

# TERMINAL PROCEDURES PUBLICATION SYMBOLS

## AERONAUTICAL INFORMATION

|   |    |
|---|----|
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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<br>DEPARTURE PROCEDURE (DP) CHARTS   |  |
|--|--|
| <p><b>RADIO AIDS TO NAVIGATION</b></p> <p>  VOR       TACAN<br/>  VOR/DME       NDB/DME<br/>  VORTAC       LOC/DME<br/>  LOC<br/>  NDB (Non-directional Beacon)<br/>  LMM, LOM (Compass locator)<br/>  Marker Beacon<br/>  Localizer Course<br/>  SDF Course                 </p> <p>(T) indicates frequency protection range      (Y) TACAN must be placed in "Y" mode to receive distance information</p> <p>                     Frequency: 112.25 (T) ORL<br/>                     Chan 59 (Y)<br/>                     Coordinates: N28°32.56' W81°20.10'<br/>                     Identifier: ORLANDO<br/>                     Geographic Position: ORL<br/>                     L-19, H-5 Enroute Chart Reference<br/>                     DME or TACAN Channel<br/>                     Underline indicates no voice transmitted on this frequency<br/>                     Waypoint Name: PRAYS<br/>                     Coordinates: N38°58.30' W89°51.50'<br/>                     Frequency: 112.7 CAP 187.1°-56.2<br/>                     Identifier: 590<br/>                     Reference Facility Elevation<br/>                     Radial-Distance (Facility to Waypoint)                 </p> |  |
| <p><b>REPORTING POINTS/FIXES WAYPOINTS</b></p> <p>                     Reporting Points<br/>                     N00° 00.00'<br/>                     W00° 00.00'                 </p> <p>  75 → DME Mileage (when not obvious)                 </p> <p>                     ▲ Name (Compulsory)<br/>                     △ Name (Non-Compulsory)                 </p> <p>  DME fix                 </p> <p>                     X Mileage Breakdown/<br/>                     Computer Navigation Fix (CNF)<br/>                     N00° 00.00'<br/>                     W00° 00.00'                 </p> <p>  WAYPOINT       FLYOVER WAYPOINT                 </p>  |  |
| <p><b>ROUTES</b></p> <p>                     4500 MEA-Minimum Enroute Altitude<br/>                     *3500 MOCA-Minimum Obstruction Clearance Altitude<br/>                     ← 270° → Departure Route - Arrival Route<br/>                     (65) Mileage between Radio Aids, Reporting Points, and Route Breaks<br/>  Distance not to scale<br/>  Transition Route<br/>  R-275 Radial line and value<br/>  Lost Communications Track<br/>  Airway/Jet Route Identification<br/>  (IAS) Holding Pattern       Changeover Point<br/>                     Holding pattern with max. restricted airspeed (175K) applies to all altitudes (210K) applies to altitudes above 6000' to and including 14000'                 </p>   |  |

| STANDARD TERMINAL ARRIVAL (STAR) CHARTS<br>DEPARTURE PROCEDURE (DP) CHARTS  |  |
|---|--|
| <p><b>SPECIAL USE AIRSPACE</b></p> <p>  R-352      R-Restricted      W-Warning<br/>                     P-Prohibited      A-Alert                 </p>  |  |
| <p><b>ALTITUDES</b></p> <p>                     5500      2300      4800      2200<br/>                     Mandatory      Minimum      Maximum      Recommended<br/>                     Altitude      Altitude      Altitude      Altitude                 </p> <p>  MCA (Minimum Crossing Altitude)<br/>                     → Altitude change at other than Radio Aids<br/>                     All altitudes/elevations are in feet-MSL.<br/>                     MRA- Minimum Reception Altitude.<br/>                     MAA- Maximum Authorized Altitude.                 </p>   |  |
| <p><b>AIRPORTS</b></p> <p>  Civil       Military       Joint Civil-Military                 </p>  |  |
| <p><b>NOTES</b></p> <p>                     All mileages are nautical.<br/>                     # Indicates control tower temporarily closed UFN.<br/>                     * Indicates a non-continuously operating facility, see A/FD or flight supplement.<br/>                     All radials, bearings are magnetic.                 </p> <p>                     (NAME2.NAME) - Example of DP flight plan Computer Code.<br/>                     (NAME.NAME2) - Example of STAR flight plan Computer Code.<br/>                     SL-0000 (FAA) - Example of a chart reference number.                 </p> <p>  Alternate Minimums not standard. Civil users refer to tabulation. USA/USN/USAF pilots refer to appropriate regulations.                 </p> <p>  NA Alternate minimums are Not Authorized due to unmonitored facility or absence of weather reporting service.                 </p> <p>  Take-off Minimums not standard and/or Departure Procedures are published. Refer to tabulation.                 </p> |  |

| APPROACH LIGHTING SYSTEM                               |   |
|--|---|
| RUNWAY TOUCH-DOWN ZONE AND CENTERLINE LIGHTING SYSTEMS | <p><b>TDZ/CL</b><br/>RUNWAY CENTERLINE LIGHTS<br/>CL<br/>TDZL<br/>TDZL</p>  |
| APPROACH LIGHTING SYSTEM                               | <p><b>ALSF-2</b></p> <p><b>ALSF-2</b><br/>GREEN<br/>WHITE<br/>RED<br/>RED<br/>WHITE<br/>SEQUENCED FLASHING LIGHTS<br/>(High Intensity)<br/>LENGTH 2400/3000 FEET</p> <p>NOTE: CIVIL ALSF-2 MAY BE OPERATED AS SSALR DURING FAVORABLE WEATHER CONDITIONS</p> |
| APPROACH LIGHTING SYSTEM                               | <p><b>ALSF-1</b></p> <p><b>ALSF-1</b><br/>RED<br/>GREEN<br/>WHITE<br/>SEQUENCED FLASHING LIGHTS<br/>(High Intensity)<br/>LENGTH 2400/3000 FEET</p>  |

| APPROACH LIGHTING SYSTEM  |  |
|---|--|
| SHORT APPROACH LIGHTING SYSTEM  | <p><b>SALS/SALSF</b><br/>(High Intensity)<br/>SAME AS INNER 1500' of ALSF-1</p>  |
| SIMPLIFIED SHORT APPROACH LIGHTING SYSTEM WITH RUNWAY ALIGNMENT INDICATOR LIGHTS                  | <p><b>SSALR</b></p> <p><b>SSALR</b><br/>GREEN<br/>WHITE<br/>SEQUENCED FLASHING LIGHTS<br/>(High Intensity)<br/>LENGTH 2400/3000 FEET</p>   |
| MEDIUM INTENSITY (MALS AND MALSF) OR SIMPLIFIED SHORT (SSALS AND SSALF) APPROACH LIGHTING SYSTEMS | <p><b>MALS, MALSF, SSALS, SSALF</b></p> <p><b>MALS<br/>MALSF<br/>SSALS<br/>SSALF</b><br/>GREEN<br/>WHITE<br/>SEQUENCED FLASHING LIGHTS FOR MALSF/SSALF ONLY<br/>LENGTH 1400 FEET</p> |
| MEDIUM INTENSITY APPROACH LIGHTING SYSTEM WITH RUNWAY ALIGNMENT INDICATOR LIGHTS                  | <p><b>MALSR</b></p> <p><b>MALSR</b><br/>SAME LIGHT CONFIGURATION AS SSALR.</p>   |
| OMNIDIRECTIONAL APPROACH LIGHTING SYSTEM  | <p><b>ODALS</b></p> <p><b>ODALS</b><br/>36<br/>THRESHOLD<br/>SEQUENCED FLASHING LIGHTS<br/>LENGTH 1500 FEET</p>  |

**APPROACH LIGHTING SYSTEM**

**VISUAL APPROACH SLOPE INDICATOR**

**VASI**

(V)

VISUAL APPROACH SLOPE INDICATOR WITH STANDARD THRESHOLD CLEARANCE PROVIDED.

