

Use a Terminal Arrival Area (TAA)



Imagine a world where every transition was a straight-in ... pretty much.

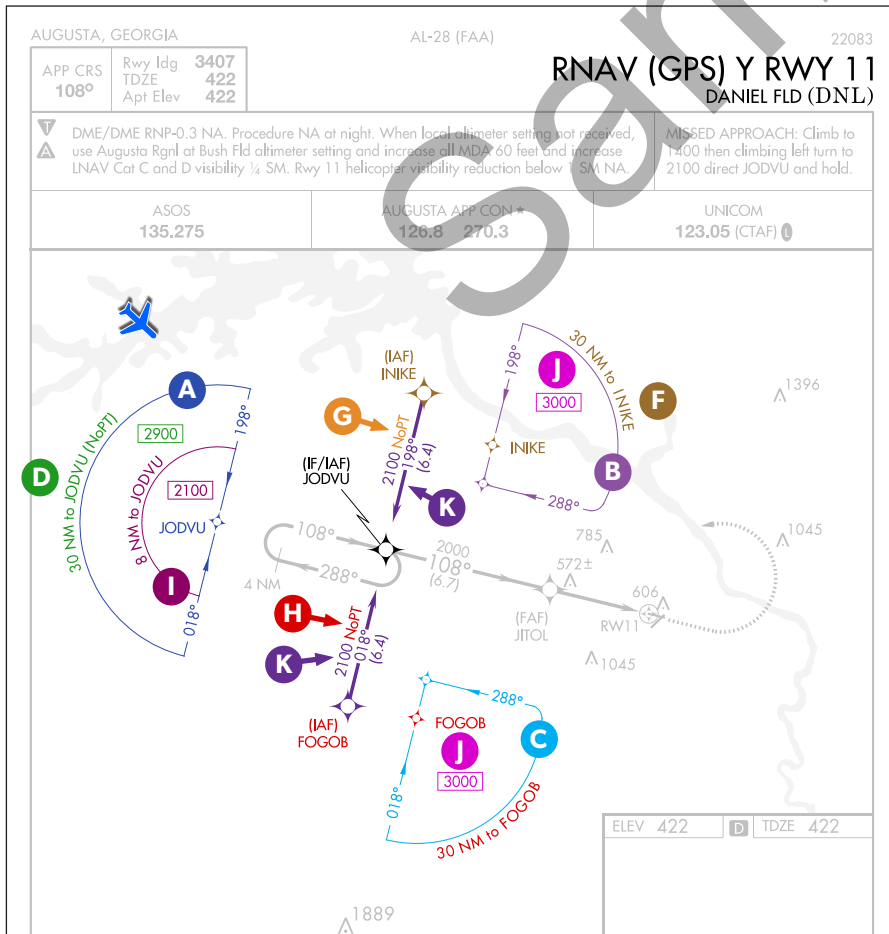
1. Get an approach clearance.
2. Determine your TAA sector.
3. Descend to the published sector altitude.
4. Continue the approach.

Get an Approach Clearance

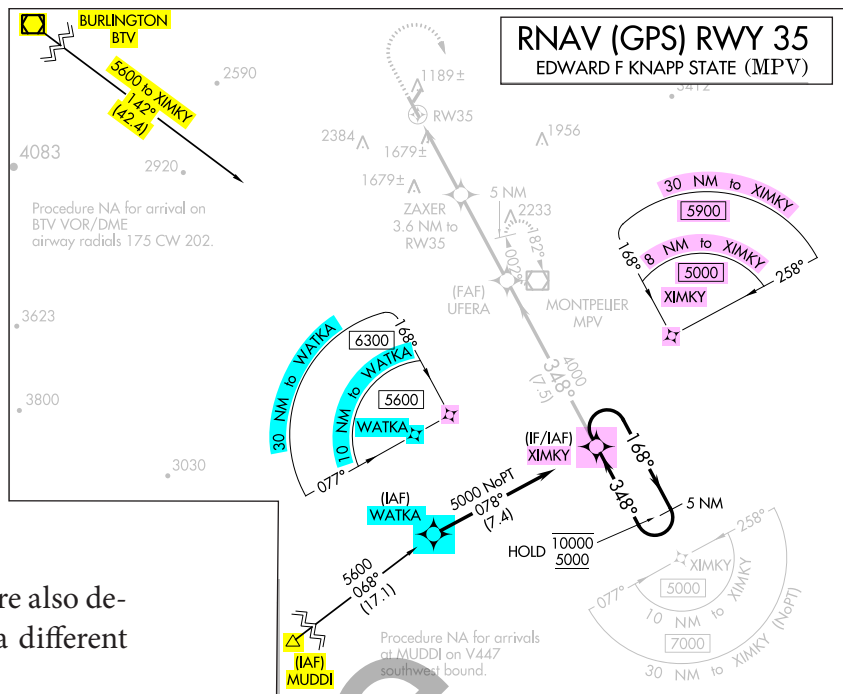
Terminal Arrival Areas (TAAs) provide a means to transition from the enroute structure onto an approach from a wide range of possible directions. They're commonly associated with RNAV approaches, although you'll find the occasional ILS that has a TAA as well.

The RNAV (GPS) Y Rwy 11 at Daniel Field (KDNL) includes a TAA divided into three sectors. These sectors are part of the procedure. You can think of them each as charted feeder segments for the approach. A three-sector arrangement like this is common. In this case, the west sector is the "straight-in" sector **A**, the northeast is "left base" **B**, and the southeast is "right base" **C**.

