

Chapter 6:

Current Issues in Aviation

Security

After the terrorist attacks of September 11, 2001, Congress enacted the Aviation and Transportation Security Act (ATSA), which created the Transportation Security Administration (TSA). Congress established TSA to develop, regulate, and enforce transportation security standards for all modes of transportation. Consistent with this mission, Congress transferred the bulk of FAA's civil aviation security responsibilities to TSA. In April 2003, the TSA requested the Aviation Security Advisory Committee (ASAC) establish a Working Group made up of industry stakeholders to develop guidelines for security enhancements at the nation's privately and publicly owned and operated general aviation (GA) landing facilities. This listing of recommended guidelines or "best practices" was designed to establish non-regulatory standards for general aviation airport security. The Working Group consisted of GA industry associations, airport operators, and state and federal government representatives. Members of the Working Group engaged in extensive discussions to review numerous general aviation airport security recommendations and industry best practices. The result of this effort was the "Report of the Aviation Security Advisory Committee Working Group on Aviation Airports Security" This report constitutes a set of federally endorsed guidelines for enhancing airport security at GA facilities throughout the nation.

Purpose

The guidelines are intended to provide U.S. general aviation airport owners, operators and users with a set of federally endorsed security enhancements and methods for implementation. This will also help prevent the unauthorized use of a general aviation aircraft in an act of terrorism against the United States. The new guidelines were developed from industry best practices and provide a tool for operators to assess an airport's characteristics and determine which security enhancements are suitable. The guidelines contain the Airport Characteristics Measurement Tool that helps to define unique security needs for differing airports. It is designed to be self-administered by airport operators, allowing them to assess an airport's security characteristics and determine which enhancements are most appropriate.

The guidelines address the security needs of both small privately owned landing strips in rural areas as well as large corporate GA airports in major metropolitan areas. The document offers an extensive list of options, ideas, and suggestions for the airport operator, sponsor, tenant and/or user to choose from when considering security enhancements for GA facilities. This guidance will provide consistency across the Nation with regard to security.

Because these guidelines were developed from industry best practices, many Kansas City Regional airports already have some or all of these measures in

place. Recognizing that every GA landing facility is unique, there are recommendations and guidelines contained in this document that might be considered highly beneficial in one airport environment while being virtually impossible to implement at another. This material should be considered a living document, which will be updated and modified as new security enhancements are developed and as input from the industry is received.

Content

In order to assess which security enhancements are most appropriate for a GA landing facility, consideration must be given to those elements that make the airport unique. The most appropriate party to do this would be the person or persons with day-to-day operational control over the facility. This could be a state official, airport manager, or fixed base operator (FBO). In any case, the party doing the assessment should be intimately familiar with the airport, its activities, and the surrounding areas. To assist in this effort, TSA has developed an Airport Characteristics Measurement tool that can be used to determine where in the risk spectrum the facility lies. The tool is a list of airport characteristics that potentially affect a facility's security demeanor. The characteristics have been broken down into the following: airport location, based aircraft, runways, and operations.

Airport Location

A facility's proximity to mass population areas or sensitive sites can affect its security posture. Distance from such sites directly affects the ability of responding agencies to effectively react to an event. The further away from a potential target, the greater the response time available to responding agencies.

Based Aircraft

A smaller number of based aircraft increases the likelihood that illegal activities would be identified more quickly than at airports with a large number of based aircraft. In addition, airports with based aircraft of over 12,500 pounds warrant greater scrutiny.

Runways

Airports with longer paved runways are able to serve larger aircraft and consequently should be more security conscious. Conversely, because shorter, unpaved runways are not practical for use by large aircraft in many weather conditions, they may present a less attractive launching point for terrorist activities.

Operations

The number and types of operations that are conducted at an airport call for different approaches to security.

The IP outlines seven functional areas of GA airport security: personnel, aircraft, airports/facilities, surveillance, security plans and communications, and specialty operations.

Personnel

Passengers/Visitors

Prior to boarding, the pilot in command should ensure that:

- They identity of all occupants is verified,
- All occupants are aboard at the invitation of the owner/operator, and
- All baggage and cargo is known to the occupants.

Flight Schools and Student Pilots

Flight schools should:

- Require flight students to use proper entrances and exits to ramp areas. If access controls are available, consider having flight school personnel allow access to ramp areas only after establishing positive identification of flight students.
- Establish positive identification of student pilots prior to every flight lesson.
- Control aircraft ignition keys so that the student cannot start the aircraft until the instructor is ready for the flight to begin.
- Limit student pilot access to aircraft keys until the student pilot has reached an appropriate point in the training curriculum.
- Consider having any student pilot check in with a specific employee (i.e. dispatcher, aircraft scheduler, flight instructor, or other "management" official) before being allowed access to parked aircraft.
- Have the student sign or initial a form and not receive keys until an instructor or other "management official" also signs or initials.
- When available, use a different ignition key from the door lock key. The instructor would provide the ignition key when he or she arrives at the aircraft.

Aircraft Renters

- The identity of an individual renting an aircraft should be verified by checking an individual's government-issued photo ID as well as his or her airman certificate and current medical certificate necessary for that operation.

- In addition to any aircraft-specific operational and training requirements, a first-time rental customer should be familiarized with local airport operations, including security procedures used at the facility.
- Operators providing rental aircraft should be vigilant for suspicious activities and report them to appropriate officials.

Aircraft

Some basic methods of securing a GA aircraft include:

- Ensuring that door locks are consistently used to prevent unauthorized access or tampering with the aircraft.
- Using keyed ignitions where appropriate.
- Storing the aircraft in a hangar, if available, and locking hangar doors.
- Using an auxiliary lock to further protect aircraft from unauthorized commercially available options for auxiliary locks include locks propellers, throttle, and tie-downs.
- Ensuring that aircraft ignition keys are not stored inside the aircraft.

Airports and Facilities

Hangars

Hangars should be properly marked and numbered for ease of emergency response. These areas are also a good place to install security and informational signs. Hangar locks that have keys that are easily obtained or duplicated should be avoided. Hangar locks should be rekeyed with every new tenant. Proper lighting around hangar areas should be installed. As an additional security measure alarm and intrusion detection systems could also aid in the security of hangars.

Locks

Such factors to consider may include:

- Is the object to be locked indoors or outdoors?
- How many people will need to use the lock (i.e. would a combination be better than issuing keys)?
- Would a certain type of lock impede access in high traffic areas?
- How secure should the area be made?
- Is the area monitored?
- How often will codes, keys, or locks need to be changed for persons needing access (e.g. new hangar tenants, those with tiedown agreements needing ramp access, etc.)?
- Will use of a lock interfere with fire code egress requirements?

Perimeter Control

It is important to consider boundary measures such as fencing, walls, or other physical barriers, electronic boundaries (e.g. sensor lines, alarms), and/or natural barriers. Physical barriers can be used to deter and delay the access of unauthorized persons onto sensitive areas of airports. Such structures are usually permanent and are designed to be a visual and psychological deterrent as well as a physical barrier. They also serve to meet safety requirements in many cases. Where possible, security fencing or other physical barriers should be aligned with security area boundaries.

Lighting

Protective lighting provides a means of continuing a degree of protection from theft, vandalism, or other illegal activity at night. Security lighting systems should be connected to an emergency power source, if available. A careful analysis of security lighting requirements should be based on the need for good visibility and the following criteria: employee recognition and badge identification, vehicle access, detection of intruders, and deterrent to illegal entry. Protective lighting is generally inexpensive to maintain, and when properly employed, may provide airport personnel with added protection from surprise by a determined intruder. However, when developing any security lighting plan care should be taken to ensure that lighting does not interfere with aircraft operations. Consider installing outdoor area lighting to help improve the security of aircraft parking and hangar areas, fuel storage areas, airport access points, and other appropriate areas.

Signs

The use of signs provides a deterrent by warning of facility boundaries as well notifying of the consequences for violation. Signs along a fence line should be located such that when standing at one sign, the observer is able to see the next sign in both directions. While signs for security purposes should be designed to draw attention, it also should be coordinated with other airport signs for style and consistency when possible. Signs should be constructed of durable materials, contrasting colors, and reflective material where appropriate. Use as concise language as possible.

Airport Planning

Planning for security should be an integral part of any project undertaken at an airport. The most efficient and cost effective method of instituting security measures into any facility or operation is thorough advance

planning and continuous monitoring throughout the project. Selecting, constructing, or modifying a facility without considering the security implications can result in costly modifications and delays. Airport operators should consider addressing future security needs such as access controls and lighting enhancements when planning new hangars or terminal buildings. Security concerns should be included and addressed in airport facility and land leases, airport rules and regulations, and the Minimum Standards document. In addition, airport construction projects can affect airfield security. Construction personnel and vehicle access during projects should be considered.

