TAKEOFF RUNWAY 24: Climb on heading 242° (or ATC assigned heading 130° CW 270°); thence. . . .

. . . . expect vectors to join assigned route. Maintain ATC assigned altitude; expect filed altitude/flight level ten minutes after departure.

LOST COMMUNICATIONS
If not in contact with Oakland Center after reaching 4000, proceed to the SGD VORTAC and hold.
TOP ALTITUDE: ASSIGNED BY ATC

TAKEOFF MINIMUMS
Rwy 6: NA - obstacles.
Rwy 1L: Standard with minimum climb of 445’ per NM to 6000.
Rwy 1R: Standard with minimum climb of 460’ per NM to 6000.
Rwys 19L/R: Standard with minimum climb of 260’ per NM to 6000.
Rwy 24: Standard with minimum climb of 400’ per NM to 6000.

NOTE: RADAR required.
NOTE: DME/DME/IRU or GPS required.
NOTE: RNAV 1.

NOTE: For non-GPS equipped aircraft, PYE, MOD, FMG, MVA, HZN, and OAL DMEs must be operational for JSICA transition.
NOTE: For non-GPS equipped aircraft, PYE, MVA, and HZN DMEs must be operational for INSLO transition.
NOTE: For non-GPS equipped aircraft, PYE and SWR DMEs must be operational for MUSTANG transition.

NOTE: Chart not to scale.

(NARRATIVE ON FOLLOWING PAGE)
DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAY 1L: Climb on heading 006° to intercept course 290° to FIRTO at or above 2700, then on track 350° to OZIEE at or above 6000, thence. . . .

TAKEOFF RUNWAY 1R: Climb on heading 006° to intercept course 291° to FIRTO at or above 2700, then on track 350° to OZIEE at or above 6000, thence. . . .

TAKEOFF RUNWAY 19L: Climb on heading 186° to intercept course 269° to KLARK, then on track 342° to FIRTO at or above 2700, then on track 350° to OZIEE at or above 6000, thence. . . .

TAKEOFF RUNWAY 19R: Climb on heading 186° to intercept course 272° to KLARK, then on track 342° to FIRTO at or above 2700, then on track 350° to OZIEE at or above 6000, thence. . . .

TAKEOFF RUNWAY 24: Climb on heading 242° to intercept course 265° to KLARK, then on track 342° to FIRTO at or above 2700, then on track 350° to OZIEE at or above 6000, thence. . . .

. . . .on (transition). Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure.

COALDALE TRANSITION (OZIEE4.OAL)
INSLO TRANSITION (OZIEE4.INSLO)
JSICA TRANSITION (OZIEE4.JSICA)
MUSTANG TRANSITION (OZIEE4.FMG)
RED BLUFF TRANSITION (OZIEE4.RBL)
RNAV (GPS) RWY 13
GNOSS FLD (DVO)

**Category**

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**MIRL Rwy 13-31**

**NOVATO, CALIFORNIA**

Amdt 2 23FEB23

**RNAV (GPS) RWY 13**

**GNOSS FLD (DVO)**

**Procedure NA for arrivals at ROZZA on V301 northbound, V108 northwest bound and V494 westbound.**

**ELEV 4**

**TDZE 4**
Baro-VNAV NA. Use Modesto altimeter setting; when not received, use Stockton Metro altimeter setting; increase LPV DA to 627 feet and all visibilities 1/2 SM; increase LNAV/VNAV DA to 588 feet and all visibilities 1/2 SM; increase all MDAs 40 feet and LNAV Cat C visibility 1/2 SM.

Procedure NA for arrivals at MOD VOR/DME on V113 southbound.

**MISSED APPROACH:** Climb to 4000 direct NOMAE and on track 114° to AWALI and hold, continue climb-in-hold to 4000.

**CATEGORY**

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**REIL Rwys 10 and 28**

**MIRL Rwy 10-28**
RNAV (GPS) RWY 28
OAKDALE (O27)

RNP APCH-GPS.

- RW28 helicopter visibility reduction below 3/4 SM NA. Baro-VNAV NA.
- Use Modesto altimeter setting; when not received, use Stockton altimeter setting; increase LPV DA to 381 feet and all visibilities 1/4 SM; increase LNAV/VNAV DA to 728 feet; increase all MDAs 40 feet.

MISSING APCH FIX

- MOD ASOS: 127.7
- NORCAL APP CON: 125.1 363.2
- UNICOM: 122.8 (CTAF)

Procedure NA for arrivals at MOD VOR/DME on V113 southbound.

Procedure NA for arrivals at AWALI on V23 southeast bound.

7000 ZOSON 328° LIN 288°

- VGS1 and RNAV glidepath not coincident (VGS1 Angle 3.00/TCH 25).
- LGV and RNAV glidepath not coincident

CATEGORY

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<td>820-1/4</td>
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<td>683 (700-2)</td>
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Amdt 2A 02DEC21
MISSING APPROACH: Climb to 3000 on heading 027° and LIN R-124 to WRAPS INT/LIN 16.7 DME and hold, continue climb-in-hold to 3000.

Use Modesto altimeter setting, when not received, use Stockton altimeter setting and increase all MDA 40 feet.

DME required.

REIL Rwys 10 and 28

MIRL Rwy 10-28

CI 820-1 583 (600-1) 920-2 683 (700-2) NA

IF/IAF MODESTO 114.6 MOD Chan 93
DME required. DME from OAK VOR/DME. Simultaneous reception of I-OAK and OAK DME required.
* RVR 1800 authorized with use of FD or AP or HUD to DA.

GPS or RADAR REQUIRED

**-**
MISSED APPROACH: Climb on heading 116° and on OAK VOR/DME R-131 to cross HISIS/OAK 2.8 DME at or below 1600 then climb to 5100 on heading 090° and on OAK VOR/DME R-114 to DECOT INT/OAK 11 DME/RADAR and hold, continue climb-in-hold to 5100.
DAF or RADAR required. CAT II: RVR 1000 authorized with specific
OPSPEC, MSPEC, or LOA approval and use of autoland or HUD to
touchdown. Missed approach requires minimum climb of 240 feet per
NM to 2700, if unable to meet climb gradient, see ILS or LOC RWY 30.

D-MD 1-1805

RNAV 1-GPS or RADAR
REQUIRED

LOC/DME I-1N6
108.7
Chan 24
APP CRS
296°
Rwy Idg
10000
TDZE
9
Apt Elev
9

OAKLAND TOWER
118.3 291.65 (Rwy 10L/R-28L/R, 15-33)
122.7 256.9 (Rwy 12-30)

GND CON
121.9
121.75 (Rwy 12-30)

AL-294 (FAA)

Amdt 31  07DEC17

OAKLAND, CALIFORNIA

LOC/DMK I-1N6
108.7
Chan 24
APP CRS
296°
Rwy Idg
10000
TDZE
9
Apt Elev
9

D-MD 1-1805

RNAV 1-GPS or RADAR
REQUIRED

LOC/DME I-1N6
108.7
Chan 24
APP CRS
296°
Rwy Idg
10000
TDZE
9
Apt Elev
9

OAKLAND TOWER
118.3 291.65 (Rwy 10L/R-28L/R, 15-33)
122.7 256.9 (Rwy 12-30)

GND CON
121.9
121.75 (Rwy 12-30)

AL-294 (FAA)

Amdt 31  07DEC17

OAKLAND, CALIFORNIA

LOC/DMK I-1N6
108.7
Chan 24
APP CRS
296°
Rwy Idg
10000
TDZE
9
Apt Elev
9

D-MD 1-1805

RNAV 1-GPS or RADAR
REQUIRED

LOC/DME I-1N6
108.7
Chan 24
APP CRS
296°
Rwy Idg
10000
TDZE
9
Apt Elev
9

OAKLAND TOWER
118.3 291.65 (Rwy 10L/R-28L/R, 15-33)
122.7 256.9 (Rwy 12-30)

GND CON
121.9
121.75 (Rwy 12-30)

AL-294 (FAA)

Amdt 31  07DEC17

OAKLAND, CALIFORNIA
RNAV (RNP) Z RWY 12
METRO OAKLAND INTL (OAK)

For uncompensated Baro-VNAV systems, procedure NA below 0°C or above 54°C. For inop ALS increase RNP 0.15 visibility all Cats to RVR 4500, RNP 0.30 visibility all Cats to RVR 5500.

See planview for multiple IF locations.

For uncompensated Baro-VNAV systems, procedure NA below 0°C or above 54°C. For inop ALS increase RNP 0.15 visibility all Cats to RVR 4500, RNP 0.30 visibility all Cats to RVR 5500.

See planview for multiple IF locations.

For uncompensated Baro-VNAV systems, procedure NA below 0°C or above 54°C. For inop ALS increase RNP 0.15 visibility all Cats to RVR 4500, RNP 0.30 visibility all Cats to RVR 5500.

See planview for multiple IF locations.

For uncompensated Baro-VNAV systems, procedure NA below 0°C or above 54°C. For inop ALS increase RNP 0.15 visibility all Cats to RVR 4500, RNP 0.30 visibility all Cats to RVR 5500.

See planview for multiple IF locations.
For uncompensated Baro-VNAV systems, procedure NA below 0°C (32°F) or above 54°C (130°F). GPS required.

MISSED APPROACH: Climb to 3000 on track 278° to OPLIE and on track 348° to REBAS and hold.

**D-ATIS**

<table>
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**GPS Required.**

**SW-2, 30 Nov 2023 to 25 Jan 2024**

**RNAV (RNP) Z Rwy 28L**

**OAKLAND, CALIFORNIA**

Amdt 2 30APR15

**RNAV (RNP) Z Rwy 28L**

**METRO OAKLAND INTL (OAK)**

**OAKLAND, CALIFORNIA**

Amdt 2 30APR15

**APP CRS 278°**

**278°**
RNAV (RNP) Z RWY 30

RNAV (RNP) Z RWY 30

METRO OAKLAND INTL (OAK)

AUTHORIZATION REQUIRED

See planview for multiple IF locations.

See planview for multiple IF locations.

6.1 NM

GP 3.00°
TCH 55

A
B
C
D

RNP 0.11 DA
267/24 258 (300-1/2)

RNP 0.30 DA
317/24 308 (400-1/2)

PLAZA

SAU

MITOE

RADAR REQUIRED

ELEV 9

TDZE 9

GPS required. For uncompensated Baro-VNAV systems, procedure NA below 1°C (34°F) or above 54°C (130°F). For inop ALS increase RNP 0.11 visibility all Cats to RVR 4000.

MISSED APPROACH: Climb to 4000 on track 296° to PLAZA and on track 282° to SAU VOR/DME and hold, continue climb-in-hold to 4000.

Amdt 3B  08DEC16
Procedure NA for arrivals at MICRA on V107-301 westbound.

Final approach course offset 11.16°.

MISSED APPROACH: Climbing left turn to 5200 direct HAYZE and hold, continue climb-in-hold to 5200.

VGS1 and descent angles not coincident (VGS1 Angle 3.00/TCH 50).

Helicopter visibility reduction below ¾ SM not authorized.

DME/DME RNP-0.3 NA.
RNAV (GPS) RWY 10R
METRO OAKLAND INTL (OAK)

Final approach course offset 13.17°.

Procedure NA for arrivals at MICRA on V107-301 westbound.

DME/DME RNP-0.3 NA. Helicopter visibility reduction below ¾ SM not authorized.

MISSED APPROACH: Climbing left turn to 5200 direct HAYZE and hold, continue climb-in-hold to 5200.
For uncompensated Baro-VNAV systems, LNAV/VNAV NA below 0°C (32°F) or above 54°C (130°F).
DME/DME RNP-0.3 NA.
#RVR 1800 authorized with use of FD or AP or HUD to DA.

MALSR

MISSING APPROACH: Climb direct HISIS to cross HISIS at or below 1600, then climb to 5400 on track 111° to DECOT and hold, continue climb-in-hold to 5400.

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RNAV (GPS) Y Rwy 28L
METRO OAKLAND INTL (OAK)

For uncompensated Baro-VNAV systems, LNAV/VNAV NA below 0°C (32°F) or above 54°C (130°F).
DME/DME RNP-0.3 NA.

**OAKLAND TOWER**

**GND CON**

**CLNC DEL**

**CPDLC**

**CENTRALIZED NAVIGATION DATABASE**

**OAKLAND, CALIFORNIA**

**Amdt 4A 15SEP16**

**METRO OAKLAND INTL (OAK)**

**37°43'N-122°13'W**

**195**
RNAV (GPS) Y RWY 28R

MISSED APPROACH: Climb to 3000 direct ZERMO and on track 335° to REBAS and hold.

D-ATIS NORCAL APP CON 125.35 263.15
OAKLAND TOWER 118.3 291.65 (Rwys 10L/R-28L/R, 15-33)
127.2 256.9 (Rwy 12-30)

Amdt 3A 07DEC17

RNAV (GPS) Y RWY 28R

OAKLAND, CALIFORNIA
AL-294 (FAA)

RNAV (GPS) Y RWY 28R

METRO OAKLAND INTL (OAK)
For uncompensated Baro-VNAV systems, LNAV/VNAV NA below 1° C (34°F) or above 54°C (130°F). DME/DME RNP-0.3 NA. For inop ALS, increase LNAV/VNAV all Cats visibility to RVR 4500 and LNAV Cat C/D visibility to 1% SM.

MISSED APPROACH: Climb to 4000 direct PLAZA and on track 282° to SAU VOR/DME and hold, continue climb-in-hold to 4000.

RADAR REQUIRED

CIRCLING 580-1 571 [600-1]

RNAV (GPS) Y RWY 30

METRO OAKLAND INTL (OAK)

LPV DA
209/18 200 (200-1/2)

LNAV/VNAV DA
283/24 274 (300-1/2)

LNAV MDA
580/24 571 [600-1/2] 580-1¼ 571 (600-1/4)

RNAV (GPS) Y RWY 30

OAKLAND, CALIFORNIA
Amdt 5D 07DEC17

37°43'N - 122°13'W
Helicopter visibility reduction below ½ SM NA.

**MISSED APPROACH**: Climb to 5300 on OAK VOR/DME R-093 to HAYZE INT/OAK 9 DME and hold, continue climb-in-hold to 5300.

**AVAILABILITY**: 0000-2400 UTC, 25 JAN 2024.

**VOR/DME OAK**

**Wx**: Helicopter visibility reduction below ½ SM NA.

**CATEGORY**: A

**VGS and descent angles not coincident (VGS Angle 3.00/TCH 50).**

**FAF to MAP 5.2 NM**

**ELEV**

**TDZE**

**MINIMUMS**

**Knots**

**Min:Sec**

**180**

**1:44**

**2:05**

**2:36**

**3:28**

**5:12**

**37°43'N-122°13'W**

**D-ATIS**

**NORCAL APP CON**

**OAKLAND TOWER**

**GND CON**

**CLNC DEL**

**CPDLC**

**Amdt 10A 15SEP16**

**198**
CAUTION: BE ALERT TO RUNWAY CROSSING CLEARANCES. READBACK OF ALL RUNWAY HOLDING INSTRUCTIONS IS REQUIRED.
DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAYS 28L, 28R: Climb on heading 278° to 520, then direct to cross LEJAY at or below 2000, then on track 296° to CNDEL, then left turn direct to cross PORTE at or below 10000. Thence. . . .

TAKEOFF RUNWAY 30: Climb on heading 296° to 520, then direct to cross LEJAY at or below 2000, then on track 296° to CNDEL, then left turn direct to cross PORTE at or below 10000. Thence. . . .

. . . . on (transition). Maintain 10000, expect filed altitude 10 minutes after departure.

KAYEX TRANSITION (CNDEL5.KAYEX)
KTINA TRANSITION (CNDEL5.KTINA)
NTELL TRANSITION (CNDEL5.NTELL)
SUSEY TRANSITION (CNDEL5.SUSEY)
YYUNG TRANSITION (CNDEL5.YYUNG)

TAKEOFF MINIMUMS
Rwys 10L/R, 12, 15, 33: NA - ATC.
Rwys 28L/R, 30: Standard with minimum climb of 500’ per NM to 520.

NOTE: Radar required for non-GPS equipped aircraft.
NOTE: RADAR required.
NOTE: DME required.

TAKEOFF MINIMUMS
Rwys 10L, 10R, 12, 15, 33: NA - Air Traffic

(NARRATIVE ON FOLLOWING PAGE)

NOTE: Chart not to scale.
DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAYS 28L/R: Climb heading 278° for RADAR vectors to PYE R-151, cross 4 DME northwest of OAK VOR/DME at or above 1400 and at or below 2000. Thence . . . .

TAKEOFF RUNWAY 30: Climb heading 296° for RADAR vectors to PYE R-151, cross 4 DME northwest of OAK VOR/DME at or above 1400 and at or below 2000. Thence . . . .

. . . . intercept and proceed on the PYE R-151 to SEGUL INT, then on PYE R-151 to CYPRS INT, then on MQO R-295 to MCKEY INT, then on assigned (transition). Maintain FL220. Expect clearance to filed altitude ten minutes after departure.

LOST COMMUNICATIONS: After reaching 3000, turn left heading 200° to intercept and proceed on PYE R-151, then resume own navigation.

FELLOWS TRANSITION (COAST9.FLW): From over MCKEY INT on MQO R-295 to MQO VORTAC, then on MQO R-086 and FLW R-266 to FLW VOR/DME.

GAVIOTA TRANSITION (COAST9.GVO): From over MCKEY INT on MQO R-295 to MQO VORTAC, then on MQO R-126 and GVO R-307 to GVO VORTAC.

SAN MARCUS TRANSITION (COAST9.RZS): From over MCKEY INT on MQO R-295 to MQO VORTAC, then on MQO R-116 and RZS R-299 to RZS VORTAC.

SANTA CATALINA TRANSITION (COAST9.SXC): From over MCKEY INT on BSR R-131 to DAISY INT, then on SXC R-287 to SXC VORTAC.
DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAY 30: Climb heading 296° to at or above 520, then left turn direct HUSSH, then on depicted route, maintain FL190. Expect filed altitude 10 minutes after departure.

DEDHD TRANSITION (HUSSH2.DEDHD)
GOBBS TRANSITION (HUSSH2.GOBBs)
GRTFL TRANSITION (HUSSH2.GRTFL)
MOGEE TRANSITION (HUSSH2.MOGEE)
ORRCA TRANSITION (HUSSH2.ORRCA)
SYRAH TRANSITION (HUSSH2.SYRAH)
TIPRE TRANSITION (HUSSH2.TIPRE)

NOTE: Chart not to scale.
DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAYS 10L, 10R: Climb on heading 098° to 520, then right turn direct to cross ROWLY at or below 3000, then on track 150° to cross VYYDA at or below 4000, then on track 150° to cross KATFH at or above 6000. Thence. . . .

TAKEOFF RUNWAY 12: Climb on heading 116° to 520, then direct to cross ROWLY at or below 3000, then on track 150° to cross VYYDA at or below 4000, then on track 150° to cross KATFH at or above 6000. Thence. . . .

. . . . on (transition). Maintain ATC assigned altitude, expect filed altitude 10 minutes after departure.

KAYEX TRANSITION (KATFH3.KAYEX)
KTINA TRANSITION (KATFH3.KTINA)
NTELL TRANSITION (KATFH3.NTELL)
SUSEY TRANSITION (KATFH3.SUSEY)

TAKEOFF MINIMUMS
Rwys 15, 28L/R, 30, 33: NA-ATC.
Rwys 10L/R, 12: Standard with minimum climb of 500’ per NM to 520.

NOTE: Chart not to scale.
NIMITZ FIVE DEPARTURE

DEPARTURE ROUTE DESCRIPTION

TAKEOFF MINIMUMS
Rwys 10L, 10R, 12, 15, 33: NA-Air Traffic.

NOTE: Chart not to scale.

TAKEOFF RUNWAYS 28L/R and 30: Climbing right turn heading 31.5° for RADAR vectors to assigned route/fix. Maintain ATC assigned altitude. Expect filed altitude ten minutes after departure.

LOST COMMUNICATIONS: If not in contact with departure control after reaching 4000, proceed direct to SAU VOR/DME and hold on SAU R-035. Climb in holding pattern to assigned altitude, then proceed to assigned fix/route.
(NUEVO8.EUGEN) 21168
NUEVO EIGHT DEPARTURE
AL-294 (FAA)

TOP ALTITUDE: ASSIGNED BY ATC

NOTE: RADAR required.
NOTE: DME required.

TAKEOFF MINIMUMS
Rwys 10L, 10R, 12, 15, 33: NA- Air traffic.

NOTE: Chart not to scale.
DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAYS 28L/R: Climb heading 278° for RADAR vectors to SAU R-168, cross 4 DME northwest of OAK VOR/DME at or above 1400 and at or below 2000. Thence . . . .

TAKEOFF RUNWAY 30: Climb heading 296° for RADAR vectors to SAU R-168, cross 4 DME northwest of OAK VOR/DME at or above 1400 and at or below 2000. Thence . . . .

. . . . intercept and proceed on the SAU R-168 to SAPLY INT and on BSR R-309 to EUGEN INT, then via assigned (transition). Expect clearance to filed altitude ten minutes after departure.

LOST COMMUNICATIONS: After reaching 3000, turn left heading 200° to intercept and proceed via SAU R-168, then resume own navigation.

SALINAS TRANSITION (NUEVO8.SNS): From over EUGEN INT on SNS R-286 to SNS VORTAC.

SHOEY TRANSITION (NUEVO8.SHOEY): From over EUGEN INT on BSR R-309 to SHOEY INT.
OAKLAND FIVE DEPARTURE

**TOP ALTITUDE:**
ASSIGNED BY ATC

---

**TAKEOFF MINIMUMS**

Rwys 15, 33: NA- ATC.

Rwy 10L: Standard with minimum climb of 340' per NM to 2300.

Rwy 10R: Standard with minimum climb of 330' per NM to 2300.

Rwy 12: Standard with minimum climb of 270' per NM to 1400.


NOTE: RADAR required.

NOTE: DME required.

NOTE: Use the SILENT, HUSSH, or SUNNE DEPARTURE during the periods of 2200-0700 local in lieu of the OAKLAND DEPARTURE.

**(NARRATIVE ON FOLLOWING PAGE)**
DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAYS 10L/R: Climb on heading 098° for RADAR vectors to assigned route/fix, thence. . . .

TAKEOFF RUNWAY 12: Climb on heading 116° for RADAR vectors to assigned route/fix, thence. . . .

TAKEOFF RUNWAYS 28L/R: Climb on heading 278° for RADAR vectors to assigned route/fix. Cross 4 DME northwest of OAK VOR/DME at or above 1400 and at or below 2000, thence. . . .

TAKEOFF RUNWAY 30: Climb on heading 296° for RADAR vectors to assigned route/fix. Cross 4 DME northwest of OAK VOR/DME at or above 1400 and at or below 2000, thence. . . .

. . . .maintain ATC assigned altitude. Expect filed altitude ten minutes after departure.

LOST COMMUNICATIONS: If not in contact with departure control after reaching 5000’, continue climb to assigned altitude and proceed direct to assigned route/fix.
DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAYS 10L/R, 12: Climbing right turn heading 270° for RADAR vectors to assigned route/fix, thence . . .

TAKEOFF RUNWAYS 28L/R: Climb on heading 278° for RADAR vectors to assigned route/fix. Cross 4 DME northwest of OAK VOR/DME at or above 1400 and at or below 2000, thence . . .

TAKEOFF RUNWAY 30: Climb on heading 296° for RADAR vectors to assigned route/fix. Cross 4 DME northwest of OAK VOR/DME at or above 1400 and at or below 2000, thence . . .

. . . .maintain ATC assigned altitude. Expect filed altitude ten minutes after departure.

NOTE: RADAR required.

NOTE: Chart not to scale.
DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAYS 28 L/R: Climbing right turn heading 097° to intercept OAK VOR/DME R-060 to cross SALAD/OAK 13 DME at or above 4000, thence . . . .

. . . . on ALTAM transition. Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure.

ALTAM TRANSITION (SALAD5.ALTAM): From over SALAD on OAK R-060 to ALTAM.
DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAY 30: Climbing left turn on heading 270° to V87 (commence right turn at SFO R-360) to REBAS INT/SFO 19 DME. Cross REBAS INT at or above 6000. Thence . . . .

. . . . (transition). Expect filed altitude 10 minutes after departure.

LINDEN TRANSITION (SLNT3.LIN): From over REBAS INT on LIN R-246 to LIN VOR/DME.

MENDOCINO TRANSITION (SLNT3.ENI): From over REBAS INT on SFO R-342 to SASSU INT, then on ENI R-118 to ENI VORTAC.

RED BLUFF TRANSITION (SLNT3.RBL): From over REBAS INT on SFO R-342 to SAWNA INT, then on RBL R-168 to RBL VORTAC.

SACRAMENTO TRANSITION (SLNT3.SAC): From over REBAS INT on SAC R-216 to SAC VORTAC.
NOTE: Chart not to scale.

NA-ATC.
DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAYS 10L/R: Climbing right turn to intercept OAK R-125, to cross SIXDY/OAK VOR/DME 6 DME at or above 1900 and at or below 3000, then climbing right turn to intercept and proceed on the OAK R-135 to cross SIWBI/OAK 15 DME at or above 5000 and to cross SIZXO/OAK 25 DME at or above 9000 and to cross WAGES INT/OAK 50 DME at or above FL200, thence. . . .

