

altitude is specified in the ATC clearance, that altitude becomes mandatory as defined above.

2. *The ILS glide slope is intended to be intercepted at the published glide slope intercept altitude. This point marks the PFAF and is depicted by the "lightning bolt" symbol on U.S. Government charts. Intercepting the glide slope at this altitude marks the beginning of the final approach segment and ensures required obstacle clearance during descent from the glide slope intercept altitude to the lowest published decision altitude for the approach. Interception and tracking of the glide slope prior to the published glide slope interception altitude does not necessarily ensure that minimum, maximum, and/or mandatory altitudes published for any preceding fixes will be complied with during the descent. If the pilot chooses to track the glide slope prior to the glide slope interception altitude, they remain responsible for complying with published altitudes for any preceding stepdown fixes encountered during the subsequent descent.*

3. *Approaches used for simultaneous (parallel) independent and simultaneous close parallel operations procedurally require descending on the glideslope from the altitude at which the approach clearance is issued (refer to 5-4-15 and 5-4-16). For simultaneous close parallel (PRM) approaches, the Attention All Users Page (AAUP) may publish a note which indicates that descending on the glideslope/glidepath meets all crossing restrictions. However, if no such note is published, and for simultaneous independent approaches (4300 and greater runway separation) where an AAUP is not published, pilots are cautioned to monitor their descent on the glideslope/path outside of the PFAF to ensure compliance with published crossing restrictions during simultaneous operations.*

4. *When parallel approach courses are less than 2500 feet apart and reduced in-trail spacing is authorized for simultaneous dependent operations, a chart note will indicate that simultaneous operations require use of vertical guidance and that the pilot should maintain last assigned altitude until established on glide slope. These approaches procedurally require utilization of the ILS glide slope for wake turbulence mitigation. Pilots should not confuse these simultaneous dependent operations with*

(SOIA) simultaneous close parallel PRM approaches, where PRM appears in the approach title.

5. *Altitude restrictions depicted at stepdown fixes within the final approach segment are applicable only when flying a Non-Precision Approach to a straight-in or circling line of minima identified as a MDA(H). Stepdown fix altitude restrictions within the final approach segment do not apply to pilots using Precision Approach (ILS) or Approach with Vertical Guidance (LPV, LNAV/VNAV) lines of minima identified as a DA(H), since obstacle clearance on these approaches are based on the aircraft following the applicable vertical guidance. Pilots are responsible for adherence to stepdown fix altitude restrictions when outside the final approach segment (i.e., initial or intermediate segment), regardless of which type of procedure the pilot is flying. (See FIG 5-4-1.)*

c. Minimum Safe Altitudes (MSA) are published for emergency use on IAP charts. MSAs provide 1,000 feet of clearance over all obstacles, but do not necessarily assure acceptable navigation signal coverage. The MSA depiction on the plan view of an approach chart contains the identifier of the center point of the MSA, the applicable radius of the MSA, a depiction of the sector(s), and the minimum altitudes above mean sea level which provide obstacle clearance. For conventional navigation systems, the MSA is normally based on the primary omnidirectional facility on which the IAP is predicated, but may be based on the airport reference point (ARP) if no suitable facility is available. For RNAV approaches, the MSA is based on an RNAV waypoint. MSAs normally have a 25 NM radius; however, for conventional navigation systems, this radius may be expanded to 30 NM if necessary to encompass the airport landing surfaces. A single sector altitude is normally established, however when the MSA is based on a facility and it is necessary to obtain relief from obstacles, an MSA with up to four sectors may be established.