U.S. Terminal Procedures Publication
South Central (SC) Vol 5 of 5

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Consult the Change Notice (CN) effective 04 NOV 2021 for revised Instrument Procedure Charts for this volume

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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.
INOP 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.

<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>

<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.

<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, SALSF, SALS</td>
<td>¼ mile</td>
</tr>
</tbody>
</table>

(4) Sidestep minima (CAT C-D)

<table>
<thead>
<tr>
<th>Inoperative Component or Visual Aid to Sidestep Runway</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**

<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 27</td>
<td>1352/24</td>
<td>200</td>
<td></td>
<td></td>
</tr>
<tr>
<td>S-LOC 27</td>
<td>1440/24</td>
<td>288</td>
<td>300-1/2</td>
<td>1440/50</td>
</tr>
<tr>
<td>CIRCLING</td>
<td>1540-1</td>
<td>1640-1</td>
<td>1640-1/2</td>
<td>1740-2</td>
</tr>
<tr>
<td></td>
<td>361 (400-1)</td>
<td>461 (500-1)</td>
<td>461 (500-1/2)</td>
<td>561 (600-2)</td>
</tr>
</tbody>
</table>

**Visibility in Statute Miles**

- DA: Distance Above (Land) Runway
- HAT: Height Above Touchdown Zone
- MDA: Minimum Descent Altitude
- HAA: Height Above Altitude

**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 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.

**COLD TEMPERATURE ERROR TABLE**

<table>
<thead>
<tr>
<th>REPORTED TEMP °C</th>
<th>200</th>
<th>300</th>
<th>400</th>
<th>500</th>
<th>600</th>
<th>700</th>
<th>800</th>
<th>900</th>
<th>1000</th>
<th>1500</th>
<th>2000</th>
<th>3000</th>
<th>4000</th>
<th>5000</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>+10</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>20</td>
<td>20</td>
<td>20</td>
<td>20</td>
<td>20</td>
<td>30</td>
<td>40</td>
<td>60</td>
<td>80</td>
<td>90</td>
</tr>
<tr>
<td>-10</td>
<td>20</td>
<td>20</td>
<td>20</td>
<td>30</td>
<td>40</td>
<td>50</td>
<td>50</td>
<td>60</td>
<td>90</td>
<td>120</td>
<td>170</td>
<td>230</td>
<td>280</td>
<td></td>
</tr>
<tr>
<td>-20</td>
<td>30</td>
<td>30</td>
<td>40</td>
<td>50</td>
<td>60</td>
<td>70</td>
<td>80</td>
<td>90</td>
<td>100</td>
<td>140</td>
<td>190</td>
<td>240</td>
<td>280</td>
<td>340</td>
</tr>
<tr>
<td>-30</td>
<td>40</td>
<td>40</td>
<td>50</td>
<td>60</td>
<td>70</td>
<td>80</td>
<td>90</td>
<td>100</td>
<td>120</td>
<td>160</td>
<td>200</td>
<td>240</td>
<td>280</td>
<td>340</td>
</tr>
<tr>
<td>-40</td>
<td>50</td>
<td>50</td>
<td>60</td>
<td>70</td>
<td>80</td>
<td>90</td>
<td>100</td>
<td>120</td>
<td>140</td>
<td>180</td>
<td>220</td>
<td>260</td>
<td>300</td>
<td>360</td>
</tr>
<tr>
<td>-50</td>
<td>60</td>
<td>60</td>
<td>70</td>
<td>80</td>
<td>90</td>
<td>100</td>
<td>120</td>
<td>140</td>
<td>160</td>
<td>200</td>
<td>240</td>
<td>280</td>
<td>320</td>
<td>380</td>
</tr>
</tbody>
</table>

**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 certified landing weight. VREF, VSO, and the maximum certified 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:

**MANEUVERING TABLE**

<table>
<thead>
<tr>
<th>Approach Category</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
</tr>
</thead>
<tbody>
<tr>
<td>Speed (Knots)</td>
<td>0-90</td>
<td>91-120</td>
<td>121-140</td>
<td>141-165</td>
<td>Abv 165</td>
</tr>
</tbody>
</table>
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 distance 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>3000-5000</td>
<td>1.3</td>
</tr>
<tr>
<td>5000-7000</td>
<td>1.3</td>
</tr>
<tr>
<td>7000-9000</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 next higher 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>
<th>RVR (feet)</th>
<th>Visibility (SM)</th>
<th>RVR (feet)</th>
<th>Visibility (SM)</th>
<th>RVR (feet)</th>
<th>Visibility (SM)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1600</td>
<td>¼</td>
<td>2400</td>
<td>½</td>
<td>3500</td>
<td>¾</td>
<td>5500</td>
<td>1</td>
</tr>
<tr>
<td>1800</td>
<td>½</td>
<td>2600</td>
<td>¾</td>
<td>4000</td>
<td>½</td>
<td>6000</td>
<td>¾</td>
</tr>
<tr>
<td>2000</td>
<td>¾</td>
<td>3000</td>
<td>¾</td>
<td>4500</td>
<td>¾</td>
<td>6000</td>
<td>½</td>
</tr>
<tr>
<td>2200</td>
<td>½</td>
<td>3200</td>
<td>¾</td>
<td>5000</td>
<td>1</td>
<td>6000</td>
<td>1</td>
</tr>
</tbody>
</table>

RADAR MINIMA

<table>
<thead>
<tr>
<th>RWY GP/TCH/RPI</th>
<th>CAT A/MDA-VIS</th>
<th>HAT</th>
<th>CEIL-VIS</th>
<th>CAT A/MDA-VIS</th>
<th>HAT</th>
<th>CEIL-VIS</th>
</tr>
</thead>
<tbody>
<tr>
<td>PAR</td>
<td>ABCDE</td>
<td>195/16</td>
<td>100</td>
<td>(100-¼)</td>
<td>ABCDE</td>
<td>187/16</td>
</tr>
<tr>
<td>ASR</td>
<td>AB</td>
<td>560/40</td>
<td>463</td>
<td>(500-¼)</td>
<td>AB</td>
<td>600/50</td>
</tr>
<tr>
<td>CIR</td>
<td>AB</td>
<td>560-½</td>
<td>463</td>
<td>(500-¼)</td>
<td>AB</td>
<td>600-½</td>
</tr>
</tbody>
</table>

Visibility in Statute Miles

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 500-1/4.

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

Additionally, unmonitored 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.
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-227 (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 Amdt 2B 12MAR09 Procedure Amendment Effective Date

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/heading/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.
The use of the associated codified STAR/DP and transition identifiers are requested of users when filing flight plans via teletype and are required for users filing flight plans via computer interface. 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.

**PILOT CONTROLLED AIRPORT LIGHTING SYSTEMS**

Available pilot controlled lighting (PCL) systems are indicated as follows:

1. Approach lighting systems that bear a system identification are symbolized using negative symbology, e.g., 🟢, 🟡, 🟢.
2. Approach lighting systems that do not bear a system identification are indicated with a negative "(*)" beside the name. A star (**) indicates non-standard PCL, consult Chart Suplement, e.g., 🟢**

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 🟢.

<table>
<thead>
<tr>
<th>KEY MIKE</th>
<th>FUNCTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>7 times within 5 seconds</td>
<td>Highest intensity available</td>
</tr>
<tr>
<td>5 times within 5 seconds</td>
<td>Medium or lower intensity (Lower REIL or REIL-off)</td>
</tr>
<tr>
<td>3 times within 5 seconds</td>
<td>Lowest intensity available (Lower REIL or REIL-off)</td>
</tr>
<tr>
<td>Abbreviation</td>
<td>Description</td>
</tr>
<tr>
<td>--------------</td>
<td>-------------</td>
</tr>
<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>Authorization Required</td>
</tr>
<tr>
<td>AR</td>
<td>Arrival</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>
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<tr>
<td>AWOS</td>
<td>Automated Weather Observing System</td>
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<tr>
<td>AZ</td>
<td>Azimuth</td>
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<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>
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<td>CCW</td>
<td>Counter Clockwise</td>
</tr>
<tr>
<td>CDI</td>
<td>Course Deviation Indicator</td>
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<td>Chan</td>
<td>Channel</td>
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<tr>
<td>CIFP</td>
<td>Coded Instrument Flight Procedures</td>
</tr>
<tr>
<td>CIR</td>
<td>Circling</td>
</tr>
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<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</td>
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<td>CTAF</td>
<td>Communication</td>
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<td>CW</td>
<td>Common Traffic Advisory</td>
</tr>
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<td>D-ATIS</td>
<td>Frequency</td>
</tr>
<tr>
<td>DA</td>
<td>Digital-Automated Terminal Information Service</td>
</tr>
<tr>
<td>DER</td>
<td>Decision Altitude</td>
</tr>
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<td>DH</td>
<td>Departure End of Runway</td>
</tr>
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<td>DME</td>
<td>Decision Height</td>
</tr>
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<td>Distance Measuring Equipment</td>
</tr>
<tr>
<td>DVA</td>
<td>Displaced Threshold</td>
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<tr>
<td>ELEV</td>
<td>Diverse Vector Area</td>
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<td>EMAS</td>
<td>Engineered Material Arresting System</td>
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<td>FAF</td>
<td>Final Approach Fix</td>
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<td>FD</td>
<td>Flight Director System</td>
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<td>FM</td>
<td>Fan Marker</td>
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<td>FMS</td>
<td>Flight Management System</td>
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<tr>
<td>GBAS</td>
<td>Ground Based Augmentation System</td>
</tr>
<tr>
<td>GCO</td>
<td>Ground Communications Outlet</td>
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<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 Glide Slope</td>
</tr>
<tr>
<td>GS</td>
<td>Height above Airport</td>
</tr>
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<td>HAA</td>
<td>Height above Landing</td>
</tr>
<tr>
<td>HAL</td>
<td>Height above Touchdown</td>
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<td>HAT</td>
<td>Height above Threshold</td>
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<td>HATh</td>
<td>Heliport Crossing Height</td>
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<tr>
<td>HCH</td>
<td>Heads-up Guidance System</td>
</tr>
<tr>
<td>HGS</td>
<td>High Intensity Runway Lights Head-up Display</td>
</tr>
<tr>
<td>HIRL</td>
<td>Initial Approach Fix International Civil Aviation Organization</td>
</tr>
<tr>
<td>HUD</td>
<td>Intermeadiate Fix</td>
</tr>
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<td>IAF</td>
<td>Inner Marker</td>
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<td>ICAO</td>
<td>Inoperative</td>
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<tr>
<td>INT</td>
<td>Intersection</td>
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<tr>
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<td>Knots</td>
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<tr>
<td>KIAS</td>
<td>Knots Indicated Airspeed</td>
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<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>
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<td>LNAV</td>
<td>Lateral Navigation</td>
</tr>
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<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>MALS</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 Missed Approach Point</td>
</tr>
<tr>
<td>MAP</td>
<td>Minimum Decent Altitude</td>
</tr>
<tr>
<td>MDA</td>
<td>Medium Intensity Runway Lights</td>
</tr>
<tr>
<td>MIRL</td>
<td>Minimum Reception Altitude</td>
</tr>
<tr>
<td>MM</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>MRA</td>
<td>Not Authorized</td>
</tr>
<tr>
<td>N/A</td>
<td>Non-directional Radio Beacon</td>
</tr>
<tr>
<td>NA</td>
<td>Nautical Mile</td>
</tr>
<tr>
<td>NDB</td>
<td>No Procedure Turn Required (Procedure Turn shall not be executed without ATC clearance)</td>
</tr>
<tr>
<td>NM</td>
<td>No Procedure Turn Required</td>
</tr>
<tr>
<td>NoPT</td>
<td>Not Required</td>
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<tr>
<td>Abbreviation</td>
<td>Description</td>
</tr>
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<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>
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<tr>
<td>PAR</td>
<td>Precision Approach Radar</td>
</tr>
<tr>
<td>PDC</td>
<td>Pre-Departure Clearance</td>
</tr>
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<td>PRM</td>
<td>Precision Runway Monitor</td>
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<tr>
<td>Radial</td>
<td>Radial Runway Alignment Indicator height</td>
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<tr>
<td>RCL</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>
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<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</td>
</tr>
<tr>
<td>RRL</td>
<td>Runway Remaining Lights</td>
</tr>
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<td>Rwy</td>
<td>Runway</td>
</tr>
<tr>
<td>RVR</td>
<td>Runway Visual Range</td>
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<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>Simplified 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>TAA</td>
<td>Terminal Arrival Area</td>
</tr>
<tr>
<td>TACAN</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>
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<tr>
<td>TDZL</td>
<td>Touchdown Zone Lights</td>
</tr>
<tr>
<td>THR</td>
<td>Threshold</td>
</tr>
<tr>
<td>TDOA</td>
<td>Takeoff Distance Available</td>
</tr>
<tr>
<td>TORA</td>
<td>Takeoff Run Available</td>
</tr>
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<td>TR</td>
<td>Track</td>
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<td>VASI</td>
<td>Visual Approach Slope Indicator</td>
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<tr>
<td>VCOA</td>
<td>Visual Climb over Airport</td>
</tr>
<tr>
<td>VDP</td>
<td>Visual Descent Point</td>
</tr>
<tr>
<td>VGS</td>
<td>Visual Glide Slope Indicator</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>

**Abbreviations**

ODALS: Omnidirectional Approach Light System  
ODP: Obstacle Departure Procedure  
OM: Outer Marker  
PAR: Precision Approach Radar  
PDC: Pre-Departure Clearance  
PRM: Precision Runway Monitor  
R: Radial Runway Alignment Indicator height  
RAIL: Runway Alignment Indicator Lights  
RCL: Runway Centerline Light System  
REIL: Runway End Identifier Lights  
RF: Radius-to-Fix  
RLLS: Runway Lead-in Light System  
RNAV: Area Navigation  
RNP: Required Performance Navigation  
RPI: Runway Point of Intercept  
RRL: Runway Remaining Lights  
Rwy: Runway  
RVR: Runway Visual Range  
S: Straight-in  
SALS: Short Approach Light System  
SALSF: Simplified Short Approach Lighting System with Sequenced Flashing Lights  
SSALF: Simplified Short Approach Lighting System with Sequenced Flashers  
SSALR: Simplified Short Approach Light System with RAIL  
SSALS: Simplified Short Approach Lighting System  
SDF: Simplified Directional Facility  
SM: Statute Mile  
SOIA: Simultaneous Offset Instrument Approach  
SR-SS: Sunrise-Sunset  
TAA: Terminal Arrival Area  
TACAN: TACAN  
TCH: Threshold Crossing Height (height in feet above ground level)  
TDZ: Touchdown Zone  
TDZE: Touchdown Zone Elevation  
TDZ/CL: Touchdown Zone and Runway Centerline Lighting  
TDZL: Touchdown Zone Lights  
THR: Threshold  
TDOA: Takeoff Distance Available  
TORA: Takeoff Run Available  
TR: Track  
VASI: Visual Approach Slope Indicator  
VCOA: Visual Climb over Airport  
VDP: Visual Descent Point  
VGS: Visual Glide Slope Indicator  
VNAV: Vertical Navigation  
WAAS: Wide Area Augmentation System  
WP/WPT: Waypoint (RNAV)
**LEGEND 20086**

**INSTRUMENT APPROACH PROCEDURES (CHARTS)**

**PLANVIEW SYMBOLS**

**TERMINAL ROUTES**
- Procedure Track
- Missed Approach
- Visual Flight Path

**INDICATED AIRSPEED**

<table>
<thead>
<tr>
<th>175K</th>
<th>120K</th>
<th>230K</th>
<th>180K</th>
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</thead>
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<tr>
<td>Mandatory Airspeed</td>
<td>Minimum Airspeed</td>
<td>Maximum Airspeed</td>
<td>Recommended Airspeed</td>
</tr>
</tbody>
</table>

**RADIO AIDS TO NAVIGATION**
110.1 Underline indicates No Voice transmitted on this frequency

**HOLDING PATTERNS**

- Missed Approach
- Procedure Turn
- Hold-in-lieu of Procedure Turn

**FIXES/ATC REPORTING REQUIREMENTS**
- Reporting Point
- Intersection
- WAYPOINT (Compulsory)
- WAYPOINT (Non-Compulsory)
- FLYOVER POINT (Flyover)
- MAP WP
- Computer Navigation Fix (CNF) - No ATC Function
- x (NAME) (*x* omitted when conflicts with runway pattern)

**ALTITUDES**
- 3500 Mandatory Altitude
- 2500 Minimum Altitude
- 4300 Maximum Altitude
- 3000 Recommended Altitude
- 3000 Mandatory Block
- 3000 Altitude
Three different methods are used to depict either electronic or vertical guidance: "GS", "GP", or "VDA".  
1. "GS" indicates that an Instrument Landing System (ILS) electronic glide slope (a ground antenna) provides vertical guidance. The profile section of ILS procedures depict a GS angle and TCH in the following format: GS 3.00°. TCH 55

2. "GP" on GLS and RNAV procedures indicates that either electronic vertical guidance (via Wide Area Augmentation System - WAAS or Ground Based Augmentation System - GBAS) or barometric vertical guidance is provided. GLS and RNAV procedures with a published decision altitude (DA/H) depict a GP angle and TCH in the following format: GP 3.00°. TCH 55

3. An advisory vertical descent angle (VDA) is provided on non-vertically guided conventional procedures and RNAV procedures with only a minimum descent altitude (MDA) to assist in preventing controlled flight into terrain. On Civil (FAA) procedures, this information is placed above or below the procedure track following the fix it is based on. Absence of a VDA or a note that the VDA is not authorized indicates that the prescribed obstacle clearance surface is not clear and the VDA must not be used below MDA. VDA is depicted in the following format: 3.00°. TCH 55

On Copter procedures this is depicted in the following format: 3.00°. TCH 55

A visual descent point (VDP) is used to separate the VDA and the visual descent segment. The VDA is depicted as a dashed vertical line. Visual descent segment below MDA/DA is clear of obstacles on 34:1 slope. (Absence of shaded area indicates 34:1 is not clear or Visual Segment - Obstacles.)

On RNAV and GLS procedures with vertical guidance, the profile section of ILS procedures depict a GS angle and TCH in the following format: GS 3.00°. TCH 55

On RNAV procedures with a published decision altitude (DA/H) depict a GP angle and TCH in the following format: GP 3.00°. TCH 55

On RNAV and GLS procedures with vertical guidance, the profile section of ILS procedures depict a GS angle and TCH in the following format: GS 3.00°. TCH 55

An advisory vertical descent angle (VDA) is provided on non-vertically guided conventional procedures and RNAV procedures with only a minimum descent altitude (MDA) to assist in preventing controlled flight into terrain. On Civil (FAA) procedures, this information is placed above or below the procedure track following the fix it is based on. Absence of a VDA or a note that the VDA is not authorized indicates that the prescribed obstacle clearance surface is not clear and the VDA must not be used below MDA. VDA is depicted in the following format: 3.00°. TCH 55

On Copter procedures this is depicted in the following format: 3.00°. TCH 55

A visual descent point (VDP) is used to separate the VDA and the visual descent segment. The VDA is depicted as a dashed vertical line. Visual descent segment below MDA/DA is clear of obstacles on 34:1 slope. (Absence of shaded area indicates 34:1 is not clear or Visual Segment - Obstacles.)
### RADIO AIDS TO NAVIGATION

**Compulsory:**
- ⭕️ VOR
- 📣 VORTAC
- ⭕️ DME
- 📣 NDB
- 📣 VOR/DME
- 📣 TACAN
- 📣 NDB/DME

**Non-Compulsory:**
- ⭕️ VOR
- 📣 VORTAC
- ⭕️ DME
- 📣 NDB
- 📣 VOR/DME
- 📣 TACAN
- 📣 NDB/DME

- ⭕️ LMM, LOM (Compass locator)
- 📣 Marker Beacon
- 📣 Localizer Front Course (Shading on left)
- 📣 SDF Course

(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

**Frequency**

<table>
<thead>
<tr>
<th>Identifier</th>
<th>Frequency</th>
<th>Geographic Position</th>
</tr>
</thead>
<tbody>
<tr>
<td>ORLANDO</td>
<td>I12.25 (T)</td>
<td>ORL Chan 59 (Y)</td>
</tr>
<tr>
<td>N28°32.56'</td>
<td>W81°20.10'</td>
<td>L19, H5</td>
</tr>
</tbody>
</table>

**FIXES/ATC REPORTING REQUIREMENTS**

**Reporting Points**
- N00°00.00' W00°00.00'

- ▲ Fix-Compulsory and
- △ Non-Compulsory Position Report

- DME fix

- Obvious DME (DME mileage matches route mileage)

- WAYPOINT (Compulsory)

- WAYPOINT (Non-Compulsory)

- FLYOVER POINT

**X Computer Navigation Fix (CNF) - No ATC Function**

**JEHNN**
- N00°00.00' W00°00.00'

### AIRPORTS

- ✈️ Civil
- 🗼 Military
- ⚤ Joint (Civil-Military)

Airports not served by the procedure shown in screened color

- ✈️ Civil
- 🗼 Military
- ⚤ Joint (Civil-Military)

### ROUTES

**MAA FL200**  
- Maximum Authorized Altitude 4500
- MEA-Minimum Enroute Altitude 3500

**MOCA-Minimum Obstruction Clearance Altitude**  
- 270° Arrival Route

**Mileage between Radio Aids, Reporting Points, and Route Breaks**

- (65) Transition Route
- R-275

**Lost Communications Track**

**V12**  
- Airway/Jet Route Identification

Holding pattern with max. restricted airspeed (175K) applies to all altitudes (210K) applies to altitudes above 6000' to and including 14000'

### SPECIAL USE AIRSPACE

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

### ALTITUDES

- Mandatory Altitude (Cross at)
- Minimum Altitude (Cross at or above)
- Maximum Altitude (Cross at or below)

- 5500
- 2300
- 4800

- 15000
- 12000
- 12000

**Altitude change at other than Radio Aids to Navigation**

**INDICATED AIRSPEED**

- Mandatory Airspeed 175K
- Minimum Airspeed 120K
- Maximum Airspeed 250K

**MISCELLANEOUS**

- Changeover Point

- Air Defense Identification Zone

- Ldg KLAS and KHND
- Ldg Rwys 16L/C/R

- Terminus identifier

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

**Legend**

- 21168
RADIO AIDS TO NAVIGATION

Compulsory:
- VOR
- VORTAC
- DME
- NDB/DME
- LOC/DME
- LOC

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

Marker Beacon

LMM, LOM (Compass locator)

Frequency

Reference

Position

Geographic

Channel

TACAN

DME or

on this frequency

no voice transmitted

Underline indicates distance information

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

LOCAL BACK COURSE

identifier

 identifier

Designates direction of flight

Identification of reporting points

W00°00.00'

N00°00.00'

Position Report

No Voice Transmitted

Font 

Reported by

DME Fix

21168

DEPARTURE PROCEDURE (DP) CHARTS

ROUTES

4500 MEA-Minimum Enroute Altitude
*3500 MOCA-Minimum Obstruction Clearance Altitude
270° Departure Route
(65)

Mileage between Radio Aids, Reporting Points, and Route Breaks

R-275 Radial line and value

Lost Communications Track

Airway/Jet Route Identification

Holding pattern with max. restricted airspeed (175K) applies to all altitudes (210K) applies to altitudes above 6000' to and including 14000'

Special Use Airspace

R-352 R-352

MINIMUM SAFE ALTITUDE (MSA)

120K

250K

200K

4500

4100

4700

5300

4700

12000

5000

Top altitude restriction

INDICATED AIRSPEED

175K

120K

250K

120K

250K

250K

AIRPORTS

Civil

Military

Joint

Heliport

Facility Identifier

Airport Identifier

MINIMUM SAFE ALTITUDE (MSA)

4500

4100

4700

5300

J80

V12

(Shading on left)

Localizer Front Course

Localizer Back Course

SDF Course

ORLANDO

112.25 ORL

N28°32.56' W81°20.10' Geographic Position

1.99 ORL Chan 59 Y

En route Chart Reference

DME Mileage (when not obvious)

DME Mileage

75

Obvious DME

(DME mileage matches route mileage)

WAYPOINT

(Waypoint)

(Waypoint)

(Non-Compulsory)

(Compulsory)

Minimum Altitude

X Computer Navigation Fix (CNF) - No ATC Function

(NJEHNN)

N00°00.00' W00°00.00'

N00°00.00' W00°00.00'

N00°00.00' W00°00.00'

Mandatory Altitude

(Cross at)

Minimum Altitude

(Cross at or below)

Maximum Altitude

(Cross at or above)

Top Altitude:

5000

7500

12000

Indicated Airspeed

Mandatory Airspeed

Minimum Airspeed

Maximum Airspeed

MISCELLANEOUS

Distance not to scale

21168

DEPARTURE PROCEDURE (DP) CHARTS

Jun 2021 to Dec 2021

G2
**INSTRUMENT APPROACH PROCEDURES (CHARTS)**

**Runways**
- Hard Surface
- Other Than Hard Surface
- Stopways, Taxiways, Parking Areas
- Metal Surface
- Under Construction
- Water Runway

**ARRESTING SYSTEM** (EMAS)

**REFERENCE FEATURES**
- Displaced Threshold
- Hot Spot
- Runway Holding Position Markings
- Buildings
- 24-Hour Self-Serve Fuel
- Tanks
- Obstructions
- Airport Beacon
- Runway
- Radar Reflectors
- Control Tower

**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.

**NOTE:**
- Landmark features depicted on Copter Approach insets and sketches are provided for visual reference only.
- Runway TDZ elevation
  - 0.3% DOWN
- Runway Slope
  - 0.8% UP
  - (shown when runway slope is greater than or equal to 0.3%)

**NOTE:**
- 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 2 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 symbol is shown to indicate runway declared distance information available, see appropriate Chart Supplement for distance information.**

**SCOPE**

Airport diagrams are specifically designed to assist in the movement of ground traffic at locations with complex runway/taxiway configurations. Airport diagrams are not intended to be used for approach and landing or departure operations. For revisions to Airport Diagrams: Consult FAA Order 7910.4.
Approach lighting and visual glide slope systems are indicated on the airport sketch by an identifier, e.g.,  。 Negative symbology, e.g.,  ,  indicates Pilot Controlled Lighting (PCL).

### RUNWAY TOUCHDOWN ZONE AND CENTERLINE LIGHTING SYSTEMS

<table>
<thead>
<tr>
<th>TDZ/CL</th>
<th>TDZL</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Availability of TDZ/CL will be shown by NOTE in SKETCH e.g. "TDZ/CL Rwy 15".

### APPROACH LIGHTING SYSTEMS

#### ALSF-2

![Diagram of ALSF-2]

(High Intensity)
LENGTH 2400/3000 FEET

#### ALSF-1

![Diagram of ALSF-1]

(High Intensity)
LENGTH 2400/3000 FEET

### SHORT APPROACH LIGHTING SYSTEM

#### SALS/SALSF

(High Intensity)
SAME AS INNER 1500' OF ALSF-1

#### SIMPLIFIED SHORT APPROACH LIGHTING SYSTEM (High Intensity)

LENGTH 2400/3000 FEET

### OMNIDIRECTIONAL APPROACH LIGHTING SYSTEM

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### VISUAL APPROACH SLOPE INDICATOR

#### VASI

VIA VISUAL APPROACH SLOPE INDICATOR WITH STANDARD THRESHOLD CLEARANCE PROVIDED:
ALL LIGHTS WHITE — TOO HIGH
FAR LIGHTS RED —— TOO HIGH
NEAR LIGHTS WHITE — ON GLIDE SLOPE
ALL LIGHTS RED —— TOO LOW

### MEDIUM INTENSITY APPROACH LIGHTING SYSTEM WITH RUNWAY ALIGNMENT INDICATOR LIGHTS (MALS and MALSF) OR SIMPLIFIED SHORT (SSALS and SSALF) APPROACH LIGHTING SYSTEMS

#### MALSR

SAME LIGHT CONFIGURATION AS SSAIR.
Approach lighting and visual glide slope systems are indicated on the airport sketch by an identifier, \( \circlearrowright \), \( \infty \) etc.

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

**LEGEND**

#### INSTRUMENT APPROACH PROCEDURES (CHARTS)

**APPROACH LIGHTING SYSTEM - UNITED STATES**

**PRECISION APPROACH PATH INDICATOR**

**PAPI**

- Too low
- Slightly low
- On correct approach path
- Slightly high
- Too high

Legend: \( \text{\textbullet{}} \) White \( \circlearrowright \) Red

**PULSATING VISUAL APPROACH SLOPE INDICATOR**

**PVASI**

- Pulsating White
- Steady White or Alternating Red/White
- Above Glide Path
- On Glide Path
- Slightly Below Glide Path
- Steady Red
- Below Glide Path
- Pulsating Red

Threshold

**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.

**T**-VISUAL APPROACH SLOPE INDICATOR

**"T"-VASI**

- "T" on both sides of RWY
- All lights variable white
- Correct approach slope
- Only cross bar visible
- Upright "T": Fly up
- Inverted "T": Fly down
- Red "**T**": Gross Undershoot

**TRI-COLOR VISUAL APPROACH SLOPE INDICATOR**

**TRCV**

- Above Glide Path
- On Glide Path
- Below Glide Path
- Above glide path
- On Glide Path
- Below Glide Path

**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**

Painted panels which may be lighted at night.
To use the system the pilot positions the aircraft so the elements are in alignment.
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**BAY CITY, TX**

**BAY CITY RGNL (BYY)**

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**SC-5, 07 OCT 2021 to 02 DEC 2021**
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HOUSTON COUNTY
---SEE CROCKETT, TX

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JACK BROOKS RGNL
---SEE BEAUMONT/PORT ARTHUR, TX

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---SEE EDNA, TX

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**Note:** The text appears to be a list of airport codes and minimums, likely related to aviation or air traffic control. The context is not clear from the given text.
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SC-5, 07 OCT 2021 to 02 DEC 2021
TAKEOFF MINIMUMS, (ObSTACLE) DEPARTURE PROCEDURES, AND DIVERSE VECTOR AREA (RADAR VECTORS)

INSTRUMENT APPROACH PROCEDURE CHARTS

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.

ANAHUAC, TX
CHAMBERS COUNTY (T00)

TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES

ORIG 10MAR11 (11069) (FAA)

TAKEOFF MINIMUMS:
Rwys 17, 35, NA-Environmental.

TAKEOFF OBSTACLE NOTES:
Rwy 12, vehicles on roadway beginning 19' from DER, left and right of centerline, up to 15' AGL/34' MSL.
Trees beginning 986' from DER, 732' left of centerline, up to 100' AGL/119' MSL.
Rwy 30, trees beginning 60' from DER, left and right of centerline, up to 100' AGL/124' MSL.
Venicles on roadway 121' from DER, 512' right of centerline, up to 17' AGL/36' MSL.
Tower 2152' from DER, 593' right of centerline 60' AGL/83' MSL.

ANGLETON/LAKE JACKSON, TX
TEXAS GULF COAST RGNL (LBX)

TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES

AMDT 2 22JUN17 (17173) (FAA)

TAKEOFF OBSTACLE NOTES:
Rwy 35, tree 1330' from DER, 797' left of centerline, 71' MSL.
Tree 1404' from DER, 796' left of centerline, 73' MSL.
Trees beginning 1467' from DER, 788' left of centerline, up to 75' MSL.
Tree 1474' from DER, 670' right of centerline, 72' MSL.
Tree 1516' from DER, 684' right of centerline, 73' MSL.
Tree 1578' from DER, 759' right of centerline, 74' MSL.
TAKEOFF MINIMUMS, (OBSTACLE) DEPARTURE PROCEDURES, AND DIVERSE VECTOR AREA (RADAR VECTORS)

BAY CITY, TX
BAY CITY RGNL (BYY)
TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES
AMDT 1 22JUN17 (17173) (FAA)
TAKEOFF OBSTACLE NOTES:
Rwy 13, trees and poles beginning 51' from DER, 306' left of centerline, up to 91' MSL.
Tree 337' from DER, 442' right of centerline, 79' MSL. Tree 478' from DER, 473' right of centerline, 83' MSL.
Trees beginning 714' from DER, 496' right of centerline, up to 86' MSL.
Rwy 31, tree 102' from DER, 340' right of centerline, 61' MSL.
Tree 548' from DER, 272' left of centerline, 59' MSL.
Tree 944' from DER, 272' right of centerline, 70' MSL.
Trees beginning 1002' from DER, 255' right of centerline, up to 78' MSL.
Tree 1139' from DER, 750' right of centerline, 80' MSL.

BAYTOWN, TX
BAYTOWN (HPY)
TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES
ORIG-A 10OCT19 (19283) (FAA)
TAKEOFF MINIMUMS:
Rwy 14,
300-1 or std. w/min. climb of 460’ per NM to 300.
TAKEOFF OBSTACLE NOTES:
Rwy 14, tree 9' from DER, 214' left of centerline, 47' MSL.
Trees, poles, traverse way beginning 11' from DER, 33'right of centerline, up to 54' MSL.
Tree 89' from DER, 413' left of centerline, 51' MSL.
Poles, building, trees, traverse way beginning 122' from DER, 9' left of centerline, up to 58' MSL.
Trees, poles beginning 316' from DER, 158' left of centerline, up to 66' MSL.
Poles, trees beginning 462' from DER, 237' left of centerline, up to 67' MSL.
Tree 977' from DER, 447' left of centerline, 68' MSL.

RAW AIRPARK (54T)
TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES
AMDT 1A 25APR19 (19115) (FAA)
TAKEOFF MINIMUMS:
Rwys 14, 32, NA - Environmental.
TAKEOFF OBSTACLE NOTES:
Rwy 8, trees beginning 21' from DER, 152' left of centerline, up to 100' AGL/129' MSL.
Vehicle on road beginning 100' from DER, crossing centerline, up to 15' AGL/44' MSL.
Fence beginning abeam DER, 115' right of centerline, up to 6' AGL/35' MSL.
Trees beginning 133' from DER, 333' right of centerline, up to 100' AGL/129' MSL.
Buildings beginning 266' from DER, left and right of centerline, up to 30' AGL/59' MSL.
Power lines beginning 356' from DER, 460' left of centerline, up to 32' AGL/61' MSL.
Pole 663' from DER, 188' right of centerline, 100' AGL/129' MSL.

BEAUMONT, TX
BEAUMONT MUNI (BMT)
TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES
ORIG 15JAN09 (09015) (FAA)
TAKEOFF MINIMUMS:
Rwys 16,34, NA - Obstacles.
TAKEOFF OBSTACLE NOTES:
Rwy 13, multiple trees, poles and buildings beginning 82' from DER, 2' left of centerline, up to 74' AGL/106' MSL.
Vehicle on road beginning 100' from DER, crossing centerline, up to 15' AGL/44' MSL.
Fence and signs beginning 441' from DER, 22' right of centerline, up to 73' AGL/105' MSL.
Train on railroad 545' from DER, 506' right of centerline, 23' AGL/57' MSL.

Takeoff minimums, (obstacle) departure procedures, and diverse vector area (radar vectors)
TAKEOFF MINIMUMS, (OBSTACLE) DEPARTURE PROCEDURES, AND DIVERSE VECTOR AREA (RADAR VECTORS)

BEAUMONT/PORT ARTHUR, TX
JACK BROOKS RGNL (BPT)
TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES
ORIG 17DEC09 (09351) (FAA)
TAKEOFF OBSTACLE NOTES:
  Rwy 12, multiple trees beginning 1024' from DER, 202' left of centerline, up to 43' AGL/48' MSL.
  Trees 1676' from DER, 778' right of centerline, 51' AGL/56' MSL.
  Rwy 16, multiple trees beginning 580' from DER, 519' right of centerline, up to 51' AGL/56' MSL.
  Rwy 30, multiple trees beginning 1041' from DER, 617' left of centerline, up to 67' AGL/77' MSL.
  Multiple trees beginning 1274' from DER, 398' right of centerline, up to 70' AGL/80' MSL.
  Multiple trees beginning 1288' from DER, 218' left of centerline, up to 72' AGL/82' MSL.
  Tower 1487' from DER, 398' right of centerline, 60' AGL/75' MSL.

BRENNHAM, TX
BRENNHAM MUNI (11R)
TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES
AMDT 1 11FEB10 (10042) (FAA)
TAKEOFF OBSTACLE NOTES:
  Rwy 16, trees and poles beginning 45' from DER, 272' right of centerline to 305' left of centerline, up to 89' AGL/299' MSL.
  Rwy 34, trees beginning 18' from DER, 325' right of centerline to 380' left of centerline, up to 35' AGL/382' MSL.

BRYAN, TX
COULTER FIELD (CFD)
TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES
ORIG 05JUL07 (07186) (FAA)
TAKEOFF OBSTACLE NOTES:
  Rwy 15, vehicle on road 266' from DER, on centerline, 17' AGL/389' MSL.
  Multiple trees and poles beginning 169' from DER, 339' right of centerline, up to 20' AGL/389' MSL.
  Multiple trees and poles beginning 203' from DER, 245' left of centerline, up to 35' AGL/400' MSL.
  Rwy 33, multiple poles and T-L towers beginning 36' from DER, 207' left of centerline, up to 35' AGL/382' MSL.
  Trees 508' from DER, 290' right of centerline, 25' AGL/371' MSL.

CALDWELL, TX
CALDWELL MUNI (RWV)
TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES
AMDT 1 20SEP12 (12264) (FAA)
TAKEOFF MINIMUMS:
  Rwy 33, 300-1 or std. w/min. climb of 778' per NM to 800.
TAKEOFF OBSTACLE NOTES:
  Rwy 15, trees beginning 323' from DER, left and right of centerline, up to 40' AGL/399' MSL.
  Train on tracks 372' from DER, left and right of centerline, up to 23' AGL/382' MSL.
  Power lines beginning 1896' from DER, left and right of centerline, up to 100' AGL/499' MSL.
  Rwy 33, trees beginning 5' from DER, left and right of centerline, up to 40' AGL/499' MSL.
  Power lines beginning 925' from DER, left and right of centerline, up to 50' AGL/499' MSL.
  Water tank 3624' from DER, 1031' left of centerline 215' AGL/648' MSL.

CENTER, TX
CENTER MUNI (F17)
TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES
ORIG 29JUL10 (10210) (FAA)
DEPARTURE PROCEDURE:
  Rwy 17, climb heading 167° to 1000 before turning right.
TAKEOFF OBSTACLE NOTES:
  Rwy 17, numerous trees beginning 326' from DER, 432' right and left of centerline, up to 100' AGL/414' MSL.
  Vehicle on road 234' from DER, 530' left of centerline, up to 15' AGL/314' MSL.
  Rwy 35, numerous trees beginning 1724' from DER, 388' left and right of centerline, up to 100' AGL/459' MSL.
  Vehicle on road 1091' from DER, 742' right of centerline, up to 15' AGL/354' MSL.
TAKEOFF MINIMUMS, (OBSTACLE) DEPARTURE PROCEDURES, AND DIVERSE VECTOR AREA (RADAR VECTORS)

CLEVELAND, TX
CLEVELAND MUNI (6R3)
TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES
AMDT 1 22SEP11 (11265) (FAA)
DEPARTURE PROCEDURE:
Rwy 16, climb heading 157° to 1400 before turning right.
Rwy 34, climb heading 312° to 2000 before proceeding on course.
TAKEOFF OBSTACLE NOTES:
Rwy 16, trees beginning abeam DER, right and left of centerline, up to 100' AGL/239' MSL.
Rwy 34, trees beginning 120' from DER, 243' left of centerline, up to 100' AGL/259' MSL.
Vehicles on road 738' from DER, right and left of centerline, up to 19' AGL/169' MSL.

COLLEGE STATION, TX
EASTERWOOD FLD (CLL)
TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES
AMDT 4A 28FEB19 (21112) (FAA)
DEPARTURE PROCEDURE:
Rwy 35, climb heading 346° to 900 before turning right.
TAKEOFF OBSTACLE NOTES:
Rwy 11, traverse way 5' from DER, 275' right of centerline, 322' MSL.
Tree 8' from DER, 497' right of centerline, 40' AGL/346' MSL.
Tree 10' from DER, 323' right of centerline, 39' AGL/347' MSL.
Pole 10' from DER, 55' left of centerline, 2' AGL/312' MSL.
Tree, traverse way beginning 44' from DER, 162' right of centerline, up to 44' AGL/352' MSL.
Electrical system 139' from DER, 498' left of centerline, 315' MSL.
Tree 496' from DER, 30' left of centerline, 42' AGL/325' MSL.
Trees beginning 497' from DER, 101' left of centerline, up to 331' MSL.
Elevator, building beginning 1888' from DER, 704' left of centerline, up to 64' AGL/366' MSL.
Transmission line 2483' from DER, 1148' left of centerline, 374' MSL.

Rwy 29, pole 11' from DER, 55' right of centerline, 1' AGL/320' MSL.
Tree 30' from DER, 414' left of centerline, 322' MSL.
Tree 135' from DER, 530' left of centerline, 343' MSL.
Trees beginning 305' from DER, 533' left of centerline, up to 361' MSL.
Trees beginning 536' from DER, 561' right of centerline, up to 346' MSL.
Tree 838' from DER, 665' right of centerline, 348' MSL.
Trees beginning 1010' from DER, 371' left of centerline, up to 362' MSL.
Pole beginning 1083' from DER, 692' right of centerline, up to 358' MSL.
Trees beginning 1114' from DER, 244' left of centerline, up to 363' MSL.
Tree, pole beginning 1257' from DER, 251' left of centerline, up to 365' MSL.
Trees beginning 1429' from DER, 420' right of centerline, up to 366' MSL.
Trees beginning 1542' from DER, 528' right of centerline, up to 370' MSL.
Trees beginning 1865' from DER, 87' right of centerline, up to 379' MSL.
Trees, pole beginning 1879' from DER, 37' left of centerline, up to 49' AGL/369' MSL.
Trees beginning 1945' from DER, 65' left of centerline, up to 48' AGL/371' MSL.
Tree 2059' from DER, 375' left of centerline, 372' MSL.
Rwy 35, pole 11' from DER, 55' left of centerline, 1' AGL/321' MSL.
Sign 23' from DER, 251' left of centerline, 322' MSL.
Tree 232' from DER, 552' left of centerline, 38' AGL/361' MSL.
Trees beginning 297' from DER, 460' left of centerline, up to 41' AGL/364' MSL.
Tree 774' from DER, 598' right of centerline, 341' MSL.
Tree 808' from DER, 607' right of centerline, 349' MSL.
Tree, building beginning 883' from DER, 235' left of centerline, up to 366' MSL.
Tree 1085' from DER, 649' right of centerline, 355' MSL.
Tree 1181' from DER, 719' right of centerline, 356' MSL.
Pole 1552' from DER, 818' left of centerline, 376' MSL.
Trees beginning 1740' from DER, 751' left of centerline, up to 380' MSL.

CROCKETT, TX
HOUSTON COUNTY (DKR)
TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES
ORIG 15DEC11 (11349) (FAA)
TAKEOFF MINIMUMS:
Rwy 2, 400-2 or std. w/min. climb of 280' per NM to 800.
Rwy 20, 300-1½ or std. w/min. climb of 459'per NM to 700.
TAKEOFF OBSTACLE NOTES:
Rwy 2, multiple trees beginning 57' from DER, 61' right of centerline, up to 50' AGL/399' MSL.
Multiple trees and terrain beginning 27' from DER, 109' left of centerline, up to 50' AGL/409' MSL.
Tower 1.5 NM from DER, 2864' left of centerline 233' AGL/623' MSL.
Rwy 20, multiple towers beginning 4567' from DER, 1025' right of centerline, up to 200' AGL/529' MSL.
TAKEOFF MINIMUMS, (OBSTACLE) DEPARTURE PROCEDURES, AND DIVERSE VECTOR AREA (RADAR VECTORS)

EAGLE LAKE, TX
EAGLE LAKE (ELA)
TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES
AMDT 2 05DEC19 (19339) (FAA)
TAKEOFF MINIMUMS:
Rwy 17, 300-2¼, or std. w/min. climb of 210' per NM to 400.
TAKEOFF OBSTACLE NOTES:
Rwy 17, vehicles on road, tree, vegetation beginning 38' from DER, 126' left of centerline, up to 197' MSL.
Tree 153' from DER, 110' left of centerline, 202' MSL.
Vehicles on road, tree beginning 155' from DER, 6' right of centerline, up to 197' MSL.
Trees beginning 155' from DER, 12' left of centerline, up to 36' AGL/216' MSL.
Trees, vehicles on road beginning 216' from DER, 206' right of centerline, up to 212' MSL.
Trees beginning 270' from DER, 357' left of centerline, up to 40' AGL/220' MSL.
Tree 1682' from DER, 458' left of centerline, 233' MSL.
Tower 2588' from DER, 792' left of centerline, 192' AGL/317' MSL.
Tower 1.7 NM from DER, 3144' right of centerline, 270' AGL/443' MSL.
Rwy 35, terrain beginning 5' from DER, 287' left of centerline, up to 186' MSL.
Terrain 9' from DER, 270' right of centerline, 185' MSL.
Trees beginning 96' from DER, 271' right of centerline, up to 17' AGL/199' MSL.
Vegetation 116' from DER, 366' left of centerline, 193' MSL.
Trees, vehicles on road, pole beginning 323' from DER, 127' left of centerline, up to 219' MSL.
Tree 641' from DER, 21' right of centerline, 200' MSL.
Tree 696' from DER, 31' right of centerline, 202' MSL.
Trees, vehicles on road beginning 702' from DER, 16' right of centerline, up to 207' MSL.
Pole 1055' from DER, 441' right of centerline, 219' MSL.
Tree, poles beginning 1082' from DER, 580' right of centerline, up to 223' MSL.

EDNA, TX
JACKSON COUNTY (26R)
TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES
ORIG 10DEC15 (15344) (FAA)
TAKEOFF OBSTACLE NOTES:
Rwy 15, trees beginning 758' from DER, left and right of centerline, up to 20' AGL/84' MSL.
Rwy 33, vehicle on road beginning 292' from DER, 576' left of centerline, up to 15' AGL/79' MSL.
Power poles beginning 783' from DER, 397' left of centerline, 40' AGL/104' MSL.
Power pole 1169' from DER, 506' right of centerline, 40' AGL/104' MSL.

GALVESTON, TX
SCHOLES INTL AT GALVESTON (GLS)
TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES
AMDT 5 22AUG13 (13234) (FAA)
DEPARTURE PROCEDURE:
Rwy 32, climb heading 318° to 800 before turning left.
TAKEOFF OBSTACLE NOTES:
Rwy 14, building 2614' from DER, 376' right of centerline, 76' AGL/81' MSL.
Rwy 18, buildings beginning 2560' from DER, 284' left of centerline, up to 121' AGL/178' MSL.
T-L tower 636' from DER, 551' right of centerline, 55' AGL/60' MSL.
Tree, poles beginning 50' from DER, 75' right of centerline, up to 60' AGL/65' MSL.
Rwy 32, crane 4434' from DER, 1081' left of centerline, 131' AGL/131' MSL.
Rwy 36, bush 419' from DER, 577' left of centerline, 12' AGL/17' MSL.
Tree 526' from DER, 371' left of centerline, 14' AGL/19' MSL.
Trees beginning 713' from DER, 383' right of centerline, up to 27' AGL/32' MSL.

GIDDINGS, TX
GIDDINGS-LEE COUNTY (GYB)
TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES
ORIG 29JUL10 (10210) (FAA)
TAKEOFF OBSTACLE NOTES:
Rwy 17, numerous trees beginning 720' from DER, 58' right of centerline, up to 50' AGL/479' MSL.
Numerous trees beginning 754' from DER, 340' left of centerline, up to 50' AGL/479' MSL.
Rwy 35, numerous trees beginning 613' from DER, 272' right of centerline, up to 50' AGL/539' MSL.
Numerous trees beginning 558' from DER, 265' left of centerline, up to 50' AGL/559' MSL.
Vehicle on road 516' from DER, 246' left of centerline, 15' AGL/514' MSL.
TAKEOFF MINIMUMS, (OBSTACLE) DEPARTURE PROCEDURES, AND DIVERSE VECTOR AREA (RADAR VECTORS)

HOUSTON, TX
CONROE-NORTH HOUSTON RGNL (C XO)
TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES
AMDT 4 22JUN17 (17173) (FAA)
TAKEOFF OBSTACLE NOTES:
Rwy 01, tree 829' from DER, 548' right of centerline, 297' MSL.
Trees beginning 1609' from DER, 300' left of centerline, up to 322' MSL.
Trees beginning 3635' from DER, 464' left of centerline, up to 327' MSL.
Tree 1478' from DER, 691' right of centerline, 291' MSL.
Tree 1653' from DER, 682' left of centerline, 294' MSL.
Tree 2129' from DER, 80' right of centerline, 306' MSL.
Tree 2153' from DER, 407' left of centerline, 300' MSL.
Rwy 14, NAVAID 399' from DER, 266' right of centerline, 20' AGL/255' MSL.
Tree 1478' from DER, 691' right of centerline, 291' MSL.
Tree 1653' from DER, 682' left of centerline, 294' MSL.
Tree 2129' from DER, 80' right of centerline, 306' MSL.
Tree 2153' from DER, 407' left of centerline, 300' MSL.
Rwy 19, tree 1' from DER, 474' left of centerline, 292' MSL.
Trees beginning 16' from DER, 264' left of centerline, up to 295' MSL.
Tree 67' from DER, 322' right of centerline, 263' MSL.
Trees beginning 855' from DER, 324' right of centerline, up to 303' MSL.
Trees beginning 2139' from DER, 65' right of centerline, up to 316' MSL.
Trees beginning 2475' from DER, 580' right of centerline, 347' MSL.
Tree 3423' from DER, 123' right of centerline, 323' MSL.

DAVID WAYNE HOOKS MEML (DWH)
TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES
AMDT 3 05JUN08 (21112) (FAA)
TAKEOFF MINIMUMS:
Rwys 17L, 35R, NA - Environmental.
Waterways 17, 35, NA - air traffic.
TAKEOFF OBSTACLE NOTES:
Rwy 17R, multiple trees beginning 708' from DER, 68' left of centerline, up to 71' AGL/220' MSL.
Multiple hangars beginning 433' from DER, 515' left of centerline, up to 37' AGL/182' MSL.
DME antenna 653' from DER, 256' left of centerline, 13' AGL/162' MSL.
Multiple trees and pole beginning 85' from DER, 294' right of centerline, up to 45' AGL/189' MSL.
Rwy 35L, multiple trees and poles beginning 144' from DER, 32' left of centerline, up to 79' AGL/238' MSL.
Multiple hangars and buildings beginning 85' from DER, 9' left of centerline, up to 53' AGL/202' MSL.
Multiple trees, towers and pole beginning 100' from DER, 124' right of centerline, up to 93' AGL/247' MSL.
Vehicle and road 315' from DER, on centerline 15' AGL/166' MSL.
Building 894' from DER, 231' right of centerline, 23' AGL/173' MSL.

ELLINGTON (EFD)
TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES
AMDT 3 10JAN13 (13010) (FAA)
TAKEOFF MINIMUMS:
Rwy 22, 200-1/3 or std w/min. climb of 214' 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 4, tree 1526' from DER, 737' right of centerline, 39' AGL/69' MSL.
Rwy 17R, pole 1488' from DER, 817' right of centerline, 40' AGL/74' MSL.
Rwy 22, obstruction light on GS and equipment 321' from DER, 544' left of centerline, 39' AGL/68' MSL.
Sign 213' from DER, 472' right of centerline, 6' AGL/32' MSL.
Antenna on building 1998' from DER, 598' right of centerline, 54' AGL/83' MSL.
Obstruction light on communication equipment and antenna 1626' from DER, 837' right of centerline, 88' AGL/114' MSL.
Obstruction light on water tower and tank 6114' from DER, 1635' left of centerline, 159' AGL/192' MSL.
Rwy 35L, trees beginning 1119' from DER, 679' right of centerline, up to 37' AGL/77' MSL.
Crane 2353' from DER, 1024' left of centerline, 58' AGL/97' MSL.
Rwy 35R, tree 1597' from DER, 32' left of centerline, 50' AGL/80' MSL.
Tank 2639' from DER, 1157' right of centerline, 77' AGL/109' MSL.

GEORGE BUSH INTNCNTL/HOUSTON (IAH)
TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES
AMDT 2 05JUN08 (21112) (FAA)
TAKEOFF OBSTACLE NOTES:
Rwy 8L, tree 2866' from DER, 921' left of centerline, 107' AGL/201' MSL.
Multiple trees beginning 2750' from DER, 106' right of centerline, up to 80' AGL/174' MSL.
Rwy 15L, multiple trees 2638' from DER, 758' right of centerline, up to 76' AGL/160' MSL.
Rwy 15R, tower 1431' from DER, 591' left of centerline, 48' AGL/133' MSL.
Antenna on glideslope 1469' from DER, 621' left of centerline, 49' AGL/133' MSL.
Rwy 26R, pole 950' from DER, 660' right of centerline, 40' AGL/129' MSL.
Rwy 33R, tree 2868' from DER, 1027' right of centerline, 73' AGL/172' MSL.

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

HOUSTON, TX (CON’T)
HOUSTON EXEC (TME)
TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES
ORIG 30AUG07 (21112) (FAA)
DEPARTURE PROCEDURE:
Rwy 36, climb heading 355° to 700 before turning east.
TAKEOFF-obstacle NOTES:
Rwy 36, power poles from left to right beginning 703’ from DER, 623’ left to 685’ right of centerline, up to 32’ AGL/196’ MSL.

HOUSTON-SOUTHWEST (AXH)
TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES
AMDT 5 05JUN08 (08157) (FAA)
DEPARTURE PROCEDURE:
Rwy 9, climb heading 089° to 2000 before turning left.
Rwy 27, climb heading 269° to 2200 before turning right.
TAKEOFF OBSTACLE NOTES:
Rwy 9, multiple hangars beginning 239’ from DER, 360’ right of centerline, up to 42’ AGL/106’ MSL.
Multiple trees beginning 501’ from DER, 355’ right of centerline, up to 43’ AGL/111’ MSL.
Multiple hangars beginning 119’ from DER, 498’ left of centerline, up to 41’ AGL/105’ MSL.
Pole 332’ from DER, 299’ left of centerline, 43’ AGL/97’ MSL.
Antenna 1172’ from DER, 658’ left of centerline, 51’ AGL/115’ MSL.
Multiple trees beginning 558’ from DER, 68’ left of centerline, up to 58’ AGL/122’ MSL.
Rwy 27, multiple trees beginning 1050’ from DER, 40’ left of centerline, up to 71’ AGL/140’ MSL.
Vehicle and road 99’ from DER, 291’ right of centerline, 15’ AGL/83’ MSL.

PEARLAND RGNL (LVJ)
TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES
AMDT 4 03APR14 (14093) (FAA)
DEPARTURE PROCEDURE:
Rwy 14, climb heading 142° to 1600 before turning right.
Rwy 32, climb heading 322° to 700 before proceeding on course.
TAKEOFF OBSTACLE NOTES:
Rwy 14, vehicles on road beginning 11’ from DER, 450’ right of centerline, up to 15’ AGL/54’ MSL.
Hangers 99’ from DER, 521’ left of centerline, up to 13’ AGL/53’ MSL.
Trees beginning 102’ from DER, 328’ left of centerline, up to 27’ AGL/71’ MSL.
Trees beginning 190’ from DER, 307’ right of centerline, up to 64’ AGL/98’ MSL.
Vehicles on road beginning 364’ from DER, left and right of centerline, up to 15’ AGL/59’ MSL.
Rwy 32, multiple trees beginning 30’ from DER, 142’ right of centerline, up to 59’ AGL/100’ MSL.
Multiple trees beginning 41’ from DER, 200’ left of centerline, up to 74’ AGL/118’ MSL.
Pole 68’ from DER, 107’ right of centerline, 26’ AGL/70’ MSL.
Multiple buildings and poles beginning 103’ from DER, 235’ right of centerline, up to 34’ AGL/78’ MSL.
Vehicles on road 513’ from DER, left and right of centerline, 15’ AGL/59’ MSL.
Multiple poles and trees beginning 605’ from DER, left and right of centerline up to 84’ AGL/128’ MSL.

SUGAR LAND RGNL (SGR)
TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES
AMDT 7A 20SEP12 (12264) (FAA)
DEPARTURE PROCEDURE:
Rwy 17, climb heading 170° to 1500 before turning eastbound.
Rwy 35, climb heading 350° to 1100 before turning southbound.
TAKEOFF OBSTACLE NOTES:
Rwy 17, multiple poles beginning 436’ from DER, 172’ right of centerline, up to 44’ AGL/124’ MSL.
Railroad 110’ from DER, 10’ left of centerline, 23’ AGL/104’ MSL.
Multiple poles beginning 135’ from DER, 270’ left of centerline, up to 44’ AGL/111’ MSL.
Building 1036’ from DER, 743’ right of centerline, 26’ AGL/102’ MSL.
Rwy 35, vehicle and road 65’ from DER, 2’ right of centerline, 15’ AGL/96’ MSL.
Multiple trees beginning 37’ from DER, 275’ right of centerline, up to 81’ AGL/164’ MSL.
DME antenna 380’ from DER, 253’ right of centerline, 24’ AGL/100’ MSL.
Multiple trees beginning 83’ from DER, 65’ left of centerline, up to 81’ AGL/155’ MSL.
TAKEOFF MINIMUMS, (OBSIDACLE) DEPARTURE PROCEDURES, AND DIVERSE VECTOR AREA (RADAR VECTORS)

HOUSTON, TX (CON’T)
WEST HOUSTON (IWS)
TAKEOFF MINIMUMS AND (OBSIDACLE) DEPARTURE PROCEDURES
AMDT 4  20SEP12 (12264)  (FAA)
TAKEOFF OBSTACLE NOTES:
Rwy 15, road and vehicle beginning 74’ from DER, 60’ left of centerline, up to 15’ AGL/123’ MSL.
Road and vehicle beginning 342’ from DER, 6’ right of centerline, up 15’ AGL/123’ MSL.
Building 177’ from DER, 398’ left of centerline, 18’ AGL/126’ MSL.
Light pole 942’ from DER, 453’ right of centerline, 39’ AGL/145’ MSL.
Trees beginning 307’ from DER, 26’ left of centerline, up to 58’ AGL/165’ MSL.
Trees beginning 130’ from DER, 117’ right of centerline, up to 100’ AGL/208’ MSL.

TAKEOFF OBSTACLE NOTES (Cont’d):
Rwy 16’ from DER, 3’ right of centerline, up to 75’ AGL/184’ MSL.

WILLIAM P HOBBY (HOU)
AMDT 7A  07OCT21 (21280)  (FAA)
TAKEOFF MINIMUMS:
Rwy 22, std. w/min. climb of 290’ per NM to 2700.
DEPARTURE PROCEDURE:
Rwys 31LR, climb on heading 311° to 800 before turning westbound.
TAKEOFF OBSTACLE NOTES:
Rwy 4, lighting beginning 2’ from DER, 85’ left of centerline, up to 1’ AGL/39’ MSL.
Lighting beginning 2’ from DER, 84’ right of centerline, up to 1’ AGL/39’ MSL.
Lighting beginning 9’ from DER, 4’ left of centerline, up to 1’ AGL/40’ MSL.
Lighting beginning 9’ from DER, 5’ right of centerline, up to 1’ AGL/40’ MSL.
Building 1562’ from DER, 858’ right of centerline, 69’ AGL/103’ MSL.
Tree 2399’ from DER, 154’ left of centerline, 66’ AGL/99’ MSL.
Pole beginning 4403’ from DER, 767’ right of centerline, up to 121’ AGL/166’ MSL.

Rwy 13L, tree, lighting, sign beginning 3’ from DER, 39’ right of centerline, up to 75’ AGL/115’ MSL.
Lighting beginning 9’ from DER, 39’ left of centerline, up to 1’ AGL/40’ MSL.
Sign 26’ from DER, 149’ left of centerline, 2’ AGL/42’ MSL.
Trees, building, tree beginning 174’ from DER, 9’ left of centerline, up to 75’ AGL/115’ MSL.
Trees beginning 423’ from DER, 24’ right of centerline, up to 75’ AGL/118’ MSL.
Trees beginning 2389’ from DER, 55’ left of centerline, up to 75’ AGL/118’ MSL.
Trees 2448’ from DER, 1149’ right of centerline, 75’ AGL/121’ MSL.

Rwy 13R, lighting beginning 12’ from DER, 85’ right of centerline, up to 1’ AGL/42’ MSL.
Lighting beginning 12’ from DER, 94’ left of centerline, up to 1’ AGL/42’ MSL.
Lighting 41’ from DER, 115’ left of centerline, 3’ AGL/44’ MSL.
Lighting 42’ from DER, 114’ right of centerline, 2’ AGL/43’ MSL.
Fence 87’ from DER, 492’ left of centerline, 7’ AGL/45’ MSL.
Traverse way 178’ from DER, 497’ left of centerline, 55’ MSL.
Traverse way 516’ from DER, 542’ right of centerline, 55’ MSL.
Pole, tree beginning 752’ from DER, 686’ left of centerline, up to 50’ AGL/90’ MSL.
Trees beginning 1113’ from DER, 737’ right of centerline, up to 58’ AGL/98’ MSL.
Tree 1930’ from DER, 905’ left of centerline, 50’ AGL/92’ MSL.
Trees beginning 2313’ from DER, 948’ right of centerline, 58’ AGL/101’ MSL.
Tree 2365’ from DER, 1030’ right of centerline, 59’ AGL/105’ MSL.
Tree 2716’ from DER, 1128’ right of centerline, 70’ AGL/117’ MSL.

Rwy 22, lighting beginning 5’ from DER, 84’ right of centerline, up to 1’ AGL/43’ MSL.
Pole, tree beginning 727’ from DER, 626’ right of centerline, up to 34’ AGL/77’ MSL.
Pole 1353’ from DER, 776’ left of centerline, 38’ AGL/82’ MSL.
Pole 1804’ from DER, 968’ right of centerline, 64’ AGL/109’ MSL.
Pole 2942’ from DER, 1189’ right of centerline, 72’ AGL/117’ MSL.

Rwy 31L, lighting 9’ from DER, 94’ right of centerline, 1’ AGL/45’ MSL.
Lighting beginning 9’ from DER, 85’ left of centerline, up to 1’ AGL/45’ MSL.
Electrical system 135’ from DER, 482’ left of centerline, 7’ AGL/50’ MSL.
Pole 180’ from DER, 508’ left of centerline, 40’ AGL/83’ MSL.
Pole, building beginning 359’ from DER, 411’ left of centerline, up to 39’ AGL/84’ MSL.
Building 547’ from DER, 273’ right of centerline, 27’ AGL/69’ MSL.
Tree 1391’ from DER, 466’ left of centerline, 89’ MSL.
Tree 2585’ from DER, 702’ left of centerline, 83’ AGL/121’ MSL.

Rwy 31R, sign beginning 29’ from DER, 82’ left of centerline, up to 2’ AGL/47’ MSL.
Trees, pole beginning 60’ from DER, 508’ right of centerline, up to 75’ AGL/121’ MSL.
Building 499’ from DER, 525’ left of centerline, 27’ AGL/69’ MSL.

HUNTSVILLE, TX
HUNTSVILLE MUNI (UTS)
TAKEOFF MINIMUMS AND (OBSIDACLE) DEPARTURE PROCEDURES
DEPARTURE PROCEDURE:
Rwy 18, climb runway heading to 700 before turning.
TAKEOFF MINIMUMS, (OBSTACLE) DEPARTURE PROCEDURES, AND DIVERSE VECTOR AREA (RADAR VECTORS)

JACKSONVILLE, TX
CHEROKEE COUNTY (JSO)
TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES
ORIG 16FEB06 (06047) (FAA)
DEPARTURE PROCEDURE:
Rwy 14, climb via heading 135° to 1200 before proceeding on course.

JASPER, TX
JASPER COUNTY-BELL FIELD (JAS)
TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES
ORIG 27AUG09 (09239) (FAA)
DEPARTURE PROCEDURE:
Rwy 14, climb via heading 135° to 1200 before proceeding on course.

KOUNTZE/SILSBEE, TX
HAWTHORNE FLD (45R)
TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES
ORIG 14FEB08 (21280) (FAA)
DEPARTURE PROCEDURE:
Rwy 13, terrain 3' from DER, 81' right of centerline, 0' AGL/69' MSL.
Trees beginning 64' from DER, 277' right of centerline, up to 50' AGL/119' MSL.
Tree 111' from DER, 516' left of centerline, 50' AGL/124' MSL.
Terrain 172' from DER, 119' left of centerline, 0' AGL/74' MSL.
Rwy 31, terrain 109' from DER, 134' left of centerline, 0' AGL/74' MSL.
Tree 536' from DER, 457' right of centerline, 50' AGL/114' MSL.

LA GRANGE, TX
FAYETTE RGNL AIR CENTER (3T5)
TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES
AMDT 1 13SEP18 (18256) (FAA)
DEPARTURE PROCEDURE:
Rwy 16, trees, terrain beginning 146' from DER, 389' right of centerline, up to 45' AGL/378' MSL.
Trees beginning 246' from DER, 454' right of centerline, up to 47' AGL/381' MSL.
Tree 525' from DER, 533' right of centerline, 49' AGL/383' MSL.
Tree 570' from DER, 540' left of centerline, 35' AGL/355' MSL.
Tree, building beginning 760' from DER, 527' right of centerline, up to 45' AGL/384' MSL.
Tree 769' from DER, 569' left of centerline, 43' AGL/361' MSL.
Tree 880' from DER, 524' right of centerline, 45' AGL/386' MSL.
Tree, pole, catenary beginning 926' from DER, 589' right of centerline, up to 48' AGL/390' MSL.
Tree 945' from DER, 532' left of centerline, 45' AGL/364' MSL.
Tree beginning 1005' from DER, 367' left of centerline, up to 46' AGL/365' MSL.
Tree 1185' from DER, 632' right of centerline, 49' AGL/396' MSL.
Tree beginning 1349' from DER, 259' left of centerline, up to 44' AGL/369' MSL.
Trees beginning 1465' from DER, 297' right of centerline, up to 56' AGL/406' MSL.
Trees beginning 1467' from DER, 28' left of centerline, up to 48' AGL/380' MSL.
Tree 1570' from DER, 652' right of centerline, 54' AGL/407' MSL.
Tree, catenary, pole beginning 1625' from DER, 32' right of centerline, up to 56' AGL/411' MSL.
Tree 2005' from DER, 188' left of centerline, 34' AGL/381' MSL.
Tree 2111' from DER, 523' left of centerline, 42' AGL/382' MSL.
Trees beginning 2456' from DER, 51' left of centerline, up to 44' AGL/399' MSL.
Trees beginning 2599' from DER, 5' right of centerline, up to 60' AGL/415' MSL.
Rwy 34, trees beginning 35' from DER, 322' left of centerline, up to 53' AGL/358' MSL.
Tree 200' from DER, 482' right of centerline, 13' AGL/315' MSL.
Tree 262' from DER, 355' right of centerline, 24' AGL/326' MSL.
Trees beginning 310' from DER, 361' right of centerline, up to 29' AGL/331' MSL.
Tree 494' from DER, 396' left of centerline, 58' AGL/360' MSL.
Tree, pole, catenary beginning 513' from DER, 205' left of centerline, up to 61' AGL/365' MSL.
Trees beginning 634' from DER, 389' right of centerline, up to 52' AGL/352' MSL.
Trees beginning 799' from DER, 162' right of centerline, up to 55' AGL/353' MSL.
LA PORTE, TX
LA PORTE MUNI (T41)
TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES
AMDT 6  29MAY14  (14149)  (FAA)
DEPARTURE PROCEDURE:
Rwy 5, climb heading 046° to 500 before proceeding on course.
Rwy 12, climb heading 121° to 500 before turning right.
Rwy 30, climb heading 301° to 700 before turning right.
TAKEOFF OBSTACLE NOTES:
Rwy 5, trees beginning 334' from DER, left and right of centerline, up to 67' AGL/91' MSL.
Poles beginning 973' from DER, 387' left of centerline, up to 40' AGL/64' MSL.
Buildings beginning 319' from DER, left and right of centerline, up to 30' AGL/54' MSL.
Stack 2.3 NM from DER, 3296' left of centerline, 300' AGL/334' MSL.
Rwy 12, poles beginning 127' from DER, left and right of centerline, up to 54' AGL/74' MSL.
Trees beginning 183' from DER, 446' right of centerline, up to 40' AGL/60' MSL.
Building 675' from DER, 411' right of centerline, up to 32' AGL/55' MSL.
Trees beginning 888' from DER, 113' right of centerline, up to 43' AGL/63' MSL.
Rwy 23, buildings beginning 30' from DER, 242' left of centerline, up to 30' AGL/54' MSL.
Buildings beginning 231' from DER, 134' right of centerline, up to 30' AGL/54' MSL.
Trees beginning 243' from DER, 494' right of centerline, up to 67' AGL/91' MSL.
Poles beginning 363' from DER, left and right of centerline, up to 40' AGL/64' MSL.
Vehicle on road beginning 493' from DER, 502' left of centerline, up to 15' AGL/39' MSL.
Trees beginning 753' from DER, 292' left of centerline, up to 67' AGL/91' MSL.
Trees beginning 1123' from DER, 69' right of centerline, up to 67' AGL/91' MSL.
Rwy 30, trees beginning 44' from DER, 331' right of centerline, up to 51' AGL/71' MSL.
Pole 114' from DER, 500' left of centerline, 37' AGL/60' MSL.
Buildings beginning 334' from DER, 355' left of centerline, up to 25' AGL/50' MSL.
Trees beginning 367' from DER, 471' left of centerline, up to 37' AGL/57' MSL.
Building 669' from DER, 415' right of centerline, 30' AGL/55' MSL.
Poles beginning 768' from DER, 427' right of centerline, up to 50' AGL/74' MSL.
Trees beginning 1048' from DER, left and right of centerline, up to 67' AGL/87' MSL.

LIBERTY, TX
LIBERTY MUNI (T78)
TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES
AMDT 1  29MAY14  (14149)  (FAA)
DEPARTURE PROCEDURE:
Rwy 16, climb heading 161° to 1700 before turning left.
Rwy 34, climb heading 341° to 1000 before turning right.
TAKEOFF OBSTACLE NOTES:
Rwy 16, hangars beginning 4' from DER, 340' right of centerline, up to 21' AGL/91' MSL.
Tree 273' from DER, 28' right of centerline, 28' AGL/96' MSL.
Trees and poles beginning 1166' from DER, 48' right of centerline, up to 85' AGL/155' MSL.
Rwy 34, trees beginning 176' from DER, 262' left of centerline, up to 52' AGL/117' MSL.
Poles beginning 427' from DER, 318' right of centerline, up to 40' AGL/105' MSL.
Poles beginning 451' from DER, 236' left of centerline, up to 39' AGL/106' MSL.
Trees beginning 758' from DER, 101' right of centerline, up to 101' AGL/166' MSL.
Trees beginning 1953' from DER, 40' left of centerline, up to 96' AGL/161' MSL.

LIVINGSTON, TX
LIVINGSTON MUNI (00R)
TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES
AMDT 1  05MAY11  (11125)  (FAA)
DEPARTURE PROCEDURE:
Rwy 12, climb heading 125° to 1700 before proceeding on course.
Rwy 30, climb heading 305° to 800 before turning south.
TAKEOFF OBSTACLE NOTES:
Rwy 12, trees beginning at DER, right and left of centerline, up to 100' AGL/249' MSL.
Rwy 30, vehicle on road 10' from DER, 492' right of centerline, 10' AGL/159' MSL.
Trees beginning 260' from DER, 304' right of centerline, up to 100' AGL/249' MSL.
TAKEOFF MINIMUMS, (OBSTACLE) DEPARTURE PROCEDURES, AND DIVERSE VECTOR AREA (RADAR VECTORS)

LUKFIN, TX
ANGELINA COUNTY (LFK)
TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES
AMDT 1 07DEC17 (17341) (FAA)
TAKEOFF OBSTACLE NOTES:
Rwy 7, trees beginning 109' from DER, 333' right of centerline, up to 354' MSL.
Trees beginning 358' from DER, 293' left of centerline, up to 350' MSL.
Trees beginning 467' from DER, 452' right of centerline, up to 365' MSL.
Trees beginning 513' from DER, 302' left of centerline, up to 381' MSL.
Tree 1470' from DER, 328' right of centerline, 366' MSL.
Trees beginning 1477' from DER, 483' right of centerline, up to 367' MSL.
Trees beginning 1599' from DER, 36' left of centerline, up to 387' MSL.
Trees beginning 1618' from DER, 274' right of centerline, up to 369' MSL.
Trees beginning 1636' from DER, 42' right of centerline, up to 376' MSL.
Trees beginning 1977' from DER, 44' right of centerline, up to 379' MSL.
Trees beginning 3207' from DER, 1351' left of centerline, up to 391' MSL.
Tree 3787' from DER, 965' left of centerline, 395' MSL.

Rwy 16, trees beginning 6' from DER, 384' left of centerline, up to 56' AGL/324' MSL.
Tree 138' from DER, 529' right of centerline, 284' MSL.
Tree 184' from DER, 3' left of centerline, up to 79' AGL/344' MSL.
Tree 260' from DER, 229' right of centerline, 289' MSL.
Tree, rd (n) beginning 264' from DER, 164' right of centerline, up to 320' MSL.
Trees beginning 1333' from DER, 388' right of centerline, up to 324' MSL.
Tree 2612' from DER, 448' right of centerline, up to 327' MSL.

Rwy 25, tree 265' from DER, 511' right of centerline, 302' MSL.
Trees beginning 403' from DER, 283' right of centerline, up to 354' MSL.
Trees beginning 407' from DER, 555' left of centerline, up to 299' MSL.
Trees beginning 1375' from DER, 605' left of centerline, up to 328' MSL.
Tree 1627' from DER, 629' left of centerline, 330' MSL.
Tree 2655' from DER, 447' left of centerline, 353' MSL.
Tree 3109' from DER, 417' right of centerline, 362' MSL.

Rwy 34, sign 20' from DER, 200' left of centerline, 1' AGL/290' MSL.
Ldg 48' from DER, 457' right of centerline, 303' MSL.
Tree 95’ from DER, 328’ right of centerline, 330’ MSL.
Trees beginning 166 from DER, 314’ right of centerline, up to 54’ AGL/338’ MSL.
Pole and trees beginning 344’ from DER, 310’ right of centerline, up to 346’ MSL.
Vehicles on road 571’ from DER, 3’ left of centerline, 331’ MSL.
Vehicles on road beginning 579’ from DER, 75’ right of centerline, up to 306’ MSL.
Trees beginning 602 from DER, 166’ left of centerline, up to 367’ MSL.
Trees beginning 620 from DER, 446’ right of centerline, up to 354’ MSL.
Tree, pole beginning 809 from DER, 230’ right of centerline, up to 361’ MSL.
Trees beginning 1249’ from DER, 233’ right of centerline, up to 364’ MSL.

MADISONVILLE, TX
MADISONVILLE MUNI (51R)
TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES
ORIG 31MAY12 (12152) (FAA)
TAKEOFF OBSTACLE NOTES:
Rwy 18, multiple trees and power poles beginning at DER, 179’ right of centerline, up to 50’ AGL/310’ MSL.
Multiple trees and power poles beginning at DER, 200’ left of centerline, up to 50’ AGL/309’ MSL.
Rwy 36, multiple trees and power poles beginning 99’ from DER, 50’ left of centerline, up to 50’ AGL/341’ MSL.
Multiple trees beginning 50’ from DER, 75’ right of centerline, up to 50’ AGL/346’ MSL.

MARLIN, TX
MARLIN (T15)
TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES
ORIG 10JAN13 (13010) (FAA)
TAKEOFF OBSTACLE NOTES:
Rwy 17, power lines beginning 411’ from DER, left and right of centerline, up to 125’ AGL/524’ MSL.
Building 7’ from DER, 155’ left of centerline, 30’ AGL/439’ MSL.
Trees beginning 650’ from DER, left and right of centerline, up to 50’ AGL/449’ MSL.
Building 309’ from DER, 100’ left of centerline, 30’ AGL/439’ MSL.
Vehicles in parking lot 364’ from DER, on centerline, up to 15’ AGL/415’ MSL.
Rwy 35, trees 225’ from DER, 232’ right of centerline, up to 50’ AGL/469’ MSL.
Trees 181’ from DER, 240’ left of centerline, up to 50’ AGL/459’ MSL.
Trees beginning 708’ from DER, left and right of centerline, up to 50’ AGL/469’ MSL.
Vehicles 68’ from DER, 347’ right of centerline, up to 15’ AGL/424’ MSL.
TAKEOFF MINIMUMS, (OBSTACLE) DEPARTURE PROCEDURES, AND DIVERSE VECTOR AREA (RADAR VECTORS)

MEXIA, TX

MEXIA-LIMESTONE CO (LXY)
TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES
ORIG 05MAY11 (11125) (FAA)
TAKEOFF MINIMUMS:
Rwy 36, 300-2/¼ or std. w/min. climb of 212’ per NM to 1000, or alternatively, with std. takeoff minimums and a normal 200’ per NM climb gradient, takeoff must occur no later than 1600’ prior to DER.
TAKEOFF OBSTACLE NOTES:
Rwy 18, vehicles on road beginning 202’ from DER, 400’ left of centerline, up to 15’ AGL/554’ MSL.
Tree 419’ from DER, 292’ right of centerline, up to 80’ AGL/619’ MSL.
Rwy 36, trees beginning 179’ from DER, 382’ right of centerline, up to 80’ AGL/619’ MSL.
Trees beginning 391’ from DER, 315’ left of centerline, up to 80’ AGL/629’ MSL.

NACOGDOCHES, TX

NACOGDOCHES A L MANGHAM JR RGNL (OCH)
TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES
AMDT 2A 22JUN17 (17173) (FAA)
DEPARTURE PROCEDURE:
Rwy 36, climb heading 359° to 1000 before turning right.
TAKEOFF OBSTACLE NOTES:
Rwy 18, trees 47’ from DER, 503’ left of centerline, 67’ AGL/397’ MSL.
Trees 1227’ from DER, 580’ left of centerline, 52’ AGL/382’ MSL.
Trees 2234’ from DER, 939’ right of centerline, 71’ AGL/431’ MSL.
Rwy 36, trees 252’ from DER, 485’ left of centerline, 81’ AGL/401’ MSL.
Trees 792’ from DER, 513’ left of centerline, 87’ AGL/447’ MSL.
Trees beginning 1957’ from DER, 23’ left of centerline, up to 70’ AGL/470’ MSL.
Trees 207’ from DER, 492’ right of centerline, 58’ AGL/388’ MSL.
Multiple OL’s and trees beginning 661’ from DER, 2’ right of centerline, up to 74’ AGL/434’ MSL.
Multiple trees beginning 2290’ from DER, 316’ right of centerline, up to 87’ AGL/487’ MSL.

NAVASOTA, TX

NAVASOTA MUNI (60R)
TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES
ORIG 02FEB84 (84033) (FAA)
DEPARTURE PROCEDURE:
Rwy 35, climb runway heading to 2100 before turning eastbound.

ORANGE, TX

ORANGE COUNTY (ORG)
TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES
ORIG 22OCT09 (09295) (FAA)
TAKEOFF MINIMUMS:
Rwy 4, 400-1¼ or std. w/ min. climb of 425’ per NM to 500.
Rwys 13, 31, NA-Environmental.
TAKEOFF OBSTACLE NOTES:
Rwy 4, trees beginning 893’ from DER, 513’ right of centerline, up to 30’ AGL/87’ MSL.
Trees beginning 1856’ from DER, 550 left of centerline, up to 30’ AGL/66’ MSL.
Transmission poles beginning 2518’ from DER, left and right of centerline, up to 73’ AGL/83’ MSL.
Tower 6401’ from DER, 1900’ left of centerline, 283’ AGL/298’ MSL.
Rwy 22, trees beginning at DER, left and right of centerline, up to 30’ AGL/39’ MSL.

PALACIOS, TX

PALACIOS MUNI (PSX)
TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES
ORIG-A 26MAY16 (16147) (FAA)
DEPARTURE PROCEDURE:
Rwy 8, climbing right turn heading 125° to 1800 before proceeding on course.
Rwy 13, climb heading 132° to 1100 before turning left.
Rwy 36, climb heading 357° to 1100 before turning right.
TAKEOFF OBSTACLE NOTES:
Rwy 31, bush 20’ from DER, 296’ right of centerline, 6’ AGL/16’ MSL.
TAKEOFF MINIMUMS, (OBSTACLE) DEPARTURE PROCEDURES, AND DIVERSE VECTOR AREA (RADAR VECTORS)

PALESTINE, TX
PALESTINE MUNI (PSN)
TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES
AMDT 3 30JAN20 (20030) (FAA)
TAKEOFF MINIMUMS:
Rwy 9, 400-3 w/min. climb of 262’ per NM to 1200 or std. w/min. climb of 316’ per NM to 900 or 1000-3 for VCOA.

Rwy 9, 400-3 w/min. climb of 262’ per NM to 1200 or std. w/min. climb of 316’ per NM to 900 or 1000-3 for VCOA.

Rwy 9, 400-3 w/min. climb of 262’ per NM to 1200 or std. w/min. climb of 316’ per NM to 900 or 1000-3 for VCOA.

