

Rural & Small Town Airport

Physical Security Manual & Checklist



Prepared By

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INTRODUCTION

Most of America's rural and small town airports were built at a time when security and crime prevention were not issues. Consequently, little or no effort was made to incorporate security precautions into their design. This makes these facilities extremely vulnerable to modern criminals.

Fortunately, there are a variety of relatively simple and inexpensive steps that can be taken to increase the security of airport facilities. Following the suggestion in this manual won't guarantee absolute security, but it will give you a head start in protecting your airport and its users.

This manual is based on an earlier document developed for use by government facilities and businesses. It has been in use for a several years and has been well received by its users.

This manual is intended to function as an inspection and training instrument to enable you as a Small Airport Administrator or other responsible official to:

- Perform a physical security needs assessment of your facility(s) with regard to external security threats
- Implement measures to address security deficiencies identified in the assessment.

Components of the manual include:

- An overview of general crime prevention theory. This overview provides a basic understanding of criminal motivation and the goals and methods of crime prevention planning.
- A mostly non-technical discussion of security design theory. In particular, it introduces the concept of Crime Prevention Through Environmental Design (CPTED) and explains the CPTED elements: Defensible Space, Territoriality, Surveillance, Lighting, Landscaping, and Physical Security.

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- A user-friendly set of design standards. These standards are based on a model developed by crime prevention and security experts who are responsible for specifying security requirements in new and renovated buildings. These standards are easily understandable guidelines for establishing a minimum level of adequate security in every facility type. This approach eliminates the need for the assessor to establish an arbitrary risk level for his or her facility.
 - An annotated Assessment Checklist. This Checklist is modular in nature allowing assessors to address the potential risk areas present at their airport. Some airports may utilize every module. Most will only require a few modules. The focus of this checklist is the prevention of criminal attack on the airport from the outside.

A physical security assessment utilizing the checklist should only be conducted after you have reviewed the information in this manual. Without a basic understanding of crime prevention theory and security standards, it is difficult to accurately assess and evaluate security risks.

After reviewing this manual and completing the assessment checklist, you will have a clear understanding of:

- Physical design factors influencing security at your airport.
- Previously unidentified security threats.
- The strengths and weaknesses of existing security measures.
- Methods and procedures to eliminate or reduce security threats.

Where security is concerned, there are no absolute safeguards. There are however, proven crime prevention techniques that reduce the likelihood that criminals will view your airport, and its users, as attractive targets for attack.

By understanding and acting on the information contained in this manual, you can significantly reduce the vulnerability of your airport to criminal attack.

While using this manual and checklist, keep in mind that its purpose is not so much to tell you exactly what to do, but rather, to help you understand the concepts of security and crime prevention. By understanding these concepts, you are in a strong position to make the correct crime prevention choices.



WHY BOTHER

Crime rates in small towns and rural areas tend to be low, with serious crime a rare occurrence. Consequently, security has never been a major concern at most rural and small town airports. These airports are generally used by a relatively small number of people who are well known to each other. Outsiders are rare and when they do arrive, their presence and activities are readily apparent to airport regulars. This familiarity and awareness leads to a trust that makes locks and fences seem unnecessary. Leaving offices, hangars and aircraft unsecured is commonplace.

Unfortunately, as population areas expand to encroach on previously remote airports, and criminals become more mobile and brazen, small airports are no longer immune from criminal activity. Theft of avionics is on the rise everywhere. Theft of aircraft for drug smuggling and even terrorist activity is a growing threat. The fact that small airports are easily accessible and mostly unprotected is common knowledge in the aviation oriented criminal community.

Failing to accept this new reality and understand and address the crime risks that confront small airports can have devastating and far-reaching consequences.

The financial implications to the owner for the theft of an aircraft or avionics are obvious. The potential implications for airport management when an on-airport crime occurs can be less obvious but far more serious. Whenever a crime occurs on an airport there is a potential threat of litigation against its owners and managers. If an on-airport crime such as the theft of an aircraft ultimately results in injury or death to a third party at some other location, litigation is certain.

