

Instrument Landing System (ILS) Glide Slope. FAC: 1341

CATCODE: 134351

OPR: AFFSA

OCR: AFNIC, AF/A3O, AFCEC/COS

1.1. **Description.** The ILS is the standard navigation aid that utilizes fixed radio beams to provide aircraft final approach guidance in instrument conditions.

1.2. **Requirements Determination.** The ILS consists primarily of an ALSF-1 or an ALSF2 used where CAT-I, CAT-II, and CAT-III operations are necessary. See Chapter 3 and Table 2-1A of UFC 3-535-01 and AFI 32-1044 for additional information and requirements. An approach lighting system is necessary in conjunction with the ILS to ensure a safe transition from the instrument phase to the visual phase (see Approach Lighting, **CATCODE 136661**).

1.2.1. The basic components of the ILS system are:

1.2.1.1. A localizer radio beam to furnish azimuth approach guidance to the runway, and

1.2.1.2. A glide path radio beam to furnish vertical descent approach guidance to the runway.

1.2.2. The basic components of the Category II ILS system are:

1.2.2.1. A localizer radio beam to furnish azimuth approach guidance to the runway;

1.2.2.2. A glide-path radio beam to furnish vertical descent approach guidance to the runway;

1.2.2.3. Two marker beacons (inner and outer) to provide accurate radio fixes along the approach course (TACAN distance measuring equipment (DME) fixes satisfy the outer marker requirement.);

1.2.2.4. An approved touchdown zone lighting system;

1.2.2.5. Centerline lighting system;

1.2.2.6. High intensity runway edge lighting;

1.2.2.7. All-weather markings;

1.2.2.8. Runway Visual Range (RVR) (For operations below 1,600 RVR or 0.5 km [1/3 mi], two transmissometers are necessary to provide visibility information at the approach and rollout end of the runway.); and

1.2.2.9. Remote monitoring is needed for the following elements: Glide slope, localizer and marker beacons, and approach lighting system.

1.3. **Scope Determination.** See UFC 3-260-01 and UFC 3-535-01.

1.4. **Dimensions.** See UFC 3-260-01 and UFC 3-535-01.

1.5. Design Considerations. The permanent system includes an approved localizer and an approved glide path unit. The AN/GRN-29 includes both the localizer and glide path units and satisfies Category I or II ILS requirements. The AN/GRN-31 (glide slope) and an AN/GRN-30 (localizer) are also sited on a shelter hardstand of approximately 27 m² (32 yd²).