VCOA:
Rwy 9, obtain ATC approval for VCOA when requesting IFR clearance. Climb in visual conditions to cross Palestine Muni at or above 1300 before proceeding on course.

TAKEOFF OBSTACLE NOTES:
Rwy 9 and 9A, trees beginning 201’ from DER, 195’ left of centerline, up to 100’ AGL/430’ MSL.
Rwy 9A, trees beginning 207’ from DER, 87’ right of centerline, up to 100’ AGL/378’ MSL.
Rwy 9, trees beginning 227’ from DER, 216’ left of centerline, up to 100’ AGL/384’ MSL.
Rwy 9A, trees beginning 235’ from DER, 218’ left of centerline, up to 100’ AGL/388’ MSL.
Rwy 9, trees beginning 253’ from DER, 84’ right of centerline, up to 100’ AGL/388’ MSL.
Rwy 9A, trees beginning 279’ from DER, 221’ left of centerline, up to 100’ AGL/394’ MSL.
Rwy 9, trees beginning 279’ from DER, 69’ right of centerline, up to 100’ AGL/401’ MSL.
Rwy 9A, trees beginning 305’ from DER, 223’ left of centerline, up to 100’ AGL/401’ MSL.
Rwy 9, trees beginning 408’ from DER, 233’ left of centerline, up to 100’ AGL/407’ MSL.
Rwy 9A, trees beginning 434’ from DER, 236’ left of centerline, up to 100’ AGL/414’ MSL.
Rwy 9, trees beginning 435’ from DER, 66’ right of centerline, up to 100’ AGL/407’ MSL.
Rwy 9A, trees beginning 450’ from DER, 238’ left of centerline, up to 100’ AGL/420’ MSL.
Rwy 9, trees beginning 460’ from DER, 64’ right of centerline, up to 100’ AGL/414’ MSL.
Rwy 9A, trees beginning 486’ from DER, 241’ left of centerline, up to 100’ AGL/427’ MSL.
Rwy 9, trees beginning 486’ from DER, 61’ right of centerline, up to 100’ AGL/420’ MSL.
Rwy 9A, trees beginning 512’ from DER, 243’ left of centerline, up to 100’ AGL/430’ MSL.
Rwy 9, trees beginning 512’ from DER, 59’ right of centerline, up to 100’ AGL/430’ MSL.
Rwy 9A, trees beginning 535’ from DER, 59’ left of centerline, up to 100’ AGL/434’ MSL.
Rwy 9, trees beginning 538’ from DER, 56’ right of centerline, up to 100’ AGL/437’ MSL.
Rwy 9A, trees beginning 540’ from DER, 54’ right of centerline, up to 100’ AGL/440’ MSL.
Rwy 9, trees beginning 562’ from DER, 855’ left of centerline, up to 100’ AGL/440’ MSL.
Rwy 9A, trees beginning 563’ from DER, 249’ left of centerline, up to 100’ AGL/443’ MSL.
Tree 566’ from DER, 1972’ right of centerline, 100’ AGL/443’ MSL.
Tree 588’ from DER, 2070’ left of centerline, 100’ AGL/447’ MSL.
Rwy 9A, trees beginning 588’ from DER, 251’ left of centerline, up to 100’ AGL/450’ MSL.
Rwy 9, trees beginning 590’ from DER, 51’ right of centerline, up to 100’ AGL/450’ MSL.
Rwy 9A, trees beginning 1 NM from DER, 2073’ left of centerline, 100’ AGL/457’ MSL.
Rwy 9, trees beginning 1 NM from DER, 254’ left of centerline, up to 100’ AGL/460’ MSL.
Tree 1 NM from DER, 48’ right of centerline, up to 100’ AGL/457’ MSL.
Tree 1 NM from DER, 1867’ right of centerline, 100’ AGL/460’ MSL.
Tree 1 NM from DER, 2075’ left of centerline, 100’ AGL/463’ MSL.
Rwy 9A, trees beginning 1 NM from DER, 256’ left of centerline, up to 100’ AGL/470’ MSL.
Rwy 9, trees beginning 1 NM from DER, 46’ right of centerline, up to 100’ AGL/463’ MSL.
Tree 1 NM from DER, 950’ right of centerline, up to 100’ AGL/463’ MSL.
Rwy 9A, trees beginning 1 NM from DER, 43’ right of centerline, up to 100’ AGL/473’ MSL.
Tree 1.1 NM from DER, 2080’ left of centerline, 100’ AGL/483’ MSL.
Rwy 9, trees beginning 1.1 NM from DER, 261’ left of centerline, up to 100’ AGL/489’ MSL.
Rwy 9A, trees beginning 1.1 NM from DER, 41’ right of centerline, up to 100’ AGL/479’ MSL.
Tree 1.1 NM from DER, 950’ right of centerline, up to 100’ AGL/483’ MSL.
Tree 1.1 NM from DER, 2083’ left of centerline, 100’ AGL/493’ MSL.
Tree 1.1 NM from DER, 264’ left of centerline, up to 100’ AGL/499’ MSL.
Rwy 9, trees beginning 1.1 NM from DER, 38’ right of centerline, up to 100’ AGL/486’ MSL.
Rwy 9A, trees beginning 1.1 NM from DER, 36’ right of centerline, up to 100’ AGL/493’ MSL.
Tree 1.2 NM from DER, 1479’ left of centerline, 100’ AGL/509’ MSL.
Tree 1.2 NM from DER, 267’ left of centerline, up to 100’ AGL/519’ MSL.
Rwy 9, trees beginning 1.2 NM from DER, 33’ right of centerline, up to 100’ AGL/499’ MSL.
Rwy 9A, trees beginning 1.2 NM from DER, 269’ left of centerline, up to 100’ AGL/532’ MSL.
Rwy 9, trees beginning 1.2 NM from DER, 30’ right of centerline, up to 100’ AGL/525’ MSL.
Rwy 9A, trees beginning 1.3 NM from DER, 272’ left of centerline, up to 100’ AGL/552’ MSL.
Rwy 9, trees beginning 1.3 NM from DER, 12’ right of centerline, up to 100’ AGL/552’ MSL.
Rwy 9A, trees beginning 1.3 NM from DER, 274’ left of centerline, up to 100’ AGL/568’ MSL.
Rwy 9, trees beginning 1.4 NM from DER, 2705’ left of centerline, 100’ AGL/575’ MSL.
Rwy 9A, trees beginning 1.4 NM from DER, 279’ left of centerline, up to 100’ AGL/601’ MSL.
Rwy 9, trees beginning 1.4 NM from DER, 5’ left of centerline, up to 100’ AGL/621’ MSL.
Tower 2.5 NM from DER, 345’ left of centerline, 199’ AGL/809’ MSL.

Rwy 18, tree abeam DER, 409’ left of centerline, 415’ MSL.
Tree, terrain beginning 43’ from DER, 241’ right of centerline, up to 421’ MSL.
Rwy 18, trees beginning 80’ from DER, 257’ left of centerline, up to 435’ MSL.
Rwy 18, trees beginning 158’ from DER, 166’ right of centerline, up to 447’ MSL.
Rwy 18, trees beginning 328’ from DER, 41’ left of centerline, up to 81’ AGL/451’ MSL.
Tree 18, terrain beginning 481’ from DER, 478’ right of centerline, up to 449’ MSL.
Tree 594’ from DER, 352’ right of centerline, 450’ MSL.
Rwy 18, trees beginning 695’ from DER, 35’ right of centerline, up to 463’ MSL.
Rwy 18, trees beginning 1561’ from DER, 109’ right of centerline, up to 465’ MSL.

CONT
PALESTINE, TX (CON’T)
P A L E S T I N E  M U N I  ( P S N )  ( C O N ’ T )

Rwy 27, trees beginning 189’ from DER, 149’ left of centerline, up to 100’ AGL/420’ MSL.
Trees beginning 195’ from DER, 133’ right of centerline, up to 100’ AGL/411’ MSL.
Rwy 36, tree, terrain beginning 134’ from DER, 404’ right of centerline, up to 439’ MSL.
Tree 178’ from DER, 403’ left of centerline, 418’ MSL.
Tree 200’ from DER, 481’ left of centerline, 421’ MSL.
Trees beginning 432’ from DER, 270’ left of centerline, up to 434’ MSL.
Tree 561’ from DER, 481’ left of centerline, 452’ MSL.
Trees beginning 612’ from DER, 306’ left of centerline, up to 462’ MSL.
Trees beginning 783’ from DER, 401’ left of centerline, up to 471’ MSL.
Tree 990’ from DER, 733’ right of centerline, 456’ MSL.

PORT LAVACA, TX
C A L H O U N  C O U N T Y  ( P K V )
O R I G - A  1 3 S E P 1 8  ( 1 8 2 5 6 )  ( F A A )
T A K E O F F  M I N I M U M S :
R w y s  5 ,  2 3 ,  N A - E n v i r o n m e n t a l .
T A K E O F F  O B S T A C L E  N O T E S :
R w y  1 4 ,  v e h i c l e s  o n  r o a d  4 7 5 ’  f r o m  D E R ,  o n  c e n t e r l i n e ,  u p  t o  4 4 ’  M S L .
R w y  3 2 ,  v e g e t a t i o n  6 5 ’  f r o m  D E R ,  4 0 8 ’  l e f t  o f  c e n t e r l i n e ,  3 4 ’  M S L .
P o l e  a n d  v e h i c l e s  o n  r o a d  b e g i n n i n g  5 4 7 ’  f r o m  D E R ,  4 1 2 ’  r i g h t  o f  c e n t e r l i n e ,  u p  t o  3 5 ’  A G L / 6 0 ’  M S L .
V e h i c l e s  o n  r o a d  5 7 0 ’  f r o m  D E R ,  4 1 1 ’  l e f t  o f  c e n t e r l i n e ,  u p  t o  4 5 ’  M S L .

VICTORIA, TX
V I C T O R I A  R G N L  ( V C T )
A M D T  1 A  1 2 A U G 2 1  ( 2 1 2 2 4 )  ( F A A )
T A K E O F F  O B S T A C L E  N O T E S :
R w y  1 8 ,  b u i l d i n g  5 8 8 ’  f r o m  D E R ,  4 1 5 ’  l e f t  o f  c e n t e r l i n e ,  1 8 ’  A G L / 1 1 8 ’  M S L .
I n d u s t r i a l  s y s t e m  1 6 9 6 ’  f r o m  D E R ,  2 6 5 ’  r i g h t  o f  c e n t e r l i n e ,  6 1 ’  A G L / 1 5 9 ’  M S L .
R w y  3 6 ,  v e g e t a t i o n  1 0 4 ’  f r o m  D E R ,  1 6 5 ’  r i g h t  o f  c e n t e r l i n e ,  1 0 ’  A G L / 1 1 6 ’  M S L .

WHARTON, TX
W H A R T O N  R G N L  ( A R M )
O R I G  2 7 A U G 0 9  ( 0 9 2 3 9 )  ( F A A )
T A K E O F F  O B S T A C L E  N O T E S :
R w y  3 2 ,  v e h i c l e  o n  r o a d s  b e g i n n i n g  2 6 ’  f r o m  D E R ,  3 1 2 ’  r i g h t  o f  c e n t e r l i n e ,  u p  t o  1 7 ’  A G L / 1 1 3 ’  M S L .
B u i l d i n g s  b e g i n n i n g  4 0 ’  f r o m  D E R ,  3 3 8 ’  r i g h t  o f  c e n t e r l i n e ,  u p  t o  2 6 ’  A G L / 1 2 5 ’  M S L .
P o l e s  b e g i n n i n g  1 4 0 ’  f r o m  D E R ,  4 6 7 ’  r i g h t  o f  c e n t e r l i n e ,  u p  t o  4 3 ’  A G L / 1 4 2 ’  M S L .
T r e e  8 2 8 ’  f r o m  D E R ,  5 0 9 ’  r i g h t  o f  c e n t e r l i n e ,  2 8 ’  A G L / 1 2 7 ’  M S L .
F e n c e  2 4 ’  f r o m  D E R ,  2 8 8 ’  l e f t  o f  c e n t e r l i n e ,  4 ’  A G L / 1 0 3 ’  M S L .
T r e e  1 1 4 7 ’  f r o m  D E R ,  4 2 5 ’  l e f t  o f  c e n t e r l i n e ,  4 1 ’  A G L / 1 4 0 ’  M S L .
### ALTERNATE MINIMUMS

#### NAME | ALTERNATE MINIMUMS
---|---
**ANGLETON/LAKE JACKSON, TX** | TEXAS GULF COAST RGNL (LBX)... ILS or LOC Rwy 17 RNAV (GPS) Rwy 17 RNAV (GPS) Rwy 35 NA when local weather not available.  
**BAY CITY, TX** | BAY CITY RGNL (BYY)... RNAV (GPS) Rwy 13 RNAV (GPS) Rwy 31 VOR-A  
1NA when local weather not available.  
2Categories A, B, 1100-2; Category C, 1100-3.  
**BEAUMONT, TX** | BEAUMONT MUNI (BMT)... RNAV (GPS) Rwy 13 Category D, 800-2¼;  
**BEAUMONT/PORT ARTHUR, TX** | JACK BROOKS RGNL (BPT)... ILS or LOC Rwy 12 RNAV (GPS) Rwy 16 RNAV (GPS) Rwy 30 RNAV (GPS) Rwy 34 VOR/DME Rwy 34 VOR Rwy 12  
NA when local weather not available.  
1ILS, LOC, Categories A, B, 900-2; Category C, D, 900-2½; Category E, 900-2¾.  
2NA when control tower closed.  
3Category E, 900-2¼.  
4Category B, 900-2; Category C, 900-2½; Category D, 900-2¾; Category E, 900-3.  
**BRENHAM, TX** | BRENHAM MUNI (11R)... RNAV (GPS) Rwy 16 RNAV (GPS) Rwy 34 NA when local weather not available. Category D, 800-2¼.  
**CALDWELL, TX** | CALDWELL MUNI (RWV)... RNAV (GPS) Rwy 15 RNAV (GPS) Rwy 33 VOR/DME-A NA when local weather not available.  
**CLEVELAND, TX** | CLEVELAND MUNI (6R3)... RNAV (GPS) Rwy 16 NA when local weather not available.  
**COLLEGE STATION, TX** | EASTWOOD FLD (CLL)... ILS or LOC Rwy 35 LOC BC Rwy 17 RNAV (GPS) Rwy 11 RNAV (GPS) Rwy 17 RNAV (GPS) Rwy 29 RNAV (GPS) Rwy 35 VOR Rwy 29 VOR or TACAN Rwy 11  
1NA when local weather not available.  
2LOC, Category D, 900-2¼; Category E, 900-3.  
3Category D, 900-2¾; Category E, 900-3.  
4NA when local weather not available.  
5Category D, 900-2¼.  
**CROCKETT, TX** | HOUSTON COUNTY (DKR)... RNAV (GPS) Rwy 2 NA when local weather not available.  
**EAGLE LAKE, TX** | EAGLE LAKE (ELA)... RNAV (GPS) Rwy 17 RNAV (GPS) Rwy 35 Category C, 900-2½.  
1NA when local weather not available.  
**GALVESTON, TX** | SCHUKES INTL AT GALVESTON (GLS)... RNAV (GPS) Rwy 14 RNAV (GPS) Rwy 18 RNAV (GPS) Rwy 32 RNAV (GPS) Rwy 36 Category E 800-2¼.  
1NA when local weather not available.  

### INSTRUMENT APPROACH PROCEDURE CHARTS

### IFR ALTERNATE AIRPORT MINIMUMS

Standard alternate minimums for non-precision approaches and approaches with vertical guidance [NDB, VOR, LOC, TACAN, LDA, SDF, VOR/DME, ASR, RNAV (GPS) or RNAV (RNP)] are 800-2. Standard alternate minimums for precision approaches (ILS, PAR, or GLS) are 600-2. Airports within this geographical area that require alternate minimums other than standard or alternate minimums with restrictions are listed below. NA - means alternate minimums are not authorized due to unmonitored facility, absence of weather reporting service, or lack of adequate navigation coverage. Civil pilots see FAR 91. IFR Alternate Minimums: Ceiling and Visibility Minimums not applicable to USA/USN/USAF. Pilots must review the IFR Alternate Minimums Notes for alternate airfield suitability.
<table>
<thead>
<tr>
<th>NAME</th>
<th>ALTERNATE MINIMUMS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>GIDDINGS, TX</strong></td>
<td></td>
</tr>
<tr>
<td>GIDDINGS-LEE COUNTY (GYB)</td>
<td>RNAV (GPS) Rwy 17</td>
</tr>
<tr>
<td></td>
<td>RNAV (GPS) Rwy 35</td>
</tr>
<tr>
<td>NA when local weather not available.</td>
<td></td>
</tr>
<tr>
<td><strong>HEARNE, TX</strong></td>
<td></td>
</tr>
<tr>
<td>HEARNE MUNI (LHB)</td>
<td>RNAV (GPS) Rwy 18</td>
</tr>
<tr>
<td></td>
<td>RNAV (GPS) Rwy 36</td>
</tr>
<tr>
<td>NA when local weather not available.</td>
<td></td>
</tr>
<tr>
<td><strong>HOUSTON, TX</strong></td>
<td></td>
</tr>
<tr>
<td>CONROE-NORTH HOUSTON RGNL (CXO)</td>
<td>RNAV (GPS) Rwy 1</td>
</tr>
<tr>
<td></td>
<td>RNAV (GPS) Rwy 14</td>
</tr>
<tr>
<td></td>
<td>RNAV (GPS) Rwy 19</td>
</tr>
<tr>
<td></td>
<td>RNAV (GPS) Rwy 32</td>
</tr>
<tr>
<td>Category D, 800-2½.</td>
<td></td>
</tr>
<tr>
<td><strong>DAVID WAYNE HOOKS</strong></td>
<td>RNAV (GPS) Rwy 35L</td>
</tr>
<tr>
<td>MEML (DWH)</td>
<td>NA when local weather not available.</td>
</tr>
<tr>
<td><strong>ELLINGTON (EFD)</strong></td>
<td>RNAV (GPS) Rwy 17R1</td>
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<tr>
<td></td>
<td>RNAV (GPS) Rwy 221</td>
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<tr>
<td></td>
<td>RNAV (GPS) Rwy 35L1</td>
</tr>
<tr>
<td><strong>PEARLAND RGNL (LVJ)</strong></td>
<td>RNAV (GPS) Rwy 32</td>
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<tr>
<td></td>
<td>NA when local weather not available.</td>
</tr>
<tr>
<td><strong>SUGAR LAND RGNL (SGR)</strong></td>
<td>RNAV (GPS) Rwy 35</td>
</tr>
<tr>
<td></td>
<td>NA when local weather not available.</td>
</tr>
<tr>
<td><strong>LUFKIN, TX</strong></td>
<td>RNAV (GPS) Rwy 18</td>
</tr>
<tr>
<td>ANGELINA COUNTY (LFK)</td>
<td>RNAV (GPS) Rwy 36</td>
</tr>
<tr>
<td>Category D, 900-2½.</td>
<td>NA when local weather not available.</td>
</tr>
<tr>
<td><strong>NACOGDOCHES, TX</strong></td>
<td>RNAV (GPS) Rwy 18</td>
</tr>
<tr>
<td>NACOGDOCHES A L MANGHAM JR RGNL (OCH)</td>
<td>RNAV (GPS) Rwy 36</td>
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<tr>
<td></td>
<td>NA when local weather not available.</td>
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<tr>
<td><strong>ORANGE, TX</strong></td>
<td>RNAV (GPS) Rwy 22</td>
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<tr>
<td>ORANGE COUNTY (ORG)</td>
<td>RNAV (GPS) Rwy 22</td>
</tr>
<tr>
<td>Category D, 900-2½.</td>
<td>NA when local weather not available.</td>
</tr>
<tr>
<td><strong>PALACIOS, TX</strong></td>
<td>RNAV (GPS) Rwy 13</td>
</tr>
<tr>
<td>PALACIOS MUNI (PSX)</td>
<td>RNAV (GPS) Rwy 13</td>
</tr>
<tr>
<td></td>
<td>VOR Rwy 13</td>
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<tr>
<td>NA when local weather not available.</td>
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<tr>
<td><strong>PALESTINE, TX</strong></td>
<td>RNAV (GPS) Rwy 18</td>
</tr>
<tr>
<td>PALESTINE MUNI (PSN)</td>
<td>RNAV (GPS) Rwy 36</td>
</tr>
<tr>
<td>NA when local weather not available.</td>
<td></td>
</tr>
</tbody>
</table>

1. LOC, Category C, 800-2½; Category E, 900-3.
2. LOC, Categories C, D, 800-2½.
3. Category D, 800-2½; Category E, 800-2½.
4. Categories C, D, 800-2½; Category E, 900-3.
5. Categories C, D, 800-2½.
<table>
<thead>
<tr>
<th>NAME</th>
<th>ALTERNATE MINIMUMS</th>
<th>NAME</th>
<th>ALTERNATE MINIMUMS</th>
</tr>
</thead>
<tbody>
<tr>
<td>PORT LAVACA, TX</td>
<td>CALHOUN COUNTY (PKV)..............RNAV (GPS) Rwy 14</td>
<td>VICTORIA, TX</td>
<td>VICTORIA</td>
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<tr>
<td></td>
<td>VOR/DME-A</td>
<td>RGNL (VCT)</td>
<td>RNAV (GPS) Rwy 13</td>
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<tr>
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<td>NA when local weather not available.</td>
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<td>RNAV (GPS) Rwy 31</td>
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<td>VOR Rwy 13</td>
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<td>VOR Rwy 31</td>
</tr>
<tr>
<td>WHARTON, TX</td>
<td>WHARTON RGNL (ARM)..................VOR/DME-A</td>
<td></td>
<td>NA when local weather not available.</td>
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</tbody>
</table>
THERE ARE NO RADAR PROCEDURES
FOR SOUTHEAST TEXAS (SC-5)
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.

<table>
<thead>
<tr>
<th>CITY/AIRPORT</th>
<th>LDG RWY</th>
<th>HOLD-SHORT POINT</th>
<th>AVBL LDG DIST</th>
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<tbody>
<tr>
<td>HOUSTON, TX</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GEORGE BUSH INTcntl/</td>
<td>26L</td>
<td>TWY NE</td>
<td>9,010 feet</td>
</tr>
<tr>
<td>HOUSTON (IAH)</td>
<td>08R</td>
<td>TWY NP</td>
<td>9,019 feet</td>
</tr>
</tbody>
</table>
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>
<tr>
<th>CITY/AIRPORT</th>
<th>HOT SPOT</th>
<th>DESCRIPTION*</th>
</tr>
</thead>
<tbody>
<tr>
<td>BEAUMONT/PORT ARTHUR, TX</td>
<td>HS 1</td>
<td>South end of Twy B not visible from control twr.</td>
</tr>
<tr>
<td>COLLEGE STATION, TX</td>
<td>HS 1</td>
<td>Rwy holding position marking Twy B and Rwy 11.</td>
</tr>
<tr>
<td>HOUSTON, TX</td>
<td>HS 1</td>
<td>Ramp A and Twy C at Rwy 17R.</td>
</tr>
<tr>
<td></td>
<td>HS 2</td>
<td>Twy E, Twy D, Twy K at Rwy 17L.</td>
</tr>
<tr>
<td></td>
<td>HS 3</td>
<td>Twy E at Rwy 17R-35L.</td>
</tr>
<tr>
<td></td>
<td>HS 4</td>
<td>Int of Twy G and Rwy 17L-35R.</td>
</tr>
<tr>
<td></td>
<td>HS 5</td>
<td>Int of Twy H and Rwy 17L-35R.</td>
</tr>
<tr>
<td></td>
<td>HS 6</td>
<td>Twy K at Rwy 17L.</td>
</tr>
<tr>
<td>HOUSTON, TX</td>
<td>HS 1</td>
<td>Twy F west of Twy D.</td>
</tr>
<tr>
<td>CONROE-NORTH HOUSTON RGNL (CXO)</td>
<td>HS 1</td>
<td>Twy E int with Twy A, Twy A3 from Rwy 17-35.</td>
</tr>
<tr>
<td>SUGAR LAND RGNL (SGR)</td>
<td>HS 1</td>
<td>Twy D at Rwy 13L, and Rwy 13R.</td>
</tr>
<tr>
<td>WILLIAM P. HOBBY (HOU)</td>
<td>HS 2</td>
<td>Twy G at Rwy 13R.</td>
</tr>
<tr>
<td></td>
<td>HS 3</td>
<td>Twy K1 at Rwy 04.</td>
</tr>
<tr>
<td></td>
<td>HS 4</td>
<td>Twy E at int Rwy 13L.</td>
</tr>
</tbody>
</table>

*See appropriate Chart Supplement HOT SPOT table for additional information.
BAYYY FOUR ARRIVAL (RNAV) Transition Routes

NOTE: Chart not to scale.

See following page for Arrival Routes.

For turbojet and turboprop aircraft capable of 280K or greater only.

For turbojet aircraft descend via mach number until intercepting 280K.

Maintain 280K until slowed by the STAR.

NOTE: Expect runway assignment from Houston TRACON upon initial contact.

Radar required.
ARRIVAL ROUTE DESCRIPTION

From BAYYY on track 274° to cross PUCKS between 10000 and 14000.

LANDING RUNWAY 4: From PUCKS on track 290° to cross FRDDY between 8000 and 10000 and at 240K, then on track 289° to cross FIGGG between 6000 and 7000, then on track 255° to cross SHUUG at 6000 and at 210K, then on track 222° to EMARR, then on track 222°. Expect RADAR vectors to final approach course.

LANDING RUNWAYS 13L/R: From PUCKS on track 290° to cross FRDDY between 8000 and 10000 and at 240K, then on track 289° to cross FIGGG between 6000 and 7000, then on track 278° to cross IVEEE at 6000 and at 210K, then on track 280° to VILLI, then on track 311° to ALLLY, then on track 311°. Expect RADAR vectors to final approach course.
**ARRIVAL ROUTE DESCRIPTION**

**COLL TRANSITION (COLL.BELLR4)**
**CORPUS CHRISTI TRANSITION (CRP.BELLR4)**
**LMEDA TRANSITION (LMEDA.BELLR4)**
**SAN ANTONIO TRANSITION (SAT.BELLR4)**
**SMAKR TRANSITION (SMAKR.BELLR4)**

From BELLR on track 049° to cross HNTRR between 8000 and 10000.

**LANDING RUNWAY 4:** From HNTRR on track 084° to cross GEEEO at 6000 and at 210K. Expect ILS or LOC Rwy 4 approach.

**LANDING RUNWAYS 13L/R:** From HNTRR on track 052° to cross HACKT at or below 7000, then on track 052° to cross CRSTY at 6000 and at 210K, then on track 042° to SEUS, then on track 042°. Expect RADAR vectors to final approach course.

**LANDING RUNWAY 22:** From HNTRR on track 067° to cross AWSN at or below 7000 and at 210K, then on track 067° to cross VILLI at 6000, then on track 093° to MAAHH, then on track 110°. Expect RADAR vectors to final approach course.

**LANDING RUNWAYS 31L/R:** From HNTRR on track 067° to cross AWSN at or below 7000 and at 210K, then on track 067° to cross VILLI at 6000, then on track 130° to RJAAY, then on track 130°. Expect RADAR vectors to final approach course.

**NOTE:** Chart not to scale.
ARRIVAL ROUTE DESCRIPTION

COLLEGE STATION TRANSITION (CLL.BLUBL4): From over CLL VORTAC on CLL R-153 to BLUBL. Thence . . . .

ELLVR TRANSITION (ELLVR.BLUBL4): From over ELLVR on CLL R-334 to CLL VORTAC, then on CLL R-153 to BLUBL. Thence . . . .

JAYJO TRANSITION (JAYJO.BLUBL4): From over JAYJO on TNV R-266 to BLUBL. Thence . . . .

LEONA TRANSITION (LOA.BLUBL4): From over LOA VORTAC on LOA R-209 and CLL R-029 to CLL VORTAC, then on CLL R-153 to BLUBL. Thence . . . .

LLANO TRANSITION (LLO.BLUBL4): From over LLO VORTAC on LLO R-087 and CLL R-268 to CLL VORTAC, then on CLL R-153 to BLUBL. Thence . . . .

. . . . From over BLUBL on CLL R-153 to cross SNDAY at 9000, from SNDAY fly heading 153°. Expect vectors to final approach course at or prior to SNDAY.
NOTE: RADAR required.
NOTE: RNAV 1.
NOTE: DME/DME/IRU or GPS required.
NOTE: DME/DME/IRU or GPS equipped Turbojet and Turboprop aircraft capable of 280K or greater
must file the WAAPL (RNAV) STAR.

NOTE: Chart not to scale.
ARRIVAL ROUTE DESCRIPTION

From CESAN on track 185° to CREPO, then on track 196° to PLEDO.

LANDING HOU RWYS 13L/R: From PLEDO on track 196° to FRITZ, then on track 196° to SSERA, then on track 244° to LLEGS, then on track 239° to FRDDY, then on track 289° to FIGGG, then on track 278° to IVEE, then on track 280° to VILLI, then on track 311° to ALLLY, then on track 311°. Expect vectors to final approach course.

LANDING HOU RWY 4: From PLEDO on track 196° to FRITZ, then on track 196° to SSERA, then on track 244° to LLEGS, then on track 239° to FRDDY, then on track 289° to FIGGG, then on track 255° to SHUUG, then on track 222° to EMARR, then on track 222°. Expect vectors to approach course.

LANDING HOU RWY 22: From PLEDO on track 196° to FRITZ, then on track 196° to SSERA, then on track 244° to LLEGS, then on track 273° to WWILD, then on track 310° to JCNTO, then on track 310°. Expect vectors to final approach course.

LANDING HOU RWYS 31L/R: From PLEDO on track 196° to FRITZ, then on track 196° to SSERA, then on track 244° to LLEGS, then on track 220° to MMOOW, then on track 274°. Expect vectors to final approach course.

ALL OTHER AIRPORTS: From CESAN on track 185° to CREPO, then on track 196° to PLEDO, then on track 196° to FRITZ, then on track 196° to SSERA, then on track 244° to KAANE, then on track 215°. Expect vectors to final approach course.
ARRIVAL ROUTE DESCRIPTION

ALEXANDRIA TRANSITION (AEX.DOObI2)
PLANB TRANSITION (PLANB.DOObI2)
SAWMILL TRANSITION (SWB.DOObI2)

From DOObI on track 217° to cross HHART at or above 10000, at or below 13000 and at or above 230K, then on track 215° to cross BOPPR at or above 9000 and at 210K, then on track 215° to cross ODISS at or above 8000 and at 210K, then on track 216° to cross BOZZZ at 8000 and at 210K.

Expect assigned instrument approach.

LOST COMMUNICATIONS
In the event of lost communication prior to runway assignment, execute the ILS RWY 26L approach.
COWBOY TRANSITION (CVE.DRLLR5):
DIESL TRANSITION (DIESL.DRLLR5):
ILEXY TRANSITION (ILEXY.DRLLR5): Austin Terminal
Area Departures only.
MILLSAP TRANSITION (MQP.DRLLR5):
OILL TRANSITION (OILL.DRLLR5):
TORNN TRANSITION (TORNN.DRLLR5):

NOTE: RADAR required.
NOTE: RNAV 1.
NOTE: DME/DME/IRU or GPS required.
NOTE: Turbojet and turboprop aircraft capable of 280K or greater only.
NOTE: Fly the Runway 26R transition; Houston Approach control may assign a different transition on initial contact.
NOTE: Corresponding RNAV STAR is GUSHR. Expect GUSHR when IAH is landing east.
NOTE: Turbojet aircraft descend via mach number until intercepting 280K. Maintain 280K until slowed by the STAR.

(NOTES ON THE FOLLOWING PAGE)
(NARRATIVE ON FOLLOWING PAGE)
**ARRIVAL ROUTE DESCRIPTION**

From MPORT on track 136° to cross DRLLR between 13000 and 16000 and at 250K, then on track 137° to cross PTROL between 11000 and 13000, then on track 137° to cross DOMNO between 8000 and 10000 and at 240K.

**LANDING RUNWAY 26L:** From DOMNO on track 087° to cross ZOEEE at 7000 and at 210K, then on track 087°. Expect vectors to final approach course.

**LANDING RUNWAY 26R:** From DOMNO on track 087° to cross SKLER at 6000 and at 210K, then on track 087°. Expect vectors to final approach course.

**LANDING RUNWAY 27:** From DOMNO on track 136° to cross BYSUN at 6000, then on track 136° to SMOCR, then on track 087° to cross PRAYY at 6000 and at 210K, then on track 087°. Expect vectors to final approach course.
ARRIVAL ROUTE DESCRIPTION

CORPUS CHRISTI TRANSITION (CRP.DUUUK3):  From over CRP VORTAC on CRP R-015 to CHVRN, then on IAH R-236 to DUUUK. Thence . . . .

PALACIOS TRANSITION (PSX.DUUUK3):  From over PSX VORTAC on PSX R-359 to GMANN, then on IAH R-236 to DUUUK. Thence . . . .

SAN ANTONIO TRANSITION (SAT.DUUUK3):  From over SAT VORTAC on SAT R-095 to CHVRN, then on IAH R-236 to DUUUK. Thence . . . .

. . . . From over DUUUK on IAH R-236 to BIIGG. Depart BIIGG heading 085° for vectors to final approach.
NOTE: Radar required.
NOTE: RNAV 1.
NOTE: DME/DME/IRU or GPS required.
NOTE: Turboprop aircraft only.
NOTE: Turboprop aircraft descend via mach number until intercepting 280K. Maintain 280K until slowed by the STAR.

NOTE: Except for aircraft departing SHV, PLANB transition is ATC assigned only; do not file.
NOTE: CARPR transition is ATC assigned only; do not file.
NOTE: ATC assigned only; do not file.
NOTE: Except for aircraft departing SHV, PLANB transition is ATC assigned only; do not file.
NOTE: Turboprop aircraft descend via mach number until intercepting 280K. Maintain 280K until slowed by the STAR.

NOTE: Corresponding RNAV STAR is ZEEKK. Expect ZEEKK when IAH is landing west.
NOTE: Except for aircraft departing SHV, PLANB transition is ATC assigned only; do not file.
NOTE: Turboprop aircraft descend via mach number until intercepting 280K. Maintain 280K until slowed by the STAR.

NOTE: RNAV 1.
NOTE: Radar required.
NOTE: DME/DME/IRU or GPS required.
NOTE: Turboprop aircraft only.
NOTE: Turboprop aircraft descend via mach number until intercepting 280K. Maintain 280K until slowed by the STAR.
NOTE: Corresponding RNAV STAR is ZEEKK. Expect ZEEKK when IAH is landing west.
NOTE: Except for aircraft departing SHV, PLANB transition is ATC assigned only; do not file.
NOTE: CARPR transition is ATC assigned only; do not file.
NOTE: Turboprop aircraft descend via mach number until intercepting 280K. Maintain 280K until slowed by the STAR.

NOTE: Corresponding RNAV STAR is ZEEKK. Expect ZEEKK when IAH is landing west.
NOTE: Except for aircraft departing SHV, PLANB transition is ATC assigned only; do not file.
NOTE: CARPR transition is ATC assigned only; do not file.
NOTE: Turboprop aircraft descend via mach number until intercepting 280K. Maintain 280K until slowed by the STAR.

NOTE: Corresponding RNAV STAR is ZEEKK. Expect ZEEKK when IAH is landing west.
NOTE: Except for aircraft departing SHV, PLANB transition is ATC assigned only; do not file.
NOTE: CARPR transition is ATC assigned only; do not file.
NOTE: Turboprop aircraft descend via mach number until intercepting 280K. Maintain 280K until slowed by the STAR.

NOTE: Corresponding RNAV STAR is ZEEKK. Expect ZEEKK when IAH is landing west.
NOTE: Except for aircraft departing SHV, PLANB transition is ATC assigned only; do not file.
NOTE: CARPR transition is ATC assigned only; do not file.
NOTE: Turboprop aircraft descend via mach number until intercepting 280K. Maintain 280K until slowed by the STAR.

NOTE: Corresponding RNAV STAR is ZEEKK. Expect ZEEKK when IAH is landing west.
NOTE: Except for aircraft departing SHV, PLANB transition is ATC assigned only; do not file.
NOTE: CARPR transition is ATC assigned only; do not file.
NOTE: Turboprop aircraft descend via mach number until intercepting 280K. Maintain 280K until slowed by the STAR.
ARRIVAL ROUTE DESCRIPTION

ALEXANDRIA TRANSITION (AEX.GESNR1):
CARPR TRANSITION (CARPR.GESNR1):
PLANB TRANSITION (PLANB.GESNR1):
SAWMILL TRANSITION (SWB.GESNR1):

From ZEEKK on track 229° to cross GESNR at or above 13000, at or below 16000 and at 280K.

LANDING RUNWAY 8L: From GESNR on track 226° to cross KENNN at or above 10000, at or below 11000 and at 250K, then on track 227° to cross KNGWD at or above 8000, at or below 10000 and at 240K, then on track 257° to CROSS ZOEEE at 7000 and at 240K, then on track 267° to cross CASST at 6000 and at 210K, then on track 267°. Expect RADAR vectors to final approach course.

LANDING RUNWAYS 8R/9: From GESNR on track 226° to cross KENNN at or above 10000, at or below 11000 and at 250K, then on track 227° to cross KNGWD at or above 8000, at or below 10000 and at 240K, then on track 225° to cross EDEEE at or below 8000, then on track 225° to cross REAPR at 6000, then on track 225° to cross SHIVV at 6000 and at 240K, then on track 267° to cross HOWLN at 6000 and at 210K, then on track 267°. Expect RADAR vectors to final approach course.
NOTE: Chart not to scale.
ARRIVAL ROUTE DESCRIPTION

HARVEY TRANSITION (HRVR.GILCO5): From over HRV VORTAC on HRV R-258 to JEPEG, then on MHF R-085 to WOLDE. Thence . . . .

JEPEG TRANSITION (JEPEG.GILCO5): From over JEPEG on MHF R-085 to WOLDE. Thence . . . .

KLAMS TRANSITION (KLAMS.GILCO5): From over KLAMS on SBI R-136 to KUGLE, then on MHF R-085 to WOLDE. Thence . . . .

LAFAYETTE TRANSITION (LFT.GILCO5): From over LFT VORTAC on LFT R-230 to GIRLY, then on MHF R-085 to WOLDE. Thence . . . .

LEEVILLE TRANSITION (LEV.GILCO5): From over LEV VORTAC on LEV R-276 to JEPEG, then on MHF R-085 to WOLDE. Thence . . . .

SABINE PASS TRANSITION (SBI.GILCO5): From over SBI VOR/DME on SBI R-233 to WOLDE. Thence . . . .

SEMMES TRANSITION (SJI.GILCO5): From SJI VORTAC on SJI R-244 to TOPEZ, then on HRV R-258 to JEPEG, then on MHF R-085 to WOLDE. Thence . . . .

. . . . From over WOLDE on IAH R-111 to GILCO.

LANDING RUNWAYS 8L/R, 9:
From GILCO fly heading 265° for vectors to final approach course.

FOR ALL OTHER RUNWAYS:
Expect vectors to final approach course at or prior to GILCO.
ARIVAL ROUTE DESCRIPTION

COWBOY TRANSITION (CVE.GUSHR3):
DIESL TRANSITION (DIESL.GUSHR3):
ILEXY TRANSITION (ILEXY.GUSHR3):
MILLSAP TRANSITION (MQP.GUSHR3):
OILL TRANSITION (OILL.GUSHR3):
TORNN TRANSITION (TORNN.GUSHR3):

From MPORT on track 171° to cross GUSHR at 6000 and at 210K. Expect ILS or LOC Rwy 08L.
HTOWN TWO ARRIVAL (RNAV)

ARRIVAL ROUTE DESCRIPTION

CORPUS CHRISTI TRANSITION (CRP.HTOWN2):
LMEDA TRANSITION (LMEDA.HTOWN2):
NEHOW TRANSITION (NEHOW.HTOWN2):
SMAKR TRANSITION (SMAKR.HTOWN2):
SAN ANTONIO TRANSITION (SAT.HTOWN2):
YEEHA TRANSITION (YEEHA.HTOWN2):

From GMANN on track 040° to cross HTOWN at 9000 and at 240K, then on track 031° to cross WDLNS at 7000 and at 210K. Expect ILS or LOC RWY 08R.

NOTE: Chart not to scale.
ARRIVAL ROUTE DESCRIPTION

ALEXANDRIA TRANSITION (AEX.HUDZY4): From over AEX VORTAC on AEX R-235 to WAPPL, then on IAH R-067 to HUDZY. Thence. . . .

SAWMILL TRANSITION (SWB.HUDZY4): From over SWB VOR/DME on SWB R-211 to BRWCK, then on AEX R-235 to WAPPL, then on IAH R-067 to HUDZY. Thence. . . .

. . . .from over HUDZY on IAH R-067 to CLWSN, then on IAH R-067 to SWWAA, then on heading 190°. Expect RADAR vectors to final approach course.
NOTE: Chart not to scale.

CONTINUED ON FOLLOWING PAGE

NOTE: Expect runway assignment from Houston TRACON upon initial contact.

NOTE: For turbojet and turboprop aircraft capable of 280K or greater only.

NOTE: Turbojet aircraft descend via mach number until intercepting 280K. Maintain 280K until slowed by the STAR.

NOTE: ILEXY TRANSITION for AUS terminal area departures only.
ARRIVAL ROUTE DESCRIPTION

From KIDDZ on track 152° to cross SNIFY at 12000 and at 270K, then on track 152° to QTRBK, then on track 150° to cross RVEEE at or above 11000, then on track 147° to cross AAHZZ at 10000, then on track 148° to cross GLUVR at or above 9000 and at 240K.

LANDING RUNWAY 4: From GLUVR on track 127° to cross GEEEO at 6000 and at 210K. Expect ILS or LOC Rwy 04 approach.

LANDING RUNWAYS 13L/R: From GLUVR on track 090° to cross CRSTY at 6000 and at 210K, then on track 042° to SEUSS, then on track 042°. Expect RADAR vectors to final approach course.

LANDING RUNWAY 22: From GLUVR on track 090° to cross CRSTY at 6000 and at 210K, then on track 090° to VILLI, then on track 093° to MAAHH, then on track 110°. Expect RADAR vectors to final approach course.

LANDING RUNWAYS 31L/R: From GLUVR on track 090° to cross CRSTY at 6000 and at 210K, then on track 090° to VILLI, then on track 130° to RJAAY, then on track 130°. Expect RADAR vectors to final approach course.

NOTE: Expect runway assignment from Houston TRACON upon initial contact.
NOTE: For turbojet and turboprop aircraft capable of 280K or greater only.
NOTE: Turbojet aircraft descend via mach number until intercepting 280K. Maintain 280K until slowed by the STAR.

NOTE: Chart not to scale.
ARRIVAL ROUTE DESCRIPTION

From LINKK on track 301° to cross GILLL between 8000 and 10000 and at 240K.

LANDING RUNWAY 26L: From GILLL on track 325° to cross GARRR at 7000 and at 210K. Expect assigned instrument approach RWY 26L.

LANDING RUNWAY 26R: From GILLL on track 325° to cross GARRR at 7000 and at 210K, then on track 290° at 210K. Expect vectors to final approach course.

LANDING RUNWAY 27: From GILLL on track 313° to cross RDFSH at 6000 and at 210K. Expect assigned instrument approach RWY 27.

NOTE: Chart not to scale.
ARRIVAL ROUTE DESCRIPTION

BRKAT TRANSITION (BRKAT.MSCOT4):
CHLLY TRANSITION (CHLLY.MSCOT4):
DIESL TRANSITION (DIESL.MSCOT4):
ILEXY TRANSITION (ILEXY.MSCOT4):

From SUUNR on track 116° to cross MSCOT at 10000, then on track 116° to HWKII, then on track 116° to cross DOMNO between 8000 and 10000 and at 240K.

LANDING RUNWAY 26L: From DOMNO on track 087° to cross ZOEEE at 7000 and at 210K, then on track 087°. Expect vectors to final approach course.

LANDING RUNWAY 26R: From DOMNO on track 087° to cross SKLER at 6000 and at 210K, then on track 087°. Expect vectors to final approach course.

LANDING RUNWAY 27: From DOMNO on track 136° to cross BYSUN at 6000, then on track 136° to SMOCR, then on track 087° to cross PRAYY at 6000 and at 210K, then on track 087°. Expect vectors to final approach course.

NOTE: SC-5, 07 OCT 2021 to 02 DEC 2021
NOTE: Radar Required.
NOTE: RNAV 1.
NOTE: DME/DME/IRU or GPS Required.
NOTE: Turboprop aircraft only.
NOTE: Fly the RWY 8R transition; Houston approach control may assign a different transition on initial contact.
NOTE: Corresponding RNAV STAR is LINKK. Expect LINKK when IAH is landing west.
NOTE: Turboprop aircraft descend via mach number until intercepting 280K. Maintain 280K until slowed by the STAR.
NOTE: GPS Required for KELPP, PEGLG and SEAGL transitions.

GIRLY TRANSITION (GIRLY.NNCEE1)
HARVEY TRANSITION (HRV.NNCEE1)
JEPEG TRANSITION (JEPEG.NNCEE1)
KELPP TRANSITION (KELPP.NNCEE1)
LEEVILLE TRANSITION (LEV.NNCEE1)
LAFAYETTE TRANSITION (LFT.NNCEE1)
MULLT TRANSITION (MULLT.NNCEE1)
PEGLG TRANSITION (PEGLG.NNCEE1)
SEAGL TRANSITION (SEAGL.NNCEE1)
SEMMES TRANSITION (SJI.NNCEE1)

NOTE: Chart not to scale.
NOTES: Chart not to scale.

ARRIVAL ROUTE DESCRIPTION

From LINKK on track 293° to cross NNCEE at or below 15000, then on track 293° to cross KONZ at 12000, then on track 293° to cross BEDLM at or above 10000 and at 250K.

LANDING RUNWAY 8L: From BEDLM on track 293° to cross CHKEN at or below 7000, then on track 280° to cross PRAYY at 6000, then on track 319° to cross GOVV at 6000 and at 240K, then on track 267° to cross CASST at 6000 and at 210K, then on track 267°. Expect vectors to final approach course.

LANDING RUNWAYS 8R, 9: From BEDLM on track 293° to cross CHKEN at or below 7000, then on track 280° to cross PRAYY at 6000, then on track 267° to SMOCR, then on track 267° to SHIVV at 240K, then on track 267° to cross HOWLN at 6000 and at 210K, then on track 267°. Expect 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: Fly the Rwy 8R transition; Houston approach control may assign a different transition on initial contact.
NOTE: Corresponding RNAV STAR is LINKK. Expect LINKK when IAH is landing west.
NOTE: Turbojet aircraft descend via mach number until intercepting 280K. Maintain 280K until slowed by the STAR.
NOTE: GPS Required for KELPP, PEGLG and SEAGL transitions.

NOTE: Chart not to scale.
**ARIVAL ROUTE DESCRIPTION**

**ALEXANDRIA TRANSITION (AEX.OHIO4):**
From over AEX VORTAC via AEX R-251 to LYMBO INT, then on IAH R-046 to OHII0 INT. Thence...

**LYMBO TRANSITION (LFK.OHIO4):**
From over LFK VORTAC on LFK R-159 to ZEEKK INT, then on IAH R-046 to OHII0 INT. Thence...

**PNUUT TRANSITION:**
From over PNUUT VORTAC on PNUUT R-046 to ZEE KINT, then on IAH R-046 to OHII0 INT. Thence...

**PLANNING INFORMATION**

**VERTICAL NAVIGATION**

**TURBOJETS:**
- Landing East at IAH
  - Expect 17000 FT 280K
- Landing West at IAH
  - Expect 12000 FT 250K

**GEORGE BUSH INTNL AIRPORT**
/ HOUSTON (IAH):
- ... from OHII0 INT on IAH R-046 to PNUUT. Thence...
- LANDING RUNWAYS 8L/R or 9:
  - ... fly heading 265° for vectors to final approach course.
- LANDING ALL OTHER RUNWAYS:
  - ... expect vectors to final approach course at or prior to PNUUT.
- FOR ALL OTHER AIRPORTS:
  - ... from OHII0 INT on IAH R-046 to PNUUT. Expect vectors to final approach course at or prior to PNUUT.
HOUSTON, TEXAS

RNAV Transition Routes

See following page for Arrival Routes.

BAYYY

15000 250K
12000

SHULDL 8000 1400 27° (19)
GEAR 8000 272° (46)
SLYCE 12000 1400 248° (31)
JEPEJG 12000 1700 269° (124)

NOTE: Expect runway assignment from Houston TRACON upon initial contact.
NOTE: Corresponding RNAV STAR is BAYYY. Expect BAYYY when HOU is landing 4/13.
NOTE: For turbojet and turboprop aircraft capable of 280K or greater only.
NOTE: Turbojet aircraft descend via mach number until intercepting 280K. Maintain 280K until slowed by the STAR.

KCEEE TRANSITION (KCEE.PUCKS4)
KELPP TRANSITION (KELPP.PUCKS4)
LEEVILLE TRANSITION (LEV.PUCKS4)
PEGLG TRANSITION (PEGLG.PUCKS4)
SEAGL TRANSITION (SEAGL.PUCKS4)
SEMMES TRANSITION (SJI.PUCKS4)
SHL L TRANSITION (SHLL.PUCKS4)

SC 5, 07 OCT 2021 to 02 DEC 2021
ARRIVAL ROUTE DESCRIPTION

From BAYYY on track 274° to cross PUCKS between 8000 and 11000.

LANDING RUNWAY 22: From PUCKS on track 310° to cross SQRLL at or above 8000, then on track 310° to cross KEMAH at 6000, then on track 310° to cross WWILD at 6000 and at 210K, then on track 310° to cross JCNTO at 4000, then on track 310°. Expect RADAR vectors to final approach course.

LANDING RUNWAYS 31L/R: From PUCKS on track 274° to cross BLEAU at or above 8000, then on track 274° to cross MMOOW at 6000 and at 210K, then on track 274°. Expect RADAR vectors to final approach course.
NOTE: Chart not to scale.

RIICE EIGHT ARRIVAL

NOTE: DME/DME/IRU or GPS equipped turboprop or turboprop aircraft landing IAH capable of 280K or greater must file the DRLLR/GUSHR (RNAV) STARS.

BILLEE TRANSITION (BILLEE.RIICE8): From over BILLEE INT on TNV R-334 to HOMRN INT, then IAH R-313 to RIICE INT. Thence . . . .

COLLEGE STATION TRANSITION (CLL.RIICE8): From over CLL VORTAC on CLL R-076 to BAZBL INT, then IAH R-313 to RIICE INT. Thence . . . .

COWBOY TRANSITION (CVE.RIICE8): From over CVE VOR/DME on CVE R-160 to TORNN INT, then on TNV R-334 to HOMRN INT, then on IAH R-313 to RIICE INT. Thence . . . .

ILEXY TRANSITION (ILEXY.RIICE8): From over ILEXY INT on CLL R-238 to CLL VORTAC, then on CLL R-076 to BAZBL INT, then on IAH R-313 to RIICE INT. Thence . . . .

LEONA TRANSITION (LOA.RIICE8): From over LOA VORTAC on LOA R-181 to BAZBL INT, then on IAH R-313 to RIICE INT. Thence . . . .

LLOANO TRANSITION (LLO.RIICE8): From over LLO VORTAC on LLO R-081 to HOMRN INT, then on IAH R-313 to RIICE INT. Thence . . . .

MILLSAP TRANSITION (MGP.RIICE8): From over MGP VORTAC on MGP R-124 to TORNN INT, then on TNV R-334 to HOMRN INT, then on IAH R-313 to RIICE INT. Thence . . . .

RIICE EIGHT ARRIVAL

(NARRATIVE ON FOLLOWING PAGE) HOUSTON APP CON
(CONTINUED ON FOLLOWING PAGE) 124.35 316.15
OXO ATIS 118.325
DWH ATIS 128.375
IAH D-ATIS 124.05

(20) FL180 (21) 6000

RIICE EIGHT ARRIVAL

(Contd. on following page) 07 OCT 2021 to 02 DEC 2021
ARRIVAL ROUTE DESCRIPTION

GEORGE BUSH INT’L/HOUSTON (IAH):
. . . . From over RIICE INT on IAH R-313 to BRKMN INT, to MLRRR INT, to LYYTE INT.

LANDING RUNWAY 26L/R or 27:
. . . . Fly heading 085° for vectors to final approach course.

LANDING ALL OTHER RUNWAYS:
. . . . Expect vectors to final approach course at or prior to LYYTE INT.

FOR ALL OTHER AIRPORTS:
. . . . From over RIICE INT on IAH R-313 to BRKMN INT, thence as depicted to LYYTE INT expect vectors to final approach course at or prior to LYYTE INT.
NOTE: RADAR required.
NOTE: RNAV 1.
NOTE: DME/DME/IRU or GPS required.
NOTE: Turbojet and turboprop aircraft only.
NOTE: Fly the Runway 8L transition; Houston Approach Control may assign a different transition on initial contact.
NOTE: Corresponding RNAV STAR is DOOBI.
Expect DOOBI when IAH is landing west.
NOTE: Turbojet aircraft descend via mach number until intercepting 280K. Maintain 280K until slowed by the STAR.
ARRIVAL ROUTE DESCRIPTION

ALEXANDRIA TRANSITION (AEX.SKNRD4):

PLANB TRANSITION (PLANB.SKNRD4):

SAWMILL TRANSITION (SWB.SKNRD4):

From DOOBI on track 242° to cross SKNRD at or below 16000 and at 280K.

LANDING RUNWAY 8L: From SKNRD on track 242° to cross BFFET at or above 12000 and, at or below 14000 and at 250K, then on track 242° to cross KNGWD at or above 8000, at or below 10000 and at 240K, then on track 257° to cross ZOEEE at 7000 and at 240K, then on track 267° to cross CASST at 6000 and at 210K, then on track 267°. Expect RADAR vectors to final approach course.

LANDING RUNWAYS 8R, 9: From SKNRD on track 242° to cross BFFET at or above 12000, at or below 14000 and at 250K, then on track 242° to cross KNGWD at or above 8000, at or below 10000 and at 240K, then on track 225° to cross EDEEE at or below 8000, then on track 225° to cross REAPR at 6000, then on track 225° to cross SHIVV at 6000 and at 240K, then on track 267° to cross HOWLN at 6000 and at 210K, then on track 267°. Expect RADAR vectors to final approach course.
ARRIVAL ROUTE DESCRIPTION

COLLEGE STATION TRANSITION (CLL.SNIFY1): From over CLL VORTAC on CLL R-147 to KIDDZ. Thence....

ELLVR TRANSITION (ELLVR.SNIFY1): From over ELLVR on CLL R-334 to CLL VORTAC, then on CLL R-147 to KIDDZ. Thence....

LLANO TRANSITION (LLO.SNIFY1): From over LLO VORTAC on LLO R-087 and CLL R-268 to CLL VORTAC, then on CLL R-147 to KIDDZ. Thence....

....from KIDDZ on CLL R-147 to cross SNIFY at 12000. Expect vectors to final approach course at or prior to SNIFY.

NOTE: Chart not to scale.
NOTE: RADAR required.
NOTE: RNAV 1.
NOTE: DME/DME/IRU or GPS required.
NOTE: ATC assigned only.
NOTE: Expect runway assignment from Houston TRACON upon initial contact.
NOTE: Turbojet and turboprop aircraft capable of 280K or greater only.
NOTE: GPS required for KELPP, PEGLG, and SEAGL transitions.
ARRIVAL ROUTE DESCRIPTION

From BAYYY on track 304° to SOULL at 240K.

**LANDING RUNWAY 8L:** From SOULL on track 304° to PHLLY at 240K, then on track 306° to CHKEN, then on track 280° to PRAYY, then on track 319° to GOVVV, then on track 267° to DOMNO at 210K, then on track 267° at 210K. Expect vectors to final approach course.

**LANDING RUNWAY 8R:** From SOULL on track 304° to PHLLY at 240K, then on track 306° to CHKEN, then on track 280° to PRAYY, then on track 267° to SMOCR, then on track 267° to SHIVV, then on track 267° to HOWLN at 210K, then on track 267°. Expect vectors to final approach course.

**LANDING RUNWAY 9:** From SOULL on track 304° to PHLLY at 240K, then on track 306° to CHKEN, then on track 280° to PRAYY, then on track 267° to SMOCR, then on track 267° to SHIVV, then on track 267° to HOWLN at 210K, then on track 267°. Expect vectors to final approach course.

**LANDING RUNWAY 26L:** From SOULL on track 338° to GARRR at 210K. Expect ILS or LOC Rwy 26L.

**LANDING RUNWAY 26R:** From SOULL on track 338° to GARRR at 210K, then on track 290° at 210K. Expect vectors to final approach course.

**LANDING RUNWAY 27:** From SOULL on track 336° to RDFS at 210K. Expect ILS or LOC Rwy 27.
NOTE: Radar Required.
NOTE: RNAV 1.
NOTE: DME/DME/IRU or GPS Required.
NOTE: Turbojet and turboprop aircraft only.
NOTE: Fly the Rwy 27 transition; Houston Approach control may assign a different transition on initial contact.
NOTE: Corresponding RNAV STAR is HTOWN. Expect HTOWN when IAH is landing east.
NOTE: Turbojet aircraft descend via mach number until intercepting 280K. Maintain 280K until slowed by the STAR.
TEJAS FOUR ARRIVAL (RNAV) Arrival Routes

From GMANN on track 058° to cross CITTE at or below 16000, then on track 059° to cross RIDL at or below 10000, then on track 059° to cross HOWIN at 6000 and at 240K, then on track 087° to cross ZOEE at 4000. Expect vectors to final approach course.

LANDING RUNWAY 26R: From TEJAS on track 059° to cross RIDL at or below 10000, then on track 059° to cross HOWIN at 6000 and at 240K, then on track 087° to cross ZOEE at 4000. Expect vectors to final approach course.

LANDING RUNWAY 26L: From TEJAS on track 059° to cross HOWIN at 6000 and 240K, then on track 087° to cross ZOEE at 4000 and at 210K, then on track 087°. Expect vectors to final approach course.

LANDING RUNWAY 27: From TEJAS on track 059° to cross HOWIN at 6000 and 240K, then on track 087° to cross ZOEE at 4000 and at 210K, then on track 087°. Expect vectors to final approach course.

From GMANN on track 058° to cross CITTE at or below 16000, then on track 059° to cross HOWIN at 6000 and at 240K, then on track 087° to cross ZOEE at 4000. Expect vectors to final approach course.

NOTE: Chart not to scale.
TKNIQ THREE ARRIVAL (RNAV) 

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

NOTE: Turbojet and turboprop aircraft only.
NOTE: ATC assigned only for aircraft landing HOU.

(VERBAL INFORMATION ON FOLLOWING PAGE)
ARRIVAL ROUTE DESCRIPTION

BBURT TRANSITION (BBURT.TKNIQ3)

From TKNIQ on track 301° to DOCCC.

LANDING HOU RUNWAY 4: From DOCCC on track 302° to FRDDY, then on track 289° to FIGGG, then on track 255° to SHUUG, then on track 222° to EMARR, then on track 220°. Expect RADAR vectors to final approach course.

LANDING HOU RUNWAYS 13L/R: From DOCCC on track 302° to FRDDY, then on track 289° to FIGGG, then on track 278° to IVEEE, then on track 280° to VILLI, then on track 311° to ALLY, then on track 311°. Expect RADAR vectors to final approach course.

LANDING HOU RUNWAY 22: From DOCCC on track 323° to KEMAH, then on track 310°. Expect RADAR vectors to final approach course.

LANDING HOU RUNWAYS 31L/R: From DOCCC on track 288° to MMOOW, then on track 274°. Expect RADAR vectors to final approach course.

LANDING AXH, EFD, GLS, HPY, IWS, LBX, LVJ, SGR, TME, T00, T41, 54T: From DOCCC on track 288° to MMOOW, then on track 253°. Expect RADAR vectors to final approach course.
TSHRT ONE ARRIVAL

HOUSTON, TEXAS

NOTE: RADAR required.

NOTE: DME/DME/IRU or GPS equipped turbojet and turboprop aircraft landing HOU must file the BELLR (RNAV) STAR.

NOTE: DME required for holding at HYDRL.

NOTE: Chart not to scale.

(CONTINUED ON FOLLOWING PAGE)

CORPUS CHRISTI TRANSITION (CRP.TSHRT1): From over CRP VORTAC on CRP R-029 to HYDRL, then on IAH R-221 to BELLR. Thence . . . .

PALACIOS TRANSITION (PSX.TSHRT1): From over PSX VORTAC on PSX R-011 to BELLR. Thence . . . .

SAN ANTONIO TRANSITION (SAT.TSHRT1): From over SAT VORTAC on SAT R-100 to HYDRL, then on IAH R-221 to BELLR. Thence . . . .

TSHRT ONE ARRIVAL

(BELLR.TSHRT1) 20198
AL-198 (FAA)

Transition Routes

HOUSTON, TEXAS

NOTE:  Chart not to scale.

(CONTINUED ON FOLLOWING PAGE)
from over BELLR on IAH R-221 to cross TSHRT at 12000. From TSHRT fly heading 075° for vectors to final approach course.
ARRIVAL ROUTE DESCRIPTION

BRKAT TRANSITION (BRKAT.TTORO3):
CHILLY TRANSITION (CHILLY.TTORO3):
DIESL TRANSITION (DIESL.TTORO3):
ILEXY TRANSITION (ILEXY.TTORO3):

From SUUNR on track 159° to cross TTORO at 8000 and at 210K. Expect ILS or LOC RWY 8R.

NOTE: RADAR Required.
NOTE: RNAV 1.
NOTE: DME/DME/IRU or GPS Required.
NOTE: Turboprop aircraft only.
NOTE: Expect runway assignment from Houston TRACON upon initial contact.
NOTE: Turboprop aircraft descend via mach number until intercepting 280K. Maintain 280K until slowed by the STAR.
NOTE: Corresponding RNAV STAR is MSCOT. Expect MSCOT when IAH is landing west.
NOTE: BRKAT transition ATC only.
NOTE: ILEXY transition for Austin terminal area departures only.

NOTE: Chart not to scale.
NOTE: Expect runway assignment from Houston TRACON upon initial contact.
NOTE: For turbojet and turboprop aircraft capable of 280K or greater only.
NOTE: Turbojet aircraft descend via MACH number until intercepting 280K. Maintain 280K until slowed by the STAR.
NOTE: ZEBBB TRANSITION ATC assigned only.
NOTE: Except for aircraft departing SHV, PLANB TRANSITION is ATC assigned only. Do not file.

ALEXANDRIA TRANSITION (AEX.WAPPL6)
PLANB TRANSITION (PLANB.WAPPL6)
SAWMILL TRANSITION (SWB.WAPPL6)
ZEBBB TRANSITION (ZEBBB.WAPPL6)
NOTE: Expect runway assignment from Houston TRACON upon initial contact.
NOTE: For turbojet and turboprop aircraft capable of 280K or greater only.
NOTE: Turbojet aircraft descend via MACH number until intercepting 280K. Maintain 280K until slowed by the STAR.

NOTE: Chart not to scale.
ARIVAL ROUTE DESCRIPTION

From WAPPL on track 250° to cross WLMOR between 15000 and FL210, then on track 250° to HUDZY, then on track 250° to cross CLWSN between 12000 and 14000 and at 280K, then on track 250° to cross SWWAA between 10000 and 12000 and at 250K, then on track 191° to cross PUSHN at or above 8000.

LANDING HOU RUNWAY 4: From PUSHN on track 192° to cross BUGZY at or below 10000, then on track 192° to cross PRTCH at or below 7000, then on track 177° to cross SHUUG at 6000 and at 210K, then on track 222° to EMARR, then on track 222°. Expect RADAR vectors to final approach course.

LANDING HOU RUNWAYS 13L/R: From PUSHN on track 192° to cross BUGZY at or below 10000, then on track 192° to cross PRTCH at or below 7000, then on track 200° to cross MOLLR at 6000 and at 210K, then on track 251° to VILLI, then on track 311° to ALLLY, then on track 311°. Expect RADAR vectors to final approach course.

LANDING HOU RUNWAY 22: From PUSHN on track 192° to cross BUGZY at or below 10000, then on track 175° to cross RTWNG at 7000 and at 210K, then on track 111° to MAAHH, then on track 111°. Expect RADAR vectors to final approach course.

LANDING HOU RUNWAYS 31L/R: From PUSHN on track 192° to cross BUGZY at or below 10000, then on track 192° to cross PRTCH at or below 7000, then on track 126° to cross UBETR at 6000 and at 210K, then on track 126°. Expect RADAR vectors to final approach course.

LANDING GLS, TME, AXH, HPY, T41, 54T, T00, SGR, ARM, BYY, LBX, LVJ, IWS, EFD: From WAPPL on track 250° to cross WLMOR between 15000 and FL210, then on track 250° to HUDZY, then on track 250° to cross CLWSN between 12000 and 14000 and at 280K, then on track 250° to cross SWWAA between 10000 and 12000 and at 250K, then on track 191° to cross PUSHN at or above 8000, then on track 192° to cross BUGZY at or below 10000, then on track 175° to cross PLKTN at 8000, then on track 175°. Expect RADAR vectors to final approach course.
ARRIVAL DESCRIPTION

FFSSH TRANSITION (FFSSH.WHAEL3): From over FFSSH INT on ELA R-262 to WHAEL INT. Thence.

EATIT TRANSITION (EATIT.WHAEL3): From over EATIT INT on TNV R-204 to WHAEL INT. Thence.

. . . . from over WHAEL INT on TNV R-204 to COWZZ INT, then on TNV R-204 to TNV VOR/DME. Depart TNV VOR/DME heading 070° for vectors to final approach course.

NOTE: RADAR required.

NOTE: Chart not to scale.
NOTE: RADAR required.
NOTE: RNAV 1.
NOTE: DME/DME/IRU or GPS required.
NOTE: Turbojet or turboprop aircraft capable of 280K or greater only.
NOTE: Fly the runway 26R transition; Houston approach control may assign a different transition on initial contact.
NOTE: Corresponding RNAV STAR is GESNR. Expect GESNR when IAH is landing east.
NOTE: Except for aircraft departing SHV, PLANB TRANSITION is ATC assigned only; do not file.
NOTE: CARPR TRANSITION is ATC assigned only, do not file.
NOTE: Turbojet aircraft descend via Mach number until intercepting 280K. Maintain 280K until slowed by the STAR.
ARRIVAL ROUTE DESCRIPTION

ALEXANDRIA TRANSITION (AEX.ZEEKK2)
CARPR TRANSITION (CARPR.ZEEKK2)
PLANB TRANSITION (PLANB.ZEEKK2)
SAWMILL TRANSITION (SWB.ZEEKK2)

From ZEEKK on track 211° to cross BLUUZ at or below 10000 and at 240K.

LANDING RUNWAY 26L: From BLUUZ on track 191° to cross ODISS at or above 8000 and at 210K, then on track 216° to cross BOZZZ at 8000 and at 210K. Expect ILS or LOC RWY 26L approach.

LANDING RUNWAY 26R: From BLUZZ on track 194° to cross TABRR between 6000 and 7000, then on track 194° to cross HOOTI at 6000 and at 210K. Expect ILS or LOC RWY 26R approach.

LANDING RUNWAY 27: From BLUZZ on track 172° to cross PPUNK at or below 8000, then on track 172° to cross VZEEE at or above 6000, then on track 172° to SOFFT, then on track 185° to cross CLSIK at 4000 and at 210K. Expect ILS or LOC RWY 27 approach.
**ANAHUAC, TEXAS**  
AL-6395 (FAA)  
21168

**RNAV (GPS) RWY 12**

**CHAMBERS COUNTY (T)**

**HOUSTON APP CON**  
134.45 281.4

**CTAF**  
122.9

**APP CRS**  
124°

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RADAR required. Use William P Hobby altimeter setting. GPS or RNP-0.3 required. DME/DME RNP-0.3 NA. Procedure NA at night. Rwy 12 helicopter visibility reduction below 1 SM NA. Circling NA to Rwys 17 and 35.

**MISSED APPROACH:** Climb to 3000 direct GOLBY WP and hold.

**Radar**

- Turn Procedure
- 524
- 522
- 308
- 524

- 3000 DME/DME RNP-0.3 NA. Procedure NA at night. Rwy 12 helicopter visibility.

- GOLBY WP and hold.

**ELEV**  
21

**TDZE**  
21

**124° to RW12**

**1900 X 300**

**3005 X 60**

**MIRL Rwy 12-30**

**UNL Rwy 12-30**

**ANAHUAC, TEXAS**  
Orig-C 17JUN21

**29°46'N-94°40'W**

**SC-5, 07 OCT 2021 to 02 DEC 2021**

**SC-5, 07 OCT 2021 to 02 DEC 2021**

**SC-5, 07 OCT 2021 to 02 DEC 2021**
NOTE: RADAR required.
NOTE: DME/DME/IRU or GPS required.
NOTE: RNAV 1.

TAKEOFF MINIMUMS
Rwys 17, 35: NA - Environmental
Rwys 12, 30: Standard with minimum climb of 500' per NM to 540.

TAKEOFF RUNWAY 12: Climb on heading 124° to 540 for RADAR vectors to DREMR, thence . . . .
TAKEOFF RUNWAY 30: Climb on heading 304° to 540 for RADAR vectors to DREMR, thence . . . .

...on track 345° to LITLD, then on track 346° to BLTWY, then on (transition). Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure.

CRIED TRANSITION (BLTWY7.CRIED)
**BORRN FOUR DEPARTURE (RNAV)**

**CTAF**
122.9
HOUSTON DEP CON
134.45 284.0

**TAKEOFF MINIMUMS:**
Rwy 17, 35: NA - Environmental.
Rwy 12, 30: Standard with minimum climb of 500' per NM to 540.

**NOTE:** Chart not to scale.

**NOTE:** CRGER TRANSITION ATC assigned only for aircraft departing 54T, AXH, EFD, GLS, HPY, IWS, LBX, LVJ, SGR, TME, T00, T41.

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**SC-5, 07 OCT 2021 to 02 DEC 2021**
BORRN FOUR DEPARTURE (RNAV)

DEPARTURE ROUTE DESCRIPTION

TAKEOFF RWY 12: Climb on heading 124° to 540, for RADAR vectors to BORRN, thence. . . .

TAKEOFF RWY 30: Climb on heading 304° to 540, for RADAR vectors to BORRN, thence. . . .

. . . . on track 267° to DILRE, then on (transition). Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure.

CRGER TRANSITION (BORRN4.CRGER)
JUNCTION TRANSITION (BORRN4.JCT)
MNURE TRANSITION (BORRN4.MNURE)
SAN ANTONIO TRANSITION (BORRN4.SAT)
WAILN TRANSITION (BORRN4.WAILN)
**DEPARTURE ROUTE DESCRIPTION**

**TAKEOFF RUNWAY 12:** Climb on heading 124° to 540, for RADAR vectors to VUH VOR/DME, thence . . . .

**TAKEOFF RUNWAY 30:** Climb on heading 304° to 540, for RADAR vectors to VUH VOR/DME, thence . . . .

. . . . on track 118° to HOODO, then on (transition). Maintain ATC assigned altitude.
Expect filed altitude 10 minutes after departure.

- BOWFN TRANSITION (HOODO7.BOWFN)
- CFOOD TRANSITION (HOODO7.CFOOD)
- HARVEY TRANSITION (HOODO7.HRV)
- LEEVILLE TRANSITION (HOODO7.LEV)
- SBIRD TRANSITION (HOODO7.SBIRD)

**NOTE:** Chart not to scale.
INDIE EIGHT DEPARTURE (RNAV)

CTAF
122.9
HOUSTON DEP CON
134.45 284.0

INDIE EIGHT DEPARTURE (RNAV)

NOTE: Chart not to scale.

TAKEOFF RUNWAY 12: Climb on heading 124° to 540 for RADAR vectors to RENNK, thence . . . .
TAKEOFF RUNWAY 30: Climb on heading 304° to 540 for RADAR vectors to RENNK, thence . . . .

. . . . on track 016° to COLET, then on track 025° to SUSHI, then on track 026° to WWELL, then on track 026° to INDIE, then on (transition). Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure.

TPAKK TRANSITION (INDIE8.TPAKK)

NOTE: RADAR required.
NOTE: DME/DME/IRU or GPS required.
NOTE: RNAV 1.
NOTE: TPAKK TRANSITION: For non GPS equipped aircraft TNV DME must be operational.

TAKEOFF MINIMUMS
Rwys 17, 35: NA-Environmental
Rwys 12, 30: Standard with minimum climb of 500’ per NM to 540.

DEPARTURE ROUTE DESCRIPTION

NOTE: Chart not to scale.
**RNAV 1.**

**NOTE:** Chart not to scale.

**TOP ALTITUDE:**
**ASSIGNED BY ATC**

**TAKEOFF MINIMUMS**
- Rwys 17, 35: NA - Environmental.
- Rwys 12, 30: Standard with minimum climb of 500’ per NM to 540.

**NOTE:** DME/DME/IRU or GPS required.
**NOTE:** RADAR required.
**NOTE:** RNAV 1.

**(NARRATIVE ON FOLLOWING PAGE)**
DEPARTURE ROUTE DESCRIPTION

TAKEOFF RWY 12: Climb on heading 124° to 540, for RADAR vectors to KARRR, thence. . . .
TAKEOFF RWY 30: Climb on heading 304° to 540, for RADAR vectors to KARRR, thence. . . .

. . . .on track 218° to KAVCY, then on (transition). Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure.

CORPUS CHRISTI TRANSITION (KARRR6.CRP)
PALACIOS TRANSITION (KARRR6.PSX)
TRUAX TRANSITION (KARRR6.NGP)
WWREN TRANSITION (KARRR6.WWREN)
YOMOM TRANSITION (KARRR6.YOMOM)
NOTE: RADAR required.
NOTE: DME/DME/IRU or GPS required.
NOTE: RNAV 1.

TAKEOFF MINIMUMS
Rwys 17, 35: NA - Environmental.
Rwys 12, 30: Standard with minimum
climb of 500' per NM to 540.

DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAY 12: Climb on heading 124°
to 540 for RADAR vectors to KNTKY, thence . . . .
TAKEOFF RUNWAY 30: Climb on heading 304°
to 540 for RADAR vectors to KNTKY, thence . . . .

. . . . on track 032° to PEETY, then on track 032°
to DARTR, then on track 031° to MUSIQ, then on
track 031° to CLAVN, then on track 031° to
VELCO, then on track 031° to ENJOY, then on
track 031° to LURIC, then on (transition).
Maintain ATC assigned altitude. Expect filed
altitude 10 minutes after departure.

HAWES TRANSITION (LURIC8.HAWES)
ORRTH TRANSITION (LURIC8.ORRTH)
CTAF
122.9
HOUSTON DEP CON
134.45 284.0

TAKEOFF MINIMUMS
Rwy 17, 35: NA - environmental.
Rwy 12, 30: Standard with minimum climb of 500' per NM to 540.

NOTE: DME/DME/IRU or GPS required.
NOTE: RADAR required.
NOTE: RNAV 1.
NOTE: GUSTI and LCH TRANSITIONS ATC assigned only for aircraft departing
AXH, EFD, GLS, HPY, IWS, LBX, LVJ, SGR, TME, T00, T41 and 54T.

DEPARTURE ROUTE DESCRIPTION
TAKEOFF RWY 12: Climb on heading 124° to 540 for RADAR vectors to MMALT, thence.
TAKEOFF RWY 30: Climb on heading 304° to 540 for RADAR vectors to MMALT, thence.

. . . on track 086° to MOOKI, then on (transition). Maintain ATC assigned altitude.
Expect filed altitude 10 minutes after departure.

GUSTI TRANSITION (MMALT5.GUSTI)
LAKE CHARLES TRANSITION (MMALT5.LCH)
WHITE LAKE TRANSITION (MMALT5.LLA)

NOTE: Chart not to scale.
TOP ALTITUDE: ASSIGNED BY ATC

TAKEOFF MINIMUMS
Rwys 17, 35: NA - Environmental.
Rwys 12, 30: Standard.

NOTE: RADAR required.
NOTE: Chart not to scale.

(NARRATIVE ON FOLLOWING PAGE)
DEPARTURE ROUTE DESCRIPTION

TAKEOFF ALL RUNWAYS: When entering controlled airspace, climb on assigned heading for RADAR vectors to SKUBA INT. Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure, thence . . . .

. . . . on PSX R-038 to PSX VORTAC.

FORT STOCKTON TRANSITION (PSX2.FST): From over PSX VORTAC on PSX R-253 and THX R-073 to THX VORTAC, then on THX R-259 and COT R-078 to COT VORTAC, then on COT R-318 and RSG R-136 to RSG VORTAC, then on RSG R-283 and FST R-100 to FST VORTAC.

SAN ANTONIO TRANSITION (PSX2.SAT): From over PSX VORTAC on PSX R-253 and THX R-073 to THX VORTAC, then on SAT R-158 to SAT VORTAC.
NOTE: Chart not to scale.

NOTE: RADAR required.

NOTE: DME/DME/IRU or GPS required.

NOTE: RNAV 1.

**DEPARTURE ROUTE DESCRIPTION**

**TAKEOFF RUNWAY 12:** Climb on heading 124° to 540 for RADAR vectors to KNTKY, thence . . .

**TAKEOFF RUNWAY 30:** Climb on heading 304° to 540 for RADAR vectors to KNTKY, thence . . . .

. . . .on track 032° to PEETY, then on track 032° to DARTR, then on track 031° to MUSIQ, then on track 031° to CLAVN, then on track 060° to STRYA, then on (transition). Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure.

**DPATY TRANSITION (STRYA8.DPATY)**

**JBULL TRANSITION (STRYA8.JBULL)**
DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAY 12: Climb on heading 124° to 540 for RADAR vectors to BBYSE, thence...

TAKEOFF RUNWAY 30: Climb on heading 304° to 540 for RADAR vectors to BBYSE, thence...

...on track 331° to SPICR, then on track 331° to WLLIS, then on track 332° to STYCK, then on (transition). Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure.

DOLEY TRANSITION (STYCK8.DOLEY)
WTSON TRANSITION (STYCK8.WTSON)
(WATFO5.WATFO) 19115
AL-6395 (FAA)

WATFO FIVE DEPARTURE (RNAV)

NOTE: GPS required.
NOTE: RADAR required.
NOTE: RNAV 1.

TAKEOFF MINIMUMS:
Rwy 17, 35: NA - environmental.
Rwy 12, 30: Standard with minimum climb of 500' per NM to 540.

NOTE: Chart not to scale.

DEPARTURE ROUTE DESCRIPTION

TAKEOFF RWY 12: Climb on heading 124° to 540, for RADAR vectors to WATFO, thence. . . .
TAKEOFF RWY 30: Climb on heading 304° to 540, for RADAR vectors to WATFO, thence. . . .
...on track 141° to VUH VOR/DME, then on (transition). Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure.

ANKRR TRANSITION (WATFO5.ANKRR)
KELPP TRANSITION (WATFO5.KELPP)
MUSYL TRANSITION (WATFO5.MUSYL)
NOTE: RADAR required.
NOTE: DME/DME/IRU or GPS required.
NOTE: RNAV 1.

TAKEOFF MINIMUMS
Rwy 17, 35: NA - Environmental.
Rwy 12, 30: Standard with minimum climb of 500' per NM to 540.

DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAY 12: Climb on heading 124° to 540 for RADAR vectors to WYLSN, thence... . . .
TAKEOFF RUNWAY 30: Climb on heading 304° to 540 for RADAR vectors to WYLSN, thence... . . .

... on track 360° to MONNT, then on (transition). Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure.

GIFFA TRANSITION (WYLSN8.GIFFA)
MAJKK TRANSITION (WYLSN8.MAJKK)

NOTE: Chart not to scale.
ILS or LOC RWY 17
TEXAS GULF COAST RGNL (LBX)

DME required.

- For inop ALS, increase S-LOC 17 Cat C/D visibility to ½ SM.
- Circling NA east of Rwy 17-35.

ASOS
119.925

HOUSTON APP CON
134.45 264.0

CLNC DEL
125.2

UNICOM
123.0 (CTAF)

MISSED APPROACH: Climb to 600 then climbing left turn to 3000 on VUH VOR/DME R-243 to DELVE/VUH 22.1 DME and hold.

Procedure NA for arrival on VUH VOR/DME.

2017

ILS or LOC RWY 17
TEXAS GULF COAST RGNL (LBX)

Amdt 7 10OCT19

29°07'N-95°28'W
RNAV (GPS) RWY 17
TEXAS GULF COAST RGNL (LBX)

ASOS | HOUSTON APP CON | CLINC DEL | UNICOM
---|----------------|-----------|--------
119.925 | 134.45 284.0 | 125.2 | 123.0 (CTAF)

MISSED APPROACH: Climb to 2000 direct ACKLE and hold.

LNAV/VNAV DA

LPV DA | 282-½ 257 (300-½)
LNAV/VNAV DA | 360-¾ 335 (400-¾)
LNAV MDA | 420-½ 395 (400-½)

CIRCLING

GP 3.00° TCH 50

Procedure NA for arrival at KEEDS via V556 westbound.

Rwy ldg 7000
Apt Elev 25

MALSR

175° to RW17

175° to RW17
RNAV (GPS) RWY 35
TEXAS GULF COAST RGNL (LBX)

**ASOS**
- ACKLE 119.925
- HOUSTON APP CON 134.45 284.0
- CLNC DEL 125.2
- UNICOM 123.0 (CTAF)

**DEM/DME RNP-0.3 NA.** Baro-VNAV NA below -16°C (4°F). When local altimeter setting not received, use William P. Hobby altimeter setting and increase all DAs/MDAs 100 feet and Circling Cat D visibility ½ SM. Baro-VNAV and VDP NA when using William P. Hobby altimeter setting. Circling NA east of Rwy 17-35.

**MISSED APPROACH:** Climb to 2000 direct PLOT and right turn via 104° track to DELVE and hold.

**WSAS**
- CH 77516
- APP CRS 355°
- Rw 1 Leg 7000
- TDZE 25
- Apt Elev 25

**TEXAS GULF COAST RGNL (LBX)**
- 355° to RW35
- 624° to NORWO
- 216° to LETTY
- 267° to PLOT
- 150° to INDEN
- 200° to ACKLE
- 200° to DELVE

**Table:**

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<td>CIRCLING</td>
<td>455 (500-1 1/2)</td>
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</table>

**Notes:**
- Procedure
- 355° to RW35
- 6 NM to 3.4 NM
- 1 NM to RW35
- *LNAV only*
- VGS and RNAV glideslope, not coincident (VGS Angle 3.00/ΔCH 40).
- 2000
- 355°
- 1500
- 104°

**Diagram:**
- EA-6453 (FAA)
- 20142

**Amdt 2B 26MAR20**
- Angleton/Lake Jackson, Texas

**29°07’N-95°28’W**

**9900** 07 OCT 2021 to 02 DEC 2021
NOTE: RADAR required.

NOTE: The following TRANSITIONS are ATC assigned only. Do not file.

CRESTVIEW TRANSITION: (For aircraft being weather rerouted to join a jet route off CEW VORTAC or overflying CEW VORTAC to join a direct route).

MC COMB TRANSITION: (For aircraft being weather rerouted to join a jet route off MCB VORTAC or overflying MCB VORTAC to join a direct route).

TAKEOFF MINIMUMS
Rwys 17, 35: Standard.
DEPARTURE ROUTE DESCRIPTION

TAKEOFF ALL RUNWAYS: When entering controlled airspace, climb on assigned heading for RADAR vectors to RAECN INT. Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure, thence...

.on IAH R-028 to VELCO INT, cross VELCO INT at or above 10000, then right turn on LFK R-082 and AEX R-265 to AEX VORTAC.

CRESTVIEW TRANSITION (AEX3.CEW): From over AEX VORTAC on AEX R-085 and MCB R-266 to MCB VORTAC, then on MCB R-095 and CEW R-277 to CEW VORTAC.

MC COMB TRANSITION (AEX3.MCB): From over AEX VORTAC on AEX R-085 and MCB R-266 to MCB VORTAC.
**NOTE:** RADAR required.
**NOTE:** DME/DME/IRU or GPS required.
**NOTE:** RNAV 1.

**TAKEOFF MINIMUMS.**
Rwys 17, 35: Standard with minimum climb of 500’ per NM to 540.

**DEPARTURE ROUTE DESCRIPTION**

**TAKEOFF RUNWAY 17:** Climb on heading 175° to 540 for RADAR vectors to DREMR, thence . . . .
**TAKEOFF RUNWAY 35:** Climb on heading 355° to 540 for RADAR vectors to DREMR, thence . . . .

. . . . on track 345° to LITLD, then on track 346° to BLTWY, then on (transition). Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure.

**CRIED TRANSITION (BLTWY7.CRIED)**
NOTE: Chart not to scale.
DEPARTURE ROUTE DESCRIPTION

TAKEOFF RWY 17: Climb on heading 175° to 540, for RADAR vectors to BORRN, thence. . . .
TAKEOFF RWY 35: Climb on heading 355° to 540, for RADAR vectors to BORRN, thence. . . .

. . .on track 267° to DILRE, then on (transition). Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure.

CRGER TRANSITION (BORRN4.CRGER)
JUNCTION TRANSITION (BORRN4.JCT)
MNURE TRANSITION (BORRN4.MNURE)
SAN ANTONIO TRANSITION (BORRN4.SAT)
WAILN TRANSITION (BORRN4.WAILN)
NOTE: RADAR required.

TAKEOFF MINIMUMS
Rwys 17, 35: Standard.

TAKEOFF ALL RUNWAYS: When entering controlled airspace, climb on assigned heading for RADAR vectors to LITLD INT. Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure, thence . . . .

. . . . on IAH R-344 to STELL INT, then on IAH R-344 to CRIED INT, then left turn on CQY R-144 to CQY VORTAC.
NOTE: Chart not to scale.

**DEPARTURE ROUTE DESCRIPTION**

**TAKEOFF ALL RUNWAYS:** When entering controlled airspace, climb on assigned heading for RADAR vectors to RAECN INT. Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure, thence. . . .

. . . . on IAH R-028 and the ELD R-208 to ELD VOR/DME, cross VELCO INT at or above 10000.
NOTE: RADAR required.  
NOTE: For aircraft destined for the DFW terminal area only.

TAKEOFF MINIMUMS
Rwys 17, 35: Standard.

DEPARTURE ROUTE DESCRIPTION

TAKEOFF ALL RUNWAYS: When entering controlled airspace, climb on assigned heading for RADAR vectors to MONNT INT. Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure, thence...

... on IAH R-358 to cross GIFFA INT at or above 10000.

NOTE: Chart not to scale.
ASOS
119.925
CLNC DEL
125.2
CTAF
123.0
HOUSTON DEP CON
134.45 284.0

NOTE: RNAV 1.
NOTE: RADAR required.
NOTE: ATC assigned only.
NOTE: DME/DME/IRU or GPS required.
NOTE: For non-GPS equipped aircraft, LCH, LLA, TBD, and LEV DME’s must be operational.

NOTE: Chart not to scale.

DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAY 17: Climb on heading 175° to 540, for RADAR vectors to VUH VOR/DME, thence . . .
TAKEOFF RUNWAY 35: Climb on heading 355° to 540, for RADAR vectors to VUH VOR/DME, thence . . .

. . . on track 118° to HOODO, then on (transition). Maintain ATC assigned altitude.
Expect filed altitude 10 minutes after departure.

BOWFN TRANSITION (HOODO7.BOWFN)
CFOOD TRANSITION (HOODO7.CFOOD)
HARVEY TRANSITION (HOODO7.HRV)
LEEVILLE TRANSITION (HOODO7.LEV)
SBIRD TRANSITION (HOODO7.SBIRD)
INDIE EIGHT DEPARTURE (RNAV)

TAKEOFF MINIMUMS
Rwys 17, 35: Standard with minimum climb of 500' per NM to 540.

TAKEOFF RUNWAY 17: Climb on heading 175° to 540 for RADAR vectors to RENNK, thence . . . .
TAKEOFF RUNWAY 35: Climb on heading 355° to 540 for RADAR vectors to RENNK, thence . . . .

. . . . on track 016° to COLET, then on track 025° to SUSHI, then on track 026° to WWELL, then on track 026° to INDIE, then on (transition).
Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure.

TPAKK TRANSITION (INDIE8.TPAKK)

NOTE: Chart not to scale.

INDIE EIGHT DEPARTURE (RNAV)

(INDIE8.INDIE) 07OCT21

NOTE: RADAR required.
NOTE: DME/DME/IRU or GPS required.
NOTE: RNAV 1.
NOTE: TPAKK TRANSITION: For non GPS equipped aircraft TNV DME must be operational.
NOTE: RADAR required.
NOTE: JUNCTION TRANSITION: For aircraft overflying JCT VORTAC on J2, J15 or J86.
NOTE: CENTEX TRANSITION: ATC assigned only for aircraft inbound to the DFW Metroplex area that are being rerouted due to bad weather.
NOTE: CORPUS CHRISTI TRANSITION: ATC assigned only.
NOTE: LAREDO TRANSITION: ATC assigned only.

TOP ALTITUDE: ASSIGNED BY ATC

ASOS
119.925
125.2
CTAF
123.0
HOUSTON DEP CON
134.45 284.0

NOTE: Chart not to scale.
DEPARTURE ROUTE DESCRIPTION

TAKEOFF ALL RUNWAYS: When entering controlled airspace, climb on assigned heading for RADAR vectors to SHYNR INT. Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure, thence . . . .

. . . . on IDU R-085 to BOCCK INT, then on IDU R-085 to IDU VORTAC.

CENTEX TRANSITION (IDU1.CWK): From over IDU VORTAC on IDU R-289 and CWK R-110 to CWK VORTAC.

CORPUS CHRISTI TRANSITION (IDU1.CRP): From over IDU VORTAC on IDU R-259 to MARCS INT, then on SAT R-056 to SAT VORTAC, then on SAT R-145 and CRP R-324 to CRP VORTAC.

JUNCTION TRANSITION (IDU1.JCT): From over IDU VORTAC on IDU R-276 and JCT R-094 to JCT VORTAC.

LAREDO TRANSITION (IDU1.LRD): From over IDU VORTAC on IDU R-259 to MARCS INT, then on SAT R-056 to SAT VORTAC, then on SAT R-194 and LRD R-012 to LRD VORTAC.
ASOS
119.925
CTAF
123.0
CINC DEL
125.2
HOUSTON DEP CON
134.45 284.0

KARRR SIX DEPARTURE (RNAV)

NOTE: Chart not to scale.

RNAV 1.

NOTE: DME/DME/IRU or GPS required.
NOTE: RADAR required.
NOTE: RNAV 1.

TOP ALTITUDE: ASSIGNED BY ATC

T K A R R R

1.9° 4200 7 (7)

218° 4200 (7)

K A V C Y

246° 7800 (18)

S K U B A

12000 (37)

222° 12000 (64)

P A L A C I O S

22° 12000 (115)

Y O M O M

22° 12000 (17)

P S X

247°

*1500

CORPUS CHRISTI CRP

*247°

12000

12000

12000

12000

(115)

(17)

2600

2500

2600

2600

(64)

(37)

TRUAX NGP

WWREN

7800

*1500

4200

2100

17°

17°

540

355°

SKUBA

12°

12°

7800

*1500

4200

2100

17°

17°

540

355°

KARRR

KAVCY

RIIGG

AL-6453 (FAA)

TEXAS GULF COAST RGNL (LBX)

ANGLETON/LAKE JACKSON, TEXAS

AL-6453 (FAA)

TEXAS GULF COAST RGNL (LBX)

ANGLETON/LAKE JACKSON, TEXAS

SC-5, 07 OCT 2021 to 02 DEC 2021

TAKEOFF MINIMUMS
Rwys 17, 35:
Standard with minimum climb of 500’ per NM to 540.

NOTE: Chart not to scale.

(NARRATIVE ON FOLLOWING PAGE)
DEPARTURE ROUTE DESCRIPTION

TAKEOFF RWY 17: Climb on heading 175° to 540, for RADAR vectors to KARRR, thence. . . .
TAKEOFF RWY 35: Climb on heading 355° to 540, for RADAR vectors to KARRR, thence. . . .

. . . . on track 218° to KAVCY, then on (transition). Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure.

CORPUS CHRISTI TRANSITION (KARRR6.CRP)
PALACIOS TRANSITION (KARRR6.PSX)
TRUAX TRANSITION (KARRR6.NGP)
WWREN TRANSITION (KARRR6.WWREN)
YOMOM TRANSITION (KARRR6.YOMOM)
(LOA4.LOA) 21280
LEONA FOUR DEPARTURE
AL-6453 (FAA)
ANGLETON/LAKE JACKSON, TEXAS

TOP ALTITUDE: ASSIGNED BY ATC

ARDMORE
116.7 ADM
Chan 114
N34°12.69' - W97°10.10'
L-17, H-6

TULSA
114.4 TUL
Chan 91
N36°11.78' - W95°47.29'

DOLEY
N32°11.35' - W96°23.08'

RANGER
115.7 FUZ
Chan 104
N32°53.37' - W97°10.77'
L-17, H-6

WACO
115.3 ACT
Chan 100
N31°39.74' - W97°16.14'

CEDAR CREEK
114.8 CQY
Chan 98
N32°11.14' - W96°13.09'

LEONA
110.8 LOA
Chan 45
N31°07.44' - W95°58.08'

BONHAM
114.6 BYP
Chan 93
N33°32.25' - W96°14.05'
L-17, H-6

FL180
R-130
R-156

FL180
R-172

R-330
N32°11.35'

FL180
R-163

R-147
R-200

FL180
R-156

WLLIS
N30°32.08' - W95°39.10'

HUMBLE
116.6 IAH
Chan 113

LEONA FOUR DEPARTURE
(LOA4.LOA) 07OCT21

TAKEOFF MINIMUMS
Rwys 17, 35: Standard.

NOTE: RADAR required.
NOTE: Except for aircraft destined ACT or the DFW terminal area, all aircraft filing the LEONA SID must file one of the published transitions via FUZ (LOA4.FUZ), ADM (LOA4.ADM), or BYP (LOA4.BYP).
NOTE: RANGER TRANSITION: For aircraft overflying west/northwest of the DFW terminal area FL240 and above.
NOTE: ARDMORE TRANSITION: For aircraft overflying north/northwest of the DFW terminal area FL240 and above.
NOTE: BONHAM TRANSITION: For aircraft overflying/landing TUL VORTAC FL240 and above.

NOTE: Chart not to scale.

(NARRATIVE ON FOLLOWING PAGE)
TAKEOFF ALL RUNWAYS: When entering controlled airspace, climb on assigned heading for RADAR vectors to WLLIS INT. Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure, thence . . . .

. . . . on LOA R-147 to LOA VORTAC.

ARDMORE TRANSITION (LOA4.ADMIN): From over LOA VORTAC on LOA R-334 to DOLEY INT, then on ADM R-156 to ADM VORTAC.

BONHAM TRANSITION (LOA4.BYP): From over LOA VORTAC on LOA R-341 and CQY R-163 to CQY VORTAC, then on BYP R-173 to BYP VORTAC.

RANGER TRANSITION (LOA4.FUZ): From over LOA VORTAC on LOA R-334 to DOLEY INT, then on FUZ R-130 to FUZ VORTAC.
NOTE: RADAR and DME required.
NOTE: For aircraft destined LIT or overflying LIT or PXV.

LUFKIN
112.1 LFK
Chan 58
N31°09.75'
W94°43.01'

SKKIP
N31°14.91'
W95°39.45'

LA-6453 (FAA)
TEXAS GULF COAST RGNL (LBX)
ANGleton/LAke JACkSON, TEXAS

TOP ALTITUDE:
ASSIGNED BY ATC

LITTLE ROCK
113.9 LIT
Chan 86
N34°40.66'
W92°10.83'

LIT
113.9 IAH
Chan 113

DAISETTA
116.9 DAS
Chan 116

NOTE: Chart not to scale.

(TOPICAL ON FOLLOWING PAGE)
DEPARTURE ROUTE DESCRIPTION

TAKEOFF ALL RUNWAYS: When entering controlled airspace, climb on assigned heading for RADAR vectors to KYANN INT. Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure, thence.

...on IAH R-013 to COLET INT, then right turn on LFK R-203 to LFK VORTAC.

LITTLE ROCK TRANSITION (LFK3.LIT): From over LFK VORTAC on LFK R-026 to SKKIP INT, then on LFK R-026 and LIT R-207 to LIT VORTAC.
LURIC EIGHT DEPARTURE (RNAV)

NOTE: Chart not to scale.

NOTE: RADAR required.
NOTE: DME/DME/IRU or GPS required.
NOTE: RNAV 1.

NOTE: Chart not to scale.

LURIC EIGHT DEPARTURE (RNAV)

(LURIC8.LURIC) 07 OCT 21

ANGleton/LAKE JACKSON, TEXAS

TEXAS GULF COAST RGNL (LBX)

ASOS
119.925
CLNC DEL
125.2
CTAF
123.0
HOUSTON DEP CON
134.45 284.0

NOTE: Chart not to scale.

NOTE: RADAR required.
NOTE: DME/DME/IRU or GPS required.
NOTE: RNAV 1.

NOTE: Chart not to scale.

DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAY 17: Climb on heading 175° to 540 for RADAR vectors to KNTKY, thence . . . .

TAKEOFF RUNWAY 35: Climb on heading 355° to 540 for RADAR vectors to KNTKY, thence . . . .

. . . . on track 032° to PEETY, then on track 032° to DARTR, then on track 031° to MUSIQ, then on track 031° to CLAVN, then on track 031° to VELCO, then on track 031° to ENJOY, then on track 031° to LURIC, then on (transition). Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure.

HAWES TRANSITION (LURIC8.HAWES)

ORRTH TRANSITION (LURIC8.ORRTH)

NOTE: Chart not to scale.
**TAKEOFF MINIMUMS**

Rwy 17, 35: Standard with minimum climb of 500’ per NM to 540.

**TOP ALTITUDE: ASSIGNED BY ATC**

**DEPARTURE ROUTE DESCRIPTION**

**TAKEOFF RWY 17:** Climb on heading 175° to 540 for RADAR vectors to MMALT, thence . . .

**TAKEOFF RWY 35:** Climb on heading 355° to 540 for RADAR vectors to MMALT, thence . . .

. . . .on track 086° to MOOKI, then on (transition). Maintain ATC assigned altitude.

Expect filed altitude 10 minutes after departure.

**GUSTI TRANSITION (MMALT5.GUSTI)**

**LAKE CHARLES TRANSITION (MMALT5.LCH)**

**WHITE LAKE TRANSITION (MMALT5.LLA)**

**NOTE:** Chart not to scale.
NOTE: RADAR required.
NOTE: Chart not to scale.

(NARRATIVE ON FOLLOWING PAGE)
DEPARTURE ROUTE DESCRIPTION

TAKEOFF ALL RUNWAYS: When entering controlled airspace, climb on assigned heading for RADAR vectors to SKUBA INT. Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure, thence . . . . on PSX R-038 to PSX VORTAC.

FORT STOCKTON TRANSITION (PSX2.FST): From over PSX VORTAC on PSX R-253 and THX R-073 to THX VORTAC, then on THX R-259 and COT R-078 to COT VORTAC, then on COT R-318 and RSG R-136 to RSG VORTAC, then on RSG R-283 and FST R-100 to FST VORTAC.

SAN ANTONIO TRANSITION (PSX2.SAT): From over PSX VORTAC on PSX R-253 and THX R-073 to THX VORTAC, then on SAT R-158 to SAT VORTAC.
STRYA EIGHT DEPARTURE (RNAV)

TOP ALTITUDE: ASSIGNED BY ATC

TAKEOFF MINIMUMS
Rwys 17, 35: Standard with minimum climb of 500' per NM to 540.

NOTE: RADAR required.
NOTE: DME/DME/IRU or GPS required.
NOTE: RNAV 1.

DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAY 17: Climb on heading 175° to 540 for RADAR vectors to KNTKY, thence.
TAKEOFF RUNWAY 35: Climb on heading 355° to 540 for RADAR vectors to KNTKY, thence.

... on track 032° to PEETY, then on track 032° to DARTR, then on track 031° to MUSIQ, then on track 031° to CLAVN, then on track 060° to STRYA, then on (transition). Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure.

DPATY TRANSITION (STRYA8.DPATY)
JBULL TRANSITION (STRYA8.JBULL)
NOTE: Chart not to scale.

DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAY 17: Climb on heading 175° to 540 for RADAR vectors to BBYSE, thence...  
TAKEOFF RUNWAY 35: Climb on heading 355° to 540 for RADAR vectors to BBYSE, thence...  
......on track 331° to SPICR, then on track 331° to WLLIS, then on track 332° to STYCK, then on (transition). Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure.

DOLEY TRANSITION (STYCK8.DOLEY)  
WTSON TRANSITION (STYCK8.WTSON)
WATFO FIVE DEPARTURE (RNAV)

DEPARTURE ROUTE DESCRIPTION

TAKEOFF RWY 17: Climb on heading 175° to 540, for RADAR vectors to WATFO, thence. . . .
TAKEOFF RWY 35: Climb on heading 355° to 540, for RADAR vectors to WATFO, thence. . . .

. . . on track 141° to VUH VOR/DME, then on (transition). Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure.

ANKRR TRANSITION (WATFO5.ANKRR)
KELPP TRANSITION (WATFO5.KELPP)
MUSYL TRANSITION (WATFO5.MUSYL)
NOTE: Chart not to scale.

DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAY 17: Climb on heading 175° to 540 for RADAR vectors to WYLSON, thence . . .

TAKEOFF RUNWAY 35: Climb on heading 355° to 540 for RADAR vectors to WYLSON, thence . . .

. . .on track 360° to MONNT, then on (transition). Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure.

GIFFA TRANSITION (WYLSON8.GIFFA)
MAJKKK TRANSITION (WYLSON8.MAJKKK)

NOTE: Radar required.
NOTE: DME/DME/IRU or GPS required.
NOTE: RNAV 1.

NOTE: Chart not to scale.
RNAV (GPS) RWY 13
BAY CITY RGNL (BYY)

For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -15°C (5°F) or above 54°C (130°F).
Rwy 13, 31 helicopter visibility reduction below 1 SM NA. RADAR required. DME/DME RNP-0.3 NA.
When local altimeter setting not received, use Palacios altimeter setting and increase all DA 63 feet and
all MDA 80 feet; increase LNAV visibility Cat C 1/4 mile. VDP and Baro-VNAV N/A when using Palacios
altimeter setting.

MISSED APPROACH:
Climb to 2000 direct LEMUR and hold.

AWOS: 3
118.075

HOUSTON CENTER
128.6 360.8

UNICOM
122.8 (CTAF)

NoPT for arrival at COSDI on V13 southwest bound.

Procedure NA for arrival on PSX VORTAC
airway radials 009 CW 060.

VGSI and RNAV glideslope not coincident
(VGSI Angle 3.00/TCH 40).

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<td>C CIRCLING</td>
<td>500-1</td>
<td>455 (500-1)</td>
<td>620-1½</td>
<td>575 (600-1½)</td>
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BAY CITY, TEXAS
Orig-B 22JUN17

28°58’N-95°52’W
For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -15°C (5°F) or above 54°C (130°F). Rwy 13, 31 helicopter visibility reduction below 1 SM NA. DME/DME RNP-0.3 NA. When local altimeter setting not received, use Palacios altimeter setting and increase all DA 63 feet and all MDA 80 feet; increase LNAV visibility Cat C ¼ mile. VDP and Baro-VNAV N/A when using Palacios altimeter setting.

Procedure NA for arrival on PSX VORTAC airway radials 009 CW 060.

SC-5, 07 OCT 2021 to 02 DEC 2021
VOR-A
BAY CITY RGNL (BYY)

AWOS-3
118.075

HOUSTON CENTER
128.6 360.8

UNICOM
122.8 (CTAF)

Rwy 13, 31 helicopter visibility reduction below 1 SM. NA. DME required. When local altimeter setting not received, use Palacios altimeter setting and increase all MDA 80 feet.

MISSED APPROACH: Climb to 1100 then climbing right turn to 2600 on PSX VORTAC R-054 to MARVY/17 DME and hold.

PSX   26.3
OXUSY
PSX 26.3

PSX   23
FEMEL
PSX 23

PSX   17
MARVY
PSX 17

PSX  1600
R-054
Rwy Idg
Apt Elev
N/A
N/A

Amdt 4D 17AUG17

28°58'N-95°52'W
NOTE: RADAR required.
NOTE: DME/DME/IRU or GPS required.
NOTE: RNAV 1.

TAKEOFF MINIMUMS
Rwys 13, 31: Standard with minimum climb of 500’ per NM to 560.

DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAY 13: Climb on heading 131° or as assigned by ATC for RADAR vectors to DREMR, thence . . . .
TAKEOFF RUNWAY 31: Climb on heading 311° or as assigned by ATC for RADAR vectors to DREMR, thence . . . .

...on track 345° to LITLD, then on track 346° to BLTWY, then on (transition). Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure.

CRIED TRANSITION (BLTWY7.CRIED)

NOTE: Chart not to scale.
INDIE EIGHT DEPARTURE (RNAV)

**TAKEOFF MINIMUMS**

Rwy 13, 31: Standard with minimum climb of 500' per NM to 560.

**DEPARTURE ROUTE DESCRIPTION**

TAKEOFF RUNWAY 13: Climb on heading 131° to 560 for RADAR vectors to RENNK, thence . . . .

TAKEOFF RUNWAY 31: Climb on heading 311° to 560 for RADAR vectors to RENNK, thence . . . .

. . . . on track 016° to COLET, then on track 025° to SUSHI, then on track 026° to WWELL, then on track 026° to INDIE, then on (transition). Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure.

TPAKK TRANSITION (INDIE8.TPAKK)

**NOTE:** Chart not to scale.

AWOS-3
118.075
CTAF
122.8
HOUSTON DEP CON
128.6 360.8

NOTE: RADAR required.
NOTE: DME/DME/IRU or GPS required.
NOTE: RNAV 1.
NOTE: TPAKK TRANSITION: For non GPS equipped aircraft TNV DME must be operational.
NOTE: Chart not to scale.

DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAY 13: Climb on heading 131° to 560 for RADAR vectors to KNTKY, thence . . . .
TAKEOFF RUNWAY 31: Climb on heading 311° to 560 for RADAR vectors to KNTKY, thence . . . .

. . . . on track 032° to PEETY, then on track 032° to DARTR, then on track 031° to MUSIQ, then on track 031° to CLAVN, then on track 031° to VELCO, then on track 031° to ENJOY, then on track 031° to LURIC, then on (transition). Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure.

HAWES TRANSITION (LURIC8.HAWES)
ORRTH TRANSITION (LURIC8.ORRTH)
**DEPARTURE ROUTE DESCRIPTION**

**TAKEOFF RWY 13:** Climb on heading 131° to 560 for RADAR vectors to MMALT, thence.

**TAKEOFF RWY 31:** Climb on heading 311° to 560 for RADAR vectors to MMALT, thence.

...on track 086° to MOOKI, then on (transition). Maintain ATC assigned altitude.

Expect filed altitude 10 minutes after departure.

**GUSTI TRANSITION (MMALT5.GUSTI)**

**LAKE CHARLES TRANSITION (MMALT5.LCH)**

**WHITE LAKE TRANSITION (MMALT5.LLA)**

**NOTE:** Chart not to scale.

**NOTE:** DME/DME/IRU or GPS required.

**NOTE:** RADAR required.

**NOTE:** RNAV 1.

**NOTE:** GUSTI and LCH TRANSITIONS ATC assigned only for aircraft departing AXH, EFD, GLS, HPY, IWS, LBX, LVJ, SGR, TME, T00, T41 and 54T.

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**TOP ALTITUDE: ASSIGNED BY ATC**

**TAKEOFF MINIMUMS**

Rwy 13, 31: Standard with minimum climb of 500’ per NM to 560.
NOTE: Chart not to scale.

NOTE: RADAR required.
NOTE: DME/DME/IRU or GPS required.
NOTE: RNAV 1.

**DEPARTURE ROUTE DESCRIPTION**

**TAKEOFF RUNWAY 13:** Climb on heading 131° to 560 for RADAR vectors to KNTKY, thence . . .

**TAKEOFF RUNWAY 31:** Climb on heading 311° to 560 for RADAR vectors to KNTKY, thence . . .

. . . . on track 032° to PEETY, then on track 032° to DARTR, then on track 031° to MUSIQ, then on track 031° to CLAVN, then on track 060° to STRYA, then on (transition). Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure.

**DPATY TRANSITION (STRYA8.DPATY)**

**Jbull TRANSITION (STRYA8.JBULL)**
**DEPARTURE ROUTE DESCRIPTION**

**TAKEOFF RUNWAY 13**: Climb on heading 131° to 560 for RADAR vectors to BBYSE, thence...

**TAKEOFF RUNWAY 31**: Climb on heading 311° to 560 for RADAR vectors to BBYSE, thence...

...on track 331° to SPICR, then on track 331° to WLLIS, then on track 332° to STYCK, then on (transition). Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure.

**DOLEY TRANSITION (STYCK8.DOLEY)**

**WTSON TRANSITION (STYCK8.WTSON)**
DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAY 13: Climb on heading 131° to 560 for RADAR vectors to WYLSN, thence. . . .

TAKEOFF RUNWAY 31: Climb on heading 311° to 560 for RADAR vectors to WYLSN, thence. . . .

. . . on track 360° to MONNT, then on (transition). Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure.

GIFFA TRANSITION (WYLSN8.GIFFA)
MAJKK TRANSITION (WYLSN8.MAJKK)
Radar Required

Apt Elev
TDZE
Apt Elev

HOUSTON APP CON
134.45  281.4

TCH 40
3.04°
5 NM

REIL Rwys 14 and 32
MIRL Rwy 14-32

LNAV MDA
500-1
466 (500-1)

CIRCLING
500-1
466 (500-1)
560-1
526 (600-1)

UNICOM
122.8 (CTAF)

MISSED APPROACH: Climb to 2000 direct to POMDE and hold.

Circling NA at night. Rwy 14 helicopter visibility reduction below 1 SM NA. Obtain local altimeter setting on CTAF; when not received, use William P Hobby altimeter setting and increase all MDA 60 feet.

APP CRS
140°
Rwy Idg
3320
TDZE
34
Apt Elev
34

Category
A
B
C
D

RNAV (GPS) RWY 14
BAYTOWN (HPY)

Baytown, Texas
Orig-A 17Jun21

29°47' N-94°57' W
SC-5, 07 OCT 2021 to 02 DEC 2021

**MISSED APPROACH:**
Climbing right turn to 2000 direct to POMDE and hold.

**UNICOM:** 122.8 (CTAF)

**RADAR REQUIRED**

**Circling NA at night. Rwy 14 helicopter visibility reduction below 1 SM NA. Obtain local altimeter setting on CTAF; when not received, use William P Hobby altimeter setting and increase all MDA 60 feet.**
NOTE: RADAR required.
NOTE: DME/DME/IRU or GPS required.
NOTE: RNAV 1.

TAKEOFF MINIMUMS
Rwy 14, 32: Standard with minimum climb of 500' per NM to 540.

TAKEOFF RUNWAY 14: Climb on heading 140° to 540 for RADAR vectors to DREM, thence . . . .
TAKEOFF RUNWAY 32: Climb on heading 320° to 540 for RADAR vectors to DREM, thence . . . .

...on track 345° to LITLD, then on track 346° to BLTWY, then on (transition). Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure.

CRIED TRANSITION (BLTWY7.CRIED)
BORRN FOUR DEPARTURE (RNAV)

CTAF
BORRN
122.8
HOUSTON DEP CON
134.45 284.0

TAKEOFF MINIMUMS:
Rwy 14, 32: Standard with minimum climb of 500’ per NM to 540.

NOTE: Chart not to scale.

NOTE: DME/DME/IRU or GPS required.
NOTE: RADAR required.
NOTE: RNAV 1.
NOTE: CRGER TRANSITION ATC assigned only for aircraft departing 54T, AXH, EFD, GLS, HPY, IWS, LBX, LVJ, SGR, TME, T00, T41.

(NARRATIVE ON FOLLOWING PAGE)

SC-5, 07 OCT 2021 to 02 DEC 2021
BORRN FOUR DEPARTURE (RNAV)

DEPARTURE ROUTE DESCRIPTION

TAKEOFF RWY 14: Climb on heading 140° to 540, for RADAR vectors to BORRN, thence. . . .
TAKEOFF RWY 32: Climb on heading 320° to 540, for RADAR vectors to BORRN, thence. . . .

. . . . on track 267° to DILRE, then on (transition). Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure.

CRGER TRANSITION (BORRN4.CRGER)
JUNCTION TRANSITION (BORRN4.JCT)
MNURE TRANSITION (BORRN4.MNURE)
SAN ANTONIO TRANSITION (BORRN4.SAT)
WAILN TRANSITION (BORRN4.WAILN)
NOTE: RNAV 1.
NOTE: RADAR required.
NOTE: ATC assigned only.
NOTE: DME/DME/IRU or GPS required.
NOTE: For non-GPS equipped aircraft, LCH, LLA, TBD, and LEV DME's must be operational.

**TOP ALTITUDE: ASSIGNED BY ATC**

**TAKEROFF MINIMUMS**
Rws 14, 32: Standard with minimum climb of 500’ per NM to 540.

**DEPARTURE ROUTE DESCRIPTION**

**TAKEOFF RUNWAY 14:** Climb on heading 140° to 540, for RADAR vectors to VUH VOR/DME, thence . . .

**TAKEOFF RUNWAY 32:** Climb on heading 320° to 540, for RADAR vectors to VUH VOR/DME, thence . . .

. . . . on track 118° to HOODO, then on (transition). Maintain ATC assigned altitude.
Expect filed altitude 10 minutes after departure.

**BOWFN TRANSITION (HOODO7.BOWFN)**
**CFOOD TRANSITION (HOODO7.CFOOD)**
**HARVEY TRANSITION (HOODO7.HRV)**
**LEEVILLE TRANSITION (HOODO7.LEV)**
**SBIRD TRANSITION (HOODO7.SBIRD)**
DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAY 14: Climb on heading 140° to 540 for RADAR vectors to RENNK, thence . . . .

TAKEOFF RUNWAY 32: Climb on heading 320° to 540 for RADAR vectors to RENNK, thence . . . .

. . . . on track 016° to COLET, then on track 025° to SUSHI, then on track 026° to WWELL, then on track 026° to INDIE, then on (transition). Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure.

TPAKK TRANSITION (INDIE8.TPAKK)

TAKEOFF MINIMUMS

Rwys 14, 32: Standard with minimum climb of 500’ per NM to 540.
NOTE: Chart not to scale.

Takeoff Minimums:
Rwys 14, 32:
Standard with minimum climb of 500' per NM to 540.

NOTE: DME/DME/IRU or GPS required.
NOTE: RADAR required.
NOTE: RNAV 1.
TAKEOFF RWY 14: Climb on heading 140° to 540, for RADAR vectors to KARRR, thence . . .
TAKEOFF RWY 32: Climb on heading 320° to 540, for RADAR vectors to KARRR, thence . . .

. . . .on track 218° to KAVCY, then on (transition). Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure.

CORPUS CHRISTI TRANSITION (KARRR6.CRP)
PALACIOS TRANSITION (KARRR6.PSX)
TRUAX TRANSITION (KARRR6.NGP)
WWREN TRANSITION (KARRR6.WWREN)
YOMOM TRANSITION (KARRR6.YOMOM)
LURIC EIGHT DEPARTURE (RNAV)

CTAF
122.8
HOUSTON DEP CON
134.45 284.0

NOTE: RADAR required.
NOTE: DME/DME/IRU or GPS required.
NOTE: RNAV 1.

DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAY 14: Climb on heading 140°
to 540 for RADAR vectors to KNTKY, thence . . . .

TAKEOFF RUNWAY 32: Climb on heading 320°
to 540 for RADAR vectors to KNTKY, thence . . . .

. . . . on track 032° to PEETY, then on track 032° to
DARTR, then on track 031° to MUSIQ, then on track
031° to CLAVN, then on track 031° to VELCO, then
on track 031° to ENJOY, then on track 031° to LURIC,
then on (transition). Maintain ATC assigned altitude.
Expect filed altitude 10 minutes after departure.

HAWES TRANSITION (LURIC8.HAWES)
ORRTH TRANSITION (LURIC8.ORRTH)
CTAF
122.8
HOUSTON DEP CON
134.45 284.0

**TAKEOFF MINIMUMS**
Rwy 14, 32: Standard with minimum climb of 500' per NM to 540.

**TOP ALTITUDE:**
ASSIGNED BY ATC

**NOTE:**
DME/DME/IRU or GPS required.
RADAR required.
RNAV 1.
GUSTI and LCH TRANSITIONS ATC assigned only for aircraft departing AXH, EFD, GLS, HPY, IWS, LBX, LVJ, SGR, TME, T00, T41 and 54T.

**DEPARTURE ROUTE DESCRIPTION**

**TAKEOFF RWY 14:** Climb on heading 140° to 540 for RADAR vectors to MMALT, thence . . .

**TAKEOFF RWY 32:** Climb on heading 320° to 540 for RADAR vectors to MMALT, thence . . .

. . . on track 086° to MOOKI, then on (transition). Maintain ATC assigned altitude.
Expect filed altitude 10 minutes after departure.

**GUSTI TRANSITION (MMALT5.GUSTI)**
**LAKE CHARLES TRANSITION (MMALT5.LCH)**
**WHITE LAKE TRANSITION (MMALT5.LLA)**

**NOTE:** Chart not to scale.
TAKEOFF MINIMUMS
Rwy 14: 300-1 or standard with a minimum climb of 420' per NM to 300.
Rwy 32: Standard.
DEPARTURE ROUTE DESCRIPTION

TAKEOFF ALL RUNWAYS: When entering controlled airspace, climb on assigned heading for RADAR vectors to SKUBA INT. Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure, thence . . . .

. . . . on PSX R-038 to PSX VORTAC.

FORT STOCKTON TRANSITION (PSX2.FST): From over PSX VORTAC on PSX R-253 and THX R-073 to THX VORTAC, then on THX R-259 and COT R-078 to COT VORTAC, then on COT R-318 and RSG R-136 to RSG VORTAC, then on RSG R-283 and FST R-100 to FST VORTAC.

SAN ANTONIO TRANSITION (PSX2.SAT): From over PSX VORTAC on PSX R-253 and THX R-073 to THX VORTAC, then on SAT R-158 to SAT VORTAC.
**NOTE:** Chart not to scale.

**NOTE:** RNAV 1.

**NOTE:** DME/DME/IRU or GPS required.

**NOTE:** RADAR required.

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**NOTE:** Chart not to scale.

**NOTE:** RNAV 1.

**NOTE:** DME/DME/IRU or GPS required.

**NOTE:** RADAR required.

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**DEPARTURE ROUTE DESCRIPTION**

**TAKEOFF RUNWAY 14:** Climb on heading 140° to 540 for RADAR vectors to KNTKY, thence . . .

**TAKEOFF RUNWAY 32:** Climb on heading 320° to 540 for RADAR vectors to KNTKY, thence . . .

. . . on track 032° to PEETY, then on track 032° to DARTR, then on track 031° to MUSIQ, then on track 031° to CLAVN, then on track 060° to STRYA, then on (transition). Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure.

**DPATY TRANSITION (STRYA8.DPATY)**

**JBULL TRANSITION (STRYA8.JBULL)**
TOP ALTITUDE: ASSIGNED BY ATC

NOTE: RADAR required.
NOTE: DME/DME/IRU or GPS required.
NOTE: RNAV 1.

TAKEOFF MINIMUMS
Rwys 14, 32: Standard with minimum climb of 500' per NM to 540.

NOTE: Chart not to scale.

DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAY 14: Climb on heading 140° to 540 for RADAR vectors to BBYSE, thence . . .
TAKEOFF RUNWAY 32: Climb on heading 320° to 540 for RADAR vectors to BBYSE, thence . . .
. . .on track 331° to SPICR, then on track 331° to WLLIS, then on track 332° to STYCK, then on (transition). Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure.

DOLEY TRANSITION (STYCK8.DOLEY)
WTSON TRANSITION (STYCK8.WTSON)
**DEPARTURE ROUTE DESCRIPTION**

**TAKEOFF RWY 14:** Climb on heading 138° to 540, for RADAR vectors to WATFO, thence. . . .

**TAKEOFF RWY 32:** Climb on heading 318° to 540, for RADAR vectors to WATFO, thence. . . .

. . . . on track 141° to VUH VOR/DME, then on (transition). Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure.

**ANKRR TRANSITION (WATFO5.ANKRR)**

**KELPP TRANSITION (WATFO5.KELPP)**

**MUSYL TRANSITION (WATFO5.MUSYL)**

**NOTE:** Chart not to scale.
**DEPARTURE ROUTE DESCRIPTION**

**TAKEOFF RUNWAY 14:** Climb on heading 140° to 540 for RADAR vectors to WYLSN, thence. . . .

**TAKEOFF RUNWAY 32:** Climb on heading 320° to 540 for RADAR vectors to WYLSN, thence. . . .

. . . .on track 360° to MONNT, then on (transition). Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure.

**GIFFA TRANSITION (WYLSN8.GIFFA)**

**MAJKK TRANSITION (WYLSN8.MAJKK)**

**NOTE:** Chart not to scale.
Circling NA to Rwys 14 and 32. Procedure NA at night. Use William P Hobby altimeter setting.

MISSED APPROACH: Climb to 500 then climbing right turn to 2200 direct TRIOS and hold.

Visual Segment - Obstacles.
NOTE: RADAR required.

NOTE: DME/DME/IRU or GPS required.

NOTE: RNAV 1.

DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAY 8: Climb on heading 084° to 540 for RADAR vectors to DREMR, thence . . . .
TAKEOFF RUNWAY 26: Climb on heading 264° to 540 for RADAR vectors to DREMR, thence . . . .

...on track 345° to LITLD, then on track 346° to BLTWY, then on (transition). Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure.

CRIED TRANSITION (BLTWY7.CRIED)
BORRN FOUR DEPARTURE (RNAV)

NOTE: DME/DME/IRU or GPS required.
NOTE: RADAR required.
NOTE: RNAV 1.
NOTE: CRGER TRANSITION ATC assigned only for aircraft departing 54T, AXH, EFD, GLS, HPY, IWS, LBX, LVJ, SGR, TME, T00, T41.

(NARRATIVE ON FOLLOWING PAGE)

NOTE: Chart not to scale.
DEPARTURE ROUTE DESCRIPTION

TAKEOFF RWY 8: Climb on heading 084° to 540, for RADAR vectors to BORRN, thence. . . .
TAKEOFF RWY 26: Climb on heading 264° to 540, for RADAR vectors to BORRN, thence. . . .

. . . on track 267° to DILRE, then on (transition). Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure.

CRGER TRANSITION (BORRN4.CRGER)
JUNCTION TRANSITION (BORRN4.JCT)
MNURE TRANSITION (BORRN4.MNURE)
SAN ANTONIO TRANSITION (BORRN4.SAT)
WAILN TRANSITION (BORRN4.WAILN)
NOTE: Chart not to scale.

DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAY 8: Climb on heading 084° to 540, for RADAR vectors to VUH VOR/DME, thence . . . .
TAKEOFF RUNWAY 26: Climb on heading 264° to 540, for RADAR vectors to VUH VOR/DME, thence . . . .

. . . . on track 118° to HOODO, then on (transition). Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure.

BOWFN TRANSITION (HOODO7.BOWFN)
CFOOD TRANSITION (HOODO7.CFOOD)
HARVEY TRANSITION (HOODO7.HRV)
LEEVILLE TRANSITION (HOODO7.LEV)
SBIRD TRANSITION (HOODO7.SBIRD)
INDIE EIGHT DEPARTURE (RNAV)

TAKEOFF MINIMUMS
Rwys 14, 32: NA Environmental.
Rwys 8, 26: Standard with minimum climb of 500’ per NM to 540.

NOTE: RADAR required.
NOTE: DME/DME/IRU or GPS required.
NOTE: RNAV 1.
NOTE: TPAKK TRANSITION: For non GPS equipped aircraft TNV DME must be operational.

DEPARTURE ROUTE DESCRIPTION
TAKEOFF RUNWAY 8: Climb on heading 084° to 540 for RADAR vectors to RENNK, thence . . . .
TAKEOFF RUNWAY 26: Climb on heading 264° to 540 for RADAR vectors to RENNK, thence . . . .
. . . . on track 016° to COLET, then on track 025° to SUSHI, then on track 026° to WWELL, then on track 026° to INDIE, then on (transition). Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure.

TPAKK TRANSITION (INDIE8.TPAKK)
NOTE: Chart not to scale.

NOTE: DME/DME/IRU or GPS required.
NOTE: RADAR required.
NOTE: RNAV 1.

TAKEOFF MINIMUMS
Rwys 14, 32: NA - Environmental.
Rwys 8, 26: Standard with minimum climb of 500' per NM to 540.

TOP ALTITUDE: ASSIGNED BY ATC

CTAF
122.7
HOUSTON DEP CON
134.45 284.0

NOTE: RNAV 1.
NOTE: RADAR required.
NOTE: DME/DME/IRU or GPS required.
NOTE: RNAV 1.

(NARRATIVE ON FOLLOWING PAGE)
DEPARTURE ROUTE DESCRIPTION

TAKEOFF RWY 8: Climb on heading 084° to 540, for RADAR vectors to KARRR, thence. . . .
TAKEOFF RWY 26: Climb on heading 264° to 540, for RADAR vectors to KARRR, thence. . . .

. . . .on track 218° to KAVCY, then on (transition). Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure.

CORPUS CHRISTI TRANSITION (KARRR6.CRP)
PALACIOS TRANSITION (KARRR6.PSX)
TRUAX TRANSITION (KARRR6.NGP)
WWREN TRANSITION (KARRR6.WWREN)
YOMOM TRANSITION (KARRR6.YOMOM)
**LURIC EIGHT DEPARTURE (RNAV)**

**NOTE:** Chart not to scale.

**DEPARTURE ROUTE DESCRIPTION**

**TAKEOFF RUNWAY 8:** Climb on heading 084° to 540 for RADAR vectors to KNTKY, thence . . . .

**TAKEOFF RUNWAY 26:** Climb on heading 264° to 540 for RADAR vectors to KNTKY, thence . . . .

. . . . on track 032° to PEETY, then on track 032° to DARTR, then on track 031° to MUSIQ, then on track 031° to CLAVN, then on track 031° to VELCO, then on track 031° to ENJOY, then on track 031° to LURIC, then on (transition). Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure.

**HAWES TRANSITION (LURIC8.HAWES)**

**ORRTH TRANSITION (LURIC8.ORRTH)**
CTAF  
122.7  
HOUSTON DEP CON  
134.45 284.0

**TOP ALTITUDE:**  
**ASSIGNED BY ATC**

**DEPARTURE ROUTE DESCRIPTION**

**TAKEOFF RWY 8:** Climb on heading 084° to 540 for RADAR vectors to MMALT, thence...  
**TAKEOFF RWY 26:** Climb on heading 264° to 540 for RADAR vectors to MMALT, thence...  
. . . on track 086° to MOOKI, then on (transition). Maintain ATC assigned altitude.  
Expect filed altitude 10 minutes after departure.

**GUSTI TRANSITION (MMALT5.GUSTI)**  
**LAKE CHARLES TRANSITION (MMALT5.LCH)**  
**WHITE LAKE TRANSITION (MMALT5.LLA)**

**NOTE:** Chart not to scale.

**NOTE:** DME/DME/IRU or GPS required.  
**NOTE:** RADAR required.  
**NOTE:** RNAV 1.  
**NOTE:** GUSTI and LCH TRANSITIONS ATC assigned only for aircraft departing AXH, EFD, GLS, HPY,  
IWS, LBX, LVJ, SGR, TME, T00,  
T41 and 54T.

**NOTE:** SC-5, 07 OCT 2021 to 02 DEC 2021
NOTE: RADAR required.
NOTE: Chart not to scale.

(NARRATIVE ON FOLLOWING PAGE)
DEPARTURE ROUTE DESCRIPTION

TAKEOFF ALL RUNWAYS: When entering controlled airspace, climb on assigned heading for RADAR vectors to SKUBA INT. Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure, thence.

. . . on PSX R-038 to PSX VORTAC.

FORT STOCKTON TRANSITION (PSX2.FST): From over PSX VORTAC on PSX R-253 and THX R-073 to THX VORTAC, then on THX R-259 and COT R-078 to COT VORTAC, then on COT R-318 and RSG R-136 to RSG VORTAC, then on RSG R-283 and FST R-100 to FST VORTAC.

SAN ANTONIO TRANSITION (PSX2.SAT): From over PSX VORTAC on PSX R-253 and THX R-073 to THX VORTAC, then on SAT R-158 to SAT VORTAC.
STRYA EIGHT DEPARTURE (RNAV)

TAKEOFF MINIMUMS
Rwys 8, 26: Standard with minimum climb of 500' per NM to 540.
Rwys 14, 32: NA - Environmental.

NOTE: Radar required.
NOTE: DME/DME/IRU or GPS required.
NOTE: RNAV 1.

DEPARTURE ROUTE DESCRIPTION
TAKEOFF RUNWAY 8: Climb on heading 084° to 540 for RADAR vectors to KNTKY, thence....
TAKEOFF RUNWAY 26: Climb on heading 264° to 540 for RADAR vectors to KNTKY, thence....

....on track 032° to PEETY, then on track 032° to DARTR, then on track 031° to MUSIQ, then on track 031° to CLAVN, then on track 060° to STRYA, then on (transition). Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure.

DPATY TRANSITION (STRYA8.DPATY)
JBULL TRANSITION (STRYA8.JBULL)
DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAY 8: Climb on heading 084° to 540 for RADAR vectors to BBYSE, thence. . .
TAKEOFF RUNWAY 26: Climb on heading 264° to 540 for RADAR vectors to BBYSE, thence. . .

. . . on track 331° to SPICR, then on track 331° to WLLIS, then on track 332° to STYCK, then on (transition). Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure.

DOLEY TRANSITION (STYCK8.DOLEY)
WTSON TRANSITION (STYCK8.WTSON)

NOTE: Chart not to scale.
WATFO FIVE DEPARTURE (RNAV)

DEPARTURE ROUTE DESCRIPTION

TAKEOFF RWY 8: Climb on heading 084° to 540, for RADAR vectors to WATFO, thence. . . .
TAKEOFF RWY 26: Climb on heading 264° to 540, for RADAR vectors to WATFO, thence. . . .

. . . on track 141° to VUH VOR/DME, then on (transition). Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure.

ANKRR TRANSITION (WATFO5.ANKRR)
KELPP TRANSITION (WATFO5.KELPP)
MUSYL TRANSITION (WATFO5.MUSYL)

NOTE: GPS required.
NOTE: RADAR required.
NOTE: RNAV 1.

NOTE: Chart not to scale.
NOTE: RADAR required.
NOTE: DME/DME/IRU or GPS required.
NOTE: RNAV 1.

TAKEOFF MINIMUMS
Rwy 8, 26: Standard with minimum climb of 500' per NM to 540.
Rwy 14, 32: NA - Environmental.

DEPARTURE ROUTE DESCRIPTION
TAKEOFF RUNWAY 8: Climb on heading 084° to 540 for RADAR vectors to WYLSN, thence.
TAKEOFF RUNWAY 26: Climb on heading 264° to 540 for RADAR vectors to WYLSN, thence.

... on track 360° to MONNT, then on (transition). Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure.

GIFFA TRANSITION (WYLSN8.GIFFA)
MAJKK TRANSITION (WYLSN8.MAJKK)
For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -15°C (5°F) or above 54°C (130°F). Circling Rwy 31 NA at night. Rwy 13 helicopter visibility reduction below 3/4 SM NA.

Procedure NA for arrival at DAS VOR/DME on V574 westbound.

Procedure NA for arrivals at SILBE on V569 southeast bound.

Procedure NA for uncompensated Baro-VNAV systems, LNAV/VNAV NA below -15°C (5°F) or above 54°C (130°F). Circling Rwy 31 NA at night. Rwy 13 helicopter visibility reduction below 3/4 SM NA.

For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -15°C (5°F) or above 54°C (130°F). Circling Rwy 31 NA at night. Rwy 13 helicopter visibility reduction below 3/4 SM NA.
RNAV (GPS) RWY 31
BEAUMONT MUNI (BMT)

### RNP APCH.

- **Rwy 31** helicopter visibility reduction below 1 SM NA.
- Straight-in Rwy 31 NA at night, Circling Rwy 31 NA at night.

### Misapproach
- Climb to 500 then climbing right turn to 2000 direct KIELL and hold.

### Weather
- **AWOS-3PT**
  - 118.425
- **HOUSTON APP CON**
  - 121.3 377.1
- **CLNC DEL**
  - 121.75
- **UNICOM**
  - 123.0 (CTAF)

### Chart Details

#### 30°04'N-94°13'W

#### BEAUMONT, TEXAS

```plaintext
RW31
308° to

HOUSTON APP CON
121.3 377.1

AWOS-3PT
118.425

CLNC DEL
121.75

UNICOM
123.0 (CTAF)
```

#### Navigation Points

- **BEAUMONT MUNI (BMT)**
- **KIELL**
- **CORNNS**
- **WURAL**

#### Rwy 31

- **MISSED APPROACH:** Climb to 500 then climbing right turn to 2000 direct KIELL and hold.

#### Diagram

- **KIELL**
- **CORNNS**
- **WURAL**

#### RNP APCH.

- **ELEV 32**
- **TDZE 32**
- **REIL Rwy 13**
- **MIRL Rwy 13-31**

#### Chart

- **Amdt 1 24MAY18**

---

**Based on the information provided, the chart details the RNAV (GPS) RWY 31 at BEAUMONT MUNI (BMT) with specific navigation points and procedures for approach and landing.**
### Use Beaumont-Port Arthur, TX (Jack Brooks Rgnl), altimeter setting. Circling NA Rwy 16-34. Visibility reduction by helicopters NA.

### MISSED APPROACH: Climbing left turn to 2300 via BPT R-316 to KIELL INT/DAS 22.2 DME.

<table>
<thead>
<tr>
<th>AWOS:3P/T</th>
<th>HOUSTON APP CON</th>
<th>CLNC DEL</th>
<th>UNICOM</th>
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<tr>
<td>118.425</td>
<td>121.3</td>
<td>377.1</td>
<td>123.0</td>
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### Category

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<th>B</th>
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<th>D</th>
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<tr>
<td>S-13</td>
<td>580-1</td>
<td>549 (600-1)</td>
<td>580-1½</td>
<td>549 (600-1½)</td>
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<tr>
<td>CIRCLING</td>
<td>580-1</td>
<td>548 (600-1)</td>
<td>580-1½</td>
<td>549 (600-1½)</td>
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</table>

### Chart Details
- **VOR/DME RWY 13 BEAUMONT MUNI (BMT)**
- **AMDT 3D  21MAY20**
- **SC-5, 07 OCT 2021 to 02 DEC 2021**
- **30°04’N-94°13’W**

### Diagram
- **REIL Rwy 13**
- **MIRL Rwy 13-31**
- ** Category A**
  - 2300 BPT
  - R-316

### Navigation Points
- **FITAP INT**
- **BPT 24.2**
- **BPT 15.5**
- **ARRCO BPT 17.8**

### beacon
- **VGSI and descent angles not coincident**
  - (VGSI Angle 3.00/TCH 40).

### Points
- **2000 NoP**
- **087° (13.1)**
- **2042 A**
- **2049 A**
- **2040 A**
- **119° 4.7 NM from FAF**
- **REIL Rwy 13**
- **MIRL Rwy 13-31**
USE BEAUMONT-PORT ARTHUR, TX (JACK BROOKS RGNL) ALTIMETER SETTING. CIRCLING NA RWY 16-34. VISIBILITY REDUCTION BY HELICOPTERS NA.

MISSED APPROACH: CLIMBING RIGHT TURN TO 2000 VIA BPT R-316 TO KIELL INT/DAS 22.2 DME.

<table>
<thead>
<tr>
<th>Category</th>
<th>APP CRS</th>
<th>Rwy Idg</th>
<th>TDZE</th>
<th>Apt Elev</th>
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<td>S-31</td>
<td>299°</td>
<td>3934</td>
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<td>CIRCLING</td>
<td>299°</td>
<td>600-1</td>
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<td>688 (700-2)</td>
<td>688 (700-2)</td>
<td>688 (700-2/4)</td>
</tr>
</tbody>
</table>

MISA BPT 25 NM

116.9 DAS
Chan 116

R-087

114.5 BPT
Chan 92

BOELO

BPT 7.8

VOR/DME RWY 31

BEAUMONT MUNI (BMT)

BEAUMONT, TEXAS

Amdt 4D 21MAY20

30°04'N-94°13'W
ILS or LOC RWY 12
JACK BROOKS RGNL (BPT)

**Atmospheric pressure: 1013 hPa at 1500 feet.**

**MISSED APPROACH:** Climb to 3000 ft on BPT VOR/DME R-113 to MARSA INT/BPT 15 DME and hold.

**ATIS**
126.3

**HOUSTON APP CON**
121.3 377.1

**BEAUMONT TOWER**
119.5 (CTAF)

**GND CON**
124.85

**CLNC DEL**
118.3

**UNICOM**
122.95

**Rwy Idg**

tdze 15

**Apt Elev**
15

**APP CRS**
116°

**Loc or Radar** required.

**Rwy Ldg**
6750

**Apf Elev**
15

**TWR**
126

**Chan** 38 (Y)

**DME or Radar** required.

**When local altimeter setting not received, use Orange County altimeter setting:**

- Increase S-ILS 12 DA to 246 feet; increase all MDAs 40 feet. COUGS Fix Minimums: increase S-LOC Cat C/D/E visibility to RVR 4000 feet. For inop MALSR, increase S-ILS 12 Cat E visibility to RVR 4000, S-LOC 12 Cat E visibility to 2 1/2 miles. COUGS Fix Minimums: increase S-LOC Cat C/D/E visibility to 1 1/2 miles. For inop MALSR, when using Orange County altimeter setting, increase S-ILS 12 Cat E visibility to RVR 4000, S-LOC 12 Cat C/D/E to 2 1/2 miles. COUGS Fix Minimums: increase S-LOC Cat C/D/E visibility to 1 1/2 miles. VDP NA when using Orange County altimeter setting.

**RVR 1800 authorized with use of FD or AP or HUD to DA, NA when using Orange County altimeter setting.**

**Remain within 10 NM**

**GS 3.00°**

**TCH 52**

*Cat E procedure turn NA.*

**Use I-BPT DME when on the localizer course.**

**KAZOO**

I-BPT 6.3

Radar

**COUGS**

I-BPT 3.7

**LOC only:**

**#1-BPT 2.5**

**#1-BPT 1.3**

**#LOC only:**

**CATEGORY**

A

B

C

D

E

**S-ILS 12**

215/24 200 (200-1/2)

**S-LOC 12**

820/24 805 (900-1/2) 820/40 805 (900-3/4) 820-1/2 805 (900-1/2)

**COUGS Fix Minimums (DME Required)**

**S-LOC 12**

460/24 445 (500-1/2) 460/45 445 (500-1/2)
RNAV (GPS) RWY 12

JACK BROOKS RGNL (BPT)

MISSED APPROACH: Climb to 3000 direct MARSA and hold.

ATIS 126.3
HOUSTON APP CON 121.3 377.1 BEAUMONT TOWER* 119.5 (CTAF)\* GND CON 124.85 CLINC DEL 118.3 UNICOM 122.95
RNAV (GPS) RWY 16

JACK BROOKS RGNL (BPT)

Radar required.

Baro-VNAV NA when using Orange County altimeter setting. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below 15°C (59°F) or above 49°C (120°F). RW 16 helicopter VDP NA when using Orange County altimeter setting.

Missed approach: Climb to 3000 direct HEDIR and hold.

ATIS 126.3

Houston App Con 121.3 377.1

Beaumont Tower 119.5 (CTAF)

Gnd Con 124.85

CLNC Del 118.3

UNICOM 122.95

At 2000 feet, Right 16° to RW 16.

1.1 NM to MARSA and hold.

29°57'N-94°01'W

Jack Brooks RGNL (BPT)

RNAV (GPS) RWY 16

CATELOG A B C D E

LPV DA 273-3/4 258 (300-3/4)

LNAV/ VNAV DA 422-1/2 407 (500-1/2)

LNAV MDA 420-1 405 (500-1)

RNAV (GPS) RWY 16

29°57'N-94°01'W

95
RNAV (GPS) RWY 30

JACK BROOKS RGNL (BPT)

BEAUMONT/PORT ARTHUR, TEXAS

ATIS 126.3
HOUSTON APP CON 121.3 377.1
BEAUMONT TOWER* 119.5 (CTAF)
GND CON 124.85
CLNC DEL 118.3
UNICOM 122.95

BEAUMONT/PORT ARTHUR, TEXAS

Orig A 07NOV19

29°57'N-94°01'W

RNP APCH.

RADAR required.

Baro-VNAV NA when using Orange County altimeter setting. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -15°C (5°F) or above 49°C (120°F). RWy 30 helicopter visibility reduction below ½ SM NA. When local altimeter setting not received, use Orange County altimeter setting: increase LPV DA to 295 feet; increase LNAV/VNAV DA to 436 feet; increase all MDAs 40 feet; increase LPV and LNAV/VNAV all Cats visibility ½ SM and LNAV Cat E visibility ¼ SM.

MISSED APPROACH: Climb to 3000 direct GIDDY and hold.

GIDDY and hold.

3000

LNAV only.

296° to RW30

LPV DA

263-¾

251 (300-¾)

263-¾

251 (300-¾)

1700

3.1 NM

5.1 NM

C

D

E

LNAV/ VNAV DA

404-1¾

392 (400-1¾)

404-1¾

392 (400-1¾)

LNAV MDA

540-1

528 (600-1)

540-1¾

528 (600-1¾)

540-1¾

528 (600-1¾)

Category

A

B

C

D

E

TWR 126

APP CRS 296°

Rwy Idg 12

Tdez 15

Apt Elev

WAAS

CH 69216

W30A

BEAUMONT TOWER

GND CON

UNICOM

SC-5, 07 OCT 2021 to 02 DEC 2021

20086

29°57'N-94°01'W

GIDDY

500

301

296°

MEYGI

2 NM to RW30

ROVEZ

296°

2000

296°

PORTZ

2000

3000

GIDDY

170

44

169±

239

404

514°

170

3.1 NM

296°

5070 X 150

6750 X 150

BEAUMONT/PORT ARTHUR, TEXAS

Orig A 07NOV19

29°57'N-94°01'W

RNAV (GPS) RWY 30

JACK BROOKS RGNL (BPT)
RNAV (GPS) RWY 34
JACK BROOKS RGNL (BPT)

BEAUMONT/PORT ARTHUR, TEXAS
AL-521 (FAA) 20086

RNP APCH.

Radar required.

Baro-VNAV NA when using Orange County altimeter setting. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -15°C (5°F) or above 49°C (120°F).

When local altimeter setting not received, use Orange County altimeter setting: increase LPV DA to 247 feet; increase LNAV/VNAV DA to 469 feet; increase LNAV Cat C visibility ½ SM.

Missed Approach: Climb to 3000 direct NUWRY and via track 283° to GIDDY and hold.

ATIS
126.3

Houston App Con
121.3 377.1

Beaumont Tower*
119.5 (CTAF)

Gnd Con
124.85

Clnc Del
118.3

Unicom
122.95

* LNAV only.

For uncompensated track 283° to GIDDY and hold.

REIL Rwys 16-30 and 34
HIRL Rwys 12-30, 16-34

Orig A 07NOV19

29°57´N-94°01´W

97
**BEAUMONT/PORT ARTHUR, TEXAS**

**AL-521 (FAA)**

### VOR/DME RWY 34

**JACK BROOKS RGNL (BPT)**

**ATIS** 126.3  
**HOUSTON APP CON** 121.3 377.1  
**BEAUMONT TOWER** 119.5 (CTAF)  
**GND CON** 124.85  
**CLNC DEL** 118.3  
**UNICOM** 122.95

When local altimeter setting not received, use Orange County altimeter setting and increase all MDA 40 feet, increase S-34 visibility Cat C and D 1/2 SM.

**MISSED APPROACH:** Climb to 2000 via BPT VOR/DME R-049 to PEVET INT.

**SC-5, 07 OCT 2021 to 02 DEC 2021**
For inoperative MALSR, increase S-12 Cat C/D/E visibility to RVR 4500. For inoperative MALSR when using Orange County altimeter setting, increase S-12 Cat E visibility to 1 1/2 mile.

### MISSED APCH FIX

Climb to 1700 via BPT R-113 to MARSA Int/BPT 15 DME.

### CATEGORY

<table>
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<tr>
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<th>C</th>
<th>D</th>
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<td>S-12</td>
<td>420/24</td>
<td>405 (500-1/2)</td>
<td>420/40</td>
<td>405 (500-3/4)</td>
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<tr>
<td>Circling</td>
<td>480-1</td>
<td>465 (500-1)</td>
<td>840-1</td>
<td>825 (900-1/4)</td>
<td>840-2</td>
</tr>
</tbody>
</table>

### REMAIN WITHIN 10 NM

Using Orange County altimeter setting, increase S-12 Cat C/D/E visibility to RVR 6000. When local altimeter setting not received, use Orange County altimeter setting and increase all MDA 40 feet and S-12 Cat C/D/E visibility to RVR 4500. For inoperative MALSR, increase S-12 Cat E visibility to 1 1/2 mile.
CAUTION: BE ALERT TO RUNWAY CROSSING CLEARANCES. READBACK OF ALL RUNWAY HOLDING INSTRUCTIONS IS REQUIRED.
RNAV (GPS) RWY 16
BRENNHAM MUNI (11R)

RNP APCH.

- Rwy 16 helicopter visibility reduction below ½ SM NA. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -1.5°C or above 37°C. When local altimeter setting not received, use College Station altimeter setting and increase all DA 52 feet, and all MDA 60 feet, increase LPV and LNAV/VNAV all Cats and LNAV Cats C/D visibility ½ SM. VDP and Baro-VNAV NA with College Station altimeter setting.

- MISSED APPROACH: Climb to 2200 direct JINGA and hold.

**AWOS-3**

- 121.125

**HOUSTON APP CON**

- 134.3 360.85

**UNICOM**

- 123.075 (CTAF)

**RADAR REQUIRED**

- [IAF] JELBA
- [IF] DUDYA
- [AF] EYUBE

- 3100
- 075°
- (10)

- 3100
- 255°
- (10)

- 165° to RW16

- 686
- 24°
- 4 NM

- 410
- 686
- 886
- 760

- 2200
- JINGA

- LNAV Only.

- 1.7 NM to RW16

- 2000
- 165°
- 7.5 NM

- 2000
- 3.4 NM

- 2000
- 1.7 NM

- 6003
- X 75

- 686

- 34

- 165°
- 750°

- 6003 X 75

- 886

- 461°

- 34

- 686

- 34

- 686

- 461°

- 34
Radar Required

Procedure NA for arrivals at GASEC on V15 northwest bound.

Procedure NA for arrivals at SUXOE on V369 northwest bound.

VGSI and RNAV glidepath not coincident (VGSI Angle 3.50/TCH 40).

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<td>636-1</td>
<td>275 (300-1)</td>
<td>NA</td>
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<tr>
<td>LNAV/VNAV DA</td>
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<td>275 (300-1)</td>
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<td>LNAV MDA</td>
<td>720-1</td>
<td>359 (400-1)</td>
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</table>

ReIL Rwy 15 and 33

MIRL Rwy 15-33
VOR/DME-A
Coulter Field (CFD)

Use College Station altimeter setting; if not received, use Caldwell Muni altimeter setting and increase all MDAs 40 feet.

AWOS-3PT 125.975
CLL ASOS 126.85
Houston APP CON 134.3 360.85
UNICOM 123.0 (CTAF)

MISSED APPROACH: Climb to 2100 direct CLL VORTAC and hold.

COLLEGE STATION
113.3 CLL
Chan 80

2100 to RANEE
027° (13)

One Minute Holding Pattern

CAUTION
Use College Station altimeter setting; if not received, use Caldwell Muni altimeter setting and increase all MDAs 40 feet.

AWOS-3PT 125.975
CLL ASOS 126.85
Houston APP CON 134.3 360.85
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113.3 CLL
Chan 80

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027° (13)

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Houston APP CON 134.3 360.85
UNICOM 123.0 (CTAF)

MISSED APPROACH: Climb to 2100 direct CLL VORTAC and hold.

COLLEGE STATION
113.3 CLL
Chan 80

2100 to RANEE
027° (13)

One Minute Holding Pattern

CAUTION
Use College Station altimeter setting; if not received, use Caldwell Muni altimeter setting and increase all MDAs 40 feet.

AWOS-3PT 125.975
CLL ASOS 126.85
Houston APP CON 134.3 360.85
UNICOM 123.0 (CTAF)

MISSED APPROACH: Climb to 2100 direct CLL VORTAC and hold.

COLLEGE STATION
113.3 CLL
Chan 80

2100 to RANEE
027° (13)

One Minute Holding Pattern

CAUTION
Use College Station altimeter setting; if not received, use Caldwell Muni altimeter setting and increase all MDAs 40 feet.

AWOS-3PT 125.975
CLL ASOS 126.85
Houston APP CON 134.3 360.85
UNICOM 123.0 (CTAF)

MISSED APPROACH: Climb to 2100 direct CLL VORTAC and hold.

COLLEGE STATION
113.3 CLL
Chan 80

2100 to RANEE
027° (13)

One Minute Holding Pattern

CAUTION
Use College Station altimeter setting; if not received, use Caldwell Muni altimeter setting and increase all MDAs 40 feet.

AWOS-3PT 125.975
CLL ASOS 126.85
Houston APP CON 134.3 360.85
UNICOM 123.0 (CTAF)

MISSED APPROACH: Climb to 2100 direct CLL VORTAC and hold.

COLLEGE STATION
113.3 CLL
Chan 80

2100 to RANEE
027° (13)

One Minute Holding Pattern

CAUTION
Use College Station altimeter setting; if not received, use Caldwell Muni altimeter setting and increase all MDAs 40 feet.

AWOS-3PT 125.975
CLL ASOS 126.85
Houston APP CON 134.3 360.85
UNICOM 123.0 (CTAF)

MISSED APPROACH: Climb to 2100 direct CLL VORTAC and hold.

COLLEGE STATION
113.3 CLL
Chan 80

2100 to RANEE
027° (13)

One Minute Holding Pattern

CAUTION
Use College Station altimeter setting; if not received, use Caldwell Muni altimeter setting and increase all MDAs 40 feet.
RNAV (GPS) RWY 15
Caldwell Muni (RWV)

When local altimeter setting not received, use College Station altimeter setting and increase all MDA 60 feet. Circling NA east of RW 15-33. DME/DME RNP-0.3 NA. Procedure NA at night. Helicopter visibility reduction below 1 SM NA.

MISSED APPROACH: Climb to 2000 direct KOKEC and hold.

AWOS-3PT 118.35
HOUSTON APP CON 134.3 360.85
CTAF 122.9

RADAR REQUIRED

ELEV 391 TDZE 391

Caldwell, Texas
Orig-A 29May14

30°31'N-96°42'W
When local altimeter setting not received, use College Station altimeter setting and increase all MDA 60 feet. Circling NA east of Rwy 15-33. DME/DME RNP-0.3 NA. Procedure NA at night. Rwy 33 helicopter visibility reduction below 1 SM NA.

**AWOS-3PT**
118.35

**HOUSTON APP CON**
134.3 360.85

**CTAF**
122.9

---

**RADAR REQUIRED**

---

**MISSED APCH FIX**

4 NM

NUPSY

---

**ELEV** 391
**TDZE** 390

---

**MIRL Rwy 15-33**

---

**SC-5, 07 OCT 2021 to 02 DEC 2021**

---

**RNAV (GPS) RWY 33**

---

**Circling**

1000-1 609 (700-1)

---

**RNAV (GPS) RWY 33**
AWOS-3PT
118.35

HOUSTON APP CON
134.3 360.85

CTAF
122.9

NoPT for arrival on CLL VORTAC airway radials 318 CW 143.

MISSED APPROACH: Climb to 2000 then climbing left turn to 2100 direct CLL VORTAC and hold.

When local altimeter setting not received, use College Station altimeter setting and increase MDA 60 feet. Circling NA east of Rwy 15-33. Procedure NA at night.

NEW AIRPORT NAME, CRD, and FPL

VORTAC CLL
113.3
Chan 80

APP CRS
243°

Rwy Idg
TDZE
N/A

Apt Elev
391

AWOS-3PT
118.35

HOUSTON APP CON
134.3 360.85

CTAF
122.9

NEW AIRPORT NAME, CRD, and FPL

VORTAC CLL
113.3
Chan 80

APP CRS
243°

Rwy Idg
TDZE
N/A

Apt Elev
391

AWOS-3PT
118.35

HOUSTON APP CON
134.3 360.85

CTAF
122.9

NEW AIRPORT NAME, CRD, and FPL

VORTAC CLL
113.3
Chan 80

APP CRS
243°

Rwy Idg
TDZE
N/A

Apt Elev
391

AWOS-3PT
118.35

HOUSTON APP CON
134.3 360.85

CTAF
122.9

NEW AIRPORT NAME, CRD, and FPL
RNAV (GPS) RWY 17

CENTER MUNI (F'17)

Rwy 17 helicopter visibility reduction below 1 SM NA.
Straight-In RWY 17 NA at night, Circling RWY 17 NA at night.

Procedure NA for arrivals at CARTH via V13 northbound.

AWOS-3PT OCH AWOS-3 FORTH WORTH CENTER UNICOM
128.775 135.625 126.325 346.25 122.8 (CTAF)
RNAV (GPS) RWY 35
CENTER MUNI (F17)

**RNP APCH.**

- **AWOS-3PT**: 128.775
- **OCH AWOS-3**: 135.625
- **FORTH WORTH CENTER**: 126.325 346.25
- **UNICOM**: 122.8 (CTAF)

**Procedure NA for arrivals on LFK VORTAC airway radials 354 CW 082.**

**VGSI and descent angles not coincident (VGSI Angle 3.00/TCH 49).**

- **Circling Rwy 35 NA at night.**
- **Rwy 35 helicopter visibility reduction below ⅔ SM NA.**

**MISSED APPROACH: Climb to 3800 direct WENDE and on track 353° to CARTH and hold.**

**Category B/C/D**

<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>LNAV MDA</td>
<td>960-1 652 (700-1)</td>
<td>960-1⅓ 652 (700-1⅓)</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>CIRCLING</td>
<td>960-1 641 (700-1)</td>
<td>1160-2⅔ 841 (900-2⅔)</td>
<td>NA</td>
<td>NA</td>
</tr>
</tbody>
</table>

**APP CRS** 347°

- Rwy Idg 5501
- TDZE 308
- Apt Elev 319

**Orig-D 12AUG21**

**31°50'N-94°09W**
LUFKIN 112.1 LFK  
Chan 58

GREGG COUNTY 112.9 GGG  
Chan 76

AWOS-3PT 128.775
OCH AWOS-3 135.625
FORTH WORTH CENTER 126.325 346.25
UNICOM 122.8 (CTAF)

SC-5, 07 OCT 2021 to 02 DEC 2021

NDB RWY 17 CENTER MUNI (F17)

Rwy 17 helicopter visibility reduction below 1 SM NA.  
Straight-In Rwy 17 NA at night, Circling Rwy 17 NA at night.

MISSED APPROACH: Climb to 1500 then climbing  
left turn to 3000 direct CZJ NDB and hold.

Remain within 10 NM

AWOS-3PT 128.775
OCH AWOS-3 135.625
FORTH WORTH CENTER 126.325 346.25
UNICOM 122.8 (CTAF)

MISSED APPROACH: Climb to 1500 then climbing  
left turn to 3000 direct CZJ NDB and hold.

Remain within 10 NM

AWOS-3PT 128.775
OCH AWOS-3 135.625
FORTH WORTH CENTER 126.325 346.25
UNICOM 122.8 (CTAF)

MISSED APPROACH: Climb to 1500 then climbing  
left turn to 3000 direct CZJ NDB and hold.
Circling to Rwy 34 NA at night. Rwy 16 helicopter visibility reduction below ¾ SM NA. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -15°C or above 54°C.

Procedure NA for arrivals at EAKES on T254 westbound.

MISSED APPROACH: Climb to 620 then climbing left turn to 2000 direct KENNN and hold.

**AWOS-3**

**HOUSTON APP CON**

**UNICOM**

119.325

119.7 281.4

123.0 (CTAF)

**HAWXE**

3000

087° (11.7)

157°

**DUUPO**

2200

2200

112
NOTE: RADAR required.
NOTE: DME/DME/IRU or GPS required.
NOTE: RNAV 1.

TAKEOFF MINIMUMS
Rwy 16, 34: Standard with minimum climb of 500' per NM to 660.

TAKEOFF RUNWAY 16: Climb on heading 157° to 1400 for RADAR vectors to DREMR, thence . . . .
TAKEOFF RUNWAY 34: Climb on heading 312° to 2000 for RADAR vectors to DREMR, thence . . . .

...on track 345° to LITLD, then on track 346° to BLTWY, then on (transition). Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure.

CRIED TRANSITION (BLTWY7.CRIED)
TOP ALTITUDE: ASSIGNED BY ATC

NOTE: Chart not to scale.

SC-5, 07 OCT 2021 to 02 DEC 2021
TAKEOFF RWY 16: Climb on heading 157° to 1400, for RADAR vectors to BORRN, thence. . . .
TAKEOFF RWY 34: Climb on heading 337° to 2000, for RADAR vectors to BORRN, thence. . . .

. . . on track 267° to DILRE, then on (transition). Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure.

CRGER TRANSITION (BORRN4.CRGER)
JUNCTION TRANSITION (BORRN4.JCT)
MNURE TRANSITION (BORRN4.MNURE)
SAN ANTONIO TRANSITION (BORRN4.SAT)
WAILN TRANSITION (BORRN4.WAILN)
NOTE: Chart not to scale.

DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAY 16: Climb on heading 157° to 1400, for RADAR vectors to VUH VOR/DME, thence . . . .
TAKEOFF RUNWAY 34: Climb on heading 312° to 2000, for RADAR vectors to VUH VOR/DME, thence . . . .

. . . on track 118° to HOODO, then on (transition). Maintain ATC assigned altitude.
Expect filed altitude 10 minutes after departure.

BOWFN TRANSITION (HOODO7.BOWFN)
CFOOD TRANSITION (HOODO7.CFOOD)
HARVEY TRANSITION (HOODO7.HRV)
LEEVILLE TRANSITION (HOODO7.LEV)
SBIRD TRANSITION (HOODO7.SBIRD)
DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAY 16: Climb on heading 157° to 1400 for RADAR vectors to RENNK, thence . . . .

TAKEOFF RUNWAY 34: Climb on heading 312° to 2000 for RADAR vectors to RENNK, thence . . . .

. . . on track 016° to COLET, then on track 025° to SUSHI, then on track 026° to WWELL, then on track 026° to INDIE, then on (transition). Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure.

TPAKK TRANSITION (INDIE8.TPAKK)

NOTE: Chart not to scale.
DEPARTURE ROUTE DESCRIPTION

TAKEOFF RWY 16: Climb on heading 157° to 1400, for RADAR vectors to KARRR, thence. . . .
TAKEOFF RWY 34: Climb on heading 337° to 2000, for RADAR vectors to KARRR, thence. . . .

. . . on track 218° to KAVCY, then on (transition). Maintain ATC assigned altitude.
Expect filed altitude 10 minutes after departure.

CORPUS CHRISTI TRANSITION (KARRR6.CRP)
PALACIOS TRANSITION (KARRR6.PSX)
TRUAX TRANSITION (KARRR6.NGP)
WWREN TRANSITION (KARRR6.WWREN)
YOMOM TRANSITION (KARRR6.YOMOM)
NOTE: Radar required.
NOTE: DME/DME/IRU or GPS required.
NOTE: RNAV 1.

DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAY 16: Climb on heading 157°
to 1400 for RADAR vectors to KNTKY, thence . . . .
TAKEOFF RUNWAY 34: Climb on heading 312°
to 2000 for RADAR vectors to KNTKY, thence . . . .

. . . . on track 032° to PEETY, then on track 032° to
DARTR, then on track 031° to MUSIQ, then on track
031° to CLAVN, then on track 031° to VELCO, then
on track 031° to ENJOY, then on track 031° to LURIC,
then on (transition). Maintain ATC assigned altitude.
Expect filed altitude 10 minutes after departure.

HAWES TRANSITION (LURIC8.HAWES)
ORRTH TRANSITION (LURIC8.ORRTH)
DEPARTURE ROUTE DESCRIPTION

TAKEOFF RWY 16: Climb on heading 337° to 2000 for RADAR vectors to MMALT, hence... .

TAKEOFF RWY 34: Climb on heading 157° to 1400 for RADAR vectors to MMALT, hence...

...on track 086° to MOOKI, then on (transition). Maintain ATC assigned altitude.

GUSTI TRANSITION (MMALT5.GUSTI)

LAKE CHARLES TRANSITION (MMALT5.LCH)

WHITE LAKE TRANSITION (MMALT5.LLA)

NOTE: Chart not to scale.

GUSTI and MMALT FIVE TRANSITIONS ATC assigned only for aircraft departing.

NOTE: RNAV 1.

NOTE: RADAR required.

NOTE: DME/DME/IRU or GPS required.

NOTE: AXH, EFD, GUS, HPY, IWS, LBX, LIV, SOR, TME, T41 and 54T.
CLEVELAND, TEXAS

CLEVELAND MUNI

AWOS-3
119.325
CTAF
123.0
HOUSTON DEP CON
119.7 281.4

TOP ALTITUDE:
ASSIGNED BY ATC

1 4 0 0
FL180
2000

NOTE: RADAR required.
NOTE: Chart not to scale.

(NARRATIVE ON FOLLOWING PAGE)
TAKEOFF RUNWAY 16: Climb on heading 157° to 1400 before turning. When entering controlled airspace, climb on assigned heading for RADAR vectors to SKUBA INT. Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure, thence. . . .

TAKEOFF RUNWAY 34: Climb on heading 312° to 2000 before turning. When entering controlled airspace, climb on assigned heading for RADAR vectors to SKUBA INT. Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure, thence. . . .