TAKEOFF RUNWAY 12: Climb on heading 116° for vectors to assigned route/fix, thence. . . .

TAKEOFF RUNWAYS 28L/R: Climb on heading 278° for vectors to PYE R-135 to cross 4 DME northwest of OAK VOR/DME at or above 1400 and at or below 2000. Intercept and proceed on the PYE R-135 to cross PORTE INT/PYE 40 DME at or above 9000, then on OSI R-285 to OSI VOR/DME, then on OSI R-116 to cross WAGES INT/OSI 35 DME at or above FL200, thence. . . .

TAKEOFF RUNWAY 30: Climb on heading 296° for vectors to assigned route/fix. Cross 4 DME northwest of OAK VOR/DME at or above 1400 and at or below 2000, thence. . . .

. . . on (transition) or (assigned route) maintain ATC assigned altitude.
Expect filed altitude 10 minutes after departure.

LOST COMMUNICATIONS
TAKEOFF RUNWAYS 28L/R and 30: After reaching 3000, turn left heading 200°, intercept and proceed via the PYE R-135. Resume your own navigation.

AVENAL TRANSITION (SKYL1.AVE): From over WAGES INT on OSI R-116 and AVE R-298 to AVE VOR/DME.
FELLOWS TRANSITION (SKYL1.FLW): From over WAGES INT on FLW R-306 to FLW VOR/DME.
PANOCHÉ TRANSITON (SKYL1.PXN): From over WAGES INT on PXN R-274 to PXN VORTAC.
TAKEOFF MINIMUMS
Rwys 10L/R, 12, 15, 33: NA-Air Traffic.

NOTE: RADAR required.

NOTE: Chart not to scale.

DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAYS 28L/R, 30: Climbing left turn on heading 120° for vectors to SUNNE. Maintain 5000. Expect higher altitude five minutes after departure.
### RNAV (GPS)-A

**HAIGH FLD (O37)**

**Category**: B/C/D

**Appr CRS**: 280°

**Rwy Idg**: N/A

**TDZE**: N/A

**Apt Elev**: 218

**Unicom**: 122.7 (CTAF)

**Elevation**: 218

**DME**: 7200

**RNAV (GPS)-A**

**Use Chico altimeter setting; when not received, use Redding altimeter setting and increase all MDA 120 feet. Increase visibility Cat C and D 5/4 SM.**

**MISSED APPROACH**: Climbing left turn to 4800 direct JITIM and hold, continue climb-in-hold to 4800.

**Procedure NA for arrivals at TALUM on V23-195 southeast bound.**

**Category**

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<td>502 (600-1½)</td>
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**ORLAND, CALIFORNIA**

**Orig**: 21 MAY 2020

**AL-6410 (FAA)**

**SW-2, 30 NOV 2023 to 25 JAN 2024**

**39°43'N-122°09'W**

**217**
For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -2°C (29°F) or above 54°C (130°F). Circling NA northeast of Rwy 13-31. DME/DME RNP-0.3 NA.

MISSED APPROACH: Climb to 650 then climbing right turn to 6000 direct MRGGO and hold, continue climb-in-hold to 6000.

ASOS | NORCAL APP CON | UNICOM
---|---|---
121.425 | 125.4 259.1 | 122.8 (CTAF)

For arrivals at YUBBA on V23 southbound.

Methodology for landing at YUBBA Z4000 (23.6) on runway 182.
Circling NA northeast of Rwy 13-31. DME required.

MISSED APPROACH: Climbing left turn to 3000 on MYV VOR/DME R-338 to HAZED/MYV 11.6 DME and hold.

DME REQUIRED

MISSED APPROACH: Climbing left turn to 3000 on MYV VOR/DME R-338 to HAZED/MYV 11.6 DME and hold.
Circling NA southwest of Rwy 13-31. Rwy 31 helicopter visibility reduction below 1 SM NA. Procedure NA at night. When control tower closed, use Norman Y Mineta San Jose Intl altimeter setting and increase all MDAs 40 feet.

MISSED APPROACH: Climb to 1400 then climbing right turn to 3000 direct SJC VOR/DME and hold.
CAUTION: BE ALERT TO RUNWAY CROSSING CLEARANCES.
READBACK OF ALL RUNWAY HOLDING INSTRUCTIONS IS REQUIRED.

JANUARY 2020
ANNUAL RATE OF CHANGE
0.1° W
RNAV (GPS) RWY 29
Petaluma Muni (O69)

For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -15°C or above 54°C. Circling Rwy 11 NA at night.

AWOS-3P 132.325
Oakland Center 127.8 353.5
Unicom 122.7 (CTAF)

Procedure NA for arrivals at HABAP on V108 northwest bound.

Procedure NA for arrivals at REBAS on V87 southbound.

Procedure NA for arrivals at CROIT on V195 southeast bound and V108 southeast bound.

Misplaced approach: Climb to 3500 direct XIKIY and on track 216° to HIRUV.
VOR RWY 29

MISSED APPROACH: Climb to 2000 via SGD R-276 then climbing left turn to 3500 direct PYE VOR/DME.

AWOS-3P 132.325

OAKLAND CENTER 127.8 353.5

UNICOM 122.7 (CTAF)

Circling Rwy 11 NA at night.

NoPT for arrival on SGD VORTAC airway radials 114 CW 165.

DME unusable from SGD VORTAC 11.1 DME to MAP.

Holding Pattern One Minute

CIRCLING

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Orig-E 05OCT23

38°15'N 122°36'W
### RNAV (GPS) RWY 5
**PLACERVILLE (PVF)**

#### WAAS
- **CH 78324**
- **W05A**

<table>
<thead>
<tr>
<th>APP CRS</th>
<th>RWy Idg</th>
<th>TDZE</th>
<th>Apt Elev</th>
</tr>
</thead>
<tbody>
<tr>
<td>049°</td>
<td>3914</td>
<td>2586</td>
<td>2586</td>
</tr>
</tbody>
</table>

#### RNP APCH - GPS
- **Circling NA northwest of Rwys 5-23.**
- **For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -20°C or above 54°C.**
- **MISSED APPROACH:** Climb to 3200 then climbing right turn to 4500 direct TRIPP and hold.

<table>
<thead>
<tr>
<th>AWOS-3</th>
<th>NORCAL APP CON</th>
<th>UNICOM</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>128.125</strong></td>
<td><strong>127.4 317.5</strong></td>
<td><strong>122.8 (CTAF)</strong></td>
</tr>
</tbody>
</table>

#### RNAV (GPS) RWY 5
**PLACERVILLE (PVF)**

- **HOLD 4000 4000**
- **4 NM**
- **GP 3.00° TCH 45**
- **4 NM Holding Pattern**
- **TRIPP**
- **CAWDE**

#### Category
- **LPV DA**
  - **2966-1 380 (400-1)**
  - **NA**
- **LNAV/VNAV DA**
  - **2970-1 384 (400-1¾)**
  - **NA**
- **LNAV MDA**
  - **3080-1 494 (500-1)**
  - **NA**
- **CIRCLING**
  - **3180-1 3440-1¼ 594 (600-1)**
  - **854 (900-1¼)**
  - **NA**

#### Procedure NA for arrivals at MUREQ on V338 southbound.

#### Procedure NA for arrivals at CORLY on V6 northeast bound.
GPS RWY 12
PORTERVILLE MUNI (PTV)

AWOS: 3PT 134.625

BAKERSFIELD APP CON 120.5

UNICOM 122.8 (CTAF)

One Minute Holding Pattern

MISSED APPROACH: Climbing right turn to 3100 direct TTE VOR/DME and hold.
RNAV (GPS) RWY 33
RED BLUFF MUNI (RBL)

**Baro-VNAV NA when using Redding altimeter setting. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -15°C (5°F) or above 48°C (118°F). DME/DME RNP-0.3 NA.**

When local altimeter setting not received, use Redding altimeter setting and increase all DA/MDA 80 feet and increase LPV all Cats visibility ½ SM, LNAV/VNAV all Cats visibility ¾ SM, LNAV Cat C visibility ½ SM and Circling Cats C and D visibility ½ SM.

**MISSED APPROACH:**
Climb to 4000 direct PUVGE and track 028° to HOMAN and hold.

**Procedure NA for arrivals on RBL VORTAC airway radials 122 CW 185.**

1. From VIJIX (IAF) track 028° and climb to 4000 direct PUVGE and hold.
2. From HOMAN (IF/IAF) track 151° and cross 3500 holding pattern.
3. From TOWAN (FAF) track 331° and descend to 2000.

**RNAV (GPS) RWY 33**
RED BLUFF MUNI (RBL)

**Category A**

<table>
<thead>
<tr>
<th>LPV DA</th>
<th>LNAV/ VNAV DA</th>
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<tbody>
<tr>
<td>602-1</td>
<td>718-1 366 (400-1)</td>
</tr>
<tr>
<td>780-1</td>
<td>780-1 428 (500-1)</td>
</tr>
<tr>
<td>860-1</td>
<td>900-1 548 (600-1)</td>
</tr>
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</table>

**CATEGORY B**

<table>
<thead>
<tr>
<th>LPV DA</th>
<th>LNAV/ VNAV DA</th>
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</thead>
<tbody>
<tr>
<td>250 (300-1)</td>
<td>428 (500-1)</td>
</tr>
<tr>
<td>508 (600-1)</td>
<td>708 (800-2)</td>
</tr>
</tbody>
</table>

**RNAV (GPS) RWY 33**
RED BLUFF MUNI (RBL)

**40°09'N 122°15'W**

**RED BLUFF, CALIFORNIA**
Orig-A 01FEB18
When local altimeter setting not received, use Redding altimeter setting and increase all MDAs and all Cat C/D visibility ½ SM. VDP NA with Redding altimeter setting.

**MISSING APPROACH:** Climb to 2000 direct RBL VORTAC and hold.

<table>
<thead>
<tr>
<th>CATEGORY</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
</tr>
</thead>
<tbody>
<tr>
<td>S-15</td>
<td>880-1</td>
<td>528 (600-1)</td>
<td>880-1½</td>
<td>528 (600-1½)</td>
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</table>

CIRCLING

<table>
<thead>
<tr>
<th></th>
<th>880-1</th>
<th>528 (600-1)</th>
<th>900-1½</th>
<th>548 (600-1½)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>900-1½</td>
<td>548 (600-1½)</td>
<td>1060-2½</td>
<td>708 (800-2½)</td>
</tr>
</tbody>
</table>

RED BLUFF, CALIFORNIA

AL-344 (FAA)
RED BLUFF, CALIFORNIA
Amdt 8B 23APR20

RED BLUFF MUNI (RBL)

VOR RWY 33

When local altimeter setting not received, use Redding altimeter setting and increase all MDAs 80 feet and all Cat C/D visibilities 1/4 SM.

MIssed Approach: Climb to 1500, then climbing right turn to 2000 direct RBL VORTAC and hold.

ASOS
120.775

OAKLAND CENTER
132.2 350.3

UNICOM
123.0 (CTAF)

RED BLUFF MUNI (RBL)

RED BLUFF, CALIFORNIA

UNICOM
OAKLAND CENTER
115.7 RBL
Chan 104

RED BLUFF MUNI (RBL)

Amdt 8B 23APR20

RED BLUFF, CALIFORNIA

RED BLUFF MUNI (RBL)

VOR RWY 33

RED BLUFF, CALIFORNIA

40°09'N-122°15'W

RED BLUFF MUNI (RBL)

AL-344 (FAA)

23054

RED BLUFF, CALIFORNIA

RED BLUFF MUNI (RBL)

VOR RWY 33

RED BLUFF, CALIFORNIA

UNICOM
OAKLAND CENTER
115.7 RBL
Chan 104

RED BLUFF MUNI (RBL)

VOR RWY 33

RED BLUFF, CALIFORNIA

AL-344 (FAA)

23054

RED BLUFF, CALIFORNIA

RED BLUFF MUNI (RBL)

VOR RWY 33

RED BLUFF, CALIFORNIA

AL-344 (FAA)

23054
Procedure NA at night. Rwy 16, 34 helicopter visibility reduction below 1 SM NA. When local altimeter setting not received, use Redding Rgnl altimeter setting and increase all MDAs 60 feet.

**AWOS-2**
- APP CRS 118.675
- Rwy Idg N/A
- TDZE N/A
- Apt Elev 723

**OAKLAND CENTER**
- 132.2
- 350.3

**UNICOM**
- 122.8 (CTAF)

**RNAV (GPS)-A**

**BENTON FLD (O85)**

**MISSED APPROACH**: Climb to 4000 direct WHISH and on track 182° to EVEMY and hold.

**Final approach course offset 6.55°.**

**MISSED APCH FIX**
- 4 NM
- EVEMY

**CATEGORY**
- A: 1340-1
- B: 617 (700-1)
- C: 1600-1/4
- D: 877 (900-1/4)
- NA

**REDING, CALIFORNIA**

**APP CRS**
- 166°

**Rwy Idg**
- N/A

**TDZE**
- N/A

**Apt Elev**
- 723

**REDING, CALIFORNIA**

**APP CRS**
- 166°
RNP APCH - GPS.

Procedure NA at night. Rwy 16, 34 helicopter visibility reduction below 1 SM NA. When local altimeter setting not received, use Redding Rgnl altimeter setting and increase all MDAs 60 feet.

**A** Not Available

**NA** Procedure NA for arrivals at TOMAD on V195 westbound.

**MISS** MISSP: Climb to 10000 direct WAMES and on track 355° to JIRKO and on track 074° to FARRO and hold, continue climb-in-hold to 10000.

**AWOS-2**

118.675

**OAKLAND CENTER**

132.2 350.3

**UNICOM**

122.8 (CTAF)

**Rwy Idg**

N/A

**TDZE**

N/A

**Apt Elev**

723

**APP CRS**

340°

**WAMES**

3000

**JIRKO**

3000

**FARRO**

3000

**CARMY**

3000

**HIKIP**

3000

**RW34**

3000

**VGSIs and descent angles not coincident (VGSIs Angle 3.50°/TCH 24).**

**SW-2, 30 NOV 2023 to 25 JAN 2024**
TAKEOFF OBSTACLE NOTES

Rwy 16: Trees beginning 75' from DER, 319' left of centerline, up to 30' AGL/732' MSL.

Vehicle on road 273' from DER, 537' right of centerline, 730' MSL.

Tree 771' from DER, 613' right of centerline, 747' MSL.

Tree 1105' from DER, 324' right of centerline, 755' MSL.

Trees beginning 1207' from DER, 162' right of centerline, up to 51' AGL/762' MSL.

Rwy 34: Building 2' from DER, 455' left of centerline, 724' MSL.

Pole, sign beginning 63' from DER, 179' right of centerline, up to 749' MSL.

Navaid, trees, pole beginning 84' from DER, 260' left of centerline, up to 748' MSL.

Trees, fence, poles beginning 116' from DER, 182' right of centerline, up to 46' AGL/765' MSL.

Trees, pole beginning 373' from DER, 224' left of centerline, up to 57' AGL/753' MSL.

Trees beginning 623' from DER, 440' right of centerline, up to 775' MSL.

Pole, trees beginning 750' from DER, 19' left of centerline, up to 754' MSL.

Trees beginning 1766' from DER, 870' left of centerline, up to 779' MSL.

NOTE: Chart not to scale.

DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAY 16: Climb to 2000, then climbing left turn direct RBL VORTAC.

TAKEOFF RUNWAY 34: Climbing right turn on heading 100° to intercept RDD VOR/DME R-330 to RDD VOR/DME, then on RDD VOR/DME R-156 to intercept RBL VORTAC R-336 to RBL VORTAC.

VCOA ALL RUNWAYS: Obtain ATC approval for VCOA when requesting IFP clearance. Climb in visual conditions to cross Benton Fld airport at or above 5800 before proceeding on course.
ILS or LOC RWY 34 REDDING RGNL (RDD)

**ATIS** 124.1
**OAKLAND CENTER** 132.2 350.3
**REDWOOD TOWER** 119.8 (CTAF) 269.25
**GND CON** 121.7
**UNICOM** 122.95

**ELEV** 505  TDZE 499

---

**LOCALIZER** 108.7
**I-RDD** 114.35 RDD
**Chan 90(Y)**

**MALSR** RDD (12)
**ITMOR** RDD R-044 to ITMOR INT/RDD

**MISSING APPROACH:** Climb to 1700 then climbing right turn to 5000 on heading 090° and RDD R-044 to ITMOR INT/RDD 12 DME and hold, continue climb-in-hold to 5000.

**MISSED APPROACH:**
- Climb to 1700 then climbing right turn to 5000 on heading 090° and RDD R-044 to ITMOR INT/RDD 12 DME and hold, continue climb-in-hold to 5000.
- Climb to 1700 then climbing right turn to 5000 on heading 090° and RDD R-044 to ITMOR INT/RDD 12 DME and hold, continue climb-in-hold to 5000.

**DME required for LOC only.**
- For inop ALS, increase S-ILS 34 Cat E visibility to ½ SM and S-LOC 34 Cat C/D/E visibility to 1 SM.

---

** категория **
- A
- B
- C
- D
- E

**олодок **
- S-ILS 34 840-½ 341 (400-½)
- S-LOC 34 940-1 435 (500-1)
- CIRCLING 495 (500-1) 615 (600-1) 835 (900-2) 835 (500-2)

**Направление**
- 40°31'N-122°18'W

**Комментарии**
- SW-2, 30 NOV 2023 to 25 JAN 2024

**Время**
- 235
RNAV (GPS) RWY 34
REDDING RGNL (RDD)

For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -4°C or above 54°C. For inop ALS, increase LNAV/VNAV all Cats visibility to ¾ SM and LNAV Cat C, D visibility to ½ SM.

MISSED APPROACH: Climb to 1700 then climbing right turn to 5000 direct ITMOR, continue climb-in-hold to 5000.

GND CON 121.7
UNICOM 122.95

REDDEING, CALIFORNIA
Amdt 2 30JAN20

40°31’N-122°18’W
LOC BC RWY 16
REDDING RGNL (RDD)

ATIS 124.1
OAKLAND CENTER 132.2 350.3
REDDING TOWER 119.8 (CTAF) 269.25
GND CON 121.7
UNICOM 122.95

MISSED APPROACH: Climb to 2000 then climbing left turn to 5000 on heading 015° and RDD VOR/DME R-044 to ITMOR INT/RDD 12 DME and hold, continue climb-in-hold to 5000.

Rwy 16 helicopter visibility reduction below ½ SM NA.

DME required.

LOC/DME I-RDD
108.7
Channel 24

APP CRS 166°

Rwy Idg TDZE Apt Elev
7003 505 505

Amdt 8 30Jan20
Inop table does not apply to S-34 Cats C/D.
MACHL fix minimums: for inop ALS, increase S-34 Cat C/D visibility to 1¾ SM.

**ALTERNATE MISSED APCH FIX**

**REDING**

**RDO RR 25 NM**

**RED BLUFF 115.7 RBL**

**ELEV 505**

**REDING, CALIFORNIA**

**VOR RWY 34**

**REDDING RGNL (RDD)**

**ATIS**

124.1

**OAKLAND CENTER**

132.2 350.3

**REDDING TOWER**

* 119.8 (CTAF) 269.25

**GND CON**

121.7

**UNICOM**

122.95

**ALTERNATE MISSED APPROACH**

**ITMOR INT and hold, continue climb-in-hold to 5300.**

**ITMOR FIX MINIMUMS**

**REDDING 3.8 MACHL**

**RED BLUFF 3.8 MACHL**

** charts showing navigation information, approach procedures, and minimums.**
DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAYS 12, 16: Climbing left turn within 1 NM, thence.

TAKEOFF RUNWAYS 30, 34: Climbing right turn within 1 NM, thence.

. . . . Intercept the RDD R-111, to HOMAN INT/RDD 10 DME, cross
HOMAN INT/RDD 10 DME at or above 4000'; then on (transition) or
(assigned route). Expect filed altitude 10 minutes after departure.

RED BLUFF TRANSITION (HOMAN3.RBL): From over HOMAN INT/RDD 10 DME
on RBL R-357 to RBL VORTAC.

NOTE: Chart not to scale.
DEPARTURE ROUTE DESCRIPTION

TAKEOFF MINIMUMS
Rwys 12: Standard with minimum climb of 410’ per NM to 3000.
Rwy 16: Standard with minimum climb of 495’ per NM to 3000.
Rwy 30: Standard with minimum climb of 440’ per NM to 3000.
Rwy 34: Standard with minimum climb of 410’ per NM to 3000.

TAKEOFF RUNWAYS 12 and 16: Climbing right turn heading 264° to intercept RDD VOR/DME R-217 to KENDL, cross KENDL at or above 3000, thence . . .
TAKEOFF RUNWAYS 30 and 34: Climbing right turn direct RDD VOR/DME then on RDD VOR/DME R-217 to KENDL, cross KENDL at or above 3000, thence . . .

. . . . via (transition) or (assigned route) maintain ATC assigned altitude.

FORTUNA TRANSITION (KENDL4.FOT): From over KENDL on RDD R-217 to TOMAD, thence on RBL R-273 and FOT R-091 to FOT VORTAC.
RED BLUFF TRANSITION (KENDL4.RBL): From over KENDL on RBL R-324 to RBL VORTAC.
TOMAD TRANSITION (KENDL4.TOMAD): From over KENDL on RDD R-217 to TOMAD.
DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAYS 12 and 16: Turn left immediately after departure to intercept and proceed on the RDD R-355 to KREST DME Fix. Cross KREST DME Fix at or above 4000, thence on (transition) or (assigned route).

TAKEOFF RUNWAYS 30 and 34: Turn right immediately after departure to intercept and proceed on RDD R-355 to KREST DME Fix. Cross KREST DME Fix at or above 4000, thence on (transition) or (assigned route).

ITMOR TRANSITION (KREST3.ITMOR): From over KREST DME Fix on RDD 12 DME Arc clockwise to ITMOR INT.

SHATA TRANSITION (KREST3.SHATA): From over KREST DME Fix on RDD 12 DME Arc counterclockwise to SHATA INT.

TOMAD TRANSITION (KREST3.TOMAD): From over KREST DME Fix on RDD 12 DME Arc counterclockwise to RDD R-217, thence on RDD R-217 to TOMAD INT.
DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAY 12: Climb heading 126° (or ATC assigned 344° CW 234°), thence . . . .

TAKEOFF RUNWAY 16: Climb heading 166° (or ATC assigned 354° CW 234°), thence . . . .

TAKEOFF RUNWAY 30: Climb heading 306° (or ATC assigned 134° CW 004°), thence . . . .

TAKEOFF RUNWAY 34: Climb heading 346° (or ATC assigned 174° CW 004°), thence . . . .

. . . . expect vectors to join assigned route. Maintain ATC assigned altitude; expect filed altitude/flight level ten minutes after departing.

LOST COMMUNICATIONS: If no contact with Oakland Center after reaching 4000 proceed to RBL VORTAC and hold.

NOTE: RADAR required.

NOTE: Chart not to scale.
RNAV (GPS) RWY 16
REEDLEY MUNI (O32)

For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -1.5°C (5°F) or above 54°C (130°F). Circling NA east of Rwy 16-34. Baro-VNAV and VDP NA when using Fresno Yosemite Int'l altimeter setting. DME/DME RNP-0.3 NA. When local altimeter setting not received, use Fresno Yosemite Int'l altimeter setting: increase all DAs 41 feet and all visibilities ¾ SM; increase all MDAs 60 feet.

MISSED APPROACH: Climb to 3100 direct DEICE and hold, continue climb-in-hold to 3100.

<table>
<thead>
<tr>
<th>AWOS-3PT</th>
<th>FRESNO APP CON</th>
<th>UNICOM</th>
</tr>
</thead>
<tbody>
<tr>
<td>120.175</td>
<td>132.35 323.25</td>
<td>122.7 (CTAF)</td>
</tr>
</tbody>
</table>

RNAV (GPS) RWY 16
REEDLEY MUNI (O32)

WAAS CH 77841 W16A
APP CRS 155° Rwy Idg 3300 TDZE 386 Apt Elev 386

MISSED APCH FIX
DEICE
ZIDIV 2 NM to RW16

PIPRE

3900 332° 152°

3900 to CATIM 151° (3.2)

CATIM

3 NM

155°

Holding Pattern

DEICE

LNAV only

* LNAV only

CATEGORY

LPV DA 636-¾ 250 (300-¾) NA
LNAV/ VNAV DA 672-7¾ 286 (300-¾) NA
LNAV MDA 760-1 374 (400-1) NA
CIRCLING 800-1 414 (500-1) 454 (500-1) NA

MIRL Rwy 16-34

36°40'N-119°27'W

SW-2, 30 NOV 2023 to 25 JAN 2024

SW-2, 30 NOV 2023 to 25 JAN 2024

MISSED APCH FIX: Climb to 3100 direct DEICE and hold, continue climb-in-hold to 3100.

RNAV (GPS) RWY 16
REEDLEY MUNI (O32)

For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -1.5°C (5°F) or above 54°C (130°F). Circling NA east of Rwy 16-34. Baro-VNAV and VDP NA when using Fresno Yosemite Int'l altimeter setting. DME/DME RNP-0.3 NA. When local altimeter setting not received, use Fresno Yosemite Int'l altimeter setting: increase all DAs 41 feet and all visibilities ¾ SM; increase all MDAs 60 feet.