If you're within a TAA when receiving an approach clearance, you're already on a published approach segment with a charted minimum altitude. In that case, ATC doesn't need to provide a fix or an altitude, and your clearance could be as simple as: "N123PW, cleared RNAV Yankee Runway 11 approach Daniel Field."



Not all TAA sectors allow for joining a procedure without a course reversal. The northeast quadrant to Montpelier, VT (KMPV) shows both bearings and distances to the HILPT at XIMKY. You must fly the course reversal. This approach also includes non-TAA transition routes onto the approach from MUDDI and BTV. If you fly from MUDDI or BTV, the TAA doesn't apply.



Determine Your TAA Sector

TAA sector boundaries are defined by the inbound course to a single waypoint. They're also defined by a distance, but that could be to a different waypoint (hold that thought).

For this approach, the sector boundaries are referenced to JODVU. If you're arriving from a direction where your direct course to JODVU is 018° through 198° clockwise, you're in the straight-in sector. This sector starts 30 NM from JODVU on any of these courses **D**. The left base sector is 198° through 288° to JODVU and the right-base sector is 288° through 018°.

Usually it's obvious which sector you're in, but if you're near a border and unsure, enter direct JODVU into your GPS and compare the direct course to the sector boundaries.

Suppose you were headed direct to KDNL from the northwest before being cleared for the RNAV (GPS) Y Rwy 11. Loading the approach and proceeding direct to JODVU reveals a direct course of 140° and a distance of 25.2 NM **E**. That's within the straight-in sector of the TAA. As implied by the straight-in name, and the NoPT plan-view note **D**, no course reversal (page 87) is required for this sector.

Choose your IAF wisely when loading approaches that contain a TAA. If you load the WATKA transition for the RNAV (GPS) Rwy 35 to KMPV, you won't get an option for a course reversal. If you load the XIMKY transition and are within a quadrant where a course reversal is required, it will be added automatically. If you load the approach from the NoPT sector, you'll get the option for the course reversal in case you want it.

The left-base sector is defined by courses to JODVU, but extends 30 NM from INIKE **F**. If you're arriving in this sector, you want direct INIKE, not JODVU. That's because while there isn't a "NoPT" note for the sector, there is a "NoPT" note on the leg from INIKE to JODVU **G**. So you use the TAA to reach INIKE and then get a NoPT leg from there. If ATC has cleared you direct JODVU from this sector, ask for direct INIKE instead. Likewise for the right-base sector, you're inside the TAA when 30 NM from FOGO and want direct to that fix to enjoy a NoPT arrival **H**.

The approach is loaded from the IAF, which is different for each of these sectors. If you were direct



JODVU in the left-base sector, you may need to reload the approach to get INIKE in the flight plan.

Descend to the Published Sector Altitude

If you're cleared for the approach and within a TAA sector, you can descend to its minimum altitude. The straight-in sector includes a minimum altitude of 2900 feet within 30 NM of JODVU **(D)**, and 2100 feet within 8 NM **(I)**. For arrivals in the other sectors, it's 3000 feet for the entire sector until crossing INIKE or FOGOB **(J)** and then 2100 for the legs to JODVU **(K)**.

Unless ATC restricted you in the clearance, you can freely descend to the TAA altitude when cleared for the approach. If you were restricted, ask if you can

descend to the TAA altitude. Some controllers are a bit hazy on TAA procedures.

Continue the Approach

Ideally, TAAs make it such that you shouldn't have to fly a course reversal unless you or ATC demands it. Verify that the hold is not present in the GPS flight plan. If it is—and you don't want it—delete it. Conversely, if you loaded the approach from the appropriate IAF and ATC hits you with an unexpected hold, you may have to add it (page 53).

Once you cross JODUV, INIKE, or FOGOB, the TAA is no longer in play. Continue flying the altitudes of the published segments as with any approach.

AN MSA IS NOT A TAA

Minimum Safe Altitudes (MSAs) are for emergency use only. Unlike TAAs, they're not part of the approach procedure. That means they may not be used for descents, and they'll never be labeled "NoPT."

So how can you tell them apart? Simply, MSAs say "MSA" above the circle, along with the waypoint that defines the center point and the radius covered. Within that radius, MSAs offer a 1000-foot buffer above the highest obstacle. Because of the buffer and wide radius—usually 25 NM—MSAs are often much higher than the charted approach altitudes.

Some MSAs are a complete ring with a single altitude, like on the RNAV (GPS) Rwy 5 to KDNL. On that approach, 3000 feet is a safe altitude within 25 NM of the Runway 5 MAP.

Others have multiple sectors, like the ILS Rwy 17 to KMPV. That approach uses the MPV VOR as a reference point. If your direct course to the VOR is between 270° and 360° clockwise, the minimum

altitude is 6000 feet. Otherwise, it's 5300 feet. **An approach clearance does not authorize you to fly these altitudes. They exist solely to provide a last-resort, emergency altitude.**

Approaches with a TAA don't have a Minimum Safe Altitude (MSA) ring, because you could use the TAA like an MSA.

When might you actually use an MSA? Suppose you're flying an RNAV approach and experience a GPS outage. Without positive course guidance to navigate the safety of published approach segments, a wise first action may be to begin a climb to the MSA. Similarly, if you lose communications while being vectored for an approach, a climb to the MSA would offer an obstacle-free altitude.

In general though, think of MSAs much like the OROCA on Low Altitude Enroute Charts. They provide an at-a-glance indication of safe altitudes across a wide area.