. . . .on PSX R-038 to PSX VORTAC.

FORT STOCKTON TRANSITION (PSX2.FST): From over PSX VORTAC on PSX R-253 and THX R-073 to THX VORTAC, then on THX R-259 and COT R-078 to COT VORTAC, then on COT R-318 and RSG R-136 to RSG VORTAC, then on RSG R-283 and FST R-100 to FST VORTAC.

SAN ANTONIO TRANSITION (PSX2.SAT): From over PSX VORTAC on PSX R-253 and THX R-073 to THX VORTAC, then on SAT R-158 to SAT VORTAC.
NOTE: Chart not to scale.

**TOP ALTITUDE: ASSIGNED BY ATC**

**TAKEOFF MINIMUMS**

Rwys 16, 34: Standard with minimum climb of 500’ per NM to 660.

**NOTE:** RADAR required.

**NOTE:** DME/DME/IRU or GPS required.

**NOTE:** RNAV 1.

**DEPARTURE ROUTE DESCRIPTION**

TAKEOFF RUNWAY 16: Climb on heading 157° to 1400 for RADAR vectors to KNTKY, thence . . .

TAKEOFF RUNWAY 34: Climb on heading 312° to 2000 for RADAR vectors to KNTKY, thence . . .

. . . on track 032° to PEETY, then on track 032° to DARTR, then on track 031° to MUSIQ, then on track 031° to CLAVN, then on track 060° to STRYA, then on (transition). Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure.

DPATY TRANSITION (STRYA8.DPATY)

JBULL TRANSITION (STRYA8.JBULL)

**AWOS-3**

119.325

CTAF

123.0

HOUSTON DEP CON

119.7 281.4

**NOTE:** RNAV 1.

**NOTE:** DME/DME/IRU or GPS required.

**NOTE:** RADAR required.

**STRYA EIGHT DEPARTURE (RNAV)**

STRYA EIGHT DEPARTURE (RNAV) 21280

AL-6073 (FAA)

CLEVELAND MUNI (6R3)

CLEVELAND, TEXAS

SC-5, 07 OCT 2021 to 02 DEC 2021
DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAY 16: Climb on heading 157° to 1400 for RADAR vectors to BBYSE, thence . . .

TAKEOFF RUNWAY 34: Climb on heading 312° to 2000 for RADAR vectors to BBYSE, thence . . .

. . .on track 331° to SPICR, then on track 331° to WLLIS, then on track 332° to STYCK, then on (transition). Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure.

DOLEY TRANSITION (STYCK8.DOLEY)
WTSON TRANSITION (STYCK8.WTSON)
**WATFO FIVE DEPARTURE (RNAV)**

**DEPARTURE ROUTE DESCRIPTION**

**TAKEOFF RWY 16:** Climb on heading 157° to 1400, for RADAR vectors to WATFO, thence. . . .

**TAKEOFF RWY 34:** Climb on heading 337° to 2000, for RADAR vectors to WATFO, thence. . . .

. . . . on track 141° to VUH VOR/DME, then on (transition). Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure.

**ANKRR TRANSITION (WATFO5.ANKRR)**

**KELPP TRANSITION (WATFO5.KELPP)**

**MUSYL TRANSITION (WATFO5.MUSYL)**
DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAY 16: Climb on heading 157° to 1400 for RADAR vectors to WYLSN, thence . . . .

TAKEOFF RUNWAY 34: Climb on heading 312° to 2000 for RADAR vectors to WYLSN, thence . . . .

. . . on track 360° to MONNT, then on (transition). Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure.

GIFFA TRANSITION (WYLSN8.GIFFA)
MAJKK TRANSITION (WYLSN8.MAJKK)
COLLEGE STATION, TEXAS

ILS or LOC RWY 35
EASTWOOD FLD (CLL)

ADF or DME required for procedure entry. ADF or DME required for LOC only.

For inop ALS, increase S-ILS 35 Cat E visibility to ½ SM and S-LOC 35 Cat E visibility to 1½ SM. ILS glideslope unusable for coupled approaches below 1050 feet MSL.

ATIS 126.85 134.3 360.85
HOUSTON APP CON 118.5 (CTAF) 284.7
GROUND CON 128.7 284.7
CLNC DEL 128.7
CLNC DEL 120.4 (when twr closed)
UNICOM 122.95

MISSP APCH FIX

COLLEGE STATION 113.3 CLL Chan 80

EASTERWOOD TOWER 1022

MISSP APCH FIX

LOCALIZER 110.55 CLL Chan 42(Y)

COLLEGE STATION, TEXAS

AL-928 (FAA)

SC-5, 07 OCT 2021 to 02 DEC 2021

 Procedure NA for arrival at COUTH on V306 eastbound.

COLLEGE STATION

TDZE 311

ELEV 321

07 OCT 2021 to 02 DEC 2021

COLLEGE STATION, TEXAS

Amdt 14A  28FEB19

FAF to MAP 5.1 NM

S-ILS 35 760 1/2 449 (500-1/2)
S-LOC 35 760-1/2 449 (500-1/2)

CIRCLING 860-1 880-1
539 (600-1) 559 (600-1)

1000-2 1180-2 1180-3
679 (700-2) 859 (900-2) 859 (900-3)

EASTWOOD FLD (CLL)

ILS or LOC RWY 35

30°35'N-96°22'W
RNAV (GPS) RWY 11
EASTERWOOD FLD (CLL)

RNP APCH.

For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -3°C or above 54°C. Rwy 11 helicopter visibility reduction below 1/4 SM NA.

ATIS | HOUSTON APP CON | EASTERWOOD TOWER* | GND CON | CLNC DEL | CLNC DEL | UNICOM
-----|----------------|-------------------|---------|----------|----------|--------
126.85 | 134.3 360.85 | 118.5 (CTAF) 284.7 | 128.7 284.7 | 120.4 (when twr closed) | 122.95 |

MISSED APPROACH: Climb to 3000 direct EDAYA and hold.

ATIS
126.85

HOUSTON APP CON
134.3 360.85

EASTERWOOD TOWER*
118.5 (CTAF) 284.7

GND CON
128.7 284.7

CLNC DEL
120.4 (when twr closed)

UNICOM
122.95

WAAS
CH 65632
W11A

APP CRS
106°

Rwy Idg
TDZE

Apt Elev
321

5158

COLLEGE STATION, TEXAS
AL-928 (FAA)

SC-5, 07 OCT 2021 to 02 DEC 2021

Amdt 1D 28FEB19

30°35’N-96°22’W

EASTERWOOD FLD (CLL)
RNAV (GPS) RWY 11

WASHINGTON D C METRO DC-8 1972 (FAA)
RNAV (GPS) RWY 29
EASTERWOOD FLD (CLL)

Baro-VNAV NA when using Caldwell altimeter setting. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -3°C or above 54°C. Rwy 29 helicopter visibility reduction below ¼ SM NA.

ATIS 126.85  Houston APP CON 134.3  EASTERWOOD TOWER 118.5 (CTAF) 284.7  GND CON 128.7  CLNC DEL 120.4 (when twr closed)  UNICOM 122.95

MISSED APPROACH: Climb to 2000 direct ICESO and hold.
For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -3°C or above 54°C. For inop ALS, increase LPV Cat E and LNAV/VNAV all Cats visibility to ¾ SM, increase LNAV Cat E visibility to 1¾ SM.
LOC BC RWY 17
EASTERWOOD FLD (CLL)

DME required.

Disregard glideslope indications.

LOC/DMEm I-CLL 110.55
Chan 42(Y)

APP CRS 166°
Rwy Idg 7000
TDZE 321
Apt Elev 321

MISSED APPROACH: Climb to 2000 on heading 166° and CLL R-127 to HEDIX/CLL 14 DME and hold.

BACK COURSE

Use I-CLL DME when on the localizer course.

ZONEN INT I-CLL 14.6

BRYIN INT I-CLL 4.8

I-CLL 1.5

WEVAN I-CLL 0.5

I-CLL R-127 to HEDIX/CLL 14 DME and hold.

Disregard glideslope indications.

CATEGORY
A
B
C
D
E

S-LOC 17
940-1
619 (700-1)
940-1½
619 (700-1½)

CIRCLING
940-1
619 (700-1)

Knots
60
90
120
150
180

Min:Sec
4:18
2:52
2:09
1:43
1:26

ELEV 321
TDZE 321

166° 4.3 NM from FAF

CLLN 0.5
WEVAN

LOCALIZER 110.55
I-CLL 4.8
Chan 42(Y)

HEDIX
I-CLL 1.5
Rwy Idg

FAF to MAP 4.3 NM

166° 4.3 NM from FAF

Reil Rwy 29
MIRL Rwy 11-29
HIRL Rwy 17-35

FAF to MAP 4.3 NM

166° 4.3 NM from FAF

MISSED APPROACH: Climb to 2000 on heading 166° and CLL R-127 to HEDIX/CLL 14 DME and hold.

BACK COURSE

Use I-CLL DME when on the localizer course.

ZONEN INT I-CLL 14.6

BRYIN INT I-CLL 4.8

I-CLL 1.5

WEVAN I-CLL 0.5

I-CLL R-127 to HEDIX/CLL 14 DME and hold.

Disregard glideslope indications.

CATEGORY
A
B
C
D
E

S-LOC 17
940-1
619 (700-1)
940-1½
619 (700-1½)

CIRCLING
940-1
619 (700-1)

Knots
60
90
120
150
180

Min:Sec
4:18
2:52
2:09
1:43
1:26

ELEV 321
TDZE 321

166° 4.3 NM from FAF

CLLN 0.5
WEVAN

LOCALIZER 110.55
I-CLL 4.8
Chan 42(Y)

HEDIX
I-CLL 1.5
Rwy Idg

FAF to MAP 4.3 NM

166° 4.3 NM from FAF

Reil Rwy 29
MIRL Rwy 11-29
HIRL Rwy 17-35

FAF to MAP 4.3 NM

166° 4.3 NM from FAF

MISSED APPROACH: Climb to 2000 on heading 166° and CLL R-127 to HEDIX/CLL 14 DME and hold.

BACK COURSE

Use I-CLL DME when on the localizer course.

ZONEN INT I-CLL 14.6

BRYIN INT I-CLL 4.8

I-CLL 1.5

WEVAN I-CLL 0.5

I-CLL R-127 to HEDIX/CLL 14 DME and hold.

Disregard glideslope indications.

CATEGORY
A
B
C
D
E

S-LOC 17
940-1
619 (700-1)
940-1½
619 (700-1½)

CIRCLING
940-1
619 (700-1)

Knots
60
90
120
150
180

Min:Sec
4:18
2:52
2:09
1:43
1:26

ELEV 321
TDZE 321

166° 4.3 NM from FAF

CLLN 0.5
WEVAN

LOCALIZER 110.55
I-CLL 4.8
Chan 42(Y)

HEDIX
I-CLL 1.5
Rwy Idg

FAF to MAP 4.3 NM

166° 4.3 NM from FAF

Reil Rwy 29
MIRL Rwy 11-29
HIRL Rwy 17-35

FAF to MAP 4.3 NM

166° 4.3 NM from FAF

MISSED APPROACH: Climb to 2000 on heading 166° and CLL R-127 to HEDIX/CLL 14 DME and hold.

BACK COURSE

Use I-CLL DME when on the localizer course.

ZONEN INT I-CLL 14.6

BRYIN INT I-CLL 4.8

I-CLL 1.5

WEVAN I-CLL 0.5

I-CLL R-127 to HEDIX/CLL 14 DME and hold.

Disregard glideslope indications.
READBACK OF ALL RUNWAY HOLDING INSTRUCTIONS IS REQUIRED.

CAUTION: BE ALERT TO RUNWAY CROSSING CLEARANCES.

READBACK OF ALL RUNWAY HOLDING INSTRUCTIONS IS REQUIRED.
RNAV (GPS) RWY 2
HOUSTON COUNTY (DKR)

DME/DME RNP-0.3 NA. When local altimeter setting not received, use
Palestine altimeter setting and increase all MDA 100 feet.
Procedure NA at night. Helicopter visibility reduction below 1 SM NA.

MISSED APPROACH: Climb to 1000
then climbing left turn to 4000 direct
LOA VORTAC and hold.

Procedure NA for arrivals on LOA VORTAC
airway radials 013 CW 131.

Procedure NA for arrivals on LOA VORTAC
airway radials 171 CW 318.
Procedure NA at night. Rwy 20 helicopter visibility reduction below 1 SM NA.

AWOS-3PT | HOUSTON CENTER | CTAF
---|---|---
118.775 | 134.8 269.6 | 122.9 0

Procedure NA for arrival on LOA VORTAC airway radials 323 CW 131.

MISSED APPROACH: Climbing right turn to 4000 direct LOA VORTAC and hold.

Procedure NA for arrival on LFK VORTAC airway radials 245 CW 020.

Visual Segment - Obstacles.

<table>
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<th>C</th>
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<tr>
<td>LP MDA</td>
<td>880-1 532 (600-1)</td>
<td>NA</td>
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<tr>
<td>LNAV MDA</td>
<td>900-1 552 (600-1)</td>
<td>NA</td>
<td></td>
<td></td>
</tr>
<tr>
<td>GA CIRCLING</td>
<td>900-1 552 (600-1) 980-1 632 (700-1)</td>
<td>NA</td>
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</table>
RNAV (GPS) RWY 17
EAGLE LAKE (ELA)

Rwy 17 helicopter visibility reduction below ¾ SM N A. Circling Rwy 35 NA at night. When local altimeter setting not received, use Wharton altimeter setting and increase all MDA 80 feet, increase LP, LNAV and Circling Cat C visibility ½ SM. VDP NA when using Wharton altimeter setting.

AWOS-3PT 128.475
HOUSTON APP CON 124.225 306.975
CTAF 122.9

MISSED APPROACH: Climb to 2000 direct ZOMVA and hold.

Missed Approach:
831

HIDIM
2000

IVUYU
241°
229°

ZOMVA
2000

Apt Elev
TDZE

MIRL Rwy 17-35

Category
LP MDA
LNAV MDA
CIRCLING

A
580-1
600-1
860-1

B
396 (400-1)
416 (500-1)
676 (700-1)

C
580-1½
600-1½
1040-2½

D
396 (400-1½)
416 (500-1½)
856 (900-2½)

NA
NA
NA

AWOS-3PT
128.475
HOUSTON APP CON
124.225 306.975
CTAF
122.9

Amdt 1C 17JUN21

29°36'N-96°19'W
EAGLE LAKE, TEXAS

EAGLE LAKE (ELA)

RNAV (GPS) RWY 35

EAGLE LAKE, TEXAS

ELEV 184
TDZE 184

RWHY 35

AWOS 3PT 128.475
HOUSTON APP CON 124.225 306.975
CTAF 122.9

MISSED APPROACH: Climb to 2000 direct HIDIM and hold.

1 SM NA.

Straight-in and Circling Rwy 35 NA at night.

MISSED APCH FIX
4 NM
166°
346°

HIDIM

M6A RW35 25 NM

2100

HDIM

184

29°36’N-96°19’W

AMDT 2 05DEC19

29°36’N-96°19’W
Circling Rwy 35 NA at night. Rwy 17 helicopter visibility reduction below ½ SM NA, VDP NA when using Wharton altimeter setting. When local altimeter setting not received, use Wharton altimeter setting and increase all MDA 80 feet and S-17 and Circling Cat C visibility ¼ SM.

MISSED APPROACH: Climb to 2000, then left turn direct ELA VOR/DME and hold.

<table>
<thead>
<tr>
<th>AWOS-3PT</th>
<th>HOUSTON APP CON</th>
<th>CTAF</th>
</tr>
</thead>
<tbody>
<tr>
<td>128.475</td>
<td>124.225 306.975</td>
<td>122.9</td>
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EAGLE LAKE, TEXAS (ELA)

VOR CRSP

Category

<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
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<tbody>
<tr>
<td>S-17</td>
<td>660-1</td>
<td>476 (500-1)</td>
<td>660-1 ¾</td>
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<tr>
<td>CIRCLING</td>
<td>860-1</td>
<td>676 (700-1)</td>
<td>1040-2½</td>
</tr>
</tbody>
</table>

EAGLE LAKE, TEXAS

Amdt 5B 17JUN21

SC-5, 07 OCT 2021 to 02 DEC 2021
RNAV (GPS)-A
JACKSON COUNTY (26R)

APP CRS
147°
Rwy ldg N/A
TDZE N/A
Apt Elev 61

RNP APCH.

VCT ASOS
119.025

HOUSTON CENTER
128.6 360.8

UNICOM
122.8 (CTAF)

HOLD 6000
2000

47° A

30 NM to ZEDNA (NoPT)
2200

ZEDNA

327°

057°

057°

MERRY

4 NM

4.7 NM

327°

147°

154°

(FAF) SHAVE

2000

2200
direct MERRY and hold.

HOLD 112±

RW15

147°

327°

579°

6000

2200

2000

UNICOM

MERRY

47° A

30 NM to ZEDNA

EDNA, TEXAS

AL-6468 (FAA)

21084

Use Victoria altimeter setting; when not received, use Port Lavaca altimeter setting.

MISSED APPROACH: Climb to 2200 direct MERRY and hold.

CATEGORY
A
B
C
D

CIRCLING
640-1
579 (600-1)
NA

MIRL Rwy 15-33

EDNA, TEXAS

Orig-A 24MAY18

29°00'N-96°35'W

21ST OCT 2021 to 02 DEC 2021

HOUSTON CENTER 128.6 360.8

VCT ASOS 119.025

UNICOM 122.8 (CTAF)

ELEV 61

147° to RW15

6.1 NM

579° (600-1)

582.7°

53

-
Use Victoria altimeter setting; when not received, use Port Lavaca altimeter setting.

MISSED APPROACH: Climb to 2000 direct ZEDNA and hold.
ILS or LOC RWY 14
SCHOLES INTL AT GALVESTON (GLS)

DME required.
RADAR required for procedure entry at UCENU.

Circling NA east of Rwy 18 and northeast of Rwy 32. DME from VUH VOR/DME. Simultaneous reception of I-GLS and VUH DME required. For inop ALS, increase S-ILS 14 Cat E visibility to 3/4 SM and S-LOC 14 Cat E visibility to 1/2 SM.

PROCEDURE TURN NA for Cat E aircraft.

MISSING APCH FIX

113.0 VUH Chan 77

DELVE

VUH 22

Procedure NA for arrivals at VUH VOR/DME on V556 eastbound.

ALTERNATE
MISSING APCH FIX

113.0 VUH Chan 77

SCHOLES

113.0 VUH Chan 77

SWANE INT

VUH 5.6

LOCALIZER 111.7
I-GLS

* LOC only

VUH

1200

3000

hdg
284°

DELVE

Δ

SWANE INT

180°

138°

1800

138°

1800

4.2 NM

1.3 NM

G5 3.00°
TCH 53

1800

138°

1800

Procedure Turn NA for Cat E aircraft.

* I-GLS

1.4

VUH

V556 eastbound.

VUH 22.1

DME required.

S-ILS 14

460-1/2 455 (500-1/2)

G5 3.00°

TCH 53

1800

138°

1800

PROCEDURE TURN NA for Cat E aircraft.

VUH

1200

3000

hdg
284°

DELVE

Δ

SWANE INT

180°

138°

1800

138°

1800

4.2 NM

1.3 NM

G5 3.00°
TCH 53

1800

138°

1800

Procedure Turn NA for Cat E aircraft.

* I-GLS

1.4

VUH

V556 eastbound.

VUH 22.1

DME required.

S-ILS 14

460-1/2 455 (500-1/2)

G5 3.00°

TCH 53

1800

138°

1800

4.2 NM

1.3 NM

G5 3.00°
TCH 53

1800

138°

1800

Procedure Turn NA for Cat E aircraft.

* I-GLS

1.4

VUH

V556 eastbound.

VUH 22.1

DME required.

S-ILS 14

460-1/2 455 (500-1/2)

G5 3.00°

TCH 53

1800

138°

1800

4.2 NM

1.3 NM

G5 3.00°
TCH 53

1800

138°

1800

Procedure Turn NA for Cat E aircraft.

* I-GLS

1.4

VUH

V556 eastbound.

VUH 22.1

DME required.
**RNAV (GPS) RWY 14**

**SCHOLES INTL AT GALVESTON (GLS)**

**Baro-VNAV and LPV Operations**

- When using William P Hobby altimeter setting, for uncompensated Baro-VNAV systems, LNAV/VNAV NA below 1°C (34°F) or above 54°C (130°F), Circling NA east of Rwy 18 and northeast of Rwy 32. DME/DME RNP-0.3 NA.

**MALSR**

- Climb to 1200 then climbing right turn to 3000 direct DELVE and hold.

**Missed Approach**

- Missed approach: Climb to 1200 then climbing right turn to 3000 direct DELVE and hold.

**ASOS**

- 119.275

**HOUSTON APP CON**

- 134.45 284.0

**GALVESTON TOWER**

- 120.575 (CTAF) 118.625

**GND CON**

- 135.35

**CLNC DEL**

- 120.575 (CTAF) 118.625

**UNICOM**

- 123.05

**Radar Required**

- Jacksonville, FL, 2013

**Category**

- A: 205-1/2, 200 (200-1/2)
- B: 342-5/8, 337 (400-5/8)
- C: 460-1/2, 455 (500-1/2)
- D: 460-7/8, 455 (500-7/8)
- E: 500-1, 494 (500-1)

**Table**

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<tr>
<th>CATEGORY</th>
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<th>D</th>
<th>E</th>
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<tr>
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<td>337</td>
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<tr>
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<td>455</td>
<td>500-1/2</td>
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<tr>
<td>CIRCLING</td>
<td>500-1</td>
<td>494</td>
<td>500-1</td>
<td>500-1/2</td>
<td>554</td>
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</tbody>
</table>

**SCHOLES INTL AT GALVESTON (GLS)**

**RNAV (GPS) RWY 14**

**GALVESTON, TEXAS**

**Amdt 1A 02APR15**

**2013**

**2017**

**20142**

**WAAS CH 65606 W14A**

**APP CRS 138°**

**Rwy Idg 5000**

**TDZE 5**

**Apt Elev 6**

**MALSR**

**Missed Approach**

- Climb to 1200 then climbing right turn to 3000 direct DELVE and hold.

**ASOS**

- 119.275

**HOUSTON APP CON**

- 134.45 284.0

**GALVESTON TOWER**

- 120.575 (CTAF) 118.625

**GND CON**

- 135.35

**CLNC DEL**

- 120.575 (CTAF) 118.625

**UNICOM**

- 123.05

**Radar Required**

- Jacksonville, FL, 2013

**Category**

- A: 205-1/2, 200 (200-1/2)
- B: 342-5/8, 337 (400-5/8)
- C: 460-1/2, 455 (500-1/2)
- D: 460-7/8, 455 (500-7/8)
- E: 500-1, 494 (500-1)

**Table**

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<th>C</th>
<th>D</th>
<th>E</th>
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<tbody>
<tr>
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<td>205-1/2</td>
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<td>200-1/2</td>
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<td>337</td>
<td>400-5/8</td>
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<td></td>
</tr>
<tr>
<td>LNAV MDA</td>
<td>460-1/2</td>
<td>455</td>
<td>500-1/2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CIRCLING</td>
<td>500-1</td>
<td>494</td>
<td>500-1</td>
<td>500-1/2</td>
<td>554</td>
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**SCHOLES INTL AT GALVESTON (GLS)**

**RNAV (GPS) RWY 14**

**GALVESTON, TEXAS**

**Amdt 1A 02APR15**

**2013**
Circling NA east of Rwy 18 and northeast of Rwy 32.

MISSED APPROACH: Climb to 800 then climbing right turn to 3000 direct DELVE and hold.

---

**RNAV (GPS) RWY 18**

**SCHOLES INTL AT GALVESTON (GLS)**

**COORDINATES**

179° to RW18

**ELEV 6 D TDZE 6**

**MAP**

- **RAWUF**
- **SEPOY**
- **TARCU**
- **OMEHU**
- **DELVE**

**MAP LEGEND**

- 3000 to 2000
- 2000 to 1800
- 1800 to 179°
- 179° to 100

**MAP INSTRUCTIONS**

- 1 NM to RW18
- 2.7 NM to RW18
- 3.0° TCH 44
- 179°

**MAP NOTES**

- 2000 to 269°
- 800 to 3000 to DELVE

---

**COORDINATES**

- **ASOS**: 119.275
- **HOUSTON APP CON**: 134.45 284.0
- **GALVESTON TOWER**: 120.575
- **GND CON**: 118.625
- **CLNC DEL**: 135.35
- **UNICOM**: 123.05

**AIRPORT INFORMATION**

- **GALVESTON, TEXAS**
- **SCHOLES INTL AT GALVESTON**
- **GLS**

**SCHOLARS INTL AT GALVESTON**

**UNICOM**

- 120.575

---

**RNAV GPS Rwy 18**

- **1800**
- **GALVESTON, TEXAS**
- **SDN**

---

**RNAV GPS Rwy 18**

- **TARCU**
- **ORD**
- **REIL**
- **WY**
- **RETE**

**MISSED APPROACH FIX**

- **TARCU**
- **TARCU**
- **ORD**
- **ORD**

**MISSED APPROACH**

- Climb to 800 then climbing right turn to 3000 direct DELVE and hold.

---

**AMDT 2B 30JAN20**

**SC-5, 07 OCT 2021 to 02 DEC 2021**

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**29°16’N-94°52’W**
When VGSI inop, Straight-in/Circling Rwy 36 procedure NA at night. Circling NA east of Rwy 18.
When local altimeter setting not received, use William P Hobby altimeter setting and increase all MDA.
Increase LP Cat C/D/E visibility to 1 ½ mile, LNAV Cat C/D/E visibility to 1 ½ mile, and Circling Cat E visibility to 2½ mile.

### When VGSI inop
- Straight-in/Circling Rwy 36 procedure NA at night.
- Circling NA east of Rwy 18.
- When local altimeter setting not received, use William P Hobby altimeter setting and increase all MDA.
- Increase LP Cat C/D/E visibility to 1 ½ mile, LNAV Cat C/D/E visibility to 1 ½ mile, and Circling Cat E visibility to 2½ mile.

### MDA RW36 25 NM
- 3100

### ASOS
- 119.275

### HOUSTON APP CON
- 134.45 284.0

### GALVESTON TOWER *
- 120.575 (CTAF)

### GND CON
- 118.625

### CLNC DEL
- 135.35

### UNICOM
- 123.05

### Radar Required

### Missed Approach Fix
- 4 NM

### Unicom
- 123.05

### Category
- A
- B
- C
- D
- E

### LP MDA
- 440-1
- 435 (500-1)
- 440-1 ½
- 435 (500-1 ½)

### LNAV MDA
- 460-1
- 455 (500-1)
- 460-1 ½
- 455 (500-1 ½)

### Circling
- 500-1
- 494 (500-1)
- 500-1 ½
- 554 (600-2)
- 620-2 ½

### SC-5, 07 OCT 2021 to 02 DEC 2021

### SCOLES INTL AT GALVESTON (G.L.S)

### RNAV (GPS) RWY 36

### GALVESTON, TEXAS

### Amdt 1A 02APR15

### 29°16'N-94°52'W
CAUTION: BE ALERT TO RUNWAY CROSSING CLEARANCES. READBACK OF ALL RUNWAY HOLDING INSTRUCTIONS IS REQUIRED.
NOTE: RADAR required.

NOTE: The following TRANSITIONS are ATC assigned only. Do not file.

CRESTVIEW TRANSITION: (For aircraft being weather rerouted to join a jet route off CEW VORTAC or overflying CEW VORTAC to join a direct route).
MC COMB TRANSITION: (For aircraft being weather rerouted to join a jet route off MCB VORTAC or overflying MCB VORTAC to join a direct route).

TAKEOFF MINIMUMS
Rwys 14, 18, 32, 36: Standard.

(NARRATIVE ON FOLLOWING PAGE)
DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAYS 14, 18, 36: When entering controlled airspace, climb on assigned heading for RADAR vectors to RAECN INT. Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure, thence . . .

TAKEOFF RUNWAY 32: Climb on heading 318° to 800 before turning. When entering controlled airspace, climb on assigned heading for RADAR vectors to RAECN INT. Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure, thence. . . .

. . . . on IAH R-028 to VELCO INT, cross VELCO INT at or above 10000, then right turn on LFK R-082 and AEX R-265 to AEX VORTAC.

CRESTVIEW TRANSITION (AEX3.CEW): From over AEX VORTAC on AEX R-085 and MCB R-266 to MCB VORTAC, then on MCB R-095 and CEW R-277 to CEW VORTAC.

MC COMB TRANSITION (AEX3.MCB): From over AEX VORTAC on AEX R-085 and MCB R-266 to MCB VORTAC.
NOTE: Chart not to scale.

NOTE: RNAV 1.

NOTE: RADAR required.

NOTE: DME/DME/IRU or GPS required.

NOTE: RNAV 1.

DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAY 14: Climb on heading 138° to 520 for RADAR vectors to DREMR, thence . . . .

TAKEOFF RUNWAY 18: Climb on heading 179° to 520 for RADAR vectors to DREMR, thence . . . .

TAKEOFF RUNWAY 32: Climb on heading 318° to 520 for RADAR vectors to DREMR, thence . . . .

TAKEOFF RUNWAY 36: Climb on heading 359° to 520 for RADAR vectors to DREMR, thence . . . .

...on track 345° to LITLD, then on track 346° to BLTWY, then on (transition). Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure.

CRIED TRANSITION (BLTWY7.CRIED)

NOTE: Chart not to scale.
**BORRN FOUR DEPARTURE (RNAV)**

**NOTE:** Chart not to scale.

**ASOS**
119.275
CLNC DEL (When hr w: closed)
135.35
GND CON
118.625
GALVESTON TOWER *
120.575 (CTAF)
HOUSTON DEP CON
134.45  284.0

**TOP ALTITUDE: ASSIGNED BY ATC**

**JUNCTION JCT**

12000 279°
*3700 (77)

**CRGER**

12000 279°
*3100 (33)

**PSTUR**

12000 275°
*2100 (34)

**PUFER**

12000 275°
*2100 (34)

**ZUUU**

8800 271°
*2800 (31)

**MNUR**

10600 275°
*2100 (34)

**BOCCK**

7600 271°
*1600 (16)

**DILRE**

4400 267°
*1600 (7)

**BORRN**

12000 275°
*3700

**DILRE**

12000 275°
*2100

**NOTE:**
- DME/DME/IRU or GPS required.
- RADAR required.
- RNAV 1.
- CRGER TRANSITION ATC assigned only for aircraft departing 54T, AXH, EFD, GLS, HPY, IWS, LBX, LVJ, SGR, TME, T00, T41.

** TAKEOFF MINIMUMS:**
Rwy 14, 18, 32, 36: Standard with minimum climb of 500' per NM to 520.

**NOTE:**
- CRGER TRANSITION ATC assigned only for aircraft departing 54T, AXH, EFD, GLS, HPY, IWS, LBX, LVJ, SGR, TME, T00, T41.

**SAN ANTONIO SAT**

12000 261°
*2800 (35)

**MARCS**

12000 261°
*2800 (35)

**FOWL**

12000 278°
*2900 (33)

**HAYYY**

12000 275°
*2100 (34)

**WAILN**

10800 270°
*1800 (20)

**BOCCK**

7700 271°
*1700 (17)

**WEED**

**BORN**

12000 275°
*3700

**BOCCK**

12000 275°
*2100

**WAILN**

10800 270°
*1800 (20)

**NOTE:**
- Chart not to scale.
DEPARTURE ROUTE DESCRIPTION

TAKEOFF RWY 14: Climb on heading 138° to 520, for RADAR vectors to BORRN, thence. . .
TAKEOFF RWY 18: Climb on heading 179° to 520, for RADAR vectors to BORRN, thence. . .
TAKEOFF RWY 32: Climb on heading 318° to 520, for RADAR vectors to BORRN, thence. . .
TAKEOFF RWY 36: Climb on heading 359° to 520, for RADAR vectors to BORRN, thence. . .

. . .on track 267° to DILRE, then on (transition). Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure.

CRGER TRANSITION (BORRN4.CRGER)
JUNCTION TRANSITION (BORRN4.JCT)
MNURE TRANSITION (BORRN4.MNURE)
SAN ANTONIO TRANSITION (BORRN4.SAT)
WAILN TRANSITION (BORRN4.WAILN)
NOTE: RADAR required.

TAKEOFF MINIMUMS
Rwys 14, 18, 32, 36: Standard.

DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAYS 14, 18, 36: When entering controlled airspace, climb on assigned heading for RADAR vectors to LITLD INT. Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure, thence . . . .

TAKEOFF RUNWAY 32: Climb on heading 318° to 800 before turning. When entering controlled airspace, climb on assigned heading for RADAR vectors to LITLD INT. Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure, thence . . . .

. . . . on IAH R-344 to STELL INT, then on IAH R-344 to CRIED INT, then left turn on CQY R-144 to CQY VORTAC.
NOTE: Radar required.
NOTE: For aircraft destined KMEM or filed via Q32 or J42.

NOTE: Chart not to scale.

(NARRATIVE ON FOLLOWING PAGE)
DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAYS 14, 18, 36: When entering controlled airspace, climb on assigned heading for RADAR vectors to RAECN INT. Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure, thence. . . .

TAKEOFF RUNWAY 32: Climb on heading 318° to 800 before turning. When entering controlled airspace, climb on assigned heading for RADAR vectors to RAECN INT. Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure, thence. . . .

. . . .on IAH R-028 and the ELD R-208 to ELD VOR/DME, cross VELCO INT at or above 10000.
NOTE: Radar required. For aircraft destined for the DFW terminal area only.

**DEPARTURE ROUTE DESCRIPTION**

**TAKEOFF RUNWAYS 14, 18, 36:** When entering controlled airspace, climb on assigned heading for RADAR vectors to MONNT INT, maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure. Thence . . . .

**TAKEOFF RUNWAY 32:** Climb on heading 318° to 800 before turning. When entering controlled airspace, climb on assigned heading for RADAR vectors to MONNT INT. Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure. Thence . . . .

. . . . on IAH R-358 to cross GIFFA INT at or above 10000.

**GIFFA ONE DEPARTURE**

**GIFFA ONE DEPARTURE**

**SCHOLES INTL AT GALVESTON (GLS)**

**SCHOLES INTL AT GALVESTON (GLS)**

**AL-164 (FAA)**

**GALVESTON, TEXAS**

**GALVESTON, TEXAS**

**SC-5, 07 OCT 2021 to 02 DEC 2021**

**SC-5, 07 OCT 2021 to 02 DEC 2021**

**159**
NOTE: RNAV 1.
NOTE: RADAR required.
NOTE: ATC assigned only.
NOTE: DME/DME/IRU or GPS required.
NOTE: For non-GPS equipped aircraft, LCH, LLA, TBD, and LEV DME’s must be operational.

**Takeoff Minimums**
Rwys 14, 18, 32, 36: Standard with minimum climb of 500’ per NM to 520.

**Departure Route Description**

**Takeoff Runway 14:** Climb on heading 138° to 520, for RADAR vectors to VUH VOR/DME, thence . . . .

**Takeoff Runway 18:** Climb on heading 179° to 520, for RADAR vectors to VUH VOR/DME, thence . . . .

**Takeoff Runway 32:** Climb on heading 318° to 520, for RADAR vectors to VUH VOR/DME, thence . . . .

**Takeoff Runway 36:** Climb on heading 359° to 520, for RADAR vectors to VUH VOR/DME, thence . . . .

. . . . on track 118° to HOODO, then on (transition). Maintain ATC assigned altitude.
Expect filed altitude 10 minutes after departure.

**Bowfn Transition (HOODO7.BOWFN)**
**CFOOD Transition (HOODO7.CFOOD)**
**Harvey Transition (HOODO7.HRV)**
**Leeville Transition (HOODO7.LEV)**
**SBird Transition (HOODO7.SBIRD)**
INDIE EIGHT DEPARTURE (RNAV)

TOP ALTITUDE: ASSIGNED BY ATC

TAKEOFF MINIMUMS
Rwys 14, 18, 32, 36:
Standard with minimum climb of 500' per NM to 520.

DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAY 14: Climb on heading 138° to 520 for
RADAR vectors to RENNK, thence . . . .
TAKEOFF RUNWAY 18: Climb on heading 179° to 520 for
RADAR vectors to RENNK, thence . . . .
TAKEOFF RUNWAY 32: Climb on heading 318° to 520 for
RADAR vectors to RENNK, thence . . . .
TAKEOFF RUNWAY 36: Climb on heading 359° to 520 for
RADAR vectors to RENNK, thence . . . .

. . . . on track 016° to COLET, then on track 025° to SUSHI,
then on track 026° to WWELL, then on track 026° to INDIE,
then on (transition). Maintain ATC assigned altitude. Expect
filed altitude 10 minutes after departure.

TPAKK TRANSITION (INDIE8.TPAKK)

NOTE: Chart not to scale.
DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAYS 14, 18, 36: When entering controlled airspace, climb on assigned heading for RADAR vectors to SHYNR INT. Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure, thence . . . .

TAKEOFF RUNWAY 32: Climb on heading 318° to 800 before turning. When entering controlled airspace, climb on assigned heading for RADAR vectors to SHYNR INT. Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure, thence . . . .

. . . . on IDU R-085 to BOCCK INT, then on IDU R-085 to IDU VORTAC.

CENTEX TRANSITION (IDU1.CWK): From over IDU VORTAC on IDU R-289 and CWK R-110 to CWK VORTAC.

CORPUS CHRISTI TRANSITION (IDU1.CRP): From over IDU VORTAC on IDU R-259 to MARCS INT, then on SAT R-056 to SAT VORTAC, then on SAT R-145 and CRP R-324 to CRP VORTAC.

JUNCTION TRANSITION (IDU1.JCT): From over IDU VORTAC on IDU R-276 and JCT R-094 to JCT VORTAC.

LAREDO TRANSITION (IDU1.LRD): From over IDU VORTAC on IDU R-259 to MARCS INT, then on SAT R-056 to SAT VORTAC, then on SAT R-194 and LRD R-012 to LRD VORTAC.
**KARRR SIX DEPARTURE (RNAV)**

**SCHOLES INTL AT GALVESTON (GLS)**

---

**ASOS**
119.275
CNCL DEL (When twr closed)
135.35
GND CON
118.625
GALVESTON TOWER *
120.575 (CTAF)
HOUSTON DEP CON
134.45 284.0

---

**NOTE:** Chart not to scale.

---

**TOP ALTITUDE: ASSIGNED BY ATC**

---

**NOTE:** DME/DME/IRU or GPS required.
**NOTE:** RADAR required.
**NOTE:** RNAV 1.

---

**TAKEOFF MINIMUMS**

Rwys 14, 18, 32, 36: Standard with minimum climb of 500' per NM to 520.

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**SC-5, 07 OCT 2021 to 02 DEC 2021**
**DEPARTURE ROUTE DESCRIPTION**

**TAKEOFF RWY 14:** Climb on heading 138° to 520, for RADAR vectors to KARRR, thence. . . .

**TAKEOFF RWY 18:** Climb on heading 179° to 520, for RADAR vectors to KARRR, thence. . . .

**TAKEOFF RWY 32:** Climb on heading 318° to 520, for RADAR vectors to KARRR, thence. . . .

**TAKEOFF RWY 36:** Climb on heading 359° to 520, for RADAR vectors to KARRR, thence. . . .

. . . . on track 218° to KAVCY, then on (transition). Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure.

**CORPUS CHRISTI TRANSITION (KARRR6.CRP)**

**PALACIOS TRANSITION (KARRR6.PSX)**

**TRUAX TRANSITION (KARRR6.NGP)**

**WWREN TRANSITION (KARRR6.WWREN)**

**YOMOM TRANSITION (KARRR6.YOMOM)**
NOTE: Chart not to scale.

(TOP ALTITUDE: ASSIGNED BY ATC)

ARDMORE
116.7
ADM
Chan 114
N34°12.69' - W97°10.10'
L-17, H-6

RANGER
115.7
FUZ
Chan 104
N32°53.37' - W97°10.77'
L-17, H-6

DOLEY
N32°11.35'
W96°13.09'
(81)

Cedar Creek
114.8
CQY
Chan 98
N32°11.14' - W96°14.05'
L-17, H-6

Waco
115.3
ACT
Chan 100
N31°39.74' - W97°16.14'

WLLIS
N30°32.08'
W95°39.10'

NOTE: RADAR required.

NOTE: Except for aircraft destined ACT or the DFW terminal area,
all aircraft filing the LEONA SID must file one of the published
transitions via FUZ (LOA4.FUZ), ADM (LOA4.ADM), or
BYP (LOA4.BYP).

NOTE: RANGER TRANSITION: For aircraft overflying west/northwest of
the DFW terminal area FL240 and above.

NOTE: ARDMORE TRANSITION: For aircraft overflying north/northwest of
the DFW terminal area FL240 and above.

NOTE: BONHAM TRANSITION: For aircraft overflying/landing TUL
VORTAC FL240 and above.

NOTE: Takeoff minimums:
Rwy 14, 18, 32, 36: Standard.

(NARRATIVE ON FOLLOWING PAGE)
TAKEOFF RUNWAYS 14, 18, 36: When entering controlled airspace, climb on assigned heading for RADAR vectors to WLLIS INT. Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure, thence . . . .

TAKEOFF RUNWAY 32: Climb on heading 318° to 800 before turning. When entering controlled airspace, climb on assigned heading for RADAR vectors to WLLIS INT. Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure, thence . . . .

. . . . on LOA R-147 to LOA VORTAC.

ARDMORE TRANSITION (LOA4.ADM): From over LOA VORTAC on LOA R-334 to DOLEY INT, then on ADM R-156 to ADM VORTAC.

BONHAM TRANSITION (LOA4.BYP): From over LOA VORTAC on LOA R-341 and CQY R-163 to CQY VORTAC, then on BYP R-173 to BYP VORTAC.

RANGER TRANSITION (LOA4.FUZ): From over LOA VORTAC on LOA R-334 to DOLEY INT, then on FUZ R-130 to FUZ VORTAC.
NOTE: Chart not to scale.

NOTE: RADAR and DME required.

NOTE: For aircraft destined LIT or overflying LIT or PXV.

TOP ALTITUDE: ASSIGNED BY ATC

LITTLE ROCK
113.9 LIT
N34°40.66’
W92°10.83’
L-18, H-6

SKKIP
N31°14.91’
W94°39.45’

LUFKIN
112.1 LFK
N31°09.75’
W94°43.01’

SUSHI
N30°35.48’
W95°04.39’

COLET
N30°25.96’
W95°09.66’

KYANN
N30°15.53’
W95°13.96’

HUMBLE
116.6 IAH

DAISETTA
116.9 DAS

TAKOFF MINIMUMS
Rwys 14, 18, 32, 36: Standard.

(NARRATIVE ON FOLLOWING PAGE)
DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAYS 14, 18, 36: When entering controlled airspace, climb on assigned heading for RADAR vectors to KYANN INT. Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure, thence . . .

TAKEOFF RUNWAY 32: Climb on heading 318° to 800 before turning. When entering controlled airspace, climb on assigned heading for RADAR vectors to KYANN INT. Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure, thence . . .

. . . on IAH R-013 to COLET INT, then right turn on LFK R-203 to LFK VORTAC.

LITTLE ROCK TRANSITION (LFK3.LIT): From over LFK VORTAC on LFK R-026 to SKKIP INT, then on LFK R-026 and LIT R-207 to LIT VORTAC.
LURIC EIGHT DEPARTURE (RNAV)

TOP ALTITUDE: ASSIGNED BY ATC

NOTE: RADAR required.
NOTE: DME/DME/IRU or GPS required.
NOTE: RNAV 1.

NOTE: Chart not to scale.

DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAY 14: Climb on heading 138° to 520 for RADAR vectors to KNTKY, thence . . . .
TAKEOFF RUNWAY 18: Climb on heading 179° to 520 for RADAR vectors to KNTKY, thence . . . .
TAKEOFF RUNWAY 32: Climb on heading 318° to 520 for RADAR vectors to KNTKY, thence . . . .
TAKEOFF RUNWAY 36: Climb on heading 359° to 520 for RADAR vectors to KNTKY, thence . . . .

. . . . on track 032° to PEETY, then on track 032° to DARTR, then on track 031° to MUSIQ, then on track 031° to CLAVN, then on track 031° to VELCO, then on track 031° to ENJOY, then on track 031° to LURIC, then on (transition). Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure.

HAWES TRANSITION (LURIC8.HAWES)
ORRTH TRANSITION (LURIC8.ORRTH)
ASOS 119.275  
CLNC DEL (When twr closed) 135.35  
GND CON 118.625  
GALVESTON TOWER * 120.575 (CTAF)  
HOUSTON DEP CON 134.45 284.0

NOTE: DME/DME/IRU or GPS required.  
NOTE: RADAR required.  
NOTE: RNAV 1.  
NOTE: GUSTI and LCH TRANSITIONS ATC assigned only for aircraft departing AXH, EFD, GLS, HPY, IWS, LBX, LVJ, SGR, TME, T00, T41 and 54T.

**DEPARTURE ROUTE DESCRIPTION**

**TAKEOFF RWY 14:** Climb on heading 138° to 520 for RADAR vectors to MMALT, thence . . .  
**TAKEOFF RWY 18:** Climb on heading 179° to 520 for RADAR vectors to MMALT, thence . . .  
**TAKEOFF RWY 32:** Climb on heading 318° to 520 for RADAR vectors to MMALT, thence . . .  
**TAKEOFF RWY 36:** Climb on heading 359° to 520 for RADAR vectors to MMALT, thence . . .

. . . on track 086° to MOOKI, then on (transition). Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure.

**GUSTI TRANSITION (MMALT5.GUSTI)**  
**LAKE CHARLES TRANSITION (MMALT5.LCH)**  
**WHITE LAKE TRANSITION (MMALT5.LLA)**
DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAYS 14, 18, 36: When entering controlled airspace, climb on assigned heading for RADAR vectors to SKUBA INT. Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure, thence.

TAKEOFF RUNWAY 32: Climb on heading 318° to 800 before turning. When entering controlled airspace, climb on assigned heading for RADAR vectors to SKUBA INT. Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure, thence.

...on PSX R-038 to PSX VORTAC.

FORT STOCKTON TRANSITION (PSX2.FST): From over PSX VORTAC on PSX R-253 and THX R-073 to THX VORTAC, then on THX R-259 and COT R-078 to COT VORTAC, then on COT R-318 and RSG R-136 to RSG VORTAC, then on RSG R-283 and FST R-100 to FST VORTAC.

SAN ANTONIO TRANSITION (PSX2.SAT): From over PSX VORTAC on PSX R-253 and THX R-073 to THX VORTAC, then on SAT R-158 to SAT VORTAC.
STRYA EIGHT DEPARTURE (RNAV)

NOTE: Chart not to scale.

NOTE: RADAR required.
NOTE: DME/DME/IRU or GPS required.
NOTE: RNAV 1.

TOP ALTITUDE: ASSIGNED BY ATC

TAKEOFF MINIMUMS

Rwys 14, 18, 32, 36: Standard with minimum climb of 500’ per NM to 520.

DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAY 14: Climb on heading 138° to 520 for RADAR vectors to KNTKY, thence...

TAKEOFF RUNWAY 18: Climb on heading 179° to 520 for RADAR vectors to KNTKY, thence...

TAKEOFF RUNWAY 32: Climb on heading 318° to 520 for RADAR vectors to KNTKY, thence...

TAKEOFF RUNWAY 36: Climb on heading 359° to 520 for RADAR vectors to KNTKY, thence...

...on track 032° to PEETY, then on track 032° to DARTR, then on track 031° to MUSIQ, then on track 031° to CLAVN, then on track 060° to STRYA, then on (transition). Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure.

DPATY TRANSITION (STRYA8.DPATY)

JBULL TRANSITION (STRYA8.JBULL)
DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAY 14: Climb on heading 138° to 520 for RADAR vectors to BBYSE, thence.

TAKEOFF RUNWAY 18: Climb on heading 179° to 520 for RADAR vectors to BBYSE, thence.

TAKEOFF RUNWAY 32: Climb on heading 318° to 520 for RADAR vectors to BBYSE, thence.

TAKEOFF RUNWAY 36: Climb on heading 359° to 520 for RADAR vectors to BBYSE, thence.

.on track 331° to SPICR, then on track 331° to WLLIS, then on track 332° to STYCK, then
.on (transition). Maintain ATC assigned altitude. Expect filed altitude 10 minutes after
departure.

DOLEY TRANSITION (STYCK8.DOLEY)

WTSON TRANSITION (STYCK8.WTSON)
NOTE: GPS required.
NOTE: RADAR required.
NOTE: RNAV 1.

NOTE: Chart not to scale.

DEPARTURE ROUTE DESCRIPTION

TAKEOFF RWY 14: Climb on heading 138° to 520, for RADAR vectors to WATFO, thence. . . .
TAKEOFF RWY 18: Climb on heading 179° to 520, for RADAR vectors to WATFO, thence. . . .
TAKEOFF RWY 32: Climb on heading 318° to 520, for RADAR vectors to WATFO, thence. . . .
TAKEOFF RWY 36: Climb on heading 359° to 520, for RADAR vectors to WATFO, thence. . . .

. . . on track 141° to VUH VOR/DME, then on (transition). Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure.

ANKRR TRANSITION (WATFO5.ANKRR)
KELPP TRANSITION (WATFO5.KELPP)
MUSYL TRANSITION (WATFO5.MUSYL)

TAKEOFF MINIMUMS
Rwy 14, 18, 32, 36: Standard with minimum climb of 500' per NM to 520.
DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAY 14: Climb on heading 138° to 520 for RADAR vectors to WYLSN, thence. . . .

TAKEOFF RUNWAY 18: Climb on heading 179° to 520 for RADAR vectors to WYLSN, thence. . . .

TAKEOFF RUNWAY 32: Climb on heading 318° to 520 for RADAR vectors to WYLSN, thence. . . .

TAKEOFF RUNWAY 36: Climb on heading 359° to 520 for RADAR vectors to WYLSN, thence. . . .

. . . . on track 360° to MONNT, then on (transition). Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure.

GIFFA TRANSITION (WYLSN8.GIFFA)
MAJKK TRANSITION (WYLSN8.MAJKK)
RNAV (GPS) RWY 17
GIDDINGS-LEE COUNTY (GYB)

MISSED APPROACH:
Climb to 2500 direct and hold.

AWOS-3 119,225
AUSTIN APP CON 127,225 317,65
UNICOM 123,05 (CTAF)

MISSED APCH FIX:
RAMOS (FAA)
HARQE (FAF)
JAYJO (IAF)

HOLDING PATTERN:
2300 348° to RAMOS
2300 168° to HARQE

4 NM

MIRL Rwy 17: 35
30°10'N-96°59'W

GIDDINGS, TEXAS
Orig-A 26JUN14
RNAV (GPS) RWY 35
GIDDINGS-LEE COUNTY (GYB)

AWOS-3
119.225

AUSTIN APP CON
127.225 317.65

UNICOM
123.05 (CTAF)

MISSED APPROACH: Climb to 2500 direct PPENS and hold.

DME/DME RNP-0.3 NA. Procedure NA at night. Helicopter visibility reduction below 1 SM NA. When local altimeter setting not received, use Austin-Bergstrom Intl altimeter setting and increase all MDA 100 feet; increase LNAV Cat C visibility ¼ mile.
Procedure NA at night. Helicopter visibility reduction below 1 SM NA. Use Austin-Bergstrom altimeter setting.

MISSED APPROACH: Climbing left turn to 2500 via IDU R-293 to IUKKA 20 DME and hold.

AWOS-3
119.225

AUSTIN APP CON
127.225 317.65

UNICOM
123.05 (CTAF)

Procedure
Turn NA

IDU 25

IUKKA 20

IDU 14

MIRL Rwy 17-35

GIDDINGS-LEE COUNTY (GYB)

SC-5, 07 OCT 2021 to 02 DEC 2021
**RNAV (GPS) RWY 18**

**HEARNE MUNI (LHB)**

**Category:**
- **A** (IF) JUPAX
- **B** (LHB) YORDU
- **C** (LHB) RUPOC
- **D** (LHB) CORAB

**MISSED APPROACH:** Climb to 2100 direct HISEM and hold.

**Systems:**
- LNAV/VNAV NA below -15°C or above 54°C.

**Apt Elev: 285 ft**

**Pos: 30°52'N-96°37'W**

**Origin: 16 JUL 2020**

**AWOS-3**
- **118.675**

**HOUSTON APP CON**
- **134.3 360.85**

**CTAF**
- **122.9**

**CTAF**
- **123.3**

**178° to RW18**

**RW18**
- **2 NM to WIGVU**
- **1.4 NM to YORDU**
- **463**
- **663**
- **686**
- **2600**
- **2600**
- **266° (10)**

**HISEM**
- **178°**

**LNAV/VNAV**
- **LNAV only**
- **RNAV (GPS) RWY 18**
- **RNAV (GPS) RWY 18**
- **RNAV (GPS) RWY 18**

**MISSED APPROACH FIX**
- **HISEM**
- **178°**
- **4 NM**

** CATEGORY**
- **A** 485-3/4 200 (200-3/4)
- **B** 583-1 298 (300-1)
- **C** 780-1 495 (500-1) 780-1 495 (500-1%)
- **D** 800-1 515 (600-1) 880-1 595 (600-1) 920-1 495 (700-1%)

**ELEV 285**

**TDZE 285**

**178°**

**2600**

**2100**

**2 NM to WIGVU**

**2 NM to RW18**

**1.4 NM to RW18**

**GP 3.00° TCH 40°**

**1 NM**

**4 NM**

**1053**

**2.6° 26°**

**18°**

**615**

**663**

**686**

**WIGVU**
- **2 NM to RW18**
- **1800**
- **178°**

**YORDU**
- **163**
- **615**
- **98**

**JUPAX**
- **2600**
- **2600**
- **266° (10)**

**CTAF 122.9**

**123.3**

**MIRL Rwy 18 36**

**MIRL Rwy 18 36 X 75**

**2300**

**2600**

**088° (10)**

**178° to RW18**

**2600**

**178°**

**2600**

**266° (10)**

**178°**

**1800**
RNAV (GPS) RWY 36
HEARNE MUNI (LHB)

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 College Station altimeter setting and increase all DA 55 feet and all MDA 60 feet. Increase LPV, LNAV/VNAV all CATs and LNAV CAT C visibility ½ mile. Increase Circling CAT C visibility ¼ mile. Baro-VNAV and VDP NA when using College Station altimeter setting.

MISSED APPROACH: Climb to
2600 direct JUPAX and hold.

AWOS-3
118.675

HOUSTON APP CON
134.3 360.85
CTAF 122.9

1270

(IAF) CAPEG

2600 direct JUPAX and hold.

RADAR REQUIRED

HEARNE, TEXAS
Orig-A 02APR15
ILS or LOC RWY 14
CONROE-NORTH HOUSTON RGNL (CXO)

ADDITIONS/CHANGES

ATIS 118.325
HOUSTON APP CON 119.7 281.4
CONROE TOWER * 124.125 (CTAF) 0
GND CON 120.45
CLNC DEL 120.45
CLNC DEL 119.55 (When twr closed)

MSCR 1/1

ATC DLY 2100 1.8 NM

Category

A
B
C
D
S-ILS 14
S-LOC 14
CIRCLING
S-LOC 14
CIRCLING

ZUDOP FIX MINIMUMS

HOUSTON, TEXAS
Almdt 3C 25APR19

30°21'N-95°25'W
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. Rwy 1 helicopter visibility reduction below 3/4 SM NA.

MISSED APPROACH: Climb to 2000 direct IPOME and hold.
For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -6°C (-22°F) or above 54°C (130°F). DME/DME RNP-0.3 NA.

LNAV only.

MISSED APPROACH: Climb to 700 then climbing left turn to 3100 direct CLEEP and hold.
HOUSTON, TEXAS
AL-5573 (FAA)

RNAV (GPS) RWY 19
CONROE-NORTH HOUSTON RGNL (CXO)

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. Rwy 19 helicopter visibility reduction below ½ SM NA.

MISSED APPROACH: Climb to 3100 direct JEVIB and left turn on track 077° to CLEEP and hold.

<table>
<thead>
<tr>
<th>ATIS</th>
<th>HOUSTON APP CON</th>
<th>CONROE TOWER</th>
<th>GND CON</th>
<th>CLINC DEL</th>
<th>CLINC DEL</th>
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<td>118.325</td>
<td>119.7 281.4</td>
<td>124.125 (CTAF)</td>
<td>120.45</td>
<td>120.45</td>
<td>119.55</td>
</tr>
</tbody>
</table>

3100 direct JEVIB and left turn 077° to CLEEP and hold.

LPV DA
LNAV/ VNAV DA
LNAV MDA
CIRCLING

30°21'N 95°25'W
CONROE-NORTH HOUSTON RGNL (CXO)
RNAV (GPS) RWY 19

HOUSTON, TEXAS
Orig A 22JUN17

SC-5, 07 OCT 2021 to 02 DEC 2021
RNAV (GPS) RWY 32
CONROE-NORTH HOUSTON RGNL (CXO)

For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -6°C (-22°F) or above 54°C (130°F). DME/DME RNP-0.3 NA. Rwy 32 helicopter visibility reduction below 1/4 SM NA.

MISSED APPROACH: Climb to 2100 direct AXTEP and hold.

ATIS 118.325
HOUSTON APP CON 119.7 281.4
CONROE TOWER 124.125 (CTAF)
GND CON 120.45
CLNC DEL 120.45
CLNC DEL 119.55 (When twr closed)

Amdt 2A 22JUN17

LC

RNAV (GPS) RWY 32
CONROE-NORTH HOUSTON RGNL (CXO)

30°21'N-95°25'W

187
AL-5573 (FAA)

**NDB RWY 14**

**CONROE-NORTH HOUSTON RGNL (CXO)**

**ATIS**

<table>
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<tr>
<th>ATIS</th>
<th>HOUSTON APP CON</th>
<th>CONROE TOWER</th>
<th>GND CON</th>
<th>CLNC DEL</th>
<th>CLNC DEL</th>
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<td>124.125 (CTAF)</td>
<td>120.45</td>
<td>120.45</td>
<td>119.55</td>
</tr>
</tbody>
</table>

**GND CON**

- CONROE TOWER
- Houston Center
- CONROE Tower
- Houston LMA

**MALSR**

- ALIBI LOM and hold.
- MISSED APPROACH: Climb to 1000 then climbing left turn to 2100 direct ALIBI LOM and hold.

**ATIS**

- 119.7
- 281.4
- 124.125 (CTAF)

**ELEV**

- 245

**TDZE**

- 236

**CATEGORY**

- A
- B
- C
- D

- S-14
- 880-¾
- 644 (700-¾)
- 880-¾
- 644 (700-¾)
- 880-¾
- 644 (700-¾)
- 880-¾
- 644 (700-¾)

- CIRCLING
- 880-1
- 635 (700-1)
- 880-1½
- 635 (700-1½)
- 880-1½
- 635 (700-1½)
- 880-1½
- 635 (700-1½)

**KNOTS**

- 60
- 90
- 120
- 150
- 180

**MIN:SEC**

- 5:06
- 3:24
- 2:33
- 2:02
- 1:42

**REMARKS**

- NAVASOTA
- Chan 106
- Amdt 3C  25APR19
- SC-5, 07 OCT 2021 to 02 DEC 2021
- HOUSTON, TEXAS 30°21’N-95°25’W
READBACK OF ALL RUNWAY HOLDING INSTRUCTIONS IS REQUIRED.

CAUTION: BE ALERT TO RUNWAY CROSSING CLEARANCES.
READBACK OF ALL RUNWAY HOLDING INSTRUCTIONS IS REQUIRED.
NOTE: RADAR required.

NOTE: The following TRANSITIONS are ATC assigned only. Do not file.

CRESTVIEW TRANSITION: (For aircraft being weather rerouted to join a jet route off CEW VORTAC or overflying CEW VORTAC to join a direct route).

MC COMB TRANSITION: (For aircraft being weather rerouted to join a jet route off MCB VORTAC or overflying MCB VORTAC to join a direct route).

TAKEOFF MINIMUMS
Rwys 1, 14, 19, 32: Standard.
ALEXANDRIA THREE DEPARTURE

DEPARTURE ROUTE DESCRIPTION

TAKEOFF ALL RUNWAYS: When entering controlled airspace, climb on assigned heading for RADAR vectors to RAECN INT. Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure, thence. . . .

. . . .on IAH R-028 to VELCO INT, cross VELCO INT at or above 10000, then right turn on LFK R-082 and AEX R-265 to AEX VORTAC.

CRESTVIEW TRANSITION (AEX3.CEW): From over AEX VORTAC on AEX R-085 and MCB R-266 to MCB VORTAC, then on MCB R-095 and CEW R-277 to CEW VORTAC.

MC COMB TRANSITION (AEX3.MCB): From over AEX VORTAC on AEX R-085 and MCB R-266 to MCB VORTAC.
BLTWY SEVEN DEPARTURE (RNAV)  
(BLTWY7.BLTWY) 07OCT21

NOTE: Chart not to scale.

NOTE: RADAR required.
NOTE: DME/DME/IRU or GPS required.
NOTE: RNAV 1.

DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAY 1: Climb on heading 012° to 760 for RADAR vectors to DREMR, thence . . .

TAKEOFF RUNWAY 14: Climb on heading 140° to 760 for RADAR vectors to DREMR, thence . . .

TAKEOFF RUNWAY 19: Climb on heading 192° to 760 for RADAR vectors to DREMR, thence . . .

TAKEOFF RUNWAY 32: Climb on heading 320° to 760 for RADAR vectors to DREMR, thence . . .

...on track 345° to LITLD, then on track 346° to BLTWY, then on (transition). Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure.

CRIED TRANSITION (BLTWY7.CRIED)
BORRN FOUR DEPARTURE

NOTE: Chart not to scale.

(NARRATIVE ON FOLLOWING PAGE)
DEPARTURE ROUTE DESCRIPTION

TAKEOFF RWY 1: Climb on heading 012° to 760, for RADAR vectors to BORRN, thence. . . .
TAKEOFF RWY 14: Climb on heading 140° to 760, for RADAR vectors to BORRN, thence. . . .
TAKEOFF RWY 19: Climb on heading 192° to 760, for RADAR vectors to BORRN, thence. . . .
TAKEOFF RWY 32: Climb on heading 320° to 760, for RADAR vectors to BORRN, thence. . . .

. . . .on track 267° to DILRE, then on (transition). Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure.

CRGER TRANSITION (BORRN4.CRGER)
JUNCTION TRANSITION (BORRN4.JCT)
MNURE TRANSITION (BORRN4.MNURE)
SAN ANTONIO TRANSITION (BORRN4.SAT)
WAILN TRANSITION (BORRN4.WAILN)
NOTE: Chart not to scale.

DEPARTURE ROUTE DESCRIPTION

TAKEOFF ALL RUNWAYS: When entering controlled airspace, climb on assigned heading for RADAR vectors to LITLD INT. Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure, thence . . . .

. . . . on IAH R-344 to STELL INT, then on IAH R-344 to CRIED INT, then left turn on CQY R-144 to CQY VORTAC.
NOTE: Chart not to scale.

DEPARTURE ROUTE DESCRIPTION

TAKEOFF ALL RUNWAYS: When entering controlled airspace, climb on assigned heading for RADAR vectors to RAECN INT. Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure, thence. . . .

. . . . on IAH R-028 and the ELD R-208 to ELD VOR/DME, cross VELCO INT at or above 10000.
**DEPARTURE ROUTE DESCRIPTION**

**TAKEOFF ALL RUNWAYS**: When entering controlled airspace, climb on assigned heading for RADAR vectors to MONNT INT. Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure, thence.

. . . . . on IAH R-358 to cross GIFFA INT at or above 10000.

**NOTE**: Chart not to scale.
INDIE EIGHT DEPARTURE (RNAV)

TAKEOFF RUNWAY 1: Climb on heading 012° to 760 for RADAR vectors to RENNK, thence . . . .
TAKEOFF RUNWAY 14: Climb on heading 140° to 760 for RADAR vectors to RENNK, thence . . . .
TAKEOFF RUNWAY 19: Climb on heading 192° to 760 for RADAR vectors to RENNK, thence . . . .
TAKEOFF RUNWAY 32: Climb on heading 320° to 760 for RADAR vectors to RENNK, thence . . . .

. . . . on track 016° to COLET, then on track 025° to SUSHI, then on track 026° to WWELL, then on track 026° to INDIE, then on (transition). Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure.

TPAKK TRANSITION (INDIE8.TPAKK)
DEPARTURE ROUTE DESCRIPTION

TAKEOFF ALL RUNWAYS: When entering controlled airspace, climb on assigned heading for RADAR vectors to SHYNR INT. Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure, thence . . . .

. . . . on IDU R-085 to BOCCK INT, then on IDU R-085 to IDU VORTAC.

CENTEX TRANSITION (IDU1.CWK): From over IDU VORTAC on IDU R-289 and CWK R-110 to CWK VORTAC.

CORPUS CHRISTI TRANSITION (IDU1.CRP): From over IDU VORTAC on IDU R-259 to MARCS INT, then on SAT R-056 to SAT VORTAC, then on SAT R-145 and CRP R-324 to CRP VORTAC.

JUNCTION TRANSITION (IDU1.JCT): From over IDU VORTAC on IDU R-276 and JCT R-094 to JCT VORTAC.

LAREDO TRANSITION (IDU1.LRD): From over IDU VORTAC on IDU R-259 to MARCS INT, then on SAT R-056 to SAT VORTAC, then on SAT R-194 and LRD R-012 to LRD VORTAC.
CONROE-NORTH HOUSTON RGNL (CXO)
HOUSTON, TEXAS

JUNCTION ONE DEPARTURE

NOTE: Chart not to scale.

DEPARTURE ROUTE DESCRIPTION

TAKEOFF ALL RUNWAYS: When entering controlled airspace, climb on assigned heading for RADAR vectors to CUZZZ INT. Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure, thence . . . .

. . . . on IAH R-276 and JCT R-090 to JCT VORTAC.

TOP ALTITUDE: ASSIGNED BY ATC

NOTE: For aircraft overflying JCT VORTAC on J86 filing FL240 or above.
之内

**NOTE:** Chart not to scale.

**NOTE:** DME/DME/IRU or GPS required.

**NOTE:** RADAR required.

**NOTE:** RNAV 1.
TAKEOFF RWY 1: Climb on heading 012° to 760, for RADAR vectors to KARRR, thence. . . .
TAKEOFF RWY 14: Climb on heading 140° to 760, for RADAR vectors to KARRR, thence. . . .
TAKEOFF RWY 19: Climb on heading 192° to 760, for RADAR vectors to KARRR, thence. . . .
TAKEOFF RWY 32: Climb on heading 320° to 760, for RADAR vectors to KARRR, thence. . . .

. . . . . on track 218° to KAVCY, then on (transition). Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure.

CORPUS CHRISTI TRANSITION (KARR6.CRP)
PALACIOS TRANSITION (KARR6.PSX)
TRUAX TRANSITION (KARR6.NGP)
WWREN TRANSITION (KARR6.WWREN)
YOMOM TRANSITION (KARR6.YOMOM)
NOTE: RADAR required.

DEPARTURE ROUTE DESCRIPTION

When entering controlled airspace, climb on assigned heading for RADAR vectors to WEDRI INT. Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure, thence. . . .

. . . .on IAH R-082 to HOURN INT, then on LCH R-253 to LCH VORTAC.

FIGHTING TIGERS TRANSITION (LCH5.LSU): From over LCH VORTAC on LCH R-070 and LSU R-252 to LSU VORTAC.

LAKE CHARLES FIVE DEPARTURE (LCH5.LCH) 22JUN17

HOUSTON, TEXAS

CONROE-NORTH HOUSTON RGNL (CXO)
LEONA FOUR DEPARTURE
(LOA4.LOA) 07OCT21

NOTE: Chart not to scale.

(NARRATIVE ON FOLLOWING PAGE)
DEPARTURE ROUTE DESCRIPTION

TAKEOFF ALL RUNWAYS: When entering controlled airspace, climb on assigned heading for RADAR vectors to WLLIS INT. Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure, thence . . . .

. . . . on LOA R-147 to LOA VORTAC.

ARDMORE TRANSITION (LOA4.ADM): From over LOA VORTAC on LOA R-334 to DOLEY INT, then on ADM R-156 to ADM VORTAC.

BONHAM TRANSITION (LOA4.BYP): From over LOA VORTAC on LOA R-341 and CQY R-163 to CQY VORTAC, then on BYP R-173 to BYP VORTAC.

RANGER TRANSITION (LOA4.FUZ): From over LOA VORTAC on LOA R-334 to DOLEY INT, then on FUZ R-130 to FUZ VORTAC.
NOTE: Chart not to scale.

NOTE: Radar and DME required.

NOTE: For aircraft destined LIT or overflying LIT or PXV.

TOP ALTITUDE: ASSIGNED BY ATC

LOWEST
113.9 LIT
Chan 86
N34°40.66’ W92°10.83’
L-18, H-6

SKKIP
N31°14.91’ W94°39.45’

LUFTIN
112.1 LFK
Chan 58
N31°09.75’ W94°43.01’

SUSHI
N30°35.48’ W95°04.39’

COLET
N30°26.96’ W95°09.66’

KYANN
N30°15.53’ W95°13.96’

HUMBLE
116.6 IAH
Chan 113

DAISSETA
116.9 DAS
Chan 116

LIT
113.9

NOTE: Chart not to scale.

TAKEOFF MINIMUMS
Rwys 1, 14, 19, 32: Standard.

(NARRATIVE ON FOLLOWING PAGE)
DEPARTURE ROUTE DESCRIPTION

TAKEOFF ALL RUNWAYS: When entering controlled airspace, climb on assigned heading for RADAR vectors to KYANN INT. Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure, thence . . .

. . . on IAH R-013 to COLET INT, then right turn on LFK R-203 to LFK VORTAC.

LITTLE ROCK TRANSITION (LFK3.LIT): From over LFK VORTAC on LFK R-026 to SKKIP INT, then on LFK R-026 and LIT R-207 to LIT VORTAC.
LURIC EIGHT DEPARTURE (RNAV)

ATIS
118.325
CLNC DEL
120.45
CLNC DEL
119.55 (when twr closed)
GND CON
120.45
CONROE TOWER ★
124.125 (CTAF)
HOUSTON DEP CON
119.7  281.4

NOTE:  RNAV 1.
NOTE:  DME/DME/IRU or GPS required.
NOTE:  RADAR required.

TOP ALTITUDE: ASSIGNED BY ATC

TAKEOFF MINIMUMS
Rwys 1, 14, 19, 32: Standard with minimum climb of 500’ per NM to 760.

DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAY 1: Climb on heading 012° to 760 for RADAR vectors to KNTKY, thence . . . . .
TAKEOFF RUNWAY 14: Climb on heading 140° to 760 for RADAR vectors to KNTKY, thence . . . . .
TAKEOFF RUNWAY 19: Climb on heading 192° to 760 for RADAR vectors to KNTKY, thence . . . . .
TAKEOFF RUNWAY 32: Climb on heading 320° to 760 for RADAR vectors to KNTKY, thence . . . . .

. . . . on track 032° to PEETY, then on track 032° to DARTR, then on track 031° to MUSIQ, then on track 031° to CLAVN, then on track 031° to VELCO, then on track 031° to ENJOY, then on track 031° to LURIC, then on (transition). Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure.

HAWES TRANSITION (LURIC8.HAWES)
ORRTH TRANSITION (LURIC8.ORRTH)

NOTE: Chart not to scale.
**DEPARTURE ROUTE DESCRIPTION**

**TAKEOFF RWY 1:** Climb on heading 012° to 760 for RADAR vectors to MMALT, thence . . .

**TAKEOFF RWY 14:** Climb on heading 140° to 760 for RADAR vectors to MMALT, thence . . .

**TAKEOFF RWY 19:** Climb on heading 192° to 760 for RADAR vectors to MMALT, thence . . .

**TAKEOFF RWY 32:** Climb on heading 320° to 760 for RADAR vectors to MMALT, thence . . .

. . .on track 086° to MOOKI, then on (transition). Maintain ATC assigned altitude.

Expect filed altitude 10 minutes after departure.

**GUSTI TRANSITION (MMALT5.GUSTI)**

**LAKE CHARLES TRANSITION (MMALT5.LCH)**

**WHITE LAKE TRANSITION (MMALT5.LLA)**
**Palacios Two Departure**

**(PSX2, PSX)**

- **Conroe-North Houston Rgnl (CX0)**
- **Houston, Texas (HAH)**

**Note:** Radar required.

**Note:** Chart not to scale.

**Narrative on following page**

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**Top Altitude:** Assigned by ATC

**Takeoff Minimums**

Rwys 1, 14, 19, 32: Standard.

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**FL180**

- **283° (150)**
- **259° (51)**
- **253° (99)**

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**(Narrative on following page)**

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**SC-5, 07 OCT 2021 to 02 DEC 2021**
DEPARTURE ROUTE DESCRIPTION

TAKEOFF ALL RUNWAYS: When entering controlled airspace, climb on assigned heading for RADAR vectors to SKUBA INT. Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure, thence...

on PSX R-038 to PSX VORTAC.

FORT STOCKTON TRANSITION (PSX2.FST): From over PSX VORTAC on PSX R-253 and THX R-073 to THX VORTAC, then on THX R-259 and COT R-078 to COT VORTAC, then on COT R-318 and RSG R-136 to RSG VORTAC, then on RSG R-283 and FST R-100 to FST VORTAC.

SAN ANTONIO TRANSITION (PSX2.SAT): From over PSX VORTAC on PSX R-253 and THX R-073 to THX VORTAC, then on SAT R-158 to SAT VORTAC.
**DEPARTURE ROUTE DESCRIPTION**

**TAKEOFF RUNWAY 1**: Climb on heading 012° to 760 for RADAR vectors to KNTKY, thence. . . .

**TAKEOFF RUNWAY 14**: Climb on heading 140° to 760 for RADAR vectors to KNTKY, thence. . . .

**TAKEOFF RUNWAY 19**: Climb on heading 192° to 760 for RADAR vectors to KNTKY, thence. . . .

**TAKEOFF RUNWAY 32**: Climb on heading 320° to 760 for RADAR vectors to KNTKY, thence. . . .

. . . . on track 032° to PEETY, then on track 032° to DARTR, then on track 031° to MUSIQ, then on track 031° to CLAVN, then on track 060° to STRYA, then on (transition). Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure.

**DPATY TRANSITION (STRYA8.DPATY)**

**JBULL TRANSITION (STRYA8.JBULL)**
DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAY 1: Climb on heading 012° to 760 for RADAR vectors to BBYSE, thence...
TAKEOFF RUNWAY 14: Climb on heading 140° to 760 for RADAR vectors to BBYSE, thence...
TAKEOFF RUNWAY 19: Climb on heading 192° to 760 for RADAR vectors to BBYSE, thence...
TAKEOFF RUNWAY 32: Climb on heading 320° to 760 for RADAR vectors to BBYSE, thence...
..on track 331° to SPICR, then on track 331° to WLLIS, then on track 332° to STYCK, then on (transition). Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure.

DOLEY TRANSITION (STYCK8.DOLEY)
WTSON TRANSITION (STYCK8.WTSON)

NOTE: Chart not to scale.
WATFO FIVE DEPARTURE (RNAV)

**TOP ALTITUDE: ASSIGNED BY ATC**

**NOTE:** GPS required.
**NOTE:** RADAR required.
**NOTE:** RNAV 1.

**DEPARTURE ROUTE DESCRIPTION**

**TAKEOFF RWY 1:** Climb on heading 012° to 760, for RADAR vectors to WATFO, thence. . . .
**TAKEOFF RWY 14:** Climb on heading 140° to 760, for RADAR vectors to WATFO, thence. . . .
**TAKEOFF RWY 19:** Climb on heading 192° to 760, for RADAR vectors to WATFO, thence. . . .
**TAKEOFF RWY 32:** Climb on heading 320° to 760, for RADAR vectors to WATFO, thence. . . .

. . . .on track 141° to VUH VOR/DME, then on (transition). Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure.

**ANKRR TRANSITION (WATFO5.ANKRR)**
**KELPP TRANSITION (WATFO5.KELPP)**
**MUSYL TRANSITION (WATFO5.MUSYL)**

**NOTE:** Chart not to scale.
WYLSN EIGHT DEPARTURE (RNAV)

TOP ALTITUDE: ASSIGNED BY ATC

NOTE: RADAR required.
NOTE: DME/DME/IRU or GPS required.
NOTE: RNAV 1.

TAKEOFF MINIMUMS
Rwys 1, 14, 19, 32: Standard with minimum climb of 500' per NM to 760.

DEPARTURE ROUTE DESCRIPTION
TAKEOFF RUNWAY 1: Climb on heading 012° to 760 for RADAR vectors to WYLSN, thence...
TAKEOFF RUNWAY 14: Climb on heading 140° to 760 for RADAR vectors to WYLSN, thence...
TAKEOFF RUNWAY 19: Climb on heading 192° to 760 for RADAR vectors to WYLSN, thence...
TAKEOFF RUNWAY 32: Climb on heading 320° to 760 for RADAR vectors to WYLSN, thence...

...on track 360° to MONNT, then on (transition). Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure.

GIFFA TRANSITION (WYLSN8.GIFFA)
MAJKK TRANSITION (WYLSN8.MAJKK)

NOTE: Chart not to scale.
Amdt 1D  13SEP18

Baro-VNAV and VDP NA when using George Bush Intcntl/Houston altimeter setting. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -4°C (25°F) or above 54°C (130°F). When local altimeter setting not received, use George Bush Intcntl/Houston altimeter setting and increase all DA 36 feet and all MDA 40 feet, increase LPV and LNAV/VNAV visibility all Cats ½ mile, LNAV visibility Cats C/D ¼ mile. Rwy 35L helicopter visibility reduction below ¾ SM NA. Circling NA to Rwy 17W and 35W.

**MISSED APPROACH:** Climb to 2000 direct OILER and hold.

Baro-VNAV and VDP NA when using George Bush Intcntl/Houston altimeter setting. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -4°C (25°F) or above 54°C (130°F). When local altimeter setting not received, use George Bush Intcntl/Houston altimeter setting and increase all DA 36 feet and all MDA 40 feet, increase LPV and LNAV/VNAV visibility all Cats ½ mile, LNAV visibility Cats C/D ¼ mile. Rwy 35L helicopter visibility reduction below ¾ SM NA. Circling NA to Rwy 17W and 35W.

**MISSED APPROACH:** Climb to 2000 direct OILER and hold.

Baro-VNAV and VDP NA when using George Bush Intcntl/Houston altimeter setting. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -4°C (25°F) or above 54°C (130°F). When local altimeter setting not received, use George Bush Intcntl/Houston altimeter setting and increase all DA 36 feet and all MDA 40 feet, increase LPV and LNAV/VNAV visibility all Cats ½ mile, LNAV visibility Cats C/D ¼ mile. Rwy 35L helicopter visibility reduction below ¾ SM NA. Circling NA to Rwy 17W and 35W.

**MISSED APPROACH:** Climb to 2000 direct OILER and hold.
When local altimeter setting not received, use George Bush Intcntl/Houston altimeter setting and increase all MDA 40 feet; increase S-LOC 17R Cats C/D visibility ½ mile. Circling NA to Rwys 17W and 35W. Rwy 17R helicopter visibility reduction below ¾ SM NA.

**MISSED APPROACH:** Climb to 1200 then climbing right turn to 2000 on heading 325° and IAH VORTAC R-293 to TNV VOR/DME and hold.

**ATIS**
- HOUSTON APP CON 127.4 354.1 EAST
- GND CON 121.8 239.0
- CLNC DEL 119.45
- UNICOM 122.95

**LOCALIZER 110.5**
- Chan 42

**HUMBLE**
- IAH 119.45

**NAVASOTA**
- 115.9 TNV 106

---

**WATER RWY**
17W-35W 2530 X 100
Rwy 17L-35R 3500 X 35

---

**FAF to MAP 4.9NM**

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**HOUSTON, TEXAS**
Amdt 3E 13SEP18

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**30°04'N-95°33'W**

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**DAVID WAYNE HOOKS MEML(DWH)**

---

**DWH**

---

**AL-5457 (FAA)**

---

**21112**

**LOC RWY 17R**

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**DAVID WAYNE HOOKS MEML(DWH)**

---

**LOC RWY 17R**

---

**LOC RWY 17R**

---

**HOUSTON, TEXAS**

---

**AL-5457 (FAA)**

---

**21112**

---

**LOC RWY 17R**

---

**DAVID WAYNE HOOKS MEML(DWH)**
Caution: Be alert to runway crossing clearances. Readback of all runway holding instructions is required.
**TOP ALTITUDE: ASSIGNED BY ATC**

**NOTE:** RADAR required.

**NOTE:** The following TRANSITIONS are ATC assigned only. Do not file.

**CRESTVIEW TRANSITION:** (For aircraft being weather rerouted to join a jet route off CEW VORTAC or overflying CEW VORTAC to join a direct route).

**MC COMB TRANSITION:** (For aircraft being weather rerouted to join a jet route off MCB VORTAC or overflying MCB VORTAC to join a direct route).