MISSED APPROACH: Climb to 3100 direct DEICE and hold, continue climb-in-hold to 3100.
For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -15°C (5°F) or above 54°C (130°F). Circling NA east of Rwy 16-34. Baro-VNAV and VDP NA when using Fresno Yosemite Intl altimeter setting. Rwy 34 helicopter visibility reduction below ¾ SM NA. DME/DME RNP-0.3 NA. When local altimeter setting not received, use Fresno Yosemite Intl altimeter setting: increase all DAs 41 feet and all visibilities ¾ SM; increase all MDAs 60 feet.

**RNAV (GPS) RWY 34**

**REEDLEY MUNI (O32)**

**AWOS-3PT**

120.175

**FRESNO APP CON**

132.35 323.25

**UNICOM**

122.7 (CTAF)

**Category**

<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
<th>C</th>
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</tr>
</thead>
<tbody>
<tr>
<td>LPV DA</td>
<td>636  34</td>
<td>250 (300-34)</td>
<td>NA</td>
</tr>
<tr>
<td>LNAV/VNAV DA</td>
<td>740  1</td>
<td>354 (400-1)</td>
<td>NA</td>
</tr>
<tr>
<td>LNAV MDA</td>
<td>860  1</td>
<td>474 (500-1)</td>
<td>NA</td>
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<tr>
<td>CIRCLING</td>
<td>860  1</td>
<td>474 (500-1)</td>
<td>NA</td>
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**MIRL Rwy 16-34**

335° to RW34

**Category**

<table>
<thead>
<tr>
<th>A</th>
<th>C</th>
<th>D</th>
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<tbody>
<tr>
<td>LPV</td>
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<tr>
<td>CIRCLING</td>
<td>860  1</td>
<td>474 (500-1)</td>
</tr>
</tbody>
</table>

**DEICING**

335° to DEICE

**Holding Pattern**

4 NM

**DEICE**

3100 to DEICE

**VGSI and RNAV glidepath not coincident**

(VGSI Angle 4.00/TCH 49).

**RNAV (GPS) RWY 34**

**REEDLEY MUNI (032)**

132.35 323.25

**UNICOM**

122.7 (CTAF)

**ELEV 386**

**TDZE 386**

**AWOS-3PT**

120.175

**FRESNO APP CON**

132.35 323.25

**UNICOM**

122.7 (CTAF)

**ELEV 386**

**TDZE 386**

**AWOS-3PT**

120.175

**FRESNO APP CON**

132.35 323.25

**UNICOM**

122.7 (CTAF)
RNAV (GPS) RWY 25
RIO VISTA MUNI (088)

**AWOS-AV**
127.075

**UNICOM**
122.725 [CTAF]

**TRAVIS APP CON**
119.9  257.9

**UNITED STATES OF AMERICA**

**RNAV (GPS) RWY 25**

**CIRCLING Rwy 33 NA at night. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -15°C or above 54°C.**

**MISSED APPROACH:** Climb to 500 then climbing right turn to 3100 direct JIRAG and hold, continue climb-in-hold to 3100.

**AWOS-AV**
127.075

**UNICOM**
122.725 [CTAF]

**TRAVIS APP CON**
119.9  257.9

**ELEV 23**

**TDZE 23**

**CATEGORY**

<table>
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<tr>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
</tr>
</thead>
</table>

**LPV DA**
223-3/4  200 (200-3/4)  NA

**LNAV/VNAV DA**
353-1  330 (400-1)  NA

**LNAV MDA**
460-1  437 (500-1)  460-1 437 (500-1/4)  460-1 3/4  340 (500-1/4)  340 (500-1/4)  NA

**CIRCLING**
460-1  437 (500-1)  600-1  577 (600-1)  940-2 3/4  917 (1000-23/4)  NA

**GPS 3.00°**

**TCH 40**

**WAGER**

**HOLD 6000 3200**

**5100**

**MSA RW 25 25 NM**

**252° to RW 25**

**087°→ 6000**

**267°→ 3200**

**4 NM**

**3.6 NM**

**9.9 NM**

**RIO VISTA, CALIFORNIA**
Amdt 4  24MAR22

**RIO VISTA MUNI (088)**

**38°12′N-121°42′W**

**247**
VOR/DME RWY 34
MC CLELLAN AIRFIELD (MCC)

AWOS-3 125.975
NORCAL APP CON 127.4 317.5
CLNC DEL 119.825
UNICOM 122.975 (CTAF)

VDP NA when using Sacramento Intl altimeter setting. When local altimeter setting not received, use Sacramento Intl altimeter setting and increase all MDAs 40 feet.

MISSED APPROACH: Climbing right turn to 2200 via MCC R-344 to BONDZ/MCC B DME/RADAR and hold.

SACRAMENTO, CALIFORNIA
Orig-C 10NOV16

38°40'N-121°24'W

© 2023 by the Administrator of Civil Aviation/FAA
When local altimeter setting not received, use Sacramento Intl altimeter setting and increase DA to 322 feet, increase all MDAs 40 feet and Circling Cat D visibility 1/4 SM. Autopilot coupled approach NA below 335 feet. For inop MALSR, increase S-ILS 2 all Cats visibility to 3/4 SM and S-LOC 2 Cat C/D visibility to 1 SM. For inop MALSR when using Sacramento Intl altimeter setting, increase S-ILS 2 all Cats visibility to 3/4 SM.

**ATIS**
125.5

**NORCAL APP CON**
125.25 257.9

**EXEC TOWER**
119.5 (CTAF) 278.8

**GND CON**
125.0

**UNICOM**
122.95
RNAV (GPS) RWY 2
SACRAMENTO EXEC (SAC)

For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -1°C or above 54°C. For inop ALS, increase LNAV/VNAV all Cats visibility to 1/2 SM, increase LNAV all Cats visibility to 1 SM.

Procedure NA for arrivals at EMBER on V150 southwest bound.
Procedure NA for arrivals at COUPS on V6 southbound.
Procedure NA for arrivals at VISTO on V334-392 southbound.

Misplaced approach: Climb to 440 then climbing left turn to 2000 direct JIRAG and hold.

LNAV MDA
500-1 496 (500-1)
520-1 476 (500-1)
560-1 536 (600-1½)
776 (800-2½)

Circling
500-1 476 (500-1)
520-1 496 (500-1)
560-1 536 (600-1½)
776 (800-2½)

WAAS CH 62810 W02A
APP CRS 019° Rwy Idg 5503 TDZE 21 Apt Elev 24

ATIS 125.5 NORCAL APP CON 125.0 EXEC TOWER 119.5 (CTAF) GND CON 278.8 UNICOM 122.95

RNAP APCH-GPS

SACRAMENTO, CALIFORNIA

38°31'N-121°30'W

Amdt 1 22APR21

3W-2, 30 NOV 2023 to 25 JAN 2024
When local altimeter setting not received, use Sacramento Intl altimeter setting and increase all MDAs 40 feet and Circling Cat D visibility 1/2 SM.

MISSED APPROACH: Climbing left turn to 1600 direct SAC VORTAC and hold.

ATIS 125.5
NORCAL APP CON 125.25 257.9
EXEC TOWER* 119.5 (CTAF) 278.8
GND CON 125.0
UNICOM 122.95
CAUTION: BE ALERT TO RUNWAY CROSSING CLEARANCES.
READBACK OF ALL RUNWAY HOLDING INSTRUCTIONS IS REQUIRED.
Aircraft not GPS equipped - RADAR required for procedure entry. DME or RADAR required. RNP APCH-GPS. From TENCO.

Simultaneous approach authorized. Circling NA west of Rwy 17L-35R.

For inop ALS, increase S-LOC 17L Cat C/D visibility to 1 3/4 SM and JOBDU F3849 min. S-LOC 17L Cat C/D visibility to RVR 4500.

Jobud min. 3 SM.

Jobud fix minimums S-LOC 17L Cat C/D visibility to RVR 4500.

For inop ALS, increase S-LOC 17L Cat C/D visibility to 1 SM and Simultaneous approach authorized. Circling NA west of Rwy 17L-35R.

DME or RADAR required. RNP APCH-GPS. From TENCO.

Simultaneous approach authorized. Circling NA west of Rwy 17L-35R.
ILS or LOC RWY 35L
SACRAMENTO INTL (SMF')

DME required.

Circling NA east of Rwy 17R-35L. Autopilot coupled approach NA below 312 MSL. For inop ALS, increase S-LOC 33L Cats C/D viability to RVR 4500.

* RVR 1800 authorized with the use of FD or AP or HUD to DA.

D-ATIS
126.75
NORCAL APP CON
125.4 259.1 (W-NE) 125.25 257.9 (SW)
127.4 317.5 (E-SE)

CAPITOL TOWER
GND CON
125.7 256.7
121.7 256.7
121.1 256.7

SACRAMENTO, CALIFORNIA
AL-5490 (FAA)

ILS or LOC RWY 35L
SACRAMENTO INTL (SMF')

Procedure NA for arrivals on SAC VORTAC airway radials 257 CW 329.

VGSI and ILS glidepath not coincident (VGSI Angle 3.00/TCH 76).

GS 3.00°
TCH 76

ILS or LOC RWY 35L
SACRAMENTO, CALIFORNIA
Amtd 8 24MAR22
AIRCRAFT NOT GPS EQUIPPED - RADAR REQUIRED FOR PROCEDURE ENTRY.

DME OR RADAR REQUIRED. RNP APCH-GPS. FROM TENO.

Simultaneous approach authorized.

MISSING APPROACH: Climb to 500 then climbing right turn to 2000 on heading 350° and SAC VORTAC R-329 to GRIME INT/SAC 35.2 DME and hold.

Simultaneous approach authorized.

D-ATIS
126.75

NORCAL APP CON
125.4 259.1 (W-NE) 125.25 257.9 (SW) 127.4 317.5 (E-SE)

CAPITOL TOWER
125.7 256.7

GND CON
121.7 256.7

CINN DEL
121.1 256.7

CPDLC

AIRCRAFT NOT GPS EQUIPPED - RADAR REQUIRED FOR PROCEDURE ENTRY.

DME OR RADAR REQUIRED. RNP APCH-GPS. FROM TENO.

Simultaneous approach authorized.

MISSING APPROACH: Climb to 500 then climbing right turn to 2000 on heading 350° and SAC VORTAC R-329 to GRIME INT/SAC 35.2 DME and hold.

Simultaneous approach authorized.

D-ATIS
126.75

NORCAL APP CON
125.4 259.1 (W-NE) 125.25 257.9 (SW) 127.4 317.5 (E-SE)

CAPITOL TOWER
125.7 256.7

GND CON
121.7 256.7

CINN DEL
121.1 256.7

CPDLC

AIRCRAFT NOT GPS EQUIPPED - RADAR REQUIRED FOR PROCEDURE ENTRY.

DME OR RADAR REQUIRED. RNP APCH-GPS. FROM TENO.

Simultaneous approach authorized.

MISSING APPROACH: Climb to 500 then climbing right turn to 2000 on heading 350° and SAC VORTAC R-329 to GRIME INT/SAC 35.2 DME and hold.

Simultaneous approach authorized.

D-ATIS
126.75

NORCAL APP CON
125.4 259.1 (W-NE) 125.25 257.9 (SW) 127.4 317.5 (E-SE)

CAPITOL TOWER
125.7 256.7

GND CON
121.7 256.7

CINN DEL
121.1 256.7

CPDLC

AIRCRAFT NOT GPS EQUIPPED - RADAR REQUIRED FOR PROCEDURE ENTRY.

DME OR RADAR REQUIRED. RNP APCH-GPS. FROM TENO.

Simultaneous approach authorized.

MISSING APPROACH: Climb to 500 then climbing right turn to 2000 on heading 350° and SAC VORTAC R-329 to GRIME INT/SAC 35.2 DME and hold.

Simultaneous approach authorized.
Aircraft not GPS equipped - RADAR required for procedure entry. DME or RADAR required. RNP APCH-GPS. From Tenco.

Simultaneous approach authorized. Requires specific OPSPEC, MSPEC or LOA approval.

MISSED APPROACH: Climb to 500 then climbing left turn to 3000 direct SAC VORTAC and hold.

Requires specific OPSPEC, MSPEC or LOA approval.

VGSI and ILS glidepath not coincident (VGSI Angle 3.00/TCH 64).

SA CATEGORY II ILS-SPECIAL AIRCREW & AIRCRAFT CERTIFICATION REQUIRED
RNAV (RNP) Z RWY 17L
SACRAMENTO INTL (SMF)
RNAV (RNP) Z RWY 17R
SACRAMENTO INTL (SMF')

**Authorization Required**

**RNP AR APCH-GPS.**

For uncompensated Baro RNAV systems, procedure NA below -2°C or above 54°C. For inop ALS, increase RNP 0.10 all Cats visibility to RVR 4000; increase RNP 0.18 all Cats visibility to RVR 4500 and RNP 0.30 all Cats visibility to RVR 5500.

**Missed Approach:** Climb to 500 then climbing right turn to 2000 direct GRIME and hold.

**Amdt 2 24MAR22**

HIRL Rwys 17R-35L and 17L-35R
TDZ/CLN Rwys 17L and 17R

**APP CRS**

168°

<table>
<thead>
<tr>
<th>Category</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
</tr>
</thead>
<tbody>
<tr>
<td>RNP 0.10 DA</td>
<td>275/24</td>
<td>250 (300-1/2)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>RNP 0.18 DA</td>
<td>326/24</td>
<td>301 (300-1/2)</td>
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<tr>
<td>RNP 0.30 DA</td>
<td>385/30</td>
<td>360 (400-5/6)</td>
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</tbody>
</table>

**RNAV (RNP) Z RWY 17R**

**Category**

A

B

C

D

**APP CRS**

168°

**Rwy Idg**

8598

**TDZE**

25

**Apt Elev**

27

**PACER COVER** SACRAMENTO, CALIFORNIA

**SMF** SACRAMENTO INTL (SMF')
RNAV (RNP) Z RWY 35L
SACRAMENTO INTL (SMF)

D-ATIS 126.75
NORCAL APP CON 125.4 259.1 [W-NE] 125.25 257.9 [SW]
CAPITOL TOWER 125.7 256.7
GND CON 121.7 256.7
CLNC DEL 121.1 256.7
CPDLC

MISS ACH FIX
GRIME 115° 333° 4 NM

For uncompensated Baro-VNAV systems, procedure NA below -2°C or above 54°C. For inop ALS, increase RNP 0.12 all Cats visibility to RVR 4500; increase RNP 0.30 all Cats visibility to RVR 5500.

MISSED APPROACH: Climb to 2000 on track 348° to JARNU and track 321° to GRIME and hold.

ELEV 27
TDZE 24

VGSI and RNAV glidepath not coincident
(VGSI Angle 3.00/TCH 76).

See planview for multiple IF locations.

AUTHORIZATION REQUIRED
For uncompensated Baro-VNAV systems, procedure NA below -2°C or above 54°C.

**MISSING APCH FIX**

GRIME

**ELEV 27**

**TDZE 24**

**See planview for multiple IF locations.**

**AUTHORIZATION REQUIRED**

**SACRAMENTO, CALIFORNIA**

**AL-5490 (FAA)**

**23054**

**RNAV (RNP) Z RWY 35R**

SACRAMENTO INTL (SMF)

**RNPAR APCH-GPS.**

**NORCAL APP CON**

**CAPITOL TOWER**

**GND CON**

**CLNC DEL**

**CPDLC**

**APP CRS**

348°

8605

TDZE

24

Apt Elev

27

**RWP 17R-35L and 17L-35R**

**TWR/CLN Rwys 17L and 17R**

**HIRL Rwys 17R-35L and 17L-35R**

**Amdt 2 24MAR22**

**SW-2, 30 NOV 2023 to 25 JAN 2024**

**RNAV (RNP) Z RWY 35R**

**SACRAMENTO INTL (SMF)**

**38°42'N-121°35'W**
RNAV (GPS) Y RWY 17L

SACRAMENTO INTL (SMF')

RNAV (GPS) Y RWY 17L

SACRAMENTO, CALIFORNIA

Amendment 3b

RAW TEXT

Circling NA west of Rwy 17L-35R. Simultaneous approach authorized. LNAV procedure NA during simultaneous operations. Use of FD or AP required during simultaneous operations. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -4°C or above 54°C. For inop ALS, increase LNAV/VNAV all Cats visibility to RVR 4000 and LNAV C/D visibility to RVR 5500.

RNP APCH - GPS.

MALSR

MISSING APPROACH: Climb to 500 then climbing left turn to 3000 direct ORRCA and hold.

<table>
<thead>
<tr>
<th>CATEGORY</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
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<tr>
<td>LPV DA</td>
<td>227/18</td>
<td>200 (200-1/2)</td>
<td></td>
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<tr>
<td>LNAV/ VNAV DA</td>
<td>277/24</td>
<td>250 (300-1/2)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LNAV MDA</td>
<td>380/24</td>
<td>353 (400-1/2)</td>
<td>380/30</td>
<td>353 (400-1/2)</td>
</tr>
</tbody>
</table>

CIRCLING

SACRAMENTO, CALIFORNIA

Amdt 3b 23FEB23

38°42’N-121°35’W
RNAV (GPS) Y RWY 17R

SACRAMENTO INTL (SMF')

Circling NA east of Rwys 17R-35L. Simultaneous approach authorized. Use of FD or AP required during simultaneous operations. LNAV procedure NA during simultaneous operations. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -4°C or above 54°C. For inop ALS, increase LNAV/VNAV all Cats visibility to RVR 4500 and LNAV all Cats visibility to RVR 5500.

MISSED APPROACH: Climb to 500 then climbing right turn to 2000 direct GRIME and hold.
Circling NA east of Rwy 17R-35L. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -2°C or above 54°C. For inop ALS, increase LNAV/VNAV all Cats visibility to RVR 4500 and increase LNAV Cat C/D visibility to RVR 5500.

* RVR 1800 authorized with use of FD or AP or HUD to DA.

MISSED APPROACH: Climb to 800 then climbing left turn to 2000 direct GRIME and hold.
NA below -2°C or above 54°C.
DEPARTURE ROUTE DESCRIPTION

TAKEOFF MINIMUMS

Rwys 17R, 35L/R: Standard.
Rwy 17L: Standard with minimum climb of 220’ per NM to 700.

NOTE: Chart not to scale.

TAKEOFF RUNWAYS 17L/R: Climbing left turn heading 120°, or as assigned by ATC, for RADAR vectors to assigned route/fix, thence...
TAKEOFF RUNWAYS 35L/R: Climbing right turn heading 090°, or as assigned by ATC, for RADAR vectors to assigned route/fix, thence...

...maintain ATC assigned altitude. Expect filed altitude ten minutes after departure.
DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAYS 17L/R: Climb on heading 168° to 540, then left turn direct FTHIL. Thence. . . .

TAKEOFF RUNWAYS 35L/R: Climb on heading 348° to 540, then right turn direct FTHIL. Thence. . . .

. . . . on transition. Maintain FL190. Expect filed altitude 10 minutes after departure.

FRIANT TRANSITION (FTHIL3.FRA)

NOTE: Chart not to scale.

TAKEOFF MINIMUMS
Rwys 17L/R, 35L/R: Standard with minimum climb of 500’ per NM to 540.

NOTE: RNAV-1.
NOTE: RADAR required.
NOTE: DME/DME/IRU or GPS required.

NOTE: Chart not to scale.
**DEPARTURE ROUTE DESCRIPTION**

**TAKEOFF RUNWAYS 35L/R:** Climb on heading 348° to 540, then right turn direct RVRCT. Thence . . . .

. . . . on transition. Maintain ATC assigned altitude. Expect filed altitude 5 minutes after departure.

**MACUS TRANSITION (RVRCT4.MACUS)**

**RALEY TRANSITION (RVRCT4.RALEY)**

**SHUFL TRANSITION (RVRCT4.SHUFL)**

**TAKEOFF MINIMUMS**

Rwys 35L/R: Standard with minimum climb of 500’ per NM to 540.

**NOTE:** Chart not to scale.
**DEPARTURE ROUTE DESCRIPTION**

**TAKEOFF RUNWAYS 17L/R:** Climb on heading 168° to 540, then left turn direct SCTWN at or above 2300. Thence . . . . . . . . . . . . . . . . on transition. Maintain ATC assigned altitude. Expect filed altitude 5 minutes after departure.

**MACUS TRANSITION (SCTWN4.MACUS)**

**RALEY TRANSITION (SCTWN4.RALEY)**

**SHUFL TRANSITION (SCTWN4.SHUFL)**

**NOTE:** Chart not to scale.
RNAV (GPS) RWY 4R

SACRAMENTO MATHER (MHR)

ATIS 118.325 NORCAL APP CON 127.4 317.5
MATHER TOWER * 120.65 (CTAF) 0 282.25
GND CON 121.85 307.9 CLNC DEL 121.85 307.9
UNICOM 122.95

Procedure NA for arrival on SAC VORTAC airway radials 021 CW 113.

Circling NA northwest of Rwy 4R-22L. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -15°C or above 37°C.

MISSING APPROACH: Climb to 3300 direct STNGR and hold.

ATIS 118.325 NORCAL APP CON 127.4 317.5
MATHER TOWER * 120.65 (CTAF) 0 282.25
GND CON 121.85 307.9 CLNC DEL 121.85 307.9
UNICOM 122.95

RNAV (GPS) RWY 4R

SACRAMENTO MATHER (MHR)

ATIS 118.325 NORCAL APP CON 127.4 317.5
MATHER TOWER * 120.65 (CTAF) 0 282.25
GND CON 121.85 307.9 CLNC DEL 121.85 307.9
UNICOM 122.95

Procedure NA for arrival on SAC VORTAC airway radials 021 CW 113.

Circling NA northwest of Rwy 4R-22L. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -15°C or above 37°C.

MISSING APPROACH: Climb to 3300 direct STNGR and hold.

ATIS 118.325 NORCAL APP CON 127.4 317.5
MATHER TOWER * 120.65 (CTAF) 0 282.25
GND CON 121.85 307.9 CLNC DEL 121.85 307.9
UNICOM 122.95

RNAV (GPS) RWY 4R

SACRAMENTO MATHER (MHR)

ATIS 118.325 NORCAL APP CON 127.4 317.5
MATHER TOWER * 120.65 (CTAF) 0 282.25
GND CON 121.85 307.9 CLNC DEL 121.85 307.9
UNICOM 122.95

Procedure NA for arrival on SAC VORTAC airway radials 021 CW 113.

Circling NA northwest of Rwy 4R-22L. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -15°C or above 37°C.

MISSING APPROACH: Climb to 3300 direct STNGR and hold.

ATIS 118.325 NORCAL APP CON 127.4 317.5
MATHER TOWER * 120.65 (CTAF) 0 282.25
GND CON 121.85 307.9 CLNC DEL 121.85 307.9
UNICOM 122.95

Procedure NA for arrival on SAC VORTAC airway radials 021 CW 113.

Circling NA northwest of Rwy 4R-22L. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -15°C or above 37°C.

MISSING APPROACH: Climb to 3300 direct STNGR and hold.

ATIS 118.325 NORCAL APP CON 127.4 317.5
MATHER TOWER * 120.65 (CTAF) 0 282.25
GND CON 121.85 307.9 CLNC DEL 121.85 307.9
UNICOM 122.95

Procedure NA for arrival on SAC VORTAC airway radials 021 CW 113.

Circling NA northwest of Rwy 4R-22L. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -15°C or above 37°C.

MISSING APPROACH: Climb to 3300 direct STNGR and hold.
RNAV (GPS) RWY 22L
SACRAMENTO MATHER (MHR)

SACRAMENTO, CALIFORNIA  AL-356 (FAA)  23166

**MISSED APPROACH**: Climb to 3000 direct XAKBE and on track 233° to SAC VORTAC and hold.

**GIRDING NA northwest of Rwy 4R-22L. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -15°C or above 54°C. For inop ALS, increase LNAV/VNAV all Cats visibility to 1/2 SM and LNAV Cat C/D visibility to 1/2 SM.**

### ATIS

| 118.325 |

### NORCAL APP CON

| 127.4 | 317.5 |

### MATHER TOWER ⚫ |

| 120.65 (CTAF) |

### GND CON

| 121.85 | 307.9 |

### CLINC DEL

| 121.85 | 307.9 |

### UNICOM

| 122.95 |

### MISS APCH FIX

**SACRAMENTO**

| SAC |

### Procedure NA for arrivals on HAGAN on V392-494 northbound.

### 3000 XAKBE

| Ir 233° |

### SACramento

### LNAV only

- **3.1 NM to**
- **1.4 NM to**
- **2.1 NM to**

### RW22L

### Jekax 2.1 NM to RW22L

### Gadbe 2.1 NM to RW22L

### Jekax 1.4 NM to RW22L

### Sandur 2.1 NM to RW22L

### Misser Approach Fix

- **1800**
- **2600**

### Holding Pattern

- **041°**
- **6000**
- **221°**
- **3500**

### GP 3.00° TCH 56

### CATEGORY

| A | B | C | D |

### LPV DA

- **298-1/2**
- **200 (200-1/2)**

### LNAV/ VNAV DA

- **517-1/4**
- **419 (500-1/4)**

### LNAV MDA

- **580-1/2**
- **482 (500-1/2)**
- **580-1**
- **482 (500-1)**
- **600-1/2**
- **502 (600-1/2)**
- **800-2 1/4**
- **702 (800-2 1/4)**

### SACRAMENTO MATHER (MHR) Amdt 3A 30JAN20

**38°33' N-121°18' W**
CAUTION: BE ALERT TO RUNWAY CROSSING CLEARANCES.
READBACK OF ALL RUNWAY HOLDING INSTRUCTIONS IS REQUIRED.
When local altimeter setting not received, use Monterey altimeter setting and increase S-ILS 31 DA to 355 feet. For inop ALS when using Monterey altimeter setting, increase S-ILS 31 visibility to RVR 4500. DME from SNS VORTAC. DME use requires simultaneous reception of I-SNS and SNS DME.