ALL LIGHTS WHITE — — TOO HIGH

FAR LIGHTS RED  
NEAR LIGHTS WHITE ] ON GLIDE SLOPE

ALL LIGHTS RED — — TOO LOW

VASI 2

THRESHOLD

VASI 4

THRESHOLD

VASI 12

THRESHOLD

**APPROACH LIGHTING SYSTEM**

**VISUAL APPROACH SLOPE INDICATOR**

**VASI**

(V<sub>3</sub>)

VISUAL APPROACH SLOPE INDICATOR WITH A THRESHOLD CROSSING HEIGHT TO ACCOMMODATE LONG BODIED OR JUMBO AIRCRAFT.

VASI 6

THRESHOLD

VASI 16

THRESHOLD

**PRECISION APPROACH PATH INDICATOR**

**PAPI**

(P)

Legend: □ White ■ Red

Too low

Slightly low

On correct approach path

Slightly high

Too high

**"T"-VISUAL APPROACH SLOPE INDICATOR**

**"T"-VASI**

(V<sub>1</sub>)

"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.

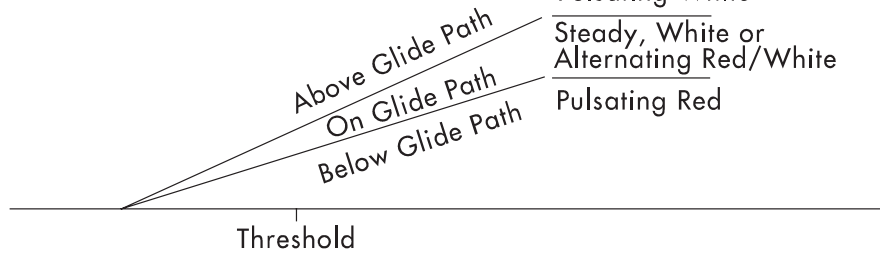
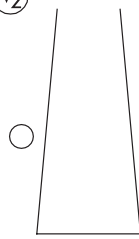
APPROACH LIGHTING SYSTEM

PULSATING VISUAL APPROACH SLOPE INDICATOR

PVASI

(V<sub>2</sub>)

PVASI



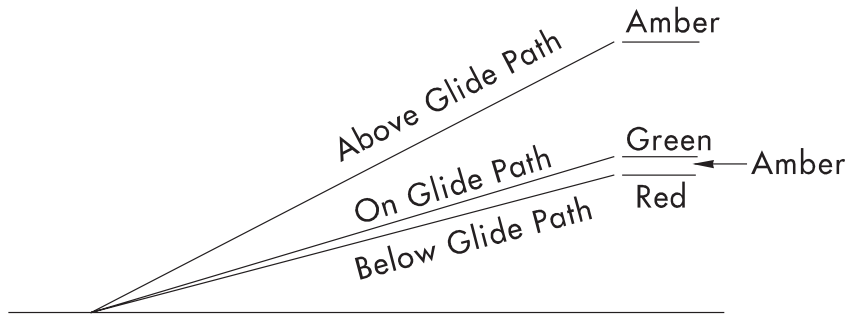
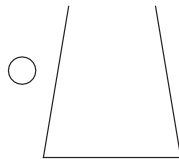
CAUTION: When viewing the pulsating visual approach slope indicators in the pulsating white or pulsating red sectors, it is possible to mistake this lighting aid for another aircraft or a ground vehicle. Pilots should exercise caution when using this type of system.