---

**TAKEOFF MINIMUMS**

Rwys 17L, 35R: NA - Environmental.

Waterway 17, 35: NA - Air Traffic.

Rwys 17R, 35L: Standard.

---

**NOTE:** Chart not to scale.

(NARRATIVE ON FOLLOWING PAGE)
DEPARTURE ROUTE DESCRIPTION

TAKEOFF ALL RUNWAYS: When entering controlled airspace, climb on assigned heading for RADAR vectors to RAECN INT. Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure, thence. . . .

. . . . on IAH R-028 to VELCO INT, cross VELCO INT at or above 10000, then right turn on LFK R-082 and AEX R-265 to AEX VORTAC.

CRESTVIEW TRANSITION (AEX3.CEW): From over AEX VORTAC on AEX R-085 and MCB R-266 to MCB VORTAC, then on MCB R-095 and CEW R-277 to CEW VORTAC.

MC COMB TRANSITION (AEX3.MCB): From over AEX VORTAC on AEX R-085 and MCB R-266 to MCB VORTAC.
NOTE: RADAR required.
NOTE: DME/DME/IRU or GPS required.
NOTE: RNAV 1.

TAKEOFF MINIMUMS
Rwys 17L, 35R: NA - Environmental.
Waterways 17, 35: NA - Air Traffic.
Rwys 17R, 35L: Standard with minimum climb of 500’ per NM to 660.

TAKEOFF RUNWAY 17R: Climb on heading 168° to 660 for RADAR vectors to DREMR, thence. . . .
TAKEOFF RUNWAY 35L: Climb on heading 348° to 660 for RADAR vectors to DREMR, thence. . . .

. . . on track 345° to LITLD, then on track 346° to BLTWY, then on (transition). Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure.

CRIED TRANSITION (BLTWY7.CRIED)

NOTE: Chart not to scale.
DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAY 17R: Climb on heading 168° to 660, for RADAR vectors to BORRN, thence. . . .
TAKEOFF RUNWAY 35L: Climb on heading 348° to 660, for RADAR vectors to BORRN, thence. . . .

. . . .on track 267° to DILRE, then on (transition). Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure.

CRGER TRANSITION (BORRN4.CRGER)
JUNCTION TRANSITION (BORRN4.JCT)
MNURE TRANSITION (BORRN4.MNURE)
SAN ANTONIO TRANSITION (BORRN4.SAT)
WAILN TRANSITION (BORRN4.WAILN)
NOTE: RADAR required.

TAKEOFF MINIMUMS
Rwys 17L, 35R: NA - Environmental.
Waterways 17, 35: NA - Air Traffic.
Rwys 17R, 35L: Standard.

TAKEOFF ALL RUNWAYS: When entering controlled airspace, climb on assigned heading for RADAR vectors to LITLD INT. Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure, thence . . .

. . . on IAH R-344 to STELL INT, then on IAH R-344 to CRIED INT, then left turn on CQY R-144 to CQY VORTAC.
NOTE: RADAR required.
NOTE: For aircraft destined KMEM or filed via Q32 or J42.

DEPARTURE ROUTE DESCRIPTION

TAKEOFF ALL RUNWAYS: When entering controlled airspace, climb on assigned heading for RADAR vectors to RAECN INT. Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure, thence. . . .

. . . on IAH R-028 and the ELD R-208 to ELD VOR/DME, cross VELCO INT at or above 10000.
NOTE: Chart not to scale.

DEPARTURE ROUTE DESCRIPTION

TAKEOFF ALL RUNWAYS: When entering controlled airspace, climb on assigned heading for RADAR vectors to MONNT INT. Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure, thence. . . .

. . . .on IAH R-358 to cross GIFFA INT at or above 10000.
NOTE: Chart not to scale.

DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAY 17R: Climb on heading 168° to 660, for RADAR vectors to VUH VOR/DME, thence... . . .

TAKEOFF RUNWAY 35L: Climb on heading 348° to 660, for RADAR vectors to VUH VOR/DME, thence... . . .

...on track 118° to HOODO, then on (transition). Maintain ATC assigned altitude.
Expect filed altitude 10 minutes after departure.

BOWFN TRANSITION (HOODO7.BOWFN)
CFOOD TRANSITION (HOODO7.CFOOD)
HARVEY TRANSITION (HOODO7.HRV)
LEEVILLE TRANSITION (HOODO7.LEV)
SBIRD TRANSITION (HOODO7.SBIRD)
**INDIE EIGHT DEPARTURE (RNAV)**

**TOP ALTITUDE: ASSIGNED BY ATC**

- **RENKK**
  - 3100
  - 10
- **COLET**
  - 3100
  - (10)
  - 025° to INDIE
- **SUSHI**
  - 3100
  - (39)
  - 026° to WWELL, then on track 016° to COLET, then on track 025° to INDIE.
- **TPAKK**
  - 3100
  - (23)

**NOTE:** RADAR required.

- **NOTE:** DME/DME/IRU or GPS required.
- **NOTE:** RNAV 1.
- **NOTE:** TPAKK TRANSITION: For non GPS equipped aircraft TNV DME must be operational.

**TAKEOFF MINIMUMS**

- Rwys 17L, 35R: NA-Environmental.
- Waterways 17, 35: NA-Air Traffic.
- Rwys 17R, 35L: Standard with minimum climb of 500’ per NM to 660.

**DEPARTURE ROUTE DESCRIPTION**

- **TAKEOFF RUNWAY 17R:** Climb on heading 168° to 660 for RADAR vectors to RENNK, thence . . .
- **TAKEOFF RUNWAY 35L:** Climb on heading 348° to 660 for RADAR vectors to RENNK, thence . . .

. . . on track 016° to COLET, then on track 025° to SUSHI, then on track 026° to WWELL, then on track 026° to INDIE, then on (transition). Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure.

- **TPAKK TRANSITION (INDIE8.TPAKK)**
NOTE: Chart not to scale.

JUNCTION
116.0 JCT
Chan 107
N30°35.88'W99°49.05'
L-19, H-7

STONESTONE
113.8 STV
Chan 85

CENTEX
112.8 CWK
Chan 75
N30°22.71'W97°31.79'
L-19-21, H-7

SAN ANTONIO
116.8 SAT
Chan 115
N29°38.64'W98°27.68'

MARKS
110.2 IDU
Chan 39
N29°53.87'W97°51.68'
N29°57.36'W96°33.73'

INDUSTRY
110.2 IDU
Chan 39

BOCCK
N29°56.20'W96°12.46'

NAVOSA
115.9 TNV
Chan 106
N29°55.64'W96°02.43'

SHYNR
N29°55.64'W96°02.43'

LAREDO
117.4 LRD
Chan 121
N27°28.72'W99°25.06'
L-20, H-7

CORPUS CHRISTI
115.5 CRP
Chan 102
N27°54.23'W97°26.69'
L-20-21, H-7

INDUSTRY ONE DEPARTURE
(TWENTYDO)
HOUSTON, TEXAS

NOTE: JUNCTION TRANSITION: For aircraft overflying JCT VORTAC on J2, J15 or J86.

NOTE: CENTEX TRANSITION: ATC assigned only for aircraft inbound to the DFW Metroplex area that are being rerouted due to bad weather.

NOTE: CORPUS CHRISTI TRANSITION: ATC assigned only.

NOTE: LAREDO TRANSITION: ATC assigned only.

NOTE: RADAR required.

TAKEOFF MINIMUMS
Rwys 17L, 35R, NA - Environmental.
Rwys 17L, 35R, NA - Environmental.
Rwys 17L, 35R, NA - Environmental.

WATERWAYS 17, 35, NA - AIR TRAFFIC.
Rwys 17R, 35L: Standard.

SC-5, 07 OCT 2021 to 02 DEC 2021
DEPARTURE ROUTE DESCRIPTION

TAKEOFF ALL RUNWAYS: When entering controlled airspace, climb on assigned heading for RADAR vectors to SHYNR INT. Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure, thence.

.on IDU R-085 to BOCCK INT, then on IDU R-085 to IDU VORTAC.

CENTEX TRANSITION (IDU1.CWK): From over IDU VORTAC on IDU R-289 and CWK R-110 to CWK VORTAC.

CORPUS CHRISTI TRANSITION (IDU1.CRP): From over IDU VORTAC on IDU R-259 to MARCS INT, then on SAT R-056 to SAT VORTAC, then on SAT R-145 and CRP R-324 to CRP VORTAC.

JUNCTION TRANSITION (IDU1.JCT): From over IDU VORTAC on IDU R-276 and JCT R-094 to JCT VORTAC.

LAREDO TRANSITION (IDU1.LRD): From over IDU VORTAC on IDU R-259 to MARCS INT, then on SAT R-056 to SAT VORTAC, then on SAT R-194 and LRD R-012 to LRD VORTAC.
NOTE: Chart not to scale.

DEPARTURE ROUTE DESCRIPTION

TAKING OFF ALl RUNWAYS, when entering controlled airspace, climb on assigned heading 10 minutes after departure, thence...

NOTE: For aircraft overflying JCT VORTAC RADAR required.

NOTE: Chart not to scale.

DEPARTURE MINIMUMS

Rwys 17, 35L: Standard.
Waterway 17, 35: NA - Environmental.
Waterway 17, 35: NA - Air Traffic.

NOTE: For aircraft overflying JCT VORTAC

TURNING POINT:

Sanzit Antonio Chan 115

SAN ANTONIO

Chan 115

NOTE: Chart not to scale.

DEPARTURE MINIMUMS

Rwys 17R, 35L: 211
HUMBLE

Chan 113

116.0 (CTAF) 354.1 (WEST)

123.4 354.1 (EAST)

118.4 281.4 (Rwys 35R/W)

123.8 257.7 (Rwys 17R/L)

HOUSTON DEP CON

119.45

CLNC DEL

281.375

ATIS

ASSIGNED BY ATC

SC-5, 07 OCT 2021 to 02 DEC 2021
**TAKING MINIMUMS**

Rwys 17L, 35R: NA - Environmental.
Waterways 17, 35: NA - Air Traffic.
Rwys 17R, 35L: Standard with minimum climb of 500' per NM to 660.

**NOTE:**
- DME/DME/IRU or GPS required.
- RADAR required.
- RNAV 1.

**(NARRATIVE ON FOLLOWING PAGE)**
DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAY 17R: Climb on heading 168° to 660, for RADAR vectors to KARRR, thence. . . .
TAKEOFF RUNWAY 35L: Climb on heading 348° to 660, for RADAR vectors to KARRR, thence. . . .

. . . .on track 218° to KAVCY, then on (transition). Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure.

CORPUS CHRISTI TRANSITION (KARRR6.CRP)
PALACIOS TRANSITION (KARRR6.PSX)
TRUAX TRANSITION (KARRR6.NGP)
WWREN TRANSITION (KARRR6.WWREN)
YOMOM TRANSITION (KARRR6.YOMOM)
LAKE CHARLES FIVE DEPARTURE

DEPARTURE ROUTE DESCRIPTION

When entering controlled airspace, climb on assigned heading for RADAR vectors to WEDRI INT. Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure, thence. . . .

. . . on IAH R-082 to HOURN INT, then on LCH R-253 to LCH VORTAC.

FIGHTING TIGERS TRANSITION (LCH5.LSU): From over LCH VORTAC on LCH R-070 and LSU R-252 to LSU VORTAC.

NOTE: Chart not to scale.
Note: Top altitude: assigned by ATC.

Takeoff minimums:
- Rwys 17R, 35L: Standard.
- Rwys 17L, 35R: NA - Environmental.
- Waterway 17, 35: NA - Air Traffic.

Note: Radar required.
Note: Except for aircraft destined ACT or the DFW terminal area, all aircraft filing the LEONA SID must file one of the published transitions via FUZ (LOA4.FUZ), ADM (LOA4.ADM), or BYP (LOA4.BYP).
Note: Ranger transition: For aircraft overflying west/northwest of the DFW terminal area FL240 and above.
Note: Ardmore transition: For aircraft overflying north/northwest of the DFW terminal area FL240 and above.
Note: Bonham transition: For aircraft overflying/landing TUL VORTAC FL240 and above.

Note: Chart not to scale.

(NARRATIVE ON FOLLOWING PAGE)
DEPARTURE ROUTE DESCRIPTION

TAKEOFF ALL RUNWAYS: When entering controlled airspace, climb on assigned heading for RADAR vectors to WLLIS INT. Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure, thence . . . .

. . . . on LOA R-147 to LOA VORTAC.

ARDMORE TRANSITION (LOA4.ADM): From over LOA VORTAC on LOA R-334 to DOELEY INT, then on ADM R-156 to ADM VORTAC.

BONHAM TRANSITION (LOA4.BYP): From over LOA VORTAC on LOA R-341 and CQY R-163 to CQY VORTAC, then on BYP R-173 to BYP VORTAC.

RANGER TRANSITION (LOA4.FUZ): From over LOA VORTAC on LOA R-334 to DOELEY INT, then on FUZ R-130 to FUZ VORTAC.
NOTE: Chart not to scale.

TOP ALTITUDE: ASSIGNED BY ATC

NOTE: RADAR and DME required.

NOTE: For aircraft destined LIT or overflying LIT or PXV.
DEPARTURE ROUTE DESCRIPTION

TAKEOFF ALL RUNWAYS: When entering controlled airspace, climb on assigned heading for RADAR vectors to KYANN INT. Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure, thence. . . .

. . . .on IAH R-013 to COLET INT, then right turn on LFK R-203 to LFK VORTAC.

LITTLE ROCK TRANSITION (LFK3.LIT): From over LFK VORTAC on LFK R-026 to SKKIP INT, then on LFK R-026 and LIT R-207 to LIT VORTAC.
DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAY 17R: Climb on heading 168° to 660 for RADAR vectors to KNTKY, thence . . . .
TAKEOFF RUNWAY 35L: Climb on heading 348° to 660 for RADAR vectors to KNTKY, thence . . . .

. . . . on track 032° to PEETY, then on track 032° to DARTR, then on track 031° to MUSIQ, then on track 031° to CLAVN, then on track 031° to VELCO, then on track 031° to ENJOY, then on track 031° to LURIC, then on (transition). Maintain ATC assigned altitude.
Expect filed altitude 10 minutes after departure.

HAWES TRANSITION (LURIC8.HAWES)
ORRTH TRANSITION (LURIC8.ORRTH)
DEPARTURE ROUTE DESCRIPTION

**TAKEOFF RUNWAY 17R:** Climb on heading 168° to 660 for RADAR vectors to MMALT, thence... . . .

**TAKEOFF RUNWAY 35L:** Climb on heading 348° to 660 for RADAR vectors to MMALT, thence... . . .

. . . on track 086° to MOOKI, then on (transition). Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure.

**GUSTI TRANSITION (MMALT5.GUSTI)**
**LAKE CHARLES TRANSITION (MMALT5.LCH)**
**WHITE LAKE TRANSITION (MMALT5.LLA)**

NOTE: Chart not to scale.
NOTE: RADAR required.

NOTE: Chart not to scale.

TAKEOFF MINIMUMS
Rwys 17L, 35R: NA - Environmental.
Waterways 17, 35: NA - Air Traffic.
Rwys 17R, 35L: Standard.
DEPARTURE ROUTE DESCRIPTION

TAKEOFF ALL RUNWAYS: When entering controlled airspace, climb on assigned heading for RADAR vectors to SKUBA INT. Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure, thence . . . .

. . . . on PSX R-038 to PSX VORTAC.

FORT STOCKTON TRANSITION (PSX2.FST): From over PSX VORTAC on PSX R-253 and THX R-073 to THX VORTAC, then on THX R-259 and COT R-078 to COT VORTAC, then on COT R-318 and RSG R-136 to RSG VORTAC, then on RSG R-283 and FST R-100 to FST VORTAC.

SAN ANTONIO TRANSITION (PSX2.SAT): From over PSX VORTAC on PSX R-253 and THX R-073 to THX VORTAC, then on SAT R-158 to SAT VORTAC.
STRYA EIGHT DEPARTURE (RNAV)

NOTE: Chart not to scale.

NOTE: RADAR required.
NOTE: DME/DME/IRU or GPS required.
NOTE: RNAV 1.

DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAY 17R: Climb on heading 168°
to 660 for RADAR vectors to KNTKY, thence. . . .

TAKEOFF RUNWAY 35L: Climb on heading 348°
to 660 for RADAR vectors to KNTKY, thence. . . .

. . . . on track 032° to PEETY, then on track 032° to
DARTR, then on track 031° to MUSIQ, then on track
031° to CLAVN, then on track 060° to STRYA, then
on (transition). Maintain ATC assigned altitude.
Expect filed altitude 10 minutes after departure.

DPATY TRANSITION (STRYA8.DPATY)
JBULL TRANSITION (STRYA8.JBULL)
DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAY 17R: Climb on heading 168° to 660 for RADAR vectors to BBYSE, thence...

TAKEOFF RUNWAY 35L: Climb on heading 348° to 660 for RADAR vectors to BBYSE, thence...

...on track 331° to SPICR, then on track 331° to WLLIS, then on track 332° to STYCK, then on (transition). Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure.

DOLEY TRANSITION (STYCK8.DOLEY)

WTSON TRANSITION (STYCK8.WTSON)

NOTE: Chart not to scale.

DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAY 17R: Climb on heading 168° to 660 for RADAR vectors to BBYSE, thence...

TAKEOFF RUNWAY 35L: Climb on heading 348° to 660 for RADAR vectors to BBYSE, thence...

...on track 331° to SPICR, then on track 331° to WLLIS, then on track 332° to STYCK, then on (transition). Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure.

DOLEY TRANSITION (STYCK8.DOLEY)

WTSON TRANSITION (STYCK8.WTSON)

NOTE: Chart not to scale.
WATFO FIVE DEPARTURE (RNAV)

DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAY 17R: Climb on heading 168° to 660, for RADAR vectors to WATFO, thence. . . .
TAKEOFF RUNWAY 35L: Climb on heading 348° to 660, for RADAR vectors to WATFO, thence. . . .

. . . . on track 141° to VUH VOR/DME, then on (transition). Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure.

ANKRR TRANSITION (WATFO5.ANKRR)
KELPP TRANSITION (WATFO5.KELPP)
MUSYL TRANSITION (WATFO5.MUSYL)

NOTE: Chart not to scale.
NOTE: Chart not to scale.

DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAY 17R: Climb on heading 168° to 660 for RADAR vectors to WYLSN, thence . . .

TAKEOFF RUNWAY 35L: Climb on heading 348° to 660 for RADAR vectors to WYLSN, thence . . .

. . . on track 360° to MONNT, then on (transition).
Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure.

GIFFA TRANSITION (WYLSN8.GIFFA)
MAJKKK TRANSITION (WYLSN8.MAJKK)
**RADAR REQUIRED**

**MISSING APPROACH:** Climb to 3100 direct EWOFY and right turn on track 129° to CEROP and right turn on track 219° to WATFO and hold.

**ATIS**
HOUSTON APP CON
135.575 269.9

**ELLINGTON TOWER**
134.45 284.0

**GND CON**
126.05 253.5

** rad = 1.5NM**

** CATEGORY A**
LNAV MDA: 500-1 470 (500-1)
CIRCLING: 500-1 467 (500-1)

** CATEGORY B**
LNAV MDA: 500-1 470 (500-1)
CIRCLING: 500-1 467 (500-1)

** CATEGORY C**
LNAV MDA: 500-1 470 (500-1)
CIRCLING: 500-1 467 (500-1)

** CATEGORY D**
LNAV MDA: 500-1 470 (500-1)
CIRCLING: 500-1 467 (500-1)

** CATEGORY E**
LNAV MDA: 500-1 470 (500-1)
CIRCLING: 500-1 467 (500-1)

*NOTE*:
- **TDZE**: 30
- **Apt Elev**: 33
- **App Crs**: 309°
- **Rwy Idg**: 8001
- **Rwy**: 30
- **Elev**: 33
- **Ellipse**: 5 NM
For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -15°C (5°F) or above 43°C (109°F). DME/DME RNP-0.3 NA. Inop table does not apply to LPV DA. For inop MALSF, increase LNAV/VNAV all Cats and LNAV Cats A and B visibility to RVR 5500 and Cats C/D/E visibility to 1.5 miles. Circling NA west of Rwy 17R-35L.

ATIS
HOUSTON APP CON
ELLINGTON TOWER
GND CON
135.575 269.9
134.45 284.0
126.05 253.5
121.6 275.8

Radar Required

MALSF

MISSED APPROACH: Climb to 3100 direct ATZIB and on track 125° to WATFO and hold.

ATIS
HOUSTON APP CON
ELLINGTON TOWER
GND CON
135.575 269.9
134.45 284.0
126.05 253.5
121.6 275.8
Circling NA west of Rwy 17R - 35L. For uncompensated Baro-VNAV systems, LN/AV/VNAV NA below -15°C or above 54°C. For inop ALS, increase LPV Cat E visibility to RVR 4000, LN/AV/VNAV all Cats visibility to RVR 4500, and LN/AV Cats C/D/E visibility to RVR 5500.

MISSED APPROACH: Climb to 500 then climbing left turn to 3100 direct WATFO and hold.

VGSI and RNAV glidepath not coincident (VGSI Angle 3.00/TCH 50).

**ATTENTION**

MALSR

ELEV

TDZE

**ATIS**

HOUSTON APP CON

ELLINGTON TOWER

GND CON

**HOUSTON, TEXAS**

**ELLINGTON (EFD)**

**HOUSTON, TEXAS**

**ELLINGTON (EFD)**

**HOUSTON, TEXAS**

**ELLINGTON (EFD)**
For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -1.5°C (5°F) or above 43°C (109°F). Circling NA west of Rwy 17R 35L. DME/DME RNP 0.3 NA.

For inop MALSF, increase LNAV/VNAV all Cats visibility to 1½ mile, and LNAV Cats A and B visibility to 1 mile and Cats C, D and E visibility to 1½ mile. Inop table does not apply to LPV.

MALSF

MISSED APPROACH: Climb to 1500 then climbing right turn to 3100 direct WATFO and hold.

ATIS
HOUSTON APP CON
ELLINGTON TOWER
GND CON

135.575 269.9
134.45 284.0
126.05 253.5
121.6 275.8

RADAR REQUIRED

1500 3100 WATFO

VGSI and RNAV glidepath not coincident (VGSI Angle 3.00°/TCH 32).

LNAV only.

* LNAV only.

HDG 354° to RW35L

Texas
HOUSTON, TEXAS
AL-197 (FAA)

TACAN RWY 4
ELLINGTON (EFD)

ATIS
135.575 269.9

HOUSTON APP CON
134.45 284.0

ELLINGTON TOWER
126.05 253.5

GND CON
121.6 275.8

RADAR REQUIRED

Circling NA west of Rwy 17R-35L.
Helicopter visibility reduction below 1 SM NA.

MISSED APPROACH: Climbing right
turn to 3100 on EFD TACAN R-136
to WATFO/EFD 16 DME and hold.

HOUSTON, TEXAS
Orig-B 08OCT20
29°36'N-95°10'W
257
**TACAN RWY 17R**

**ELLINGTON (EFD)**

**ATIS**
- 135.575 269.9

**HOUSTON APP CON**
- 134.45 284.0

**ELLINGTON TOWER**
- 126.05 253.5

**GND CON**
- 121.6 275.8

**RADAR REQUIRED**

**TACAN EFD**
- Chan 31 (109.4)
- APP CRS 163°

**Rwy Idg**
- 9001

**Apt Elev**
- 32

**Apt Elev**
- 33

**MALSF**
- NA

**MISSED APPROACH:** Climbing left turn to 3100 on EFD TACAN R-136 to WATFO/EFD 1 DME and hold.

**Category**
- A
- B
- C
- D
- E

**CIRCLING**
- 500-1 467 (500-1)

**VGSI and descent angles not coincident** (VGSI Angle 3.00/TCH 48).

**ELEV**
- 33

**ALP**
- 32

**HOS**
- 116

**HOUSTON, TEXAS**

**Orig B 08OCT120**

29°36'N-95°10'W

EFD 11

**ETIME**
- 5

**JINNI**
- 1.5

**WATFO**
- 1.5

**GKD**
- 6.4

**YESHI**
- 6.4

**LAWKE**
- 11

**ELLINGTON**
- Chan 31
- EFD 11 (109.4)

**AS A**
- 25 NM

**ESA**
- W/IN 100 NM 16000

**MISSED APCH FIX**
- EFD R-136

**Application Fix**
- Chan 31

**TACAN EFD**
- Chan 31

**WATFO**
- EFD 16 DME and hold.

to 3100 on EFD TACAN R-136 to

**MISSING APPROACH:** Climbing left turn to 3100 on EFD TACAN R-136 to WATFO/EFD 1 DME and hold.
HOUSTON, TEXAS
AL-197 (FAA)

TACAN RWY 22
ELLINGTON (EFD)

ATIS
HOUSTON APP CON
ELLINGTON TOWER
GND CON

135.575 269.9
134.45 284.0
126.05 253.5
121.6 275.8

RADAR REQUIRED

3100
WATFO
EFD R-136

VGSI and descent angles not coincident
(VGSI Angle 3.00/TCH 50).

S-22
CIRCLING

HOUSTON, TEXAS
Orig C 08OCT20

ELLINGTON (EFD)

29°36'N-95°10"W
259
HOUSTON, TEXAS
AL-197 (FAA)

TACAN RWY 35L
ELLINGTON (EFD)

ATIS
135.575 269.9

HOUSTON APP CON
134.45 284.0

ELLINGTON TOWER
126.05 253.5

GND CON
121.6 275.8

RADAR REQUIRED

Rwy Idg 9001
TDZE 28
Apt Elev 33

MISSED APPROACH: Climbing right
turn to 3100 on EFD TACAN R-136
to WATFO/EFD 16 DME and hold.

- Circling NA west of Rwy 17R-35L. When ALS inop,
  increase S-35L Cats A/B visibility to RVR 5500 and
  Cats C/D/E to 1 1/2 miles.

- VGSI and descent angles not coincident
  (VGSI Angle 3.00/TCH 32).

- ESA W/IN 100 NM 16000

- MSA EFD 25 NM

- CIRCLING

- CATEGORY
  - S-35L
    - 520/40
    - 492 (500-3/4)
    - 520/60
    - 492 (500-1/4)
  - CIRCLING
    - 520-1
    - 487 (500-1)
  - 580-1/2
  - 640-2
  - 607 (700-2)
  - 667 (700-2/4)

- 002° 9.0 NM
- 002° 5.2 NM from FAF

HOUSTON, TEXAS
Orig-B 08OCT20

ELLINGTON (EFD)

29°36’N-95°10’W

SC-5, 07 OCT 2021 to 02 DEC 2021
READBACK OF ALL RUNWAY HOLDING INSTRUCTIONS IS REQUIRED.

CAUTION: BE ALERT TO RUNWAY CROSSING CLEARANCES.
READBACK OF ALL RUNWAY HOLDING INSTRUCTIONS IS REQUIRED.
NOTE: RADAR required.

NOTE: The following TRANSITIONS are ATC assigned only. Do not file.

CRESTVIEW TRANSITION: (For aircraft being weather rerouted to join a jet route off CEW VORTAC or overflying CEW VORTAC to join a direct route).

MC COMB TRANSITION: (For aircraft being weather rerouted to join a jet route off MCB VORTAC or overflying MCB VORTAC to join a direct route).

TAKEOFF MINIMUMS

Rwys 4, 17L/R, 35L/R: Standard.
Rwy 22: 200-1/4 or standard with minimum climb of 214’ per NM to 300, or alternatively, with standard takeoff minimums and a normal 200’ per NM climb gradient, takeoff must occur no later than 1400’ prior to DER.
DEPARTURE ROUTE DESCRIPTION

TAKEOFF ALL RUNWAYS: Climb on assigned heading for RADAR vectors to RAECN INT. Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure, thence.

. . . on IAH R-028 to VELCO INT, cross VELCO INT at or above 10000, then right turn on LFK R-082 and AEX R-265 to AEX VORTAC.

CRESTVIEW TRANSITION (AEX3.CEW): From over AEX VORTAC on AEX R-085 and MCB R-266 to MCB VORTAC, then on MCB R-095 and CEW R-277 to CEW VORTAC.

MC COMB TRANSITION (AEX3.MCB): From over AEX VORTAC on AEX R-085 and MCB R-266 to MCB VORTAC.
NOTE: RADAR required.
NOTE: DME/DME/IRU or GPS required.
NOTE: RNAV 1.

TAKEOFF MINIMUMS
Rwys 4, 17L/R, 22, 35L/R:
Standard with minimum climb of 500’ per NM to 540.

DEPARTURE ROUTE DESCRIPTION
TAKEOFF RUNWAY 4: Climb on heading 039° to 540 for RADAR vectors to DREMR, thence . . . .
TAKEOFF RUNWAYS 17L/R: Climb on heading 174° to 540 for RADAR vectors to DREMR, thence . . . .
TAKEOFF RUNWAY 22: Climb on heading 219° to 540 for RADAR vectors to DREMR, thence . . . .
TAKEOFF RUNWAYS 35L/R: Climb on heading 354° to 540 for RADAR vectors to DREMR, thence . . . .

...on track 345° to LITLD, then on track 346° to BLTWY, then on (transition). Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure.

CRIED TRANSITION (BLTWY7.CRIED)
ATIS
135.575 269.9
GND CON
121.6 275.8
ELLINGTON TOWER
126.05 253.5
HOUSTON DEP CON
134.45 284.0

BORRN FOUR DEPARTURE (RNAV)

NOTE: DME/DME/IRU or GPS required.
NOTE: RADAR required.
NOTE: RNAV 1.
NOTE: CRGER TRANSITION ATC assigned only for aircraft departing 54T, AXH, EFD, GLS, HPY, IWS, LBX, LVJ, SGR, TME, T00, T41.

NOTE: Chart not to scale.
DEPARTURE ROUTE DESCRIPTION

TAKEOFF RWY 4: Climb on heading 039° to 540, for RADAR vectors to BORRN, thence. . . .
TAKEOFF RWYS 17L/R: Climb on heading 174° to 540, for RADAR vectors to BORRN, thence. . . .
TAKEOFF RWY 22: Climb on heading 219° to 540, for RADAR vectors to BORRN, thence. . . .
TAKEOFF RWYS 35L/R: Climb on heading 354° to 540, for RADAR vectors to BORRN, thence. . . .

. . . on track 267° to DILRE, then on (transition). Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure.

CGER TRANSITION (BORRN4.CGER)
JUNCTION TRANSITION (BORRN4.JCT)
MNRE TRANSITION (BORRN4.MNRE)
SAN ANTONIO TRANSITION (BORRN4.SAT)
WAILN TRANSITION (BORRN4.WAILN)
NOTE: RADAR required.

TAKEOFF MINIMUMS
Rwys 4, 17L/R, 35L/R: Standard.
Rwy 22: 200-1/4 or Standard with minimum climb of 214' per NM to 300 or alternatively with standard takeoff minimums and a normal 200' per NM climb gradient, takeoff must occur no later than 1400' prior to DER.

DEPARTURE ROUTE DESCRIPTION

TAKEOFF ALL RUNWAYS: Climb on assigned heading for RADAR vectors to LITLD INT. Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure, thence . . . .

. . . . on IAH R-344 to STELL INT, then on IAH R-344 to CRIED INT, then left turn on CQY R-144 to CQY VORTAC.
NOTE: RADAR required.
NOTE: For aircraft destined KMEM or filed via Q32 or J42.

TAKING MINIMUMS
Rwy 4, 17L/R, 35L/R: Standard.
Rwy 22: 200-1/4 or standard with minimum climb of 214' per NM to 300 or alternatively with standard takeoff minimums and a normal 200‘ per NM climb gradient, takeoff must occur no later than 1400‘ prior to DER.

NOTE: Chart not to scale.

(NARRATIVE ON FOLLOWING PAGE)
DEPARTURE ROUTE DESCRIPTION

TAKEOFF ALL RUNWAYS: Climb on assigned heading for RADAR vectors to RAECN INT. Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure, thence . . .

. . . on IAH R-028 and the ELD R-208 to ELD VOR/DME, cross VELCO INT at or above 10000.
**DEPARTURE ROUTE DESCRIPTION**

**TAKEOFF ALL RUNWAYS:** Climb on assigned heading for RADAR vectors to MONNT INT. Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure, thence . . . .

. . . . on IAH R-358 to cross GIFFA INT at or above 10000.

**NOTE:** Chart not to scale.

**GIFFA ONE DEPARTURE**

**(GIFFA1.GIFFA) 07OCT21**
NOTE: RNAV 1.

NOTE: RADAR required.

NOTE: ATC assigned only.

NOTE: DME/DME/IRU or GPS required.

NOTE: For non-GPS equipped aircraft, LCH, LLA, TBD, and LEV DME’s must be operational.

TAKEOFF MINIMUMS
Rwys 4, 17L/R, 22, 35L/R: Standard with minimum climb of 500’ per NM to 540.

DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAY 4: Climb on heading 039° to 540, for RADAR vectors to VUH VOR/DME, thence . . . .

TAKEOFF RUNWAYS 17L/R: Climb on heading 174° to 540, for RADAR vectors to VUH VOR/DME, thence . . . .

TAKEOFF RUNWAY 22: Climb on heading 219° to 540, for RADAR vectors to VUH VOR/DME, thence . . . .

TAKEOFF RUNWAYS 35L/R: Climb on heading 354° to 540, for RADAR vectors to VUH VOR/DME, thence . . . .

. . . . on track 118° to HOODO, then on (transition). Maintain ATC assigned altitude.

Expect filed altitude 10 minutes after departure.

BOWFN TRANSITION (HOODO7.BOWFN)
CFOOD TRANSITION (HOODO7.CFOOD)
HARVEY TRANSITION (HOODO7.HRV)
LEEVILLE TRANSITION (HOODO7.LEV)
SBIRD TRANSITION (HOODO7.SBIRD)
INDIE EIGHT DEPARTURE (RNAV)

**DEPARTURE ROUTE DESCRIPTION**

**TAKEOFF RUNWAY 4:** Climb on heading 039° to 540 for RADAR vectors to RENNK, thence . . . .

**TAKEOFF RUNWAYS 17L/R:** Climb on heading 174° to 540 for RADAR vectors to RENNK, thence . . . .

**TAKEOFF RUNWAY 22:** Climb on heading 219° to 540 for RADAR vectors to RENNK, thence . . . .

**TAKEOFF RUNWAYS 35L/R:** Climb on heading 354° to 540 for RADAR vectors to RENNK, thence . . . .

. . . on track 016° to COLET, then on track 025° to SUSHI, then on track 026° to WWELL, then on track 026° to INDIE, then on (transition). Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure.

**TPAKK TRANSITION (INDIE8.TPAKK)**

**TAKEOFF MINIMUMS**

Rwys 4, 17L/R, 22, 35L/R:
Standard with minimum climb of 500’ per NM to 540.

**NOTE:** Radar required.

**NOTE:** DME/DME/IRU or GPS required.

**NOTE:** RNAV 1.

**NOTE:** TPAKK TRANSITION: For non GPS equipped aircraft TNV DME must be operational.

**TWO WAY NAVIGATION**

272
NOTE: Chart not to scale.
DEPARTURE ROUTE DESCRIPTION

TAKEOFF ALL RUNWAYS: Climb on assigned heading for RADAR vectors to SHYNR INT. Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure, thence . . . .

. . . on IDU R-085 to BOCCK INT, then on IDU R-085 to IDU VORTAC.

CENTEX TRANSITION (IDU1.CWK): From over IDU VORTAC on IDU R-289 and CWK R-110 to CWK VORTAC.

CORPUS CHRISTI TRANSITION (IDU1.CRP): From over IDU VORTAC on IDU R-259 to MARCS INT, then on SAT R-056 to SAT VORTAC, then on SAT R-145 and CRP R-324 to CRP VORTAC.

JUNCTION TRANSITION (IDU1.JCT): From over IDU VORTAC on IDU R-276 and JCT R-094 to JCT VORTAC.

LAREDO TRANSITION (IDU1.LRD): From over IDU VORTAC on IDU R-259 to MARCS INT, then on SAT R-056 to SAT VORTAC, then on SAT R-194 and LRD R-012 to LRD VORTAC.
RNAV 1.

Note: Chart not to scale.

Note: DME/DME/IRU or GPS required.

Note: Radar required.

Note: RNAV 1.
DEPARTURE ROUTE DESCRIPTION

TAKEOFF RWY 4: Climb on heading 039° to 540, for RADAR vectors to KARRR, thence. . . .
TAKEOFF RWYS 17L/R: Climb on heading 174° to 540, for RADAR vectors to KARRR, thence. . . .
TAKEOFF Rwy 22: Climb on heading 219° to 540, for RADAR vectors to KARRR, thence. . . .
TAKEOFF RWYS 35L/R: Climb on heading 354° to 540, for RADAR vectors to KARRR, thence. . . .

.on track 218° to KAVC0, then on (transition). Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure.

CORPUS CHRISTI TRANSITION (KARRR6.CRP)
PALACIOS TRANSITION (KARRR6.PSX)
TRUAX TRANSITION (KARRR6.NGP)
WWREN TRANSITION (KARRR6.WWREN)
YOMOM TRANSITION (KARRR6.YOMOM)
LEONA FOUR DEPARTURE

TOP ALTITUDE: ASSIGNED BY ATC

ARDMORE
116.7 ADM
Chan 114
N34°12.69' - W97°10.10'
L-17, H-6

DOLEY
310°
(39)
FL180
R-172
L-17, H-6

RANGER
115.7 FUZ
Chan 104
N32°53.37' - W97°10.77'
L-17, H-6

TULSA
114.4 TUL
Chan 91
N36°11.78' - W95°47.29'

WACO
115.3 ACT
Chan 100
N31°39.74' - W97°16.14'

WLLIS
N30°32.08'
W95°39.10'

BONHAM
114.8 BYP
Chan 93
N33°32.25' - W96°14.05'
L-17, H-6

CEDAR CREEK
114.8 CQY
Chan 98
N32°11.14' - W96°13.09'

114°00'00" N31°39.74' - W97°16.14'

NOTE: RADAR required.
NOTE: Except for aircraft destined ACT or the DFW terminal area, all aircraft filing the LEONA SID must file one of the published transitions via FUZ (LOA4.FUZ), ADM (LOA4.ADM), or BYP (LOA4.BYP).

NOTE: RANGER TRANSITION: For aircraft overflying west/northwest of the DFW terminal area FL240 and above.
NOTE: ARDMORE TRANSITION: For aircraft overflying north/northwest of the DFW terminal area FL240 and above.
NOTE: BONHAM TRANSITION: For aircraft overflying/landing TUL VORTAC FL240 and above.

NOTE: Chart not to scale.

TOP ALTITUDE: ASSIGNED BY ATC

LEONA FOUR DEPARTURE

(TOP ALTITUDE: ASSIGNED BY ATC)
DEPARTURE ROUTE DESCRIPTION

TAKEOFF ALL RUNWAYS: Climb on assigned heading for RADAR vectors to WILLIS INT. Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure, thence . . . .

. . . . on LOA R-147 to LOA VORTAC.

ARDMORE TRANSITION (LOA4.ADM): From over LOA VORTAC on LOA R-334 to DOLEY INT, then on ADM R-156 to ADM VORTAC.

BONHAM TRANSITION (LOA4.BYP): From over LOA VORTAC on LOA R-341 and CQY R-163 to CQY VORTAC, then on BYP R-173 to BYP VORTAC.

RANGER TRANSITION (LOA4.FUZ): From over LOA VORTAC on LOA R-334 to DOLEY INT, then on FUZ R-130 to FUZ VORTAC.
NOTE: Chart not to scale.

NOTE: RADAR and DME required.

NOTE: For aircraft destined LIT or overflying LIT or PXV.

TAKESOFF MINIMUMS
Rwy 4, 17L/R, 35L/R: Standard.
Rwy 22: 200-1 1/4 or standard with minimum climb of 214’ per NM to 300 or alternatively with standard takeoff minimums and a normal 200’ per NM climb gradient, takeoff must occur no later than 1400’ prior to DER.

(NARRATIVE ON FOLLOWING PAGE)
DEPARTURE ROUTE DESCRIPTION

TAKEOFF ALL RUNWAYS: Climb on assigned heading for RADAR vectors to KYANN INT. Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure, thence. . . .

. . . .on IAH R-013 to COLET INT, then right turn on LFK R-203 to LFK VORTAC.

LITTLE ROCK TRANSITION (LFK3.LIT): From over LFK VORTAC on LFK R-026 to SKKIP INT, then on LFK R-026 and LIT R-207 to LIT VORTAC.
**NOTE:** Chart not to scale.

**LURIC EIGHT DEPARTURE (RNAV)**

**ATIS**
- 135.575 269.9
- **GND CON**
- 121.6 275.8
- **ELLINGTON TOWER**
- 126.05 253.5
- **HOUSTON DEP CON**
- 134.45 284.0

**NOTE:** RADAR required.
**NOTE:** DME/DME/IRU or GPS required.
**NOTE:** RNAV 1.

**TOP ALTITUDE: ASSIGNED BY ATC**

- **HAWES**
- **LURIC**
- **ORRTH**
- **CLAVN**
- **VELCO**
- **ENJOY**

**TAKEOFF MINIMUMS**
Rwys 4, 17L/R, 22, 35L/R: Standard with minimum climb of 500' per NM to 540.

**DEPARTURE ROUTE DESCRIPTION**

**TAKEOFF RUNWAY 4:** Climb on heading 039° to 540 for RADAR vectors to KNTKY, thence . . . .

**TAKEOFF RUNWAYS 17L/R:** Climb on heading 174° to 540 for RADAR vectors to KNTKY, thence . . . .

**TAKEOFF RUNWAY 22:** Climb on heading 219° to 540 for RADAR vectors to KNTKY, thence . . . .

**TAKEOFF RUNWAYS 35L/R:** Climb on heading 354° to 540 for RADAR vectors to KNTKY, thence . . . .

. . . . on track 032° to PEETY, then on track 032° to DARTR, then on track 031° to MUSIQ, then on track 031° to CLAVN, then on track 031° to VELCO, then on track 031° to ENJOY, then on track 031° to LURIC, then on (transition). Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure.

**HAWES TRANSITION (LURIC8.HAWES)**

**ORRTH TRANSITION (LURIC8.ORRTH)**
NOTE: Chart not to scale.

**DEPARTURE ROUTE DESCRIPTION**

**TAKEOFF RWY 4:** Climb on heading 039° to 540 for RADAR vectors to MMALT, thence. . . .

**TAKEOFF RWYS 17L/R:** Climb on heading 174° to 540 for RADAR vectors to MMALT, thence. . . .

**TAKEOFF RWY 22:** Climb on heading 219° to 540 for RADAR vectors to MMALT, thence. . . .

**TAKEOFF RWYS 35L/R:** Climb on heading 354° to 540 for RADAR vectors to MMALT, thence. . . .

. . . . on track 086° to MOOKI, then on (transition). Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure.

**GUSTI TRANSITION (MMALT5.GUSTI)**

**LAKE CHARLES TRANSITION (MMALT5.LCH)**

**WHITE LAKE TRANSITION (MMALT5.LLA)**
**TAKEOFF MINIMUMS**

Rwys 4, 17L/R, 35L/R: Standard.
Rwy 22: 200-1/4 or standard with minimum climb of 214' per NM to 300 or alternatively with standard takeoff minimums and a normal 200' per NM climb gradient, takeoff must occur no later than 1400' prior to DER.

**NOTE:** RADAR required.

**NOTE:** Chart not to scale.

**(NARRATIVE ON FOLLOWING PAGE)**
TAKEOFF ALL RUNWAYS: Climb on assigned heading for RADAR vectors to SKUBA INT. Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure, thence . . . .

. . . . on PSX R-038 to PSX VORTAC.

FORT STOCKTON TRANSITION (PSX2.FST): From over PSX VORTAC on PSX R-253 and THX R-073 to THX VORTAC, then on THX R-259 and COT R-078 to COT VORTAC, then on COT R-318 and RSG R-136 to RSG VORTAC, then on RSG R-283 and FST R-100 to FST VORTAC.

SAN ANTONIO TRANSITION (PSX2.SAT): From over PSX VORTAC on PSX R-253 and THX R-073 to THX VORTAC, then on SAT R-158 to SAT VORTAC.
STRYA EIGHT DEPARTURE (RNAV)

NOTE: Chart not to scale.

NOTE: RADAR required.
NOTE: DME/DME/IRU or GPS required.
NOTE: RNAV 1.

DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAY 4: Climb on heading 039° to 540 for RADAR vectors to KNTKY, thence.

TAKEOFF RUNWAYS 17L/R: Climb on heading 174° to 540 for RADAR vectors to KNTKY, thence.

TAKEOFF RUNWAY 22: Climb on heading 219° to 540 for RADAR vectors to KNTKY, thence.

TAKEOFF RUNWAYS 35L/R: Climb on heading 354° to 540 for RADAR vectors to KNTKY, thence.

...on track 032° to PEETY, then on track 032° to DARTR, then on track 031° to MUSIQ, then on track 031° to CLAVN, then on track 060° to STRYA, then on (transition). Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure.

DPATY TRANSITION (STRYA8.DPATY)

JBULL TRANSITION (STRYA8.JBULL)

TOP ALTITUDE: ASSIGNED BY ATC

TAKEOFF MINIMUMS
Rwys 4, 17L/R, 22, 35L/R:
Standard with minimum climb of 500’ per NM to 540.
NOTE: Chart not to scale.

DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAY 4: Climb on heading 039° to 540 for RADAR vectors to BBYSE, thence...
TAKEOFF RUNWAYS 17L/R: Climb on heading 174° to 540 for RADAR vectors to BBYSE, thence...
TAKEOFF RUNWAY 22: Climb on heading 219° to 540 for RADAR vectors to BBYSE, thence...
TAKEOFF RUNWAYS 35L/R: Climb on heading 354° to 540 for RADAR vectors to BBYSE, thence...

...on track 331° to SPICR, then on track 331° to WLLIS, then on track 332° to STYCK, then on (transition). Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure.

DOLEY TRANSITION (STYCK8.DOLEY)
WTSON TRANSITION (STYCK8.WTSON)
DEPARTURE ROUTE DESCRIPTION

TAKEOFF RWY 4: Climb on heading 039° to 540, for RADAR vectors to WATFO, thence . . .

TAKEOFF RWYS 17L/R: Climb on heading 174° to 540, for RADAR vectors to WATFO, thence . . .

TAKEOFF RWY 22: Climb on heading 219° to 540, for RADAR vectors to WATFO, thence . . .

TAKEOFF RWYS 35L/R: Climb on heading 354° to 540, for RADAR vectors to WATFO, thence . . .

. . . .on track 141° to VUH VOR/DME, then on (transition). Maintain ATC assigned altitude.

Expect filed altitude 10 minutes after departure.

ANKRR TRANSITION (WATFO5.ANKRR)
KELPP TRANSITION (WATFO5.KELPP)
MUSYL TRANSITION (WATFO5.MUSYL)
DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAY 4: Climb on heading 039° to 540 for RADAR vectors to WYLSN, thence. . . .

TAKEOFF RUNWAYS 17L/R: Climb on heading 174° to 540 for RADAR vectors to WYLSN, thence. . . .

TAKEOFF RUNWAY 22: Climb on heading 219° to 540 for RADAR vectors to WYLSN, thence. . . .

TAKEOFF RUNWAYS 35L/R: Climb on heading 354° to 540 for RADAR vectors to WYLSN, thence. . . .

. . . .on track 360° to MONNT, then on (transition). Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure.

GIFFA TRANSITION (WYLSN8.GIFFA)
MAJKK TRANSITION (WYLSN8.MAJKK)
**ILS or LOC RWY 8L**

**GEORGE BUSH INT’L/HOUSTON (IAH)**

**ATIS** 124.05

**HOUSTON APP CON** 120.05 379.1 EAST

**HOUSTON TOWER** 120.725 290.2

**GND CON** 118.575

**CLEC DEL** 128.1

**CPDLC**

**MISSED APPROACH:** Climb to 600 then climbing left turn to 4000 on IAH VORTAC R-019 to CLEEP/IAH 22.1, DME and hold.

---

### Table: Category and Distance

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<tr>
<th>Category</th>
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<th>C</th>
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**HOUSTON, TEXAS**

**Amdt 4E 20JUN19**

**29°59’N-95°20’W**
**ILS or LOC RWY 8R**

**GEORGE BUSH INT’L/HOUSTON (IAH)**

**HOUSTON, TEXAS**

**AL-5461 (FAA)**

**LOC/DME I-IAH**

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<th>Apl Elev</th>
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**APP CRS**

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| 9402 |

**MALS**

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**3000 (2.6)**

**MATON**

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**3000 (3.9)**

**MISSED APPROACH:** Climb to 3000 on heading 087° and on DAS VORTAC R-242 to DAS VORTAC and hold.

**Simultaneous approach authorized. For inop ALS, increase S-LOC BR Cat C/D/E visibility to 1½ SM. For inop ALS, increase S-ILS 8R Cat E visibility to RVR 4000.**

**D-ATIS**

| 124.05 |

**HOUSTON APP CON**

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**HOUSTON TOWER**

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**GND CON**

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**CLNC DEL**

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**CPDLC**

**HDG 087°**

**LOCALIZER 109.7**

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**ILS or LOC RWY 8R**

**HDG 087°**

**DAS VORTAC R-242**

**HDG 087°**

**DAS**

**Chan 34**

**MALSR**

**GS 3.00° TCH 55**

**S-ILS BR**

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**200 (200-½)**

**S-LOC BR**

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<table>
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**TDZ/CL Rwys 8R, BL, 15R, 26R, 26L, 27 and 33L**

**HIRL all Rwys**

**TDZE 95**

**Amdt 26A 10OCT19**

**29°59’N-95°20’W**
ILS or LOC RWY 33R

GEORGE BUSH INT’L/HOUSTON (IAH)

RADAR REQUIRED

**MASSA IAH 25 NM**

**3100**

**GOMER INT/TNV 26.8**

**DME and hold.**

2000 on IAH VORTAC R-330 to

MISSED APPROACH: Climb to

2000 on IAH VORTAC R-330 to

GOMER INT/TNV 26.8 DME and hold.

**D-ATIS**

124.05

**HOUSTON APP CON**

120.05 379.1 EAST

124.35 316.15 WEST

**HOUSTON TOWER**

127.3 288.25

**GND CON**

121.7

**CLNC DEL**

128.1

**CPDLC**

**HOUSTON TOWER**

GND CON

121.7

CLNC DEL

128.1

**INT’L/HOUSTON**

**GOMER**

**HUMBLE**

**Rwy 33L Idg**

12001

**Rwy 33L Idg**

10000

**App CRS**

111.9

**Elev**

96

**TDZE 33L**

90

**Apt Elev**

96

**TDZE**

89

**LOC I-CDG**

111.9

**App CRS**

329°

**RADAR REQUIRED**

**ELEV**

96

**TDZE 33L**

90

**TDZ/CL Rwys**

8R, 8L, 15R, 26R, 26L, 27 and 33L

**HIRL all Rwys**

**Figures for APCH and MDA are WGS 84**

**Type 1 DME installation**

**Type 1 Int’l**

**#1**

**SC-5, 07 OCT 2021 to 02 DEC 2021**

**10000 X 150**

**12001 X 150**

**9000 X 150**

**29°59'N-95°20'W**

**Knots**

60 90 120 150 180

**Min:Sec**

4:36 3:04 2:18 1:50 1:32

**GEORGE BUSH INT’L/HOUSTON (IAH)**

**ILS or LOC RWY 33R**

**HOUSTON, TEXAS**

**Amdt 13A 23JUN16**

**29°59’N-95°20’W**
HOUSTON, TEXAS

SA CATEGORY 1 ILS - SPECIAL AIRCREW & AIRCRAFT CERTIFICATION REQUIRED

HOUSTON, TEXAS

Amdt 4E 20JUN19

ILS RWY 8L (SA CAT I)

IM

29°59'N-95°20'W

297
HOUSTON, TEXAS

ILS RWY 26L (SA CAT I)

GEORGE BUSH INTL/HOUSTON (IAH)

LOC/DME I-JYV
109.7
Chan 34

APP CRS
267°

Rwy Idg
9402
TDZE
95

Apt Elev
96

DME required. From BOZZZ, GARR: RNAV 1-GPS required.

Simultaneous approach authorized with Rwy 26R and Rwy 27.
Requires specific OPSPEC, MSPEC, or LOA approval and use of HUD to DH.

ALSF-2

MISSING APPROACH: Climb to 3000 then left turn heading 240° and IAH VORTAC R-270 to LUCEP INT/IAH 22.9 DME and hold.

D-ATIS
124.05
HOUSTON APP CON
120.05 379.1 EAST
124.35 316.15 WEST

HOUSTON TOWER
125.35 290.2

GND CON
118.575

CLNC DEL
128.1

TDZE
95

ELEV
96

LOCIZER 109.7
I-JYV

116.9 IAH
Chan 113

LOCALIZER 109.7
I-JYV

116.6 IAH
Chan 113

MISS APCH FIX

LUCEP INT
IAH [22.9]

LONG ISLAND
105.9 TW

Chan 116
R-213
R-270

090°

RA 152/14 150 DA 245

SG CATEGORY I ILS - SPECIAL AIRCREW & AIRCRAFT CERTIFICATION REQUIRED

HOUSTON, TEXAS

Amdt 21D 25APR19

29°59'N-95°20'W

I-HLS RWY 26L (SA CAT I)
ILS RWY 26R (SA CAT I)

GEORGE BUSH INT’L/HOUSTON (IAH)

SA CATEGORY I — SPECIAL AIRCREW & AIRCRAFT CERTIFICATION REQUIRED

HOUSTON, TEXAS

Amdt 4B 25APR19

29°59’N-95°20’W

299
ILS RWY 8R (SA CAT I & II)

GEORGE BUSH INT’L/HOUSTON (IAH)

RNAV 1-GPS or RADAR required for procedure entry, DME.

Simultaneous approach authorized. SA CAT I: Requires specific OPSPEC, MSPEC, or LOA approval and use of HUD to DH. SA CAT II: Reduced lighting: requires specific OPSPEC, MSPEC, or LOA approval and use of autoland or HUD to touchdown.

LOCALIZER 109.7
IAH ....
Ch 34

DAISSETA 116.9 DAS
Chan 116

MISSED APCH FIX

HOUSTON TOWER

GND CON
118.575

CLNC DEL
128.1

CPDLC

HOUSTON, TEXAS

AL-5461 (FAA)
21112

GEORGE BUSH INT’L/HOUSTON (IAH)

S-ILS 8R
SA CAT I
RA 152/14
150 DA 245

S-ILS 8R
SA CAT II
RA 102/12
100 DA 195

SA CATEGORY I and II ILS SPECIAL AIRCREW & AIRCRAFT CERTIFICATION REQUIRED
ILS RWY 27 (CAT II & III)
GEORGE BUSH INTL/HOUSTON (IAH)

LOC/DME I-GHI 110.9 Chan 46
APP CRS 267°
Rwy Idg 10000
TDZE 86
Apt Elev 96

Simultaneous approach authorized. Use of FD or AP required during simultaneous operations. Cat II: RVR 1000 authorized with specific OPSPEC, MSPEC, or LOA approval and use of autoland or HUD to touchdown.

MISSED APPROACH: Climb to 560 then climbing left turn to 3000 on IAH VORTAC R-215 to TICOY/IAH 20 DME and hold.

RNAV 1-GPS or RADAR required for procedure entry. DME required.

S-ILS 27 CAT II RA 101/12 100 DA 186
S-ILS 27 CAT III RVR 06

CATEGORY II & III ILS - SPECIAL AIRCREW & AIRCRAFT CERTIFICATION REQUIRED
For inop ALSF, increase GLS all Cats visibility to RVR 4000. Simultaneous approach authorized with Rwy 8R and Rwy 9. DME/DME RNP-0.3 NA. GPS Required. Autoland approach NA. Use of FD or AP providing RNAV track guidance required during simultaneous operations.

ALSF-2

MISSED APPROACH: Climb to 580 then climbing left turn to 4000 direct CLEEP and hold.

RADAR REQUIRED
For inop MALSR, increase GLS all Cts visibility to RVR 4000. Simultaneous approach authorized with Rwy 8L and Rwy 9. DME/DME RNP-0.3 NA. GPS required. Use of FD or AP providing RNAV track guidance required during simultaneous operations. Autoland approach NA.

For missed approach, climb to 3000 direct MKAYE and hold.

**Radar Required**

**GEORGE BUSH INTL/ HOUSTON (IAH)**

**Gls Rwy 8R**

**HOU, TX (IAH)**

- **Approach Fixes**
  - MKAYE
  - LASSY
  - EELPO
  - REIGN
  - DPLOY
  - JELLI

- **VGSi and GLS Glidepath**
  - Not coincident
  - VGSi Angle 3.00/TCH 72

- **CATs and DA**
  - GLS: 296/18
  - DA: 200

- **Autoland Approach**
  - NA

- **MALSR**
  - Not Available

- **Certification**
  - **A**
  - **B**
  - **C**
  - **D**
  - **E**
For inop MALSR, increase GLS all Cats visibility to RVR 4000. Simultaneous approach authorized with Rwys 8L/R. DME/DME RNP-0.3 NA. Use of FD or AP providing RNAV track guidance required during simultaneous operations. GPS required. Autoland approach NA. **RVR 1800 authorized with use of FD or AP or HUD to DA.

MISSED APPROACH: Climb to 580 then climbing right turn to 3000 direct JEBOX and hold.
For inop ALSF, increase GLS all Cats visibility to RVR 4000. Simultaneous approach authorized with Rwy 26R and Rwy 27. DME/DME RNP-0.3 NA. GPS required. Use of FD or AP providing RNAV track guidance required during simultaneous operations. Autoland approach NA.

MISSPD APCH FIX
LUCEP

RADAR REQUIRED

GLS unusable inside DA.

VGSI and GLS glidepath not coincident (VGSI Angle 3.00°/TCH 71).

HOUSTON, TEXAS

LAAS
CH 20662
RPI GJYV

APP CRS
267°

Rwy Idg 9402
TDZE 95
Apt Elev 96

Amdt 1B 07DEC17

GEORGEBUSHINTCNTL/HOUSTON (IAH)

GLS RWY 26L

HOUSTON TOWER
125.35 290.2

HOUSTON APP CON
120.05 379.1 EAST
124.35 316.15 WEST

GND CON
118.575

CLNC DEL
128.1

CPDLC
Gls RWY 27

Simultaneous approach authorized. Use of FD or AP required during simultaneous operations. Autopilot coupled approach NA below 286. For inop ALS, increase GLS Cat E visibility to RVR 4000.

For inop ALS, increase GLS Cat E visibility to RVR 4000.

Gls unusable inside DA.

VGSI and GLS glidepath not coincident (VGSI Angle 3.00°/TCH 70).

GLS unusable inside DA.
GPS Required. For uncompensated Baro-VNAV systems, procedure NA below -3°C (27°F) or above 54°C (130°F). For inop ALSF-2, increase RNP 0.30 all Cats visibility to 1 ½ mile. Simultaneous approach authorized. Use of FD or AP providing RNAV track guidance required during simultaneous operations.

MISSSED APPROACH: Climb to 580 then climbing left turn to 4000 direct CLEEP and hold.

Radar Required for arrivals at MAAKO.
**RNAV (RNP) Y RWY 8R**

**GEORGE BUSH INTL/HOUSTON (IAH)**

**HOUSTON TOWER**
125.35 290.2

**CLNC DEL**
128.1

**CPDLC**

**MISSED APPROACH:** Climb to 3000 on track 087° to MKAYE and hold.

For uncompensated Baro-VNAV systems, procedure NA below -3°C or above 54°C. For inap ALS increase RNP 0.13 all Cats visibility to RVR 4500, RNP 0.14 all Cats visibility to RVR 5600, RNP 0.30 all Cats visibility to 1/2 SM. Simultaneous approach authorized.

---

**APP CRS**

<table>
<thead>
<tr>
<th>Rwy Idg</th>
<th>TDZE</th>
<th>Apt Elev</th>
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<tr>
<td>9402</td>
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**MALSR**

---

**D-ATIS**

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<tr>
<th>HOUSTON APP CON</th>
<th>HOUSTON TOWER</th>
<th>GND CON</th>
<th>CLNC DEL</th>
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<tbody>
<tr>
<td>120.05 379.1 EAST</td>
<td>125.35 290.2</td>
<td>118.575</td>
<td>128.1</td>
</tr>
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</table>

**ELEVATION**

- 96 ft
- TDZE 95

**AUTHORIZATION REQUIRED**

- **HOUSTON, TEXAS**
- **AL-5461 (FAA)**
- **Amdt 1B 11OCT18**

---

**SC-5, 07 OCT 2021 to 02 DEC 2021**

**HOUSTON, TEXAS**

**GEORGE BUSH INTL/HOUSTON (IAH)**

**RNAV (RNP) Y RWY 8R**

**29°59’N-95°20’W**
RNAV (RNP) Y RWY 9

GEORGE BUSH INT’L/HOUSTON (IAH)

HOUSTON, TEXAS
Orig-B 13SEP18

29°59’N-95°20’W

RNP 0.30 DA
516/49 425 (500-1)

For uncompensated Baro-VNAV systems, procedure NA below -3°C (27°F) or above 54°C (130°F). GPS required. For inop MALSR, increase all Cats visibility 3/4 mile. Simultaneous approach authorized. Use of FD or AP providing RNAV track guidance required during simultaneous operations.

MALSR

MISSED APPROACH: Climb to 3000 then climbing right turn to JEBOX and hold.

D-ATIS
124.05

HOUSTON APP CON
120.05 379.1 EAST
124.35 316.15 WEST

HOUSTON TOWER
135.15 290.2

GND CON
118.575

CLNC DEL
128.1

CPDLC

AUTHORIZATION REQUIRED

GEORGE BUSH INT’L/HOUSTON (IAH)

RNAV (RNP) Y RWY 9

HOUSTON, TEXAS
AL-5461 (FAA)

21112

Rwy Idg 10000
TDZE 91
Apt Elev 96
RNAV (RNP) Y RWY 26L
GEORGE BUSH INTL/HOUSTON (IAH)

For uncompensated Baro-VNAV systems, procedure NA below -3°C or above 54°C. Simultaneous approach authorized. For inop ALS, increase RNP 0.13 all Cats visibility to RVR 5100, and RNP 0.30 all Cats visibility to 1/2 SM.

MISSED APPROACH: Climb to 3000 on track 267° to LUCEP and hold.

NGI and RNAV glidepath not coincident (VGSI Angle 3.00°/TCH 71).

Authorized Required

RNP 0.30 DA
454/55
543 (500-1)

RNP 0.13 DA
414/40
319 (400-1/4)
For uncompensated Baro-VNAV systems, procedure NA below -3°C (27°F) or above 54°C (130°F). GPS required. Simultaneous approach authorized. For inop ALS, increase RNP 0.11 all Cats visibility to RVR 5000 and increase RNP 0.15 all Cats visibility to 1½ SM. Use of FD or AP providing RNAV track guidance required during simultaneous operations.

### RNAV (RNP) Y RWY 26R

**HOUSTON, TEXAS**

<table>
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<tr>
<th>APP CRS</th>
<th>Rwry Idg</th>
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<td>267°</td>
<td>9000</td>
<td>96</td>
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**GEORGE BUSH INTCNTL/HOUSTON (IAH)**

<table>
<thead>
<tr>
<th>ALSF</th>
<th>MISSED APPROACH: Climb to 600 then climbing right turn to 3000 direct PEPBI and hold.</th>
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### Radar Required

- **2049**
- **636**
- **241**
- **396**
- **256**
- **530**
- **646**

### D-ATIS

<table>
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<tr>
<th>HOUSTON APP CON</th>
<th>HOUSTON TOWER</th>
<th>GND CON</th>
<th>CLNC DEL</th>
<th>CPDLC</th>
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<tr>
<td>120.05 379.1 EAST</td>
<td>120.72 290.2</td>
<td>121.7</td>
<td>128.1</td>
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<tr>
<td>124.35 316.15 WEST</td>
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<td></td>
<td></td>
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### Radar Required

- **636**
- **241**
- **396**
- **256**
- **530**
- **646**

**ALSF-2**

### RNAV (RNP) Y RWY 26R

**HOUSTON, TEXAS**

<table>
<thead>
<tr>
<th>CATEGORY</th>
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<tr>
<td>RNP 0.11 DA</td>
<td>429/40</td>
<td>333 (400-1/4)</td>
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<td>RNP 0.15 DA</td>
<td>496/45</td>
<td>400 (400-2/5)</td>
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<tr>
<td>RNP 0.30 DA</td>
<td>554/50</td>
<td>458 (500-1/5)</td>
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**GEORGE BUSH INTCNTL/HOUSTON (IAH)**

**RNAV (RNP) Y RWY 26R**

**HOUSTON, TEXAS**

<table>
<thead>
<tr>
<th>Orig-D</th>
<th>13SEP18</th>
</tr>
</thead>
</table>

### 29°59’N-95°20’W
Simultaneous approach authorized. Use of FD or AP required during simultaneous operations. For uncompensated Baro-VNAV systems, procedure NA below -2°C or above 54°C. For inop ALS, increase RNP 0.30 all Cats visibility to RVR 4500.

**MISSING APPROACH:** Climb to 560 then climbing left turn to 3000 direct TICOY and hold.
RNAV (GPS) RWY 15R

HOUSTON, TEXAS

RNAV (GPS) RWY 15R

GEORGE BUSH INTL/HOUSTON (IAH)

RADAR required for procedure entry.

For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -3°C or above 54°C. For inop ALS, increase LPV Cat E visibility to RVR 4000, LNAV/VNAV all Cats visibility to RVR 5500, and LNAV Cat C/D/E visibility to 1½ SM.

MISSED APPROACH: Climb to 2000 direct JINIP and left turn on track 079° to COSBI and hold.
RNAV (GPS) RWY 33R
GEORGE BUSH INTL/HOUSTON (IAH)

**For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -3°C (27°F) or above 54°C (130°F). For inop MALSR, increase LPV Cat E visibility to RVR 4000, LNAV/VNAV Cat E visibility to 1 3/4, and LNAV Cat E visibility to 1 3/4. DME/DME RNP-0.3 NA. **RVR 1800 authorized with use of FD or AP or HUD to DA.**

**MISSED APPROACH:** Climb to 2000 direct NALIE and on track 333° to GOMER and hold.

**D-ATIS**
124.05

**HOUSTON APP CON**
120.05 379.1 EAST
124.35 316.15 WEST

**RADAR REQUIRED**

**ELEV 96**

**TDZE 33L**
90

**TDZE 33R**
89

**HOUSTON TOWER**
127.3 288.25

**GND CON**
121.7

**CLNC DEL**
128.1

**CPDLC**
For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -3°C (27°F) or above 54°C (130°F). For inop ALSF, increase LPV Cat E visibility to RVR 4000, LNAV/VNAV Cat E visibility to 1/4, and LNAV Cat C/D/E visibility to 1/4. Simultaneous approach authorized with Rwy 8R and Rwy 9. DME/DME RNP-0.3 NA. Use of FD or AP providing RNAV track guidance required during simultaneous operations. LNAV procedure NA during simultaneous operations.

**MISSED APPROACH:** Climb to 580 then climbing left turn to 4000 direct CLEEP and hold.

<table>
<thead>
<tr>
<th>Category</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
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<tr>
<td>LPV DA</td>
<td>295/18</td>
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<td>LNAV/VNAV DA</td>
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<td>391 (400-¾)</td>
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<td>LNAV MDA</td>
<td>580/24</td>
<td>485 (500-½)</td>
<td>580/50</td>
<td>485 (500-1)</td>
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**RADAR REQUIRED**
For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -3°C (27°F) or above 54°C (130°F). For inop MALSR, increase LPV Cat E visibility to RVR 4000, LNAV/VNAV all Cats visibility to RVR 6000, and LNAV Cat C/D/E visibility to 1½. Simultaneous approach authorized with Rwy 8L and Rwy 9. DME/DME RNP-0.3 NA. Use of FD or AP providing RNAV track guidance required during simultaneous operations. LNAV procedure NA during simultaneous operations.

RNAV (GPS) Z RWY 8R
GEORGE BUSH INT’NTL/HOUSTON (IAH)

MISSED APPROACH: Climb to 3000 direct MKAYE and hold.

D-ATIS
124.05

HOUSTON APP CON
120.05 379.1 EAST
124.35 316.15 WEST

HOUSTON TOWER
125.35 290.2

GND CON
118.575

CLNC DEL
128.1

MISSED APCH FIX
4 NM

-087°

MKAYE

RADAR REQUIRED

MISSED APPROACH: Climb to 3000 direct MKAYE and hold.

Depart from MKAYE and hold.
Climb to 3000 direct MKAYE and hold.

ATIS
124.05

HOUSTON TOWER
125.35 290.2

GND CON
118.575

CLNC DEL
128.1

ATIS
124.05

HOUSTON TOWER
125.35 290.2

GND CON
118.575

CLNC DEL
128.1

SAFETY ALERT
For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -3°C (27°F) or above 54°C (130°F). For inop MALSR, increase LPV Cat E visibility to RVR 4000, LNAV/VNAV all Cats visibility to RVR 6000, and LNAV Cat C/D/E visibility to 1½. Simultaneous approach authorized with Rwy 8L and Rwy 9. DME/DME RNP-0.3 NA. Use of FD or AP providing RNAV track guidance required during simultaneous operations. LNAV procedure NA during simultaneous operations.

RNAV (GPS) Z RWY 8R
GEORGE BUSH INT’NTL/HOUSTON (IAH)

MISSED APPROACH: Climb to 3000 direct MKAYE and hold.
For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -3°C (27°F) or above +54°C (130°F). For inop MALSR, increase LPV Cat E visibility to 3,000 ft, LNAV/VNAV Cat E visibility to 1/2 mile, and LNAV Cat C/D/E visibility to 1/2 mile. Simultaneous approach authorized with Rwys 8L/R. DME/DME RNP-0.3 NA. LNAV procedure NA during simultaneous operations. Use of FD or AP providing RNAV track guidance required during simultaneous operations. ** RVR 1800 authorized with use of FD or AP or HUD to DA.

D-ATIS
HOUSTON APP CON
HOUSTON TOWER
GND CON
CLNC DEL
CPDLC

Radar Required

RNAV (GPS) Z RWY 9
GEORGE BUSH INTNCTL/HOUSTON (IAH)

** RVR 1800 authorized with use of FD or AP or HUD to DA.
For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -3°C (27°F) or above 54°C (130°F). For inop ALSF, increase LPV Cat E visibility to RVR 4000, LNAV/VNAV Cat E visibility to 13⁄4, and LNAV Cat E visibility to 13⁄4. DME/DME RNP-0.3 NA. Simultaneous approach authorized with Rwy 26R and Rwy 27. LNAV procedure NA during simultaneous operations. Use of FD or AP providing RNAV track guidance required during simultaneous operations.
RNAV (GPS) Z RWY 26R

GEORGE BUSH INTL/HOUSTON (IAH)

HOUSTON, TEXAS

AL-5461 (FAA)

For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -3°C (27°F) or above 54°C (130°F). For inop ALSF, increase LPV Cat E visibility to RVR 4000, LNAV/VNAV all Cats visibility to 1/2, and LNAV Cat C/D/E visibility to 1/2. DME/DME RNP-0.3 NA. Simultaneous approach authorized with Rwy 26L and Rwy 27. LNAV procedure NA during simultaneous operations. Use of FD or AP providing RNAV track guidance required during simultaneous operations.

**ALSF-2**

**MISSING APPROACH:** Climb to 600 then climbing right turn to 3000 direct PEPBI and hold.

### RNAV (GPS) Z RWY 26R

**RNAV (GPS) Z RWY 26R**

**HOUSTON, TEXAS**

**IAH**

**29°59'N-95°20'W**

**ELEV 96**

**TDZE 96**

**GND CON 120.72 290.2**

**CLNC DEL 128.1**

**CPDLC**

**D-ATIS 124.05**

**HOUSTON APP CON 120.05 379.1 EAST**

**124.35 316.15 WEST**

**HOUSTON TOWER**

**CLNC DEL 128.1**

**GND CON 121.7**

**CPDLC**

**RADAR REQUIRED**

**LPV DA**

296/18 200 (200-1/2)

**LNAV/ VNAV DA**

496/42 400 (400-3/4)

**LNAV MDA**

600/24 504 (600-3/4) 600/55 504 (600-1)

**TDZ/CL Rwys 8R, 8L, 15R, 26R, 26L, 27 and 33L**

**HIRL all Rwys**

**Amdt 4B 17AUG17**

**9000 X 150**

**9402 X 150**

**10000 X 150**

**12001 X 150**

**21112**

**2959’N-9520’W**

**325**
RNAV (GPS) Z RWY 27
GEORGE BUSH INTCNTL/HOUSTON (IAH)

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 -2°C or above 54°C. For inop ALS, increase LPV Cat E visibility to RVR 4000, LNAV/VNAV Cat E visibility to RVR 6000, and LNAV Cats C, D and E visibility to 1/4 SM.

D-ATIS
124.05

HOUSTON APP CON
120.05 379.1 EAST
124.35 316.15 WEST

HOUSTON TOWER
135.15 290.2

GND CON
118.575

CLNC DEL
128.1

CPDLC

MISSED APPROACH: Climb to 500, then climbing left turn to 3100 direct TICOY and hold.

TDZ/CL Rwys 8R, 8L, 26R, 26L, 27 and 33L
HIRL all Rwys

GEAR BUSH INTCNTL/HOUSTON (IAH)

RNAV (GPS) Z RWY 27

29°59'N-95°20'W

HOU 5B 22APR21

Amdt 5B 22APR21

SC-5, 07 OCT 2021 to 02 DEC 2021
NOTE: RADAR required. 

NOTE: The following TRANSITIONS are ATC assigned only. Do not file. 

CRESTVIEW TRANSITION: (For aircraft being weather rerouted to join a jet route off CEW VORTAC or overflying CEW VORTAC to join a direct route).

MC COMB TRANSITION: (For aircraft being weather rerouted to join a jet route off MCB VORTAC or overflying MCB VORTAC to join a direct route).

TAKEOFF MINIMUMS

(NARRATIVE ON FOLLOWING PAGE)
DEPARTURE ROUTE DESCRIPTION

TAKEOFF ALL RUNWAYS: Climb on assigned heading for RADAR vectors to RAECN INT, maintain 16000. Expect filed altitude 10 minutes after departure, thence.

. . . . on IAH R-028 to VELCO INT, cross VELCO INT at or above 10000, then right turn on LFK R-082 and AEX R-265 to AEX VORTAC.

CRESTVIEW TRANSITION (AEX3.CEW): From over AEX VORTAC on AEX R-085 and MCB R-266 to MCB VORTAC, then on MCB R-095 and CEW R-277 to CEW VORTAC.

MC COMB TRANSITION (AEX3.MCB): From over AEX VORTAC on AEX R-085 and MCB R-266 to MCB VORTAC.
NOTE: RADAR required.

NOTE: DME/DME/IRU or GPS required.

NOTE: RNAV 1.

TAKEOFF MINIMUMS:
Rwys 8L/R, 9, 15L/R, 26L/R, 27, 33L/R:
Standard with minimum climb of 500' per NM to 600.

DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAYS 8L/R, 9: Climb on heading 087° to 600 for RADAR vectors to DREMR, thence . . . .
TAKEOFF RUNWAYS 15L/R: Climb on heading 149° to 600 for RADAR vectors to DREMR, thence . . . .
TAKEOFF RUNWAYS 26L/R, 27: Climb on heading 267° to 600 for RADAR vectors to DREMR, thence . . . .
TAKEOFF RUNWAYS 33L/R: Climb on heading 329° to 600 for RADAR vectors to DREMR, thence . . . .

. . . . on track 345° to LITLD, then on track 346° to BLTWY, then on (transition). Maintain 16000 or as assigned by ATC. Expect filed altitude 10 minutes after departure.

CRIED TRANSITION (BLTWY7.CRIED)
**BN DTO FIVE DEPARTURE (RNAV)**

**NOTE:** Chart not to scale.

### TAKEOFF MINIMUMS

Rwys 15L/R, 26L/R, 27, 33L/R: Standard with minimum climb of 500’ per NM to 1200.

- **NOTE:** RADAR required.
- **NOTE:** DME/DME/IRU or GPS required.
- **NOTE:** RNAV 1.
- **NOTE:** For use during west flow at IAH, for east flow file the PITZZ DEPARTURE.

### HOUSTON TOWER

- 120.725 290.2 (Rwys 8L, 26R)
- 125.35 290.2 (Rwys 8R, 26L)
- 127.3 288.25 (Rwys 15L/R, 33L/R)
- 135.15 290.2 (Rwys 9, 27)

### HOUSTON DEP CON

- 126.675 339.8

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### (NARRATIVE ON FOLLOWING PAGE)
DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAYS 15L/R: Climb heading 149° to 600, then right turn direct to cross SCAMM at or below 5000, then on track 277° to SHAAK, thence . . . .
TAKEOFF RUNWAYS 26L/R, 27: Climb heading 267° to 600, expect RADAR vectors to SHAAK, thence . . . .
TAKEOFF RUNWAYS 33L/R: Climb heading 329° to 600, expect RADAR vectors to SHAAK, thence . . . .

. . . . on track 277° to BNDTO, then on (transition). Maintain 16000. Expect filed altitude 10 minutes after departure.

CRGER TRANSITION (BNDTO5.CRGER)
MNURE TRANSITION (BNDTO5.MNURE)
SAN ANTONIO TRANSITION (BNDTO5.SAT)
WAILN TRANSITION (BNDTO5.WAILN)
NOTE: RADAR required.

DEPARTURE ROUTE DESCRIPTION

TAKEOFF ALL RUNWAYS: Climb on assigned heading for RADAR vectors to LITLD INT, maintain 16000. Expect filed altitude 10 minutes after departure, thence . . . .

. . . . on IAH R-344 to STELL INT, then on IAH R-344 to CRIED INT, then left turn on CQY R-144 to CQY VORTAC.
DEPARTURE ROUTE DESCRIPTION

TAKEOFF ALL RUNWAYS: Climb on assigned heading for RADAR vectors to RAECN INT, maintain 16000. Expect filed altitude 10 minutes after departure, thence.

.... on IAH R-028 and the ELD R-208 to ELD VOR/DME, cross VELCO INT at or above 10000.
FLYZA FIVE DEPARTURE (RNAV)

D-ATIS
124.05
CFLNC DEL
128.1
CPDLC
GND CON
118.575 (Rwys 8L/R, 26L/R, 9, 27)
121.7 (Rwys 15L/R, 33L/R)
HOUSTON TOWER
120.725 290.2 (Rwys 8L, 26R)
125.35 290.2 (Rwys 8R, 26L)
127.3 288.25 (Rwys 15L/R, 33L/R)
135.15 290.2 (Rwys 9, 27)
HOUSTON DEP CON
127.125 269.075

NOTE: Chart not to scale.

NOTE: RADAR required.
NOTE: RNAV 1.
NOTE: GPS required.

TOP ALTITUDE: 16000

TAKEOFF MINIMUMS
Rwys 8L/R, 9, 15L/R, 26L/R, 27, 33L/R:
Standard with minimum climb of 500’ per NM to 800.

NOTE: GPS required.

FLYZA FIVE DEPARTURE (RNAV)

NARRATIVE ON FOLLOWING PAGE
DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAYS 8L/R, 9: Climb heading 087° to 600, expect RADAR vectors to cross BOTLL at or below 5000, thence . . . .

TAKEOFF RUNWAYS 15L/R: Climb heading 149° to 600, then left turn direct to cross TTAPS at or below 4000, then on track 123° to cross BOTLL at or below 5000, thence . . . .

TAKEOFF RUNWAYS 26L/R, 27: Climb heading 267° to 600, expect RADAR vectors to cross BOTLL at or below 5000, thence . . . .

TAKEOFF RUNWAYS 33L/R: Climb heading 329° to 600, expect RADAR vectors to cross BOTLL at or below 5000, thence . . . .

. . . . on track 139° to cross FLYZA at or above 7000, then on (transition). Maintain 16000. Expect filed altitude 10 minutes after departure.

ANKRR TRANSITION (FLYZA5.ANKRR)
KELPP TRANSITION (FLYZA5.KELPP)
MUSYL TRANSITION (FLYZA5.MUSYL)
NOTE: Chart not to scale.

DEPARTURE ROUTE DESCRIPTION

TAKEOFF ALL RUNWAYS: Climb on assigned heading for RADAR vectors to MONNT INT, maintain 16000. Expect filed altitude 10 minutes after departure, thence . . . .

. . . . on IAH R-358 to cross GIFFA INT at or above 10000.
NOTE: RNAV 1.

NOTE: DME/DME/IRU or GPS Required.

NOTE: RNAV 1.

TAKEOFF MINIMUMS:
Rwy 8L/R, 9, 15L/R: Standard with minimum climb of 500’ per NM to 1700.

NOTE: RADAR required.

(NARRATIVE ON FOLLOWING PAGE)
DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAYS 8L/R, 9: Climb heading 087° to 600, expect RADAR vectors to cross DWSUN at or below 4000, thence . . .
TAKEOFF RUNWAYS 15L/R: Climb heading 149° to 600, then left turn direct CRTMN, then on track 086° to cross DWSUN at or below 4000, thence. . . .

. . . . on track 086° to cross GUMBY at or below 5000, then on (transition). Maintain 16000. Expect filed altitude 10 minutes after departure.

GUSTI TRANSITION (GUMBY3.GUSTI)
LAKE CHARLES TRANSITION (GUMBY3.LCH)
WHITE LAKE TRANSITION (GUMBY3.LLA)
Takeoff Minimums

Rwys 8L/R, 9, 15L/R, 26L/R, 27, 33L/R:
Standard with minimum climb of 500’ per NM to 600.

**Note:** Chart not to scale.
(HOODO7.HOODO) 21280
HOODO SEVEN DEPARTURE (RNAV) AL-5461 (FAA)

GEORGE BUSH INTCTRL/HOUSTON (IAH)
HOUSTON, TEXAS

DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAYS 8L/R, 9: Climb on heading 087° to 600, for RADAR vectors to VUH VOR/DME, thence . . . .
TAKEOFF RUNWAYS 15L/R: Climb on heading 149° to 600, for RADAR vectors to VUH VOR/DME, thence . . . .
TAKEOFF RUNWAYS 26L/R, 27: Climb on heading 267° to 600, for RADAR vectors to VUH VOR/DME, thence . . . .
TAKEOFF RUNWAYS 33L/R: Climb on heading 329° to 600, for RADAR vectors to VUH VOR/DME, thence . . . .

. . . . on track 118° to HOODO, then on (transition). Maintain 16000. Expect filed altitude 10 minutes after departure.

BOWFN TRANSITION (HOODO7.BOWFN)
CFOOD TRANSITION (HOODO7.CFOOD)
HARVEY TRANSITION (HOODO7.HRV)
LEEVILLE TRANSITION (HOODO7.LEV)
SBIRD TRANSITION (HOODO7.SBIRD)
INDIE EIGHT DEPARTURE (RNAV)

DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAYS 8L/R, 9: Climb on heading 087° to 600 for RADAR vectors to RENNK, thence . . . .

TAKEOFF RUNWAYS 15L/R: Climb on heading 149° to 600 for RADAR vectors to RENNK, thence . . . .

TAKEOFF RUNWAYS 26L/R, 27: Climb on heading 267° to 600 for RADAR vectors to RENNK, thence . . . .

TAKEOFF RUNWAYS 33L/R: Climb on heading 329° to 600 for RADAR vectors to RENNK, thence . . . .

. . . . on track 016° to COLET, then on track 025° to SUSHI, then on track 026° to WWELL, then on track 026° to INDIE, then on (transition). Maintain 16000 or as assigned by ATC. Expect filed altitude 10 minutes after departure.

TPAKK TRANSITION (INDIE8.TPAKK)

NOTE: Chart not to scale.
DEPARTURE ROUTE DESCRIPTION

TAKEOFF ALL RUNWAYS: Climb on assigned heading for RADAR vectors to SHYNR INT, maintain 16000. Expect filed altitude 10 minutes after departure, thence . . . .

. . . . on IDU R-085 to BOCCK INT, then on IDU R-085 to IDU VORTAC.

CENTEX TRANSITION (IDU1.CWK): From over IDU VORTAC on IDU R-289 and CWK R-110 to CWK VORTAC.

CORPUS CHRISTI TRANSITION (IDU1.CRP): From over IDU VORTAC on IDU R-259 to MARCS INT, then on SAT R-056 to SAT VORTAC, then on SAT R-145 and CRP R-324 to CRP VORTAC.

JUNCTION TRANSITION (IDU1.JCT): From over IDU VORTAC on IDU R-276 and JCT R-094 to JCT VORTAC.

LAREDO TRANSITION (IDU1.LRD): From over IDU VORTAC on IDU R-259 to MARCS INT, then on SAT R-056 to SAT VORTAC, then on SAT R-194 and LRD R-012 to LRD VORTAC.
NOTE: Chart not to scale.

DEPARTURE ROUTE DESCRIPTION

TAKEOFF ALL RUNWAYS: Climb on assigned heading for RADAR vectors to CUZZZ INT. Maintain 16000. Expect filed altitude 10 minutes after departure. Thence . . . .

. . . . on IAH R-276 and JCT R-090 to JCT VORTAC.
DEPARTURE ROUTE DESCRIPTION

Climb on assigned heading for RADAR vectors to WEDRI INT, maintain 16000. Expect filed altitude 10 minutes after departure, thence.

.... on IAH R-082 to HOURN INT, then on LCH R-253 to LCH VORTAC.

FIGHTING TIGERS TRANSITION (LCH5.LSU): From over LCH VORTAC on LCH R-070 and LSU R-252 to LSU VORTAC.
**LEONA FOUR DEPARTURE**

**TOP ALTITUDE:**

**16000**

**TAKEOFF MINIMUMS**


**NOTE:** RADAR required.

**NOTE:** Except for aircraft destined ACT or the DFW terminal area, all aircraft filing the LEONA SID must file one of the published transitions via FUZ (LOA4.FUZ), ADM (LOA4.ADM), or BYP (LOA4.BYP).

**NOTE:** RANGER TRANSITION: For aircraft overflying west/northwest of the DFW terminal area FL240 and above.

**NOTE:** ARDMORE TRANSITION: For aircraft overflying north/northwest of the DFW terminal area FL240 and above.

**NOTE:** BONHAM TRANSITION: For aircraft overflying/landing TUL VORTAC FL240 and above.

**NOTE:** Chart not to scale.
DEPARTURE ROUTE DESCRIPTION

TAKEOFF ALL RUNWAYS: Climb on assigned heading for RADAR vectors to WLLIS INT, maintain 16000. Expect filed altitude 10 minutes after departure, thence . . . .

. . . . on LOA R-147 to LOA VORTAC.

ARDMORE TRANSITION (LOA4.ADM): From over LOA VORTAC on LOA R-334 to DOLEY INT, then on ADM R-156 to ADM VORTAC.

BONHAM TRANSITION (LOA4.BYP): From over LOA VORTAC on LOA R-341 and CQY R-163 to CQY VORTAC, then on BYP R-173 to BYP VORTAC.

RANGER TRANSITION (LOA4.FUZ): From over LOA VORTAC on LOA R-334 to DOLEY INT, then on FUZ R-130 to FUZ VORTAC.
NOTE: Chart not to scale.

TOP ALTITUDE: 16000

NOTE: RADAR and DME required.
NOTE: For aircraft destined LIT or overflying LIT or PXV.

LUFKIN
112.1 LFK
Chan 58
N31°09.75'
W94°43.01'

SUSHI
N30°35.48'
W95°04.39'

COLET
N30°26.96'
W95°09.66'

KYANN
N30°15.53'
W95°13.96'

HUMBLE
116.6 IAH
Chan 113

DAISETTA
116.9 DAS
Chan 116

TOP ALTITUDE: 16000

NOTE: RADAR and DME required.
NOTE: For aircraft destined LIT or overflying LIT or PXV.

LUFKIN
112.1 LFK
Chan 58
N31°09.75'
W94°43.01'

SUSHI
N30°35.48'
W95°04.39'

COLET
N30°26.96'
W95°09.66'

KYANN
N30°15.53'
W95°13.96'

HUMBLE
116.6 IAH
Chan 113

DAISETTA
116.9 DAS
Chan 116

NOTE: Chart not to scale.

LUFKIN THREE DEPARTURE
(LFK3.LFK) 07OCT21

NOTE: Chart not to scale.

LUFKIN THREE DEPARTURE
(LFK3.LFK) 07OCT21

NOTE: Chart not to scale.

LUFKIN THREE DEPARTURE
(LFK3.LFK) 07OCT21

NOTE: Chart not to scale.
DEPARTURE ROUTE DESCRIPTION

TAKEOFF ALL RUNWAYS: Climb on assigned heading for RADAR vectors to KYANN INT, maintain 16000. Expect filed altitude 10 minutes after departure, thence. . . .

. . . on IAH R-013 to COLET INT, then right turn on LFK R-203 to LFK VORTAC.

LITTLE ROCK TRANSITION (LFK3.LIT): From over LFK VORTAC on LFK R-026 to SKKIP INT, then on LFK R-026 and LIT R-207 to LIT VORTAC.
LURIC EIGHT DEPARTURE (RNAV)

NOTE: Chart not to scale.

NOTE: RADAR required.
NOTE: DME/DME/IRU or GPS required.
NOTE: RNAV 1.

DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAYS 8L/R, 9: Climb on heading 087° to 600 for RADAR vectors to KNTKY, thence . . .
TAKEOFF RUNWAYS 15L/R: Climb on heading 149° to 600 for RADAR vectors to KNTKY, thence . . .
TAKEOFF RUNWAYS 26L/R, 27: Climb on heading 267° to 600 for RADAR vectors to KNTKY, thence . . .
TAKEOFF RUNWAYS 33L/R: Climb on heading 329° to 600 for RADAR vectors to KNTKY, thence . . .

. . . . on track 032° to PEETY, then on track 032° to DARTR, then on track 031° to MUSIQ, then on track 031° to CLAVN, then on track 031° to VELCO, then on track 031° to ENJOY, then on track 031° to LURIC, then on (transition). Maintain 16000 or as assigned by ATC. Expect filed altitude 10 minutes after departure.

HAWES TRANSITION (LURIC8.HAWES)
ORRTH TRANSITION (LURIC8.ORRTH)
TAKEOFF MINIMUMS
Rwys 15L/R, 26L/R, 27, 33L/R: Standard with minimum climb of 500' per NM to 800.

NOTE: RADAR required.
NOTE: DME/DME/IRU or GPS required.
NOTE: RNAV 1.
NOTE: For use during west flow at IAH.
   For east flow file the GUMBY RNAV DEPARTURE.

[NARRATIVE ON FOLLOWING PAGE]
DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAYS 15L/R: Climb heading 149° to 600, then left turn direct to cross TTAPS at or below 4000, then on track 123° to cross BOTLL at or below 5000, thence . . . .
TAKEOFF RUNWAYS 26L/R, 27: Climb heading 267° to 600, expect RADAR vectors to cross BOTLL at or below 5000, thence . . . .
TAKEOFF RUNWAYS 33L/R: Climb heading 329° to 600, expect RADAR vectors to cross BOTLL at or below 5000, thence . . . .

. . . . on track 090° to MMUGS, then on (transition). Maintain 16000. Expect filed altitude 10 minutes after departure.

GUSTI TRANSITION (MMUGS4.GUSTI)
LAKE CHARLES TRANSITION (MMUGS4.LCH)
WHITE LAKE TRANSITION (MMUGS4.LLA)
NOTE: RADAR required.

NOTE: Chart not to scale.

(NARRATIVE ON FOLLOWING PAGE)
DEPARTURE ROUTE DESCRIPTION

TAKEOFF ALL RUNWAYS: Climb on assigned heading for RADAR vectors to SKUBA INT, maintain 16000. Expect filed altitude 10 minutes after departure, thence . . . .

. . . . on PSX R-038 to PSX VORTAC.

FORT STOCKTON TRANSITION (PSX2.FST): From over PSX VORTAC on PSX R-253 and THX R-073 to THX VORTAC, then on THX R-259 and COT R-078 to COT VORTAC, then on COT R-318 and RSG R-136 to RSG VORTAC, then on RSG R-283 and FST R-100 to FST VORTAC.

SAN ANTONIO TRANSITION (PSX2.SAT): From over PSX VORTAC on PSX R-253 and THX R-073 to THX VORTAC, then on SAT R-158 to SAT VORTAC.
PITZZ FOUR DEPARTURE (RNAV)

NOTE: RADAR required.
NOTE: DME/DME/IRU or GPS required.
NOTE: RNAV 1.
NOTE: For use during east flow at IAH. For west flow file the BNDTO RNAV departure.

(NARRATIVE ON FOLLOWING PAGE)
DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAYS 8L/R, 9: Climb heading 087° to 600, expect RADAR vectors to RODKL, thence. . . .
TAKEOFF RUNWAYS 15L/R: Climb heading 149° to 600, then right turn direct to cross JAYLO at or below 5000, then on track 237° to RODKL, thence. . . .

. . . .on track 238° to cross PITZZ at or above 7000, then on (transition). Maintain 16000. Expect filed altitude 10 minutes after departure.

CRGER TRANSITION (PITZZ4.CRGER)
MNURE TRANSITION (PITZZ4.MNURE)
SAN ANTONIO TRANSITION (PITZZ4.SAT)
WAILN TRANSITION (PITZZ4.WAILN)
NOTE: RNAV 1.
NOTE: DME/DME/IRU or GPS required.
NOTE: RADAR required.
NOTE: RNAV 1.

Rwys 8L/R, 9, 15L/R, 26L/R, 27, 33L/R:
Standard with minimum climb of 500’ per NM to 800.

(NARRATIVE ON FOLLOWING PAGE)
TAKEOFF RUNWAYS 8L/R, 9: Climb on heading 087° to 600, for RADAR vectors to cross BOTLL at or below 5000, thence . . . .
TAKEOFF RUNWAYS 15L/R: Climb on heading 149° to 600, then left turn direct to cross TTAPS at or below 4000, then on track 123° to cross BOTLL at or below 5000, thence . . . .
TAKEOFF RUNWAYS 26L/R, 27: Climb on heading 267° to 600, for RADAR vectors to cross BOTLL at or below 5000, thence . . . .
TAKEOFF RUNWAYS 33L/R: Climb on heading 329° to 600, for RADAR vectors to cross BOTLL at or below 5000, thence . . . .

. . . . on track 139° to cross FLYZA at or above 7000, then on track 216° to cross WINEO at or above 9000, then on track 221° to cross RITAA at or above 10000, then on (transition). Maintain 16000. Expect filed altitude 10 minutes after departure.

CORPUS CHRISTI TRANSITION (RITAA6.CRP)
PALACIOS TRANSITION (RITAA6.PSX)
TRUAX TRANSITION (RITAA6.NGP)
WWREN TRANSITION (RITAA6.WWREN)
YOMOM TRANSITION (RITAA6.YOMOM)
(STRYA8.STRYA) 21280

STRYA EIGHT DEPARTURE (RNAV)

NOTE: Chart not to scale.

D-ATIS
124.05
CLNC DEL
128.1
CPDLC
GND CON

118.575 (Rwys 8L/R, 26L/R, 9/27)
121.7 (Rwys 15L/R, 33L/R)

HOUSTON TOWER
120.725 290.2 (Rwys 8L/26R)
125.35 290.2 (Rwys 8R/26L)
127.3 288.25 (Rwys 15L/R, 33L/R)
135.15 290.2 (Rwys 9/27)

HOUSTON DEP CON
132.25 285.425

NOTE: RADAR required.
NOTE: DME/DME/IRU or GPS required.
NOTE: RNAV 1.

- TAKEOFF RUNWAYS 8L/R, 9, 15L/R, 26L/R, 27, 33L/R: Climb on heading 087° to 600 for RADAR vectors to KNTKY, thence . . . .
- TAKEOFF RUNWAYS 15L/R: Climb on heading 149° to 600 for RADAR vectors to KNTKY, thence . . . .
- TAKEOFF RUNWAYS 26L/R, 27: Climb on heading 267° to 600 for RADAR vectors to KNTKY, thence . . . .
- TAKEOFF RUNWAYS 33L/R: Climb on heading 329° to 600 for RADAR vectors to KNTKY, thence . . . .

. . . . on track 032° to PEETY, then on track 032° to DARTR, then on track 031° to MUSIQ, then on track 031° to CLAVN, then on track 060° to STRYA, then on (transition). Maintain 16000 or as assigned by ATC. Expect filed altitude 10 minutes after departure.

DPATY TRANSITION (STRYA8.DPATY)
JBULL TRANSITION (STRYA8.JBULL)
DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAYS 8L/R, 9: Climb on heading 087° to 600 for RADAR vectors to BBYSE, thence. . .
TAKEOFF RUNWAYS 15L/R: Climb on heading 149° to 600 for RADAR vectors to BBYSE, thence. . .
TAKEOFF RUNWAYS 26L/R, 27: Climb on heading 267° to 600 for RADAR vectors to BBYSE, thence. . .
TAKEOFF RUNWAYS 33L/R: Climb on heading 329° to 600 for RADAR vectors to BBYSE, thence. . .

. . .on track 331° to SPICR, then on track 331° to WLLIS, then on track 332° to STYCK, then on (transition). Maintain 16000 or as assigned by ATC. Expect filed altitude 10 minutes after departure.

DOLEY TRANSITION (STYCK8.DOLEY)
WTSON TRANSITION (STYCK8.WTSON)

NOTE: Chart not to scale.
DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAYS 8L/R, 9: Climb on heading 087° to 600 for RADAR vectors to WYLSN, thence. . . .
TAKEOFF RUNWAYS 15L/R: Climb on heading 149° to 600 for RADAR vectors to WYLSN, thence. . . .
TAKEOFF RUNWAYS 26L/R, 27: Climb on heading 267° to 600 for RADAR vectors to WYLSN, thence. . . .
TAKEOFF RUNWAYS 33L/R: Climb on heading 329° to 600 for RADAR vectors to WYLSN, thence. . . .

. . . on track 360° to MONNT, then on (transition). Maintain 16000 or as assigned by ATC. Expect filed altitude 10 minutes after departure.

GIFFA TRANSITION (WYLSN8.GIFFA)
MAJKK TRANSITION (WYLSN8.MAJKK)
Baro-VNAV NA when using David Wayne Hooks Meml altimeter setting. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -15°C (59°F) or above 48°C (118°F). DME/DME RNP-0.3 NA. VDP NA when using David Wayne Hooks Meml altimeter setting. Helicopter visibility reduction below 3 SM NA. When local altimeter setting not received, use David Wayne Hooks Meml altimeter setting and increase all DA 57 feet and all MDA 60 feet; increase LNAV/VNAV all Cats and LNAV Cat C/D visibility 3/4 mile, and Circling Cat C/D visibility 3/4 mile and hold.

**MISSED APPROACH:** Climb to 2000 direct ZUXUG and on track 203° to EBERE and hold.

<table>
<thead>
<tr>
<th>ATIS</th>
<th>HOUSTON APP CON</th>
<th>EXECUTIVE TOWER</th>
<th>GND CON</th>
<th>CLNC DEL</th>
<th>GCO</th>
<th>UNICOM</th>
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<tbody>
<tr>
<td>119.525</td>
<td>123.8 257.7</td>
<td>126.975 (CTAF)</td>
<td>132.075</td>
<td>132.075</td>
<td>121.725</td>
<td>122.975</td>
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</table>

**CAGSO**

- GP 3.00° TCH 40
- CATEGORY A
- LPV DA 416-1 250 (300-1)
- LNAV/VNAV DA 708-2 542 (600-2)
- LNAV MDA 780-1 614 (700-1) 780-3/4 614 (700-1 3/4)

**ELEV 166**

- 175° to RW18

- TP 166
- 2000
- 175°
- 2000
- 1.8 NM to RW18
- RW18

- ZUXUG
- EBERE
- 2000
- GP 3.00°
- TCH 40

- CATEGORY A
- B
- C
- D

- 363
**RNAV (GPS) RWY 36**

**HOUSTON EXEC (TME)**

**ATIS**

119.525

**HOUSTON APP CON**

123.8 257.7

**EXECUTIVE TOWER**

126.975 (CTAF)

**GND CON**

132.075

**CLNC DEL**

132.075

**GCO**

121.725

**UNICOM**

122.975

**BARO-VNAV NOTAM**

Baro-VNAV NA when using David Wayne Hooks Meml 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. VDP NA when using David Wayne Hooks Meml altimeter setting. When local altimeter setting not received, use David Wayne Hooks Meml altimeter setting and increase LPV DA to 471 feet, LNAV/VNAV DA to 719 feet; increase all MDA 60 feet.

Increase LNAV/VNAV visibility 1/8 mile all Cats and LNAV and circling Cat C/D 1/4 mile.

**MISSING APPROACH**

Climb to 2000 direct AGAXE and via 328° track to BIMTE and hold.

**TRANSMITTERS**

**ATIS**

119.525

**HOUSTON APP CON**

123.8 257.7

**EXECUTIVE TOWER**

126.975 (CTAF)

**GND CON**

132.075

**CLNC DEL**

132.075

**GCO**

121.725

**UNICOM**

122.975

**RADAR REQUIRED**

**ELEV**

166

**TDZE**

164
CAUTION: BE ALERT TO RUNWAY CROSSING CLEARANCES.
READBACK OF ALL RUNWAY HOLDING INSTRUCTIONS IS REQUIRED.
NOTE: RADAR required.

NOTE: The following TRANSITIONS are ATC assigned only. Do not file.

CRESTVIEW TRANSITION: (For aircraft being weather rerouted to join a jet route off CEW VORTAC or overflying CEW VORTAC to join a direct route).

MC COMB TRANSITION: (For aircraft being weather rerouted to join a jet route off MCB VORTAC or overflying MCB VORTAC to join a direct route).

TOP ALTITUDE: ASSIGNED BY ATC

TAKEOFF MINIMUMS
Rwys 18, 36: Standard.

(NARRATIVE ON FOLLOWING PAGE)
DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAY 18: When entering controlled airspace, climb on assigned heading for RADAR vectors to RAECN INT. Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure, thence. . . .

TAKEOFF RUNWAY 36: Climb on heading 355° to 700 before turning. When entering controlled airspace, climb on assigned heading for RADAR vectors to RAECN INT. Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure, thence. . . .

. . . . on IAH R-028 to VELCO INT, cross VELCO INT at or above 10000, then right turn on LFK R-082 and AEX R-265 to AEX VORTAC.

CRESTVIEW TRANSITION (AEX3.CEW): From over AEX VORTAC on AEX R-085 and MCB R-266 to MCB VORTAC, then on MCB R-095 and CEW R-277 to CEW VORTAC.

MC COMB TRANSITION (AEX3.MCB): From over AEX VORTAC on AEX R-085 and MCB R-266 to MCB VORTAC.
NOTE: RADAR required.
NOTE: DME/DME/IRU or GPS required.
NOTE: RNAV 1.

TAKEOFF MINIMUMS
Rwy 18, 36: Standard with minimum climb of 500' per NM to 680.

DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAY 18: Climb on heading 175° to 680 for RADAR vectors to DREMR, thence . . .
TAKEOFF RUNWAY 36: Climb on heading 355° to 680 for RADAR vectors to DREMR, thence . . .
...on track 345° to LITLD, then on track 346° to BLTWY, then on (transition). Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure.

CRIED TRANSITION (BLTWY7.CRIED)

NOTE: Chart not to scale.
NOTE: Chart not to scale.
DEPARTURE ROUTE DESCRIPTION

TAKEOFF RWY 18: Climb on heading 175° to 680, for RADAR vectors to BORRN, thence. . . .
TAKEOFF RWY 36: Climb on heading 355° to 680, for RADAR vectors to BORRN, thence. . . .

. . . . on track 267° to DILRE, then on (transition). Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure.

CRGER TRANSITION (BORRN4.CRGER)
JUNCTION TRANSITION (BORRN4.JCT)
MNURE TRANSITION (BORRN4.MNURE)
SAN ANTONIO TRANSITION (BORRN4.SAT)
WAILN TRANSITION (BORRN4.WAILN)
NOTE: Chart not to scale.

**DEPARTURE ROUTE DESCRIPTION**

**TAKEOFF RUNWAY 18:** When entering controlled airspace, climb on assigned heading for RADAR vectors to LITLD INT. Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure, thence.

**TAKEOFF RUNWAY 36:** Climb on heading 355° to 700 before turning. When entering controlled airspace, climb on assigned heading for RADAR vectors to LITLD INT. Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure, thence.

. . . . on IAH R-344 to STELL INT, then on IAH R-344 to CRIED INT, then left turn on CQY R-144 to CQY VORTAC.
DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAY 18: When entering controlled airspace, climb on assigned heading for RADAR vectors to RAECN INT. Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure, thence...

TAKEOFF RUNWAY 36: Climb on heading 355° to 700 before turning. When entering controlled airspace, climb on assigned heading for RADAR vectors to RAECN INT. Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure, thence...

... on IAH R-028 and the ELD R-208 to ELD VOR/DME, cross VELCO INT at or above 10000.
NOTE: RADAR required.
NOTE: For aircraft destined for the DFW terminal area only.

TAKEOFF MINIMUMS
Rwys 18, 36: Standard.

TOP ALTITUDE: ASSIGNED BY ATC

NOTE: Chart not to scale.
DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAY 18: When entering controlled airspace, climb on assigned heading for RADAR vectors to MONNT INT. Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure, thence . . .

TAKEOFF RUNWAY 36: Climb on heading 355° to 700 before turning. When entering controlled airspace, climb on assigned heading for RADAR vectors to MONNT INT. Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure, thence . . .

. . . . on IAH R-358 to cross GIFFA INT at or above 10000.
**NOTE:** RNAV 1.
**NOTE:** RADAR required.
**NOTE:** ATC assigned only.
**NOTE:** DME/DME/IRU or GPS required.
**NOTE:** For non-GPS equipped aircraft, LCH, LLA, TBD, and LEV DME's must be operational.

**DEPARTURE ROUTE DESCRIPTION**

**TAKEOFF RUNWAY 18:** Climb on heading 175° to 680, for RADAR vectors to VUH VOR/DME, thence . . . .

**TAKEOFF RUNWAY 36:** Climb on heading 355° to 700, for RADAR vectors to VUH VOR/DME, thence . . . .

. . . . on track 118° to HOODO, then on (transition). Maintain ATC assigned altitude.

Expect filed altitude 10 minutes after departure.

**BOWFN TRANSITION (HOODO7.BOWFN)**

**CFOOD TRANSITION (HOODO7.CFOOD)**

**HARVEY TRANSITION (HOODO7.HRV)**

**LEEVILLE TRANSITION (HOODO7.LEV)**

**SBIRD TRANSITION (HOODO7.SBIRD)**

**NOTE:** Chart not to scale.
TAKEOFF MINIMUMS
Rwy 18, 36: Standard with minimum climb of 500' per NM to 680.

NOTE: RADAR required.
NOTE: DME/DME/IRU or GPS required.
NOTE: RNAV 1.
NOTE: TPAKK TRANSITION: For non GPS equipped aircraft TNV DME must be operational.

TAKEOFF RUNWAY 18: Climb on heading 175° to 680 for RADAR vectors to RENNK, thence . . . .
TAKEOFF RUNWAY 36: Climb on heading 355° to 680 for RADAR vectors to RENNK, thence . . . .

. . . . on track 016° to COLET, then on track 025° to SUSHI, then on track 026° to WWELL, then on track 026° to INDIE, then on (transition). Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure.

TPAKK TRANSITION (INDIE8.TPAKK)
DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAY 18: When entering controlled airspace, climb on assigned heading for RADAR vectors to SHYNR INT. Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure, thence . . . .

TAKEOFF RUNWAY 36: Climb on heading 355° to 700 before turning. When entering controlled airspace, climb on assigned heading for RADAR vectors to SHYNR INT. Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure, thence . . . .

. . . . on IDU R-085 to BOCCK INT, then on IDU R-085 to IDU VORTAC.

CENTEX TRANSITION (IDU1.CWK): From over IDU VORTAC on IDU R-289 and CWK R-110 to CWK VORTAC.

CORPUS CHRISTI TRANSITION (IDU1.CRP): From over IDU VORTAC on IDU R-259 to MARCS INT, then on SAT R-056 to SAT VORTAC, then on SAT R-145 and CRP R-324 to CRP VORTAC.

JUNCTION TRANSITION (IDU1.JCT): From over IDU VORTAC on IDU R-276 and JCT R-094 to JCT VORTAC.

LAREDO TRANSITION (IDU1.LRD): From over IDU VORTAC on IDU R-259 to MARCS INT, then on SAT R-056 to SAT VORTAC, then on SAT R-194 and LRD R-012 to LRD VORTAC.
KARRR SIX DEPARTURE (RNAV)

**NOTE:** Chart not to scale.

**ATIS**
HOUSTON, TEXAS
119.525
CLNC DEL
132.075
EXECUTIVE TOWER
126.975 (CTAF)
HOUSTON DEP CON
123.8 257.7

**NOTE:** RNAV 1.
**NOTE:** RADAR required.
**NOTE:** DME/DME/IRU or GPS required.
**NOTE:** RNAV 1.

**TAKEOFF MINIMUMS**
Rwys 18, 36:
Standard with minimum climb of 500’ per NM to 680.

**TOP ALTITUDE:**
ASSIGNED BY ATC

- **CORPUS CHRISTI CRP**
  - 12000
  - 1500
  - 247°
  - (17)

- **YOMOM**
  - 12000
  - 1800
  - 219°
  - (64)

- **PALACIOS PSX**
  - 12000
  - 2600
  - 222°
  - (37)

- **RIIGG**
  - 12000
  - 1700
  - 228°
  - (115)

- **TTKUBA**
  - 12000
  - 1500
  - 7800

- **KAVCY**
  - 246°
  - (18)

- **RIIGG**
  - 12000
  - 2100
  - 216°
  - (17)

- **KARRR**
  - 680

**ASSIGNED BY ATC**

**TOP ALTITUDE:**

- **YOMOM**
  - 120112

- **HOUSTON DEP CEN**
  - 126.975 (CTAF)

- **EXECUTIVE TOWER**
  - 123.8 257.7

- **ATIS**
  - 119.525

**HoSTON DEP CEN**

- **STANDARD WITH MINIMUM CLimb**: 500’ per NM to 680.

**EXECUTIVE TOWER**

- **EXEcutivE TOwER**
  - 132.075

**NOTE:** Chart not to scale.
DEPARTURE ROUTE DESCRIPTION

TAKEOFF RWY 18: Climb on heading 175° to 680, for RADAR vectors to KARRR, thence. . . .
TAKEOFF RWY 36: Climb on heading 355° to 680, for RADAR vectors to KARRR, thence. . . .

. . . . on track 218° to KAVCY, then on (transition). Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure.

CORPUS CHRISTI TRANSITION (KARRR6.CRP)
PALACIOS TRANSITION (KARRR6.PSX)
TRUAX TRANSITION (KARRR6.NGP)
WWREN TRANSITION (KARRR6.WWREN)
YOMOM TRANSITION (KARRR6.YOMOM)
NOTE: Chart not to scale.

**TOP ALTITUDE: ASSIGNED BY ATC**

- **ARDMORE**
  - 116.7 ADM
  - Chan 114
  - N33°12.69' - W97°10.10'
  - L-17, H-6

- **FL180**
  - 330° (50)
  - FL180

- **DOLEY**
  - N32°11.35' - W96°23.08'
  - L-17, H-6

- **RANGER**
  - 115.7 FUZ
  - Chan 104
  - N32°53.37' - W97°10.77'
  - L-17, H-6

- **WACO**
  - 115.3 ACT
  - Chan 100
  - N31°39.74' - W97°16.14'

- **波兰**
  - 114.4 TUL
  - Chan 91
  - N36°11.78' - W95°47.29'

- **TULSA**
  - 114.4 TUL
  - Chan 91
  - N36°11.78' - W95°47.29'

- **Cedar Creek**
  - 114.8 CQY
  - Chan 98
  - N32°11.14' - W96°13.09'

- **LEONA**
  - 110.8 LOA
  - Chan 45
  - N31°07.44' - W95°58.08'

- **BONHAM**
  - 114.6 BYP
  - Chan 93
  - N33°32.25' - W96°14.05'
  - L-17, H-6

- **FL180**
  - 353°
  - FL180

- **334°**
  - 4000 (39)

- **334°**
  - 4000 (39)

- **HUMBLE**
  - 116.6 IAH
  - Chan 113

- **L-17, H-6**

**TAKEOFF MINIMUMS**

Rwys 18, 36: Standard.

**NOTE:** RADAR required.

**NOTE:** Except for aircraft destined ACT or the DFW terminal area, all aircraft filing the LEONA SID must file one of the published transitions via FUZ (LOA4.FUZ) ADM (LOA4.ADM) or BYP (LOA4.BYP).

**NOTE:** RANGER TRANSITION: For aircraft overflying west/northwest of the DFW terminal area FL240 and above.

**NOTE:** ARDMORE TRANSITION: For aircraft overflying north/northwest of the DFW terminal area FL240 and above.

**NOTE:** BONHAM TRANSITION: For aircraft overflying/landing TUL VORTAC FL240 and above.

**NOTE:**Chart not to scale.

(NARRATIVE ON FOLLOWING PAGE)
DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAY 18: When entering controlled airspace, climb on assigned heading for RADAR vectors to WLLIS INT. Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure, thence . . . .

TAKEOFF RUNWAY 36: Climb on heading 355° to 700 before turning. When entering controlled airspace, climb on assigned heading for RADAR vectors to WLLIS INT. Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure, thence . . . .

. . . . on LOA R-147 to LOA VORTAC.

ARDMORE TRANSITION (LOA4.ADM): From over LOA VORTAC on LOA R-334 to DOLEY INT, then on ADM R-156 to ADM VORTAC.

BONHAM TRANSITION (LOA4.BYP): From over LOA VORTAC on LOA R-341 and CQY R-163 to CQY VORTAC, then on BYP R-173 to BYP VORTAC.

RANGER TRANSITION (LOA4.FUZ): From over LOA VORTAC on LOA R-334 to DOLEY INT, then on FUZ R-130 to FUZ VORTAC.
NOTE: Chart not to scale.

TOP ALTITUDE: ASSIGNED BY ATC

NOTE: RADAR and DME required.
NOTE: For aircraft destined LIT or overflying LIT or PXV.

TAKEOFF MINIMUMS
Rwys 18, 36: Standard.

(NARRATIVE ON FOLLOWING PAGE)
DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAY 18: When entering controlled airspace, climb on assigned heading for RADAR vectors to KYANN INT. Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure, thence.

TAKEOFF RUNWAY 36: Climb on heading 355° to 700 before turning. When entering controlled airspace, climb on assigned heading for RADAR vectors to KYANN INT. Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure, thence.

. . . .on IAH R-013 to COLET INT, then right turn on LFK R-203 to LFK VORTAC.

LITTLE ROCK TRANSITION (LFK3.LIT): From over LFK VORTAC on LFK R-026 to SKKIP INT, then on LFK R-026 and LIT R-207 to LIT VORTAC.
NOTE: RNAV 1.
NOTE: DME/DME/IRU or GPS required.
NOTE: RADAR required.

**DEPARTURE ROUTE DESCRIPTION**

**TAKEOFF RUNWAY 18:** Climb on heading 175° to 680 for RADAR vectors to KNTKY, thence . . . .

**TAKEOFF RUNWAY 36:** Climb on heading 355° to 680 for RADAR vectors to KNTKY, thence . . . .

. . . . on track 032° to PEETY, then on track 032° to DARTR, then on track 031° to MUSIQ, then on track 031° to CLAVN, then on track 031° to VELCO, then on track 031° to ENJOY, then on track 031° to LURIC, then on (transition). Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure.

**HAWES TRANSITION (LURIC8.HAWES)**

**ORRTH TRANSITION (LURIC8.ORRTH)**

**NOTE:** Chart not to scale.
GUSTI TRANSITION (MMALT5.GUSTI)
LAKE CHARLES TRANSITION (MMALT5.LCH)
WHITE LAKE TRANSITION (MMALT5.LLA)

NOTE: Chart not to scale.
FORT STOCKTON
116° FST
Chan 116
N30°57'13" W102°58'54"
L-19, H-6

SAN ANTONIO
116° SAT
Chan 115
N29°38'64.4" W98°27'58.4"
L-19, H-7

EAGLE LAKE
116° ELA
Chan 111

SKUBA
N29°11.72' W95°47.47'

THREE RIVERS
111° THX
Chan 51
N28°30.30' W98°09.03'

PALACIOS
117° PSX
Chan 120
N28°45.87' W96°18.37'

NOTE: RADAR required.
NOTE: Chart not to scale.

(NARRATIVE ON FOLLOWING PAGE)
DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAY 18: When entering controlled airspace, climb on assigned heading for RADAR vectors to SKUBA INT. Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure, thence . . . .

TAKEOFF RUNWAY 36: Climb on heading 355° to 700 before turning. When entering controlled airspace, climb on assigned heading for RADAR vectors to SKUBA INT. Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure, thence . . . .

. . . . on PSX R-038 to PSX VORTAC.

FORT STOCKTON TRANSITION (PSX2.FST): From over PSX VORTAC on PSX R-253 and THX R-073 to THX VORTAC, then on THX R-259 and COT R-078 to COT VORTAC, then on COT R-318 and RSG R-136 to RSG VORTAC, then on RSG R-283 and FST R-100 to FST VORTAC.

SAN ANTONIO TRANSITION (PSX2.SAT): From over PSX VORTAC on PSX R-253 and THX R-073 to THX VORTAC, then on SAT R-158 to SAT VORTAC.
**NOTE:** Chart not to scale.

**DEPARTURE ROUTE DESCRIPTION**

**TAKEOFF RUNWAY 18:** Climb on heading 175° to 680 for RADAR vectors to KNTKY, thence. . . .

**TAKEOFF RUNWAY 36:** Climb on heading 355° to 680 for RADAR vectors to KNTKY, thence. . . .

. . . .on track 032° to PEETY, then on track 032° to DARTR, then on track 031° to MUSIQ, then on track 031° to CLAVN, then on track 060° to STRYA, then on (transition). Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure.

**DPATY TRANSITION (STRYA8.DPATY)**

**JBULL TRANSITION (STRYA8.JBULL)**
**DEPARTURE ROUTE DESCRIPTION**

**TAKEOFF RUNWAY 18:** Climb on heading 175° to 680 for RADAR vectors to BBYSE, thence...

**TAKEOFF RUNWAY 36:** Climb on heading 355° to 680 for RADAR vectors to BBYSE, thence...

. . .on track 331° to SPICR, then on track 331° to WLLIS, then on track 332° to STYCK, then on (transition). Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure.

**DOLEY TRANSITION (STYCK8.DOLEY)**

**WTSON TRANSITION (STYCK8.WTSON)**
WATFO FIVE DEPARTURE (RNAV)

DEPARTURE ROUTE DESCRIPTION

TAKEOFF RWY 18: Climb on heading 174° to 680, for RADAR vectors to WATFO, thence. . . .

TAKEOFF RWY 36: Climb on heading 354° to 680, for RADAR vectors to WATFO, thence. . . .

. . . .on track 141° to VUH VOR/DME, then on (transition). Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure.

ANKRR TRANSITION (WATFO5.ANKRR)
KELPP TRANSITION (WATFO5.KELPP)
MUSYL TRANSITION (WATFO5.MUSYL)
NOTE: Chart not to scale.

NOTE: Radar required.
NOTE: DME/DME/IRU or GPS required.
NOTE: RNAV 1.

TAKEOFF MINIMUMS
Rwy 18, 36: Standard with minimum climb of 500' per NM to 680.

DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAY 18: Climb on heading 175° to 680 for Radar vectors to WYLSN, thence.

TAKEOFF RUNWAY 36: Climb on heading 355° to 680 for Radar vectors to WYLSN, thence.

...on track 360° to MONNT, then on (transition). Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure.

GIFFA TRANSITION (WYLSN8.GIFFA)
MAJKK TRANSITION (WYLSN8.MAJKK)
Circling Rwy 27 NA at night. Rwy 9 helicopter visibility reduction below ¾ SM NA.

MISSED APPROACH: Climb to 2700 direct WENPI and on track 179° to HEBUR and on track 267° to KEEDS and hold.

AWOS-3 123.625
HOUSTON APP CON 123.8 257.7
CLNC DEL 120.8
UNICOM 123.0 (CTAF)

VGSI and descent angles not coincident (VGSI Angle 3.50/TCH 50).

LNAV MDA

CIRCLING 620-1 551 (600-1) 700-1½ 631 (700-1¼) NA

HOUSTON, TEXAS

Amdt 2B  15JUL21

29°30'N-95°29'W
**RNP APCH.**

For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -1.5°C (5°F) or above 54°C (130°F). Rwy 27 helicopter visibility reduction below ½ SM NA. Obtain local altimeter setting on CTAF; when not received use William P. Hobby altimeter setting and increase all DAs/MDA’s 40 feet, and LPV, LNAV Cat C visibility ½ mile. Baro-VNAV NA when using William P. Hobby altimeter setting.

**MISSED APPROACH:** Climb to 2700 direct RUPRE and via 200° track to KEEDS.

**AWOS-3**

<table>
<thead>
<tr>
<th>HOUSTON APP CON</th>
<th>CLNC DEL</th>
<th>UNICOM</th>
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<td>120.8</td>
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**RADAR REQUIRED**

- **KEEDS**
- **ELEV 68**
- **TDZE 67**

**REIL Rwy 9 and 27**

**MIRL Rwy 9-27**

**Category C**

For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -1.5°C (5°F) or above 54°C (130°F). Rwy 27 helicopter visibility reduction below ½ SM NA. Obtain local altimeter setting on CTAF; when not received use William P. Hobby altimeter setting and increase all DAs/MDA’s 40 feet, and LPV, LNAV Cat C visibility ½ mile. Baro-VNAV NA when using William P. Hobby altimeter setting.

**MISSED APPROACH:** Climb to 2700 direct RUPRE and via 200° track to KEEDS.

**AWOS-3**

<table>
<thead>
<tr>
<th>HOUSTON APP CON</th>
<th>CLNC DEL</th>
<th>UNICOM</th>
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<tbody>
<tr>
<td>123.625</td>
<td>120.8</td>
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</table>

**RADAR REQUIRED**

- **KEEDS**
- **ELEV 68**
- **TDZE 67**

**REIL Rwy 9 and 27**

**MIRL Rwy 9-27**

**Category C**

For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -1.5°C (5°F) or above 54°C (130°F). Rwy 27 helicopter visibility reduction below ½ SM NA. Obtain local altimeter setting on CTAF; when not received use William P. Hobby altimeter setting and increase all DAs/MDA’s 40 feet, and LPV, LNAV Cat C visibility ½ mile. Baro-VNAV NA when using William P. Hobby altimeter setting.

**MISSED APPROACH:** Climb to 2700 direct RUPRE and via 200° track to KEEDS.

**AWOS-3**

<table>
<thead>
<tr>
<th>HOUSTON APP CON</th>
<th>CLNC DEL</th>
<th>UNICOM</th>
</tr>
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<tbody>
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<td>120.8</td>
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</table>
LOC RWY 9
HOUSTON-SOUTHWEST (AXH)

AWOS-3 123.625
HOUSTON APP CON 123.80 257.7
CLNC DEL 120.8
UNICOM 123.0 (CTAF)

RNAN 1-GPS.

UNICOM APP CRS 5002
Rwy Ldg TDZE 69
Apt Elev 69

Circling

LOC/DME I-AXH 108.9
Chan 26

Rwy 9 helicopter visibility reduction below 1/4 SM NA.

MISSED APPROACH: Climbing right turn to 2500 direct KEEDS.

Reil Rwys 9 and 27
MIRL Rwy 9-27

LOCALIZER 108.9
I-AXH
Chan 26

MISSED APPROACH: Climbing right turn to 2500 direct KEEDS.

Category

S-LOC 9
540-1 471 (500-1) 540-1 471 (500-1)

CIRCLING
580-1 511 (600-1) 700-1 631 (700-1)

395
NOTE: Chart not to scale.

TOP ALTITUDE: ASSIGNED BY ATC

NOTE: RADAR required.

NOTE: The following TRANSITIONS are ATC assigned only. Do not file.

CRESTVIEW TRANSITION: (For aircraft being weather rerouted to join a jet route off CEW VORTAC or overflying CEW VORTAC to join a direct route).

MC COMB TRANSITION: (For aircraft being weather rerouted to join a jet route off MCB VORTAC or overflying MCB VORTAC to join a direct route).

(NARRATIVE ON FOLLOWING PAGE)
ALEXANDRIA THREE DEPARTURE

DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAY 9: Climb on heading 089° to 2000 before turning. When entering controlled airspace, climb on assigned heading for RADAR vectors to RAECN INT. Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure, thence.

TAKEOFF RUNWAY 27: Climb on heading 269° to 2200 before turning. When entering controlled airspace, climb on assigned heading for RADAR vectors to RAECN INT. Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure, thence.

. . . .on IAH R-028 to VELCO INT, cross VELCO INT at or above 10000, then right turn on LFK R-082 and AEX R-265 to AEX VORTAC.

CRESTVIEW TRANSITION (AEX3.CEW): From over AEX VORTAC on AEX R-085 and MCB R-266 to MCB VORTAC, then on MCB R-095 and CEW R-277 to CEW VORTAC.

MC COMB TRANSITION (AEX3.MCB): From over AEX VORTAC on AEX R-085 and MCB R-266 to MCB VORTAC.
NOTE: RADAR required.
NOTE: DME/DME/IRU or GPS required.
NOTE: RNAV 1.

TAKEOFF MINIMUMS
Rwy 9, 27: Standard with minimum climb of 500’ per NM to 580.

DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAY 9: Climb on heading 089° to 2000 for RADAR vectors to DREMR, thence . . . . 
TAKEOFF RUNWAY 27: Climb on heading 269° to 2200 for RADAR vectors to DREMR, thence . . . . 

...on track 345° to LITLD, then on track 346° to BLTWY, then on (transition). Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure.

CRIED TRANSITION (BLTWY7.CRIED)
**Takeoff Minimums:**
Rwy 9, 27: Standard with minimum climb of 500' per NM to 580.

**DME/DME/IRU or GPS required.**
**RADAR required.**
**RNAV 1.**
**CRGER TRANSITION ATC assigned only for aircraft departing 54T, AXH, EFD, GLS, HPY, IWS, LBX, LVJ, SGR, TME, T00, T41.**

*NOTE: Chart not to scale.*
DEPARTURE ROUTE DESCRIPTION

TAKEOFF RWY 9: Climb on heading 089° to 2000, for RADAR vectors to BORRN, thence. . . .
TAKEOFF RWY 27: Climb on heading 269° to 2200, for RADAR vectors to BORRN, thence. . . .

. . . .on track 267° to DILRE, then on (transition). Maintain ATC assigned altitude.
Expect filed altitude 10 minutes after departure.

CRGER TRANSITION (BORRN4.CRGER)
JUNCTION TRANSITION (BORRN4.JCT)
MNURE TRANSITION (BORRN4.MNURE)
SAN ANTONIO TRANSITION (BORRN4.SAT)
WAILN TRANSITION (BORRN4.WAILN)
NOTE: Chart not to scale.

**DEPARTURE ROUTE DESCRIPTION**

**TAKEOFF RUNWAY 9:** Climb on heading 089° to 2000 before turning. When entering controlled airspace, climb on assigned heading for RADAR vectors to LITLD INT. Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure, thence.

**TAKEOFF RUNWAY 27:** Climb on heading 269° to 2200 before turning. When entering controlled airspace, climb on assigned heading for RADAR vectors to LITLD INT. Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure, thence.

. . . . . on IAH R-344 to STELL INT, then on IAH R-344 to CRIED INT, then left turn on CQY R-144 to CQY VORTAC.
NOTE: RADAR required.
NOTE: For aircraft destined KMEM or filed via Q32 or J42.

NOTE: Chart not to scale.
DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAY 9: Climb on heading 089° to 2000 before turning. When entering controlled airspace, climb on assigned heading for RADAR vectors to RAECN INT. Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure, thence. . . .

TAKEOFF RUNWAY 27: Climb on heading 269° to 2200 before turning. When entering controlled airspace, climb on assigned heading for RADAR vectors to RAECN INT. Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure, thence. . . .

. . . .on IAH R-028 and the ELD R-208 to ELD VOR/DME, cross VELCO INT at or above 10000.
NOTE: RADAR required.
NOTE: For aircraft destined for the DFW terminal area only.

TOP ALTITUDE: ASSIGNED BY ATC

NOTE: Chart not to scale.
DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAY 9: Climb on heading 089° to 2000 before turning. When entering controlled airspace, climb on assigned heading for RADAR vectors to MONNT INT. Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure, thence . . . .

TAKEOFF RUNWAY 27: Climb on heading 269° to 2200 before turning. When entering controlled airspace, climb on assigned heading for RADAR vectors to MONNT INT. Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure, thence . . . .

. . . . on IAH R-358 to cross GIFFA INT at or above 10000.
HOUSTON SEVEN DEPARTURE (RNAV)

TOP ALTITUDE: ASSIGNED BY ATC

NOTE: Chart not to scale.

DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAY 27: Climb on heading 269° to 2200, for RADAR vectors to VUH VOR/DME, thence . . . .

TAKEOFF RUNWAY 9: Climb on heading 089° to 2000, for RADAR vectors to VUH VOR/DME, thence . . . .

. . . . on track 118° to HOODO, then on (transition). Maintain ATC assigned altitude.

Expect filed altitude 10 minutes after departure.

BOWFN TRANSITION (HOODO7.BOWFN)
CFOOD TRANSITION (HOODO7.CFOOD)
HARVEY TRANSITION (HOODO7.HRV)
LEEVILLE TRANSITION (HOODO7.LEV)
SBIRD TRANSITION (HOODO7.SBIRD)

NOTE: RNAV 1.
NOTE: RADAR required.
NOTE: ATC assigned only.
NOTE: DME/DME/IRU or GPS required.
NOTE: For non-GPS equipped aircraft, LCH, LLA, TBD, and LEV DME's must be operational.

TAKEOFF MINIMUMS
Rwys 9, 27: Standard with minimum climb of 500' per NM to 580.
DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAY 9: Climb on heading 089° to 2000 for RADAR vectors to RENNK, thence . . . .

TAKEOFF RUNWAY 27: Climb on heading 269° to 2200 for RADAR vectors to RENNK, thence . . . .

. . . . on track 016° to COLET, then on track 025° to SUSHI, then on track 026° to WWELL, then on track 026° to INDIE, then on (transition).
Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure.

TPAKK TRANSITION (INDIE8.TPAKK)

NOTE: Chart not to scale.
NOTE: WILL REMAIN IN FRACTION.
DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAY 27: Climb on heading 089° to 2000 before turning. When entering controlled airspace, climb on assigned heading for RADAR vectors to SHYNR INT. Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure, thence . . . .

TAKEOFF RUNWAY 27: Climb on heading 269° to 2200 before turning. When entering controlled airspace, climb on assigned heading for RADAR vectors to SHYNR INT. Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure, thence . . . .

. . . . on IDU R-085 to BOCCK INT, then on IDU R-085 to IDU VORTAC.

CENTEX TRANSITION (IDU1.CWK): From over IDU VORTAC on IDU R-289 and CWK R-110 to CWK VORTAC.

CORPUS CHRISTI TRANSITION (IDU1.CRP): From over IDU VORTAC on IDU R-259 to MARCS INT, then on SAT R-056 to SAT VORTAC, then on SAT R-145 and CRP R-324 to CRP VORTAC.

JUNCTION TRANSITION (IDU1.JCT): From over IDU VORTAC on IDU R-276 and JCT R-094 to JCT VORTAC.

LAREDO TRANSITION (IDU1.LRD): From over IDU VORTAC on IDU R-259 to MARCS INT, then on SAT R-056 to SAT VORTAC, then on SAT R-194 and LRD R-012 to LRD VORTAC.
TAKEOFF MINIMUMS
Rwys 9, 27:
Standard with minimum climb of 500' per NM to 580.

NOTE: Chart not to scale.
NOTE: DME/DME/IRU or GPS required.
NOTE: RADAR required.
NOTE: RNAV 1.
TAKEOFF RWY 9: Climb on heading 089° to 2000, for RADAR vectors to KARRR, thence. . . .
TAKEOFF RWY 27: Climb on heading 269° to 2200, for RADAR vectors to KARRR, thence. . . .

. . . on track 218° to KAVCY, then on (transition). Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure.

CORPUS CHRISTI TRANSITION (KARRR6.CRP)
PALACIOS TRANSITION (KARRR6.PSX)
TRUAX TRANSITION (KARRR6.NGP)
WWREN TRANSITION (KARRR6.WWREN)
YOMOM TRANSITION (KARRR6.YOMOM)
DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAY 9: Climb on heading 089° to 2000 before turning. When entering controlled airspace, climb on assigned heading for RADAR vectors to WLLIS INT. Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure, thence . . . .

TAKEOFF RUNWAY 27: Climb on heading 269° to 2200 before turning. When entering controlled airspace, climb on assigned heading for RADAR vectors to WLLIS INT. Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure, thence . . . .

. . . . on LOA R-147 to LOA VORTAC.

ARDMORE TRANSITION (LOA4.ADM): From over LOA VORTAC on LOA R-334 to DOLEY INT, then on ADM R-156 to ADM VORTAC.

BONHAM TRANSITION (LOA4.BYP): From over LOA VORTAC on LOA R-341 and CQY R-163 to CQY VORTAC, then on BYP R-173 to BYP VORTAC.

RANGER TRANSITION (LOA4.FUZ): From over LOA VORTAC on LOA R-334 to DOLEY INT, then on FUZ R-130 to FUZ VORTAC.
NOTE: Chart not to scale.

NOTE: RADAR and DME required.
NOTE: For aircraft destined LIT or overflying LIT or PXV.

TOP ALTITUDE: ASSIGNED BY ATC

LITTLE ROCK
113.9 LIT
Chan B6
N34°40.66' W92°10.83'
L-18, H-6

SKKIP
N31°14.91' W94°39.45'

LUFKIN
112.1 LFK
Chan 58
N31°09.75' W94°43.01'

SUSHI
N30°35.48' W95°04.39'

COLET
N30°26.96' W95°09.66'

KYANN
N30°15.53' W95°13.96'

HUMBLE
116.6 IAH
Chan 113

DAISETTA
116.9 DAS
Chan 116

TAKEOFF MINIMUMS
Rwys 9, 27: Standard.

NOTE: Chart not to scale.

(NARRATIVE ON FOLLOWING PAGE)
DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAY 9: Climb on heading 089° to 2000 before turning. When entering controlled airspace, climb on assigned heading for RADAR vectors to KYANN INT. Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure, thence. . . .

TAKEOFF RUNWAY 27: Climb on heading 269° to 2200 before turning. When entering controlled airspace, climb on assigned heading for RADAR vectors to KYANN INT. Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure, thence. . . .

. . . on IAH R-013 to COLET INT, then right turn on LFK R-203 to LFK VORTAC.

LITTLE ROCK TRANSITION (LFK3.LIT): From over LFK VORTAC on LFK R-026 to SKKIP INT, then on LFK R-026 and LIT R-207 to LIT VORTAC.
NOTE: RADAR required.
NOTE: DME/DME/IRU or GPS required.
NOTE: RNAV 1.

TOP ALTITUDE: ASSIGNED BY ATC

TAKEOFF MINIMUMS
Rwys 9, 27: Standard with minimum climb of 500’ per NM to 580.

DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAY 9: Climb on heading 089° to 2000 for RADAR vectors to KNTKY, thence . . . .
TAKEOFF RUNWAY 27: Climb on heading 269° to 2200 for RADAR vectors to KNTKY, thence . . . .

. . . on track 032° to PEETY, then on track 032° to DARTR, then on track 031° to MUSIQ, then on track 031° to CLAVN, then on track 031° to VELCO, then on track 031° to ENJOY, then on track 031° to LURIC, then on (transition). Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure.

HAWES TRANSITION (LURIC8.HAWES)
ORRTH TRANSITION (LURIC8.ORRTH)
NOTE: Chart not to scale.

**DEPARTURE ROUTE DESCRIPTION**

**TAKEOFF RWY 9:** Climb on heading 089° to 2000 for RADAR vectors to MMALT, thence. . .

**TAKEOFF RWY 27:** Climb on heading 269° to 2200 for RADAR vectors to MMALT, thence. . .

. . . . on track 086° to MOOKI, then on (transition). Maintain ATC assigned altitude.

Expect filed altitude 10 minutes after departure.

**GUSTI TRANSITION (MMALT5.GUSTI)**

**LAKE CHARLES TRANSITION (MMALT5.LCH)**

**WHITE LAKE TRANSITION (MMALT5.LLA)**

**NOTE:** Chart not to scale.

**AWOS-3**
123.625
CTAF
123.0
CLNC DEL
120.8
HOUSTON DEP CON
123.8 257.7
NOTE: RADAR required.
NOTE: Chart not to scale.

(NARRATIVE ON FOLLOWING PAGE)
DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAY 9: Climb on heading 089° to 2000 before turning. When entering controlled airspace, climb on assigned heading for RADAR vectors to SKUBA INT. Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure, thence . . . .

TAKEOFF RUNWAY 27: Climb on heading 269° to 2200 before turning. When entering controlled airspace, climb on assigned heading for RADAR vectors to SKUBA INT. Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure, thence . . . .

. . . on PSX R-038 to PSX VORTAC.

FORT STOCKTON TRANSITION (PSX2.FST): From over PSX VORTAC on PSX R-253 and THX R-073 to THX VORTAC, then on THX R-259 and COT R-078 to COT VORTAC, then on COT R-318 and RSG R-136 to RSG VORTAC, then on RSG R-283 and FST R-100 to FST VORTAC.

SAN ANTONIO TRANSITION (PSX2.SAT): From over PSX VORTAC on PSX R-253 and THX R-073 to THX VORTAC, then on SAT R-158 to SAT VORTAC.
DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAY 9: Climb on heading 089° to 2000 for RADAR vectors to KNTKY, thence . . .

TAKEOFF RUNWAY 27: Climb on heading 269° to 2200 for RADAR vectors to KNTKY, thence . . .

. . . on track 032° to PEETY, then on track 032° to DARTR, then on track 031° to MUSIQ, then on track 031° to CLAVN, then on track 060° to STRYA, then on (transition). Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure.

DPATY TRANSITION (STRYA8.DPATY)
JBUll TRANSITION (STRYA8.JBUll)
NOTE: Chart not to scale.

DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAY 9: Climb on heading 089° to 2000 for RADAR vectors to BBYSE, thence . . .

TAKEOFF RUNWAY 27: Climb on heading 269° to 2200 for RADAR vectors to BBYSE, thence . . .

. . .on track 331° to SPICR, then on track 331° to WLLIS, then on track 332° to STYCK, then on (transition). Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure.

DOLEY TRANSITION (STYCK8.DOLEY)
WTSON TRANSITION (STYCK8.WTSON)
DEPARTURE ROUTE DESCRIPTION

TAKEOFF RWY 9: Climb on heading 089° to 2000, for RADAR vectors to WATFO, thence . . .

TAKEOFF RWY 27: Climb on heading 269° to 2200, for RADAR vectors to WATFO, thence . . .

. . . on track 141° to VUH VOR/DME, then on (transition). Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure.

ANKRR TRANSITION (WATFO5.ANKRR)
KELPP TRANSITION (WATFO5.KELPP)
MUSYL TRANSITION (WATFO5.MUSYL)
NOTE: RADAR required.
NOTE: DME/DME/IRU or GPS required.
NOTE: RNAV 1.

TAKEOFF MINIMUMS
Rwy 9, 27: Standard with minimum climb of 500' per NM to 580.

DEPARTURE ROUTE DESCRIPTION
TAKEOFF RUNWAY 9: Climb on heading 089° to 2000 for RADAR vectors to WYLSN, thence . . .
TAKEOFF RUNWAY 27: Climb on heading 269° to 2200 for RADAR vectors to WYLSN, thence . . .

. . .on track 360° to MONNT, then on (transition). Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure.

GIFFA TRANSITION (WYLSN8.GIFFA)
MAJKK TRANSITION (WYLSN8.MAJKK)
HOUSTON, TEXAS

RAVEN (GPS) RWY 32
PEARLAND RGNL (LVJ)

ASOS
118.525

HOUSTON APP CON
134.45 284.0

CLNC DEL
124.0

UNICOM
122.725 (CTAF)

Circling to Rwy 14 NA at night. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -1°C (31°F) or above 54°C (130°F). When local altimeter setting not received, use William P Hobby altimeter setting and increase all DA 18 feet and all MDA 20 feet, increase LNAV/VNAV visibilities all Cats ½ mile. VDP and Baro-VNAV NA when using William P Hobby altimeter setting. DME/DME RNP-0.3 NA. Helicopter visibility reduction below ½ SM NA.

MISSED APPROACH: Climb to 500 then climbing left turn to 3000 direct ACOLA and hold.

ASOS
118.525

HOUSTON APP CON
134.45 284.0

CLNC DEL
124.0

UNICOM
122.725 (CTAF)

RADAR REQUIRED

HOUSTON, TEXAS

Amdt 4A 02APR15

PEARLAND RGNL (LVJ)

RNAV (GPS) RWY 32

29°31'N-95°15'W
NOTE: RADAR required.
NOTE: DME/DME/IRU or GPS required.
NOTE: RNAV 1.

TAKEOFF MINIMUMS
Rwys 14, 32: Standard with minimum climb of 500' per NM to 560.

TAKEOFF RUNWAY 14: Climb on heading 142° to 1600 for RADAR vectors to DREMR, thence . . . .
TAKEOFF RUNWAY 32: Climb on heading 322° to 700 for RADAR vectors to DREMR, thence . . . .

...on track 345° to LITLD, then on track 346° to BLTWY, then on (transition). Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure.

CRIED TRANSITION (BLTWY7.CRIED)
NOTE: Chart not to scale.
DEPARTURE ROUTE DESCRIPTION

TAKEOFF RWY 14: Climb on heading 142° to 1600, for RADAR vectors to BORRN, thence. . . .
TAKEOFF RWY 32: Climb on heading 322° to 900, for RADAR vectors to BORRN, thence. . . .

...on track 267° to DILRE, then on (transition). Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure.

CRGER TRANSITION (BORRN4.CRGER)
JUNCTION TRANSITION (BORRN4.JCT)
MNURE TRANSITION (BORRN4.MNURE)
SAN ANTONIO TRANSITION (BORRN4.SAT)
WAILN TRANSITION (BORRN4.WAILN)
**DEPARTURE ROUTE DESCRIPTION**

**TAKING OFF RUNWAY 14:** Climb on heading 142° to 1600, for RADAR vectors to VUH VOR/DME, thence . . . .

**TAKING OFF RUNWAY 32:** Climb on heading 322° to 700, for RADAR vectors to VUH VOR/DME, thence . . . .

. . . . on track 118° to HOODO, then on (transition). Maintain ATC assigned altitude.

Expect filed altitude 10 minutes after departure.

**BOWFN TRANSITION (HOODO7.BOWFN)**
**CFOOD TRANSITION (HOODO7.CFOOD)**
**HARVEY TRANSITION (HOODO7.HRV)**
**LEEVILLE TRANSITION (HOODO7.LEV)**
**SBIRD TRANSITION (HOODO7.SBIRD)**
INDIE EIGHT DEPARTURE (RNAV)

NOTE: Chart not to scale.

DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAY 14: Climb on heading 142° to 1600 for RADAR vectors to RENNK, thence . . . .

TAKEOFF RUNWAY 32: Climb on heading 322° to 700 for RADAR vectors to RENNK, thence . . . .

. . . . on track 016° to COLET, then on track 025° to SUSHI, then on track 026° to WWELL, then on track 026° to INDIE, then on (transition). Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure.

TPAKK TRANSITION (INDIE8.TPAKK)

NOTE: RADAR required.
NOTE: DME/DME/IRU or GPS required.
NOTE: RNAV 1.
NOTE: TPAKK TRANSITION: For non GPS equipped aircraft TNV DME must be operational.

TAKEOFF MINIMUMS

Rwys 14, 32: Standard with minimum climb of 500’ per NM to 560.
NOTE: Chart not to scale.

ASOS
118.525
CTAF
122.725
CLNC DEL
124.0
HOUSTON DEP CON
134.45 284.0

NOTE: DME/DME/IRU or GPS required.
NOTE: RADAR required.
NOTE: RNAV 1.

TOP ALTITUDE: ASSIGNED BY ATC

HAUPTER MINIMUMS
Rwy 14, 32:
Standard with minimum climb of 500’ per NM to 560.

NOTE: Chart not to scale.

PEARLAND RGNL (LVJ)
HOUSTON, TEXAS
AL-4440 (FAA)
**DEPARTURE ROUTE DESCRIPTION**

**TAKEOFF RWY 14:** Climb on heading 142° to 1600, for RADAR vectors to KARRR, thence. . . .

**TAKEOFF RWY 32:** Climb on heading 322° to 900, for RADAR vectors to KARRR, thence. . . .

. . . .on track 218° to KAVCY, then on (transition). Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure.

**CORPUS CHRISTI TRANSITION (KARRR6.CRP)**
**PALACIOS TRANSITION (KARRR6.PSX)**
**TRUAX TRANSITION (KARRR6.NGP)**
**WWREN TRANSITION (KARRR6.WWREN)**
**YOMOM TRANSITION (KARRR6.YOMOM)**
NOTE: Chart not to scale.

NOTE: RADAR required.
NOTE: DME/DME/IRU or GPS required.
NOTE: RNAV 1.

NOTE: Chart not to scale.

TAKEOFF MINIMUMS
Rwys 14, 32: Standard with minimum climb of 500’ per NM to 560.

TAKEOFF RUNWAY 14: Climb on heading 142° to 1600 for RADAR vectors to KNTKY, thence . . . .

TAKEOFF RUNWAY 32: Climb on heading 322° to 700 for RADAR vectors to KNTKY, thence . . . .

. . . . on track 032° to PEETY, then on track 032° to DARTR, then on track 031° to MUSIQ, then on track 031° to CLAVN, then on track 031° to VELCO, then on track 031° to ENJOY, then on track 031° to LURIC, then on (transition). Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure.

HAWES TRANSITION (LURIC8.HAWES)
ORRTH TRANSITION (LURIC8.ORRTH)
**TAKING MINIMUMS**
Rwy 14, 32: Standard with minimum climb of 500’ per NM to 560.

**TOP ALTITUDE:**
ASSIGNED BY ATC

NOTE: Chart not to scale.

**DEPARTURE ROUTE DESCRIPTION**

**TAKEOFF RUNWAY 14:** Climb on heading 142° to 1600 for RADAR vectors to MMALT, thence...

**TAKEOFF RUNWAY 32:** Climb on heading 322° to 900 for RADAR vectors to MMALT, thence...

...on track 086° to MOOKI, then on (transition). Maintain ATC assigned altitude.
Expect filed altitude 10 minutes after departure.

**GUSTI TRANSITION (MMALT5.GUSTI)**
LAKE CHARLES TRANSITION (MMALT5.LCH)
WHITE LAKE TRANSITION (MMALT5.LLA)

Note: DME/DME/IRU or GPS required.
Note: RADAR required.
Note: RNAV 1.
Note: GUSTI and LCH TRANSITIONS ATC assigned only for aircraft departing
AXH, EFD, GLS, HPY, IWS, LBX, LVJ, SGR, TME, T40, T41 and 54T.
NOTE: RADAR required.
NOTE: Chart not to scale.

(NARRATIVE ON FOLLOWING PAGE)
DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAY 14: Climb on heading 142° to 1600 before turning, when entering controlled airspace, climb on assigned heading for RADAR vectors to SKUBA INT. Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure, thence. . . .

TAKEOFF RUNWAY 32: Climb on heading 322° to 700 before turning, when entering controlled airspace, climb on assigned heading for RADAR vectors to SKUBA INT. Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure, thence. . . .

. . . on PSX R-038 to PSX VORTAC.

FORT STOCKTON TRANSITION (PSX2.FST): From over PSX VORTAC on PSX R-253 and THX R-073 to THX VORTAC, then on THX R-259 and COT R-078 to COT VORTAC, then on COT R-318 and RSG R-136 to RSG VORTAC, then on RSG R-283 and FST R-100 to FST VORTAC.

SAN ANTONIO TRANSITION (PSX2.SAT): From over PSX VORTAC on PSX R-253 and THX R-073 to THX VORTAC, then on SAT R-158 to SAT VORTAC.
STRYA EIGHT DEPARTURE (RNAV)

NOTE: Chart not to scale.

TAKEOFF MINIMUMS
Rwys 14, 32: Standard with minimum climb of 500’ per NM to 560.

NOTE:  RNAV 1.
NOTE: DME/DME/IRU or GPS required.
NOTE: RADAR required.
NOTE: Chart not to scale.

DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAY 14: Climb on heading 142° to 1600 for RADAR vectors to KNTKY, thence . . .
TAKEOFF RUNWAY 32: Climb on heading 322° to 700 for RADAR vectors to KNTKY, thence . . .
. . . on track 032° to PEETY, then on track 032° to DARTR, then on track 031° to MUSIQ, then on track 031° to CLAVN, then on track 060° to STRYA, then on (transition). Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure.

DPATY TRANSITION (STRYA8.DPATY)
JBUll TRANSITION (STRYA8.JBULL)
NOTE: Chart not to scale.

DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAY 14: Climb on heading 142° to 1600 for RADAR vectors to BBYSE, thence... 
TAKEOFF RUNWAY 32: Climb on heading 322° to 700 for RADAR vectors to BBYSE, thence... 
...on track 331° to SPICR, then on track 331° to WLLIS, then on track 332° to STYCK, then on (transition). Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure.

DOLEY TRANSITION (STYCK8.DOLEY) 
WTSON TRANSITION (STYCK8.WTSON)

NOTE: RADAR required.
NOTE: DME/DME/IRU or GPS required.
NOTE: RNAV 1.
WATFO FIVE DEPARTURE (RNAV)

DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAY 14: Climb on heading 140° to 1600, for RADAR vectors to WATFO, thence. . . .

TAKEOFF RUNWAY 32: Climb on heading 320° to 900, for RADAR vectors to WATFO, thence. . . .

. . . . on track 141° to VUH VOR/DME, then on (transition). Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure.

ANKRR TRANSITION (WATFO5.ANKRR)
KELPP TRANSITION (WATFO5.KELPP)
MUSYL TRANSITION (WATFO5.MUSYL)
DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAY 14: Climb on heading 142° to 1600 for RADAR vectors to WYLSN, thence. . . .

TAKEOFF RUNWAY 32: Climb on heading 322° to 700 for RADAR vectors to WYLSN, thence. . . .

. . . on track 360° to MONNT, then on (transition). Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure.

NOTE: Chart not to scale.
ILS or LOC RWY 35
SUGAR LAND RGNL (SGR)

DME required. RADAR required for procedure entry.

VDP NA when using William P Hobby altimeter setting. When local altimeter setting not received, use William P Hobby altimeter setting and increase all DA 51 feet and all MDA 60 feet and S-LOC 35 Cat C/D visibility 1/2 mile, and Circling Cat C/D visibility 1/4 mile.

MISSED APPROACH: Climb to 900 then climbing left turn to 2000 on I-TXH localizer south course to HULLO/I-TXH 6.3 DME and hold.

LOCALIZER 110.7
I-TXH 44

ILS only.

LOC only.

*600 when using William P Hobby altimeter setting.

HOUSTON, TEXAS

SUGAR LAND RGNL (SGR)

ILS or LOC RWY 35

SC-5, 07 OCT 2021 to 02 DEC 2021

SC-5, 07 OCT 2021 to 02 DEC 2021

SC-5, 07 OCT 2021 to 02 DEC 2021

29°37'N-95°39'W
Rwy 17 helicopter visibility reduction below ¾SM NA. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -15°C or above 54°C.

#### ATIS
- HOUSTON APP CON: 118.125
- SUGAR LAND TOWER: 118.65 (CTAF)

#### GND CON
- CLNC DEL: 121.4
- CLNC DEL (when hrw closed): 119.25
- UNICOM: 122.95

#### VGSI and RNAV glidespath not coincident
(VGSI Angle 3.5/TCH 52).

#### Category

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#### RNP APCH.

- WAAS CH 82513
- APP CRS 170°
- Rwy Idg 7620
- TDZE 82
- Apt Elev 82

#### MISSED APPROACH: Climb to 2000 direct POPAM and hold.
For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -15°C (5°F) or above 43°C (109°F). Baro-VNAV and VDP NA when using William P Hobby altimeter setting. When local altimeter setting not received, use William P Hobby altimeter setting: increase all DA 51 feet; increase all MDA 60 feet and increase LNAV-VNAV all Cats visibility to 1/4, LNAV Cat C/D visibility to 1/4, and Circling Cat C visibility to 2, Cat D to 2 1/4. When VGSI inop, Circling Rwy 17 NA at night.
ATIS*  
118.125  
SUGAR LAND TOWER*  
118.65  
GND CON  
121.4  
CLNC DEL  
121.4  
119.25 (When Tower Closed)  

FIELD ELEV 81  

TWR 176°±  

FIELD DIAGRAM  

JANUARY 2020  
ANNUAL RATE OF CHANGE  
0.1° W  

140°  

95°39'W  

29°38'N  

RWY 17-35  
S-80, D-120, 2S-152, 2D-200, 2D/2D2-600  

ELEV 74  

35  

95°40'W  

CAUTION: BE ALERT TO RUNWAY CROSSING CLEARANCES.  
READBACK OF ALL RUNWAY HOLDING INSTRUCTIONS IS REQUIRED.
ALEXANDRIA THREE DEPARTURE

NOTE: Chart not to scale.

NOTE: RADAR required.

NOTE: The following TRANSITIONS are ATC assigned only. Do not file.

CRESTVIEW TRANSITION: (For aircraft being weather rerouted to join a jet route off CEW VORTAC or overflying CEW VORTAC to join a direct route).

MC COMB TRANSITION: (For aircraft being weather rerouted to join a jet route off MCB VORTAC or overflying MCB VORTAC to join a direct route).

TOP ALTITUDE: ASSIGNED BY ATC

(TOP ALTITUDE: ASSIGNED BY ATC)

(AEX3.AEX) 07OCT21

ALEXANDRIA THREE DEPARTURE

(NARRATIVE ON FOLLOWING PAGE)

ASSESS BY ATC TO TOP ALTITUDE:

170°

350°

1500

1100

30°

170°
DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAY 17: Climb on heading 170° to 1500 before turning. When entering controlled airspace, climb on assigned heading for RADAR vectors to RAECN INT. Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure, thence.

TAKEOFF RUNWAY 35: Climb on heading 350° to 1100 before turning. When entering controlled airspace, climb on assigned heading for RADAR vectors to RAECN INT. Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure, thence.

...on IAH R-028 to VELCO INT, cross VELCO INT at or above 10000, then right turn on LFK R-082 and AEX R-265 to AEX VORTAC.

CRESTVIEW TRANSITION (AEX3.CEW): From over AEX VORTAC on AEX R-085 and MCB R-266 to MCB VORTAC, then on MCB R-095 and CEW R-277 to CEW VORTAC.

MC COMB TRANSITION (AEX3.MCB): From over AEX VORTAC on AEX R-085 and MCB R-266 to MCB VORTAC.
DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAY 17: Climb on heading 170° to 1500 for RADAR vectors to DREMR, thence . . . .
TAKEOFF RUNWAY 35: Climb on heading 350° to 1100 for RADAR vectors to DREMR, thence . . . .

…on track 345° to LITLD, then on track 346° to BLTWY, then on (transition). Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure.

CRIED TRANSITION (BLTWY7.CRIED)

NOTE: Chart not to scale.
**Takeoff Minimums:**
Rwy 17, 35: Standard with minimum climb of 500' per NM to 600.'
¬

DEPARTURE ROUTE DESCRIPTION

TAKEOFF RWY 17: Climb on heading 170° to 1500, for RADAR vectors to BORRN, thence. . . .

TAKEOFF RWY 35: Climb on heading 350° to 1100, for RADAR vectors to BORRN, thence. . . .

. . . on track 267° to DILRE, then on (transition). Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure.

CRGER TRANSITION (BORRN4.CRGER)
JUNCTION TRANSITION (BORRN4.JCT)
MNURE TRANSITION (BORRN4.MNURE)
SAN ANTONIO TRANSITION (BORRN4.SAT)
WAILN TRANSITION (BORRN4.WAILN)
NOTE: RADAR required.

TAKEOFF MINIMUMS
Rwys 17, 35: Standard.
DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAY 17: Climb on heading 170° to 1500 before turning. When entering controlled airspace, climb on assigned heading for RADAR vectors to LITLD INT. Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure, thence . . . .

TAKEOFF RUNWAY 35: Climb on heading 350° to 1100 before turning. When entering controlled airspace, climb on assigned heading for RADAR vectors to LITLD INT. Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure, thence . . . .

. . . . on IAH R-344 to STELL INT, then on IAH R-344 to CRIED INT, then left turn on CQY R-144 to CQY VORTAC.
EL DORADO ONE DEPARTURE

TOP ALTITUDE:
ASSIGNED BY ATC

NOTE: RADAR required.
NOTE: For aircraft destined KMEM
or filed via Q32 or J42.

TAKEOFF MINIMUMS
Rwys 17, 35: Standard.
DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAY 17: Climb on heading 170° to 1500 before turning. When entering controlled airspace, climb on assigned heading for RADAR vectors to RAECN INT. Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure, thence.

TAKEOFF RUNWAY 35: Climb on heading 350° to 1100 before turning. When entering controlled airspace, climb on assigned heading for RADAR vectors to RAECN INT. Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure, thence.

... on IAH R-028 and the ELD R-208 to ELD VOR/DME, cross VELCO INT at or above 10000.
NOTE: RADAR required.
NOTE: For aircraft destined for the DFW terminal area only.

NOTE: Chart not to scale.

(NARRATIVE ON FOLLOWING PAGE)
DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAY 17: Climb on heading 170° to 1500 before turning. When entering controlled airspace, climb on assigned heading for RADAR vectors to MONNT INT. Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure, thence . . . .

TAKEOFF RUNWAY 35: Climb on heading 350° to 1100 before turning. When entering controlled airspace, climb on assigned heading for RADAR vectors to MONNT INT. Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure, thence . . . .

. . . . on IAH R-358 to cross GIFFA INT at or above 10000.
DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAY 17: Climb on heading 170° to 1500, for RADAR vectors to VUH VOR/DME, thence . . . .

TAKEOFF RUNWAY 35: Climb on heading 350° to 1100, for RADAR vectors to VUH VOR/DME, thence . . . .

. . . . on track 118° to HOODO, then on (transition). Maintain ATC assigned altitude.

Expect filed altitude 10 minutes after departure.

BOWFN TRANSITION (HOODO7.BOWFN)
CFOOD TRANSITION (HOODO7.CFOOD)
HARVEY TRANSITION (HOODO7.HRV)
LEEVILLE TRANSITION (HOODO7.LEV)
SBIRD TRANSITION (HOODO7.SBIRD)
INDIE EIGHT DEPARTURE (RNAV)

**DEPARTURE ROUTE DESCRIPTION**

**TAKEOFF RUNWAY 17:** Climb on heading 170° to 1500 for RADAR vectors to RENNK, thence . . . .

**TAKEOFF RUNWAY 35:** Climb on heading 350° to 1100 for RADAR vectors to RENNK, thence . . . .

. . . . on track 016° to COLET, then on track 025° to SUSHI, then on track 026° to WWELL, then on track 026° to INDIE, then on (transition). Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure.

**TPAKK TRANSITION (INDIE8.TPAKK)**

**NOTE:** Chart not to scale.
INDUSTRY ONE DEPARTURE

(INDU.1DU) 07OCT21

INDUSTRY ONE DEPARTURE

SC-5, 07 OCT 2021 to 02 DEC 2021

NOTE: Chart not to scale.
DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAY 17: Climb on heading 170° to 1500 before turning. When entering controlled airspace, climb on assigned heading for RADAR vectors to SHYNR INT. Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure, thence . . .

TAKEOFF RUNWAY 35: Climb on heading 350° to 1100 before turning. When entering controlled airspace, climb on assigned heading for RADAR vectors to SHYNR INT. Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure, thence . . .

. . . . on IDU R-085 to BOCCK INT, then on IDU R-085 to IDU VORTAC.

CENTEX TRANSITION (IDU1.CWK): From over IDU VORTAC on IDU R-289 and CWK R-110 to CWK VORTAC.

CORPUS CHRISTI TRANSITION (IDU1.CRP): From over IDU VORTAC on IDU R-259 to MARCS INT, then on SAT R-056 to SAT VORTAC, then on SAT R-145 and CRP R-324 to CRP VORTAC.

JUNCTION TRANSITION (IDU1.JCT): From over IDU VORTAC on IDU R-276 and JCT R-094 to JCT VORTAC.

LAREDO TRANSITION (IDU1.LRD): From over IDU VORTAC on IDU R-259 to MARCS INT, then on SAT R-056 to SAT VORTAC, then on SAT R-194 and LRD R-012 to LRD VORTAC.
KARR SIX DEPARTURE (RNAV) 1100

NOTE: Chart not to scale.

TOP ALTITUDE: ASSIGNED BY ATC

SC-5, 07 OCT 2021 to 02 DEC 2021
DEPARTURE ROUTE DESCRIPTION

TAKEOFF RWY 17: Climb on heading 170° to 1500, expect RADAR vectors to KARRR, thence. . . .
TAKEOFF RWY 35: Climb on heading 350° to 1100, expect RADAR vectors to KARRR, thence. . . .

. . . .on track 218° to KAVCY, then on (transition). Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure.

CORPORUS CHRISTI TRANSITION (KARRR6.CRP)
PALACIOS TRANSITION (KARRR6.PSX)
TRUAX TRANSITION (KARRR6.NGP)
WWREN TRANSITION (KARRR6.WWREN)
YOMOM TRANSITION (KARRR6.YOMOM)
TOP ALTITUDE: ASSIGNED BY ATC

NOTE: RADAR required.

NOTE: Except for aircraft destined ACT or the DFW terminal area, all aircraft filing the LEONA SID must file one of the published transitions via FUZ (LOA4.FUZ) ADM (LOA4.ADM) or BYP (LOA4.BYP).

NOTE: RANGER TRANSITION: For aircraft overflying west/northwest of the DFW terminal area FL240 and above.