A stolen aircraft crashed into a neighborhood during a drug run or into an office building during a terror incident can have far reaching repercussions for both the aircraft owner and the airport of origin. Victimization of airport users can result in negative publicity and create economic losses for the airport and its FBO's.

The only way to avoid the consequences of crime and the potential litigation nightmares that follow is to make every “reasonable” effort to prevent any “foreseeable” criminal attack. This security assessment is the first step in the process.



Small Airports After 9/11

On September 11, 2001, America suffered a devastating act of terrorism. The fact that the terrorists were able to pass through airport security measures and commandeer commercial airliners to carry out the attacks placed not only commercial airports, but General Aviation as a whole under tremendous public scrutiny. During the ensuing investigations, it was learned that the terrorists prepared for these attacks by enrolling in flight training at various small airports. It was also learned that terrorists explored the possibility of using agricultural aircraft to spray chemical or biological substances on an unsuspecting public. This new information about terrorist methods means that every airport from the largest international facility down to the rural airstrip is a potential target of terrorist activity.

In January 2002, a sixteen-year-old student pilot stole a training aircraft from his flight school and intentionally crashed it into an office building. As could be expected the furor that followed once again raised questions about airport security.

In light of the above, should small airports be more vigilant just because of the threat of terrorism? We believe the answer is no. The odds of terrorist activity occurring at most small airports are infinitesimal.

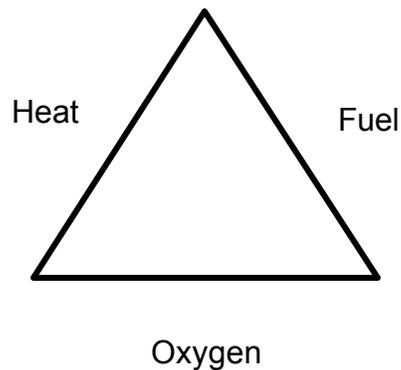
However, just because terrorist activity is unlikely at your airport doesn't mean that constant vigilance is unnecessary. If an aircraft is stolen from your ramp, does it really matter as to the motive of the thief? The aircraft is still gone. If a suspicious person is seen loitering around parked aircraft, does it matter at that moment if he is a terrorist or just an avionics thief? When a crime is occurring, the motives of the criminal are irrelevant.

If your airport develops a security program that protects aircraft, property and people from criminal attack, you have met your obligation. Your responsibility is to prevent crime regardless of the motive of the criminal.

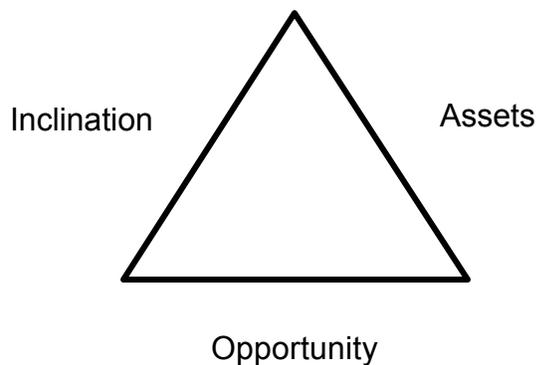


A CRASH COURSE IN CRIME PREVENTION

When we were in grade school, most of us learned about the Fire Triangle. We learned that in order for a fire to burn, three things are required. They are *Heat*, *Fuel* and *Oxygen*. Remove any one of the three and a fire can't happen.



Crime, like fire, requires three components in order to occur. These components are *Inclination*, *Assets* and *Opportunity*. As with fire, removal of one or more of the components will prevent the crime from occurring.



To understand these three components and their role in crime prevention, we will examine them separately.

Inclination

This component describes the desire or motivation of an individual to commit a crime. Examples are: financial gain, revenge, jealousy, anger and hatred.

Because *inclination* involves a person and their mental processes, from an airport management standpoint, it is the most difficult component to remove. *Inclination* exists in the realm of psychologists, sociologists and criminologists. There is little that airport managers can do to influence it.

