

RUNWAY LENGTH ANALYSIS

A runway length analysis was conducted for Capital City Airport to determine the runway length required by Allegiant Air for flights out of Lansing to Las Vegas, NV using the Boeing MD-82, MD-83, or the MD-87.

The runway length requirements for the referenced aircraft operating at 100% gross aircraft weight (GAW), standard day (59 deg. F), airfield elevation of 1000 AMSL are as follows:

MD-82 (149,500 GAW): 7,800'
MD-83 (160,000 GAW): 8,700'
MD-87 (149,500 GAW): 8,000'

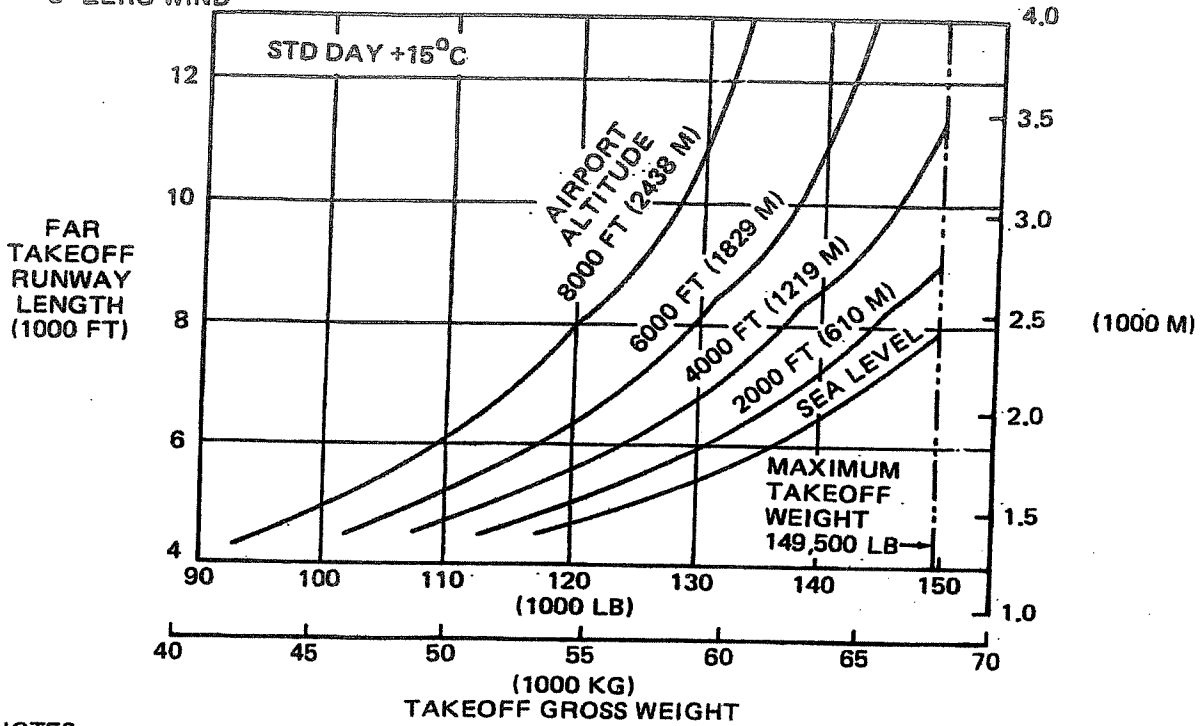
The GAW for the flight leg from Lansing to Las Vegas at full passenger load, plus fuel to Las Vegas, plus fuel to a 200 NM alternate, plus reserves would probably be less than the maximum gross aircraft weight allowable. This would require less than the maximum runway length. To accurately determine the runway length required, specific fuel requirements must be obtained from Allegiant Air. If, for example, Allegiant flies an MD-83 at 90% load (144,000# to include full passenger load, plus fuel to Las Vegas, plus fuel to an alternate site, plus fuel reserves) for the Lansing to Las Vegas run, then the runway length requirement might be as short as the 7,250' runway Lansing already has.

Attached are the runway length charts from Boeing that depict the runway lengths required for the various models of the MD-80 aircraft for differing airfield conditions. These charts, as well as statements from the FAA-ADO office, stipulate that the airline must be coordinated with to determine their specific requirements (things such as insurance requirements for runway length, additional safety margins the airline might impose, etc).