TRI-COLOR VISUAL APPROACH SLOPE INDICATOR

TRCV

(V<sub>4</sub>)

TRCV



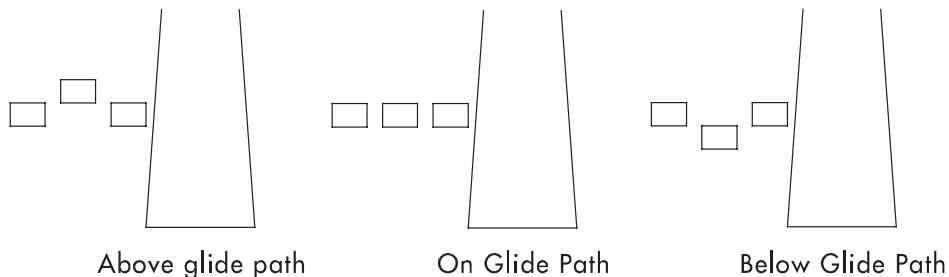
CAUTION: When the aircraft descends from green to red, the pilot may see a dark amber color during the transition from green to red.

ALIGNMENT OF ELEMENT SYSTEMS













APAP

(V<sub>5</sub>)

APAP



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           |  | AIRPORT DIAGRAM/SKETCH   |  |
|----------------------------------|--|--|--|
| <p><b>ARRESTING GEAR</b></p>     | <p>  uni-directional<br/>  bi-directional<br/>  Jet Barrier                 </p> <p>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.</p>   | <p><b>NOTES</b></p> <p> 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.</p> <p>Approach light symbols are shown in the Flight Information Handbook.</p> <p>Airport diagram scales are variable.</p> <p>True/magnetic North orientation may vary from diagram to diagram</p> <p>Coordinate values are shown in 1 or ½ minute increments. They are further broken down into 6 second ticks, within each 1 minute increments.</p> <p>Positional accuracy within ±600 feet unless otherwise noted on the chart.</p> <p>NOTE:<br/>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 FLIP. (Foreign Only)</p> |  |
| <p><b>REFERENCE FEATURES</b></p> | <p>  Buildings<br/>  Tanks<br/>  Obstruction<br/>  Airport Beacon<br/>  Runway Radar Reflectors<br/>  Control Tower #                 </p> <p># When Control Tower and Rotating Beacon are co-located, Beacon symbol will be used and further identified as TWR.</p> <p><b>Helicopter Alighting Areas</b></p> <p></p> <p><b>Negative Symbols used to identify Copter Procedures landing point</b></p> <p></p> <p>TDZE 123 Runway TDZ elevation<br/>                     —0.3% DOWN<br/>                     0.8% UP — Runway Slope<br/>                     (shown when runway slope exceeds 0.3%)</p> <p>NOTE:<br/>Runway Slope measured to midpoint on runways 8000 feet or longer.</p> |  |  |

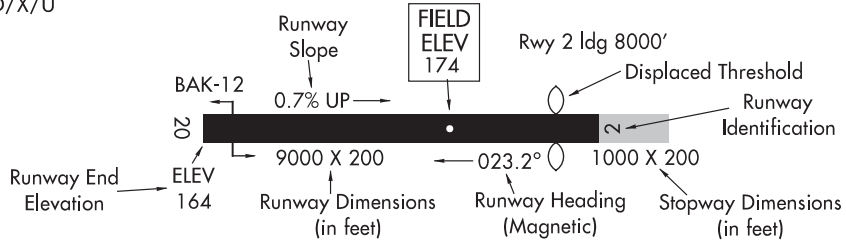
AIRPORT DIAGRAM/SKETCH

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 ldg 5000'.

