TERMINAL PROCEDURES PUBLICATION SYMBOLS

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GENERAL INFORMATION
Symbols shown are for the Terminal Procedures Publication (TPP) which includes Standard Terminal Arrival Routes (STARs), Departure Procedures (DPs), Instrument Approach Procedures (IAP) and Airport Diagrams.
### STANDARD TERMINAL ARRIVAL (STAR) CHARTS

#### DEPARTURE PROCEDURE (DP) CHARTS

**RADIO AIDS TO NAVIGATION**
- **VOR**
- **TACAN**
- **VOR/DME**
- **NDB/DME**
- **VORTAC**
- **LOC/DME**
- **LOC**
- **NDB (Non-directional Beacon)**
- **LMM, LOM (Compass locator)**
- **Marker Beacon**
- **Localizer Course**
- **SDF Course**

<table>
<thead>
<tr>
<th>(I) indicates frequency protection range</th>
<th>(T) TACAN must be placed in **&quot;*&quot; mode to receive distance information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Geographic Position</td>
<td></td>
</tr>
<tr>
<td>Coordinates</td>
<td></td>
</tr>
<tr>
<td>Frequency, Identifier</td>
<td></td>
</tr>
</tbody>
</table>

**REPORTING POINTS/FIXES WAYPOINTS**

- **Reporting Points**
  - Name (Compulsory)
  - Name (Non-Compulsory)
  - DME fix

- **Mileage Breakdown**
  - Computer Navigation Fix (CNF)
  - N00°00'00" W00°00'00"

- **NAME** ("X" omitted when it conflicts with runway pattern)

- **WAYPOINT** (Compulsory)
- **WAYPOINT** (Non-Compulsory)
- **WAYPOINT** (Flyover Point)
- **MAP WP** (Flyover)

#### ROUTES

- **REG**
- **WAAS VNAV outages may occur daily due to initial system limitations. WAAS VNAV NOTAM service is not provided for this approach.**

### STANDARD TERMINAL ARRIVAL (STAR) CHARTS

**DEPARTURE PROCEDURE (DP) CHARTS**

### SPECIAL USE AIRSPACE

- **R-Restricted**
- **W-Warning**
- **P-Prohibited**
- **A-Alert**

### ALTITUDES

- **Mandatory Altitude**
  - (Cross at)
  - (Cross at or above)
  - (Cross at or below)

- **Minimum Crossing Altitude**
- **Maximum Altitude**

### AIRPORTS

**STAR Charts**
- Civil
- Military
- Joint
- Civil-Military

### NOTES

- All mileages are nautical.
- Indicates control tower temporarily closed UF N.
  - Indicates a non-continuously operating facility, see A/FD or Flight Supplement.
  - All radials, bearings are magnetic.

- SI-0000 (FAA) - Example of a chart reference number.

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

- Alternate minimums are Not Authorized due to unmanned facility or absence of weather reporting service.

- Take-off Minimums not standard and/or Departure Procedures are published. Refer to tabulation.

- WAAS VNAV outages may occur daily due to initial system limitations. WAAS VNAV NOTAM service is not provided for this approach.
### Approach Lighting System

**Runway Touchdown Zone and Centerline Lighting Systems**

- **TDZ/CL**
- **TDZL**
- **CL**

**Approach Lighting System**

- **ALSF-2**
- **ALSF-1**

**Short Approach Lighting System**

- **SALS/SALSF**
- **SSALR**

**Simplified Short Approach Lighting System with Runway Alignment Indicator Lights**

- **SSALR**

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

- **MALS, MALSF, SSALS, SSALF**

**Medium Intensity Approach Lighting System with Runway Alignment Indicator Lights**

- **MALS, MALSF, SSALS, SSALF**

**Odin DIRECTIONal Approach Lighting System (ODALS)**

- **ODALS**

**Notes:**
- Civil ALSF-2 may be operated as SSALR during favorable weather conditions.
- SSALF, length 2400/3000 feet.
- SSALF, length 1400 feet.
- ODALS, length 1500 feet.
**VISUAL APPROACH SLOPE INDICATOR**

**VASI**

- VASI
  - Visual Approach Slope Indicator
  - With standard threshold clearance provided.
  - All lights white — too high
  - Far lights red — on glide slope
  - Near lights white — too low

**VASI 2**

- Threshold

**VASI 4**

- Threshold

**VASI 12**

- Threshold

**"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

**VISUAL APPROACH SLOPE INDICATOR**

**VASI 6**

- Threshold

**VASI 16**

- Threshold

**PRECISION APPROACH PATH INDICATOR**

**PAPI**

- Legend: White ■ Red
- Too low
- Slightly low
- On correct approach path
- Slightly high
- Too high
### Approach Lighting System

#### Pulsating Visual Approach Slope Indicator (PVASI)

- **PVASI**
- Above Glide Path: Pulsating White
- On Glide Path: Steady, White or Alternating White/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.

#### Tri-Color Visual Approach Slope Indicator (TRCV)

- **TRCV**
- Above Glide Path: Amber
- On Glide Path: Green → Amber
- Below Glide Path: Red

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

#### Alignment of Element Systems (APAP)

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

Painted panels which may be lighted at night. To use the system the pilot positions the aircraft so the elements are in alignment.
AIRPORT DIAGRAM/SKETCH

ARRESTING GEAR

- uni-directional
- bi-directional
- Jet Barrier

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

REFERENCE FEATURES

- Buildings
- Tanks
- Obstruction
- Highest Obstruction
- Airport Beacon
- Runway Radar Reflectors
- Control Tower #

# When Control Tower and Rotating Beacon are co-located, Beacon symbol will be used and further identified as TWR.

Helicopter Alighting Areas

- Negative Symbols used to identify Copter Procedures landing point

TDZE 123 Runway TDZ elevation ---0.3% DOWN Runway Slope
0.8% UP ---- (shown when runway slope equals or exceeds 0.3%)

NOTE: Runway Slope measured to midpoint on runways 8000 feet or longer.