**MISSING APPROACH FIX**

When local altimeter setting not received, use Monterey altimeter setting and increase S-ILS 31 DA to 355 feet. For inop ALS when using Monterey altimeter setting, increase S-ILS 31 visibility to RVR 4500. DME from SNS VORTAC. DME use requires simultaneous reception of I-SNS and SNS DME.

**ATIS**
- 124.85

**NORCAL APP CON**
- 133.0
- 251.15

**SALINAS TOWER**
- 119.525 (CTAF)
- 239.3

**GND CON**
- 121.7

**UNICOM**
- 123.0

**LOCALIZER**
- 108.5

**I-SNS**
- 117.3 (SNS)
- 2 Chan 120

**DEBBS**
- SNS 15.7

**FREZZ**
- SNS 17.1

**HOLD**
- 7900

**MARNA**
- 10.9 (SNS)

**SALINAS MUNI (SNS)**

**ILS RWY 31**

**Procedure NA for arrival on SNS VORTAC airway radials 083 CW 167.**

**GS 3.00°**

**TCH 50**

**15.3 NM**

**1.4 NM**

**4.9 NM**

**SW-2, 30 NOV 2023 to 25 JAN 2024**

**CATEGORY**
- A
- B
- C
- D

**S-ILS 31**
- 302/24
- 220 (300-1/2)

**SALINAS, CALIFORNIA**
- Amdt 6 19MAY22

**AL-363 (FAA)**

**2023**

**36°40'N-121°36'W**

**281**
RNAV (GPS) RWY 13
SALINAS MUNI (SNS)

**Rwy 13**

- Helicopter visibility reduction below 3/4 SM NA.
- For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -1°C or above 54°C.
- Circling NA for Cats C and D northeast of Rwy 13 and north of Rwy 26.

**ATIS**
- 124.85

**NORCAL APP CON**
- 133.0
- 251.15

**SALINAS TOWER**
- 119.525 (CTAF) 239.3

**GND CON**
- 121.7

**UNICOM**
- 123.0

**Procedure NA for**
- arrivals at MOVER on V25-V87 northwest bound.
- arrivals at SHOEY on V27 northwest bound.
- Procedure NA for arrivals at ISIFU on V230 west bound.

**RWP**
- 84

**TDZE**
- 84

**HIRL Rwy 13-31**
- 162

**MIRL Rwy 8-26**
- 500 x 150

**CIRCLING**
- 580-1 496 (500-1)

**LPV**
- DA 334-¾ 250 (300¾)

**LNAV/VNAV**
- DA 447-1 363 (400-1)

**LNAV MDA**
- 580-1 496 (500-1)
- 580-1½ 496 (500-1½)

**CIRCLING**
- 580-1 496 (500-1)
- 696 (700-2)
- 1536 (1600-3)

**Categoria**
- A 1.4 NM
- B 3.5 NM
- C 6.1 NM
- D 6.1 NM to RW13
- E 1.4 NM to RW13

**RNAV (GPS)**
- RWP 13
- 135°
- 26° N-121°36’W

**Attn to pilots**
- Do not exceed 185K until MARNA. Climb to 600 then climbing right turn to 4800 direct MARNA and hold, continue climb-in-hold to 4800.

**MISSED APPROACH**
- (Do not exceed 185K until MARNA). Climb to 600 then climbing right turn to 4800 direct MARNA and hold, continue climb-in-hold to 4800.
Circling NA for Cats C and D northeast of Rwy 13 and north of Rwy 26. For inop ALS, increase LNAV Cat C/D visibility to RVR 5500.

MSIS APPROACH: Climb to 600 then climbing left turn to 4800 direct MARNA and hold, continue climb-in-hold to 4800.

Procedure NA for arrivals at RANCK on V87 east bound and T333 northwest bound.

VGSI and descent angles not coincident (VGSI Angle 3.00/TCH 59).

HIRL Rwy 13-31
MIRL Rwy 8-26
REIL Rwsy 13 and 26

36°40'N-121°36'W
**RNAV (GPS) Z RWY 31**

**SALINAS MUNI (SNS)**

**Amdt 1 19MAY22**

**WAAAS CH 69513 W31A**
- APP CRS 315°
- Rwy Idg 4825
- TDZE 82
- Apt Elev 84

**MALSR**
- Baro-VNAV NA.

**ATIS**
- 124.85

**NORCAL APP CON**
- 133.0  251.15

**SALINAS TOWER**
- 119.525 (CTAF) 239.3

**GND CON**
- 121.7

**UNICOM**
- 123.0

**MISSED APPROACH:** Climb to 600 then climbing left turn to 4800 direct MARNA and hold, continue climb-in-hold to 4800.

Procedure NA for arrivals at RANCK on V87 east bound and T333 southeast bound.

- **VGSI and RNAV glidepath not coincident (VGSI Angle 3.00°/TCH 59).**

**WABUB**

- **MARNA**
- **ACIYO**
- **GIPVY**
- **ACIYO**
- **WABUB**

**MIRL Rwy 13-31**

**HIRL Rwy 13-31**

**LPV DA**
- 302/24 220 (300-½)

**RNP APCH-GPS:**

**RNAV (GPS) Z RWY 31**

**SALINAS, CALIFORNIA**

**NORCAL APP CON**
- 133.0  251.15

**GND CON**
- 121.7

**UNICOM**
- 123.0

**36°40'N-121°36'W**

**285**
VDP NA when using Monterey altimeter setting. DME from SNS VORTAC. DME use requires simultaneous reception of I-SNS and SNS DME. Circling NA for Cats C and D northeast of Rwy 13 and north of Rwy 26. For inop ALS, increase S-LOC-31 visibility Cats C and D to RVR 5000. For inop ALS, when using Monterey altimeter setting, increase S-LOC-31 visibility Cats C and D to RVR 6000. When local altimeter setting not received, use Monterey altimeter setting and increase all MDAs 60 feet and Circling visibility Cat C ¼ SM.

Procedure NA for arrival on SNS VORTAC airway radius 083 CW 167.

MISSED APPROACH: Climb to 800 then climbing left turn to 4800 on SNS VORTAC R-275 to MARNA/SNS 10.9 DME and hold, continue climb-in-hold to 4800.
VOR RWY 13
SALINAS MUNI (SNS)

DME required.
- Rwy 13 helicopter visibility reduction below 1 SM NA. Circling NA for Cat C northeast of Rwy 13 and north of Rwy 26 and NA for Cat D northeast of Rwy 13-31.

MISSED APPROACH: Climbing right turn to 4800 on SNS VORTAC R-275 to MARNA/SNS 10.9 DME and hold, continue climb-in-hold to 4800.

ATIS 124.85
NORCAL APP CON 133.0 251.15
SALINAS TOWER* 119.525 (CTAF) 239.3
GND CON 121.7
UNICOM 123.0

Procedure NA for arrivals at SNS VORTAC on V25-87 southeast bound and V230 east bound

**Remain within 10 NM**

**CATEGORY**

<table>
<thead>
<tr>
<th></th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
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<tbody>
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<td>580-1</td>
<td>496 (500-1)</td>
<td>580-1</td>
<td>496 (500-1)</td>
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<tr>
<td>CIRCLING</td>
<td>580-1</td>
<td>496 (500-1)</td>
<td>780-2</td>
<td>696 (700-2)</td>
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**FAF to MAP 3.9 NM**

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<th>90</th>
<th>120</th>
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<td>Min:Sec</td>
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<td>2:36</td>
<td>1:57</td>
<td>1:34</td>
<td>1:18</td>
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</table>

**UNICOM**

SALINAS, CALIFORNIA
Amdt 12 19MAY22

36°40'N-121°36'W
CAUTION: BE ALERT TO RUNWAY CROSSING CLEARANCES.
READBACK OF ALL RUNWAY HOLDING INSTRUCTIONS IS REQUIRED.
DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAY 8: Climb heading 081° to 500 then climbing right turn heading 144° to intercept SNS R-114 (V248) southeast bound to SARDO INT. Thence . . . .

TAKEOFF RUNWAY 13: Climb heading 132° to 500 then climbing left turn to intercept SNS R-114 (V248) southeast bound to SARDO INT. Thence . . . .

TAKEOFF RUNWAY 26: Climb heading 261° to 500 then climbing right turn heading 144° to intercept SNS R-114 (V248) southeast bound to SARDO INT. Thence . . . .

TAKEOFF RUNWAY 31: Climb heading 312° to 500 then climbing left turn heading 084° to intercept SNS R-114 (V248) southeast bound to SARDO INT. Thence . . . .

. . . . Proceed on assigned route. Expect clearance to filed altitude 5 minutes after departure.
SALINAS THREE DEPARTURE
(SNS3.SNS) 19MAY22

TAKEOFF MINIMUMS
Rwys 8, 13, 26, 31: Standard.

NOTE: Rwys 8, 13: Do not exceed 210K until established on SNS R-255.

NOTE: RADAR required.

NOTE: Chart not to scale.

DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAYS 8, 13: Climbing right turn to 6000 to intercept SNS R-255 thence . . . .

TAKEOFF RUNWAY 26: Climb to 6000 to intercept SNS R-255 thence . . . .

TAKEOFF RUNWAY 31: Climbing left turn to 6000 to intercept SNS R-255 thence . . . .

. . . . Expect RADAR vectors to assigned route. Expect clearance to filed altitude/flight level within five (5) minutes after departure.
Circling NA southwest of Rwy 31-13.

**RNAV (GPS) RWY 31**

**CALAVERAS COUNTY-MAURY RASMUSSEN FIELD (CPU)**

- **AWOS-3P**: 118.525
- **NORCAL APP CON**: 125.1 363.2
- **UNICOM**: 123.0 (CTAF)

**MISSED APPROACH**: Climb to 4400 direct ZEGEX and hold, continue climb-in-hold to 4400.

**MISSING APCH FIX**

5 NM

ZEGEX

**5200 08° (28.2)**

**LINDEN LIN**

**MISA RW31 25 NM**

**8800**

**ELEV 1328**

**TDZE 1328**

**4400 ZEGEX**

**VGSI and descent angle not coincident (VGSI Angle 3.00/TCH 26).**

- **ZESUM**: 3 NM to RW31
- **KACBY**: (IF/IAF)
- **WUBEB**: (IAF)
- **HOFED**: (IAF)

**MIRL Rwy 13-31**

**LP MDA**: 1600-1 272 (300-1)
- **LNAV MDA**: 1860-1 532 (600-1) 1860-1½ 532 (600-1½)
- **CIRCLING**: 1860-1 532 (600-1) 2040-1 712 (800-1) 2360-3 1032 (1100-3)

**SAN ANDREAS, CALIFORNIA**

**2000**

**SAN ANDREAS, CALIFORNIA**

**311°**

**3478°**

**3897°**

**2595°**

**3802 X 60**

**144° 5200**

**5200**

**5200 N**

**OPT (5.5)**

**3700**

**KACBY**

**RW31**

**3 NM to ZESUM**

**UNICOM 123.0 (CTAF)**
RNAV (GPS) Y RWY 30
SAN CARLOS (SQL)

ATIS 125.9
NORCAL APP CON 133.95 317.6
SAN CARLOS TOWER * 119.0 (CTAF) 326.2
GND CON 121.6
UNICOM 122.95

Final approach course offset by 5.53°

Procedure NA for arrivals at OSI VOR/DME on T261 southwest bound.

VGSi and descent angles not coincident (VGSi Angle 3.00/TCH 25).

Category A

LNAV MDA 1260-1½ 1255 (1300-1¼)
NA

CIRCLING 1260-1½ 1255 (1300-1¼) 1260-1½ 1255 (1300-1¼) NA

Circling NA west of Rwy 12-30.

Rwy 30 visibility reduction by helicopters below 1 SM NA.

When local altimeter setting not received, use San Francisco Intl altimeter setting and increase all MDA 40 feet.

Use San Francisco Intl altimeter setting and increase all MDA 40 feet.

Misssed Approach: Climbing left turn to 5400 direct AMEBY and hold, continue climb-in-hold to 5400.
RNAV (GPS) Z RWY 30
SAN CARLOS (SQL)

DME/DME RNP-0.3 NA. When local altimeter setting not received, use San Francisco Intl altimeter setting and increase all MDA 40 feet. RWy 30 visibility reduction by helicopters below 1 SM NA. MISSED APPROACH: Climbing left turn to 5400 direct AMEBY and hold, continue climb-in-hold to 5400. Missed approach requires minimum climb of 302 feet per NM to 5400.

<table>
<thead>
<tr>
<th>ATIS</th>
<th>NORCAL APP CON</th>
<th>SAN CARLOS TOWER</th>
<th>GND CON</th>
<th>UNICOM</th>
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</thead>
<tbody>
<tr>
<td>125.9</td>
<td>133.95</td>
<td>317.6</td>
<td>121.6</td>
<td>122.95</td>
</tr>
</tbody>
</table>

If unable to comply with climb gradient, use RNAV (GPS) Y RWY 30.

Final approach course offset by 5.53°

Procedure NA for arrivals at OSI VOR/DME on T261 southwest bound.

VGSI and descent angles not coincident (VGSI Angle 3.00/TCH 25).

SW-2, 30 Nov 2023 to 25 Jan 2024
CAUTION: BE ALERT TO RUNWAY CROSSING CLEARANCES.
READBACK OF ALL RUNWAY HOLDING INSTRUCTIONS IS REQUIRED.
ILS or LOC RWY 28R
SAN FRANCISCO INTL (SFO)

RNVA 1-GPS or RADAR required for procedure entry.

Circling NA to Rwys 10L, 10R, 19L, and 19R. Circling Rwy 1L, 1R NA at night. LOC procedure NA during simultaneous operations. For inop ALS increase S-LOC 28R* Cat C/D visibility to 1½ SM. Simultaneous approach authorized. Simultaneous operations require use of vertical guidance; maintain last assigned altitude until established on glideslope.

MISSED APPROACH: Climb to 3000 on SFO VOR/DME R-281 to VIKYU INT/SFO 12 DME and hold. *MISSED approach requires minimum climb of 350 feet per NM to 1900; if unable to meet climb gradient, see ILS or LOC RWY 28L.
SAN FRANCISCO, CALIFORNIA
AL-375 (FAA) 23334

ILS RWY 28R (SA CAT I)
SAN FRANCISCO INTL (SFO)

LOC/DME I-GWQ
111.7
Chan 54
APP CRS
284°
Rwy Idg
13
TDZE
11236
Apt Elev
13

RNAV 1-GPS or RADAR required for procedure entry.

Requires specific OPSPEC, MSPEC, or LOA approval and use of HUD to DH.

D-ATIS
113.7 115.8 118.85
NORCAL APP CON
134.5 338.2
SAN FRANCISCO TOWER
120.5 269.1
GND CON
121.8
CLNC DEL
118.2
CPDLC

MISSED APPROACH: Climb to 3000 on SFO VOR/DME R-281 to VIKYU INT/SFO 12 DME and hold.
*Missed approach requires minimum climb of 350 feet per NM to 1900; if unable to meet climb gradient, see ILS or LOC RWY 28L.

SAN FRANCISCO INTL
115.8 SFO 12 DME and hold.

SAN FRANCISCO 111.8 Chan 105
R-281

MISSAPCH FIX
I-GWQ 12
SFO

WOODSIDE 113.9 OSI Chan 86

LOCATOR 111.7
I-GWQ 7.4

SAN FRANCISCO, CALIFORNIA
Amdt 15B 19MAY22

ILS and ILS glidepath not coincident (VGSI Angle 3.00/TCH 68).

Category 1 ILS - Special Aircrew & Aircraft Certification Required
MISSED APPROACH: Climb to 920 then climbing left turn to 4000 direct PRTLA and hold. Missed approach requires minimum climb of 357 feet per NM to 2000.

Autopilot coupled approach NA below 293 feet. In inop ALS, increase GLS visibility to RVR 4500.

VGSI and GLS glidepath not coincident (VGSI Angle 3.00°/TCH 71).

GLS RWY 19L

SAN FRANCISCO INTL (SFO)

Amdt 1 30NOV23
RNAV (RNP) Y RWY 28R
SAN FRANCISCO INTL (SFO)

For uncompensated Baro-VDNS systems, procedure NA below 3°C or above 54°C. For inop ALS, increase RNP 0.11 all Cats visibility to RVR 4000 and RNP 0.30 all Cats visibility to RVR 4500.

MISSED APPROACH: Climb to 3000 on track 284° to VIKYU and hold.
* Missed approach requires minimum climb of 250 feet per NM to 1600.
# Missed approach requires minimum climb of 350 feet per NM to 2100.

**Missed approach requires minimum climb of 250 feet per NM to VIKYU and hold.**

For inop ALS, increase RNP 0.11 all Cats visibility to RVR 4000 and RNP 0.30 all Cats visibility to RVR 4500.

MISSED APPROACH: Climb to 3000 on track 284° to VIKYU and hold.
* Missed approach requires minimum climb of 250 feet per NM to 1600.
# Missed approach requires minimum climb of 350 feet per NM to 2100.

For uncompensated Baro-VNA systems, procedure NA below 3°C or above 54°C. For inop ALS, increase RNP 0.11 all Cats visibility to RVR 4000 and RNP 0.30 all Cats visibility to RVR 4500.

MISSED APPROACH: Climb to 3000 on track 284° to VIKYU and hold.
* Missed approach requires minimum climb of 250 feet per NM to 1600.
# Missed approach requires minimum climb of 350 feet per NM to 2100.

For uncompensated Baro-VDNS systems, procedure NA below 3°C or above 54°C. For inop ALS, increase RNP 0.11 all Cats visibility to RVR 4000 and RNP 0.30 all Cats visibility to RVR 4500.

MISSED APPROACH: Climb to 3000 on track 284° to VIKYU and hold.
* Missed approach requires minimum climb of 250 feet per NM to 1600.
# Missed approach requires minimum climb of 350 feet per NM to 2100.

For uncompensated Baro-VDNS systems, procedure NA below 3°C or above 54°C. For inop ALS, increase RNP 0.11 all Cats visibility to RVR 4000 and RNP 0.30 all Cats visibility to RVR 4500.

MISSED APPROACH: Climb to 3000 on track 284° to VIKYU and hold.
* Missed approach requires minimum climb of 250 feet per NM to 1600.
# Missed approach requires minimum climb of 350 feet per NM to 2100.

For uncompensated Baro-VDNS systems, procedure NA below 3°C or above 54°C. For inop ALS, increase RNP 0.11 all Cats visibility to RVR 4000 and RNP 0.30 all Cats visibility to RVR 4500.

MISSED APPROACH: Climb to 3000 on track 284° to VIKYU and hold.
* Missed approach requires minimum climb of 250 feet per NM to 1600.
# Missed approach requires minimum climb of 350 feet per NM to 2100.

For uncompensated Baro-VDNS systems, procedure NA below 3°C or above 54°C. For inop ALS, increase RNP 0.11 all Cats visibility to RVR 4000 and RNP 0.30 all Cats visibility to RVR 4500.

MISSED APPROACH: Climb to 3000 on track 284° to VIKYU and hold.
* Missed approach requires minimum climb of 250 feet per NM to 1600.
# Missed approach requires minimum climb of 350 feet per NM to 2100.

For uncompensated Baro-VDNS systems, procedure NA below 3°C or above 54°C. For inop ALS, increase RNP 0.11 all Cats visibility to RVR 4000 and RNP 0.30 all Cats visibility to RVR 4500.

MISSED APPROACH: Climb to 3000 on track 284° to VIKYU and hold.
* Missed approach requires minimum climb of 250 feet per NM to 1600.
# Missed approach requires minimum climb of 350 feet per NM to 2100.

For uncompensated Baro-VDNS systems, procedure NA below 3°C or above 54°C. For inop ALS, increase RNP 0.11 all Cats visibility to RVR 4000 and RNP 0.30 all Cats visibility to RVR 4500.

MISSED APPROACH: Climb to 3000 on track 284° to VIKYU and hold.
* Missed approach requires minimum climb of 250 feet per NM to 1600.
# Missed approach requires minimum climb of 350 feet per NM to 2100.

For uncompensated Baro-VDNS systems, procedure NA below 3°C or above 54°C. For inop ALS, increase RNP 0.11 all Cats visibility to RVR 4000 and RNP 0.30 all Cats visibility to RVR 4500.

MISSED APPROACH: Climb to 3000 on track 284° to VIKYU and hold.
* Missed approach requires minimum climb of 250 feet per NM to 1600.
# Missed approach requires minimum climb of 350 feet per NM to 2100.

For uncompensated Baro-VDNS systems, procedure NA below 3°C or above 54°C. For inop ALS, increase RNP 0.11 all Cats visibility to RVR 4000 and RNP 0.30 all Cats visibility to RVR 4500.

MISSED APPROACH: Climb to 3000 on track 284° to VIKYU and hold.
* Missed approach requires minimum climb of 250 feet per NM to 1600.
# Missed approach requires minimum climb of 350 feet per NM to 2100.

For uncompensated Baro-VDNS systems, procedure NA below 3°C or above 54°C. For inop ALS, increase RNP 0.11 all Cats visibility to RVR 4000 and RNP 0.30 all Cats visibility to RVR 4500.

MISSED APPROACH: Climb to 3000 on track 284° to VIKYU and hold.
* Missed approach requires minimum climb of 250 feet per NM to 1600.
# Missed approach requires minimum climb of 350 feet per NM to 2100.

For uncompensated Baro-VDNS systems, procedure NA below 3°C or above 54°C. For inop ALS, increase RNP 0.11 all Cats visibility to RVR 4000 and RNP 0.30 all Cats visibility to RVR 4500.

MISSED APPROACH: Climb to 3000 on track 284° to VIKYU and hold.
* Missed approach requires minimum climb of 250 feet per NM to 1600.
# Missed approach requires minimum climb of 350 feet per NM to 2100.

For uncompensated Baro-VDNS systems, procedure NA below 3°C or above 54°C. For inop ALS, increase RNP 0.11 all Cats visibility to RVR 4000 and RNP 0.30 all Cats visibility to RVR 4500.

MISSED APPROACH: Climb to 3000 on track 284° to VIKYU and hold.
* Missed approach requires minimum climb of 250 feet per NM to 1600.
# Missed approach requires minimum climb of 350 feet per NM to 2100.

For uncompensated Baro-VDNS systems, procedure NA below 3°C or above 54°C. For inop ALS, increase RNP 0.11 all Cats visibility to RVR 4000 and RNP 0.30 all Cats visibility to RVR 4500.

MISSED APPROACH: Climb to 3000 on track 284° to VIKYU and hold.
* Missed approach requires minimum climb of 250 feet per NM to 1600.
# Missed approach requires minimum climb of 350 feet per NM to 2100.

For uncompensated Baro-VDNS systems, procedure NA below 3°C or above 54°C. For inop ALS, increase RNP 0.11 all Cats visibility to RVR 4000 and RNP 0.30 all Cats visibility to RVR 4500.

MISSED APPROACH: Climb to 3000 on track 284° to VIKYU and hold.
* Missed approach requires minimum climb of 250 feet per NM to 1600.
# Missed approach requires minimum climb of 350 feet per NM to 2100.

For uncompensated Baro-VDNS systems, procedure NA below 3°C or above 54°C. For inop ALS, increase RNP 0.11 all Cats visibility to RVR 4000 and RNP 0.30 all Cats visibility to RVR 4500.

MISSED APPROACH: Climb to 3000 on track 284° to VIKYU and hold.
* Missed approach requires minimum climb of 250 feet per NM to 1600.
# Missed approach requires minimum climb of 350 feet per NM to 2100.
For uncompensated Baro-VNAV systems, procedure NA below 2°C (36°F) or above 34°C (93°F). GPS required. When VGS is inop, procedure NA at night.

**MISSING APPROACH:** Climb to 3600 on track 104° to IGUKE and on track 103° to DUMBA and hold.

**Producer NA for arrivals at STINS on V25-199 and V27 northwest bound.**

**VGSI and RNAV glidepath not coincident (VGSI Angle 3.00°/TCH 68).**

- **3600**
  - **IGUKE**
  - **TR 104°**
- **RUW10R**
  - **DUMBA**
  - **TR 103°**

**AUTHORIZATION REQUIRED**

**CATEGORY**

- **A**
  - **RNP 0.20 DA**
  - **396-1 1/4**
  - **386 (400-1 1/4)**
- **B**
  - **RNP 0.30 DA**
  - **1108-4**
  - **1098 (1100-4)**

**37°37'N-122°23'W**
RNAV (GPS) RWY 10L
SAN FRANCISCO INTL (SFO)

D-ATIS
113.7 115.8 118.85
NORCAL APP CON 134.5 338.2
SAN FRANCISCO TOWER 120.5 269.1
GND CON 121.8
CLNC DEL 118.2
CPDLC

Procedure NA for arrivals at STINS on V25-199 and V27 northwest bound.

