

Submitted for recognition as an American National Standard

**CABIN ACCOMMODATIONS FOR PASSENGERS WITH AMBULATORY
DISABILITIES TRANSPORT CATEGORY AIRCRAFT**

1. SCOPE:

The methods and designs presented herein shall not be construed as being the only means of accomplishing these accommodations.

This document applies to all transport category aircraft using features required by Department of Transportation Regulations CFR382.

Passengers with ambulatory disabilities for whom provisions shall be made on each airplane type and location(s) for their seating as defined in Federal Aviation Regulations.

The goal is to provide cabin service comparable to that available to other travelers without jeopardizing the safety of fellow passengers. This necessitates consideration of physical, neurological and sensory capabilities, and limitations of mobility impaired persons. With proper consideration and design implementation, it will be possible to serve the needs of the majority of the disabled population.

1.1 Purpose:

This document provides considerations for the design of cabin facilities to accommodate passengers with ambulatory disabilities while traveling aboard transport category aircraft.

2. REFERENCES:

2.1 SAE Publications:

Available from SAE, 400 Commonwealth Drive, Warrendale, PA 15096-0001.

ARP1315 Lavatory Installation
AIR1815 Safe Carriage of Impaired and Disabled Passengers
ARP4120 Foldable Onboard Wheelchairs for Physically Impaired Passenger
ARP4192 Passenger Safety Video Briefings
AIR4496 Cabin Stowage of Personal Wheelchairs

SAE Technical Standards Board Rules provide that: "This report is published by SAE to advance the state of technical and engineering sciences. The use of this report is entirely voluntary, and its applicability and suitability for any particular use, including any patent infringement arising therefrom, is the sole responsibility of the user."

SAE reviews each technical report at least every five years at which time it may be reaffirmed, revised, or cancelled. SAE invites your written comments and suggestions.

SAE ARP4387

2.2 Other Publications:

Available from Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402.

Department of Transportation Regulations OST 14CFR Part 382

Federal Aviation Administration Regulations 14CFR Part 121

Recommended Guidelines for Design of Accessible Aircraft Lavatories (per Department of Transportation Regulations CFR382)

3. TECHNICAL REQUIREMENTS:**3.1 In providing equipment for use aboard an aircraft, care must be taken to follow the systems approach to design and to consider the following:**

- a. The interaction of many elements require the study of the total system. The primary elements are:
 - (1) The disabled passenger
 - (2) Cabin crew members
 - (3) Other nondisabled passengers
 - (4) The provisions, equipment, and fixtures within the aircraft interior
- b. The interaction of these above elements must include the disabled person's degree of mobility access of disabled persons to passenger cabin furnishings and compartments, use of provisions by the passengers with disabilities, and assistance required of them.
- c. The impact of flying by disabled persons must be evaluated in terms of the disabled traveler's limitations and capabilities; namely boarding, seating, garment removal and stowage, onboard baggage stowage, lavatory use, food and beverage consumption, and all of the other amenities afforded the airline passenger.
- d. Seating of passengers with disabilities as related to emergency preparedness, egress, and exit locations. Federal Aviation Administration Regulations set strict limits on who may be seated at an exit row.

3.2 Passenger Seat With Movable Armrest:

- 3.2.1 **Functional Problem:** A fixed passenger seat armrest impedes transfer to and from an onboard wheelchair.
- 3.2.2 **Solution:** While the fixed armrest may be valuable leverage for many passengers with disabilities, after being seated it is an obstruction which is difficult to maneuver over and has the potential for injury.