NOTES

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

Approach light symbols are shown in the Flight Information Handbook.

Airport diagram scales are variable.

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

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

Positional accuracy within ½00 feet unless otherwise noted on the chart.

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

RUNWAYS

- Hard Surface
- Other than hard surface
- Stopways, Taxiways, Parking Areas
- Displaced Threshold
- Closed Runway
- Closed Taxiway
- Under Construction
- Metal Surface
- Runway Centerline Lighting

Runway length depicted is the physical length of the runway (end-to-end, including displaced thresholds if any) but excluding areas designated as stopways. Where a displaced threshold is shown and/or part of the runway is otherwise not available for landing, an annotation is added to indicate the landing length of the runway; e.g., Rwy 13 Idg 5000’.

Runway Weight Bearing Capacity/PCN Pavement Classification Number is shown as a codified expression.
Refer to the appropriate Supplement/Airport Facility Directory for applicable codes e.g., RWY 14-32 575, T185, ST175, TT325
PCN 80 F/D/X/U

Scope

Airport diagrams are specifically designed to assist in the movement of ground traffic at locations with complex runway/taxiway configurations and provide information for updating Computer Based Navigation Systems (i.e., INS, GPS) aboard aircraft. Airport diagrams are not intended to be used for approach and landing or departure operations. For revisions to Airport Diagrams: Consult FAA Order 7910.4B.
**INSTRUMENT APPROACH PROCEDURES PLAN VIEW**

### TERMINAL ROUTES

- **Procedure Track**
- **Missed Approached**
- **Visual Flight Path**
- **Procedure Turn** (Type degree and point of turn optional)

### HOLDING PATTERNS

- **In lieu of Procedure Turn**
  - **270° (IAS)**
  - **090°**

### REPORTING POINTS / FIXES / WAYPOINTS

- **NAVAID Fix**
  - ▲ Compulsory Position Report
  - △ Non-Compulsory Position Report
- **RNAV Waypoint**
  - ▲ Compulsory Position Report
  - △ Non-Compulsory Position Report

### RADIO AIDS TO NAVIGATIONS

- **VOR**
- **VOR/DME**
- **TACAN**
- **VORTAC**
- **NDB**
- **NDB/DME**
- **LOM/LMM** (Compass locator at Outer/Middle Marker)

- **Marker Beacon**
  - **Localizer**
    - (LOC/LDA)
    - **Course**
  - **SDF Course**

### MINIMUM SAFE ALTITUDE

- **Waypoint Data**
  - **Waypoint Name**
  - **Waypoint Identifier**
  - **Primary Navaid**
  - **Secondary Navaid**

- **Computer Navigation Fix (CNF)**
  - x [NAME] (fx” omitted when it conflicts with runway pattern)

### DME Distance

- **From Facility**
  - ARC/DME/RNAV Fix
  - R-198 Radiolocator Fix
  - L-198 Lead Radiolocator Fix
  - L-198 Lead Bearing Fix
Minimum MSL altitudes are charted within each of these defined areas/subdivisions that provide at least 1,000 feet of obstacle clearance, or more as necessary in mountainous areas.

**SPECIAL USE AIRSPACE**

- **R** Restricted
- **W** Warning
- **P** Prohibited
- **A** Alert

**OBSTACLES**

- **Spot Elevation**
- **Highest Spot Elevation**
- **Obstacle**
- **Highest Obstacle**
- **Doubtful accuracy**

**FACILITIES / FIXES**

- **FM**
- **IM**
- **MM**
- **NDB**
- **OM**
- **VOR**
- **VORTAC**
- **TACAN**
- **WP**

**ALTITUDES**

<table>
<thead>
<tr>
<th>MCA</th>
<th>Minimum Crossing Altitude</th>
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<tbody>
<tr>
<td>2200</td>
<td>Recommended Minimum Altitude</td>
</tr>
<tr>
<td>4800</td>
<td>Maximum Altitude</td>
</tr>
<tr>
<td>2300</td>
<td>Minimum Altitude</td>
</tr>
<tr>
<td>2500</td>
<td>Mandatory Altitude</td>
</tr>
</tbody>
</table>
Two different methods are used for vertical guidance:

- ILS and LNAV/VNAV use **GS 3.00°** in the lower left or right corner.

  - "GS" indicates an electronic glide slope is present in the case of an ILS approach and precision vertical guidance for LNAV/VNAV.

- Other charts use **3.00°** as a non-precision vertical guidance to avoid controlled flight into terrain. It is placed above or below the procedure track following the fix it is based on.

**MLS APPROACH**

- **Glidepath 3.00° TCH 50**
- **Glidepath Altitude at FAF**
- **Final Approach Fix (FAF)**
- **Glidepath 3.00**
- **TCH 75**
- **Visual segment below MDA/DA is clear of obstacles on 34:1 slope. (Absence of shaded area indicates 34:1 is not clear.)**

**RNAV APPROACH**

- **1.9 NM to BRUSH**
- **RW19L**
- **19°**
- **X Marks: VGS and descent angles not coincident**
- **201°**
- **5800**
- **Procedure Turn NA**

**NON PRECISION**

- **1.1 NM to MAP**
- **VOR**
- **Final Approach Segment Vertical Descent Angle (VDA)**
- **127°**
- **307°**
- **1600**

**DESCENT FROM HOLDING PATTERN**

- **VOR**
- **127°**
- **307°**
- **1600**