Surveillance

- Airport Community Watch Program
- Know Reporting Procedure
 - Contact Airport management
 - Utilize GA-SECURE Hotline (866) GS SECUR
 - Contact local Law Enforcement
- Form Airport Security Committee
- Encourage Law Enforcement Officer Support
- Utilize Closed Circuit Television
- Install Intrusion Detection System

Security Procedures and Communications

Security Procedures

GA airport managers/operators may find it helpful to develop written security procedures. Many of these security initiatives are already being conducted on airfields but have not been formalized into a documented program. Documentation provides managers with a traceable and auditable method of ensuring airport employees and tenants are aware of and understand security issues. Such a protocol should minimally consist of, but not be limited to, airport and local law enforcement contact information, including alternates when available, and utilization of a program to increase airport user awareness of security precautions such as Airport Watch.

Threat Level Increases

Appropriate actions may include:

- Conducting all measures taken at lower threat condition.
- Limiting facility access points.

- Making regular surveillance patrols of facility property, buildings, and aircraft.
- Increasing surveillance of critical locations.
- Coordinating necessary security efforts with federal, state, and local law enforcement agencies or any National Guard or other appropriate organizations.
- Preparing to execute contingency procedures, as appropriate.
- Ensuring positive identification of pilots and tenants.
- Assigning emergency response personnel, pre-positioning, and mobilize specially trained teams or resources.
- Closing the facility.

Threat Communication System

The following phone numbers should be included on the contact list

- Landing facility operator
- Landing facility manager
- Individual with responsibility for facility security
- Local Police or County Sheriff Department (List all responding LEO Agencies)
- State Aviation Director
- County/City Emergency Manager
- State Police
- Fire Department
- State Office of Public Safety/Homeland Security
- FBI
- Local FAA contact
- Local TSA contact (that is, Federal Security Director or designee)
- Any other appropriate organization

Specialty Operations

Agricultural Aircraft Operations

TSA suggests that each owner/operator take appropriate steps to secure agricultural aircraft when unattended, including:

- Use multiple devices to secure agricultural aircraft such as throttle and control locks, propeller locks, and hidden ignition switches.
- Store aircraft in hangars with electronic security systems and steel doors.
- Park heavy equipment in the front and back of agricultural aircraft when hangars are not available for storage.

Airport Tenant Facilities

For those airports with a perimeter fence, many airport tenant facilities have access to the aircraft parking and movement and public areas of the

airport through their building. Typically, the tenant leasing the facility is responsible for security. However their access controls may also be incorporated into the airport's security procedures and/or alarm and reporting system. Airport operators should coordinate with their tenants to ensure that any security procedures or systems do not conflict or leave gaps. For example, airport management should coordinate and ensure security procedures exist and are harmonized with maintenance facilities that have access on both the public side of the fence and the aircraft parking and movement areas.

Aircraft and Vehicle Fueling Facilities

Fuel farms are normally placed in as remote a location of the airport as possible for safety and convenience purposes. If feasible, use security fencing, lighting, and access controls whenever possible to control movement in these areas. Trucks used to transfer fuel to aircraft should be secured when not in use. This includes controlling fuel truck keys and not leaving keys in trucks while unattended. Consider marshalling fuel trucks in an easily monitored location.

Military Facilities

Some airports may have adjacent or on-airport military facilities such as military Reserve, National Guard, or active duty units. Since each of these situations is unique, and since these facilities are often at least partly within the aircraft movement area, detailed coordination between the airport and the military facility must occur for security procedures and responses. Typical areas of coordination include access control, badging and background check requirements, areas of access, security patrol boundaries, security response responsibilities, and joint and/or shared security system data and equipment.

These guidelines are self-administered and simply make suggestions based on industry best practices. Kansas City regional airports are generally in compliance with these guidelines with no major variances to report.

Light / Sport Aircraft Category

Overview

The FAA has created a new rule for the manufacture, certification, operation, and maintenance of Light-Sport Aircraft in 2004. Light-Sport Aircraft is a small, simple to operate, and low performance aircrafts that weigh less than 1,320 pounds. They are heavier and faster than ultralight vehicles and include airplanes, gliders, balloons, powered parachutes, weight-shift-control aircraft, and gyroplanes.