NOTE: ARDMORE TRANSITION: For aircraft overflying north/northwest of the DFW terminal area FL240 and above.

NOTE: BONHAM TRANSITION: For aircraft overflying/landing TUL VORTAC FL240 and above.

NOTE: Chart not to scale.
LEONA FOUR DEPARTURE

DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAY 17: Climb on heading 170° to 1500 before turning. When entering controlled airspace, climb on assigned heading for RADAR vectors to WLLIS INT. Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure, thence . . . .

TAKEOFF RUNWAY 35: Climb on heading 350° to 1100 before turning. When entering controlled airspace, climb on assigned heading for RADAR vectors to WLLIS INT. Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure, thence . . . .

. . . . on LOA R-147 to LOA VORTAC.

ARDMORE TRANSITION (LOA4.ADM): From over LOA VORTAC on LOA R-334 to DOLEY INT, then on ADM R-156 to ADM VORTAC.

BONHAM TRANSITION (LOA4.BYP): From over LOA VORTAC on LOA R-341 and CQY R-163 to CQY VORTAC, then on BYP R-173 to BYP VORTAC.

RANGER TRANSITION (LOA4.FUZ): From over LOA VORTAC on LOA R-334 to DOLEY INT, then on FUZ R-130 to FUZ VORTAC.
NOTE: Chart not to scale.

*LUFKIN THREE DEPARTURE*

**TOP ALTITUDE: ASSIGNED BY ATC**

**LITTLE ROCK**
113.9 UUT
Chan 86
N34°40.66' W92°10.83'
L-18, H-6

**SKKIP**
N31°14.91' W94°39.45'

**LUFKIN**
112.1 LFK
Chan 58
N31°09.75' W94°43.01'

**SUSHI**
N30°35.48' W95°04.39'

**COLET**
N30°26.96' W95°09.66'

**KYANN**
N30°15.53' W95°13.96'

**HUMBLE**
116.6 IAH
Chan 113

**DAISETTA**
116.9 DAS
Chan 116

**NOTE:** RADAR and DME required.
**NOTE:** For aircraft destined LIT or overflying LIT or PXV.

*LUFKIN THREE DEPARTURE*

**TAKEOFF MINIMUMS**
Rwys 17, 35: Standard.

*(NARRATIVE ON FOLLOWING PAGE)*
DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAY 17: Climb on heading 170° to 1500 before turning. When entering controlled airspace, climb on assigned heading for RADAR vectors to KYANN INT. Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure, thence. . . .

TAKEOFF RUNWAY 35: Climb on heading 350° to 1100 before turning. When entering controlled airspace, climb on assigned heading for RADAR vectors to KYANN INT. Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure, thence. . . .

. . .on IAH R-013 to COLET INT, then right turn on LFK R-203 to LFK VORTAC.

LITTLE ROCK TRANSITION (LFK3.LIT): From over LFK VORTAC on LFK R-026 to SKKIP INT, then on LFK R-026 and LIT R-207 to LIT VORTAC.
NOTE: RADAR required.
NOTE: DME/DME/IRU or GPS required.
NOTE: RNAV 1.

 Expect filed altitude 10 minutes after departure. Then on track 031° to ENJOY, then on track 031° to LURIC, then on track 031° to CLAVN, then on track 031° to VELCO, then on track 031° to MUSIQ, then on track 031° to DARTR, then on track 032° to PEETY, then on track 032° to KNTKY, thence . . . .

TAKEOFF MINIMUMS
Rwys 17, 35: Standard with minimum climb of 500’ per NM to 600.

DEPARTURE ROUTE DESCRIPTION

TAKEOFF RWY 17: Climb on heading 170° to 1500 for RADAR vectors to KNTKY, thence . . . .
TAKEOFF RWY 35: Climb on heading 350° to 1100 for RADAR vectors to KNTKY, thence . . . .

. . . . on track 032° to PEETY, then on track 032° to DARTR, then on track 031° to MUSIQ, then on track 031° to CLAVN, then on track 031° to VELCO, then on track 031° to ENJOY, then on track 031° to LURIC, then on (transition). Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure.

HAZES TRANSITION (LURIC8.HAWES)
OORTH TRANSITION (LURIC8.OORTH)

NOTE: Chart not to scale.
ATIS *  
118.125  
CLNC DFL  
121.4  
CLNC DFL (when twr closed)  
119.25  
GND CON  
121.4  
SUGARLAND TOWER *  
118.65 [CTAF]  
HOUSTON DEP CON  
123.8  257.7

**TAKEOFF MINIMUMS**  
Rwy 17, 35: Standard with minimum climb of 500’ per NM to 600.

---

**DEPARTURE ROUTE DESCRIPTION**

**TAKEOFF RWY 17:** Climb on heading 170° to 1500 for RADAR vectors to MMALT, thence...  
**TAKEOFF RWY 35:** Climb on heading 350° to 1100 for RADAR vectors to MMALT, thence...  
... on track 086° to MOOKI, then on (transition). Maintain ATC assigned altitude.  
Expect filed altitude 10 minutes after departure.

**GUSTI TRANSITION (MMALT5.GUSTI)**  
LAKE CHARLES TRANSITION (MMALT5.LCH)  
WHITE LAKE TRANSITION (MMALT5.LLA)

---

**NOTE:** Chart not to scale.
DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAY 17: Climb on heading 170° to 1500 before turning. When entering controlled airspace, climb on assigned heading for RADAR vectors to SKUBA INT. Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure, thence . . . .

TAKEOFF RUNWAY 35: Climb on heading 350° to 1100 before turning. When entering controlled airspace, climb on assigned heading for RADAR vectors to SKUBA INT. Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure, thence . . . .

. . . . on PSX R-038 to PSX VORTAC.

FORT STOCKTON TRANSITION (PSX2.FST): From over PSX VORTAC on PSX R-253 and THX R-073 to THX VORTAC, then on THX R-259 and COT R-078 to COT VORTAC, then on COT R-318 and RSG R-136 to RSG VORTAC, then on RSG R-283 and FST R-100 to FST VORTAC.

SAN ANTONIO TRANSITION (PSX2.SAT): From over PSX VORTAC on PSX R-253 and THX R-073 to THX VORTAC, then on SAT R-158 to SAT VORTAC.
NOTE: Chart not to scale.

NOTE:  RNAV 1.

NOTE:  DME/DME/IRU or GPS required.

NOTE:  RADAR required.

TOP ALTITUDE: ASSIGNED BY ATC

TAKEOFF MINIMUMS
Rwys 17, 35: Standard with minimum climb of 500’ per NM to 600.

TAKEOFF RUNWAY 17: Climb on heading 170° to 1500 for RADAR vectors to KNTKY, thence. . . .
TAKEOFF RUNWAY 35: Climb on heading 350° to 1100 for RADAR vectors to KNTKY, thence. . . .

. . . . on track 032° to PEETY, then on track 032° to DARTR, then on track 031° to MUSIQ, then on track 031° to CLAVN, then on track 060° to STRYA, then on (transition). Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure.

DPATY TRANSITION (STRYA8.DPATY)
JBULL TRANSITION (STRYA8.JBULL)
NOTE: Chart not to scale.

DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAY 17: Climb on heading 170° to 1500 for RADAR vectors to BBYSE, thence. . .

TAKEOFF RUNWAY 35: Climb on heading 350° to 1100 for RADAR vectors to BBYSE, thence. . .

. . .on track 331° to SPICR, then on track 331° to WLLIS, then on track 332° to STYCK, then on (transition). Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure.

DOLEY TRANSITION (STYCK8.DOLEY)
WTSON TRANSITION (STYCK8.WTSON)
Takeoff RWY 17: Climb on heading 170° to 1500, for RADAR vectors to WATFO, thence. . . .
Takeoff RWY 35: Climb on heading 350° to 1100, for RADAR vectors to WATFO, thence. . . .

. . . .on track 141° to VUH VOR/DME, then on (transition). Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure.

ANKRR transition (WATFO5.ANKRR)
KELPP transition (WATFO5.KELPP)
MUSYL transition (WATFO5.MUSYL)
NOTE: Chart not to scale.

RNAV 1. 
NOTE: DME/DME/IRU or GPS required.
NOTE: RADAR required.
NOTE: RNAV 1.

TAKEOFF MINIMUMS
Rwy 17, 35: Standard with minimum climb of 500’ per NM to 600.

DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAY 17: Climb on heading 170° to 1500 for RADAR vectors to WYLSN, thence . . .
TAKEOFF RUNWAY 35: Climb on heading 350° to 1100 for RADAR vectors to WYLSN, thence . . .

. . . on track 360° to MONNT, then on (transition).
Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure.

GIFFA TRANSITION (WYLSN8.GIFFA)
MAJKK TRANSITION (WYLSN8.MAJKK)

NOTE: Chart not to scale.
RNAV (GPS) RWY 15
WEST HOUSTON (IWS)

HOUSTON, TEXAS
AL-6079 (FAA)

Amdt 1D 15JUL21

**RNP APCH.**

- Procedure NA at night.
- Rwy 15 helicopter visibility reduction below 1 SM NA.
- Use George Bush Intcntl/Houston altimeter setting.

**HOUSTON APP CON**
123.8 257.7

**CLNC DEL**
121.15

**UNICOM**
123.05 (CTAF) 0

**EAWS**

**APP CRS** 150°

**Rwy Idg** 3953

**TDZE** 111

**Apt Elev** 111

**RNAV (GPS) RWY 15**

**HOUSTON, TEXAS**

**ELEV** 111

**TDZE** 111

**2000 150° (10)**

- SHYNR

**120°**

- 4 NM

**VGSI and descent angles not coincident (VGSI Angle 3.70/TCH 43).**

**600 2000 SHYNR**

**600**

**2000**

**SHYNR**

**CIRCLING**

- 600-1
- 489 (500-1)
- 489 (500-1)
- 529 (600-1)
- 529 (600-1)
- 689 (700-2)

** CATEGORY **

<table>
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<th>D</th>
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<tr>
<td>CIRCLING</td>
<td>600-1</td>
<td>489 (500-1)</td>
<td>640-1</td>
<td>529 (600-1)</td>
</tr>
</tbody>
</table>

**USE GEORGE BUSH INTCNT/HOUSTON ALTIMETER SETTING.**

**Procedure NA at night.**

**Rwy 15 helicopter visibility reduction below 1 SM NA.**

**MISSED APPROACH:** Climb to 600 then climbing right turn to 2000 direct SHYNR and hold.

**ATTENTION:**

- Use George Bush Intcntl/Houston altimeter setting.
- Procedure NA at night.
- Rwy 15 helicopter visibility reduction below 1 SM NA.
- Use George Bush Intcntl/Houston altimeter setting.
RNAV (GPS) RWY 33
WEST HOUSTON (TWS)

HOUSTON APP CON
123.8 257.7

ELEV 111
TDZE 111

Rwy 33 helicopter visibility reduction below 1 SM NA. Use George Bush Intcntl/Houston altimeter setting. Circling Rwy 15 NA at night.

MISSED APPROACH: Climbing left turn to 2000 direct SHYNR and hold.

2000
SHYNR

VGSIs and descent angles not coincident [VGSIs angle 3.70/TCH 44].

29°49'N-95°40'W

RNP APCH.

MSD APCH FIX
SHYNR

300°

4 NM

EMULE

529 (600-1)

689 (700-2)

1700

3000

100

2049

COART

LNAV MDA
600-1
489 (500-1)
600-1/8
489 (500-1/8)
NA

CIRCLING
600-1
489 (500-1)
640-1
529 (600-1)
800-2
689 (700-2)
NA

Rwy Idg 3953
TDZE 111
Apt Elev 111

HOUSTON, TEXAS

UNICOM
123.05 (CTAF)

CLNC DEL
121.15

3.00°

RW33

90°

4.9 NM

1.00°

3.00°

TCH 45

ائية
NOTE: RADAR required.

NOTE: The following TRANSITIONS are ATC assigned only. Do not file.

CRESTVIEW TRANSITION: (For aircraft being weather rerouted to join a jet route off CEW VORTAC or overflying CEW VORTAC to join a direct route).

MC COMB TRANSITION: (For aircraft being weather rerouted to join a jet route off MCB VORTAC or overflying MCB VORTAC to join a direct route).

TAKING MINIMUMS
Rwys 15, 33: Standard.

NOTE: Chart not to scale.

(NARRATIVE ON FOLLOWING PAGE)

SC-5, 07 OCT 2021 to 02 DEC 2021
DEPARTURE ROUTE DESCRIPTION

TAKEOFF ALL RUNWAYS: When entering controlled airspace, climb on assigned heading for RADAR vectors to RAECN INT. Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure, thence.

. . .on IAH R-028 to VELCO INT, cross VELCO INT at or above 10000, then right turn on LFK R-082 and AEX R-265 to AEX VORTAC.

CRESTVIEW TRANSITION (AEX3.CEW): From over AEX VORTAC on AEX R-085 and MCB R-266 to MCB VORTAC, then on MCB R-095 and CEW R-277 to CEW VORTAC.

MC COMB TRANSITION (AEX3.MCB): From over AEX VORTAC on AEX R-085 and MCB R-266 to MCB VORTAC.
NOTE: RADAR required.
NOTE: DME/DME/IRU or GPS required.
NOTE: RNAV 1.

**DEPARTURE ROUTE DESCRIPTION**

**TAKEOFF RUNWAY 15:** Climb on heading 150° to 620 for RADAR vectors to DREMR, thence . . . .

**TAKEOFF RUNWAY 33:** Climb on heading 330° to 620 for RADAR vectors to DREMR, thence . . . .

...on track 345° to LITLD, then on track 346° to BLTWY, then on (transition). Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure.

**CRIED TRANSITION (BLTWY7.CRIED)**

**NOTE:** Chart not to scale.
CTAF 123.05
CLNC DEL 121.15
HOU STON DEP CON 123.8 257.7

TOP ALTITUDE:
ASSIGNED BY ATC

BEIN TAKING MINIMUMS:
Rwy 15, 33: Standard with minimum
climb of 500’ per NM to 620.

NOTE: Chart not to scale.
DEPARTURE ROUTE DESCRIPTION

TAKEOFF RWY 15: Climb heading 150° to 620, for RADAR vectors to BORRN, thence. . . .
TAKEOFF RWY 33: Climb heading 330° to 620, for RADAR vectors to BORRN, thence. . . .

... on track 267° to DILRE, then on (transition). Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure.

CRGER TRANSITION (BORRN4.CRGER)
JUNCTION TRANSITION (BORRN4.JCT)
MNURE TRANSITION (BORRN4.MNURE)
SAN ANTONIO TRANSITION (BORRN4.SAT)
WAILN TRANSITION (BORRN4.WAILN)
NOTE: RADAR required.

TAKEOFF MINIMUMS
Rwys 15, 33: Standard.

NOTE: Chart not to scale.

DEPARTURE ROUTE DESCRIPTION

TAKEOFF ALL RUNWAYS: When entering controlled airspace, climb on assigned heading for RADAR vectors to LITLD INT. Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure, thence . . . .

. . . . on IAH R-344 to STELL INT, then on IAH R-344 to CRIED INT, then left turn on CQY R-144 to CQY VORTAC.

NOTE: Chart not to scale.
NOTE: RADAR required.
NOTE: For aircraft destined KMEM or filed via Q32 or J42.

TAKEOFF MINIMUMS
Rwys 15, 33: Standard.

NOTE: Chart not to scale.

DEPARTURE ROUTE DESCRIPTION

TAKEOFF ALL RUNWAYS: When entering controlled airspace, climb on assigned heading for RADAR vectors to RAECN INT. Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure, thence. . . .

. . . on IAH R-028 and the ELD R-208 to ELD VOR/DME, cross VELCO INT at or above 10000.
NOTE: RADAR required.
NOTE: For aircraft destined for the DFW terminal area only.

TAKEOFF MINIMUMS
Rwys 15, 33: Standard

NOTE: Chart not to scale.

DEPARTURE ROUTE DESCRIPTION

TAKEOFF ALL RUNWAYS: When entering controlled airspace, climb on assigned heading for RADAR vectors to MONNT INT. Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure, thence . . .

. . . . on IAH R-358 to cross GIFFA INT at or above 10000.
**DEPARTURE ROUTE DESCRIPTION**

**TAKEOFF RUNWAY 15:** Climb on heading 150° to 620, for RADAR vectors to VUH VOR/DME, thence . . . .

**TAKEOFF RUNWAY 33:** Climb on heading 330° to 620, for RADAR vectors to VUH VOR/DME, thence . . . .

. . . . on track 118° to HOODO, then on (transition). Maintain ATC assigned altitude.

Expect filed altitude 10 minutes after departure.

**BOWFN TRANSITION (HOODO7.BOWFN)**
**CFOOD TRANSITION (HOODO7.CFOOD)**
**HARVEY TRANSITION (HOODO7.HRV)**
**LEEVILLE TRANSITION (HOODO7.LEV)**
**SBIRD TRANSITION (HOODO7.SBIRD)**
INDIE EIGHT DEPARTURE (RNAV)

NOTE: RADAR required.
NOTE: DME/DME/IRU or GPS required.
NOTE: RNAV 1.
NOTE: TPAKK TRANSITION: For non GPS equipped aircraft TNV DME must be operational.

TAKEOFF MINIMUMS
Rwys 15, 33: Standard with minimum climb of 500’ per NM to 620.

DEPARTURE ROUTE DESCRIPTION
TAKEOFF RUNWAY 15: Climb on heading 150° to 620 for RADAR vectors to RENNK, thence . . . .
TAKEOFF RUNWAY 33: Climb on heading 330° to 620 for RADAR vectors to RENNK, thence . . . .

. . . . on track 016° to COLET, then on track 025° to SUSHI, then on track 026° to WWELL, then on track 026° to INDIE, then on (transition). Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure.

TPAKK TRANSITION (INDIE8.TPAKK)

NOTE: Chart not to scale.
NOTE: RADAR required.
NOTE: JUNCTION TRANSITION: For aircraft overflying JCT VORTAC on J2, J15 or JB6.
NOTE: CENTEX TRANSITION: ATC assigned only for aircraft inbound to the DFW Metroplex area that are being rerouted due to bad weather.
NOTE: CORPUS CHRISTI TRANSITION: ATC assigned only.
NOTE: LAREDO TRANSITION: ATC assigned only.

TAKEOFF MINIMUMS
Rwys 15, 33: Standard.
DEPARTURE ROUTE DESCRIPTION

TAKEOFF ALL RUNWAYS: When entering controlled airspace, climb on assigned heading for RADAR vectors to SHYNR INT. Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure, thence . . . .

. . . . on IDU R-085 to BOCCK INT, then on IDU R-085 to IDU VORTAC.

CENTEX TRANSITION (IDU1.CWK): From over IDU VORTAC on IDU R-289 and CWK R-110 to CWK VORTAC.

CORPUS CHRISTI TRANSITION (IDU1.CRP): From over IDU VORTAC on IDU R-259 to MARCS INT, then on SAT R-056 to SAT VORTAC, then on SAT R-145 and CRP R-324 to CRP VORTAC.

JUNCTION TRANSITION (IDU1.JCT): From over IDU VORTAC on IDU R-276 and JCT R-094 to JCT VORTAC.

LAREDO TRANSITION (IDU1.LRD): From over IDU VORTAC on IDU R-259 to MARCS INT, then on SAT R-056 to SAT VORTAC, then on SAT R-194 and LRD R-012 to LRD VORTAC.
**(RNAV 1)**

**NOTE:** Chart not to scale.

**NOTE:** DME/DME/IRU or GPS required.

**NOTE:** RADAR required.

**NOTE:** RNAV 1.

**TOP ALTITUDE:**

**ASSIGNED BY ATC**

**CTAF**
123.05
**CLNC DEL**
121.15
**HOUSTON DEP CON**
123.8 257.7

**TAKEOFF MINIMUMS**
Rwys 15, 33:
Standard with minimum climb of 500’ per NM to 620.

**WEST HOUSTON (LWS)**
HOUSTON, TEXAS

**(NARRATIVE ON FOLLOWING PAGE)**

SC-5, 07 OCT 2021 to 02 DEC 2021
DEPARTURE ROUTE DESCRIPTION

TAKEOFF RWY 15: Climb on heading 150° to 620, for RADAR vectors to KARRR, thence. . . .
TAKEOFF RWY 33: Climb on heading 330° to 620, for RADAR vectors to KARRR, thence. . . .

. . . . on track 218° to KAVCY, then on (transition). Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure.

CORPORUS CHRISTI TRANSITION (KARRR6.CRP)
PALACIOS TRANSITION (KARRR6.PSX)
TRUAX TRANSITION (KARRR6.NGP)
WWREN TRANSITION (KARRR6.WWREN)
YOMOM TRANSITION (KARRR6.YOMOM)
NOTE: Radar required.
NOTE: Except for aircraft destined ACT or the DFW terminal area, all aircraft filing the LEONA SID must file one of the published transitions via FUZ (LOA4.FUZ), ADM (LOA4.ADM), or BYP (LOA4.BYP).
NOTE: RANGER TRANSITION: For aircraft overflying west/northwest of the DFW terminal area FL240 and above.
NOTE: ARDMORE TRANSITION: For aircraft overflying north/northwest of the DFW terminal area FL240 and above.
NOTE: BONHAM TRANSITION: For aircraft overflying/landing TUL VORTAC FL240 and above.

NOTE: Chart not to scale.
DEPARTURE ROUTE DESCRIPTION

TAKEOFF ALL RUNWAYS: When entering controlled airspace, climb on assigned heading for RADAR vectors to WLLIS INT. Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure, thence . . . .

. . . . on LOA R-147 to LOA VORTAC.

ARDMORE TRANSITION (LOA4.ADM): From over LOA VORTAC on LOA R-334 to DOLEY INT, then on ADM R-156 to ADM VORTAC.

BONHAM TRANSITION (LOA4.BYP): From over LOA VORTAC on LOA R-341 and CQY R-163 to CQY VORTAC, then on BYP R-173 to BYP VORTAC.

RANGER TRANSITION (LOA4.FUZ): From over LOA VORTAC on LOA R-334 to DOLEY INT, then on FUZ R-130 to FUZ VORTAC.
NOTE: Chart not to scale.

Top Altitude: Assigned by ATC

NOTE: RADAR and DME required.
NOTE: For aircraft destined LIT or overflying LIT or PXV.

LUFKIN
112.1 LFK
Chan 58
N31°09.75' W94°43.01'

SUSHI
N30°35.48' W95°04.39'

COLET
N30°26.96' W95°09.66'

KYANN
N30°15.53' W95°13.96'

HUMBLE
116.6 IAH
Chan 113

DAISETTA
116.9 DAS
Chan 116

TAKEOFF MINIMUMS
Rwys 15, 33: Standard.

NOTE: Chart not to scale.

(NARRATIVE ON FOLLOWING PAGE)
DEPARTURE ROUTE DESCRIPTION

TAKEOFF ALL RUNWAYS: When entering controlled airspace, climb on assigned heading for RADAR vectors to KYANN INT. Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure, thence . . .

. . . on IAH R-013 to COLET INT, then right turn on LFK R-203 to LFK VORTAC.

LITTLE ROCK TRANSITION (LFK3.LIT): From over LFK VORTAC on LFK R-026 to SKKIP INT, then on LFK R-026 and LIT R-207 to LIT VORTAC.
LURIC EIGHT DEPARTURE (RNAV)

**DEPARTURE ROUTE DESCRIPTION**

**TAKEOFF RUNWAY 15:** Climb on heading 150° to 620 for RADAR vectors to KNTKY, thence . . . .

**TAKEOFF RUNWAY 33:** Climb on heading 330° to 620 for RADAR vectors to KNTKY, thence . . . .

. . . . on track 032° to PEETY, then on track 032° to DARTR, then on track 031° to MUSIQ, then on track 031° to CLAVN, then on track 031° to VELCO, then on track 031° to ENJOY, then on track 031° to LURIC, then on (transition). Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure.

**HAWES TRANSITION (LURIC8.HAWES)**

**ORRTH TRANSITION (LURIC8.ORRTH)**
CTAF
123.05
CNC DEL
121.15
HOUSTON DEP CON
123.8 257.7

**TAKEOFF MINIMUMS**

Rwy 15, 33: Standard with minimum climb of 500' per NM to 620.

**DEPARTURE ROUTE DESCRIPTION**

**TAKEOFF RWY 15:** Climb on heading 150° to 620 for RADAR vectors to MMALT, thence...

**TAKEOFF RWY 33:** Climb on heading 330° to 620 for RADAR vectors to MMALT, thence...

... on track 086° to MOOKI, then on (transition). Maintain ATC assigned altitude.

Expect filed altitude 10 minutes after departure.

**GUSTI TRANSITION (MMALT5.GUSTI)**

**LAKE CHARLES TRANSITION (MMALT5.LCH)**

**WHITE LAKE TRANSITION (MMALT5.LLA)**

**NOTE:** Chart not to scale.
DEPARTURE ROUTE DESCRIPTION

TAKEOFF ALL RUNWAYS: When entering controlled airspace, climb on assigned heading for RADAR vectors to SKUBA INT. Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure, thence . . . .

. . . . on PSX R-038 to PSX VORTAC.

FORT STOCKTON TRANSITION (PSX2.FST): From over PSX VORTAC on PSX R-253 and THX R-073 to THX VORTAC, then on THX R-259 and COT R-078 to COT VORTAC, then on COT R-318 and RSG R-136 to RSG VORTAC, then on RSG R-283 and FST R-100 to FST VORTAC.

SAN ANTONIO TRANSITION (PSX2.SAT): From over PSX VORTAC on PSX R-253 and THX R-073 to THX VORTAC, then on SAT R-158 to SAT VORTAC.
**NOTE: Chart not to scale.**

**DEPARTURE ROUTE DESCRIPTION**

**TAKEOFF RUNWAY 15:** Climb on heading 150° to 620 for RADAR vectors to KNTKY, thence.

**TAKEOFF RUNWAY 33:** Climb on heading 330° to 620 for RADAR vectors to KNTKY, thence.

. . . . on track 032° to PEETY, then on track 032° to DARTR, then on track 031° to MUSIQ, then on track 031° to CLAVN, then on track 060° to STRYA, then on (transition). Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure.

**DPATY TRANSITION** (STRYA8.DPATY)

**JBULL TRANSITION** (STRYA8.JBULL)

**NOTE:** RADAR required.
**NOTE:** DME/DME/IRU or GPS required.
**NOTE:** RNAV 1.

**TOP ALTITUDE:** ASSIGNED BY ATC

**DEPARTURE ROUTE DESCRIPTION**

**TAKEOFF MINIMUMS**

Rwys 15, 33: Standard with minimum climb of 500' per NM to 620.

**NOTE:** Chart not to scale.
NOTE: Chart not to scale.

DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAY 15: Climb on heading 150° to 620 for RADAR vectors to BBYSE, thence...
TAKEOFF RUNWAY 33: Climb on heading 330° to 620 for RADAR vectors to BBYSE, thence...

...on track 331° to SPICR, then on track 331° to WLLIS, then on track 332° to STYCK, then on (transition). Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure.

DOLEY TRANSITION (STYCK8.DOLEY)
WTSON TRANSITION (STYCK8.WTSON)
**DEPARTURE ROUTE DESCRIPTION**

**TAKEOFF RWY 15:** Climb on heading 150° to 620, for RADAR vectors to WATFO, thence. . . .

**TAKEOFF RWY 33:** Climb on heading 330° to 620, for RADAR vectors to WATFO, thence. . . .

. . . .on track 141° to VUH VOR/DME, then on (transition). Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure.

**ANKRR TRANSITION (WATFO5.ANKRR)**
**KELPP TRANSITION (WATFO5.KELPP)**
**MUSYL TRANSITION (WATFO5.MUSYL)**
WYLSDN EIGHT DEPARTURE (RNAV)

DEPARTURE ROUTE DESCRIPTION

**TAKEOFF RUNWAY 15:** Climb on heading 150° to 620 for RADAR vectors to WYLSDN, thence . . .

**TAKEOFF RUNWAY 33:** Climb on heading 330° to 620 for RADAR vectors to WYLSDN, thence . . .

. . . . on track 360° to MONNT, then on (transition). Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure.

**GIFFA TRANSITION (WYLSDN.WYLSN)**

**MAJKK TRANSITION (WYLSDN.WYLSN)**
HOUSTON, TEXAS
AL-198 (FAA) 21280

ILS or LOC RWY 13R
WILLIAM P HOBBY (HOU)

Radar or DME required for LOC only.
Radar required for procedure entry.

Inop table does not apply to S-ILS Rwy 13R. Rwy 13R helicopter visibility reduction below 3/4 SM NA. For inop ALS, increase S-LOC 13R Cats A/B visibility to RVR 5500, Cats C/D/E to 1 3/4 SM.

D-ATIS: 124.6
HOUSTON APP CON: 120.05 379.1 EAST
124.35 316.15 WEST
HOBBY TOWER: 118.7 256.9
GND CON: 121.9
CLNC DEL: 125.45

RADAR required for procedure entry.

MISSED APPROACH: Climb to 800 then climbing right turn to 2200 direct VUH VOR/DME.

ELEV: 46
TDZE: 46

131° 5.9 NM from FAF

REIL Rwy 31L
MIRL Rwy 13L-31R
HIRL Rwys 4-22 and 13R-31L
TDZ/CL Rwys 4, 13R and 31L

FDR to MAP 5.9 NM

Knots: 60 90 120 150 180
Min:Sec: 5:54 3:56 2:57 2:22 1:58

HOUSTON, TEXAS
Amdt: 12D 25APR19

29°39'N-95°17'W

WILLIAM P HOBBY (HOU)

ILS or LOC RWY 13R
Aircraft not GPS equipped - RADAR required for procedure entry. From GEEEO: RNAV 1 - GPS required.

Requires specific OPSPEC, MSPEC, or LOA approval and use of HUD to DH.

**SA CATEGORY I ILS - SPECIAL AIRCREW & AIRCRAFT CERTIFICATION REQUIRED**
For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -2°C (29°F) or above 54°C (130°F). For inop ALSF-2, increase LPV Cat E visibility to RVR 4000, LNAV/VNAV all Cats visibility to 1/4 miles and LNAV Cat C/D/E visibility to 1/3 mile. DME/DME RNP 0.3 NA.

MISSED APPROACH: Climb to 2000 direct RAYCI and hold.
For uncompensated Baro-VNAV systems, LNAV/VNAV NA below 1.5°C (5°F) or above 49°C (120°F), DME/DME RNP-0.3 NA. For inop ALS, increase LPV all Cat visibility to RVR 5000; increase LNAV/VNAV Cats A/B/C/D visibility to 1 ½ SM, Cat E to 1 ½ SM; and increase LNAV Cats A/B visibility to RVR 5000, Cats C/D to 1 ½ SM, Cat E to 1 ½ SM. Rwy 13R helicopter visibility reduction below ¾ SM NA.

MALSR
MISSING APCH FIX: Climb to 2200 direct LESLO and on track 134° to VUH VOR/DME.

D-ATIS
HOUSTON APP CON
120.05 379.1 EAST
124.35 316.15 WEST
HOBBY TOWER
GND CON
118.7 256.9
121.9
125.45

ELEV
46

TDZE
46

RNAV (GPS) RWY 13R
WILLIAM P HOBBY (HOU)

For uncompensated Baro-VNAV systems, LNAV/VNAV NA below 1.5°C (5°F) or above 49°C (120°F), DME/DME RNP-0.3 NA. For inop ALS, increase LPV all Cat visibility to RVR 5000; increase LNAV/VNAV Cats A/B/C/D visibility to 1 ½ SM, Cat E to 1 ½ SM; and increase LNAV Cats A/B visibility to RVR 5000, Cats C/D to 1 ½ SM, Cat E to 1 ½ SM. Rwy 13R helicopter visibility reduction below ¾ SM NA.

MALSR
MISSING APCH FIX: Climb to 2200 direct LESLO and on track 134° to VUH VOR/DME.

D-ATIS
HOUSTON APP CON
120.05 379.1 EAST
124.35 316.15 WEST
HOBBY TOWER
GND CON
118.7 256.9
121.9
125.45

ELEV
46

TDZE
46

RNAV (GPS) RWY 13R
WILLIAM P HOBBY (HOU)

For uncompensated Baro-VNAV systems, LNAV/VNAV NA below 1.5°C (5°F) or above 49°C (120°F), DME/DME RNP-0.3 NA. For inop ALS, increase LPV all Cat visibility to RVR 5000; increase LNAV/VNAV Cats A/B/C/D visibility to 1 ½ SM, Cat E to 1 ½ SM; and increase LNAV Cats A/B visibility to RVR 5000, Cats C/D to 1 ½ SM, Cat E to 1 ½ SM. Rwy 13R helicopter visibility reduction below ¾ SM NA.

MALSR
MISSING APCH FIX: Climb to 2200 direct LESLO and on track 134° to VUH VOR/DME.

D-ATIS
HOUSTON APP CON
120.05 379.1 EAST
124.35 316.15 WEST
HOBBY TOWER
GND CON
118.7 256.9
121.9
125.45

ELEV
46

TDZE
46

RNAV (GPS) RWY 13R
WILLIAM P HOBBY (HOU)

For uncompensated Baro-VNAV systems, LNAV/VNAV NA below 1.5°C (5°F) or above 49°C (120°F), DME/DME RNP-0.3 NA. For inop ALS, increase LPV all Cat visibility to RVR 5000; increase LNAV/VNAV Cats A/B/C/D visibility to 1 ½ SM, Cat E to 1 ½ SM; and increase LNAV Cats A/B visibility to RVR 5000, Cats C/D to 1 ½ SM, Cat E to 1 ½ SM. Rwy 13R helicopter visibility reduction below ¾ SM NA.

MALSR
MISSING APCH FIX: Climb to 2200 direct LESLO and on track 134° to VUH VOR/DME.

D-ATIS
HOUSTON APP CON
120.05 379.1 EAST
124.35 316.15 WEST
HOBBY TOWER
GND CON
118.7 256.9
121.9
125.45

ELEV
46

TDZE
46

RNAV (GPS) RWY 13R
WILLIAM P HOBBY (HOU)

For uncompensated Baro-VNAV systems, LNAV/VNAV NA below 1.5°C (5°F) or above 49°C (120°F), DME/DME RNP-0.3 NA. For inop ALS, increase LPV all Cat visibility to RVR 5000; increase LNAV/VNAV Cats A/B/C/D visibility to 1 ½ SM, Cat E to 1 ½ SM; and increase LNAV Cats A/B visibility to RVR 5000, Cats C/D to 1 ½ SM, Cat E to 1 ½ SM. Rwy 13R helicopter visibility reduction below ¾ SM NA.

MALSR
MISSING APCH FIX: Climb to 2200 direct LESLO and on track 134° to VUH VOR/DME.

D-ATIS
HOUSTON APP CON
120.05 379.1 EAST
124.35 316.15 WEST
HOBBY TOWER
GND CON
118.7 256.9
121.9
125.45

ELEV
46

TDZE
46

RNAV (GPS) RWY 13R
WILLIAM P HOBBY (HOU)

For uncompensated Baro-VNAV systems, LNAV/VNAV NA below 1.5°C (5°F) or above 49°C (120°F), DME/DME RNP-0.3 NA. For inop ALS, increase LPV all Cat visibility to RVR 5000; increase LNAV/VNAV Cats A/B/C/D visibility to 1 ½ SM, Cat E to 1 ½ SM; and increase LNAV Cats A/B visibility to RVR 5000, Cats C/D to 1 ½ SM, Cat E to 1 ½ SM. Rwy 13R helicopter visibility reduction below ¾ SM NA.

MALSR
MISSING APCH FIX: Climb to 2200 direct LESLO and on track 134° to VUH VOR/DME.

D-ATIS
HOUSTON APP CON
120.05 379.1 EAST
124.35 316.15 WEST
HOBBY TOWER
GND CON
118.7 256.9
121.9
125.45

ELEV
46

TDZE
46

RNAV (GPS) RWY 13R
WILLIAM P HOBBY (HOU)

For uncompensated Baro-VNAV systems, LNAV/VNAV NA below 1.5°C (5°F) or above 49°C (120°F), DME/DME RNP-0.3 NA. For inop ALS, increase LPV all Cat visibility to RVR 5000; increase LNAV/VNAV Cats A/B/C/D visibility to 1 ½ SM, Cat E to 1 ½ SM; and increase LNAV Cats A/B visibility to RVR 5000, Cats C/D to 1 ½ SM, Cat E to 1 ½ SM. Rwy 13R helicopter visibility reduction below ¾ SM NA.

MALSR
MISSING APCH FIX: Climb to 2200 direct LESLO and on track 134° to VUH VOR/DME.

D-ATIS
HOUSTON APP CON
120.05 379.1 EAST
124.35 316.15 WEST
HOBBY TOWER
GND CON
118.7 256.9
121.9
125.45

ELEV
46

TDZE
46

RNAV (GPS) RWY 13R
WILLIAM P HOBBY (HOU)

For uncompensated Baro-VNAV systems, LNAV/VNAV NA below 1.5°C (5°F) or above 49°C (120°F), DME/DME RNP-0.3 NA. For inop ALS, increase LPV all Cat visibility to RVR 5000; increase LNAV/VNAV Cats A/B/C/D visibility to 1 ½ SM, Cat E to 1 ½ SM; and increase LNAV Cats A/B visibility to RVR 5000, Cats C/D to 1 ½ SM, Cat E to 1 ½ SM. Rwy 13R helicopter visibility reduction below ¾ SM NA.

MALSR
MISSING APCH FIX: Climb to 2200 direct LESLO and on track 134° to VUH VOR/DME.
Radar Required

- LNAV only.
- *1.5 NM to RW22
- 3000
- 1600
- 221°
- 2049
- 2049
- 2049
- 2049
- ACOLA
- EISEN
- AVVOS
- KAFDO
- GP 3.00° TCH 52
- 1.5 NM
- 2.2 NM
- 7.5 NM

Category

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MISSED APPROACH: Climb to 3000 direct EISEN and on track 225° to ACOLA and hold.
For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -1.5°C (5°F) or above 43°C (109°F).

For uncompensated Baro-VNAV systems, DME/DME RNP-0.3 NA.

MISSED APPROACH: Climb to 2000 direct EDTED and on track 283° to DREWZ and hold.

RADAR REQUIRED

ELEV 46   TDZE 43

2000  EDTED  DREWZ  1.2 NM to RW31L

FGMOG  2.5 NM to RW31L  VGS1 and RNAV glidepath not coincident (VGS1 Angle 3.00/TCH 76).

FAMOG  2.5 NM to RW31L

RW31L  2.5 NM to FAMOG

RW31L  1.2 NM to RW31L  RNAV (GPS) RWY 31L

VAIRU  TWR 190  311° to RW31L

REIL Rwy 31L
MIRL Rwy 13L-31R
HIRL Rwys 4-22 and 13R-31L
TDZ/CL Rwys 4, 13R and 31L

29°39'N-95°17'W  509
Amdt 2  20JUN19

RNAV 1-GPS required. RADAR required for procedure entry.

For inop ALS, increase S-LOC 22 Cat C/D/E visibility to 1 1/4 SM.

MISSED APPROACH: Climb to 3000 direct EISEN and on track 225° to ACOLA and hold.

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29°39’N-95°17’W
ASDE-X in use. Operate transponders with altitude reporting mode and ADS-B (if equipped) enabled on all airport surfaces.
D-ATIS 124.6
CLNC DEL 125.45
CPDLC GND CON 121.9
HOBBY TOWER 118.7
HOUSTON DEP CON 132.25

EXAMPLE 3 AEX 07 OCT 2021

ALEXANDRIA THREE DEPARTURE

NOTE: Chart not to scale.

NOTE: RADAR required.

NOTE: The following TRANSITIONS are ATC assigned only. Do not file.

CRESTVIEW TRANSITION: (For aircraft being weather rerouted to join a jet route off CEW VORTAC or overflying CEW VORTAC to join a direct route).

MC COMB TRANSITION: (For aircraft being weather rerouted to join a jet route off MCB VORTAC or overflying MCB VORTAC to join a direct route).

TAKEOFF MINIMUMS

Rwy 22: Standard with minimum climb of 290’ per NM to 1500.

(NARRATIVE ON FOLLOWING PAGE)
DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAYS 4, 13L/R, 22: Climb on assigned heading for RADAR vectors to RAECN INT, maintain 16000. Expect filed altitude 10 minutes after departure, thence.

TAKEOFF RUNWAYS 31L/R: Climb on heading 311° to 800 before turning, then climb on assigned heading for RADAR vectors to RAECN INT, maintain 16000. Expect filed altitude 10 minutes after departure, thence.

. . . .on IAH R-028 to VELCO INT, cross VELCO INT at or above 10000, then right turn on LFK R-082 and AEX R-265 to AEX VORTAC.

CRESTVIEW TRANSITION (AEX3.CEW): From over AEX VORTAC on AEX R-085 and MCB R-266 to MCB VORTAC, then on MCB R-095 and CEW R-277 to CEW VORTAC.

MC COMB TRANSITION (AEX3.MCB): From over AEX VORTAC on AEX R-085 and MCB R-266 to MCB VORTAC.
BLTWY SEVEN DEPARTURE (RNAV)

NOTE: RADAR required.
NOTE: DME/DME/IRU or GPS required.
NOTE: RNAV 1.

TAKEOFF MINIMUMS
Rwys 4, 13L/R, 31L/R: Standard with minimum climb of 500’ per NM to 560.
Rwy 22: Standard with minimum climb of 500’ per NM to 700.

TAKEOFF RUNWAY 4: Climb on heading 041° to 560 for RADAR vectors to DREMR, thence . . .
TAKEOFF RUNWAYS 13L/R: Climb on heading 131° to 560 for RADAR vectors to DREMR, thence . . .
TAKEOFF RUNWAY 22: Climb on heading 221° to 700 for RADAR vectors to DREMR, thence . . .
TAKEOFF RUNWAYS 31L/R: Climb on heading 311° to 560 for RADAR vectors to DREMR, thence . . .

. . . on track 345° to LITLD, then on track 346° to BLTWY, then on (transition). Maintain 16000 or as assigned by ATC. Expect filed altitude 10 minutes after departure.

CRIED TRANSITION (BLTWY7.CRIED)

NOTE: Chart not to scale.
NOTE: RADAR required.

TAKEOFF MINIMUMS
Rwy 22: Standard with minimum climb of 290’ per NM to 1500.

(NARRATIVE ON FOLLOWING PAGE)
DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAYS 4, 13L/R, 22: Climb on assigned heading for RADAR vectors to LITLD INT, maintain 16000. Expect filed altitude 10 minutes after departure, thence . . . .

TAKEOFF RUNWAYS 31L/R: Climb on heading 311° to 800 before turning, then climb on assigned heading for RADAR vectors to LITLD INT, maintain 16000. Expect filed altitude 10 minutes after departure, thence . . . .

. . . . on IAH R-344 to STELL INT, then on IAH R-344 to CRIED INT, then left turn on CQY R-144 to CQY VORTAC.
NOTE: RADAR required.
NOTE: For aircraft destined KMEM
or filed via Q32 or J42.

TAKEOFF MINIMUMS
Rwy 22: Standard with minimum climb of 290’ per NM to 1500.

NOTE: Chart not to scale.
DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAYS 4, 13L/R, 22: Climb on assigned heading for RADAR vectors to RAECN INT, maintain 16000, expect filed altitude 10 minutes after departure, thence.

TAKEOFF RUNWAYS 31L/R: Climb on heading 311° to 800 before turning, then climb on assigned heading for RADAR vectors to RAECN INT, maintain 16000, expect filed altitude 10 minutes after departure, thence.

. . . . on IAH R-028 and the ELD R-208 to ELD VOR/DME, cross VELCO INT at or above 10000.
DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAY 4: Climb on heading 041° to 560, expect RADAR vectors to ELOCO, thence . . . .
TAKEOFF RUNWAYS 13L/R: Climb on heading 131° to 560, expect RADAR vectors to ELOCO, thence . . . .
TAKEOFF RUNWAY 22: Climb on heading 221° to 560, expect RADAR vectors to ELOCO, thence . . . .
TAKEOFF RUNWAYS 31L/R: Climb on heading 311° to 560, expect RADAR vectors to ELOCO, thence . . . .

. . . . . on track 070° to CHPEE, then on (transition). Maintain 16000, expect filed altitude 10 minutes after departure.

WHITE LAKE TRANSITION (ELOCO5.LLA)
DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAYS 4, 13L/R, 22: Climb on assigned heading for RADAR vectors to MONNT INT, maintain 16000. Expect filed altitude 10 minutes after departure, thence . . . .

TAKEOFF RUNWAYS 31L/R: Climb on heading 311° to 800 before turning, then climb on assigned heading for RADAR vectors to MONNT INT, maintain 16000. Expect filed altitude 10 minutes after departure, thence . . . .

. . . . on IAH R-358 to cross GIFFA INT at or above 10000.

NOTE: Chart not to scale.
TAKING MINIMUMS
Rwys 4, 13L/R, 31L/R: Standard with minimum climb of 500' per NM to 560.
Rwy 22: Standard with minimum climb of 500' per NM to 700.

TAKEOFF RUNWAY 4: Climb on heading 041° to 560, for RADAR vectors to VUH VOR/DME, thence . . .
TAKEOFF RUNWAYS 13L/R: Climb on heading 131° to 560, for RADAR vectors to VUH VOR/DME, thence . . .
TAKEOFF RUNWAY 22: Climb on heading 221° to 700, for RADAR vectors to VUH VOR/DME, thence . . .
TAKEOFF RUNWAYS 31L/R: Climb on heading 311° to 560, for RADAR vectors to VUH VOR/DME, thence . . .

. . . on track 118° to HOODO, then on (transition). Maintain 16000.
Expect filed altitude 10 minutes after departure.

BOWFN TRANSITION (HOODO7.BOWFN)
CFOOD TRANSITION (HOODO7.CFOOD)
HARVEY TRANSITION (HOODO7.HRV)
LEEVILLE TRANSITION (HOODO7.LEV)
SBIRD TRANSITION (HOODO7.SBIRD)

NOTE: Chart not to scale.
INDIE EIGHT DEPARTURE (RNAV)

TAKEOFF MINIMUMS
Rwys 4, 13L/R, 31L/R:
Standard with minimum climb of 500’ per NM to 560.
Rwy 22:
Standard with minimum climb of 500’ per NM to 700.

TAKEOFF RUNWAY 4: Climb on heading 041° to 560 for RADAR vectors to RENNK, thence . . . .
TAKEOFF RUNWAYS 13L/R: Climb on heading 131° to 560 for RADAR vectors to RENNK, thence . . . .
TAKEOFF RUNWAY 22: Climb on heading 221° to 700 for RADAR vectors to RENNK, thence . . . .
TAKEOFF RUNWAYS 31L/R: Climb on heading 311° to 560 for RADAR vectors to RENNK, thence . . . .

. . . . on track 016° to COLET, then on track 025° to SUSHI, then on track 026° to WWELL, then on track 026° to INDIE, then on (transition). Maintain 16000 or as assigned by ATC. Expect filed altitude 10 minutes after departure.

TPAKK TRANSITION (INDIE8.TPAKK)

NOTE: Chart not to scale.
**INDUSTRY ONE DEPARTURE**

**TOP ALTITUDE:**

16000

**NOTE:** Chart not to scale.

---

**INDUSTRY ONE DEPARTURE**

**RAILWAY**

Rwy 22: Standard with minimum climb of 290’ per NM to 1500.

**NOTE:** RADAR required.

**NOTE:** JUNCTION TRANSITION: For aircraft overflying JCT VORTAC on J2, J15 or J86.

**NOTE:** CENTEX TRANSITION: ATC assigned only for aircraft inbound to the DFW Metroplex area that are being rerouted due to bad weather.

**NOTE:** CORPUS CHRISTI TRANSITION: ATC assigned only.

**NOTE:** LAREDO TRANSITION: ATC assigned only.

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**NARRATIVE ON FOLLOWING PAGE**

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**SC-5, 07 OCT 2021 to 02 DEC 2021**

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**SC-5, 07 OCT 2021 to 02 DEC 2021**
DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAYS 4, 13L/R, 22: Climb on assigned heading for RADAR vectors to SHYNR INT, maintain 16000. Expect filed altitude 10 minutes after departure, thence . . . .

TAKEOFF RUNWAYS 31L/R: Climb on heading 311° to 800 before turning, then climb on assigned heading for RADAR vectors to SHYNR INT, maintain 16000. Expect filed altitude 10 minutes after departure, thence . . . .

. . . . on IDU R-085 to BOCCK INT, then on IDU R-085 to IDU VORTAC.

CENTEX TRANSITION (IDU1.CWK): From over IDU VORTAC on IDU R-289 and CWK R-110 to CWK VORTAC.

CORPUS CHRISTI TRANSITION (IDU1.CRP): From over IDU VORTAC on IDU R-259 to MARCS INT, then on SAT R-056 to SAT VORTAC, then on SAT R-145 and CRP R-324 to CRP VORTAC.

JUNCTION TRANSITION (IDU1.JCT): From over IDU VORTAC on IDU R-276 and JCT R-094 to JCT VORTAC.

LAREDO TRANSITION (IDU1.LRD): From over IDU VORTAC on IDU R-259 to MARCS INT, then on SAT R-056 to SAT VORTAC, then on SAT R-194 and LRD R-012 to LRD VORTAC.
LEONA FOUR DEPARTURE

TOP ALTITUDE: 16000

TULSA
114.4 TUL  
Chan 91
N36°11.78' - W95°47.29'

ARDMORE
116.7 ADM  
Chan 114
N34°12.69' - W97°10.10'
L-17, H-6

RANGER
115.7 FUZ  
Chan 104
N32°53.37' - W97°10.77'
L-17, H-6

DOLEY
N32°11.14' - W96°13.09'

WACO
115.3 ACT  
Chan 100
N31°39.74' - W97°16.14'

LEONA
110.8 LOA  
Chan 45
N31°07.44' - W95°58.08'

BONHAM
114.6 BYP  
Chan 93
N33°32.25' - W96°14.05'
L-17, H-6

CEDAR CREEK
114.8 CQY  
Chan 98
N32°11.14' - W96°13.09'

LEONA FOUR DEPARTURE

NOTE: Chart not to scale.

(NARRATIVE ON FOLLOWING PAGE)
DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAYS 4, 13L/R, 22: Climb on assigned heading for RADAR vectors to WLLIS INT; maintain 16000. Expect filed altitude 10 minutes after departure, thence . . .

TAKEOFF RUNWAYS 31L/R: Climb on heading 311° to 800 before turning, then climb on assigned heading for RADAR vectors to WLLIS INT, maintain 16000. Expect filed altitude 10 minutes after departure, thence . . .

. . . on LOA R-147 to LOA VORTAC.

ARDMORE TRANSITION (LOA4.ADM): From over LOA VORTAC on LOA R-334 to DOLEY INT, then on ADM R-156 to ADM VORTAC.

BONHAM TRANSITION (LOA4.BYP): From over LOA VORTAC on LOA R-341 and CQY R-163 to CQY VORTAC, then on BYP R-173 to BYP VORTAC.

RANGER TRANSITION (LOA4.FUZ): From over LOA VORTAC on LOA R-334 to DOLEY INT, then on FUZ R-130 to FUZ VORTAC.
NOTE: Chart not to scale.

NOTE: RADAR and DME required.
NOTE: For aircraft destined LIT or overflying LIT or PXV.

TOP ALTITUDE:
16000

LUFKIN
112.1 LFK
Chan 58
N31°09.75'
W94°43.01'

SUSHI
N30°35.48'
W94°39.45'

COLET
N30°26.96'
W95°09.66'

KYANN
N30°15.53'
W95°13.96'

HUMBLE
116.6 IAH
Chan 113

DAISETTA
116.9 DAS
Chan 116

LITTLE ROCK
113.9 LIT
Chan 86
N34°40.66'
W92°10.83'

SKKIP
N31°14.91'
W94°39.45'

NOTE: Chart not to scale.

(LFK3.LFK) 21280
LUFKIN THREE DEPARTURE
AL-198 (FAA)

NOTE: Chart not to scale.

(NARRATIVE ON FOLLOWING PAGE)
DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAYS 4, 13L/R, 22: Climb on assigned heading for RADAR vectors to KYANN INT, maintain 16000. Expect filed altitude 10 minutes after departure, thence.

TAKEOFF RUNWAYS 31L/R: Climb on heading 311° to 800 before turning, then climb on assigned heading for RADAR vectors to KYANN INT, maintain 16000. Expect filed altitude 10 minutes after departure, thence.

. . . . . .on IAH R-013 to COLET INT, then right turn on LFK R-203 to LFK VORTAC.

LITTLE ROCK TRANSITION (LFK3.LFK): From over LFK VORTAC on LFK R-026 to SKKIP INT, then on LFK R-026 and LIT R-207 to LIT VORTAC.
NOTE: Chart not to scale.

NOTE: RADAR required.
NOTE: DME/DME/IRU or GPS required.
NOTE: RNAV 1.

**DEPARTURE ROUTE DESCRIPTION**

**TAKEOFF RUNWAY 4**: Climb on heading 041° to 560 for RADAR vectors to KNTKY, thence . . . .

**TAKEOFF RUNWAYS 13L/R**: Climb on heading 131° to 560 for RADAR vectors to KNTKY, thence . . . .

**TAKEOFF RUNWAY 22**: Climb on heading 221° to 700 for RADAR vectors to KNTKY, thence . . . .

**TAKEOFF RUNWAYS 31L/R**: Climb on heading 311° to 560 for RADAR vectors to KNTKY, thence . . . .

. . . . on track 032° to PEETY, then on track 032° to DARTR, then on track 031° to MUSIQ, then on track 031° to CLAVN, then on track 031° to ENJOY, then on track 031° to LURIC, then on (transition). Maintain 16000 or as assigned by ATC. Expect filed altitude 10 minutes after departure.

**HAWES TRANSITION (LURIC8.HAWES)**

**ORRTH TRANSITION (LURIC8.ORRTH)**

**TAKEOFF MINIMUMS**

Rwys 4, 13L/R, 31L/R: Standard with minimum climb of 500' per NM to 560.
Rwy 22: Standard with minimum climb of 500’ per NM to 700.

**D-ATIS**
124.6
**CLNC DEL**
125.45
**CPDLC**
**GND CON**
121.9
**HOBBY TOWER**
118.7 256.9
**HOUSTON DEP CON**
132.25 285.425

HOUSTON, TEXAS
WILLIAM P HOBBY (HOU)

SC-5, 07 OCT 2021 to 02 DEC 2021
NOTE: RADAR required.

NOTE: Chart not to scale.

(NARRATIVE ON FOLLOWING PAGE)

TAKEOFF MINIMUMS
Rwy 22: Standard with minimum climb
of 290’ per NM to 1500.
TAKEOFF RUNWAYS 4, 13L/R, 22: Climb on assigned heading for RADAR vectors to SKUBA INT, maintain 16000. Expect filed altitude 10 minutes after departure, thence . . . .

TAKEOFF RUNWAYS 31L/R: Climb on heading 311° to 800 before turning, then climb on assigned heading for RADAR vectors to SKUBA INT, maintain 16000. Expect filed altitude 10 minutes after departure, thence . . . .

. . . . on PSX R-038 to PSX VORTAC.

FORT STOCKTON TRANSITION (PSX2.FST): From over PSX VORTAC on PSX R-253 and THX R-073 to THX VORTAC, then on THX R-259 and COT R-078 to COT VORTAC, then on COT R-318 and RSG R-136 to RSG VORTAC, then on RSG R-283 and FST R-100 to FST VORTAC.

SAN ANTONIO TRANSITION (PSX2.SAT): From over PSX VORTAC on PSX R-253 and THX R-073 to THX VORTAC, then on SAT R-158 to SAT VORTAC.
NOTE: Chart not to scale.

PEECE FIVE DEPARTURE (RNAV)

TOP ALTITUDE: 16000

TAKEOFF MINIMUMS
Rwy 4: Standard with minimum climb of 500’ per NM to 3800.
Rwy 13L: Standard with minimum climb of 500’ per NM to 4200.
Rwy 13R: Standard with minimum climb of 500’ per NM to 4400.
Rwy 22: Standard with minimum climb of 500’ per NM to 3900.
Rwys 31L/R: Standard with minimum climb of 500’ per NM to 3300.

NOTE: GPS required for ANKRR, KELPP, AND MUSYL TRANSITIONS.

NOTE: Chart not to scale.

(NARRATIVE ON FOLLOWING PAGE)
DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAY 4: Climb on heading 041° to 560, expect RADAR vectors to PEECE, thence. . . .

TAKEOFF RUNWAYS 13L/R: Climb on heading 131° to 560, expect RADAR vectors to PEECE, thence. . . .

TAKEOFF RUNWAY 22: Climb on heading 221° to 560, expect RADAR vectors to PEECE, thence. . . .

TAKEOFF RUNWAYS 31L/R: Climb on heading 311° to 560, expect RADAR vectors to PEECE, thence. . . .

. . . . on track 131° to VUH VOR/DME, then on (transition). Maintain 16000, expect filed altitude 10 minutes after departure.

ANKRR TRANSITION (PEECE5.ANKRR)
KELPP TRANSITION (PEECE5.KELPP)
MUSYL TRANSITION (PEECE5.MUSYL)
**(PTRON7, PTRON)** 21280

AL-198 (FAA)

**PTRON SEVEN DEPARTURE (RNAV)**

**TOP ALTITUDE:**

16000

**TAKEOFF MINIMUMS**

Rwy 4: Standard with minimum climb of 500’ per NM to 900.
Rwy 13L: Standard with minimum climb of 500’ per NM to 3600.
Rwy 13R: Standard with minimum climb of 500’ per NM to 3800.
Rwy 22: Standard with minimum climb of 500’ per NM to 1900.
Rwys 31L/R: Standard with minimum climb of 500’ per NM to 560.

**NOTE:** RNAV 1.

**NOTE:** DME/DME/IRU or GPS required.

**NOTE:** RADAR required.

**NOTE:** Chart not to scale.

(NARRATIVE ON FOLLOWING PAGE)
DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAY 4: Climb on heading 041° to 560, expect RADAR vectors to SAALT, thence. . . .
TAKEOFF RUNWAYS 13L/R: Climb on heading 131° to 560, expect RADAR vectors to SAALT, thence. . . .
TAKEOFF RUNWAY 22: Climb on heading 221° to 560, expect RADAR vectors to SAALT, thence. . . .
TAKEOFF RUNWAYS 31L/R: Climb on heading 311° to 560, expect RADAR vectors to SAALT, thence. . . .

. . . .on track 191° to PTRON, then on (transition). Maintain 16000, expect filed altitude 10 minutes after departure.

CORPUS CHRISTI TRANSITION (PTRON7.CRP)
PALACIOS TRANSITION (PTRON7.PSX)
TRUAX TRANSITION (PTRON7.NGP)
WWREN TRANSITION (PTRON7.WWREN)
YOMOM TRANSITION (PTRON7.YOMOM)
NOTE: Chart not to scale.

TOP ALTITUDE:
16000

NOTE: DME/DME/IRU or GPS required.
NOTE: RADAR required.
NOTE: RNAV 1.
NOTE: CRGER TRANSITION ATC assigned only.

TAKEOFF MINIMUMS
Rwys 4, 13L/R, 31L/R:
Standard with minimum climb of 500’ per NM to 560.
Rwy 22: Standard with minimum climb of 500’ per NM to 800.

(NARRATIVE ON FOLLOWING PAGE)
DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAY 4: Climb on heading 041° to 560, expect RADAR vectors to RETYR, thence . . . .
TAKEOFF RUNWAYS 13L/R: Climb on heading 131° to 560, expect RADAR vectors to RETYR, thence . . . .
TAKEOFF RUNWAY 22: Climb on heading 221° to 560, expect RADAR vectors to RETYR, thence . . . .
TAKEOFF RUNWAYS 31L/R: Climb on heading 311° to 560, expect RADAR vectors to RETYR, thence . . . .

. . . . on track 298° to MNNKE, then on (transition). Maintain 16000, expect filed altitude 10 minutes after departure.

CRGER TRANSITION (RETYR6.CRGER)
JUNCTION TRANSITION (RETYR6.JCT)
MNURE TRANSITION (RETYR6.MNURE)
SAN ANTONIO TRANSITION (RETYR6.SAT)
WAILN TRANSITION (RETYR6.WAILN)
NOTE: Chart not to scale.

NOTE: RADAR required.
NOTE: DME/DME/IRU or GPS required.
NOTE: RNAV 1.

DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAY 4: Climb on heading 041° to 560 for RADAR vectors to KNTKY, thence . . .
TAKEOFF RUNWAYS 13L/R: Climb on heading 131° to 560 for RADAR vectors to KNTKY, thence . . .
TAKEOFF RUNWAY 22: Climb on heading 221° to 700 for RADAR vectors to KNTKY, thence . . .
TAKEOFF RUNWAYS 31L/R: Climb on heading 311° to 560 for RADAR vectors to KNTKY, thence . . .

. . . on track 032° to PEETY, then on track 032° to DARTR, then on track 031° to MUSIQ, then on track 031° to CLAVN, then on track 060° to STRYA, then on (transition). Maintain 16000 or as assigned by ATC. Expect filed altitude 10 minutes after departure.

DPATY TRANSITION (STRYA8.DPATY)
JBULL TRANSITION (STRYA8.JBULL)
**DEPARTURE ROUTE DESCRIPTION**

**TAKEOFF RUNWAY 4:** Climb on heading 041° to 560 for RADAR vectors to BBYSE, thence...

**TAKEOFF RUNWAYS 13L/R:** Climb on heading 131° to 560 for RADAR vectors to BBYSE, thence...

**TAKEOFF RUNWAY 22:** Climb on heading 221° to 700 for RADAR vectors to BBYSE, thence...

**TAKEOFF RUNWAYS 31L/R:** Climb on heading 311° to 560 for RADAR vectors to BBYSE, thence...

...on track 331° to SPICR, then on track 331° to WLLIS, then on track 332° to STYCK, then on (transition). Maintain 16000 or as assigned by ATC. Expect filed altitude 10 minutes after departure.

**DOLEY TRANSITION (STYCK8.DOLEY)**

**WTSON TRANSITION (STYCK8.WTSON)**

---

**TAKEN MINIMUMS**

Rwys 4, 13L/R, 31L/R: Standard with minimum climb of 500’ per NM to 560.
Rwy 22: Standard with minimum climb of 500’ per NM to 700.

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**NOTE:** Chart not to scale.
DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAY 4: Climb on heading 041° to 560 for RADAR vectors to WYLSN, thence. . .

TAKEOFF RUNWAYS 13L/R: Climb on heading 131° to 560 for RADAR vectors to WYLSN, thence. . .

TAKEOFF RUNWAY 22: Climb on heading 221° to 700 for RADAR vectors to WYLSN, thence. . .

TAKEOFF RUNWAYS 31L/R: Climb on heading 311° to 560 for RADAR vectors to WYLSN, thence. . .

. . . on track 360° to MONNT, then on (transition). Maintain 16000 or as assigned by ATC. Expect filed altitude 10 minutes after departure.

GIFFA TRANSITION (WYLSN8.GIFFA)
MAJKK TRANSITION (WYLSN8.MAJKK)
Baro-VNAV NA when using Conroe-North Houston Rgnl altimeter setting. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -1.5°C (5°F) or above 54°C (130°F). DME/DME RNP-0.3 NA. Visibility reduction by helicopters NA. VDP NA when using Conroe-North Houston Rgnl altimeter setting. When local altimeter setting not received, use Conroe-North Houston Rgnl altimeter setting and increase all DA 75 feet and all MDA 80 feet; increase LPV and LNAV/VNAV all Cats and Circling Cat C visibility ¼ mile.

**HUNTSVILLE MUNI (UTS)**

**ASOS**
119.425

**HOUSTON CENTER**
134.8 269.6

**UNICOM**
122.8 (CTAF)

---

VNAV, BARO-VNAV, and Baro-VNAV when using Conroe-North Houston Rgnl altimeter setting. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -1.5°C (5°F) or above 54°C (130°F). DME/DME RNP-0.3 NA. Visibility reduction by helicopters NA. VDP NA when using Conroe-North Houston Rgnl altimeter setting. When local altimeter setting not received, use Conroe-North Houston Rgnl altimeter setting and increase all DA 75 feet and all MDA 80 feet; increase LPV and LNAV/VNAV all Cats and Circling Cat C visibility ¼ mile.

**SC-5, 07 OCT 2021 to 02 DEC 2021**

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**ELEV 363**

**TDZE 338**

4000

HINET

OSCER

297°

2500

4 NM

Holding Pattern

**Cat A**

**Cat B**

**Cat C**

**Cat D**

**LPV DA**

588-1 250 (300-1)

**LNAV/VNAV DA**

886-2 548 (600-2)

**LNAV MDA**

840-1 502 (500-1)

840-1 502 (500-1 ½)

**CIRCLING**

920-1 557 (600-1)

1120-2 757 (800-2 ¼)

---

HUNTSVILLE MUNI (UTS)

**RNAV (GPS) RWY 18**

**UNICOM**
122.8 (CTAF)

---

**ELEV 363**

**TDZE 338**

4000

HINET

OSCER

297°

2500

4 NM

Holding Pattern

**Cat A**

**Cat B**

**Cat C**

**Cat D**

**LPV DA**

588-1 250 (300-1)

**LNAV/VNAV DA**

886-2 548 (600-2)

**LNAV MDA**

840-1 502 (500-1)

840-1 502 (500-1 ½)

**CIRCLING**

920-1 557 (600-1)

1120-2 757 (800-2 ¼)

---

HUNTSVILLE MUNI (UTS)

**RNAV (GPS) RWY 18**

**UNICOM**
122.8 (CTAF)

---

**ELEV 363**

**TDZE 338**

4000

HINET

OSCER

297°

2500

4 NM

Holding Pattern

**Cat A**

**Cat B**

**Cat C**

**Cat D**

**LPV DA**

588-1 250 (300-1)

**LNAV/VNAV DA**

886-2 548 (600-2)

**LNAV MDA**

840-1 502 (500-1)

840-1 502 (500-1 ½)

**CIRCLING**

920-1 557 (600-1)

1120-2 757 (800-2 ¼)
When local altimeter setting not received, use Conroe-North Houston Rgnl altimeter setting and increase MDA 80 feet, increase Circling Cat C visibility 0.5 mile.

Procedure NA for arrivals at LOA VORTAC via V477 northwest bound.

MISSED APPROACH: Climbing right turn to 2000 via LOA VORTAC R-131 to KASHE/25 DME and hold.

Amdt 6A 15JUL21

 Antar 30°45'N-95°35'W

30°45'N-95°35'W

542
Visibility reduction by helicopters NA. When local altimeter setting not received use Conroe-North Houston Rgnl altimeter setting and increase all MDA 80 feet, increase S-18 and Circling Cat C visibility 1/4 mile.

MISSED APPROACH: Climb to 1500 then climbing right turn to 3000 direct UTS NDB and hold, continue climb-in-hold to 3000.

ASOS
119.425

HOUSTON CENTER
134.8 269.6

UNICOM
122.8 (CTAF) 0
RNAV (GPS) RWY 14
CHEROKEE COUNTY (JSO)

Boro-VNAV NA when using Nacogdoches altimeter setting. For uncompensated Boro-VNAV systems, LNAV/VNAV NA below -1.6°C (4°F) or above 54°C (130°F). When local altimeter setting not received, use Nacogdoches altimeter setting and increase DA 118 feet, increase MDA 120 feet and LPV visibility all Cats ½ mile, LNAV/VNAV visibility all Cats ½ mile, LNAV visibility Cat C ½ mile. DME/DME RNP 0.3 NA. VDP NA with Nacogdoches altimeter setting.

MISSED APPROACH: Climb to 3100 direct NOPCI and hold.

AWOS-3
119.075

LONGVIEW APP CON
128.75 379.15

UNICOM
122.7 (CTAF) 0

<table>
<thead>
<tr>
<th>CATEGORY</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
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<td>LPV DA</td>
<td>928-1</td>
<td>250 (300-1)</td>
<td>NA</td>
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<tr>
<td>LNAV/ VNAV DA</td>
<td>928-1</td>
<td>250 (300-1)</td>
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<tr>
<td>LNAV MDA</td>
<td>1080-1</td>
<td>402 (500-1)</td>
<td>1080-1⅛</td>
<td>402 (500-1)</td>
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<tr>
<td>CIRCLING</td>
<td>1080-1</td>
<td>402 (500-1)</td>
<td>1140-1⅛</td>
<td>462 (500-1)</td>
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ELEV 678
TDZE 678

SC-5, 07 OCT 2021 to 02 DEC 2021

LONGVIEW APP CON
Amdt 1A 17AUG17

JACKSONVILLE, TEXAS
AL-6470 (FAA)

544
Baro-VNAV NA when using Nacogdoches altimeter setting. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -1.6°C (4°F) or above 54°C (130°F). When local altimeter setting not received, use Nacogdoches altimeter setting and increase DA 118 feet, increase all MDA 120 feet and LPV, LNAV/VNAV visibility all Cats ¼ mile, LNAV and Circling Cat C visibility ½ mile. When VGSI inop, Straight-in/Circling Rwy 32 procedure NA at night. DME/DME RNP-0.3 NA. Visibility reduction by helicopters NA.

**MISSING APPROACH:** Climb to 3100 direct WOSUL and hold.

<table>
<thead>
<tr>
<th>AWOS-3</th>
<th>LONGVIEW APP CON</th>
<th>UNICOM</th>
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</thead>
<tbody>
<tr>
<td>119.075</td>
<td>128.75 379.15</td>
<td>122.7 (CTAF)</td>
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</tbody>
</table>

**MISSED APCH FIX**

- **3100 WOSUL**
- **3100 NOPCI**
- **4 NM Holding Pattern**

**RNAV (GPS) RWY 32**

**Cherokee County (JSO)**

**ELEV 678**

**TDZE 665**

**Category**

- **LPV DA**
  - 915-1
  - 250 (300-1)
  - NA
- **LNAV/ VNAV DA**
  - 915-1
  - 250 (300-1)
  - NA
- **LNAV MDA**
  - 1220-1
  - 555 (600-1)
  - 1220-1 555 (600-1) NA
- **CIRCLING**
  - 1220-1
  - 542 (600-1)
  - 1220-1 542 (600-1) NA
VOR RWY 14
CHEROKEE COUNTY (JSO)

AWOS-3 119.075
LONGVIEW APP CON* 128.75 379.15
UNICOM 122.7 (CTAF)

Procedure NA for arrivals at FZT VOR/DME on V569 northwest bound.

MISSED APPROACH: Climbing right turn to 2500 direct FZT VOR/DME and hold.

DME required.

M5A FZT 25 NM

CIVEG FZT 9

VGS and descent angles not coincident (VGS Angle 3.00/TCH 30).

CIRCLING

<table>
<thead>
<tr>
<th>CATEGORY</th>
<th>A (6 NM)</th>
<th>B (8 NM)</th>
<th>C (12 NM)</th>
<th>D (18 NM)</th>
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<td>1080-1</td>
<td>402 (500-1)</td>
<td>1080-1/4</td>
<td>402 (500-1/4)</td>
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<td></td>
<td>NA</td>
<td>NA</td>
<td>1140-1</td>
<td>462 (500-1)</td>
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<td>NA</td>
<td>1140-1/2</td>
<td>462 (500-1/2)</td>
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CHEROKEE COUNTY (JSO)

VOR RWY 14

TCH 60

ELEV 678
TDZE 678

JACKSONVILLE, TEXAS

Amdt 4B 10SEP20

31°52'N 95°13'W
Baro-VNAV NA when using De Ridder altimeter setting. 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. Visibility reduction by helicopters NA. VDP NA when using De Ridder altimeter setting.

When local altimeter setting not received, use De Ridder altimeter setting and increase all DA 85 feet, all MDA 100 feet, increase LPV all Cats visibility ½ mile, LNAV/VNAV all Cats visibility ½ mile, LNAV Cat C visibility ¾ mile. Circling Cat C ¾ mile.

**MISSIED APPROACH:** Climb to 3000 direct BRIRR and hold.

AWOS-3  118.375
HOUSTON CENTER  126.95  363.05
UNICOM  122.8 (CTAF)

<table>
<thead>
<tr>
<th>CATEGORY</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
</tr>
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<tr>
<td>LPV DA</td>
<td>567-1⅓</td>
<td>354 (400-1¼)</td>
<td>NA</td>
<td></td>
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<td>LNAV/VNAV DA</td>
<td>730-1¾</td>
<td>517 (600-1¼)</td>
<td>NA</td>
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<td>LNAV MDA</td>
<td>700-1</td>
<td>487 (500-1)</td>
<td>700-1½</td>
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<td>CIRCLING</td>
<td>740-1</td>
<td>527 (600-1)</td>
<td>740-1½</td>
<td>527 (600-1½)</td>
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</tbody>
</table>

**Procedure NA for arrival at LFK VORTAC via airway radials 082 CW 141.**
Boro-VNAV NA when using De Ridder altimeter setting. For uncompensated Boro-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 ¾ SM NA. VDP NA when using De Ridder altimeter setting.

When local altimeter setting not received, use De Ridder altimeter setting and increase all DA 85 feet, all MDA 100 feet; increase LPV visibility all Cats and LNAV Cat C ¾ mile, LNAV/VNAV visibility all Cats and Circling Cat C ¾ mile.

Procedure NA for arrivals at ROMER via V569 northwest bound.

3 NM of arrival holding point.

Uncompensated Baro-VNAV NA when using De Ridder altimeter setting.

Helicopter visibility reduction below 8 SM NA. VDP NA when using De Ridder altimeter setting.

When local altimeter setting not received, use De Ridder altimeter setting and increase all DA 85 feet, all MDA 100 feet; increase LPV visibility all Cats and LNAV Cat C ¾ mile, LNAV/VNAV visibility all Cats and Circling Cat C ¾ mile.

**RNAV (GPS) RWY 36**

**JASPER COUNTY-BELL FIELD (JAS)**

**ELEV 213**

**TDZE 192**

Uncompensated Baro-VNAV NA when using De Ridder altimeter setting.

Helicopter visibility reduction below 8 SM NA. VDP NA when using De Ridder altimeter setting.

When local altimeter setting not received, use De Ridder altimeter setting and increase all DA 85 feet, all MDA 100 feet; increase LPV visibility all Cats and LNAV Cat C ¾ mile, LNAV/VNAV visibility all Cats and Circling Cat C ¾ mile.

Procedure NA for arrivals at ROMER via V569 northwest bound.

Uncompensated Baro-VNAV NA when using De Ridder altimeter setting.

Helicopter visibility reduction below 8 SM NA. VDP NA when using De Ridder altimeter setting.

When local altimeter setting not received, use De Ridder altimeter setting and increase all DA 85 feet, all MDA 100 feet; increase LPV visibility all Cats and LNAV Cat C ¾ mile, LNAV/VNAV visibility all Cats and Circling Cat C ¾ mile.

**RNAV (GPS) RWY 36**

**JASPER COUNTY-BELL FIELD (JAS)**

**ELEV 213**

**TDZE 192**

Uncompensated Baro-VNAV NA when using De Ridder altimeter setting.

Helicopter visibility reduction below 8 SM NA. VDP NA when using De Ridder altimeter setting.

When local altimeter setting not received, use De Ridder altimeter setting and increase all DA 85 feet, all MDA 100 feet; increase LPV visibility all Cats and LNAV Cat C ¾ mile, LNAV/VNAV visibility all Cats and Circling Cat C ¾ mile.

Procedure NA for arrivals at ROMER via V569 northwest bound.
RNAV (GPS) RWY 13
HAWTHORNE FLD (45R)

RNPA PCH-GPS.

Procedure NA at night. Rwy 13 helicopter visibility reduction below 1 SM NA. Use Beaumont/Port Arthur altimeter setting; when not received use Orange altimeter setting.

MISSED APPROACH: Climb to 2000 direct JOBMO and hold.

BPT ASOS
126.3

HOUSTON APP CON
121.3 377.1

UNICOM
122.8 (CTAF)

KOUNTZE/SILSBEE, TEXAS

WAAS
CH 58242
W13A
APP CRS 136°
Rwy Idg 4303
TDZE 71
Apt Elev 71

ELEV 71
TDZE 71

136° to RW13

3100

Visual Segment - Obstacles.

2000

JOBSMO

HAREV

S

3100

136°

7 NM

5.9 NM

700-1 629 (700-1)
700-1 629 (700-1)
700-1 629 (700-1)

LNAV MDA
720-1 649 (700-1)
720-1 649 (700-1)
720-1 649 (700-1)

CIRCLING
720-1 649 (700-1)
720-1 649 (700-1)
720-1 649 (700-1)

MIRL Rwy 13: 31

MIRL Rwy 13: 31

KOUNTZE/SILSBEE, TEXAS
Amdt 1C 07OCT21

30°20'N-94°15'W

549
When local altimeter setting not received, use Giddings-Lea altimeter setting and increase DA 59 feet, all MDA 60 feet, increase LNAV Cat C visibility 1/2 mile. Rwy 16 helicopter visibility reduction below 1/2 SM NA.

MISSING APPROACH: Climb to 2600 direct JIHRU and hold.

RNP APCH.

Missed APCH FIX

JIHRU

Category A

LPV DA

568-1 250 (300-1)

NA

LNAV MDA

680-1 362 (400-1)

NA

RNAV (GPS) RWY 16

FAYETTE RGNL AIR CENTER (3T5)

WAAS CH 42928 W16A

APP CRS 156°

Rwy Idg 5000

TDZE 318

Apt Elev 324

AWOS:3

LA GRANGE, TEXAS

124.175

AUSTIN APP CON

120.875 270.25

GCO

121.725

UNICOM 122.7 (CTAF)

AL-9154 (FAA)

19311

RNAV (GPS) RWY 16

FAYETTE RGNL AIR CENTER (3T5)

LA GRANGE, TEXAS

Amdt 2C 07NOV19

29°54'N-96°57"W

LA GRANGE, TEXAS

Amdt 2C 07NOV19

29°54'N-96°57"W
RNAV (GPS) RWY 34
FAYETTE RGNL AIR CENTER (3T5)

**AWOS-3**
124.175

**AUSTIN APP CON**
120.875 270.25

**GCO**
121.725

**UNICOM**
122.7 (CTAF)

**WAAS**
CH 86929
W34A

**APP CRS**
336°

**Rwy Idg**
5000

**TDZE**
324

**Apt Elev**
324

**LA GRANGE, TEXAS**

**29°54'N-96°57'W**

---

When local altimeter setting not received, use Giddings-Lee altimeter setting and increase all MDA 60 feet, increase LP and LNAV Cat C visibility 1/2 mile. Rwy 34 helicopter visibility reduction below 1/2 SM NA.

**MISSING APPROACH**: Climb to 2600 direct BOKKE and hold.

---

**ELEV 324**
**TDZE 324**

---

**REIL Rwys 16 and 34**
MIRL Rwy 16-34

---

**RNAV (GPS) RWY 34**

---

** CATEGORY A A B C D **

<table>
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<tr>
<th>LP</th>
<th>MDA</th>
<th>700-1</th>
<th>376 (400-1)</th>
<th>740-1</th>
<th>416 (500-1)</th>
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<tr>
<td><strong>LNAV MDA</strong></td>
<td>740-1</td>
<td>416 (500-1)</td>
<td>740-1</td>
<td>416 (500-1)</td>
<td>NA</td>
<td></td>
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</tbody>
</table>
CAUTION: BE ALERT TO RUNWAY CROSSING CLEARANCES. READBACK OF ALL RUNWAY HOLDING INSTRUCTIONS IS REQUIRED.
Baro-VNAV NA. Use Ellington altimeter setting. Rwy 30 helicopter visibility reduction below ¾ SM NA. Circling Rwys 5, 23 NA at night.

**WASHINGTON**

**AWOS-3PT**

**HOUSTON APP CON**

**CLNC DEL**

**UNICOM**

**ELEV 25**

**TDZE 25**

**301° to Rw30**

**REIL Rwy 12**

**MIRL Rwys 5-23 and 12-30**

**Baro-VNAV NA. Use Ellington altimeter setting. Rwy 30 helicopter visibility reduction below ¾ SM NA. Circling Rwys 5, 23 NA at night.**

**RNP APCH.**

**RNAV (GPS) RWY 30**

**LA PORTE MUNI (T41)**

**LNAV**

**MISSED APPROACH:** Climb to 600 then climbing right turn to 2000 direct FRYED and hold.

**SC-5, 07 OCT 2021 to 02 DEC 2021**

**LA PORTE, TEXAS**

**Amdt 2C 25APR19**

**LA PORTE MUNI (T41)**

**29°40’N-95°04’W**

**553**
NOTE: RADAR required.
NOTE: The following TRANSITIONS are ATC assigned only. Do not file.
CRESTVIEW TRANSITION: (For aircraft being weather rerouted to join a jet route off CEW VOR TAC or overflying CEW VOR TAC to join a direct route).
MC COMB TRANSITION: (For aircraft being weather rerouted to join a jet route off MCB VOR TAC or overflying MCB VOR TAC to join a direct route).

TAKEOFF MINIMUMS
Rwys 5, 12, 23, 30: Standard.

(NARRATIVE ON FOLLOWING PAGE)
ALEXANDRIA THREE DEPARTURE

**DEPARTURE ROUTE DESCRIPTION**

TAKEOFF RUNWAY 5: Climb on heading 046° to 500 before turning. When entering controlled airspace, climb on assigned heading for RADAR vectors to RAECN INT. Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure, thence. . . .

TAKEOFF RUNWAY 12: Climb on heading 121° to 500 before turning. When entering controlled airspace, climb on assigned heading for RADAR vectors to RAECN INT. Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure, thence. . . .

TAKEOFF RUNWAY 23: When entering controlled airspace, climb on assigned heading for RADAR vectors to RAECN INT. Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure, thence. . . .

TAKEOFF RUNWAY 30: Climb on heading 301° to 700 before turning. When entering controlled airspace, climb on assigned heading for RADAR vectors to RAECN INT. Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure, thence. . . .

. . . .on IAH R-028 to VELCO INT, cross VELCO INT at or above 10000, then right turn on LFK R-082 and AEX R-265 to AEX VORTAC.

CRESTVIEW TRANSITION (AEX3.CEW): From over AEX VORTAC on AEX R-085 and MCB R-266 to MCB VORTAC, then on MCB R-095 and CEW R-277 to CEW VORTAC.

MC COMB TRANSITION (AEX3.MCB): From over AEX VORTAC on AEX R-085 and MCB R-266 to MCB VORTAC.
NOTE: DME/DME/IRU or GPS required.
NOTE: RNAV 1.
**BORRN FOUR DEPARTURE (RNAV)**

**Note:** Chart not to scale.

**CTAF**
122.7
CLNC DEL
125.6
HOUSTON DEP CON
134.45 284.0

**Takeoff Minimums:**
Rwy 5, 12, 23, 30: Standard with minimum climb of 500' per NM to 540.

**Note:** DME/DME/IRU or GPS required.

**Note:** RADAR required.

**Note:** RNAV 1.

**Note:** CRGER TRANSITION ATC assigned only for aircraft departing 54T, AXH, EFD, GLS, HPY, IWS, LBX, LVJ, SGR, TME, T00, T41.

**(Narrative on following page)**
### DEPARTURE ROUTE DESCRIPTION

**TAKEOFF RWY 5:** Climb on heading 046° to 540, for RADAR vectors to BORRN, thence. . . .
**TAKEOFF RWY 12:** Climb on heading 121° to 540, for RADAR vectors to BORRN, thence. . . .
**TAKEOFF RWY 23:** Climb on heading 226° to 540, for RADAR vectors to BORRN, thence. . . .
**TAKEOFF RWY 30:** Climb on heading 301° to 540, for RADAR vectors to BORRN, thence. . . .

. . . . on track 267° to DILRE, then on (transition). Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure.

**CRGER TRANSITION (BORRN4.CRGER)**
**JUNCTION TRANSITION (BORRN4.JCT)**
**MNURE TRANSITION (BORRN4.MNURE)**
**SAN ANTONIO TRANSITION (BORRN4.SAT)**
**WAILN TRANSITION (BORRN4.WAILN)**
NOTE: RADAR required.

TAKOFF MINIMUMS
Rwys 5, 12, 23, 30: Standard.

NOTE: Chart not to scale.
DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAY 5: Climb on heading 046° to 500 before turning. When entering controlled airspace, climb on assigned heading for RADAR vectors to LITLD INT. Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure, thence . . . .

TAKEOFF RUNWAY 12: Climb on heading 121° to 500 before turning. When entering controlled airspace, climb on assigned heading for RADAR vectors to LITLD INT. Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure, thence . . . .

TAKEOFF RUNWAY 23: When entering controlled airspace, climb on assigned heading for RADAR vectors to LITLD INT. Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure, thence . . . .

TAKEOFF RUNWAY 30: Climb on heading 301° to 700 before turning. When entering controlled airspace, climb on assigned heading for RADAR vectors to LITLD INT. Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure, thence . . . .

. . . . on IAH R-344 to STELL INT, then on IAH R-344 to CRIED INT, then left turn on CQY R-144 to CQY VORTAC.
NOTE: RADAR required.
NOTE: For aircraft destined KMEM or filed via Q32 or J42.
DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAY 5: Climb on heading 046° to 500 before turning. When entering controlled airspace, climb on assigned heading for RADAR vectors to RAECN INT. Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure, thence. . . .

TAKEOFF RUNWAY 12: Climb on heading 121° to 500 before turning. When entering controlled airspace, climb on assigned heading for RADAR vectors to RAECN INT. Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure, thence. . . .

TAKEOFF RUNWAY 23: When entering controlled airspace, climb on assigned heading for RADAR vectors to RAECN INT. Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure, thence. . . .

TAKEOFF RUNWAY 30: Climb on heading 301° to 700 before turning. When entering controlled airspace, climb on assigned heading for RADAR vectors to RAECN INT. Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure, thence. . . .

. . . .on IAH R-028 and the ELD R-208 to ELD VOR/DME, cross VELCO INT at or above 10000.
NOTE: RADAR required.
NOTE: For aircraft destined for the DFW terminal area only.

TAKEOFF MINIMUMS.
Rwys 5, 12, 23, 30: Standard.

NOTE: Chart not to scale.
DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAY 5: Climb on heading 046° to 500 before turning. When entering controlled airspace, climb on assigned heading for RADAR vectors to MONNT INT. Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure, thence. . . .

TAKEOFF RUNWAY 12: Climb on heading 121° to 500 before turning. When entering controlled airspace, climb on assigned heading for RADAR vectors to MONNT INT. Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure, thence. . . .

TAKEOFF RUNWAY 23: When entering controlled airspace, climb on assigned heading for RADAR vectors to MONNT INT. Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure, thence. . . .

TAKEOFF RUNWAY 30: Climb on heading 301° to 700 before turning. When entering controlled airspace, climb on assigned heading for RADAR vectors to MONNT INT. Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure, thence. . . .

. . . . on IAH R-358 to cross GIFFA INT at or above 10000.
DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAY 5: Climb on heading 046° to 540, for RADAR vectors to VUH VOR/DME, thence . . . .

TAKEOFF RUNWAY 12: Climb on heading 121° to 540, for RADAR vectors to VUH VOR/DME, thence . . . .

TAKEOFF RUNWAY 23: Climb on heading 226° to 540, for RADAR vectors to VUH VOR/DME, thence . . . .

TAKEOFF RUNWAY 30: Climb on heading 301° to 540, for RADAR vectors to VUH VOR/DME, thence . . . .

. . . . on track 118° to HOODO, then on (transition). Maintain ATC assigned altitude.

Expect filed altitude 10 minutes after departure.

BOWFN TRANSITION (HOODO7.BOWFN)
CFOOD TRANSITION (HOODO7.CFOOD)
HARVEY TRANSITION (HOODO7.HRV)
LEEVILLE TRANSITION (HOODO7.LEV)
SBIRD TRANSITION (HOODO7.SBIRD)
TAKEOFF MINIMUMS
Rwys 5, 12, 23, 30:
Standard with minimum climb of 500' per NM to 540.

TAKEOFF RUNWAY 5: Climb on heading 046° to 540
for RADAR vectors to RENNK, thence . . .
TAKEOFF RUNWAY 12: Climb on heading 121° to 540
for RADAR vectors to RENNK, thence . . .
TAKEOFF RUNWAY 23: Climb on heading 226° to 540
for RADAR vectors to RENNK, thence . . .
TAKEOFF RUNWAY 30: Climb on heading 301° to 540
for RADAR vectors to RENNK, thence . . .
. . . on track 016° to COLET, then on track 025° to
SUSHI, then on track 026° to WWELL, then on track 026°
to INDIE, then on (transition). Maintain ATC assigned
altitude. Expect filed altitude 10 minutes after departure.

TPAKK TRANSITION (INDIE8.TPAKK)

NOTE: Chart not to scale.
NOTE: SC-5, 07 OCT 2021 to 02 DEC 2021
NOTE: RNAV 1.
INDUSTRY ONE DEPARTURE

TOP ALTITUDE: ASSIGNED BY ATC

CLNC DEL
125.6
CTAF
122.7
HOU DEP CON
134.45 284.0

NOTE: Chart not to scale.

HUMBLE
IAH
116.6
Chan 113
R-262
R-170
R-174
700
046°
301°
500

NOTE: RADAR required.
NOTE: JUNCTION TRANSITION: For aircraft overflying JCT VORTAC on J2, J15 or J86.
NOTE: CENTEX TRANSITION: ATC assigned only for aircraft inbound to the DFW Metroplex area that are being rerouted due to bad weather.
NOTE: CORPUS CHRISTI TRANSITION: ATC assigned only.
NOTE: LAREDO TRANSITION: ATC assigned only.

TAKING MINIMUMS
Rwys 5, 12, 23, 30: Standard.

NOTE: Chart not to scale.
DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAY 5: Climb on heading 046° to 500 before turning. When entering controlled airspace, climb on assigned heading for RADAR vectors to SHYNR INT. Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure, thence . . . .

TAKEOFF RUNWAY 12: Climb on heading 121° to 500 before turning. When entering controlled airspace, climb on assigned heading for RADAR vectors to SHYNR INT. Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure, thence . . . .

TAKEOFF RUNWAY 23: Climb on heading 301° to 700 before turning. When entering controlled airspace, climb on assigned heading for RADAR vectors to SHYNR INT. Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure, thence . . . .

TAKEOFF RUNWAY 30: Climb on heading 301° to 700 before turning. When entering controlled airspace, climb on assigned heading for RADAR vectors to SHYNR INT. Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure, thence . . . .

. . . . on IDU R-085 to BOCCK INT, then on IDU R-085 to IDU VORTAC.

CENTEX TRANSITION (IDU1.CWK): From over IDU VORTAC on IDU R-289 and CWK R-110 to CWK VORTAC.

CORPUS CHRISTI TRANSITION (IDU1.CRP): From over IDU VORTAC on IDU R-259 to MARCS INT, then on SAT R-056 to SAT VORTAC, then on SAT R-145 and CRP R-324 to CRP VORTAC.

JUNCTION TRANSITION (IDU1.JCT): From over IDU VORTAC on IDU R-276 and JCT R-094 to JCT VORTAC.

LAREDO TRANSITION (IDU1.LRD): From over IDU VORTAC on IDU R-259 to MARCS INT, then on SAT R-056 to SAT VORTAC, then on SAT R-194 and LRD R-012 to LRD VORTAC.
**RNAV 1.

**NOTE:** Chart not to scale.

**NOTE:** DME/DME/IRU or GPS required.

**NOTE:** RADAR required.

**NOTE:** RNAV 1.
DEPARTURE ROUTE DESCRIPTION

TAKEOFF RWY 5: Climb on heading 046° to 540, for RADAR vectors to KARRR, thence . . .
TAKEOFF RWY 12: Climb on heading 121° to 540, for RADAR vectors to KARRR, thence . . .
TAKEOFF RWY 23: Climb on heading 226° to 540, for RADAR vectors to KARRR, thence . . .
TAKEOFF RWY 30: Climb on heading 301° to 540, for RADAR vectors to KARRR, thence . . .

. . . on track 218° to KAVCY, then on (transition). Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure.

CORPUS CHRISTI TRANSITION (KARRR6.CRP)
PALACIOS TRANSITION (KARRR6.PSX)
TRUAX TRANSITION (KARRR6.NGP)
WWREN TRANSITION (KARRR6.WWREN)
YOMOM TRANSITION (KARRR6.YOMOM)
LEONA FOUR DEPARTURE

TOP ALTITUDE: ASSIGNED BY ATC

ARDMORE
116.7 ADM
Chan 114
N34°12.69' - W97°10.10'
L-17, H-6

RANGER
115.7 FUZ
Chan 104
N32°53.37' - W97°10.77'
L-17, H-6

DOLEY
N32°11.35' - W96°23.08'

TULSA
114.4 TUL
Chan 91
N36°11.78' - W95°47.29'

BONHAM
114.6 BYP
Chan 93
N33°32.25' - W96°14.05'
L-17, H-6

CEDER CREEK
114.8 CQY
Chan 95
N32°11.14' - W96°13.09'

WACO
115.3 ACT
Chan 100
N31°39.74' - W96°16.14'

LEONA
110.8 LOA
Chan 45
N31°07.44' - W95°58.08'

WLLIS
N30°32.08' - W95°39.10'

NAVASOTA
115.5 TNV
Chan 106

NOTE: Chart not to scale.

LEONA FOUR DEPARTURE

NOTE: TAKEOFF MINIMUMS:
Rwys 5, 12, 23, 30: Standard.

NOTE: RADAR required.
NOTE: Except for aircraft destined ACT or the DFW terminal area,
all aircraft filing the LEONA SID must file one of the published
transitions via FUZ (LOA4.FUZ), ADM (LOA4.ADM), or
BYP (LOA4.FUZ).

NOTE: ARDMORE TRANSITION: For aircraft overflying west/northwest of
the DFW terminal area FL240 and above.

NOTE: RANGER TRANSITION: For aircraft overflying west/northwest of
the DFW terminal area FL240 and above.

NOTE: BONHAM TRANSITION: For aircraft overflying/landing TUL
VORTAC FL240 and above.

(NARRATIVE ON FOLLOWING PAGE)
DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAY 5: Climb on heading 046° to 500 before turning. When entering controlled airspace, climb on assigned heading for RADAR vectors to WLLIS INT. Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure, thence . . . .

TAKEOFF RUNWAY 12: Climb on heading 121° to 500 before turning. When entering controlled airspace, climb on assigned heading for RADAR vectors to WLLIS INT. Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure, thence . . . .

TAKEOFF RUNWAY 23: When entering controlled airspace, climb on assigned heading for RADAR vectors to WLLIS INT. Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure, thence . . . .

TAKEOFF RUNWAY 30: Climb on heading 301° to 700 before turning. When entering controlled airspace, climb on assigned heading for RADAR vectors to WLLIS INT. Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure, thence . . . .

. . . . on LOA R-147 to LOA VORTAC.

ARDMORE TRANSITION (LOA4.ADM): From over LOA VORTAC on LOA R-334 to DOLEY INT, then on ADM R-156 to ADM VORTAC.

BONHAM TRANSITION (LOA4.BYP): From over LOA VORTAC on LOA R-341 and CQY R-163 then on BOPY R-173 to BOPY VORTAC.

RANGER TRANSITION (LOA4.FUZ): From over LOA VORTAC on LOA R-334 to DOLEY INT, then on FUZ R-130 to FUZ VORTAC.
NOTE: Chart not to scale.

**LUFKIN THREE DEPARTURE**

**TOP ALTITUDE: ASSIGNED BY ATC**

**NOTE:** RADAR and DME required.

**NOTE:** For aircraft destined LIT or overflying LIT or PXV.

**LUFKIN**

112.1 LFK

Chan 58

N31°09.75' W94°43.01'

**SUSHI**

N30°35.48' W95°04.39'

**SKKIP**

N31°14.91' W94°39.45'

**COLET**

N30°26.96' W95°09.66'

**KYANN**

N30°15.53' W95°13.96'

**HUMBLE**

116.6 IAH

Chan 113

**DAISETTA**

116.9 DAS

Chan 116

**TAKEOFF MINIMUMS**

Rwys 5, 12, 23, 30: Standard.

**LITTLE ROCK**

113.9 LIT

Chan 86

N34°40.66' W92°10.83'

L-18, H-6

**NOTE:** Chart not to scale.

(NARRATIVE ON FOLLOWING PAGE)

**LUFKIN THREE DEPARTURE**

(LFK3.LFK) 07OCT21

LA PORTE, TEXAS

LA PORTE MUNI (T41)
DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAY 5: Climb on heading 046° to 500 before turning. When entering controlled airspace, climb on assigned heading for RADAR vectors to KYANN INT. Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure, thence.

TAKEOFF RUNWAY 12: Climb on heading 121° to 500 before turning. When entering controlled airspace, climb on assigned heading for RADAR vectors to KYANN INT. Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure, thence.

TAKEOFF RUNWAY 23: When entering controlled airspace, climb on assigned heading for RADAR vectors to KYANN INT. Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure, thence.

TAKEOFF RUNWAY 30: Climb on heading 301° to 700 before turning. When entering controlled airspace, climb on assigned heading for RADAR vectors to KYANN INT. Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure, thence.

...on IAH R-013 to COLET INT, then right turn on LFK R-203 to LFK VORTAC.

LITTLE ROCK TRANSITION (LFK3.LIT): From over LFK VORTAC on LFK R-026 to SKKIP INT, then on LFK R-026 and LIT R-207 to LIT VORTAC.
LURIC EIGHT DEPARTURE (RNAV)

NOTE: Chart not to scale.

NOTE: RADAR required.
NOTE: DME/DME/IRU or GPS required.
NOTE: RNAV 1.

DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAY 5: Climb on heading 046° to 540 for RADAR vectors to KNTKY, thence . . . .

TAKEOFF RUNWAY 12: Climb on heading 121° to 540 for RADAR vectors to KNTKY, thence . . . .

TAKEOFF RUNWAY 23: Climb on heading 226° to 540 for RADAR vectors to KNTKY, thence . . . .

TAKEOFF RUNWAY 30: Climb on heading 301° to 540 for RADAR vectors to KNTKY, thence . . . .

. . . . on track 032° to PEETY, then on track 032° to DARTR, then on track 031° to MUSIQ, then on track 031° to CLAVN, then on track 031° to VELCO, then on track 031° to ENJOY, then on track 031° to LURIC, then on (transition). Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure.

HAWES TRANSITION (LURIC8.HAWES)
ORRTH TRANSITION (LURIC8.ORRTH)
DEPARTURE ROUTE DESCRIPTION

TAKEOFF RWY 5: Climb on heading 046° to 540 for RADAR vectors to MMALT, thence. . . .
TAKEOFF RWY 12: Climb on heading 121° to 540 for RADAR vectors to MMALT, thence. . . .
TAKEOFF RWY 23: Climb on heading 226° to 540 for RADAR vectors to MMALT, thence. . . .
TAKEOFF RWY 30: Climb on heading 301° to 540 for RADAR vectors to MMALT, thence. . . .

. . . . on track 086° to MOOKI, then on (transition). Maintain ATC assigned altitude.
Expect filed altitude 10 minutes after departure.

GUSTI TRANSITION (MMALT5.GUSTI)
LAKE CHARLES TRANSITION (MMALT5.LCH)
WHITE LAKE TRANSITION (MMALT5.LLA)
DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAY 5: Climb on heading 046° to 500 before turning. When entering controlled airspace, climb on assigned heading for RADAR vectors to SKUBA INT. Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure, thence . . . .

TAKEOFF RUNWAY 12: Climb on heading 121° to 500 before turning. When entering controlled airspace, climb on assigned heading for RADAR vectors to SKUBA INT. Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure, thence . . . .

TAKEOFF RUNWAY 23: When entering controlled airspace, climb on assigned heading for RADAR vectors to SKUBA INT. Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure, thence . . . .

TAKEOFF RUNWAY 30: Climb on heading 301° to 700 before turning. When entering controlled airspace, climb on assigned heading for RADAR vectors to SKUBA INT. Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure, thence . . . .

. . . on PSX R-038 to PSX VORTAC.

FORT STOCKTON TRANSITION (PSX2.FST): From over PSX VORTAC on PSX R-253 and THX R-073 to THX VORTAC, then on THX R-259 and COT R-078 to COT VORTAC, then on COT R-318 and RSG R-136 to RSG VORTAC, then on RSG R-283 and FST R-100 to FST VORTAC.

SAN ANTONIO TRANSITION (PSX2.SAT): From over PSX VORTAC on PSX R-253 and THX R-073 to THX VORTAC, then on SAT R-158 to SAT VORTAC.
NOTE: Chart not to scale.

NOTE: RNAV 1.
NOTE: DME/DME/IRU or GPS required.
NOTE: RADAR required.
NOTE: RADAR required.

DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAY 5: Climb on heading 046° to 540 for RADAR vectors to KNTKY, thence. . . .
TAKEOFF RUNWAY 12: Climb on heading 121° to 540 for RADAR vectors to KNTKY, thence. . . .
TAKEOFF RUNWAY 23: Climb on heading 226° to 540 for RADAR vectors to KNTKY, thence. . . .
TAKEOFF RUNWAY 30: Climb on heading 301° to 540 for RADAR vectors to KNTKY, thence. . . .

. . . on track 032° to PEETY, then on track 032° to DARTR, then on track 031° to MUSIQ, then on track 031° to CLAVN, then on track 060° to STRYA, then on (transition). Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure.

DPATY TRANSITION (STRYA8.DPATY)
JBULL TRANSITION (STRYA8.JBULL)

TAKEOFF MINIMUMS
Rwys 5, 12, 23, 30: Standard with minimum climb of 500’ per NM to 540.

TOP ALTITUDE: ASSIGNED BY ATC

NOTE: CTAF
122.7
CLNC DEL
125.6
HOUSTON DEP CON
134.45 284.0

KNTKY
DARTR
MUSIQ
CLAVN
STRYA
DPATY
JBULL

032°
031°
065°
170°
1200
1000
060°
(126)
1900
12000
(130)

1200
1900
065°
(126)

031° to CLAVN, then on track 060° to STRYA, then on track 032° to PEETY, then on track 032° to DARTR, then on track 031° to MUSIQ, then on track 031° to CLAVN, then on track 060° to STRYA, then on (transition). Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure.

DPATY TRANSITION (STRYA8.DPATY)
JBULL TRANSITION (STRYA8.JBULL)

Expect filed altitude 10 minutes after departure.

NOTE: Chart not to scale.
**RNAV 1.**

**NOTE:** DME/DME/IRU or GPS required.

**NOTE:** RADAR required.

**NOTE:** RNAV 1.

---

**DEPARTURE ROUTE DESCRIPTION**

**TAKEOFF RUNWAY 5:** Climb on heading 046° to 540 for RADAR vectors to BBYSE, thence . . .

**TAKEOFF RUNWAY 12:** Climb on heading 121° to 540 for RADAR vectors to BBYSE, thence . . .

**TAKEOFF RUNWAY 23:** Climb on heading 226° to 540 for RADAR vectors to BBYSE, thence . . .

**TAKEOFF RUNWAY 30:** Climb on heading 301° to 540 for RADAR vectors to BBYSE, thence . . .

. . .on track 331° to SPICR, then on track 331° to WLLIS, then on track 332° to STYCK, then on (transition). Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure.

**DOLEY TRANSITION (STYCK8.DOLEY)**

**WTSON TRANSITION (STYCK8.WTSON)**

---

**TAKEOFF MINIMUMS**

Rwys 5, 12, 23, 30: Standard with minimum climb of 500’ per NM to 540.

**NOTE:** Chart not to scale.
TAKEOFF RWY 5: Climb on heading 046° to 540, for RADAR vectors to WATFO, thence. . . .
TAKEOFF RWY 12: Climb on heading 121° to 540, for RADAR vectors to WATFO, thence. . . .
TAKEOFF RWY 23: Climb on heading 226° to 540, for RADAR vectors to WATFO, thence. . . .
TAKEOFF RWY 30: Climb on heading 301° to 540, for RADAR vectors to WATFO, thence. . . .

. . . . on track 141° to VUH VOR/DME, then on (transition). Maintain ATC assigned altitude.
Expect filed altitude 10 minutes after departure.

ANKRR TRANSITION (WATF05.ANKRR)
KELPP TRANSITION (WATF05.KELPP)
MUSYL TRANSITION (WATF05.MUSYL)
NOTE: RADAR required.
NOTE: DME/DME/IRU or GPS required.
NOTE: RNAV 1.

DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAY 5: Climb on heading 046° to 540 for RADAR vectors to WYLSN, thence. . . .
TAKEOFF RUNWAY 12: Climb on heading 121° to 540 for RADAR vectors to WYLSN, thence. . . .
TAKEOFF RUNWAY 23: Climb on heading 226° to 540 for RADAR vectors to WYLSN, thence. . . .
TAKEOFF RUNWAY 30: Climb on heading 301° to 540 for RADAR vectors to WYLSN, thence. . . .

. . . . . .on track 360° to MONNT, then on (transition). Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure.

GIFFA TRANSITION (WYLSN8.GIFFA)
MAJKK TRANSITION (WYLSN8.MAJKK)
RNAV (GPS) RWY 16

RADAR REQUIRED

LNAV MDA

Amdt 2B  23JUN16

Probable NA at night. Use George Bush Interct/Houston Intntl for missed approach. Use AWOS-3 at night. 

Procedure NA at night. Use AWOS-3 at night. 

AWOS-3 (FAA)

SC-5, 07 OCT 2021 to 02 DEC 2021
Use George Bush Intctnl/Houston altimeter setting. Procedure NA at night. Helicopter visibility reduction below 1 SM NA.

MISSED APPROACH: Climb to 2000, then left turn direct DAS VORTAC.
NOTE: RADAR required.
NOTE: DME/DME/IRU or GPS required.
NOTE: RNAV 1.

TAKEOFF MINIMUMS
Rwys 16, 34: Standard with minimum climb of 500' per NM to 580.

TAKEOFF RUNWAY 16: Climb on heading 161° to 1700 for RADAR vectors to DREMR, thence . . . .
TAKEOFF RUNWAY 34: Climb on heading 341° to 1000 for RADAR vectors to DREMR, thence . . . .

...on track 345° to LITLD, then on track 346° to BLTWY, then on (transition). Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure.

CRIED TRANSITION (BLTWY7.CRIED)
CTAF 122.9
HOUSTON DEP CON 119.7 281.4

NOTE: Chart not to scale.

BORRN FOUR DEPARTURE (RNAV)

BORRN FOUR DEPARTURE (RNAV)

NOTE: DME/DME/IRU or GPS required.
NOTE: RADAR required.
NOTE: RNAV 1.
NOTE: CRGER TRANSITION ATC assigned only for aircraft departing 54T, AXH, EFD, GLS, HPY, IWS, LBX, LVJ, SGR, TME, T00, T41.

(NAEIVE ON FOLLOWING PAGE)
DEPARTURE ROUTE DESCRIPTION

TAKEOFF RWY 16: Climb on heading 161° to 1700, for RADAR vectors to BORRN, thence. . . .
TAKEOFF RWY 34: Climb on heading 341° to 1000, for RADAR vectors to BORRN, thence. . . .

. . . . on track 267° to DILRE, then on (transition). Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure.

CRGER TRANSITION (BORRN4.CRGER)
JUNCTION TRANSITION (BORRN4.JCT)
MNURE TRANSITION (BORRN4.MNURE)
SAN ANTONIO TRANSITION (BORRN4.SAT)
WAILN TRANSITION (BORRN4.WAILN)
NOTE: Chart not to scale.

DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAY 16: Climb on heading 161° to 1700, for RADAR vectors to VUH VOR/DME, thence . . . .

TAKEOFF RUNWAY 34: Climb on heading 341° to 1000, for RADAR vectors to VUH VOR/DME, thence . . . .

. . . . on track 118° to HOODO, then on (transition). Maintain ATC assigned altitude.

Expect filed altitude 10 minutes after departure.

BOWFN TRANSITION (HOODO7.BOWFN)
CFOOD TRANSITION (HOODO7.CFOOD)
HARVEY TRANSITION (HOODO7.HRV)
LEEVILLE TRANSITION (HOODO7.LEV)
SBIRD TRANSITION (HOODO7.SBIRD)
**INDIE EIGHT DEPARTURE (RNAV)**

CTAF  
122.9  
HOUSTON DEP CON  
119.7  281.4

**TOP ALTITUDE: ASSIGNED BY ATC**

**TAKEOFF MINIMUMS**  
Rwys 16, 34: Standard with minimum climb of 500’ per NM to 580.

NOTE:  RADAR required.  
NOTE:  DME/DME/IRU or GPS required.  
NOTE:  RNAV 1.  
NOTE:  TPAKK TRANSITION: For non GPS equipped aircraft TNV DME must be operational.

**DEPARTURE ROUTE DESCRIPTION**

TAKEOFF RUNWAY 16: Climb on heading 161° to 1700 for RADAR vectors to RENNK, thence . . . .  
TAKEOFF RUNWAY 34: Climb on heading 341° to 1000 for RADAR vectors to RENNK, thence . . . .

. . . . on track 016° to COLET, then on track 025° to SUSHI, then on track 026° to WWELL, then on track 026° to INDIE, then on (transition). Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure.

**TPAKK TRANSITION (INDIE8.TPAKK)**
**DEPARTURE ROUTE DESCRIPTION**

**TAKEOFF RWY 16:** Climb on heading 161° to 1700, for RADAR vectors to KARRR, thence. . . .

**TAKEOFF RWY 34:** Climb on heading 341° to 1000, for RADAR vectors to KARRR, thence. . . .

. . . . on track 218° to KAVCY, then on (transition). Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure.

**CORPUS CHRISTI TRANSITION (KARRR6.CRP)**
**PALACIOS TRANSITION (KARRR6.PSX)**
**TRUAX TRANSITION (KARRR6.NGP)**
**WWREN TRANSITION (KARRR6.WWREN)**
**YOMOM TRANSITION (KARRR6.YOMOM)**
LURIC EIGHT DEPARTURE (RNAV)

CTAF
122.9
HOUSTON DEP CON
119.7 281.4

NOTE: RADAR required.
NOTE: DME/DME/IRU or GPS required.
NOTE: RNAV 1.

NOTE: Chart not to scale.

DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAY 16: Climb on heading 161° to 1700 for RADAR vectors to KNTKY, thence....
TAKEOFF RUNWAY 34: Climb on heading 341° to 1000 for RADAR vectors to KNTKY, thence....

. . . on track 032° to PEETY, then on track 032° to DARTR, then on track 031° to MUSIQ, then on track 031° to CLAVN, then on track 031° to VELCO, then on track 031° to ENJOY, then on track 031° to LURIC, then on (transition). Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure.

HAWES TRANSITION (LURIC8.HAWES)
ORRTH TRANSITION (LURIC8.ORRTH)
DEPARTURE ROUTE DESCRIPTION

TAKEOFF RWY 16: Climb on heading 161° to 1700 for RADAR vectors to MMALT, thence.

TAKEOFF RWY 34: Climb on heading 341° to 1000 for RADAR vectors to MMALT, thence.

...on track 086° to MOOKI, then on (transition). Maintain ATC assigned altitude.

Expect filed altitude 10 minutes after departure.

GUSTI TRANSITION (MMALT5, GUSTI)
LAKE CHARLES TRANSITION (MMALT5, LCH)
WHITE LAKE TRANSITION (MMALT5, LLA)
**Takeoff Minimums**

Rwys 16, 34: Standard.

**Top Altitude:**

Assigned by ATC

**Note:** Radar required.

**Note:** Chart not to scale.

** Narrative on Following Page**
DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAY 16: Climb on heading 161° to 1700 before turning, when entering controlled airspace, climb on assigned heading for RADAR vectors to SKUBA INT. Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure, thence.

TAKEOFF RUNWAY 34: Climb on heading 341° to 1000 before turning, when entering controlled airspace, climb on assigned heading for RADAR vectors to SKUBA INT. Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure, thence.

...on PSX R-038 to PSX VORTAC.

FORT STOCKTON TRANSITION (PSX2.FST): From over PSX VORTAC on PSX R-253 and THX R-073 to THX VORTAC, then on THX R-259 and COT R-078 to COT VORTAC, then on COT R-318 and RSG R-136 to RSG VORTAC, then on RSG R-283 and FST R-100 to FST VORTAC.

SAN ANTONIO TRANSITION (PSX2.SAT): From over PSX VORTAC on PSX R-253 and THX R-073 to THX VORTAC, then on SAT R-158 to SAT VORTAC.
NOTE: Chart not to scale.

NOTE: RADAR required.
NOTE: DME/DME/IRU or GPS required.
NOTE: RNAV 1.

DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAY 16: Climb on heading 161° to 1700 for RADAR vectors to KNTKY, thence...

TAKEOFF RUNWAY 34: Climb on heading 341° to 1000 for RADAR vectors to KNTKY, thence...

. . . on track 032° to PEETY, then on track 032° to DARTR, then on track 031° to MUSIQ, then on track 031° to CLAVN, then on track 060° to STRYA, then on (transition). Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure.

DPATY TRANSITION (STRYA8.DPATY)
JBULL TRANSITION (STRYA8.JBULL)
**DEPARTURE ROUTE DESCRIPTION**

**TAKEOFF RUNWAY 16:** Climb on heading 161° to 1700 for RADAR vectors to BBYSE, thence...  
**TAKEOFF RUNWAY 34:** Climb on heading 341° to 1000 for RADAR vectors to BBYSE, thence...  
...on track 331° to SPICR, then on track 331° to WLLIS, then on track 332° to STYCK, then on (transition). Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure.

**DOLEY TRANSITION (STYCK8.DOLEY)**
**WTSON TRANSITION (STYCK8.WTSON)**

**NOTE:** Chart not to scale.
**WATFO FIVE DEPARTURE (RNAV)**

**NOTE:** GPS required.
**NOTE:** RADAR required.
**NOTE:** RNAV 1.

---

**DEPARTURE ROUTE DESCRIPTION**

**TAKEOFF RWY 16:** Climb on heading 161° to 1700, for RADAR vectors to WATFO, thence. . . .

**TAKEOFF RWY 34:** Climb on heading 341° to 1000, for RADAR vectors to WATFO, thence. . . .

. . . . on track 141° to VUH VOR/DME, then on (transition). Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure.

**ANKRR TRANSITION (WATFO5.ANKRR)**
**KELPP TRANSITION (WATFO5.KELPP)**
**MUSYL TRANSITION (WATFO5.MUSYL)**
(WYLSN8.WYLSN) 21280

WYLSN EIGHT DEPARTURE (RNAV)

CTAF
122.9
HOUSTON DEP CON
119.7 281.4

NOTE: RADAR required.
NOTE: DME/DME/IRU or GPS required.
NOTE: RNAV 1.

NOTE: Chart not to scale.

DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAY 16: Climb on heading 161° to 1700 for RADAR vectors to WYLSN, thence . . .

TAKEOFF RUNWAY 34: Climb on heading 341° to 1000 for RADAR vectors to WYLSN, thence . . .

. . . on track 360° to MONNT, then on (transition). Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure.

GIFFA TRANSITION (WYLSN8.GIFFA)
MAJKK TRANSITION (WYLSN8.MAJKK)

WYLSN EIGHT DEPARTURE (RNAV)
(WYLSN8.WYLSN) 07OCT21

SC-5, 07 OCT 2021 to 02 DEC 2021
Use Conroe-North Houston Rgnl altimeter setting. Rwy 30 helicopter visibility reduction below 1 SM NA. Night landing: Rwy 30 NA.

RNAV (GPS) RWY 30
LIVINGSTON MUNI (LVR)

HOUSTON CENTER
125.175 285.575

LIVINGSTON MUNI
122.7 (CTAF)

1000 2000 BOBKO

Visual Segment - Obstacles.

BOBKO Holding Pattern

4 NM

DILKS

AGEVE

1800

305°

2000

125°

305°

4.3 NM

3 NM

CATEGORY

A

B

C

D

LNAV MDA

680-1

529 (600-1)

680-1 1/2

649 (600-1/2)

NA

CIRCLING

800-1

649 (700-1)

800-1 3/4

649 (700-1/4)

NA

LIVINGSTON, TEXAS
Orig'D 07OCT21

30°41'N-95°01'W
Circling Rwy 16, 25 NA at night.

MISSED APPROACH: Climb to 800 then climbing right turn to 2000 direct LFK VORTAC and hold, continue climb-in-hold.

Procedure NA for arrival on LFK VORTAC airway radials 245 CW 354.

Remain within 10 NM

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<th>S-LOC 7</th>
<th>680-1/2</th>
<th>393 (400-1/2)</th>
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<td>444 (500-1)</td>
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ASOS

120.625

HOUSTON CENTER

125.175 285.575

UNICOM

123.0 (CTAF)
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. Circling Rwy 16, 25 NA at night.

**RNAV (GPS) RWY 7**

**ANGELINA COUNTY (LFK)**

**LUFKIN, TEXAS**

**MIRL Rwys 7-25 and 16-34**

Amdt 1 07DEC17

**31°14’N-94°45’W**

---

**Category**

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<td>464 (500-1)</td>
<td>584 (600-1/2)</td>
<td>844 (900-2 3/4)</td>
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**ASOS**

| 120.625 |

**HOUSTON CENTER**

| 125.175 | 285.575 |

**UNICOM**

| 123.0 (CTAF) |

**ELEV 296**

**TDZE 287**

**Procedure NA for arrival on LFK**

**VORTAC airway radials 199 CW 354.**

**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. Circling Rwy 16, 25 NA at night.**

**Amdt 1 07DEC17**

**31°14’N-94°45’W**

**RNAV (GPS) RWY 7**

**ANGELINA COUNTY (LFK)**

**LUFKIN, TEXAS**

**MIRL Rwys 7-25 and 16-34**

Amdt 1 07DEC17

**31°14’N-94°45’W**

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**ASOS**

| 120.625 |

**HOUSTON CENTER**

| 125.175 | 285.575 |

**UNICOM**

| 123.0 (CTAF) |

**ELEV 296**

**TDZE 287**

**Procedure NA for arrival on LFK**

**VORTAC airway radials 199 CW 354.**

**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. Circling Rwy 16, 25 NA at night.**

**Amdt 1 07DEC17**

**31°14’N-94°45’W**

---

**Category**

<table>
<thead>
<tr>
<th></th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
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<tbody>
<tr>
<td>LPV DA</td>
<td>537-1/2</td>
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<td>563-1/2</td>
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<tr>
<td>LNAV/VNAV DA</td>
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<td>373 (400-1/2)</td>
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<td>LNAV MDA</td>
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<td>760-1</td>
<td>880-1/2</td>
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<tr>
<td>CIRCLING</td>
<td>444 (500-1)</td>
<td>464 (500-1)</td>
<td>584 (600-1/2)</td>
<td>844 (900-2 3/4)</td>
</tr>
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</table>

**ASOS**

| 120.625 |

**HOUSTON CENTER**

| 125.175 | 285.575 |

**UNICOM**

| 123.0 (CTAF) |

**ELEV 296**

**TDZE 287**

**Procedure NA for arrival on LFK**

**VORTAC airway radials 199 CW 354.**

**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. Circling Rwy 16, 25 NA at night.**

**Amdt 1 07DEC17**

**31°14’N-94°45’W**

---

**Category**

<table>
<thead>
<tr>
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<tr>
<td>LPV DA</td>
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<td>563-1/2</td>
<td>276 (300-1/2)</td>
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<tr>
<td>LNAV MDA</td>
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<td>760-1</td>
<td>880-1/2</td>
<td>844 (900-2 3/4)</td>
</tr>
<tr>
<td>CIRCLING</td>
<td>444 (500-1)</td>
<td>464 (500-1)</td>
<td>584 (600-1/2)</td>
<td>844 (900-2 3/4)</td>
</tr>
</tbody>
</table>
DME/DME RNP: 0.3 NA. Straight-in Rwy 25 NA at night, Circling Rwy 16, 25 NA at night. Rwy 25 helicopter visibility reduction below 1 SM NA.

MISSED APPROACH: Climb to 2000 direct SIRTE and hold.

ASOS
120.625

HOUSTON CENTER
125.175 285.575

UNICOM
123.0 (CTAF)

Procedure NA for arrivals on LFK VORTAC airway radials 354 CW 082.
**RNAV (GPS) RWY 34**

**ANGELINA COUNTY (LFK)**

---

### APP CRS

<table>
<thead>
<tr>
<th>RWy Idg</th>
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<th>Aptr Elev</th>
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<tbody>
<tr>
<td>4204</td>
<td>286</td>
<td>296</td>
</tr>
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</table>

**Note:**
- DME/DME RNP-0.3 NA. Circling RW 16, 25 NA at night. RW 34 helicopter visibility reduction below ¼ SM NA.
- MISSED APPROACH: Climb to 2100 direct POLEH and hold.

### ASOS

<table>
<thead>
<tr>
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<th>ASOS Code</th>
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<tbody>
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### HOUSTON CENTER

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<th>Frequency</th>
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### UNICOM

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<tbody>
<tr>
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<td>123.0 (CTAF)</td>
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---

**Exisement Points:**
- **POLEH:** POLEH 2100
- **EXISE:** EXISE 338°
- **PAICE:** PAICE 338°

**RNAV (GPS) RWY 34**

**Category:** A

**LNAV MDA:**

- **RW34:** 660-1
- **RW34:** 374 (400-1)

**CIRCLING:**

- **740-1 (500-1)**
- **760-1 (500-1)**
- **880-1½ (600-1½)**
- **1140-2¾ (900-2¾)**

**Procedure NA for arrival on LFK VORTAC airway radials 082 CW 245.**
LUFKIN, TEXAS

**AL-870 (FAA)**

### VOR RWY 16

**ANGELINA COUNTY (LFK)**

**VORTAC LFK**
- 112.1
- Chan 58

**APP CRS**
- 152°

**Rwy Idg TDZE**
- 289

**Apt Elev**
- 296

**Rwy 16 helicopter visibility reduction below 1 SM NA.**
- DME Required. Straight-in Rwy 16 NA at night.
- Circling Rwy 16, 25 NA at night.

**MISSSED APPROACH:** Climb to 2000 on LFK VORTAC R-332 to LFK VORTAC and hold.

<table>
<thead>
<tr>
<th>ASOS</th>
<th>HOUSTON CENTER</th>
<th>UNICOM</th>
</tr>
</thead>
<tbody>
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<td>123.0</td>
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<tr>
<td></td>
<td>285.575</td>
<td>(CTAF)</td>
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</table>

**DME REQUIRED**

- **LUFKIN**
- Chan 58

**LUFKIN, TEXAS**

SC-5, 07 OCT 2021 to 02 DEC 2021

**AMENDMENT**

**MIRL Rwys 7-25 and 16-34**

**31°14'N-94°45'W**

**CATEGORY**
- A
- B
- C
- D

<table>
<thead>
<tr>
<th>S-16</th>
<th>720-1</th>
<th>431 (500-1)</th>
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<th>431 (500-1/4)</th>
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<tr>
<td><strong>CIRCLING</strong></td>
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<td></td>
<td>880-1/2</td>
<td>584 (600-1/2)</td>
<td>1140-2/3</td>
<td>844 (900-2/4)</td>
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</table>

**5400 X 100**

**606**
VOR RWY 34
ANGELINA COUNTY (LFK)

MISSED APPROACH: Climb to 900 then climbing left turn to 2000 direct LFK VORTAC and hold.

ASOS
LUFKIN, TEXAS
120.625

HOUSTON CENTER
125.175 285.575

UNICOM
123.0 [CTAF]

The diagram shows the VOR RWY 34 at LFK with various waypoints, radial lines, and instructions for pilot navigation. The graphical representation includes ELEV 296, TDZE 286, and FAF to MAP 4.2 NM. There are also details on knots, min:sec, and various altitudes and angles relevant to the approach and missed approach procedures.

The VOR RWY 34 at LFK includes instructions for pilots on how to proceed after completing an approach, including the use of specific channels and beacons for communication and navigation.

Additional details on the approach include MIRL Rwy 7-25 and 16-34, and the use of 10° radial lines for arrivals on LFK VORTAC airway. The diagram also highlights the 10° range for arrivals on the LFK VORTAC airway, with radials 082 CW 245.

For more information, refer to the LUFKIN, TEXAS, AL-870 (FAA) document.
**RNAV (GPS) RWY 18**

**MADISONVILLE MUNI (51R)**

**Category A**

**APP CRS 183°**
- Rwy Idg 3202
- TDZE 287
- Apt Elev 287

**RNP APCH.**

1. **NA** Use Huntsville Muni altimeter setting.
2. Procedure NA at night.
3. Rwy 18 helicopter visibility reduction below 1 SM NA.

**UTS ASOS**
- 119.425

**HOUSTON CENTER**
- 134.8
- 269.6

**CTAF**
- 122.9

**Procedure**
- Turn NA at night.
- Use Huntsville Muni altimeter setting.

**MISSED APPROACH:** Climb to 1500, then climbing right turn to 2100 direct LOA VORTAC and hold.

**ELEV 287**
- 183° to RW18

**TDZE 287**
- 36

**Rwy 18**
- 1800
- 134°
- 30°55'N-95°57'W
- 3.00°
- TCH 40
- 4.6 NM
- 5 NM

**RNAV MDA**
- 720-1 433 (500-1)
- NA

**MADISONVILLE, TEXAS**

**AL-6843 (FAA)**

**SC-5, 07 OCT 2021 to 02 DEC 2021**

**30°55′N-95°57′W**
Use Huntsville Muni altimeter setting.
Procedure NA at night.
Rwy 36 helicopter visibility reduction below 1 SM NA.

**Missted Approach:**
Climb to 1000 then climbing right turn to 3000 direct NAMIL WP and hold.

### RNAV (GPS) RWY 36

**Category:**
- A
- B
- C
- D

**RNAV MDA:**
- 680-1
- 397 (400-1)
- NA

**MADISONVILLE, TEXAS**

**Origin:** 07NOV19

**UTS ASOS:** 119.425

**HOU STN CENTER:** 134.8 269.6

**CTAF:** 122.9

**MADISONVILLE MUNI (51R)**

**Rwy Idg:** 003°

**TDZE:** 283

**Apt Elev:** 287

**MAPS RW36 2.5 NM**

**COLLEGE STATION:** 3000 003°

**(23.9)**

**4 NM Holding Pattern**

**NAMIL:** 3000 183° 003°

**TELNY:** 1900 003°

**RW36:** 3000 183°

**1000:**

**3000:**

**NAMIL:**

**MADISONVILLE MUNI (51R)**

**RNAV (GPS) RWY 36**

**ELEV 287**

**TDZE 283**

**30°55'N-95°57'W**

**UTS ASOS**

**HOUSTON CENTER**

**CTAF**

**MADISONVILLE MUNI (51R)**
Use Huntsville Muni altimeter setting.
Procedure NA at night.
Helicopter visibility reduction below 1 SM NA.

**MISSRED APPROACH:** Climb to 1500, then climbing right
turn to 2000 direct LOA VORTAC and hold.

---

**NOPT for arrivals on LOA VORTAC airway radials R-322 CW R-013.**

---

**UTS ASOS**
119.425

**HOUSTON APP CON**
134.8 269.6

**CTAF**
122.9

---

**One Minute Holding Pattern**

---

**VOR/DME RWY 18**

---

**MADISONVILLE, TEXAS**
Use Waco Rgnl altimeter setting.

MISSED APPROACH: Climbing left turn to 2800 via heading 270° and R-123 to MITRA/14 DME and hold.

WACO APP CON *

127.65 352.0

CTAF

122.9

MARLIN, TEXAS

AL-5854 (FAA)

Amdt 7  18MAY00

VOR/DME or GPS-A

MARLIN (T15)

31°20'N-96°51'W

611
RNAV (GPS) RWY 36
MEXIA-LIMESTONE COUNTY (LXY)

AWOS-3 127.275
WACO APP CON* 127.65 352.0
UNICOM 122.8 (CTAF)

DME/DME RNP-0.3 NA. Helicopter visibility reduction below ¾ SM NA. Obtain local altimeter setting on CTAF; when not received, use Waco Rgnl altimeter setting and increase all MDA 100 feet; increase LP Cat C visibility ½ mile and LNAV and circling Cat C visibility ¼ mile.

MisSED APPROACH: Climb to 2400 direct JUVOT and hold.
Obtain local altimeter setting on CTAF; when not received, use Waco Rgnl altimeter setting and increase all MDA 100 feet and Cat C visibility ¼ mile. Rwy 36 helicopter visibility reduction below ½ SM NA.

**MISSED APPROACH:** Climb to 1600 then climbing left turn to 2300 direct LXY NDB and hold.

**AWOS-3**

**WACO APP CON**

**UNICOM**

**WACO 115.3 ACT Chan 100**

**LEONA 110.8 LOA Chan 45**

**1600 2300 LXY**

**148° 328°**

**Remain within 10 NM**

**CATEGORY**

<table>
<thead>
<tr>
<th></th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
</tr>
</thead>
<tbody>
<tr>
<td>CIRCLING</td>
<td>1080-1</td>
<td>536 (600-1)</td>
<td>1180-1½</td>
<td>636 (700-1¼)</td>
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</table>

**MEXIA, TEXAS**

**Amdt 4A 24MAY18**

**AL-6438 (FAA)**

**WACO APP CRS**

**TDZE**

**NDA**

**MEXIA-LIMESTONE COUNTY (LXY) NDB-A**

**MEXIA-LIMESTONE COUNTY (LXY) NDB-A**
Procedure NA for arrivals on LFK VORTAC radials 279 CW 026.

Final approach course offset 6.00°.

NACOGDOCHES, TEXAS
Orig: 09SEP21

ELEV 355
TDZE 343

AWOS-3PT
135.625

PIPEC
3000
171° (25.9)

4 NM
353°

(IF/IAF)

DRBOB

1030

(LA)

LUJMU

864

929

764

3000 to DRBOB
355° (35.3)

4 NM

518

180°

WAJGU

3000

Final approach course offset 6.00°.

LNAV MDA
980-1 637 (700-1)

980-1 637 (700-1)

NA

CIRCLING
980-1 625 (700-1)

1080-2 725 (800-2)

NA

NA
Baro-VNAV NA when using Lufkin altimeter setting. 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 Lufkin altimeter setting: increase LPV DA to 599 feet, LNAV/VNAV DA to 681 feet, and visibility LNAV/VNAV NA all Cats 1/2 SM, increase all MDA 60 feet and visibility LNAV Cat C 1/8 SM and Circling Cat C 1/4 SM.

**MISSED APPROACH:** Climb to 2400 direct XOWNU and on track 352° to DRBOB and hold.
RNAV (GPS) RWY 17
NAVASOTA MUNI (60R)

Use Brenham altimeter setting; when not received, use College Station altimeter setting and increase all DA 6 feet and all MDA 20 feet. Baro-VNAV NA. Rwy 17 helicopter visibility reduction below ½ SM NA.

MISSED APPROACH: Climb to 3000 direct ZUGUK and hold.

RADAR REQUIRED

VGSI and RNAV glidepath not coincident (VGSI Angle 3.00º/TCH 45).

LNAV only.

<table>
<thead>
<tr>
<th>CATEGORY</th>
<th>LPV DA</th>
<th>LNAV/ VNAV DA</th>
<th>LNAV MDA</th>
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<tbody>
<tr>
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<td>529-1</td>
<td>635-1VAR 606</td>
<td>620-1 VAR 391</td>
</tr>
</tbody>
</table>

TAFC 123.3

SC-5, 07 OCT 2021 to 02 DEC 2021

NAVASOTA, TEXAS
Orig-C 07NOV19

2000

2000

2000

2000

2000

2000

2000

2000

2000
RNAV (GPS) RWY 35
NAVASOTA MUNI (60R)

**RNP APCH.**
- Use Brenham altimeter setting, when not received use College Station altimeter setting and increase all DA 6 feet and all MDA 20 feet.
- Rwy 35 helicopter visibility reduction below 3/4 SM NA. Baro-VNAV NA.

**MISSED APPROACH:** Climb to 3000 direct HOXID and hold.

**CTAF**
- 122.9
- 123.3

**RADAR REQUIRED**

**3000 HOXID**
- VGSI and RNAV glidepath not coincident (VGSI Angle 3.00°/TCH 46).
  - **LNAV only.**

**CATEGORY**
- A
- B
- C
- D

**LPV DA**
- 525-1
- 310 (300-1)

**RNAV/VNAV DA**
- 609-1/3
- 394 (400-1/3)

**RNAV MDA**
- 660-1
- 445 (500-1)
- 660-1/3
- 445 (500-1/3)

**ELEV 229**

**TDZE 215**

**30°22’N-96°07’W**
Use Brenham altimeter setting; when not received, use College Station altimeter setting and increase all MDA 20 feet and increase Cat C visibility 1/4 mile.

**MISSED APPROACH:** Climb to 2000 then left turn direct TNV VOR/DME and hold.

**MISSED APPROACH:** Climb to 2000 then remain within 10 NM.

**FAF to MAP 5.1 NM**

<table>
<thead>
<tr>
<th>Category</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
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<tbody>
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<td>591 (600-1)</td>
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**NAVASOTA, TEXAS**

**Amdt 2B 10NOV16**

**30°22'N-96°07'W**

**NAVASOTA MUNI (60R)**
For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -1.5°C (5°F) or above 54°C (130°F). DME/DME RNP-0.3 NA. Visibility reduction by helicopters NA. When local altimeter setting not received, use Jack Brooks Rgnl altimeter setting and increase all DA 32 feet and all MDA 40 feet, increase LPV and LNAV/VNAV all Cats visibility ¼ mile, and LNAV and Circling Cat C visibility ¼ mile.


MISSED APPROACH: Climb to 2000 direct KEDKY and left turn via track 116° to POPEY and hold.

MISSED APCH FIX
POPEY 2000
4 NM

Ω 1349
AWOS-3
118.975
HOUSTON APP CON
121.3 377.1
UNICOM
122.8 (CTAF)

ORANGE, TEXAS
AL-6312 (FAA)
20198

RNAV (GPS) RWY 22
ORANGE COUNTY (ORG)

RADAR REQUIRED

ELEV 13
TDZE 13

LNAV only
1.8 NM to RW22

* LNAV only
1.8 NM to RW22

MISSED APCH FIX
POPEY 2000
4 NM

GP 3.00°
TCH 45

CIRCLING
660-1 647 (700-1)

LNAV MDA
600-1 587 (600-1)

LNAV/ VNAV DA
674-2 661 (700-2½)

LPV DA
329-1 316 (400-1)

 CATEGORY


A
B
C
D

LPV
329-1
316 (400-1)
NA

LNAV/ VNAV DA
674-2
661 (700-2½)
NA

LNAV MDA
600-1
587 (600-1)
NA

CIRCLING
660-1
647 (700-1)
NA

ORANGE, TEXAS
Orig 22OCT09

30°04' N-93°48' W
Visibility reduction by helicopters NA. Circling NA to Rwy 13/31.
When local altimeter setting not received, use Jack Brooks Rgnl altimeter setting.
When local altimeter setting not received, use Jack Brooks Rgnl altimeter setting and increase all MDA 40 feet and increase S-22 and Circling Cat C visibility 1/4 mile.

AWOS-3
118.975

HOUSTON APP CON
121.3 377.1

UNICOM
122.8 (CTAF)
For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -20°C or above 54°C. When local altimeter setting not received, use Port Lavaca altimeter setting: Increase DA to 319 feet and visibility all Cats ½ SM; increase all MDA 60 feet and LNAV Cat C/D and Circling Cat C/D visibility ¼ SM. Baro-VNAV and VDP NA when using Port Lavaca altimeter setting. Rwy 13 helicopter visibility reduction below ¾ SM NA. Circling Rwy 8, 18, 26, 31, 36 NA at night.

MISSED APPROACH: Climb to 500 then climbing right turn to 2100 direct NAPTE and hold.

RNP APCH.

For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -20°C or above 54°C. When local altimeter setting not received, use Port Lavaca altimeter setting: Increase DA to 319 feet and visibility all Cats ½ SM; increase all MDA 60 feet and LNAV Cat C/D and Circling Cat C/D visibility ¼ SM. Baro-VNAV and VDP NA when using Port Lavaca altimeter setting. Rwy 13 helicopter visibility reduction below ¾ SM NA. Circling Rwy 8, 18, 26, 31, 36 NA at night.

MISSED APPROACH: Climb to 500 then climbing right turn to 2100 direct NAPTE and hold.
When local altimeter setting not received, use Port Lavaca altimeter setting:
Increase all MDA 60 feet and LNAV Cat C/D and Circling Cat C/D
visibility ½ SM. Rwy 13 helicopter visibility reduction below ¾ SM NA.
Circling Rwy 8, 18, 26, 31, 36 NA at night.

MISSED APPROACH: Climbing right turn
to 2000 direct PSX VORTAC and hold.

Remain within 10 NM

2000
300°

3.02°

PSX VORTAC

PSX

1100

2.1 NM

1.2 NM

CATEGORY

A

B

C

D

S-13

380-1

367 (400-1)

380-1½

367 (400-½)

CIRCLING

460-1

446 (500-1)

560-1½

546 (600-½)

700-2½

686 (700-½)

PSX VORTAC

VOR RWY 13

PALACIOS MUNI (PSX)

AL-309 (FAA)

Amdt 10G 22APR21

28°44'N-96°15'W

623
### RNAV (GPS) RWY 18

**PALESTINE MUNI (PSN)**

<table>
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<tr>
<th>AWP-3</th>
<th>FORT WORTH CENTER</th>
<th>UNICOM</th>
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<tbody>
<tr>
<td>118.025</td>
<td>135.25 265.1</td>
<td>122.7 (CTAF)</td>
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</table>

#### Approach Information

- **APC CRS**: 177°
- **Rwy Idg**: 5005
- **TDZE**: 416
- **Apt Elev**: 423

**RNAV (GPS) RWY 18**

**PALESTINE, TEXAS**

**AWOS-3**

**FORT WORTH CENTER**

**UNICOM**

**ELEV 423**

**TDZE 416**

**3000 FERES**

**SC-5, 07 OCT 2021 to 02 DEC 2021**

**357° Holding Pattern**

**1281**

**1080**

**960**

**945**

**HIBIX**

**CERBU**

**DUCAL**

**SIRRO**

**FERES**

**MISSED APCH FIX**

**MISSED APPROACH**: Climb to 3000 direct FERES and hold.

**VGSI and descent angles not coincident**

<table>
<thead>
<tr>
<th>CATEGORY</th>
<th>A</th>
<th>B</th>
<th>C</th>
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<tbody>
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</table>

**CTAF**

**AWOS-3**

**118.025**

**FORT WORTH CENTER**

**135.25 265.1**

**UNICOM**

**122.7 (CTAF)**

**VDP NA with C David Campbell Field-Corsicana Muni altimeter setting. Circling to Rwy 9-27, NA at night. When local altimeter setting not received, use Corsicana altimeter setting and increase all MDAs 100 feet and visibility Cat C 3/4 SM.**
### RNAV (GPS) RWY 36

**PALESTINE MUNI (PSN)**

<table>
<thead>
<tr>
<th>APP CRS</th>
<th>Rw y Idg</th>
<th>TDZE</th>
<th>Apt Elev</th>
</tr>
</thead>
<tbody>
<tr>
<td>357°</td>
<td>5005</td>
<td>415</td>
<td>423</td>
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<table>
<thead>
<tr>
<th>AWOS-3</th>
<th>FORT WORTH CENTER</th>
<th>UNICOM</th>
</tr>
</thead>
<tbody>
<tr>
<td>118.025</td>
<td>135.25 265.1</td>
<td>122.7 (CTAF)</td>
</tr>
</tbody>
</table>

**UNICOM**
455 (400-1)

**FORT WORTH CENTER**
960-1 3.6 NM
455 (400-1) 1360-1 3.4 NM

**AWOS-3**
5005 X 100
4002 X 75

**MISSING APPROACH:**
Climb to 2500 direct CERBU WP and hold.

**RNP APCH-GPS:**
- **VGSI and descent angles not coincident**
- **LNAV Cat C/D ½ SM and Circling Cat C ¼ SM.**

**VDP NA with C David Campbell Field-Corsicana Muni altimeter setting. When local altimeter setting not received, use Corsicana altimeter setting and increase all MDAs 100 feet and visibility LNAV Cat C/D ½ SM and Circling Cat C ¼ SM.**

**SC-5, 07 OCT 2021 to 02 DEC 2021**

**PALESTINE, TEXAS**

Amdt 1C 15JUL21

**31°47’N-95°42’W**
MISSING APPROACH: Climbing right turn to 2500 direct FZT VOR/DME and hold.

AWOS-3 118.025
FORT WORTH CENTER 135.25 265.1
UNICOM 122.7 (CTAF)

PALESTINE, TEXAS

AL-871 (FAA)

VOR Rwy 18
PALESTINE MUNI (PSN)

DME required.

\[ \Delta \text{ NA} \] Rwy 18 helicopter visibility reduction below ¾ SM NA.

ELEV 423 TDZE 416

202° 5.3 NM from FAF

MISSING APPROACH: Climbing right turn to 2500 direct FZT VOR/DME and hold.

PALESTINE, TEXAS

AL-871 (FAA)

VOR Rwy 18
PALESTINE MUNI (PSN)
For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -15°C (5°F) or above 54°C (130°F). When local altimeter setting not received, use Victoria altimeter setting and increase all DA/MDA 60 feet and visibilities 1/8 mile. DME/DME RNP-0.3 NA. Baro-VNAV and VDP NA with Victoria altimeter setting. Helicopter visibility reduction below 1/4 SM NA. Night landing: Rwy 32 NA. Circling NA to Rwys 5 and 23.

MISSED APPROACH:
Climb to 2200 direct TOVEE and hold.

For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -15°C (5°F) or above 54°C (130°F). When local altimeter setting not received, use Victoria altimeter setting and increase all DA/MDA 60 feet and visibilities 1/8 mile. DME/DME RNP-0.3 NA. Baro-VNAV and VDP NA with Victoria altimeter setting. Helicopter visibility reduction below 1/4 SM NA. Night landing: Rwy 32 NA. Circling NA to Rwys 5 and 23.

MISSED APPROACH:
Climb to 2200 direct TOVEE and hold.
When local altimeter setting not received, use Victoria altimeter setting and increase all MDA 60 feet and increase LNAV Cat C and Circling Cat C visibilities 1/2 mile. DME/DME RNP-0.3 NA. Helicopter visibility reduction below 1 SM NA. Night landing: Rwy 32 NA. Circling NA to Rwy 5 and 23.

RNAC (GPS) RWY 32
CALHOUN COUNTY (PKV)

AWOS-3
118.275

HOUSTON CENTER
128.15 350.3

UNICOM
122.8 (CTAF)

PORT LAVACA, TEXAS
AL-5904 (FAA)
20142

PORT LAVACA, TEXAS
Orig-A 25JUN15

28°39'N-96°41'W

LAN (GPS) RWY 32
CALHOUN COUNTY (PKV)

ELEV 32
TDZE 30

VULCE

PIPIY

WIVAM

(FAF)

RW32

2200

VULCE

319°

2 NM to RW32

1053

A-632E

A 1049

320°

791

861

791

PIPIY

2 NM to RW32

320°

WIVAM

(FAF)

1600

700

320°

2200

140°

4 NM

2.8 NM

7 NM

2200

VULCE

PIPIY

2 NM to RW32

1600

700

320°

WIVAM

(FAF)

RW32

791

861

319°

to RW32

ELEV 32
TDZE 30

LNAV MDA
340-1
310 (400-1)
NA

LNAV MDA
400-1
370 (400-1)
NA

CIRCLING
480-1
500-1
560-1/2

448 (500-1)
468 (500-1)
528 (600-1/2)
NA

LP MDA
340-1
310 (400-1)
NA
PORT LAVACA, TEXAS

AL-5904 (FAA)

VOR/DME-A

CALHOUN COUNTY (PKV)

When local altimeter setting not received, use Victoria altimeter setting. Circling NA to Rwy 5 and 23. Night landing: Rwy 32 NA.

AWOS-3 118.275

HOUSTON CENTER 128.15 350.3

UNICOM 122.8 (CTAF)

PORT LAVACA, TEXAS

28°39’N-96°41’W

Amdt 4D 08OCT20

SC-5, 07 OCT 2021 to 02 DEC 2021

CIRCLING

244° 5.7 NM from FAF

26001

10422

2100

1053

1049

R-275

2000

1700

244° (5)

PSX 15

1700

244°

PSX 10

2000

R-244

042°

117°3

PSX 25 NM

MSA

244°

R -244

AWOS-3

2000

28°39’N-96°41’W

244°

R -275

2000

244°

R -256

2000

R -244

1049

(IAF)

(IAF)

(IAF)

(IAF)

PALACIOS

117.3 PSX

117.3 PSX

117.3 PSX

117.3 PSX

Chan 120

Chan 120

Chan 120

Chan 120

IAF

IAF

IAF

IAF

HOUSTON CENTER

128.15 350.3

128.15 350.3

128.15 350.3

128.15 350.3

PSX 10

PSX 10

PSX 10

PSX 10

PSX 15

PSX 15

PSX 15

PSX 15

VORTAC PSX

VORTAC PSX

VORTAC PSX

VORTAC PSX

Catos

Catos

Catos

Catos

Rwy ldg

Rwy ldg

Rwy ldg

Rwy ldg

AWOS-3

AWOS-3

AWOS-3

AWOS-3

2000

2000

2000

2000

2000

2000

2000

2000

CIRCLING

760-1

760-1

760-1

760-1

760-1

760-1

760-1

760-1

728 (800-1)

728 (800-1¼)

728 (800-1½)

728 (800-2)

728 (800-2)

728 (800-2)

728 (800-2)

NA

NA

NA

NA

NA

NA

NA

NA

VOR/DME-A

CALHOUN COUNTY (PKV)

VOR/DME-A

PORT LAVACA, TEXAS

28°39’N-96°41’W

Amdt 4D 08OCT20

629
ILS or LOC RWY 13

VICTORIA RGNL (VCT)

**ILS or LOC RWY 13**

**VICTORIA RGNL (VCT)**

**ATIS**

119.025

**HOUSTON CENTER**

135.05 353.6

**VICTORIA TOWER**

126.075 (CTAF) 257.95

**GND CON**

120.525 239.25

**UNICOM**

122.7

**Descripción de la imagen**

- **ILS or LOC RWY 13 VICTORIA RGNL (VCT)**
- **ATIS**
  - 119.025
- **HOUSTON CENTER**
  - 135.05 353.6
- **VICTORIA TOWER**
  - 126.075 (CTAF) 257.95
- **GND CON**
  - 120.525 239.25
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- **GND CON**
  - 120.525 239.25
- **UNICOM**
  - 122.7
RNP APCH - GPS.

- Baro-VNAV NA when using Port Lavaca altimeter setting. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -1.5°C or above 54°C. VDP NA when using Port Lavaca altimeter setting. For inop ALS, increase LPV Cat E and LNAV/VNAV all Cats visibility to ½ SM and LNAV Cat E visibility to 1 SM. When local altimeter setting not received, use Port Lavaca altimeter setting and increase LPV DA to 367 feet and LNAV/VNAV DA to 417 feet; increase all MDAs 60 feet and visibility Cat C and D ½ SM, Cat E ¾ SM. For inop ALS when using Port Lavaca altimeter setting, increase LPV Cat E visibility to ½ SM, LNAV/VNAV all Cats visibility to ½ SM, and LNAV Cat E visibility to 1 SM.

- Baro-VNAV NA when using Port Lavaca altimeter setting. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -1.5°C or above 54°C. VDP NA when using Port Lavaca altimeter setting. For inop ALS, increase LPV Cat E and LNAV/VNAV all Cats visibility to ½ SM and LNAV Cat E visibility to 1 SM. When local altimeter setting not received, use Port Lavaca altimeter setting and increase LPV DA to 367 feet and LNAV/VNAV DA to 417 feet; increase all MDAs 60 feet and visibility Cat C and D ½ SM, Cat E ¾ SM. For inop ALS when using Port Lavaca altimeter setting, increase LPV Cat E visibility to ½ SM, LNAV/VNAV all Cats visibility to ½ SM, and LNAV Cat E visibility to 1 SM.

- For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -1.5°C or above 54°C. VDP NA when using Port Lavaca altimeter setting. For inop ALS, increase LPV Cat E and LNAV/VNAV all Cats visibility to ½ SM and LNAV Cat E visibility to 1 SM. When local altimeter setting not received, use Port Lavaca altimeter setting and increase LPV DA to 367 feet and LNAV/VNAV DA to 417 feet; increase all MDAs 60 feet and visibility Cat C and D ½ SM, Cat E ¾ SM. For inop ALS when using Port Lavaca altimeter setting, increase LPV Cat E visibility to ½ SM, LNAV/VNAV all Cats visibility to ½ SM, and LNAV Cat E visibility to 1 SM.

- For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -1.5°C or above 54°C. VDP NA when using Port Lavaca altimeter setting. For inop ALS, increase LPV Cat E and LNAV/VNAV all Cats visibility to ½ SM and LNAV Cat E visibility to 1 SM. When local altimeter setting not received, use Port Lavaca altimeter setting and increase LPV DA to 367 feet and LNAV/VNAV DA to 417 feet; increase all MDAs 60 feet and visibility Cat C and D ½ SM, Cat E ¾ SM. For inop ALS when using Port Lavaca altimeter setting, increase LPV Cat E visibility to ½ SM, LNAV/VNAV all Cats visibility to ½ SM, and LNAV Cat E visibility to 1 SM.

- For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -1.5°C or above 54°C. VDP NA when using Port Lavaca altimeter setting. For inop ALS, increase LPV Cat E and LNAV/VNAV all Cats visibility to ½ SM and LNAV Cat E visibility to 1 SM. When local altimeter setting not received, use Port Lavaca altimeter setting and increase LPV DA to 367 feet and LNAV/VNAV DA to 417 feet; increase all MDAs 60 feet and visibility Cat C and D ½ SM, Cat E ¾ SM. For inop ALS when using Port Lavaca altimeter setting, increase LPV Cat E visibility to ½ SM, LNAV/VNAV all Cats visibility to ½ SM, and LNAV Cat E visibility to 1 SM.

- For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -1.5°C or above 54°C. VDP NA when using Port Lavaca altimeter setting. For inop ALS, increase LPV Cat E and LNAV/VNAV all Cats visibility to ½ SM and LNAV Cat E visibility to 1 SM. When local altimeter setting not received, use Port Lavaca altimeter setting and increase LPV DA to 367 feet and LNAV/VNAV DA to 417 feet; increase all MDAs 60 feet and visibility Cat C and D ½ SM, Cat E ¾ SM. For inop ALS when using Port Lavaca altimeter setting, increase LPV Cat E visibility to ½ SM, LNAV/VNAV all Cats visibility to ½ SM, and LNAV Cat E visibility to 1 SM.
RNAV (GPS) RWY 31
VICTORIA RGNL (VCT)

ATIS 119.025
HOUSTON CENTER 135.05 353.6
VICTORIA TOWER* 126.075 (CTAF) 257.95
GND CON 120.525 239.25
UNICOM 122.7

**Missed Approach:**
- Climb to 2200 direct CUDKO and hold.

For uncompensated Baro-VNAV systems, procedure NA below -15°C or above 54°C. VDP NA when using Port Lavaca altimeter setting. When local altimeter setting not received, use Port Lavaca altimeter setting and increase LPV DA to 358 feet and LNAV/VNAV DA to 426 feet; increase all MDAs 60 feet and visibility Cat C and D ½ SM, Cat E ¾ SM.

- **CUDKO**

**Localizer:**
- RWY 13-31
- RWY 31

**Vertical Navigation:**
- LNAV/ VNAV DA
- LNAV MDA
- CIRCLING

**RNAV (GPS) RWY 31**
- 9111 X 150
- 4908 X 75

**Holding Pattern:**
- 2200 CUDKO
- 30 NM to SEYOG
- SEYOG

**MIRL Rwy 18-36**
- ReIL Rwy 18 and 36
- HIRL Rwy 13-31

**ELEV 115**
- TDZE 106
VICTORIA, TEXAS

21280

AL-438 (FAA)

VOR RWY 13
VICTORIA RGNL (VCT)

ATIS 119.025
HOUSTON CENTER 135.05 353.6
VICTORIA TOWER 126.075 (CTAF) 257.95
GND CON 120.525 239.25
UNICOM 122.7

TAKEOFF ROLL OUT

ELEV 115
TDZE 115

S-13

<table>
<thead>
<tr>
<th>CATEGORY</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
</tr>
</thead>
<tbody>
<tr>
<td>S-13</td>
<td>600-1½ 485 (500-1½)</td>
<td>600-1 485 (500-1)</td>
<td></td>
<td></td>
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<tr>
<td>CIRCLING</td>
<td>600-1 485 (500-1)</td>
<td>820-2 880-2½</td>
<td>705 (800-2) 765 (800-2½)</td>
<td>NA</td>
<td></td>
</tr>
</tbody>
</table>

Remain within 15 NM

VCT VOR/DME

2200

VCT

3.31°

3°

MALS R

VICTORIA
109.0 VCT
Chan 27

PASACIOS
117.3 PSX
Chan 120

127° 3.2 NM from FAF

FAF to MAP 3.2 NM

127° 3.2 NM

from FAF

VOR RWY 13
VICTORIA RGNL (VCT)

SC-5, 07 OCT 2021 to 02 DEC 2021
VICTORIA, TEXAS

AL-438 (FAA)

VOR RWY 31
VICTORIA RGNL (VCT)

DME required.

VDP NA when using Port Lavaca altimeter setting. When local altimeter setting not received, use Port Lavaca altimeter setting and increase all MDAs 60 feet and visibility Cats C and D ½ SM, Cat E ½ SM.

MISSED APPROACH: Climb to 2000 direct VCT VOR/DME and hold.

Procedure NA for arrivals at TANNA on V13-407 northeast bound.
CAUTION: BE ALERT TO RUNWAY CROSSING CLEARANCES. READBACK OF ALL RUNWAY HOLDING INSTRUCTIONS IS REQUIRED.
RNAV (GPS) RWY 14
WHARTON RGNL (ARM)

For uncompensated Baro VNAV systems, LNAV/VNAV NA below -15°C or above 54°C.

MISSED APPROACH: Climb to 2000 direct GOGOZ and hold.

AWOS-3 118.475
HOUSTON CENTER 128.6 360.8
UNICOM 122.7 (CTAF)

WHARTON, TEXAS
Orig-B 07NOV19

29°15'N-96°09'W
For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -15°C or above 54°C.

MISSED APPROACH: Climb to 2000 direct BEPUH and hold.

AWOS-3 118.475

HOUSTON CENTER 128.6 360.8

UNICOM 122.7 (CTAF)

RNP APCH.

ELEV 100  TDZE 99

MISS APCH FIX

4 NM  BEPUH

HUBEX

D 0.8  3 NM  6.1 NM

1 NM to RW32

199 RW32

1.8 NM to RW32

JIBGA

HUBEX

6000 2000

058° 328°

BEPUH

2000

526 LNAV only

153°

199 RW32

1.8 NM to RW32

JIBGA

[IF/IAF] IDFIN

GOGOZ

HOLD 6000 2000

30 NM to HUBEX

30 NM to GOGOZ

30 NM to FARAG

30 NM to BEPUH

FARAG

2100

2000

612 LNAV only

0.8

1 NM to RW32

328° to RW32

328°

328°

1700

1700

700

148°

6000

2000

GP 3.00°

HOLDING PATTERN

TCH 42

4 NM

GOGOZ

[IAF] FARAG

2000

[IF/IAF] GOGOZ

650 A

599

Rwy Idg 5004

TDZE 99

Apt Elev 100

AWOS-3

HUBEX

128.6 360.8

UNICOM 122.7 (CTAF)

WHARTON RGNL (ARM)

RNAV (GPS) RWY 32

WHARTON, TEXAS

Orig B 07NOV19

AL-6032 (FAA)
When local altimeter setting not received, use Victoria altimeter setting and increase all MDA 120 feet, increase Circling Cat C visibility 1/4 mile.

**MISSED APPROACH:** Climbing right turn to 2500 direct ELA VOR/DME and hold.

<table>
<thead>
<tr>
<th>AWOS-3</th>
<th>HOUSTON CENTER</th>
<th>UNICOM</th>
</tr>
</thead>
<tbody>
<tr>
<td>118.475</td>
<td>128.6</td>
<td>122.7</td>
</tr>
<tr>
<td></td>
<td>360.8</td>
<td>(CTAF)</td>
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</tbody>
</table>

- **EAGLE LAKE** 116.4 ELA 153° Chan 111
- **CFEEI** ELA 14
- **HECXU** ELA 20
- **MAFIY** ELA 25

**CATEGORY**

<table>
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<tr>
<th>A</th>
<th>B</th>
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<tr>
<td>CIRCLING</td>
<td>640-1</td>
<td>640-1 ¼</td>
<td>640-1 ½</td>
</tr>
<tr>
<td></td>
<td>540 (600-1)</td>
<td>540 (600-1 ¼)</td>
<td>540 (600-1 ½)</td>
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</tbody>
</table>

**WHARTON, TEXAS**

**AL-6032 (FAA)**

**WHARTON RGNL (ARM)**

**Amdt 5 27AUG09**
NOTE:  Chart not to scale.

NOTE: RNAV 1.
NOTE: DME/DME/IRU or GPS required.
NOTE: RADAR required.

NOTE: RADAR required.
NOTE: DME/DME/IRU or GPS required.
NOTE: RNAV 1.

TAKEOFF MINIMUMS
Rwy 14, 32: Standard with minimum climb of 500' per NM to 600.

DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAY 14: Climb on heading 148° or as assigned by ATC for RADAR vectors to DREMR, thence . . . .

TAKEOFF RUNWAY 32: Climb on heading 328° or as assigned by ATC for RADAR vectors to DREMR, thence . . . .

...on track 345° to LITLD, then on track 346° to BLTWY, then on (transition). Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure.

CRIED TRANSITION (BLTWY7.CRIED)

NOTE: Chart not to scale.
INDIE EIGHT DEPARTURE (RNAV)

AWOS-3
118.475
CTAF
122.7
HOUSTON DEP CON
128.6 360.8

NOTE: RADAR required.
NOTE: DME/DME/IRU or GPS required.
NOTE: RNAV 1.
NOTE: TPAKK TRANSITION: For non GPS equipped aircraft TNV DME must be operational.

TAKEOFF MINIMUMS
Rwys 14, 32: Standard with minimum climb of 500' per NM to 600.

< DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAY 14: Climb on heading 148° to 600 for RADAR vectors to RENNK, thence . . . .
TAKEOFF RUNWAY 32: Climb on heading 328° to 600 for RADAR vectors to RENNK, thence . . . .
. . . . on track 016° to COLET, then on track 025° to SUSHI, then on track 026° to WWELL, then on track 026° to INDIE, then on (transition). Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure.

TPAKK TRANSITION (INDIE8.TPAKK)

NOTE: Chart not to scale.
NOTE: Chart not to scale.

DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAY 14: Climb on heading 148° to 600 for RADAR vectors to KNKY, thence . . . .
TAKEOFF RUNWAY 32: Climb on heading 328° to 600 for RADAR vectors to KNKY, thence . . . .

. . . . on track 32° to PEETY, then on track 032° to DARTR, then on track 031° to MUSIQ, then on track 031° to CLAVN, then on track 031° to VELCO, then on track 031° to ENJOY, then on track 031° to LURIC, then on (transition). Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure.

HAWES TRANSITION (LURIC8.HAWES)
ORRTH TRANSITION (LURIC8.ORRTH)
NOTE: Chart not to scale.

TAKEOFF MINIMUMS
Rwys 14, 32: Standard with minimum climb of 500’ per NM to 600.

NOTE: RADAR required.
NOTE: DME/DME/IRU or GPS required.
NOTE: RNAV 1.

TAKEOFF ROUTE DESCRIPTION

TAKEOFF RUNWAY 14: Climb on heading 148° to 600 for RADAR vectors to KNTKY, thence. . . .
TAKEOFF RUNWAY 32: Climb on heading 328° to 600 for RADAR vectors to KNTKY, thence. . . .

. . . . on track 032° to PEETY, then on track 032° to DARTR, then on track 031° to MUSIQ, then on track 031° to CLAVN, then on track 060° to STRYA, then on (transition). Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure.

DPATY TRANSITION (STRYA8.DPATY)
JBULL TRANSITION (STRYA8.JBULL)
NOTE: Chart not to scale.

DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAY 14: Climb on heading 148° to 600 for RADAR vectors to BBYSE, thence...
TAKEOFF RUNWAY 32: Climb on heading 328° to 600 for RADAR vectors to BBYSE, thence...

...on track 331° to SPICR, then on track 331° to WLLIS, then on track 332° to STYCK, then on (transition). Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure.

DOLEY TRANSITION (STYCK8.DOLEY)
WTSON TRANSITION (STYCK8.WTSON)
DEPARTURE ROUTE DESCRIPTION

**WYLSN Eight Departure (RNAV)**

1. **Takeoff Runway 14:**
   - Climb on heading 148° to 600 for RADAR vectors to WYLSN.
   - Climb on track 360° to MONNT, then on track 328° to 600 for RADAR vectors to WYLSN.
   - Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure.

2. **Takeoff Minimums:**
   - Runway 14, 32: Standard with minimum climb of 500' per NM to 600.

**NOTE:** Chart not to scale.

**RNAV 1:**
- DME/DME/IRU or GPS required.
- Radar required.

**DEPARTURE ROUTE DESCRIPTION**

**WYLSN Eight Departure (RNAV)**

1. **Takeoff Runway 14:**
   - Climb on heading 148° to 600 for RADAR vectors to WYLSN, then on track 360° to MONNT, then on track 328° to 600 for RADAR vectors to WYLSN.
   - Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure.

2. **Takeoff Minimums:**
   - Runway 14, 32: Standard with minimum climb of 500' per NM to 600.

**NOTE:** Chart not to scale.

**RNAV 1:**
- DME/DME/IRU or GPS required.
- Radar required.

**DEPARTURE ROUTE DESCRIPTION**

**WYLSN Eight Departure (RNAV)**

1. **Takeoff Runway 14:**
   - Climb on heading 148° to 600 for RADAR vectors to WYLSN.
   - Climb on track 360° to MONNT, then on track 328° to 600 for RADAR vectors to WYLSN.
   - Maintain ATC assigned altitude. Expect filed altitude 10 minutes after departure.

2. **Takeoff Minimums:**
   - Runway 14, 32: Standard with minimum climb of 500' per NM to 600.

**NOTE:** Chart not to scale.

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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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