Achieving a longer runway for takeoff (apparently landing length is not a problem for Allegiant Air flights into Lansing) could be accomplished by adding the length to the east end of Runway 10R-28L and applying declared distances. The runway extension portion would be used only for takeoff on Runway 28L to the west with the existing 7,250' runway available for landing from either runway end or for takeoff from the west. Approximately 8,000' of runway could be made available for takeoff to the west without relocating DeWitt Road or the ARFF Road.

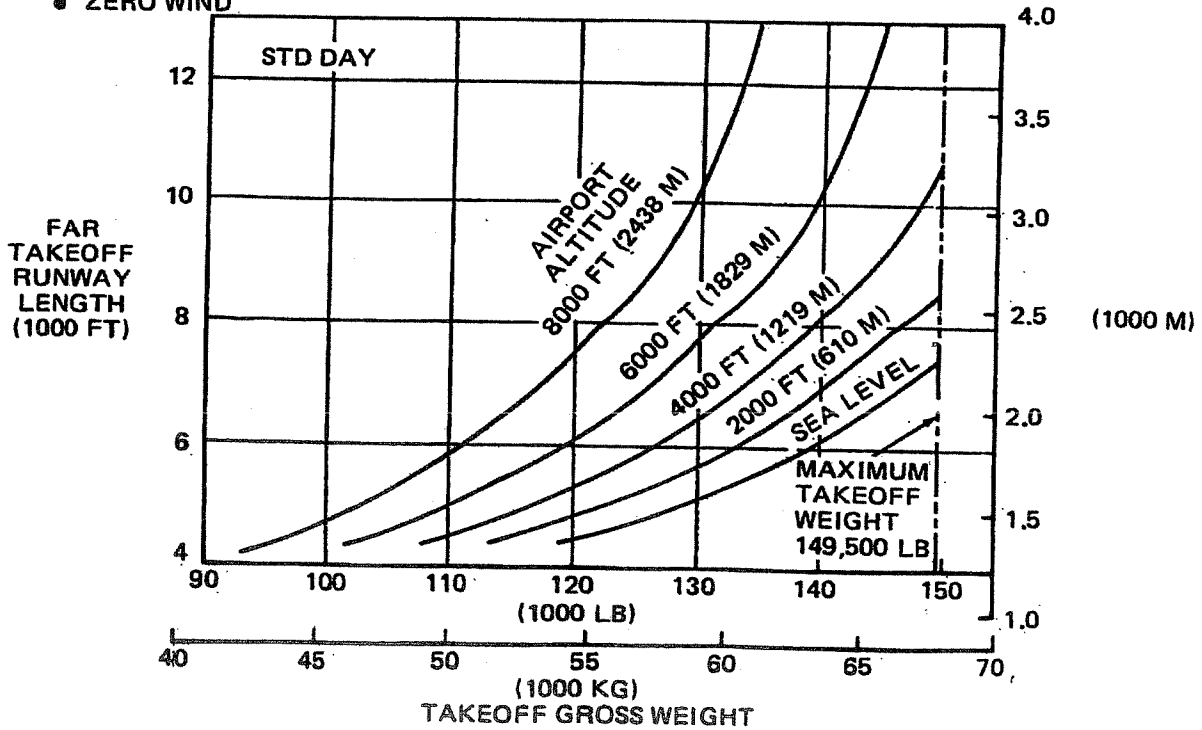
NOTES:

- JT8D-217A ENGINES
- NORMAL TAKEOFF THRUST AND ART
- ZERO RUNWAY GRADIENT
- ZERO WIND
- COORDINATE WITH USING AIRLINE FOR SPECIFIC REQUIREMENTS PRIOR TO FACILITY DESIGN



NOTES:

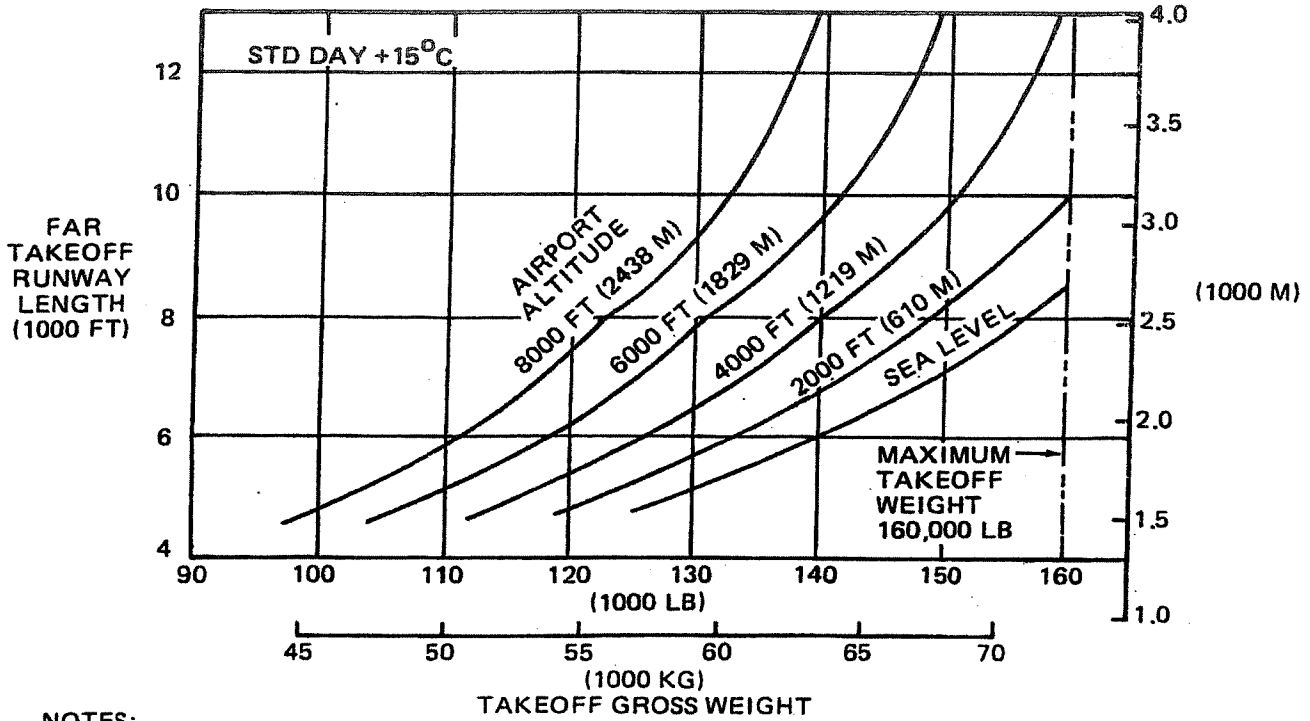
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**3.3 FAR TAKEOFF RUNWAY LENGTH REQUIREMENTS
MODEL MD-82 AND -88**