Assets

This component describes something to be gained by committing a crime. *Assets* are usually thought of as tangible objects such as an aircraft or avionics. However they may be intangible or abstract objects. In a murder, the victim is the *asset*. The bombing of a building could involve multiple assets. These may include the property that is destroyed. They might also include the symbol that the organization projects and the employees working in the building. The World Trade Center is an example of a symbolic asset.

While it may be theoretically possible in some instances to remove *assets* to prevent crime, it is generally impractical or unrealistic.

Opportunity

This component describes the circumstances and conditions that permit a crime to occur. Every crime has its own unique set of opportunities, but two conditions are usually present.

These are: (1) Access to the *asset(s)*, and (2) An apparent likelihood that the crime can be committed successfully with minimal risk to the perpetrator.

Opportunity is the crime component that is most readily influenced by security measures. When developing an airport security program, the first priorities should be the recognition of criminal opportunities followed immediately by the initiation of actions to remove those opportunities

The remainder of this manual and the accompanying assessment checklist will explore in detail the tools available to eliminate the *opportunity* for criminal activity at your airport.



CRIME PREVENTION IN 3D

Most crimes occur because the criminal found the right opportunity to act. The criminal's *inclination* and the victim's *asset* came together at a time and place where the criminal felt they could successfully commit the crime with minimal risk of interference or apprehension. That is, the criminal found circumstances and conditions to be within their comfort zone.

Your job when developing an airport security program is to create an environment that lowers the comfort level of potential criminals. Applying the three “D’s” of crime prevention helps do this.

Deter

The goal of deterrence is the creation of an environment that is unattractive to criminals. Anything that increases the likelihood that a criminal's actions will be observed and reported to police or security personnel is a deterrent. In general, open, well lit, well used areas are less susceptible to crime. The visible presence of security measures and the use of access control devices and barriers are deterrents. Alert employees, security personnel and legitimate airport users are deterrents. A successful deterrence program makes the criminal hesitant to commit their crime in that environment. Even when the facility itself is the target, such as with anti-government terrorist attacks, a well-designed deterrence program may prevent an attack.

Effective deterrents place psychological and/or physical barriers in the criminal's path and imply to them that they have no easy *opportunity* to successfully commit their crime.

Delay

In spite your best efforts, some criminals may not be put off by security measures and other *deterrent* efforts. In these instances, your next line of defense is to delay completion of the attack. The longer it takes a criminal to complete an attack, the greater the probability that they will be observed and apprehended.

Barriers such as solid doors, good locks, fencing and other physical security measures are all devices that delay a criminal's activities.

The presence of *delaying* measures increases both the difficulty and risk associated with a criminal's activities. Increased *delay* usually equates to decreased *opportunity* in the criminal mind.

Detect

Even with the best security programs, there is always a chance that criminal activity will occur. Total security doesn't exist. When a crime does occur, early *detection* greatly increases the odds that the criminal will be apprehended.

Early *detection* can be accomplished by a variety of means. During business hours, the best *detection* devices are alert people. After hours and in areas of the airport not normally occupied, various electronic devices can be employed to *detect* criminal activity. These devices include alarm systems and closed circuit television.

The presence of alert people and electronic security devices sends a message to the potential criminal that their actions will be detected. This increased risk of apprehension reduces their level of comfort. As a result, *opportunity* is also reduced.



CREATING A SECURE ENVIRONMENT: THE CPTED CONCEPT

Generally when we think of security, we think in terms of hardware items such as locks and alarm systems. It's true that hardware is an integral part of any security system. Unfortunately, hardware can be expensive. It can also create a false sense of security when relied upon as the sole means of protection.

By understanding and applying basic crime deterrence concepts supplemented by strategically applied security hardware, we can create an inherently crime resistant physical environment at a minimal cost. Not only is the environment safer, in most cases it is also a more pleasant place to work in or visit.

The idea of using the physical environment as protection against attack dates back to prehistoric times. However, it wasn't until recently that the problem of creating a defensive environment was approached from both the physical and the psychologically aspect at the same time.

The goal of Crime Prevention Through Environmental Design (CPTED) is reduction of criminal opportunity. This is achieved with physical design features that discourage crime, while encouraging legitimate use of the protected area.

CPTED makes possible designs that offer protection without resorting to the prison camp approach to security. Use of fortress-type construction is minimized, and where necessary, integrated into the overall design, thereby reducing negative visual impact as much as possible.

To understand fully how CPTED is used, it is necessary to examine its components and the philosophy behind them. Although crime prevention by design is itself relatively new, its individual elements are common security techniques. The uniqueness and success of CPTED stems from the manner in which these techniques are integrated with, and applied to, the overall facility design.

Defensible Space

To provide maximum control, an environment is first divided into smaller, clearly defined areas or zones. These zones become the focal points for the application of the various CPTED elements. "Defensible space" is the term used to describe an area that has been made a "zone of protection" by the design characteristics that create it.

Under defensible space guidelines, all areas are designated as either public, semi-private or private. This designation defines the acceptable use of each zone and determines who has a right to occupy it.

Public Zones. These areas are generally open to anyone and are the least secure of the three zones. This is particularly true when the zone is located within a building or in an area with uncontrolled access and little or no opportunity for close surveillance. Building grounds, public parking lots and lobby areas are examples of public zones. At most small airports, the entire airport with the possible exception of private offices or hangars is considered public.

Semi-private Zones. These areas create a buffer between public and private zones and/or serve as common use spaces. Office waiting areas, meeting rooms and similar areas are examples of semi-private zones. These areas are accessible to the public, but are set off from the public zone. This separation is accomplished with design features that establish definite transitional boundaries between the zones.

At some small airports the ramp areas are intended to be semi-private zones with access limited to employees, pilots and passengers.

Private Zones. These are areas of restricted entry. Access is controlled and limited to specific individuals or groups. Private offices and employee only work areas are examples of private zones.

Division between zones is generally accomplished with some type of barrier. These can be either physical or symbolic.

Physical barriers, as the name implies, are substantial in nature and physically limit or prevent movement. Fencing, some forms of landscaping, locked doors, and the like are examples of physical barriers.

Symbolic barriers are less tangible. The only requirement is that it defines the boundary between zones. This type of barrier does not prevent physical movement. All that is required is that it leaves no doubt that a transition between zones has taken place. Low decorative fences, and changes in sidewalk patterns or materials are examples of exterior symbolic barriers. Interior symbolic barriers could include furniture arrangements or rope barriers such as those used in waiting lines. Signage can be a symbolic barrier in any setting.

At some small airports, ramp areas and certain other locations are considered to be private zones.

Territoriality

Territoriality involves an individual's perception of, and relationship with, an environment. A strong sense of territoriality encourages an individual to take control of his or her environment and defend it against attack.

A sense of territoriality is fostered by architecture that allows easy identification of certain areas as the exclusive domain of a particular individual or group. This feeling is enhanced when the area involved is one the individual can relate to with a sense of pride and ownership. It is not enough for a person simply to be *able* to defend their environment; they must also *want* to defend it. That “want” results from those territorial feelings.

The term “ownership” when used in this context does not necessarily mean actual legal ownership. It can be, and very often is, a perceived ownership resulting from an individual's relationship with the environment. Pilots and ramp workers, for instance, may feel a sense of ownership for the ramp and tiedown areas.

Individuals who feel a sense of ownership in an area will be more aware of activities taking place around them. As a result, criminal activity will be more readily detected and reported.

Surveillance

Surveillance is the principal weapon in the protection of a defensible space. Criminals are least likely to act when there is a substantial risk of their actions being witnessed. Environments in which legitimate occupants can exercise a high degree of visual control have the greatest likelihood of criminal activity being observed and reported.

Informal Surveillance. Opportunities for informal or natural surveillance occur as a direct result of architectural design. Designs that minimize visual obstacles and eliminate places of concealment for potential assailants offer the most protection against crime. These open designs also encourage use of the environment. People feel safer when they can easily see and be seen.

The use of defensible space in conjunction with natural surveillance is a potent crime prevention tool. The establishment of transition zones gives both the occupant and the intruder clear and definite points of reference. For the occupant, an intruder's entrance into a semi-private or private zone creates cause for attention and possible alarm. For the intruder, entering a restricted zone spotlights his actions, elevates his anxiety level, and greatly increases his risk of being discovered and apprehended.

Formal Surveillance. Formal surveillance methods, such as closed-circuit television, electronic monitoring, fixed guard posts, and organized security

patrols, are normally used only when natural surveillance alone cannot sufficiently protect an area. Public, semi-private and private zones that are concealed from view or that experience regular periods of isolation or inactivity may benefit from some type of formal surveillance.

Lighting

Good lighting is one of the most effective crime deterrents. When used properly, light discourages criminal activity, enhances natural surveillance opportunities, and reduces fear in legitimate users.

The type and quantity of light required varies from application to application, but the goal remains the same in all cases. To the degree possible, a constant level of light providing reasonably good visibility should be maintained during hours of darkness. The absolute level of light, provided it meets minimum standards, is less critical than the evenness of the light. Bright spots and shadows should be avoided. Highly vulnerable areas and those that could conceal a potential attacker should be illuminated more brightly than areas designed for normal activity. The object is to light up the criminal without spotlighting the victim.

As used in CPTED, lighting also plays a part in creating a feeling of territoriality. Lighting can influence an individual's feelings about his environment from an aesthetic as well as a safety standpoint. A bright, cheerful environment is much more pleasing than one that appears dark and lifeless. The ability to feel good about one's environment is important in developing a sense of pride and ownership.

Landscaping

Landscaping design, like architectural design, plays a significant role in CPTED. Landscaping and can be used to perform a variety of functions.

As a symbolic barrier, landscaping can mark the transition between zones. Features such as decorative fencing, flowerbeds, ground cover, and varied patterns in cement work can show separation between zones. If more substantial barriers are needed, shrubbery such as evergreen hedges, cactus arrangements or thorny bushes can create more formidable obstacles.

From a surveillance standpoint, landscape design is critical. Visual corridors must be maintained in open, park-like areas as well as in densely planted areas. As a rule, visual surveillance corridors can be maintained by limiting shrubbery to a maximum height of three feet and trees to a minimum height of six feet at the lowest branches. This ensures that visibility between three and six feet from the ground will be relatively unimpaired. Shrubbery that conceals a building's doors, windows and walkways dramatically increases their vulnerability to attack. Growth characteristics of plants and their placement in relation to potentially vulnerable areas are also an important concern.

Another function of landscaping in crime prevention is aesthetics. Again, an attractive environment generates a sense of pride and ownership.

Physical Security

The problem with the physical security of many buildings lies with the fact that designers often don't understand crime and criminals. Enlightened physical security planning can contribute considerably to the overall security of a property. The proper application of security hardware and the elimination of security weaknesses from a structural standpoint can have a significant impact on future crime problems.

As an element of CPTED, physical security planning is not intended to create an impenetrable fortress. The goal is merely to make penetration more difficult and time-consuming. Degree of difficulty and length of delay are key factors in reducing the probability that crime will occur.

Many of the individual CPTED elements should be familiar to everyone. Hardware, lighting, and surveillance are all standard crime prevention tools. The emphasis of CPTED is not just on the tools, however. How the tools are used is what makes the difference.



SAMPLE SECURITY STANDARDS

The following is based on model security standards and building security codes in effect across the country. They were not specifically developed for airports but many of the items addressed apply to airport property and buildings. Sample standards are included for reference purposes only and should not be viewed as mandatory requirements. In fact, it would be quite unrealistic to expect all existing structures to meet these standards. It would be equally unrealistic to attempt to retrofit most structures to fully comply. Prior to implementing any standard called out here, check with a qualified security professional or consult with the appropriate standard setting organization for current recommendations. In particular, lighting standards and test standards for such items as glazing materials are subject to change at any time.

Section I: Glossary

“**Accessible**” is capability of being used as ingress or egress with no effort or special devices.