Helicopter visibility reduction below RVR 4000 NA.

MISSED APPROACH: Climb to 4000 direct DUMBA and hold.

TDZ/CL Rwys 19L and 28R
REIL Rwys 1L, 1R, and 10L
HIRL all Rwys

RNAV (GPS) RWY 10L
SAN FRANCISCO INTL (SFO)

SAN FRANCISCO, CALIFORNIA
AL-375 (FAA) 21224

37°37'N-122°23'W
307
RNAV (GPS) RWY 19L
SAN FRANCISCO INTL (SFO)

For uncompensated Baro-VNAV systems, LNAV/VNAV NA below 4°C or above 54°C. For inop ALS, increase LPV DA (CG 357) all Cats visibility to RVR 4500. For inop ALS, increase LNAV/VNAV all Cats visibility to 2 ½ SM and LNAV Cats C and D visibility to 3 SM.

Amdt 4  30NOV23

SW-2, 30 NOV 2023 to 25 JAN 2024

**308**
Runway 28L and 28R separated by 750 feet centerline to centerline. DME/DME RNP-0.3 NA. When executing a missed approach or go-around, unless otherwise instructed by ATC, initially turn right to 030° utilizing heading mode. Inoperative table does not apply. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below 2°C (36°F) or above 54°C (130°F).

*If a go-around executed after passing DARNE, go-around requires a minimum climb of 380 feet per NM to 1800.

**DATIS**

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<thead>
<tr>
<th>113.7</th>
<th>115.8</th>
<th>118.85</th>
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**NORCAL APP CON**

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**SAN FRANCISCO TOWER**

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**GND CON**

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</table>

**CLNC DEL**

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<thead>
<tr>
<th>118.2</th>
</tr>
</thead>
</table>

**CPDLC**

**RADAR REQUIRED**

**CPDLC Frequencies**

- 134.5 338.2 NORCAL APP CON
- 120.5 269.1 SAN FRANCISCO TOWER
- 121.8 GND CON
- 118.2 CLNC DEL
- 113.7 115.8 DATIS

**TDZ/CL Rwys**

- 19L and 28R
- REIL Rwys 1L, 1R, and 10L
- HIRL all Rwys

**RNAV (GPS) X RWY 28R**

**SAN FRANCISCO INTL (SFO)**

**VNAV and RNAV glidepath not coincident (VGSI Angle 3.00/TCH 68).**

**CATEGORY**

- A
- B
- C
- D

**LNAV/VNAV**

- DA* 1140-4 1127 (1200-4)

**RNAV (GPS) X RWY 28R**

**SAN FRANCISCO, CALIFORNIA**

- 37°37'N-122°23'W
**RNAV (GPS) Y RWY 10R**
**SAN FRANCISCO INTL (SFO)**

- **DME/DME RNP-0.3 NA.** When VGSI inop, procedure NA at night. Helicopter visibility reduction below RVR 5000 NA.

**MISSING APPROACH:** Climb to 4000 direct DUMBA and hold.

- **RNAV (GPS) Y RWY 10R**
- **SAN FRANCISCO TOWER**
  - **APL CRS**
  - **Rwy Idg**
  - **10704**
  - **TDZE**
  - **10**
  - **Apt Elev**
  - **13**

**D-ATIS**
- **113.7**
- **115.8**
- **118.85**

**NORCAL APP CON**
- **134.5**
- **338.2**

**SAN FRANCISCO TOWER**
- **120.5**
- **269.1**

**GND CON**
- **121.8**

**CLNC DEL**
- **118.2**

**CPDLC**
- **1974**
- **2212**

- **Procedure NA for arrivals at STINS on V25-199 and V27 northwest bound.**

**ELEV 13**
- **TDZE 10**

**VGS1 and descent angles not coincident (VGS1 Angle 3.00/TCH 68).**

**CATEGORY**
- **A**
- **B**
- **C**
- **D**

**LNAV MDA**
- **1200/60**
- **1190 (1200-1 1/2)**

**TDZ/CL Rwys 19L and 28R**
- **REIL Rwys 1L, 1R and 10L**
- **HIRL all Rwys**

**TDZ**
- **104° to RW10R**

**TDZE**
- **10**

**SAN FRANCISCO, CALIFORNIA**

- **Amdt 2A  26JUN14**

**SAN FRANCISCO TOWER**
- **GND CON**
- **121.8**
- **118.2**

**CLNC DEL**
- **113.7**
- **115.8**

**D-ATIS**
- **134.5**
- **338.2**

**SAN FRANCISCO INTL (SFO)**

- **RNAV (GPS) Y RWY 10R**
- **37°37'N-122°23'W**
- **311**
RNAV (GPS) Y RWY 19R
SAN FRANCISCO INTL (SFO)

RNPA CH 53533 W19B
APP CRS 194°
Rwy Idg 7650
TDZE 11
Apt Elev 13

Missed Approach: Climb to 1540 then climbing right turn to 3000 direct THHEO and hold.

San Francisco, California

TWR 2212

Category A
LPV DA 1005-4 994 (1000-4)

Category B
LNAV/ VNAV DA 878-2½ 867 (900-2½)

LNAV MDA 1320-1½ 1320-3 1309 (1400-1½ 1400-3)

RNAV (GPS) Y RWY 19R
San Francisco Int'l (SFO)

Amdt 4 30NOV23

37°37'N-122°23'W

San Francisco, California
Simultaneous approach authorized. Simultaneous operations require use of vertical guidance; maintain last assigned altitude until established on glidepath. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below 4°C or above 54°C. Simultaneous approach NA below 12°C (52°F).

**Missed Approach:** Climb to 600 then climbing right turn to 3000 direct THHEO and hold. *Missed approach requires minimum climb of 395 feet per NM to 2100; if unable to meet climb gradient, see RNAV (GPS) Y RWY 19R.*

**Category**

- **A**
  - LPV DA*
    - 317/45 306 (400-2.5)
  - LNAV/VNAV DA*
    - 328/45 317 (400-2.5)

**RNP APCH - GPS.**

**RNAV (GPS) Z RWY 19R**

**SAN FRANCISCO INTL (SFO)**

**D-ATIS**

- 113.7 115.8
- 118.85

**NORCAL APP CON**

- 134.5 338.2

**SAN FRANCISCO TOWER**

- 120.5 269.1

**GND CON**

- 121.8

**CLNC DEL**

- 118.2

**CPDLC**

- 120.5 269.1
- 118.85

**SAN FRANCISCO, CALIFORNIA**

**ORIG 30NOV23**

**37°37'N-122°23'W**

**313**
RNAV (GPS) Z Rwy 28R
SAN FRANCISCO INTL (SFO)

**RNP APCH:**

- Circling NA to Rwys 1L, 10R, 19L, and 19R. Circling Rwy 1L, 1 R NA at night. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below 3°C or above 54°C. For inop ALS, increase LNAV/VNAV all Cats visibility to 1.3 SM, increase LNAV Cat D/C visibility to 2 SM.

**D-ATIS**

- 113.7 115.8 118.85

**NORCAL APP CON**

- 134.5 338.2

**SAN FRANCISCO TOWER**

- 120.5 269.1

**GND CON**

- 121.8

**CLNC DEL**

- 118.2

**CPDLC**

- 7000

**SAN FRANCISCO, CALIFORNIA**

Amdt 7 13SEP18

**RNAV (GPS) Z Rwy 28R**

**ALF-2**

- MISSED APPROACH: Climb to 3200 direct VIKYU and hold, continue climb-in-hold to 3200.

**ALSF-2**

- Climb to 3200 direct VIKYU and hold, continue climb-in-hold to 3200.

**MISSING APCH FIX**

- VIKYU

**ELEV**

- 13

**TDZE**

- 13

**D**

- 5000

**MISSED APCH FIX**

- VIKYU

**104°**

**284°**

**3000**

**GP 3.00° TCH 55**

**CATEGORY**

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<td>760-1 747 (800-1)</td>
<td>960-1 1/4 947 (1000-1 1/4)</td>
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**RNAV (GPS) Z Rwy 28R**

**WASHINGTON, D.C.**

**WAAS CH 48803**

**Rwy Idg**

- 11236

**TDZE**

- 13

**Apt Elev**

- 13

**SW-2, 30 NOV 2023 to 25 JAN 2024**
NOTE: Closely spaced parallel visual approaches may be in progress to Runway 28L utilizing I-SFO. In the event of a go-around on Runway 28L, turn left heading 265° or on Runway 28R, heading 280°, climb and maintain 3000 or as directed by ATC.
TIPP TOE VISUAL RWY 28L/R

1 NM  2  3  4  5  6  7  8  9  10  11  12  13  14  15  16

TIPP TOE VISUAL APPROACH RUNWAY 28L/R

At/above 6000 at EDDYY, proceed to SIDBY at/above 5000, north turn at SIDBY to CHERA. Runway 28L, from CHERA 310° heading to intercept the I-SFO localizer. Runway 28R, from CHERA 310° heading to intercept the I-GWQ localizer. In the event of a go-around on Runway 28L, turn left on heading 265°. For a go-around on Runway 28R, heading 280°, climb and maintain 3000 or as directed by ATC.

Vertical Guidance Navaid and Angle: LOC I-SFO (GS 2.85°) RWY 28L. LOC I-GWQ (GS 3.00°) RWY 28R.

Weather Minimums: SFO 2500'/5 or SFO 1000'/3 with 5 mile visibility in eastern quadrant (030° to 120°) and San Mateo AWOS 2400'/5 (If AWOS inoperative, SQL 2400'/5)

NOTE: Closely spaced parallel visual approaches may be in progress. In the event of a go-around on Runway 28L, turn left heading 265° or on Runway 28R, heading 280°, climb and maintain 3000 or as directed by ATC.
READBACK OF ALL RUNWAY HOLDING INSTRUCTIONS IS REQUIRED.

CAUTION: BE ALERT TO RUNWAY CROSSING CLEARANCES.

D-ATIS
113.7 115.8 118.85
SAN FRANCISCO TOWER
120.5 269.1
GND CON
121.8
CLNC DEL
118.2
CPDLC
PDC

ASSC in use. Operate transponders with altitude reporting mode and ADS-B (if equipped) enabled on all airport surfaces.

Runway Status Lights in Operation.

NOTE:

B/A: BOARDBING AREA

SW-2, 30 NOV 2023 to 25 JAN 2024
DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAY 10L: Climb heading 104° to 520, then direct ORYAN, then on track 102° to SAHEY, then on track 101° to cross CIITY at or above 5000. Thence . . .

TAKEOFF RUNWAY 10R: Climb heading 104° to 520, then direct URRSA, then on track 101° to SAHEY, then on track 101° to cross CIITY at or above 5000. Thence . . .

TAKEOFF RUNWAYS 19L/19R: Climb heading 194° to 520, then left turn direct to cross CIITY at or above 5000. Thence . . .

. . . on (transition). Maintain FL190. Expect filed altitude 10 minutes after departure.

DEDHD TRANSITION (CIITY3.DEDHD)
GRTFL TRANSITION (CIITY3.GRTFL)
MOGEE TRANSITION (CIITY3.MOGEE)
ORRCA TRANSITION (CIITY3.ORRCA)
SYRAH TRANSITION (CIITY3.SYRAH)
TIPRE TRANSITION (CIITY3.TIPRE)

TAKEOFF MINIMUMS

Rwys 10L/R: Standard with minimum climb of 500' per NM to 520.
Rwys 19L/R: Standard with minimum climb of 575' per NM to 2000.

TOP ALTITUDE:

- FL190

NOTE: Chart not to scale.
DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAYS 1L/R: Climb on SFO R-350 (or as assigned) for vectors to assigned route/fix. Thence . . . .

TAKEOFF RUNWAYS 10L/R and 19L/R: Turn left and climb on the SFO R-090 and OSI R-028 to OSI VOR/DME; expect vector to assigned route/fix after OSI VOR/DME. Thence . . . .

TAKEOFF RUNWAYS 28L/R: Climb on the SFO VOR/DME R-281 to NORMM INT/ SFO VOR/DME 13 DME; expect vector to assigned route/fix after NORMM INT. Thence . . . .

. . . .expect further clearance to filed altitude 10 minutes after departure.
DEPARTURE ROUTE DESCRIPTION

TAKEOFF MINIMUMS
Rwy 28L: Standard with minimum climb of 500’ per NM to 513
then 380’ per NM to 1400.
Rwy 28R: Standard with minimum climb of 500’ per NM to 1300.

TAKEOFF RUNWAYS 28L/R: Climb on heading 284° to 513, then direct GNNRR at or above 2500, thence . . . .

. . . . on (transition), maintain 3000. Expect filed altitude 10 minutes after departure.

ALCOA TRANSITION (GNNRR3.ALCOA)
AMAKR TRANSITION (GNNRR3.AMAKR)
BEBOP TRANSITION (GNNRR3.BEBOP)
CINNY TRANSITION (GNNRR3.CINNY)

NOTE: Chart not to scale.
NOTE:  Chart not to scale.

NOTE:  Rapidly rising terrain to 2000' immediately south of airport.

TAKEOFF MINIMUMS
Rwys 10L/R: Standard.
Rwys 19L/R: Standard with minimum climb of 575' per NM to 2000.
Rwys 28L/R: Standard with minimum climb of 351' per NM to 1300.

TAKEOFF RUNWAYS 10L/R: Climbing left turn to intercept SFO R-090 to cross SImply 7 DME FIX at or above 2500, then climbing right turn heading 233° to intercept and proceed on PYE R-144 to STINS INT/SFO 22 DME, then on SFO VOR/DME R-287 to MOLEN INT/SFO 41 DME. Thence . . . .

TAKEOFF RUNWAYS 19L/R: Climbing left turn to heading 053° to intercept SFO R-090 to cross SImply 7 DME FIX at or above 2500, then climbing right turn heading 233° to intercept and proceed on PYE R-144 to STINS INT/SFO VOR/DME 22 DME, then on SFO VOR/DME R-287 to MOLEN INT/SFO 41 DME. Thence . . . .

TAKEOFF RUNWAYS 28 L/R: Climbing left turn to intercept SFO R-090 to cross WESLA INT/SFO VOR/DME 6 DME at or above 2500 then climbing right turn to intercept SFO R-287 to MOLEN INT/SFO 41 DME. Thence . . . . . . . . (transition). Expect clearance to filed altitude 10 minutes after departure.

MENDOCINO TRANSITION (MOLEN9.ENI): From over MOLEN INT on ENI R-156 to ENI VORTAC.
NIITE THREE DEPARTURE (RNAV)

DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAYS 1L/R: Climb heading 014° to 520, then right turn direct MDBAY, then on track 323° to HUSSH, then on track 324° to NIITE. Thence...

TAKEOFF RUNWAYS 28L/R: Climb heading 284° to 520 and at or below 220K, then right turn direct GALOO, then on track 325° to NIITE. Thence...

...on (transition). Maintain FL190, expect filed altitude 10 minutes after departure.

DEDHD TRANSITION (NIITE3.DEDHD)
GOBBS TRANSITION (NIITE3.GOBBs)
GRTFL TRANSITION (NIITE3.GRTFL)
MOGEE TRANSITION (NIITE3.MOGEE)
ORRCA TRANSITION (NIITE3.ORRCA)
SYRAH TRANSITION (NIITE3.SYRAH)
TIPRE TRANSITION (NIITE3.TIPRE)

NOTE: Chart not to scale.

NOTE: RNAV 1.
NOTE: RADAR required.
NOTE: DME/DME/IRU or GPS required.

NIITE THREE DEPARTURE (RNAV)
(NIITE3.NIITE) 20AUG15
NOTE: DME required.
NOTE: RADAR required.
NOTE: Turbojet only.

**TAKEOFF MINIMUMS**
Rwys 1L/R: Standard with minimum climb of 460’ per NM to 1900.
Rwys 28L/R: Standard with minimum climb of 351’ per NM to 1300.

NOTE: Chart not to scale.

(CONTINUED ON FOLLOWING PAGE)
DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAYS 1L/R: Climbing left turn heading 333° to intercept SFO VOR/DME R-350 to cross SEPDY INT/SFO VOR/DME 4 DME at or above 1600. Thence . . . .

TAKEOFF RUNWAYS 28L/R: Climb on SFO VOR/DME R-281 to cross SENZY INT/SFO VOR/DME 6 DME at or above 2500. Thence . . . .

. . . . climbing left turn heading 203° to intercept PYE R-151 to cross SEGUL INT/ PYE 68 DME at or above 16000, then on PYE R-151 to cross CYPRS INT/ PYE 101 DME at or above FL220. Then on MQO R-295 to MCKEY INT/MQO 21 DME, then on assigned (transition). Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure.

FELLOWS TRANSITION (OFFSH2.FLW): From over MCKEY INT on MQO R-295 to MQO VORTAC, then on MQO R-086 and FLW R-266 to FLW VOR/DME.

GAVIOTA TRANSITION (OFFSH2.GVO): From over MCKEY INT on MQO R-295 to MQO VORTAC, then on MQO R-126 and GVO R-307 to GVO VORTAC.

SAN MARCUS TRANSITION (OFFSH2.RZS): From over MCKEY INT on MQO R-295 to MQO VORTAC, then on MQO R-116 and RZS R-299 to RZS VORTAC.

SANTA CATALINA TRANSITION (OFFSH2.SXC): From over MCKEY INT on BSR R-131 to DAISY INT then on SXC R-287 to SXC VORTAC.
DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAY 10L: Climb on heading 104° to 520, then climb direct ORYAN, then on track 102° to SAHEY, thence . . . .

TAKEOFF RUNWAY 10R: Climb on heading 104° to 520, then climb direct URRSA, then on track 101° to SAHEY, thence . . . .

TAKEOFF RUNWAYS 19L/R: Climb on heading 194° to 520, then climbing left turn direct to SAHEY, thence . . . .

. . . on (transition). Maintain FL190, expect filed altitude 10 minutes after departure.

KAYEX TRANSITION (SAHEY4.KAYEX)

KTINA TRANSITION (SAHEY4.KTINA)

NTELL TRANSITION (SAHEY4.NTELL)

SUSEY TRANSITION (SAHEY4.SUSEY)

NOTE: Chart not to scale.
SAN FRANCISCO FOUR DEPARTURE

TOP ALTITUDE: ASSIGNED BY ATC

RED BLUFF
115.7 RBL
Chan 104

TAKEOFF MINIMUMS

Rwys 1L/R: Standard.
Rwys 28L/R: Standard with a minimum climb of 351' per NM to 1300.

NOTE: RADAR required.
NOTE: Rwys 1L/R: DME required.

DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAYS 1L/R: Climbing right turn heading 033° or ATC assigned heading to cross SFO 6 DME at or above 3000 for RADAR vectors to assigned route/fix. Expect further clearance to filed altitude 10 minutes after departure.

TAKEOFF RUNWAYS 28L/R: Climb on SFO VOR/DME R-281 to NORMM INT/SFO 13 DME; then expect RADAR vectors to assigned route/fix. Expect further clearance to filed altitude 10 minutes after departure.

LOST COMMUNICATIONS:
If not in contact with departure control after reaching 3000, continue climb to filed altitude and proceed direct to assigned route/fix.
DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAYS 28L/R: Climb heading 284° to 520, then direct KYNNG, then on depicted route to SNTNA. Thence . . . .

. . . . on (transition). Maintain 3000. Expect filed altitude 10 minutes after departure.

DEDHD TRANSITION (SNTNA2.DEDHD)
GRTFL TRANSITION (SNTNA2.GRTFL)
MOGEE TRANSITION (SNTNA2.MOGEE)
ORRCA TRANSITION (SNTNA2.ORRCA)
SYRAH TRANSITION (SNTNA2.SYRAH)
TIPRE TRANSITION (SNTNA2.TIPRE)

NOTE: RNAV 1.
NOTE: RADAR required.
NOTE: DME/DME/IRU or GPS required.
NOTE: Chart not to scale.

NOTE: Chart not to scale.
DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAYS 1L/R: Climb on heading 014° to 520 and at or below 210K, then climbing left turn direct SSTIK, then climbing left turn direct to cross PORTE at or below 10000. Thence... .

. . . on (transition). Maintain FL190, expect filed altitude 10 minutes after departure.

KAYEX TRANSITION (SSTIK5.KAYEX)
KTINA TRANSITION (SSTIK5.KTINA)
NTELL TRANSITION (SSTIK5.NTELL)
SUSEY TRANSITION (SSTIK5.SUSEY)
YYUNG TRANSITION (SSTIK5.YYUNG)

NOTE: Do not exceed 210K until leaving 520 feet.
NOTE: Chart not to scale.

DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAYS 1L, 1R: Climb heading 014° to 520, then right turn direct TYDYE, cross TYDYE at or above 3000, then on track 043° to TRUKN. Thence . . . .

TAKEOFF RUNWAYS 28L, 28R: Climb heading 284° to 520 and at or below 210K, then right turn direct TRUKN. Thence . . . .

. . . . on (transition). Maintain FL190. Expect filed altitude 10 minutes after departure.

DEDHD TRANSITION (TRUKN2.DEDHD)
GRFTL TRANSITION (TRUKN2.GRTFL)
MOGEE TRANSITION (TRUKN2.MOGEE)
ORRCA TRANSITION (TRUKN2.ORRCA)
SYRAH TRANSITION (TRUKN2.SYRAH)
TIPRE TRANSITION (TRUKN2.TIPRE)
DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAYS 28L/R: Climb on heading 284° to 520, then climb direct to cross WESLA at or above 2000 at or below 230K, then climbing left turn direct PORTE, thence . . . .

. . . . on (transition). Maintain 3000, expect filed altitude 10 minutes after departure.

KAYEX TRANSITION (WESLA5.KAYEX)

KTINA TRANSITION (WESLA5.KTINA)

NTELL TRANSITION (WESLA5.NTELL)

SUSEY TRANSITION (WESLA5.SUSEY)

YYUNG TRANSITION (WESLA5.YYUNG)

TAKEOFF MINIMUMS
Rwys 1L/R, 10L/R, 19L/R: NA-ATC.
Rwys 28L/R: Standard with minimum climb of 500' per NM to 2000.

NOTE: RNAV 1.
NOTE: DME/DME/IRU or GPS required.
NOTE: RADAR required for non-GPS equipped aircraft.
NOTE: Do not exceed 210K until leaving 520 feet.
ILS or LOC RWY 12R
NORMAN Y MINETA SAN JOSE INTL (SJC)

DME required.
For inoperative MALSR, increase S-LOC 12R Cat C/D visibility to 1 mile.

MISSED APPROACH: Climb to 500 then climb to 4000 on SJC VOR/DME R-121 to GILRO/SJC 26.7 DME and hold.

VGS and ILS glidepath not coincident (VGS Angle 3.00/TCH 75).
RNAV (RNP) Z RWY 12L
NORMAN Y MINETA SAN JOSE INTL (SJC)

For uncompensated Baro-VNAV systems, procedure NA below 0°C or above 54°C.

MISSED APPROACH: Climb to 4600 on track 126° to COKOR and track 124° to GILRO and hold.

See planview for multiple IF locations.

See planview for multiple IF locations.

MISSED APPROACH FIX
5 NM
126°
GILRO

4600
COKOR
124°
GILRO

HINIR
1100
VGSI and RNAV glidepath not coincident (VGSI Angle 3.00/TCH 70).

126°
TCH 57

3.2 NM

AUTHORIZATION REQUIRED

SAN JOSE, CALIFORNIA
Amdt 2B 24MAR22

SW-2, 30 NOV 2023 to 25 JAN 2024

SW-2, 30 NOV 2023 to 25 JAN 2024

SW-2, 30 NOV 2023 to 25 JAN 2024

SW-2, 30 NOV 2023 to 25 JAN 2024
RNAV (RNP) Z RWY 12R
NORMAN Y MINETA SAN JOSE INTL (SJJC)

AUTHORIZATION REQUIRED

For uncompensated Baro-VNAV systems, procedure NA below 0°C or above 54°C. For inop ALS, increase RNP 0.15 all Cats visibility to RVR 5500.

MISSED APPROACH: Climb to 4600 on track 126° to HOSBO and track 124° to GILRO and hold.

See planview for multiple IF locations.

5 NM

TWR

MALSR

REIL Rwy 12L
HIRL Rwy 12L-30R and 12R-30L

SAN JOSE, CALIFORNIA

approval until Feb 25 2024

AMDT 3B 24MAR22

37°22’N-121°56’W

335
RNAV (RNP) Z RWY 30R
NORMAN Y MINETA SAN JOSE INTL (SJC)

MISSED APPROACH: Climb to 600 then climb to 2000 direct ARTAQ and hold.

For uncompensated Baro-VNAV systems, procedure NA below 1°C or above 54°C.

See planview for multiple IF locations.

AUTHORIZATION REQUIRED

SAN JOSE, CALIFORNIA
Amdt 3 02DEC21

AL-693 (FAA) 22307
For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -1°C (31°F) or above 54°C (130°F). DME/DME RNP-0.3 NA. For inoperative MALSR, increase LNAV/VNAV all Cats visibility to 1 mile and LNAV C/D visibility to 1 1/2 mile.