The FAA pronounces this action necessary to address advances in sport and recreational aviation technology, lack of appropriate regulations for existing aircraft, several petitions for rulemaking, and petitions for exemptions from existing regulations. Ultimately, bringing these aircrafts under a new regulatory framework will allow individuals to experience sport and recreational aviation in a manner that is safe for the intended operations

The intended effect of this action is to provide for the manufacture of safe and economical certificated aircraft that exceed the limits currently allowed by ultralight regulation. By closing the gaps in existing regulations and by accommodating advances in technology, safety will be increased within the Light-Sport Aircraft community. This will also allow operation of these aircraft by certificated pilots for sport and recreation, to carry a passenger, and to conduct flight training and towing in a safe manner.

Specifications

To qualify as a Light-Sport Aircrafts (LSA), the aircraft must weigh less than 1,320 pounds (1,430 pounds for aircraft intended for operation on water). LSA's are one or two occupants, single engine aircrafts that have maximum stall speeds of 45 knots. The maximum airspeed is 120 knots. LSA's have fixed landing gear, except for an aircraft intended for operation on water or a glider, and fixed pitch propellers, which can be ground adjustable.

Any person with a valid driver's license may operate a LSA. The pilot must comply with the restrictions and limitations imposed on their driver's license as well as any judicial or administrative order applying to the operation of a motor vehicle. In addition, the pilot using a valid driver's license must not have been denied his/her most recent application for a medical certificate or have it suspended or revoked if you have been issued a medical certificate. Limitations of the sport pilot are as follows: must fly during the day with 3 miles of visibility or greater, fly in class G and E airspace, prohibited from excepting compensation for services, fly below 10,000 MSL, and may not tow any object. With additional training and endorsements, LSA's can operate in class B, C, and D airspace. Sport pilots may only fly aircrafts that meet the Light-Sport Aircraft definition,

which includes transitioning “ultralight like” aircrafts, newly manufactured aircrafts, and previously certificated aircrafts.

As outlined under his new rule, new identification markings are required. “N” numbers are required for all power parachutes and weight-shift control aircrafts. Experimental LSA’s will be marked “ELSA” and include 6 classes; airplane, glider, lighter-than-air, powered parachute, weight-shift, and gyroplane. Light-Sport Aircrafts will be marked “SLSA” and include 5 classes; airplane, glider, lighter-than-air, powered parachute, and weight-shift.

Potential Outcomes and Concerns

The FAA received over 4,700 comments to the Notice of Proposed Rulemaking (NPRM). Of those, 2,913 were in response to the publication of the NPRM in the Federal Register and approximately 1,800 additional comments came through the on-line forum. Most comments expressed fundamental agreement with the FAA’s intent in proposing the rule. While there were many comments containing specific criticisms of the proposed rule and suggestions for how the rule could be improved, few expressed a complete disagreement with the FAA’s goal of providing for the manufacture of safe and economical aircraft and to allow operation of these aircraft by the public in a safe manner. Some comments contained numerous specific suggestions and criticisms, yet were prefaced by a statement of support for the FAA’s efforts to make aviation more accessible to the general public. It should be noted that, while not substantial in number, several expressed a fundamental disagreement with the FAA’s proposed action, based upon a lack of confidence in the ultralight community.

This rule allows the ability to utilize a driver's license in lieu of a medical certificate. This allows pilots, who are otherwise healthy but who choose to not renew their medical certificate, to continue flying in Light Sport Aircraft. In addition, the rule explicitly states that a pilot may not use a current and valid U.S. driver's license in lieu of a valid airman medical certificate if the pilot knows or has reason to know of any medical condition that would make that person unable to operate a Light Sport Aircraft in a safe manner. The determination as to whether a pilot has a medical condition that would make him or her unable to operate the aircraft in a safe manner is the sole responsibility of the pilot.

The Airport Owners and Pilots Association (AOPA) said the agency should go even further and extend sport pilot privileges to recreational pilots. That would mean that recreational pilots could use a current driver's license to meet the medical requirements and that they could fly in Class B, C, and D airspace with the proper flight instructor endorsement.

Opponents are concerned that reducing the barriers to become a pilot does not make the skies safer, but more dangerous. One opponent mentioned that creating this class permits the “weeding out of bad pilots” and lumping them into a class that allows them to fly. Everyone agrees that this will encourage thousands of new pilots to take to the skies for recreation.

One State's Department of Transportation's aeronautical division expressed concern that allowing persons with a driver's license as a sole form of identification to have access to airports and the airspace system would reduce pilot identification standards and would lead to reduced security. The FAA responds that all persons operating an aircraft are required to possess a pilot certificate and pass a practical test. This rulemaking action will bring persons who were formerly operating as ultralight pilots into an existing certification system that will provide further scrutiny of these individuals. These ultralight pilots have not been required to have pilot certificates, possess airman medical certificates or driver's licenses, or been required to take practical tests. Therefore, they have not been subject to any level of government scrutiny. Only sport pilots, or those seeking to exercise sport pilot privileges will be afforded the opportunity to exercise certificate privileges with either an airman medical certificate or a U.S. driver's license. These persons will be required to possess a pilot certificate and pass a practical test.