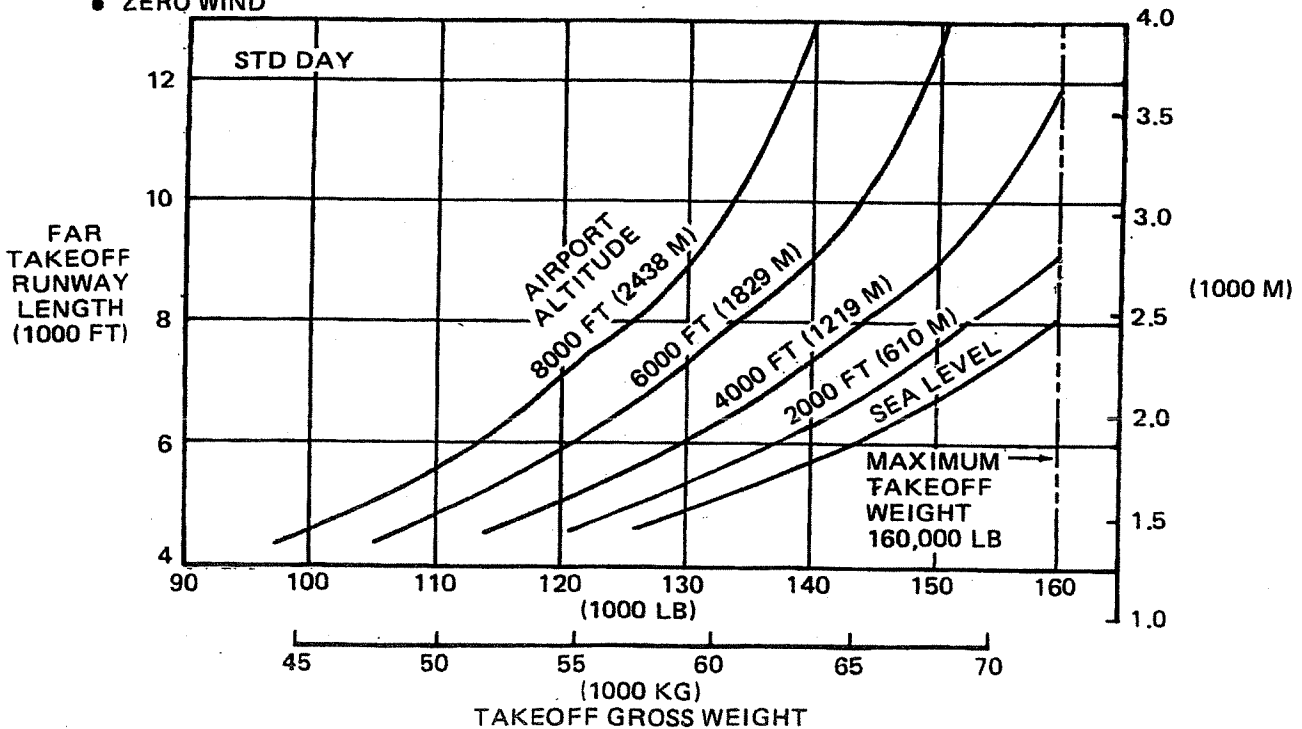
NOTES:

- JT8D-219 ENGINES
- NORMAL TAKEOFF THRUST AND ART
- ZERO RUNWAY GRADIENT
- ZERO WIND
- COORDINATE WITH USING AIRLINE FOR SPECIFIC REQUIREMENTS PRIOR TO FACILITY DESIGN



NOTES:

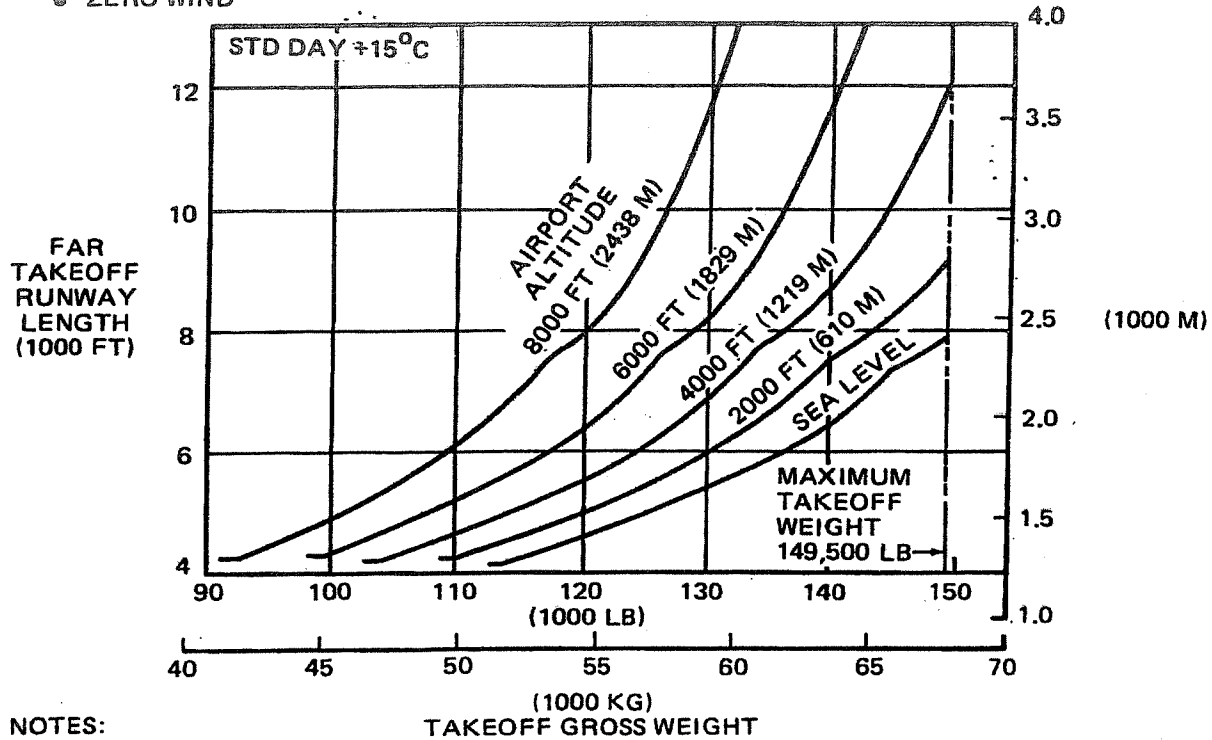
- JT8D-219 ENGINES
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**3.3 FAR TAKEOFF RUNWAY LENGTH REQUIREMENTS
 MODEL MD-83**

