

CHANGE

**DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION**

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SUBJ: SITING CRITERIA FOR INSTRUMENT LANDING SYSTEMS

1. **PURPOSE.** This change transmits revised critical area criteria for the localizer and glide slope.
2. **DISTRIBUTION.** This change is distributed to division level in the Program Engineering, Systems Maintenance, and Air Traffic Operations Services, the Offices of Systems Engineering and Program Management, Airport Standards and Flight Standards, and the Aviation Standards National Field Offices in Washington headquarters; to branch level in the regional Airway Facilities divisions; and to the Airway Facilities sectors, sector field offices, sector field units and sector field office units.
3. **EXPLANATION OF CHANGES.** This change revises the critical area requirements for all localizer and glide slope systems. These changes are a result of the following referenced reports:
 - a. DOT/FAA/PM-85/4, Theoretical Investigation of Single Frequency 8-Element Localizer Signal Scattering for Critical Area Determination.
 - b. DOT/FAA/PM-86/7, Engineering and Technical Services to Improve Reliability and Maintainability of Instrument Landing System Components, Volume I and II.
4. **DISPOSITION OF TRANSMITTAL.** This transmittal shall be retained.

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for Robert E. Brown

**Robert E. Brown
Director, Program Engineering Service**

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Initiated By: APS-440

d. Critical Jet Blast Areas. In addition to safeguarding the ILS guidance information from surface traffic interference, the system must be protected from long term deterioration resulting from accumulation of jet engine exhaust residue on the radiation and monitor antennas. Since prolonged exposure to jet fumes is dangerous to the health of personnel working on the systems, it is also necessary to minimize this deleterious effect. Therefore, no jet aircraft shall be permitted to park or hold within 300 feet of the ILS equipment shelters, the localizer antenna array, or the glide slope antennas. This distance is measured from the individual ILS component to the nearest aircraft engine, with the latter's jet exhaust directed toward the component.

e. Restrictions. Although it is desirable to completely restrict the areas and no-parking zone from all surface traffic, this is generally not feasible since access to and from the runway, terminal areas, ramp and hangar areas may necessitate traffic movement through these regions. The restrictions must therefore be sufficiently permissive, as delineated in the following, to permit this traffic flow.

(1) Vehicles in use by maintenance technicians shall be parked outside the glide slope critical area.

(2) Except as provided below and in the latest edition of Handbook 7110.65, Air Traffic Control, all surface traffic shall remain clear of the localizer standard minimum critical area whenever the localizer is in operation. Parking of unattended vehicles or aircraft within this area is prohibited at all times, except for vehicles in use by maintenance technicians which may be parked adjacent to the equipment shelter.

(3) Where roads, highways, railroad tracks, etc., pass through the critical area and investigation indicates localizer degradation results from traffic movement along these routes, effective measures shall be taken to overcome the condition. Such measures include elevation of the array followed by appropriate math modeling or flight inspection or relocation of the facility.

(4) Maintenance vehicles may pass through the critical area along access roads when traveling to and from the equipment shelter provided the route does not pass in the vicinity of the antenna.

f. Vegetation Control. Vegetation growth shall not be permitted to exceed 12 inches in height in the ILS critical areas within 2000 feet of the localizer and 800 feet from glide-slope antennas. Growth of crops of any type shall not be permitted. Mowing operations should be coordinated for a time to coincide with scheduled facility maintenance.

g. Implementation. Effective implementation of the critical area restrictions requires a coordinated effort by several regional and field offices as follows: