FENCE HEIGHT EXCEPTION
RAPID CITY REGIONAL AIRPORT

DESCRIPTION OF REQUEST

The Rapid City Regional Airport would like to request for a Fence Height Exception in regards to Chapter 15.40 Fences and Walls of the Rapid City Municipal Code pertaining to the perimeter security fence at the Airport. The fences; designed, constructed and proposed for replacement; must meet the following Federal Aviation Administration criteria.

The Rapid City Regional Airport must meet the FAA criteria for Federal airport certification regulation [Title 14, Code of Federal Regulations (CFR), Part 139 (14 CFR Part 139] which establishes certification requirements for airports serving scheduled air carrier operations. The following subsections are taken from this document:

> **139.335 Public protection.**
> (a) In a manner authorized by the Administrator, each certificate holder must provide—
>
> (1) Safeguards to prevent inadvertent entry to the movement area by unauthorized persons or vehicles; and
>
> (2) Reasonable protection of persons and property from aircraft blast.
>
> (b) Fencing that meets the requirements of applicable FAA and Transportation Security Administration security regulations in areas subject to these regulations is acceptable for meeting the requirements of paragraph (a)(l) of this section.
>
> **139.337 Wildlife hazard management.**
> (a) In accordance with its Airport Certification Manual and the requirements of this section, each certificate holder must take immediate action to alleviate wildlife hazards whenever they are detected.

References to the FAA construction characteristics can be found in the following:

1. Wildlife Hazard Management at Airport – A Manual for Airport Personnel (Second Edition, July 2005)
   a. Chapter 9 Control Techniques contains the following subsection:

   "9.2.B.IV.B EXCLUSION OF MAMMALS

   Institute a "zero tolerance" policy for deer, livestock, and other large mammals in the AOA because of their severe threat to aviation safety (see Table 8-1). The best, albeit most costly, procedure for excluding these animals off the AOA is proper fencing. **The FAA recommends a 10-12 foot chain link fence with 3-strand barbed wire outriggers.** In some cases, an airport might be able to use an 8-foot chain link fence with 3-

strand barbed outriggers, depending on the amount of deer activity in the area (see Certalert No. 04-16, Appendix E). A 4-foot skirt of chain-link fence material, attached to the bottom of the fence and buried at a 45° angle on the outside of the fence will prevent animals from digging under the fence and reduce the chance of washouts. This type of fencing also greatly increases airport security. There are also numerous electric-fence designs for excluding deer, discussed in Hygnstrom et al. (1994), that are not as costly as permanent fencing but have drawbacks in safety and maintenance."

b. **Attached** is the above referenced **Certalert No. 04-16.**

Rapid City Regional Airport has developed, in cooperation with the US Department of Agriculture Wildlife Services, a Wildlife Hazard Management Plan to meet the requirements of subsection 139.337 Wildlife hazard management of the Part 139 certification requirements. This management plan was approved by the FAA in February 2003. Chapter 8 of the document contains action tasks to be implemented by the Rapid City Regional Airport. One of the tasks is stated as follows:

"Replace the existing woven wire game fence with 10 foot chain-link fence."

The Airport has been coordinating with the FAA to satisfy the requirements of this task by replacing segments of the existing fence in phases as other activities at the Airport and federal funding permit.

It should also be noted that the FAA commonly refers to criteria as being recommended or advisory, however, these items do become mandatory to an airport if it intends to use federal funds at the airport or to obtain/maintain a Part 139 certification to provide scheduled air carrier operations.

CERTALERT

ADVISORY CAUTIONARY NON-DIRECTIVE
AIRPORT SAFETY AND OPERATIONS DIVISION AAS-300

FOR INFORMATION, CONTACT Ed Cleary, (202) 267-3389, AAS-300 (202) 267-3389

Date: 12/13/2004 **No. 04-16**

To: Airport Operators, FAA Airport Certification Safety Inspectors

Topic: Deer Hazard to Aircraft and Deer Fencing

CANCELLATION:

Certalert 01-01. Deer Aircraft Hazard, dated February 1, 2001; and Certalert 02-09. Alternative Deer Fencing, dated December 12, 2002, are cancelled.

BACKGROUND

Elevated deer populations in the United States represent an increasingly serious threat to both Commercial and General Aviation Aircraft. It is currently estimated that there over 26 million deer in the United States. Because of increasing urbanization and rapidly expanding deer populations, deer are adapting to human environments, especially around airports, where they often find food and shelter. From 1990 to 2004, over 650 deer-aircraft collisions were reported to the Federal Aviation Administration (FAA). Of these reports, over 500 indicated the aircraft was damaged as a result of the collision.

In light of recent incidents where a Learjet landing at an airport in Alabama and a Learjet departing an airport in Oregon were destroyed after colliding with deer or elk, airport operators are reminded of the importance of controlling deer and other wild ungulates on and around airfields.

PURPOSE

Proper fencing is the best way of keeping deer off aircraft movement areas. The FAA recommends a 10-12 foot chain link fence with 3-strand barbed wire outriggers. In some cases an airport may be able to use an 8-foot chain link fence with 3-strand barbed outriggers, depending upon the amount of deer activity in a local area.

All fencing must be properly installed and maintained. A 4-foot skirt of chain-link fence material, attached to the bottom of the fence and buried at a 45° angle on the outside of the fence will prevent animals from digging under the fence and

reduce the chance of washouts. This type of fencing also greatly increases airport security and safety. The fence line right-of-way must be kept free of excess vegetation. The fence line should be patrolled at least daily, and any washouts, breaks or other holes in the fence repaired as soon as they are discovered.

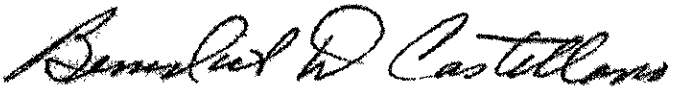
Gates should close with less than 6-inch gaps to prevent entry by deer.

When installation of chain link fencing is not feasible due to cost or environmental impacts, other types of fencing may be installed. (Cost alone is not an acceptable reason for rejecting the use of chain link fencing.) In some cases, electric fencing may offer a suitable alternative. Recent improvements in fencing components and design have greatly increased the effectiveness and ease of installation of electric fences. Tests by the USDA, National Wildlife Research Center have shown that some 4 to 6-foot, 5 to 9-strand electric fences designs can be 99% effective at stopping deer. Installation of some of the newer electric fences requires neither specialized equipment nor training and can be accomplished by airport personnel.

In limited situations, the use of non-conductive, composite, frangible electric fence posts and fence conductors may allow the installation of electric fence closer to the aircraft movement area than would normally be allowed with standard chain link fencing material.

If deer are observed on or near the aircraft movement area, immediate action must be taken to remove them.

Airport operators can contact the nearest USDA, Wildlife Services Office or the State Wildlife Management Agency for assistance with deer problems.



December 13, 2004

Ben Castellano, Manager
Airport Safety & Operations Division

Date

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