The AOPA told the FAA that the Sport Pilot and Light Sport Aircraft proposed rule is a needed step forward to provide a lower cost alternative to the current private pilot certificate. The typical private pilot's license costs approximately \$9,000 and generally takes months to achieve. With the new sport pilot certificate, the estimated cost could be as low as \$2,600.

Because the new rules will help keep recreational flying affordable, the agency expects the return of thousands of pilots who left aviation because of high costs. The production of more planes will bring down costs for everyone.

Other opponents are concerned with the motives behind this new rule. "Obviously the real intent is to regulate and restrict previously unrestricted movement" says one pilot. Another mentions that the licensing did not stem from a string of deadly crashes caused by these aircrafts, so that the driving force must be to regulate and restrict previously unrestricted movement of more than 15,000 ultralight like aircrafts.

The FAA boosts safety as a concern and backs most of its decisions with safety in mind. These new sport pilots will now be required to make themselves aware of safety- and security-related information contained in notices to airmen (NOTAMs). Before, operators of ultralight vehicles are not required to review these NOTAMs. The FAA also expects that in the long term, instructors operating Light-Sport Aircraft previously classified as two-seat ultralight-like aircraft will provide instruction at a lower cost and with greater safety.

Under this rule all persons performing work on Light-Sport Aircraft will be required to hold repairman (Light-Sport Aircraft) certificates. According to new security procedures, their names will be entered into the FAA airman registry. The holder of a Repairman certificate with an Inspection Rating may perform

inspections on LSA. Repairmen earn that certificate by attending one of the 16-hour courses that will be sponsored by USUA or other organizations. Maintenance is another issue. Owners may maintain their own aircraft, but they may not charge for their services. In order to perform maintenance on someone else's aircraft for a fee, they will need to hold a Repairman Certificate with a Maintenance Rating. This can be obtained by successfully completing a much more involved training course. Three core modules are required. They cover regular maintenance procedures, and will each have a 50-question test that will bring the repairman to a level 3 rating (authorized to perform maintenance without supervision).

In addition, all existing unregistered ultralight-like aircraft and two-place ultralight training vehicles will now be certificated and entered into the FAA aircraft registry. This will enable the TSA to conduct any necessary security screening for certificated airmen and registered aircraft operating in the National Airspace System (NAS).

The rule's safety requirements should give this segment of the general aviation community better access to insurance, financing, and airports.

As the Light-Sport Aircraft is observed over time more data and statistics will produce better guidelines for forecasting. As for now, the creation of the Light-Sport Aircraft should generate more traffic through the Kansas City regional airports. As more ultralight like aircrafts transition to Light-Sport Aircrafts then more ELSA certifications will be issued. There may also be initial costs to transition aircrafts to Light-Sport. Overall sales of Light-Sport will presumably rise and more amateur pilots will take to the air. Airport staff may need to be available for first-time pilots. Repairmen and pilots who were not regulated as ultralight like aircrafts now must be certified and set aside time to do so. Furthermore, general storage for these aircrafts will need to be considered, airports should evaluate their hangar capacity and anticipate more room for Light-Sport Aircrafts. MARC will continue to monitor this classification and gather data as it becomes available.

Anticipated Increase in Turboprop / Jet Aircraft Activity

The popularity of business aircraft has increased as more companies realize the efficiency and productivity of this powerful business tool.

Paced by the business use of general aviation aircraft, the GA active fleet is expected to grow at a rate of 0.9 percent annually over the next 12 years, according to the FAA's latest forecast. It assumes that the business use of general aviation aircraft will expand at a more rapid pace than personal use.

The FAA Aerospace Forecasts, Fiscal Years 2001- 2012 report projects that the "more expensive and sophisticated" turbine-powered fleet, including rotorcraft, will grow at four times the rate forecast for the piston aircraft categories.

The numbers of turbine-powered fixed-wing aircraft are expected to increase at an average annual rate of 3 percent, totaling 18,880 in 2012—6,600 turboprops and 12,280 jets. Meanwhile, the turbine rotorcraft fleet is expected to increase at an annual rate of 1.5 percent over the forecast period, totaling 5,960 in 2012.

