



U.S. Department
of Transportation

**Federal Aviation
Administration**

Memorandum

Subject: Action: Review and Concurrence, Equivalent Level of Safety (ELOS) Finding for 767-300 Emergency Exit Arrangement and Cross Aisle Proximity

Date: May 5, 2003

From: Manager, Transport Standards Staff Airframe /Cabin Safety Branch, ANM-115

Reg Ref: 14 CFR § 25.807, § 25.809, § 25.813

Reply to Attn of: Thomas Stafford
Airframe, ANM-120S

To: Manager, Seattle Aircraft Certification Office, ANM-100S

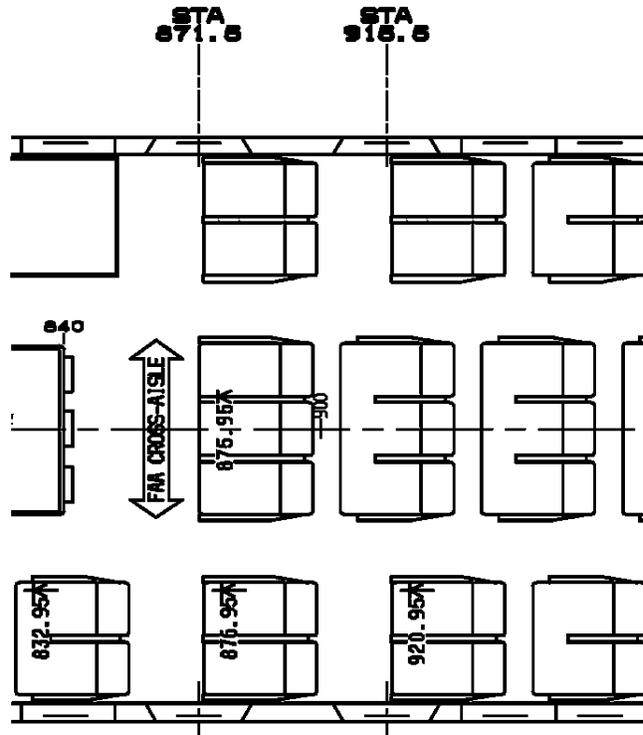
ELOS Memo #: T4173NM-DS -C-1

Background

The 767-300 A-III-III-A exit configuration was initially certificated on the 767-300 in 1986. At that time, a maximum passenger capacity of 290 passengers was granted via an equivalent level of safety finding for §§ 25.807, 25.809, and 25.813. Boeing and the FAA had a common understanding that the centerline of the cross-aisle would be located somewhere between the centerlines of the forward and aft Type III exit pairs, i.e., the cross aisle would be in close proximity to both exit pairs. This understanding was referenced in Note 6 on the Type Certificate Data Sheet A1NM.

The Company has now proposed a new 767-300 interior configuration for 209 passengers, where the cross aisle leading to the two pairs of Type III exits is not located between the two exit pairs, i.e., the cross aisle is not in “close proximity” to both exit pairs. In order to obtain approval, Boeing expressed willingness to further limit the maximum passenger capacity, and ensure that some portion of the 20 inch wide cross aisle would be located within the projected opening of one of the Type III exit pairs.

For the proposed interior configuration, the cross aisle that serves the Type III exits is located such that its centerline is approximately 9.6” forward of the centerline of the forward pair of Type III exits and approximately 53.6” forward of the centerline of the aft pair of Type III exits, as depicted below.



In order to gain approval of the new interior configuration, and address other future interior configurations, Boeing has proposed limiting the maximum passenger capacity to 220, for those A-III-III-A exit configurations where the centerline of the cross aisle is not located between the centerline of the two pairs of Type III emergency exits. This maximum passenger capacity is significant less than the 290 passenger typically allowed for 767-300’s with an A-III-III-A exit configuration, and is also less than the 255 passengers typically allowed for 767-300’s equipped with an A-III-A exit configuration. The passenger capacity is essentially restricted to that of what is typically allowed for an A-A exit configuration, and in essence, no passenger capacity credit is given for the two pairs of Type III emergency exits.

Applicable regulation(s)

§ § 25.807, 25.809, 25.813

Regulation(s) requiring an ELOS

§ 25.813

Description of compensating design features or alternative standards which allow the granting of the ELOS (including design changes, limitations or equipment needed for equivalency)

The FAA has determined that an equivalent level of safety finding can be granted in accordance with § 21.21(b)(1) for Boeing 767-300 aircraft configured with two pairs of Type A and two

pairs of overwing Type III emergency exits, for which the mid cabin cross aisle is not in close proximity to both pairs of Type III exits.

The FAA has determined that the following criteria establishes an equivalent level of safety:

- 1) The maximum passenger capacity is limited to 220 persons.
- 2) With the exception of meeting the requirements for close proximity to both pairs of Type III exits, all remaining aspects of the exits and their configuration must comply with the requirements of part 25, and the requirements contained in Note 6 of the Type Certification Data Sheet.
- 3) There must be an unobstructed cross aisle at least 20 inches wide between main aisles that is readily accessible to at least one pair of the overwing exits. Some portion of the 20-inch wide cross aisle must be located within the projected opening of one of the Type III exit pairs.
- 4) A floor proximity emergency escape path marking system must be provided for the cross aisle meeting the requirements of § 25.812(e), Amdt. 25-58.
- 5) Passenger movements between main aisles must be preserved within the area of the Type III exits. Accordingly, center section seats located longitudinally between the forward and aft Type III exit openings, or overlapping the projected Type III exit openings, must provide at least 6 inches of space between consecutive seat rows when the seatbacks are in the upright position. The exits across the aircraft must be obvious to persons standing at the opposite exit.
- 6) Exemption Number 4725 allows one seat for a required flight attendant to be located near the overwing Type III exits. Although this exemption allows a seat to be located near the Type III exits, it is not a certification requirement. In order to compensate for the placement of the cross aisle allowed by this equivalent safety finding, a flight attendant seat must be located within three longitudinal seat rows of the closest Type III exit pair.

Explanation of how design features or alternative standards provide an equivalent level of safety to the level of safety intended by the regulation

See above.

FAA approval and documentation of the ELOS

The FAA has approved the aforementioned Equivalent Level of Safety Finding in project issue paper C-1. This memorandum provides standardized documentation of the ELOS that is non-proprietary and can be made available to the public. The Transport Directorate has assigned a unique ELOS Memorandum number (see front page) to facilitate archiving and retrieval of this ELOS. This ELOS Memorandum number is listed in the Type Certificate Data Sheet under the Certification Basis section (TC's & ATC's).

Original Signed by Jeff Gardlin	5/6/03
Manager, Transport Standards Staff Airframe/Cabin Safety Branch, ANM-115	Date

ELOS Originated by Seattle ACO:	Project Engineer Thomas Stafford	Routing Symbol ANM-120S
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