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**RNAV (GPS) Y RWY 12R**

**NORMAN Y MINETA SAN JOSE INTL (SJJC)**

**RNAV (GPS) Y RWY 12R**

**NORMAN Y MINETA SAN JOSE INTL (SJJC)**
Closely spaced parallel visual approaches may be in progress to Runways 30L/R. In the event of a go-around on Runway 30L, proceed straight-ahead heading 300°, or on Runway 30R, turn right heading 120°, climb and maintain 4000, or as directed by ATC.

Weather Minimums: 2500 foot ceiling and 5 miles visibility.

RADAR REQUIRED

FAIRGROUNDS VISUAL APPROACH RUNWAYS 30L/R

FROM WEST-NORTHWEST: From over Lexington Reservoir northeast to shopping mall at Hi-ways 85/87 then to a turn onto final southeast fairgrounds and adjoining memorial park.
CAUTION: BE ALERT TO RUNWAY CROSSING CLEARANCES.
READBACK OF ALL RUNWAY HOLDING INSTRUCTIONS IS REQUIRED.
**DEPARTURE ROUTE DESCRIPTION**

**TAKEOFF MINIMUMS**

Rwys 12L/R: Standard with a minimum climb of 500' per NM to 2500.

Rwys 30L/R: NA ATC.

**NOTE:** DME/DME/IRU or GPS required.

**NOTE:** RNAV-1.

**NOTE:** RADAR required for non-GPS equipped aircraft.

**DEPARTURE RUNWAYS 12L/R:** Climb heading 126° to 570, then direct to NEVSE, then on track 039° to KIELY, then on track 348° to cross ALMDN at or below 12000. Thence... .

... on (transition). Maintain 15000 or lower filed altitude, expect higher altitude 10 minutes after departure.

**HRNER TRANSITION (ALMDN4.HRNER)**

**MOGEE TRANSITION (ALMDN4.MOGEE)**

**ORRCA TRANSITION (ALMDN4.ORRCA)**

**SYRAH TRANSITION (ALMDN4.SYRAH)**

**TIPRE TRANSITION (ALMDN4.TIPRE)**
DEPARTURE ROUTE DESCRIPTION

TAKEOFF MINIMUMS
Rwy 12L: Standard with a minimum climb of 470’ per NM to 5600.
Rwy 12R: Standard with a minimum climb of 470’ per NM to 5600.

NOTE: RNAV 1.
NOTE: DME/DME/IRU or GPS required.
NOTE: RADAR required.

TAKEOFF RUNWAYS 12L/R: Climb heading 126° or as assigned by ATC, expect RADAR vectors to cross GRRIF at or above 13000, then on track 343° to BMRNG, thence . . . . . . . . on (transition). Maintain 15000. Expect filed altitude 10 minutes after departure.

HRNER TRANSITION (BMRNG4.HRNER)
MOGEE TRANSITION (BMRNG4.MOGEE)
ORRCA TRANSITION (BMRNG4.ORRCA)
SYRAH TRANSITION (BMRNG4.SYRAH)
TIPRE TRANSITION (BMRNG4.TIPRE)
DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAYS 30L/R: Climb heading 306°, at SJC VOR/DME 1.8 DME northwest turn right heading 090° to intercept OAK R-120 to BLNCH, then turn right heading 180° for RADAR vectors to SJC VOR/DME, then on SJC R-340 to BMRNG INT. Maintain 5000, expect filed altitude 10 minutes after departure.

LOST COMMUNICATIONS

RUNWAYS 30L/R: If not in contact with departure control upon reaching BLNCH, depart BLNCH heading 180°. When able turn right direct SJC VOR/DME, cross SJC VOR/DME at or above 12000, then on SJC R-340 to BMRNG INT before proceeding on course.
**DEPARTURE ROUTE DESCRIPTION**

**TAKEOFF RUNWAYS 30L/R:** Climb heading 306° to SJC 1.8 DME NW of SJC VOR/DME, then turn right to intercept and proceed on OAK R-121 to MOONY INT, thence . . . .

. . . . on (transition) or (assigned route). Maintain 5000, expect clearance to filed altitude ten minutes after departure.

**AVENAL TRANSITION (SJC3.AVE):** From over MOONY INT on OAK R-121 and AVE R-304 to AVE VOR/DME.

**PANOCHE TRANSITION (SJC3.PXN):** From over MOONY INT on PXN R-288 to PXN VORTAC.

**NOTE:** Chart not to scale.
DEPARTURE ROUTE DESCRIPTION

NOTE: Chart not to scale.

NOTE: RNAV 1 required for non-GPS equipped aircraft.

NOTE: RADAR required for non-GPS equipped aircraft.

NOTE: DME/DME/IRU or GPS required.

NOTE: RNAV 1.

NOTE: DME/DME/IRU or GPS required.

NOTE: RNAV 1.

NOTE: RADAR required for non-GPS equipped aircraft.

NOTE: DME/DME/IRU or GPS required.

NOTE: RNAV 1.

NOTE: RADAR required for non-GPS equipped aircraft.

NOTE: DME/DME/IRU or GPS required.

NOTE: RNAV 1.

NOTE: RADAR required for non-GPS equipped aircraft.

NOTE: DME/DME/IRU or GPS required.

NOTE: RNAV 1.

NOTE: RADAR required for non-GPS equipped aircraft.

NOTE: DME/DME/IRU or GPS required.

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NOTE: RADAR required for non-GPS equipped aircraft.

NOTE: DME/DME/IRU or GPS required.
DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAYS 12L/R: Climb heading 126° to intercept and proceed on OAK R-129 to 4500, then turn left heading 303° for RADAR vectors to intercept and proceed on SJC R-009 to cross SUNOL at 5000, thence . . . .

TAKEOFF RUNWAYS 30L/R: Climb heading 306° at SJC 1.8 DME northwest of SJC VOR/DME, turn right heading 043° to intercept and proceed on SJC R-009 to cross SUNOL at 5000, thence . . . .

. . . . then on (transition) or (assigned route). Maintain ATC assigned altitude.

LINDEN TRANSITION (SUNOL1.LIN): From over SUNOL on LIN R-217 to LIN VOR/DME.

SACRAMENTO TRANSITION (SUNOL1.SAC): From over SUNOL on SAC R-177 to SAC VORTAC.

NOTE: Chart not to scale.
DEPARTURE ROUTE DESCRIPTION

TAKEOFF Runways 12L, 12R: Climb on heading 126° to 570, then direct NEVSE, then on track 115° to cross TECKY at or above 13000, thence. . . .

. . . .on (transition). Maintain FL190. Expect filed altitude 10 minutes after departure.

JFREE Transition (TECKY4.JFREE)
VLREE Transition (TECKY4.VLREE)

NOTE: Chart not to scale.
RNAV (GPS) RWY 13L
REID-HILLVIEW OF SANTA CLARA COUNTY (RHV)

Misssed Approach: Climb to 1900 then climbing right turn to 5000 direct GILRO and hold.
#Missed approach requires minimum climb of 300 feet per NM to 2800.

Procedure NA for arrivals at DECOT on V107 northwest bound.

For LPV fly visual to airport, 127° -3.6 NM. For LPV fly visual to airport, 127° -3.6 NM.

Circling Rwy 31L NA at night. Rwy 13L helicopter visibility reduction below
3/4 SM NA. VDP NA with Norman Y Mineta San Jose Intl altimeter setting.
When control tower closed, use Norman Y Mineta San Jose Intl altimeter setting
and increase all DAs 25 feet and all MDAs 40 feet; increase LPV visibility to
1 1/2 SM. Circling east of Rwy 13L-31R NA at night.

## Atis
125.2

## Norcal App Con
120.1 290.25

## Reid-Hillview Tower
* (Rwy 13L-31R) (Rwy 13R-31L) * 119.8 (CTAF) 126.1

## Gnd Con
121.65

## Unicom
122.95

---

**RNP Approach**

**V** NA

Circling Rwy 31L NA at night. Rwy 13L helicopter visibility reduction below
3/4 SM NA. VDP NA with Norman Y Mineta San Jose Intl altimeter setting.
When control tower closed, use Norman Y Mineta San Jose Intl altimeter setting
and increase all DAs 25 feet and all MDAs 40 feet; increase LPV visibility to
1 1/2 SM. Circling east of Rwy 13L-31R NA at night.

Procedure NA for arrivals at DECOT on V107 northwest bound.

## Missed Approach: Climb to 1900 then climbing right turn to 5000 direct GILRO and hold.

#Missed approach requires minimum climb of 300 feet per NM to 2800.
RNAV (GPS) Y RWY 31R
REID-HILLVIEW OF SANTA CLARA COUNTY (RHV)

Circling Rwy 31L NA at night. Rwy 31R helicopter visibility reduction below 3/4 SM NA. VDP NA when using Norman Y Mineta San Jose Intl altimeter setting. Circling east of Rwy 13L-31R NA at night. When control tower closed, use Norman Y Mineta San Jose Intl altimeter setting and increase all MDAs 40 feet.

MISSED APPROACH: Climb to 4000 direct DECOT and hold.

Final approach course offset 5.01°.

Procedure NA for arrivals at CATHE on V107 southeast bound.

Procedure NA for arrivals at GILRO on T333 southeast bound.

Category A

LNAV MDA
1300-1 1/4
1167 (1200-1 1/4)
1300-1 1/2
1167 (1200-1 1/2)
NA
NA

CIRCLING
1300-1 1/4
1165 (1200-1 1/4)
1300-1 1/2
1165 (1200-1 1/2)
NA
NA
CAUTION: BE ALERT TO RUNWAY CROSSING CLEARANCES.
READBACK OF ALL RUNWAY HOLDING INSTRUCTIONS IS REQUIRED.
NOTE: GPS required.

NOTE: RNAV 1.

TAKEOFF MINIMUMS
Rwys 31L/R: Standard.
Rwys 13L/R: NA - environmental.

TAKEOFF OBSTACLE NOTES
Rwys 31L/R: Trees 1070’ from DER, 500’ right and left of centerline, 173’ and 169’ MSL.
Rwy 31R: Light 125’ from DER, 370’ right of centerline, 159’ MSL.

NOTE: Chart not to scale.

DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAY 31L: Climb to 4000 via 307° course to CAXAB WP and 311° track to DECOT WP. Then via assigned route.

TAKEOFF RUNWAY 31R: Climb to 4000 via 307° course to ANGIF WP and 311° track to DECOT WP. Then via assigned route.

TAKEOFF RUNWAYS 13L/13R: NA.
RNAV (GPS) RWY 32
SAN MARTIN (E16)

- **Circling NA southwest of Rwy 14-32. Rwy 32 helicopter visibility reduction below ½ SM NA.**

- **Procedure NA for arrivals at 4 NM GELVY.**

- **Procedure NA for arrival on SNS VORTAC airway radials 264 CW 068.**

- **Missed approach requires minimum climb of 260 feet per NM to 2400.**

- **AWOS-3P 118.35**

- **NORCAL APP CON 124.525 348.675**

- **UNICOM 122.7 (CTAF)**

- **Circulars NA on T333 southeast bound.**

- **SAN MARTIN, CALIFORNIA**

- **ELEV 284**

- **TDZE 284**

- **MIRL Rwy 14-32**

- **RNAV (GPS) RWY 32**

- **SAN MARTIN (E16)**

- **Configuration Chart**

- **Amdt 2A 08SEP22**

- **SAN MARTIN, CALIFORNIA**

- **37°05'N 121°36'W**
RNAN (GPS) Rwy 2

Charles M Schulz-sonoma County (STS)

Missed Approach: Climb to 6000 direct UVNOQ and on track 291° to CABEX and hold. Continue climb-in-hold to 6000.

Procedure NA for arrivals at BOARS on V199 southeast bound.

Procedure NA for arrivals on PYE VOR/DME airway radials 335 CW 349.

VGSi and descent angles not coincident (VGSi Angle 3.00/TCH 50).

LNAV MDA
- 660-1
- 531 (600-1)
- 660-1/2
- 531 (600-1/2)

CIRCLING
- 660-1
- 531 (600-1)
- 680-1
- 551 (600-1)
- 1080-3
- 951 (1000-3)
- 1420-3
- 1291 (1300-3)

Radiobeacon
- SW-2, 30 Nov 2023 to 25 Jan 2024

Category
- A
- B
- C
- D

LP MDA
- 500-1
- 371 (400-1)

SANTA ROSA, CALIFORNIA
Orig-E 28MAR19

CHARLES M SCHULZ-SONOMA COUNTY (STS)

RNAV (GPS) Rwy 2
CAUTION: BE ALERT TO RUNWAY CROSSING CLEARANCES.
READBACK OF ALL RUNWAY HOLDING INSTRUCTIONS IS REQUIRED.
NOTE: RADAR required.

TAKEOFF MINIMUMS
Rwy 2: Standard with minimum climb of 300’ per NM to 2100.
Rwy 14: Standard with minimum climb of 285’ per NM to 2500.
Rwy 20: Standard with minimum climb of 265’ per NM to 2200.
Rwy 32: Standard with minimum climb of 375’ per NM to 2200.

DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAY 2: Climbing left turn on heading 305° (or as assigned between 200° CW to 305° from departure end of runway), thence . . . .

TAKEOFF RUNWAY 14: Climb on heading 144° (or as assigned between 110° CW to 315° from departure end of runway), thence . . . .

TAKEOFF RUNWAY 20: Climb on heading 196° (or as assigned between 100° CW to 250° from departure end of runway), thence . . . .

TAKEOFF RUNWAY 32: Climbing left turn on heading 315° (or as assigned between 145° CW to 315° from departure end of runway), thence . . . .

. . . . expect RADAR vectors to join assigned route. Maintain ATC assigned altitude; expect filed altitude/flight level ten minutes after departure.

LOST COMMUNICATIONS: If not in contact with Oakland Center after reaching 4000, proceed direct to the PYE VOR/DME. Thence via assigned route.
RNAV (GPS) RWY 18

LAKE TAHOE (TVL)

**ASOS**

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**OAOKLAND CENTER**

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**RNAV (GPS) RWY 18**

**ELEVATION**

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DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAY 36: Climbing left turn on heading 343° to intercept the SWR VOR/DME R-117 northwest bound. Cross RICHY/SWR 16 DME at or above 8300, cross SWR at or above 11000. Thence . . . .

. . . .on assigned route (Aircraft cleared on a transition turn left to intercept the SWR R-117 southeast bound to cross RICHY at or above 13000). Maintain ATC assigned altitude.

GENNE TRANSITION (RICHY7.GENNE): From over RICHY INT on SWR R-117 to GENNE.

MARRI TRANSITION (RICHY7.MARRI): From over RICHY INT on SWR R-117 to MARRI.

SPOOK TRANSITION (RICHY7.SPOOK): From over RICHY INT on FMG R-192 to SPOOK INT.

TILTS TRANSITION (RICHY7.TILTS): From over RICHY INT on SWR R-117 to TILTS.
**ILS or LOC RWY 29R**

**STOCKTON METRO (SCK)**

- **ATIS**: 118.25
- **NORCAL APP CON**: (SE-NW) 123.85 278.3 (N-S) 125.1 363.2
- **STOCKTON TOWER**: 120.3 (CTAF) 239.0
- **GND CON**: 121.9
- **UNICOM**: 122.95

**LOCALIZER 109.1**
- **I-SCK**: Chan 28

**ORANG MOD 25.8**

**STOCKTON METRO (SCK)**

- **ATIS**: 118.25
- **NORCAL APP CON**: (SE-NW) 123.85 278.3 (N-S) 125.1 363.2
- **STOCKTON TOWER**: 120.3 (CTAF) 239.0
- **GND CON**: 121.9
- **UNICOM**: 122.95

**LOCALIZER 109.1**
- **I-SCK**: Chan 28

---

**MISSING APPROACH**: Climb to 500 then climbing right turn to 2000 on heading 010° and MOD VOR/DME R-309 to ORANG INT/MOD 25.8 DME and hold.
ILS RWY 29R (SA CAT II)
STOCKTON METRO (SCK)

Reduced lighting: requires specific OPSPEC, MSPEC, or LOA approval and use of autoland or HUD to touchdown. Procedure NA when tower closed.

MALSR
MISSED APPROACH: Climb to 500 then climbing right turn to 2000 on heading 010° and MOD VOR/DME R-309 to ORANG INT/MOD 25.8 DME and hold.

Localizer 109.1
I-SCK 114.8 LIN
Chan 95

Procedure NA for arrivals at LIN VOR/DME on V28-244 northeast bound.

One Minute Holding Pattern

VGSI and ILS glidepath not coincident (VGSI Angle 3.00/TCH 71).

SA CATEGORY II ILS - SPECIAL AIRCREW & AIRCRAFT CERTIFICATION REQUIRED
For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -4°C (25°F) or above 54°C (130°F). DME/DME RNP-0.3 NA.

Procedure NA for arrivals on LINDEN VOR/DME airway radials 192 CW 294.
CAUTION: BE ALERT TO RUNWAY CROSSING CLEARANCES.
READBACK OF ALL RUNWAY HOLDING INSTRUCTIONS IS REQUIRED.

AIRPORT DIAGRAM

STOCKTON METRO (SCK)

STOCKTON, CALIFORNIA

CAUTION: BE ALERT TO RUNWAY CROSSING CLEARANCES.
READBACK OF ALL RUNWAY HOLDING INSTRUCTIONS IS REQUIRED.
**RNAV (GPS) RWY 29**

**SUSANVILLE MUNI (SVE)**

**AWOS-3**
133.8

**OAKLAND CENTER**
128.8 285.5

**UNICOM**
122.8 (CTAF)

---

**MISSED APPROACH:** Climbing right turn to 14000 direct AHC VOR/DME and hold, continue climb-in-hold to 14000.

---

**Visual Segment - Obstacles.**

- **CEBAS 6 NM to BIDAY**
- **WARTI**
- **EVUNE**
- **JIVGI**

**RNAV (GPS) RWY 29**

**SUSANVILLE, CALIFORNIA**

**AL-9479 (FAA)**

**Rwy Idg** 4051
**TDZE** 4146
**Apt Elev** 4149

---

**SUSANVILLE, CALIFORNIA**

**AMDEE AHC**

---

**Amdt 1C 11AUG22**

---

**SUSANVILLE, CALIFORNIA**

**Amdt 1C 11AUG22**

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**40°23'N-120°34'W**

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**R-2530**

---

**HALLE**

---

**SW-2, 30 NOV 2023 to 25 JAN 2024**

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**SW-2, 30 NOV 2023 to 25 JAN 2024**

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**SUSANVILLE, CALIFORNIA**

**Amdt 1C 11AUG22**

---

**40°23'N-120°34'W**

---

**SUSANVILLE MUNI (SVE)**

**RNAV (GPS) RWY 29**

---

**SW-2, 30 NOV 2023 to 25 JAN 2024**

---

**SUSANVILLE MUNI (SVE)**

**40°23'N-120°34'W**
Circling NA for Cat D southwest of Rwy 11-29. When local altimeter setting not received, procedure NA. Circling NA to Rwy 7/25. MISSPED APPROACH: Climbing left turn to 14000 direct AHC VOR/DME and hold, continue climb-in-hold to 14000.
NOTE: Chart not to scale.

DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAY 11: Climb via 112° heading and AHC R-267 to AHC VOR/DME, Thence. . . .
Or climb in visual conditions to cross Susanville Muni Airport eastbound at or above 6000, then via AHC R-272 to AHC VOR/DME, Thence. . . .

. . . .cross AHC VOR/DME at or above 8900'. Climb in AHC holding pattern to depart AHC VOR/DME at or above 14000 before proceeding on course.
RNAV (GPS) RWY 12
TRACY MUNI (TCY)

TRACY, CALIFORNIA
AL-5815 (FAA)

For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -15°C or above 54°C.
Circling NA southwest of Rwy 12-30. Baro-VNAV and VDP NA when using Stockton altimeter setting.
Circling Rwy 30 NA at night. Rwy 12 helicopter visibility reduction below ¼ SM NA.
When local altimeter setting not received, use Stockton altimeter setting: increase all DAs to 507 feet;
increase all MDAs 60 feet and visibilities LNAV Cat C ¼ SM.

AWOS-3
118.375

NORCAL APP CON
123.85 278.3

UNICOM
123.075 (CTAF)

Procedure NA for arrivals at ALTAM on V334-392 southbound.

CLIMB TO 700 then climbing left turn to 3200 direct HAIRE and hold.

MISSED APPROACH:
Climb to 700 then climbing left turn to 3200 direct HAIRE and hold.

RNAV (GPS) RWY 12
TRACY MUNI (TCY)

37°41'N-121°26'W
RNAV (GPS) RWY 26
TRACY MUNI (TCY)

Baro-VNAV NA when using Stockton altimeter setting. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -1.5°C or above 54°C. Circling NA southwest of Rwy 12-30. Circling Rwy 30 NA at night. Rwy 26 helicopter visibility reduction below ¾ SM NA. When local altimeter setting not received, use Stockton altimeter setting; increase LPV DA to 496 feet, increase LNAV/VNAV DA to 553 feet; increase all MDAs 60 feet and visibility LNAV Cat C ¾ SM.

Procedure NA for arrivals at ALTAM on V28 southwest bound and V334 northbound.

Procedure NA for arrivals at PATYY on V111-113 southbound.

Baro-VNAV NA when using Stockton altimeter setting. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -1.5°C or above 54°C. Circling NA southwest of Rwy 12-30. Circling Rwy 30 NA at night. Rwy 26 helicopter visibility reduction below ¾ SM NA. When local altimeter setting not received, use Stockton altimeter setting; increase LPV DA to 496 feet, increase LNAV/VNAV DA to 553 feet; increase all MDAs 60 feet and visibility LNAV Cat C ¾ SM.

RNAV (GPS) RWY 26
TRACY MUNI (TCY)

Baro-VNAV NA when using Stockton altimeter setting. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -1.5°C or above 54°C. Circling NA southwest of Rwy 12-30. Circling Rwy 30 NA at night. Rwy 26 helicopter visibility reduction below ¾ SM NA. When local altimeter setting not received, use Stockton altimeter setting; increase LPV DA to 496 feet, increase LNAV/VNAV DA to 553 feet; increase all MDAs 60 feet and visibility LNAV Cat C ¾ SM.

Procedure NA for arrivals at ALTAM on V28 southwest bound and V334 northbound.

Procedure NA for arrivals at PATYY on V111-113 southbound.
RNAV (GPS) RWY 30
TRACY MUNI (TCY)

Baro-VNAV NA when using Stockton altimeter setting. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -15°C or above 54°C. Circling NA southwest of Rwy 12-30. Straight-in Rwy 30 NA at night, Circling Rwy 30 NA at night. Rwy 30 helicopter visibility reduction below 1 SM NA. When local altimeter setting not received, use Stockton altimeter setting; increase all DAs to 307 feet; increase all MDAs 60 feet and visibility LNAV Cat C 1% SM.

**AWOS-3**

**NORCAL APP CON** 123.85 278.3

**UNICOM** 123.075 (CTAF)

**TRACY, CALIFORNIA**

**AL-5815 (FAA)**

**RW30A**

**APP CRS** 297°

**Rwy Idg** 3740

**TDZE** 193

**Apt Elev** 193

**MISSED APPROACH:** Climb to 700 then climbing right turn to 3200 direct HAIRE and hold, continue climb-in-hold to 3200.

**HAIRE**

Procedure NA for arrivals at HAIRE on V28 southwest bound.

**ICUKO**

VGSI and RNAV glidepath not coincident (VGSI Angle 3.00/TCH 35). LNAV/VNAV NA below -15°C or above 54°C. Circling NA southwest of Rwy 12-30. Baro-VNAV NA when using Stockton altimeter setting. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -15°C or above 54°C. Straight-in Rwy 30 NA at night, Circling Rwy 30 NA at night. Rwy 30 helicopter visibility reduction below 1 SM NA. When local altimeter setting not received, use Stockton altimeter setting; increase all DAs to 307 feet; increase all MDAs 60 feet and visibility LNAV Cat C 1% SM.

**NAPYI**

Holding Pattern

**VP**

LNAV only

**ICUKO**

2.8 NM to Rwy30

**ETACU**

2100

**HELVA**

297°

**LNAV only**

**ICUKO**

2.8 NM to Rwy30

**ETACU**

2100

**HELVA**

297°

**ICUKO**

2.8 NM to Rwy30

**ETACU**

2100

**HELVA**

297°

**ICUKO**

2.8 NM to Rwy30

**ETACU**

2100

**HELVA**

297°
DME required.

Circling NA southwest of Rwy 12-30. Circling Rwy 30 NA at night. Rwy 26 helicopter visibility reduction below 3/4 SM NA. When local altimeter setting not received, use Stockton altimeter setting; increase all MDAs 60 feet and visibility Cat C ¾ SM.

AWOS-3
118.375

NORCAL APP CON
123.85  278.3

UNICOM
123.075 (CTAF)

MISSED APPROACH:
Climbing right turn to 3000 direct LIN VOR/DME and hold.

CIRCLING
760-1¾  567 (600-1¼)
760-1¾  567 (600-1¼)  NA

1 NM
4.9 NM
6.1 NM

TRACY, CALIFORNIA
Amdt 1A  07NOV19

37°41′N-121°26′W
 TAKEOFF MINIMUMS
Rwys 8, 12, 30: Standard.
Rwys 26: Standard with a minimum climb of 310’ per NM to 1300.

NOTE: Chart not to scale.

DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAY 8: Climb on heading 075°, or as assigned by ATC between 275° CW 110°.