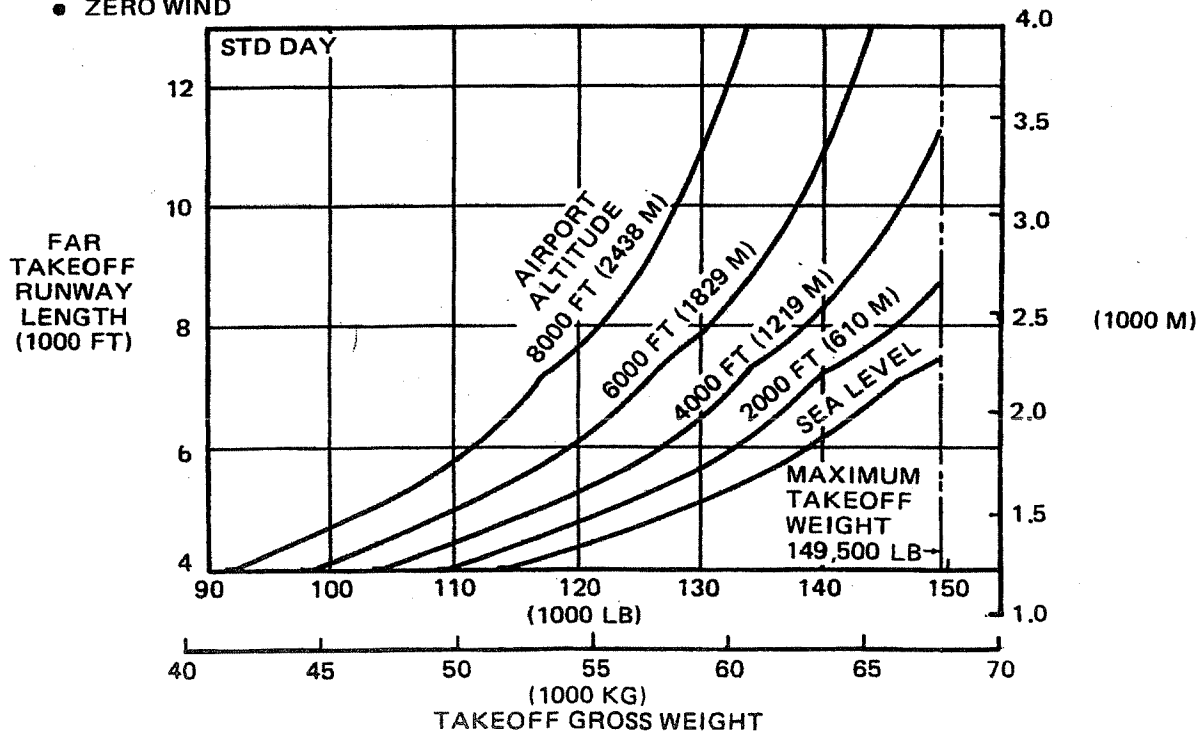
NOTES:

- JT8D-217C ENGINES
- NORMAL TAKEOFF THRUST AND ART
- ZERO RUNWAY GRADIENT
- ZERO WIND
- COORDINATE WITH USING AIRLINE FOR SPECIFIC REQUIREMENTS PRIOR TO FACILITY DESIGN



NOTES:

- JT8D-217C ENGINES
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- ZERO RUNWAY GRADIENT
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3.3 FAR TAKEOFF RUNWAY LENGTH REQUIREMENTS MODEL MD-87