The worldwide jet fleet as of the end of 2003 was 12,974 aircraft, more than double the fleet size in 1986. In fact, steady growth has occurred over the last 20 years. Since 1986, the worldwide turboprop fleet also has grown, reaching 10,147 aircraft by the end of 2003.

Most of the increase in GA aircraft use occurs with jets, the fastest-growing category of general aviation aircraft. The active fleet and hours are up 4.3 percent and 7 percent annually, respectively. The FAA said the large increases are due to the expected increases in both the fractional-ownership fleet and its activity levels. Utilization of fractional-ownership aircraft averages approximately 900 hr annually, compared with only 325 hr for all business jets.

"These particular types of aircraft tend to have a lot more utilization," said Rodgers. "As a result they are going to be the driving factor for bumping up general aviation hours." In 2012, piston-powered aircraft, including rotorcraft, are projected to fly 28.1 million hours, while turbine-powered fixed- and rotary-wing-aircraft will fly 11.7 million hours.

The number of companies operating business aircraft in the United States has grown more than 60 percent from 6,584 companies operating 9,504 aircraft in 1991 to 10,661 companies operating 15,879 aircraft in 2003. During 2003, 14,555 operators flew 23,121 turbine-powered business aircraft worldwide. More than 75 percent of the operators (10,982) and 72 percent of the aircraft (16,650) were located in North America.

Airport and Aircraft Specifics

The aircraft approach category is a grouping of aircraft based on 1.3 times their stall speed in their landing configuration at their maximum certificated landing weight.

Table 7-1 Aircraft Approach Categories

Category	Speed (knots)
A	< 91
B	91 - 120
C	121 - 140
D	141 - 165
E	> 165

Table 7-2 Airplane Design Groups

Group	Wingspan
I	< 49'
II	49 - 78'
III	79 - 117'
IV	118 - 170'
V	171 - 213'
VI	214 - 261'

Table 7-3 Runway design standards for aircraft approach category A & B and runways with greater than ¾-statute mile approach visibility minimums

Item	Airplane Design Group			
	I	II	III	IV
Runway Width	60'	75'	100'	150'
Runway Shoulder Width	10'	10'	20'	25'
Runway Blast Pad Width	80'	95'	140'	200'
Runway Blast Pad Length	100'	150'	200'	200'

Table 7-4 Runway design standards for aircraft approach category A & B and runways with lower than ¾-statute mile approach visibility minimums

Item	Airplane Design Group			
	I	II	III	IV
Runway Width	100'	100'	100'	150'
Runway Shoulder Width	10'	10'	20'	25'
Runway Blast Pad Width	120'	120'	140'	200'
Runway Blast Pad Length	100'	150'	200'	200'

Table 7-5 Runway design standards for aircraft approach categories C & D

Item	Airplane Design Group					
	I	II	III	IV	V	VI
Runway Width	100'	100'	100'	150'	150'	200'
Runway Shoulder Width	10'	10'	20'	25'	35'	40'
Runway Blast Pad Width	120'	120'	140'	200'	220'	280'
Runway Blast Pad Length	100'	150'	200'	200'	400'	400'

However, it is important to note that the current regulations for turbine-powered aircraft do not require a runway for the entire takeoff distance, while the regulations for piston-engine aircraft normally requires runway for entire takeoff. Kansas City regional airports can expect a growth in takeoffs and landings of this type of aircraft and should be poised to capture this market.

Airports should be planning improvements with regard to this growing type of aircraft and prioritize all improvements to accommodate the corporate jet. Runways should be greater than 4000 feet and currently runways not equipped to handle these aircrafts are located at Roosterville, Gardner Municipal, Lexington Municipal, and Excelsior Springs Memorial Airport. Airports that may need to expand their runways include Johnson County Executive, Clay County Regional, Lawrence Smith Memorial, and Lee's summit Municipal Airport.

Other amenities to consider when accommodating for Business Jets are car rental and lodging. While the majority of airports in the region provide or are located in close proximity to these services, there are a few outlying airports that can not provide these services. Lexington is a poor provider of these services and travelers will need to look at surrounding cities for their needs. Clay County Municipal Airport in Mosby, MO is another example of passengers on these aircrafts needing to travel to adjacent cities for lodging and car rental. Excelsior Springs, MO does offer lodging in the form of a resort and spa, but travelers will most likely turn to Kearney, MO for lodging.

To capture this growing market, airports, as well as their city in which they are located in, will have to be accommodating to and the provide for the needs of Business Jet passengers.