TAKEOFF RUNWAY 12: Climbing left turn on heading 100°, or as assigned by ATC between 297° CW 110°.

TAKEOFF RUNWAY 26: Climbing right turn on heading 300°, or as assigned by ATC between 290° CW 074°.

TAKEOFF RUNWAY 30: Climb on heading 295°, or as assigned by ATC between 290° CW 110°.
ILS or LOC or RNAV (GPS) RWY 21L

FAIRFIELD, CALIFORNIA

FAIRFIELD, CALIFORNIA

ILS or LOC or RNAV (GPS) RWY 21L

FAIRFIELD, CALIFORNIA

ILS or LOC or RNAV (GPS) RWY 21L

FAIRFIELD, CALIFORNIA
ILS RWY 21L (CAT II)

LOC I-SUU 110.1  APCH CRS 215*  RWy Ldg 10,995
TDZE 58  Arpt Elev 63  AL-488 [USAF]

RNAV1: GPS or RADAR required.
RADAR required for CAT E aircraft for full procedure off of SEATO.

ATIS 135.55 292.125
APP CON 119.9 322.325 (S) 281.45 (N)
TOWER 120.75 254.4
GND CON 121.8 289.4
CLNC DEL 127.55 335.8

CATEGORY II ILS SPECIAL AIRCREW & AIRCRAFT CERTIFICATION REQUIRED

Max 250 KIAS N/A for Sacramento or straight-in entry.

EMERG SAFE ALT 100 NM 13,000

FAIRFIELD, CALIFORNIA

TRAVIS AFB (KSUU)

Orig 19MAY22
ATIS 135.55 292.125
CLNC DEL
127 55 335.8
GND CON
121 8 289.4
TOWER
120 75 254.4
TRAVIS DEP CON
126 6 306.9

REJOY ONE DEPARTURE (RNAV) (REJOY1 • REJOY)

ATIS 135.55 292.125
[USAF] AL-488 (CIV)

REJOY 3000
LINDEN TRANSITION
HAIRE 5000
PANOCE PXN 7000
AVENAL AVE

DEPARTURE ROUTE DESCRIPTION

TAKEOFF RWY 3 L/R: Climb on heading 035° to 2000, expect ATC RADAR vectors to YOGIE, then track 115° to cross REJOY at or above 3000. Thence...

TAKEOFF RWY 21L/R: Climb on heading 215° to 2000, expect ATC RADAR vectors to cross REJOY at or above 3000. Thence...

...via assigned transition. Maintain ATC assigned altitude. Expect further clearance to filed altitude within 10 minutes after departure.

AVENAL TRANSITION: (REJOY1 • AVE)
LINDEN TRANSITION: (REJOY1 • LIN)

REJOY ONE DEPARTURE (RNAV) (REJOY1 • REJOY)

Orig 07OCT21
RNAV (GPS) RWY 11
TRUCKEE-TAHOE (TRK)

**Category A**
- LNAV MDA: 7720-1 1/4 (1816), 7720-1 1/2 (1816), 7720-3 (1816)
- NA

**Category B**
- NA

**Category C**
- NA

**Category D**
- NA

**Circling**
- 7720-1 1/4 (1816), 7720-1 1/2 (1816), 7720-3 (1816)
- NA

**RNAV APCH.**
- Procedure NA for Cat C south of Rwy 29 and east of Rwy 2.
- Procedure NA at night. Rwy 11 helicopter visibility reduction below 1 SM NA. When local altimeter setting not received, procedure NA.
- Final approach course 282° (10.5).
- Procedure NA for arrival on FMG VORTAC airway radials 037 CW 062.
- Procedure NA for arrival on SWR VOR/DME airway radials 037 CW 062.
- Procedure NA for arrival on FMG VORTAC airway radials 192 CW 332.
- Procedure NA for arrival on SWR VOR/DME airway radials 037 CW 062.
- Procedure NA at night. Rwy 11 helicopter visibility reduction below 1 SM NA. When local altimeter setting not received, procedure NA.

**RNAV (GPS) RWY 11**
TRUCKEE-TAHOE (TRK)

**D-ATIS**
- 118.0

**OAKLAND CENTER**
- 127.95

**TRUCKEE TOWER**
- 120.575 (CTAF)

**GND CON**
- 118.3

**UNICOM**
- 122.95

**RNAV APCH.**
- Circling NA for Cat C south of Rwy 29 and east of Rwy 2.
- Procedure NA at night. Rwy 11 helicopter visibility reduction below 1 SM NA. When local altimeter setting not received, procedure NA.
- Final approach course 282° (10.5).
- Procedure NA for arrival on FMG VORTAC airway radials 037 CW 062.
- Procedure NA for arrival on SWR VOR/DME airway radials 037 CW 062.
- Procedure NA at night. Rwy 11 helicopter visibility reduction below 1 SM NA. When local altimeter setting not received, procedure NA.

**RNAV (GPS) RWY 11**
TRUCKEE-TAHOE (TRK)

**D-ATIS**
- 118.0

**OAKLAND CENTER**
- 127.95

**TRUCKEE TOWER**
- 120.575 (CTAF)

**GND CON**
- 118.3

**UNICOM**
- 122.95

**RNAV APCH.**
- Circling NA for Cat C south of Rwy 29 and east of Rwy 2.
- Procedure NA at night. Rwy 11 helicopter visibility reduction below 1 SM NA. When local altimeter setting not received, procedure NA.
- Final approach course 282° (10.5).
- Procedure NA for arrival on FMG VORTAC airway radials 037 CW 062.
- Procedure NA for arrival on SWR VOR/DME airway radials 037 CW 062.
- Procedure NA at night. Rwy 11 helicopter visibility reduction below 1 SM NA. When local altimeter setting not received, procedure NA.

**RNAV (GPS) RWY 11**
TRUCKEE-TAHOE (TRK)

**D-ATIS**
- 118.0

**OAKLAND CENTER**
- 127.95

**TRUCKEE TOWER**
- 120.575 (CTAF)

**GND CON**
- 118.3

**UNICOM**
- 122.95

**RNAV APCH.**
- Circling NA for Cat C south of Rwy 29 and east of Rwy 2.
- Procedure NA at night. Rwy 11 helicopter visibility reduction below 1 SM NA. When local altimeter setting not received, procedure NA.
- Final approach course 282° (10.5).
- Procedure NA for arrival on FMG VORTAC airway radials 037 CW 062.
- Procedure NA for arrival on SWR VOR/DME airway radials 037 CW 062.
- Procedure NA at night. Rwy 11 helicopter visibility reduction below 1 SM NA. When local altimeter setting not received, procedure NA.

**RNAV (GPS) RWY 11**
TRUCKEE-TAHOE (TRK)

**D-ATIS**
- 118.0

**OAKLAND CENTER**
- 127.95

**TRUCKEE TOWER**
- 120.575 (CTAF)

**GND CON**
- 118.3

**UNICOM**
- 122.95

**RNAV APCH.**
- Circling NA for Cat C south of Rwy 29 and east of Rwy 2.
- Procedure NA at night. Rwy 11 helicopter visibility reduction below 1 SM NA. When local altimeter setting not received, procedure NA.
- Final approach course 282° (10.5).
- Procedure NA for arrival on FMG VORTAC airway radials 037 CW 062.
- Procedure NA for arrival on SWR VOR/DME airway radials 037 CW 062.
- Procedure NA at night. Rwy 11 helicopter visibility reduction below 1 SM NA. When local altimeter setting not received, procedure NA.

**RNAV (GPS) RWY 11**
TRUCKEE-TAHOE (TRK)

**D-ATIS**
- 118.0

**OAKLAND CENTER**
- 127.95

**TRUCKEE TOWER**
- 120.575 (CTAF)

**GND CON**
- 118.3

**UNICOM**
- 122.95

**RNAV APCH.**
- Circling NA for Cat C south of Rwy 29 and east of Rwy 2.
- Procedure NA at night. Rwy 11 helicopter visibility reduction below 1 SM NA. When local altimeter setting not received, procedure NA.
- Final approach course 282° (10.5).
- Procedure NA for arrival on FMG VORTAC airway radials 037 CW 062.
- Procedure NA for arrival on SWR VOR/DME airway radials 037 CW 062.
- Procedure NA at night. Rwy 11 helicopter visibility reduction below 1 SM NA. When local altimeter setting not received, procedure NA.

**RNAV (GPS) RWY 11**
TRUCKEE-TAHOE (TRK)

**D-ATIS**
- 118.0

**OAKLAND CENTER**
- 127.95

**TRUCKEE TOWER**
- 120.575 (CTAF)

**GND CON**
- 118.3

**UNICOM**
- 122.95

**RNAV APCH.**
- Circling NA for Cat C south of Rwy 29 and east of Rwy 2.
- Procedure NA at night. Rwy 11 helicopter visibility reduction below 1 SM NA. When local altimeter setting not received, procedure NA.
- Final approach course 282° (10.5).
- Procedure NA for arrival on FMG VORTAC airway radials 037 CW 062.
- Procedure NA for arrival on SWR VOR/DME airway radials 037 CW 062.
- Procedure NA at night. Rwy 11 helicopter visibility reduction below 1 SM NA. When local altimeter setting not received, procedure NA.

**RNAV (GPS) RWY 11**
TRUCKEE-TAHOE (TRK)

**D-ATIS**
- 118.0

**OAKLAND CENTER**
- 127.95

**TRUCKEE TOWER**
- 120.575 (CTAF)

**GND CON**
- 118.3

**UNICOM**
- 122.95

**RNAV APCH.**
- Circling NA for Cat C south of Rwy 29 and east of Rwy 2.
- Procedure NA at night. Rwy 11 helicopter visibility reduction below 1 SM NA. When local altimeter setting not received, procedure NA.
- Final approach course 282° (10.5).
- Procedure NA for arrival on FMG VORTAC airway radials 037 CW 062.
- Procedure NA for arrival on SWR VOR/DME airway radials 037 CW 062.
- Procedure NA at night. Rwy 11 helicopter visibility reduction below 1 SM NA. When local altimeter setting not received, procedure NA.
TRUCKEE, CALIFORNIA
AL-6021 (FAA)

RNAV (GPS)-A
TRUCKEE-TAHOE (TRK)

D-ATIS
118.0

OAOLAND CENTER
127.95 316.1

TRUCKEE TOWER *
120.575 (CTAF) *

GND CON
118.3

UNICOM
122.95

APP CRS
058°

Rwy Idg
N/A

TDZE
N/A

Apt Elev
5904

MISSED APPROACH: (Do not exceed 200K until KEBTE)
Climb to 7800 then climbing left turn to 12000 direct KEBTE
and track 282° to LEKYI and hold, continue climb-in-hold 12000.

ReFL Rwy 11
MIRL Rwy's 11-29 and 2-20

Circling NA for Cat C south of Rwy 29 and east of Rwy 2.
Procedure NA at night. When local altimeter setting not
received, procedure NA.

Category
A
B
C
D

CIRCLING
7500-1  1/4
1596 (1600-1  1/4)
1596 (1600-1  1/4)
1796 (1800-3)
NA

ELEV 5904

TRUCKEE, CALIFORNIA
Orig 20JUN19

39°19'N-120°08'W
CAUTION: BE ALERT TO RUNWAY CROSSING CLEARANCES.
READBACK OF ALL RUNWAY HOLDING INSTRUCTIONS IS REQUIRED.
**DEPARTURE ROUTE DESCRIPTION**

**TAKEOFF RUNWAY 2:** Climbing left turn to 11500 on heading 275° and SWR R-002 to TRUCK INT, thence... or for climb in visual conditions cross Truckee-Tahoe Airport heading 290° at or above 9100, then proceed on SWR R-002 to TRUCK INT. When executing VCOA, notify ATC prior to departure. Thence....

**TAKEOFF RUNWAY 29:** Climbing right turn to 11500 on heading 320° and SWR VOR/DME R-002 to TRUCK INT, thence... or for climb in visual conditions cross Truckee-Tahoe Airport heading 290° at or above 9100, then proceed on SWR R-002 to TRUCK INT. When executing VCOA, notify ATC prior to departure. thence....

...continue climb in TRUCK INT holding pattern to cross TRUCK INT at or above 11500 before proceeding on course.

**VCOA RUNWAYS 2, 29:** Obtain ATC approval for VCOA when requesting IFR clearance. Climb in visual conditions to cross Truckee-Tahoe Airport heading 290° at or above 9100, then proceed on SWR VOR/DME R-002 to TRUCK INT, thence....

...continue climb in TRUCK INT holding pattern to cross TRUCK INT at or above 11500 before proceeding on course.

NOTE: Chart not to scale.
TAKEOFF OBSTACLE NOTES

Rwy 2: Trees, electrical system beginning 32’ from DER, 189’ left of centerline, up to 5934’ MSL. Trees beginning 448’ from DER, 431’ right of centerline, up to 5968’ MSL. Trees beginning 1 NM from DER, 1765’ right of centerline, up to 6078’ MSL. Tree 1 NM from DER, 1920’ right of centerline, 6125’ MSL. Trees beginning 1 NM from DER, 1540’ right of centerline, up to 6130’ MSL. Tree 1.1 NM from DER, 2002’ right of centerline, 6145’ MSL. Tree 1.1 NM from DER, 1766’ right of centerline, 6153’ MSL. Trees beginning 1.1 NM from DER, 1340’ right of centerline, up to 6154’ MSL. Trees beginning 1.1 NM from DER, 1302’ right of centerline, up to 6182’ MSL. Trees beginning 1.1 NM from DER, 1115’ right of centerline, up to 6242’ MSL. Trees beginning 1.1 NM from DER, 1067’ right of centerline, up to 6248’ MSL. Trees beginning 1.2 NM from DER, 1147’ right of centerline, up to 6253’ MSL. Trees beginning 1.2 NM from DER, 1351’ right of centerline, up to 6266’ MSL. Trees beginning 1.2 NM from DER, 929’ right of centerline, up to 6272’ MSL. Trees beginning 1.2 NM from DER, 818’ right of centerline, up to 6280’ MSL. Trees beginning 1.3 NM from DER, 1744’ right of centerline, up to 6281’ MSL. Trees beginning 1.3 NM from DER, 639’ right of centerline, up to 6288’ MSL. Trees beginning 1.3 NM from DER, 433’ right of centerline, up to 6305’ MSL. Trees, building beginning 1.4 NM from DER, 40’ right of centerline, up to 6315’ MSL. Tree 1.5 NM from DER, 7’ left of centerline, 6137’ MSL.

Rwy 29: Sign 23’ from DER, 157’ left of centerline, 3’ AGL/5902’ MSL. Trees beginning 73’ from DER, 400’ right of centerline, up to 5968’ MSL. Pole 144’ from DER, 217’ left of centerline, 6’ AGL/5905’ MSL. Trees beginning 206’ from DER, 55’ right of centerline, up to 5971’ MSL. Tree 213’ from DER, 546’ left of centerline, 5923’ MSL. Trees beginning 637’ from DER, 81’ left of centerline, up to 6005’ MSL. Tree 5956’ from DER, 542’ right of centerline, 6058’ MSL. Trees beginning 1.6 NM from DER, 1356’ left of centerline, up to 6153’ MSL. Trees beginning 1.6 NM from DER, 1384’ left of centerline, up to 6197’ MSL. Tree, water tower beginning 1.6 NM from DER, 1738’ left of centerline, up to 6206’ MSL. Trees, pole beginning 1.6 NM from DER, 249’ left of centerline, up to 6268’ MSL. Tree 1.8 NM from DER, 3070’ right of centerline, 6192’ MSL. Tree 1.8 NM from DER, 2728’ right of centerline, 6197’ MSL. Tree 1.8 NM from DER, 1614’ right of centerline, 6204’ MSL. Trees beginning 1.8 NM from DER, 1108’ right of centerline, up to 6211’ MSL. Tree 1.8 NM from DER, 2581’ right of centerline, 6259’ MSL. Trees beginning 1.8 NM from DER, 2144’ right of centerline, up to 6265’ MSL. Trees beginning 1.9 NM from DER, 183’ right of centerline, up to 6266’ MSL. Tree 1.9 NM from DER, 3540’ right of centerline, 6308’ MSL. Tree 1.9 NM from DER, 3135’ right of centerline, 6351’ MSL. Trees beginning 1.9 NM from DER, 307’ right of centerline, up to 6379’ MSL. Tree 2 NM from DER, 3583’ right of centerline, 6391’ MSL. Trees beginning 2 NM from DER, 1301’ right of centerline, up to 6458’ MSL. Trees beginning 2 NM from DER, 535’ right of centerline, up to 6468’ MSL. Tree 2 NM from DER, 639’ left of centerline, 6270’ MSL. Tree 2.1 NM from DER, 2242’ left of centerline, 6315’ MSL. Trees beginning 2.1 NM from DER, 50’ left of centerline, up to 6332’ MSL. Tree 2.1 NM from DER, 2881’ right of centerline, 6502’ MSL. Trees beginning 2.1 NM from DER, 214’ right of centerline, up to 6505’ MSL. Tree 2.1 NM from DER, 2769’ left of centerline, 6439’ MSL. Trees beginning 2.1 NM from DER, 259’ left of centerline, up to 6440’ MSL. Tree 2.1 NM from DER, 3037’ right of centerline, 6547’ MSL. Trees beginning 2.1 NM from DER, 636’ right of centerline, up to 6573’ MSL. Trees beginning 2.2 NM from DER, 1171’ right of centerline, up to 6583’ MSL. Trees beginning 2.2 NM from DER, 733’ left of centerline, up to 6460’ MSL. Trees, building beginning 2.2 NM from DER, 20’ left of centerline, up to 6549’ MSL. Trees beginning 2.2 NM from DER, 525’ right of centerline, up to 6612’ MSL. Trees beginning 2.3 NM from DER, 1111’ right of centerline, up to 6657’ MSL. Tree beginning 2.3 NM from DER, 2179’ right of centerline, up to 6682’ MSL. Trees beginning 2.3 NM from DER, 412’ right of centerline, up to 6731’ MSL. Trees beginning 2.4 NM from DER, 371’ right of centerline, up to 6776’ MSL. Tower 2.5 NM from DER, 2714’ right of centerline, 93’ AGL/6817’ MSL. Antenna, trees beginning 2.5 NM from DER, 73’ right of centerline, up to 88’ AGL/6822’ MSL.

TRUCK FIVE DEPARTURE (OBSTACLE)
TRUCKEE, CALIFORNIA

TRUCKEE-TAHOE (TRK)

AL-6021 (FAA)

RNAV-1 GPS.

RADAR required for non-GPS equipped aircraft.

OAKLAND CENTER
127.95  316.1

TRUCKEE TOWER ✪
120.575

UNICOM
122.95

D-ATIS
118.0

TOP ALTITUDE:
13000

NOTE: Chart not to scale.

DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAY 2: Climb on heading 016° to intercept course 315° to cross MOWGL at or above 9900, thence. . . .

TAKEOFF RUNWAY 29: Climb on heading 286° to intercept course 334° to cross MOWGL at or above 9900, thence. . . .

...(transition) maintain 13000 expect filed altitude 10 minutes after departure.

HALLE TRANSITION (MOWGL2.HALLE)

LOVELOCK TRANSITION (MOWGL2.LLC)

PALISADES TRANSITION (MOWGL2.SWR)

SIGNA TRANSITION (MOWGL2.SIGNA)

WNDEL TRANSITION (MOWGL2.WNDEL)

MOWGL TWO DEPARTURE (RNAV)
(MOWGL2.MOWGL) 23222

MOWGL TWO DEPARTURE (RNAV)
(MOWGL2.MOWGL) 10AUG23

TRUCKEE, CALIFORNIA

TRUCKEE-TAHOE (TRK)
### RNAV (GPS) RWY 13

**Mefford Fld (TLR)**

**Amdt 1 28FEB19**

**SW-2, 30 NOV 2023 to 25 JAN 2024**

**Chart Description:**
- **Circling Rwy 31 NA at night. Rwy 13 helicopter visibility reduction below 3/4 SM NA.** When local altimeter setting not received, use Visalia altimeter setting and increase all MDA 40 feet.
- **Procedure NA for arrivals at LATON on V23 northwest bound.**
- **Procedure NA for arrivals at LATTA on V459 northwest bound.**
- **Lemoore C MOA**
- **Lemoore E MOA**

### Chart Details:
- **APP CRS 135°**
- **Rwy Idg 3901**
- **TDZE 265**
- **Apt Elev 265**
- **RNAV (GPS) RWY 13**
- **MIRL Rwy 13-31**
- **RNAV (GPS) RWY 13**
- **MOA Foothill 2**
- **MOA Laton**
- **MOA SW-2, 30 Nov 2023 to 25 Jan 2024**

### UHIC Code Details:
- **UHIC Code:** AL-9107 (FAA)

### RNAV Approach:
- **UNICOM 122.7 (CTAF)**
- **FRESNO APP CON 118.5 268.7**
- **AWOS-3PT 120.0**

### RNAV Approach Points:
- **JIRTA**
- **LATON**
- **LATTA**
- **Holding Pattern**
- **NIRFY**

### RNAV Approach Notes:
- **HOLD 10000 3000**
- **(IF/IAF) JIRTA**
- **(IAF) LATON**
- **(FAF) NIRFY**

### RNAV Approach Instructions:
- **Turn to 3000 direct JIRTA and hold,**
- **Continue climb-in-hold to 3000.**
- **MISSED APPROACH:** Climbing right turn to 3000 direct JIRTA and hold.

### RNAV Approach Charts:
- **ELEV 265**
- **TDZE 265**

### RNAV Approach Categories:
- **CATEGORY**
- **A**
- **B**
- **C**
- **D**
- **LNAV MDA**
- **740-1 475 (500-1)**
- **740-1½ 475 (500-1½)**
- **NA**
- **CIRCLING**
- **760-1 495 (500-1)**
- **760-1½ 495 (500-1½)**
- **NA**

### Chart Footnotes:
- **36°09’N-119°20’W**
- **Amdt 1 28FEB19**
- **SW-2, 30 NOV 2023 to 25 JAN 2024**
**RNAV (GPS) RWY 15**

UKIAH MUNI (UKI)

**MISSED APPROACH:** Climb to 5500 direct ZOXOK and hold, continue climb-in-hold to 5500.

*Missed approach requires minimum climb of 350 feet per NM to 3300.

**Circling NA southwest of Rwy 15-33. Circling Rwy 33 NA at night. Rwy 15 helicopter visibility reduction below ¾ SM NA.**

When local altimeter setting not received, procedure NA.

**ASOS**

119.275

**OAkLAND CENTER**

127.8  353.5

**UNICOM**

123.0  (CTAF)

Procedure NA for arrivals at FLUEN on V27-T257 northwest bound.

**Procedure NA for arrivals at MENSE on V199 northeast bound.**

**MISSED APCH FIX**

ZOXOK

5 NM

5600 NoPT

5600 112° (16.5)

5500

3122

MisN

**LNAV MDA**

CIRCLING

LP

MDA*

1500-1/4

883 (900-1/4)

1540-1/4

923 (1000-1/4)

1560-2/5

1580-3

963 (1000-3)

LP

MDA

2120-1/4

1503 (1600-1/4)

2120-1/4

1503 (1600-1/4)

2120-3

1503 (1600-3)

LNAV MDA*

1960-1/4

1343 (1400-1/4)

1960-1/2

1343 (1400-1/2)

1960-3

1343 (1400-3)

LNAV MDA

2220-1/4

1603 (1700-1/4)

2220-1/2

1603 (1700-1/2)

2220-3

1603 (1700-3)

CIRCLING

2220-1/4

1603 (1700-1/4)

2220-1/2

1603 (1700-1/2)

2220-3

2780-3

2163 (2200-3)
RNP APCH - GPS.

Circling NA southwest of Rwy 15-33. Circling Rwy 33 NA at night. Rwy 33 helicopter visibility reduction below 1 SM NA. When local altimeter setting not received, procedure NA.

MISSED APPROACH: Climb to 6700 direct AKGIC and on track 293° to MERRI and hold, continue climb-in-hold to 6700.

Procedure NA for arrivals at GETER on V25 southbound, and on V27-494 southeast bound.
UKIAH, CALIFORNIA

LOC/DME  I-UKI

APP CRS 155°

Rwy Idg 4423

TDZE 617

Apt Elev 617

DME required.

Circling NA southwest of Rwy 15-33. Circling Rwy 33 NA at night. Rwy 15 helicopter visibility reduction below ½ SM NA. When local altimeter setting not received, procedure NA.

MISSED APPROACH: Climbing left turn to 4100 on heading 145° then climbing right turn to 5600 direct ENI VORTAC and on ENI VORTAC R-344 to QWIKK /I-UKI 16.5 DME and hold.

UKIAH MUNI (UKI)

LOCALIZER 109.1

Ch 28

MAXWELL 1 MOA

UNICOM 123.0 (CTAF)

CIRCLING

 pokemon

ENI VORTAC

123.0

OAKLAND CENTER

127.8 353.5

ASOS

119.275

COMMUNICATIONS

LOCALIZER 109.1

Ch 28

MAXWELL 3 MOA

MENDOCINO

112.3 ENI

Ch 70

VGSI and descent angles not coincident (VGSI Angle 3.00/TCH 29)

ENI R-344

QWIKK I-UKI 16.5

One Minute Holding Pattern

QWIKK I-UKI 16.5

XANEW I-UKI 11.7

MOVPY I-UKI 10.5

WUSLI I-UKI 7.1

MIRL Rwys 15 and 33

FAR to MAP 6.3 NM

SW-2, 30 Nov 2023 to 25 Jan 2024

UKIAH MUNI (UKI)

LOC RWY 15

UKIAH MUNI (UKI)

LOC RWY 15

UKIAH MUNI (UKI)

LOC RWY 15
DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAY 33: Climb on heading 335° to 1120, then direct RONHU at or above 5400, thence . . . .