Runway Weight Bearing Capacity/or 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 S75, 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

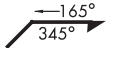
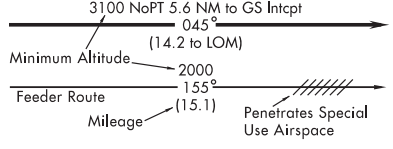
**TERMINAL ROUTES**

Procedure Track

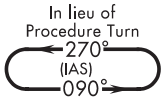
Missed Approached

Visual Flight Path

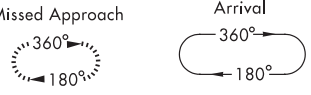
Procedure Turn  
(Type degree and point of turn optional)

**HOLDING PATTERNS**



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



Missed Approach Arrival

360° 360°

180° 180°

Holding pattern with max. restricted airspeed:  
(175K) applies to all altitudes.  
(210K) applies to altitudes above 6000' to and including 14000'.  
Limits will only be specified when they deviate from the standard. DME fixes may be shown.

### INSTRUMENT APPROACH PROCEDURES PLAN VIEW

**REPORTING POINTS / FIXES/ WAYPOINTS**

▲ Name (Compulsory)  
△ Name (Non-Compulsory)

X Mileage Breakdown/  
Computer Navigation Fix (CNF)  
N00° 00.00'  
W00° 00.00'

15 DME Distance  
From Facility | ARC/DME/RNAV Fix

Radial line and value

Lead Radial

Lead Bearing

WAYPOINT

MAP WAYPOINT

FLYOVER WAYPOINT

WAYPOINT COLLOCATED WITH NAVAID

**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)   
Right side shading-Front Course;  
Left side shading-Back Course

Course

SDF Course   
180° MLS Approach Azimuth

MLS Identifier (Y) TACAN must be in "Y" mode to receive distance information.

LOC/DME

LOC/LDA/SDF/MLS Transmitter (shown when installation is offset from its normal position off the end of the runway.)

Waypoint Data

Coordinates: PRAYS N38° 58.30' W89° 51.50'

Frequency: 112.7 CAP 187.1°-56.2

Identifier: 590

Reference Facility Elevation

Radial-Distance (Facility to Waypoint)

Primary Navaid with Coordinate Values

Secondary Navaid

LIMA  
114.5 LIMA  
Chan 92  
512° 00.80'  
W77° 07.00' LMM  
LIMA  
248 NT =



**INSTRUMENT APPROACH PROCEDURES PLAN VIEW**

**MISCELLANEOUS**

VOR Changeover Point

RWY 15 S12°00.52' End of Rwy Coordinates  
W77°06.91' (DOD only)

Distance not to scale

International Boundary

✱ Final Approach Fix (FAF)  
(for non-precision approaches)

2400  
Glide Slope/Glide Path Intercept  
Altitude and Final Approach Fix  
for precision approaches. Unless  
otherwise indicated, the non-  
precision final approach altitude  
is to be maintained until the next  
fix.

▼ Visual Descent Point (VDP)

Visual Flight Path

**MINIMUM SAFE ALTITUDE**

Facility Identifier

MSA CRW 25 NM

1500 2200  
090° 270°  
4500 2500  
360°

(arrows on distance circle identify sectors)

**TERMINAL ARRIVAL AREAS**

Straight-in Area

2000 4200  
090° 270°  
15 NM

2000 1500 2000  
090° 270°  
360° 360°  
1.2 NM

Right Base Area Left Base Area

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.

**INSTRUMENT APPROACH PROCEDURES PLAN VIEW**

**SPECIAL USE AIRSPACE**

R-352

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

**OBSTACLES**

• Spot Elevation      • Highest Spot Elevation  
△ Obstacle            ▲ Group of Obstacles  
△ Highest Obstacle    ± Doubtful accuracy

**FACILITIES / FIXES**

FM  
IM  
MM  
NDB  
OM  
VOR  
VORTAC  
TACAN  
WP

FIX  
INT

**ALTITUDES**

5500 Mandatory Altitude  
2300 Minimum Altitude  
4800 Maximum Altitude  
2200 Recommended Altitude

MCA (Minimum Crossing Altitude)

Altitude change at other than Radio Aids

INSTRUMENT APPROACH PROCEDURES PROFILE VIEW

PROFILE VIEW