. . . . on assigned transition, maintain ATC assigned altitude, expect filed altitude 10 minutes after departure.

FLUEN TRANSITION (RONHU2.FLUEN)

LAPED TRANSITION (RONHU2.LAPED)

MENDOCINO TRANSITION (RONHU2.ENI)

MENSE TRANSITION (RONHU2.MENSE)
DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAY 15: Climb on heading 155° to 1120, then left turn direct RYPAX at or above 5600 at or below 230K, thence... 

. . . . on assigned transition, maintain ATC assigned altitude, expect filed altitude 10 minutes after departure.

- GETER TRANSITION (RYPAX2.GETER)
- LAPED TRANSITION (RYPAX2.LAPED)
- MERRI TRANSITION (RYPAX2.MERRI)
- SABBY TRANSITION (RYPAX2.SABBY)
RNAV (GPS) RWY 20
NUT TREE (VCB)

MISSING APPROACH: (Do not exceed 220K until IPENE) Climb to 580 then climbing left turn to 2100 direct IPENE and hold.
Jet Missed approach requires minimum climb of 229 ft per NM to 1300.

<table>
<thead>
<tr>
<th>ASOS</th>
<th>TRAVIS APP CON</th>
<th>CTAF</th>
</tr>
</thead>
<tbody>
<tr>
<td>134.75</td>
<td>128.4 281.45</td>
<td>122.85</td>
</tr>
</tbody>
</table>

**Category**

- **A**
  - LPV DA
  - 367-3/4 250 (300-3/4)
  - 384-7/8 267 (300-3/4)
  - 614-13/8 497 (500-13/8)
  - 720-1 603 (700-1)
  - 960-25/8 843 (900-25/8)
  - 1480-3 1363 (1400-3)

- **B**
  - LPV DA

- **C**
  - LNAV/ VNAV DA
  - 720-1 603 (700-1)
  - 960-25/8 843 (900-25/8)
  - 1480-3 1363 (1400-3)

- **D**
  - LNAV MDA
  - 720-1 603 (700-1)
  - 960-25/8 843 (900-25/8)
  - 1480-3 1363 (1400-3)

- **CIRCLING**
  - 720-1 603 (700-1)

**Procedure NA** for arrivals at SAC VORTAC on airway radials 195 CW 329.

For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -3°C or above 54°C.

**CAUTION**: Circling NA west of Rwy 2-20. Circling Rwy 2 NA at night.

**NOTAM**

- SW-2, 30 NOV 2023 to 25 JAN 2024

**Atmospheric Conditions**

- Minimum temperature of -3°C or above 54°C.

**CTAF**

- 122.85
Rwy 2 helicopter visibility reduction below 1 SM NA.
DME required.
Circling Rwy 2 NA at night.
Circling NA west of Rwy 2-20.

MISSED APPROACH: Climbing right turn to 2200 on heading 100° and SAC R-241 to DOLCE/14 DME and hold.

ASOS
134.75

TRAVIS APP CON
128.4 281.45

CTAF
122.85
DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAY 2:  Climb via heading 022°, intercept SAC R-251 to SOKOY/SAC 13 DME.

TAKEOFF RUNWAY 20:  Turn left heading 032°, intercept ILA R-149 to SOKOY/ILA 39 DME.

SACRAMENTO TRANSITION (SOKOY3.SAC):  From over SOKOY on SAC R-251 to SAC VORTAC.

WILLIAMS TRANSITION (SOKOY3.ILA):  From over SOKOY on ILA R-149 to ILA VORTAC.

NOTE: Chart not to scale.
ILS or LOC RWY 30
VISALIA MUNI (VIS)

AWOS 3PT
119.925

FRESNO APP CON
118.5

CLNC DEL
118.5

UNICOM
123.05 (CTAF)

Procedure NA for arrivals at TTE VOR/DME on V165-459 southeast bound.

TULE
116.25 TTE
Chan 109 (Y)

EXTRA
13.3

HOLD
1000
2000

I-VIS
6.3

PACOD
I-VIS
6.3

I-VIS
2.8

FADER
I-VIS
2.8

080°
hdg

90°

Holding Pattern
One Minute

Category
A
B
C
D

S-ILS 30
502-1/2
207 (300-1/2)

S-LOC 30
640-1/2
345 (400-1/2)
640-3/8
345 (400-3/8)

CIRCLING
720-1
425 (500-1)

940-2
465 (500-1/2)
645 (700-2)

301° 5.2 NM from FAF

For inop ALS, increase S-LOC 30 Cat C/D visibility to 1 SM.
RNAV (GPS) RWY 12
VISALIA MUNI (VIS)

**AWOS-3PT**
119.925

**FRESNO APP CON**
118.5

**CLNC DEL**
118.5

**UNICOM**
123.05 (CTAF)

**MISSED APPROACH:** Climb to 2900 direct PANES and hold.

**For uncompensated Baro-VNAV systems, LNAV/VNAV NOT AVAILABLE below -15°C or above 54°C.**
RNAV (GPS) RWY 30
VISALIA MUNI (VIS)

**Amdt 2 15AUG19**

**VISALIA, CALIFORNIA**

**AWOS-3PT** 119.925

**FRESNO APP CON** 118.5

**CLNC DEL** 118.5

**UNICOM** 123.05 (CTAF)

**WAAS CH 77623 W30A**

**APP CRS 301°**

**Rwy Idg TDZE Apt Elev** 5635 295 295

**ALS**

**MALSR**

**Distance**

**RNAV (GPS) RWY 30**

**VISALIA MUNI (VIS)**

**SW-2, 30 Nov 2023 to 25 Jan 2024**

**ELEV 295 TDZE 295**

**3000 INOCI**

**LATON**

**PACOD**

**PANES**

**4 NM Holding Pattern**

**CATEGORY**

A B C D

**LPV DA** 502½ 207 (300½)

**LNAV/VNAV DA** 554½ 259 (300½)

**LNAV MDA** 660½ 365 (400½)

**CIRCLING** 720-1 425 (500-1)

**TTE**

**HOTLI**

**HOTLI 1.5 NM to RW30**

**HOLD 1600 2900**

**INOCI**

**Hot to PANES 112° (19.8)**

**LPV**

**DA**

**INOCI and on track 267° to LATON and hold, continue climb-in-hold to 3000.**

**3000**

**PANES**

**4 NM**

**LNAV/VNAV all Cats visibility to 3 SM, LNAV Cats C/D to 1 SM.**

**MISSING APPROACH: Climb to 3000 direct INOCI and on track 267° to LATON and hold, continue climb-in-hold to 3000.**

**For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -1.5°C or above 5.4°C. For inop ALS, increase LNAV/VNAV all Cats visibility to 3/4 SM, LNAV Cats C/D to 1 SM.**
RNAV (GPS) RWY 2
WATSONVILLE MUNI (WVI)

Circling Rwy 27 NA at night. Rwy 2 helicopter visibility reduction below ½ SM NA. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -2°C or above 54°C. Circling NA west of Rwy 2-20.

Procedure NA for arrival on SNS VORTAC airway radials 264 CW 293.

VGSI and RNAV glidepath not coincident (VGSI Angle 3.00°/TCH 43).

Misplaced Approach: (Do not exceed 185K until SHOEY) Climb to 700 then climbing left turn to 6000 direct SHOEY and hold, continue climb-in-hold to 6000.
Circling Rwy 27 NA at night. When local altimeter setting not received, use Monterey altimeter setting and increase all MDAs 80 feet and visibility Cat C 1/2 SM and S-2 Cat D 1/2 SM. Circling NA west of Rwy 2-20. Rwy 2 helicopter visibility below 1/2 SM NA.

MISSED APPROACH: Climbing right turn to 5000 direct SNS VORTAC and hold, continue climb-in-hold to 5000.

ASOS
132.275

NORCAL APP CON
127.15 307.125

UNICOM
122.8 (CTAF)

LOCALIZER 108.3

(IAF)
NALLS INT
SNS 16.5
RADAR

Remain within 10 NM

NALLS INT
SNS 16.5
RADAR

018°

SNS 16.5
RADAR

3000

198°

018°

2200

3.02°

TCH 48

3.02°

TCH 48

FAF to MAP 6.3 NM

Knots
60  90  120  150  180
Min:Sec  6:18  4:12  3:09  2:31  2:06

SW-2, 30 NOV 2023 to 25 JAN 2024
Circling NA west of Rwy 2-20. When local altimeter setting not received, use Monterey altimeter setting and increase all MDAs 80 feet.

DME required. Circling Rwy 27 NA at night.

MISSED APPROACH: Climbing left turn to 5000 direct SNS VORTAC and hold, continue climb-in-hold to 5000.

<table>
<thead>
<tr>
<th>CATEGORY</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
</tr>
</thead>
<tbody>
<tr>
<td>CIRCLING</td>
<td>1300-1/4</td>
<td>1300-1/2</td>
<td>1300-3</td>
<td>1137 (1200-3)</td>
</tr>
</tbody>
</table>

WATSONVILLE, CALIFORNIA

AL-805 (FAA)

SW-2, 30 NOV 2023 to 25 JAN 2024

Amdt 1B 30JAN20

36°56’N-121°47’W

409
NOTE: Chart not to scale.

**DEPARTURE ROUTE DESCRIPTION**

**TAKEOFF RUNWAYS 2 and 9:** Climbing right turn on heading 175° to intercept SNS VORTAC R-309 to SNS VORTAC, thence . . . .

**TAKEOFF RUNWAY 20:** Climb heading 213° to 1000, then climbing left turn to intercept SNS VORTAC R-293 to SNS VORTAC, thence . . . .

. . . . continue climb in SNS holding pattern to cross SNS VORTAC at or above MEA/MCA for route of flight.

---

**TAKEOFF MINIMUMS**

- Rwy 27: NA - Airport Obstacles.
- Rwy 20: Standard.
- Rwy 2: Standard with minimum climb of 500’ per NM to 2600.
- Rwy 9: 300-1 or standard with minimum climb of 270’ per NM to 400.

**TAKEOFF OBSTACLE NOTES**

- Rwy 2: Lighting 8’ from DER, 84’ left of centerline, 1’ AGL/159’ MSL. Lighting 9’ from DER, 84’ right of centerline, 158’ MSL. Pole 14’ from DER, 349’ left of centerline, 205’ MSL. Pole, building, vehicles on road, tree and fence beginning 15’ from DER, 322’ left of centerline, up to 50’ AGL/213’ MSL. Trees beginning 278’ from DER, 414’ right of centerline, up to 188’ MSL. Pole, vehicles on road, stack, tree and building beginning 429’ from DER, 157’ left of centerline, up to 58’ AGL/220’ MSL. Pole, building and tree beginning 808’ from DER, 22’ right of centerline, up to 40’ AGL/198’ MSL. Tree and transmission line beginning 1021’ from DER, 137’ right of centerline, up to 222’ MSL. Pole 1174’ from DER, 328’ right of centerline, 57’ AGL/224’ MSL. Trees beginning 1275’ from DER, 298’ right of centerline, up to 242’ MSL. Tree 1345’ from DER, 320’ left of centerline, 236’ MSL. Tree 2249’ from DER, 371’ left of centerline, 264’ MSL.

- Rwy 9: Tree and pole beginning 1’ from DER, 152’ left of centerline, up to 157’ MSL. Pole 65’ from DER, 301’ right of centerline, 31’ AGL/148’ MSL. Tree, fence, building, vehicles on road and pole beginning 74’ from DER, 251’ left of centerline, up to 160’ MSL. Pole, tree, building, tank and stack beginning 210’ from DER, 139’ left of centerline, up to 177’ MSL. Pole 231’ from DER, 250’ right of centerline, 32’ AGL/153’ MSL. Trees beginning 312’ from DER, 560’ right of centerline, up to 173’ MSL. Tower, pole and tree beginning 828’ from DER, 136’ left of centerline, up to 52’ AGL/181’ MSL. Trees beginning 915’ from DER, 146’ right of centerline, up to 197’ MSL. Tree 1815’ from DER, 365’ left of centerline, 215’ MSL. Tower 4697’ from DER, 1365’ right of centerline, 189’ AGL/292’ MSL.

- Rwy 20: Tree 57’ from DER, 500’ left of centerline, 153’ MSL. Fence 57’ from DER, 268’ right of centerline, 7’ AGL/143’ MSL. Pole 95’ from DER, 467’ left of centerline, 175’ MSL. Pole, vehicles on road and tree beginning 96’ from DER, 377’ left of centerline, up to 50’ AGL/183’ MSL. Transmission line 848’ from DER, 505’ left of centerline, 44’ AGL/184’ MSL. Tree and transmission line beginning 919’ from DER, 520’ left of centerline, up to 190’ MSL. Tree 1153’ from DER, 286’ right of centerline, 169’ MSL. Tree 1207’ from DER, 615’ left of centerline, 197’ MSL. Tree, building and transmission line beginning 1267’ from DER, 318’ left of centerline, up to 203’ MSL. Tree 1336’ from DER, 7’ right of centerline, 177’ MSL. Tree 1337’ from DER, 46’ right of centerline, 192’ MSL. Tree 2201’ from DER, 776’ right of centerline, 240’ MSL.
GARLK ONE DEPARTURE (RNAV) (GARLK1.GARLK) WATSONVILLE MUNI (WVI) WATSONVILLE, CALIFORNIA

NOTE: Chart not to scale.

TAKEOFF MINIMUMS
Rwy 2, 27: NA - ATC.
Rwy 20: Standard.
Rwy 9: 300-1 or standard with minimum climb of 270' per NM to 400'.

NOTE: RNAV 1.
NOTE: DME/DME/IRU or GPS required.
NOTE: For non-GPS equipped aircraft, SNS and OSI DMEs must be operational.
NOTE: RADAR required for non-GPS equipped aircraft.

TAKEOFF RUNWAY 9: Climb heading 086° to 700, then right turn direct CHAAN, thence . . .
TAKEOFF RUNWAY 20: Climb heading 198° to 700, then direct CHAAN, thence . . .

. . . . on track 207° to cross GARLK at or above 5000, then on (transition).

CHAWZ TRANSITION (GARLK1.CHAWZ)
DUBSS TRANSITION (GARLK1.DUBSS)
SALINAS TRANSITION (GARLK1.SNS)
SAPID TRANSITION (GARLK1.SAPID)
WIGGL TRANSITION (GARLK1.WIGGL)
RNAV (GPS) RWY 14
WEED (O46)

**RNAV APCH - GPS.**

- **NA** Circling NA southwest of Rwy 14-32. Use Montague altimeter setting.
- **UNICOM** 122.7 (CTAF)

**SEATTLE CENTER**

- **124.85**
- **306.3**

**UNICOM**

- **122.7 (CTAF)**

**MISSED APPROACH:**

- [Do not exceed 185K until GRENA] Climbing left turn to 9100 direct GRENA then on track 001° to ISAVE then on track 307° to KLAMA and hold.
- *Missed approach requires minimum climb of 325 feet per NM to 4000.

** Procedure NA for arrivals at GRENA on V287 and 1355 northbound.**

**CIRCLING**

- NA southwest of Rwy 14-32.

**CLIMBING**

- 325 feet per NM.

**LNAV MDA**

- **A** 3440-1 506 (500-1)
- **B** 3440-1 506 (500-1)
- **C** 3680-1 3840-1
- **D** 3440-1

**LNAV MDA**

- **A** 3440-1 506 (500-1)
- **B** 3440-1 506 (500-1)
- **C** 3680-1 3840-1
- **D** 3440-1

**CIRCLING**

- 6102 (10.6)

**UNICOM**

- **122.7 (CTAF)**

**UNICOM**

- **122.7 (CTAF)**

**SEATTLE CENTER**

- **124.85**
- **306.3**

**UNICOM**

- **122.7 (CTAF)**

**MISSED APPROACH:**

- [Do not exceed 185K until GRENA] Climbing left turn to 9100 direct GRENA then on track 001° to ISAVE then on track 307° to KLAMA and hold.
- *Missed approach requires minimum climb of 325 feet per NM to 4000.

** Procedure NA for arrivals at GRENA on V287 and 1355 northbound.**

**CIRCLING**

- NA southwest of Rwy 14-32.

**CLIMBING**

- 325 feet per NM.

**LNAV MDA**

- **A** 3440-1 506 (500-1)
- **B** 3440-1 506 (500-1)
- **C** 3680-1 3840-1
- **D** 3440-1

**LNAV MDA**

- **A** 3440-1 506 (500-1)
- **B** 3440-1 506 (500-1)
- **C** 3680-1 3840-1
- **D** 3440-1

**CIRCLING**

- 6102 (10.6)

**UNICOM**

- **122.7 (CTAF)**

**SEATTLE CENTER**

- **124.85**
- **306.3**

**UNICOM**

- **122.7 (CTAF)**

**MISSED APPROACH:**

- [Do not exceed 185K until GRENA] Climbing left turn to 9100 direct GRENA then on track 001° to ISAVE then on track 307° to KLAMA and hold.
- *Missed approach requires minimum climb of 325 feet per NM to 4000.

** Procedure NA for arrivals at GRENA on V287 and 1355 northbound.**

**CIRCLING**

- NA southwest of Rwy 14-32.

**CLIMBING**

- 325 feet per NM.

**LNAV MDA**

- **A** 3440-1 506 (500-1)
- **B** 3440-1 506 (500-1)
- **C** 3680-1 3840-1
- **D** 3440-1

**LNAV MDA**

- **A** 3440-1 506 (500-1)
- **B** 3440-1 506 (500-1)
- **C** 3680-1 3840-1
- **D** 3440-1

**CIRCLING**

- 6102 (10.6)
DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAY 32: Climb heading 324° to 3443, then right turn direct DIMGE, then on track 329° to cross FOBRO at or above 12000 or as assigned by ATC.

NOTE: GPS required.

NOTE: RNAV 1.

NOTE: Chart not to scale.

TAKEOFF MINIMUMS
Rwy 14: NA-obstacles.
Rwy 32: Standard with minimum climb of 325’ per NM to 12000.

SEATTLE CENTER
124.85 306.3
UNICOM
122.7
RNAV (GPS) RWY 16

ELLS FLD/WILLITS MUNI (028)

Procedure NA at night. Circling NA west of Rwy 16-34.
Use Ukiah altimeter setting; when not received, procedure NA.
Rwy 16 helicopter visibility reduction below 1 SM NA.

Final approach course offset 14.25°.
RNAV (GPS) RWY 34
WILLITS, CALIFORNIA

APPROACH

Rwy Idg 2705
TDZE 2066
Apt Elev 2066

**RNAV (GPS) RWY 34**

WILLITS, CALIFORNIA

(E028)

RNAV (GPS) RWY 34

WILLITS, CALIFORNIA

RI-28

39°27'N-123°22'W

Ukiah altimeter setting; when not received, procedure NA.

**MISSED APPROACH**: Climb to 6100 direct NEAPO and hold, continue climb-in-hold to 6100.

UKI ASOS 119.275
OAKLAND CENTER 132.2 350.3
UNICOM 122.8 (CTAF)

**MISSED APCH FIX**

5 NM NEAPO

5 NM to JENBU 4.8 NM to RW34

Circling NA west of Rwy 16-34. Rwy 34 helicopter visibility reduction below 1 SM NA. Procedure NA at night. Use Ukiah altimeter setting; when not received, procedure NA.

TREAS 7 NM

MAXWELL 3 MOA

30 NM to IGA10

10 NM to HERMT

30 NM to HERMT (NoPT)

HOLD 6000

10000

6100 NEAPO

VGSI and descent angles not coincident (VGSI Angle 3.00/TCH 21).

VGSI Angle 3.00/TCH 21.

MISSED APPROACH: Climb to 6100 direct NEAPO and hold, continue climb-in-hold to 6100.

**RNP APCH - GPS**

Circling NA west of Rwy 16-34. Rwy 34 helicopter visibility reduction below 1 SM NA. Procedure NA at night. Use Ukiah altimeter setting; when not received, procedure NA.

**ELEV 2066**

TDZE 2066

**3.00°**

TCH 40

**339°**

**339°**

069° to HERMT

**3.00°**

TCH 40

**339°**

069° to HERMT

**339°**

3900

3600

**3600**

**3.00°**

TCH 40

**339°**

3900

**339°**

3060-1 4

3060-1 4

3060-1 4

3060-1 4

3060-3

3060-3

3060-3

3060-3

NA

NA

NA

NA

NA

NA

**CATEGORY**

A

B

C

D

LNAV MDA

994 (1000-1 4)

994 (1000-1 4)

994 (1000-1 4)

994 (1000-1 4)

3060-3

3060-3

3060-3

3060-3

NA

NA

NA

NA

NA

NA

NA

**CIRCLING**

1514 (1600-3)

1514 (1600-3)

1514 (1600-3)

1514 (1600-3)

SW-2, 30 Nov 2023 to 25 Jan 2024

Amdt 2 02DEC21

39°27'N-123°22'W

RNAV (GPS) RWY 34

WILLITS, CALIFORNIA

AL-9480 (FAA) 21336

416
DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAY 34: Climb heading 339° to 2580, then left turn direct OOLEY, and on track 239° to cross FLUEN at or above 6700.

NOTE: RNAV 1.
NOTE: GPS required.

TAKEOFF MINIMUMS
Rwy 16: NA-air traffic.
Rwy 34: Standard with minimum climb of 360' per NM to 6700.

TAKEOFF OBSTACLE NOTES
Rwy 34: Trees beginning 92' from DER, left and right of centerline, up to 100' AGL/2139' MSL.

NOTE: Chart not to scale.
**TAKEOFF MINIMUMS**
Rwy 16: Standard
Rwy 34: N/A Obstacles

**TAKEOFF OBSTACLE NOTES**
Rwy 16: Trees 1812' from DER, 844' left of centerline, 100' AGL/2139' MSL.

**NOTE:** GPS required.
**NOTE:** RNAV 1

**DEPARTURE ROUTE DESCRIPTION**
TAKEOFF RUNWAY 16: Climb to 6000 direct VICOR WP, then via 153° track to ENI VORTAC, thence proceed on course.
RNAV (GPS) RWY 34
WILLOWS/GLENN COUNTY (WL.W)

**Note:** When Oroville Muni altimeter setting not received, procedure NA.
Baro-VNAV NA. DME/DME RNP-0.3 NA. Use Oroville altimeter setting.

**Missed Approach:** Climb to 3000 direct ZOKOP and hold.

### Organic Data

**OVES ASOS**
- **121.425**

**Oakland Center**
- **132.2**
- **350.3**

**Unicom**
- **122.8**

**Wills Center**
- **135.0**

**Unicom (CTAF)**
- **31**

### Navigation Data

- **Elev 141**
- **TDZE 138**

### Procedures

**MISSED APPROACH:**
- Climb to 3000 direct ZOKOP and hold.

**Procedure NA for arrivals at ILA VORTAC on V195 southbound.**

**Holding Pattern:**
- 4 NM

**Holding Pattern Information:**
- **WIMUL**
- **PAPAY**
- **YACUG**

**Catagory:**
- **A**
- **B**
- **C**
- **D**

**LPV**
- **DA 460-1/8 322 (400-1/8)**
- **FAA NA**

**LNAV/VNAV**
- **DA 460-1/8 322 (400-1/8)**
- **FAA NA**

**LNAV MDA**
- **540-1/8 402 (400-1/8)**
- **FAA NA**

**Circling**
- **680-1 539 (600-1)**
- **FAA NA**
WILLOWS, CALIFORNIA

AL-5296 (FAA)

VOR RWY 34
WILLOWS/GLENN COUNTY (WLW)

When Oroville Muni altimeter setting not received, procedure NA.
DME required.
Use Oroville Muni altimeter setting.

<table>
<thead>
<tr>
<th>CATEGORY</th>
<th>A</th>
<th>B</th>
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WOODLAND, CALIFORNIA

APP CRS
004°
Rwy Idg 3244
TDZE 125
Apt Elev 125

DME/DME RNP: 0.3 NA.
Procedure NA at night.
Use Sacramento Intl altimeter setting; when not received,
use Sacramento Exec altimeter setting and increase all
MDA 20 feet.

TRAVIS APP CON
126.6 281.45

UNICOM
122.8 (CTAF)

ELEV 125
TDZE 125

RNAV (GPS) RWY 36
WATTS-WOODLAND (041)

WOODLAND, CALIFORNIA
Orig 07MAY09

38°40'N-121°52'W
421
A rate of climb/descent table is provided for use in planning and executing climbs or descents under known or approximate ground speed conditions. It will be especially useful for approaches when the localizer only is used for course guidance. A best speed, power, altitude combination can be programmed which will result in a stable glide rate and altitude favorable for executing a landing if minimums exist upon breakout. Care should always be exercised so that minimum descent altitude and missed approach point are not exceeded.

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<th>%</th>
<th>GROUND SPEED (knots)</th>
<th>ANGLE</th>
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