“**Astragal**” is a device, either fixed or movable, which eliminates the vertical opening between a pair of doors when in the closed position.

“**ASTM**” is the American Society for Testing and Materials.

“**Auxiliary Locking Device**” is a secondary locking system added to the primary system to provide additional security.

“**Bolt**” is a metal bar which, when actuated, is projected or thrown either horizontally or vertically into a retaining member, such as a strike plate, to prevent a door or window from moving or opening.

“**Bolt Projection or Bolt Throw**” is the distance from the edge of the door, at the bolt centerline, to the farthest point on the bolt in the projected position, when subjected to end pressure.

“**Breakaway Doors**” are doors that will provide ingress or egress when there is a power failure.

"Burglary Resistant Glazing" is those materials as defined by Underwriters Laboratories, or generally defined as 5/16" laminated glass with a .060 inch vinyl interlayer, or one quarter (1/4) inch polycarbonate.

"Common Area" is an area of space, a building or portion of a building, which is legally accessible or used by all owners or users of a multi-tenant property.

"Component" as distinguished from a part, shall mean, subassembly, which combines with other components to make up a total door or window assembly.

"Cylinder" shall mean the subassembly of a lock containing the cylinder core and tumbler mechanism at the keyway. A double cylinder lock is one that has a key-actuated cylinder on both the exterior and interior of the door.

"Cylinder Core or Cylinder Plug" is the central part of a cylinder containing the keyway, which is rotated by the key to operate the lock mechanism.

"Cylinder Guard" is the tapered or flush metal ring or plate surrounding the otherwise exposed portion of a cylinder lock; which shall be constructed to resist cutting, drilling, prying, pulling, or wrenching with common tools.

"Deadbolt" is a lock bolt that does not have a spring action. The bolt must be actuated by a key or a key and knob or thumb turn and when projected, becomes locked against return by end pressure.

"Dead Latch or Deadlocking Latch Bolt" is a spring actuated latch bolt having a beveled end and incorporating a plunger, which, when depressed, automatically locks the projected latch bolt against return by end pressure.

"Door assembly" is a unit composed of a group of parts or components that make up a closure for an opening to control passage through a wall. For the purposes of this Standard, a door assembly consists of the following parts: Door hinges, locking device or devices, operation contacts (such as handles, knobs, push plates), miscellaneous hardware and closures, the frame, including the header, threshold and jambs plus the anchoring devices to the surrounding wall extending 36 inches from each side of the jambs and 16 inches above the header.

"Door stop" is the projection along the top, bottom and sides of a doorjamb that checks the door's swinging action.

"Double Cylinder Dead Bolt" is a deadbolt lock that can be activated **only** by a key both interiorly and exteriorly.

"Flushbolt" is a manual, key or thumb turn operated metal bolt normally used on inactive (doors) and is attached to the top and bottom of the door and engages in the header and threshold of the frame.

"Fully Tempered Glass" are those materials which meet or exceed ANSI Standards for Safety Glazing".

"Glazing" is all glass, plastics, and/or fiberglass materials, utilized as an exterior window, vision panel, lite, or pane within any type of door or window.

"Hours of Business" shall mean the time period when any activity requires the presence of employees or workers within or about the affected area.

"Hours of Darkness" means one-half hour after sunset to one-half hour before sunrise.

"Human Intrusion" is the act of forcibly or wrongfully entering where one is not welcome or invited.

"Jamb" is the vertical member(s) of a doorframe to which the door is secured.

"Jamb/Wall" is that component of a door assembly to which a door is attached and secured; the wall and jamb used together are considered a unit.

"Key-in-Knob" is a lockset having the key cylinder and other lock mechanisms contained in the knob.

"Latch or Latch Bolt" is a beveled spring-actuated bolt that usually does not have a deadlocking capability.

"Lock (or Lockset)" is a keyed device complete with cylinder, latch or deadbolt mechanism, and trim such as knobs, levers, thumb turns, escutcheons, etc., for securing a door in a closed position against forced entry. For the purpose of this Standard, a lock does not include the strike plate.

"Locking device" is a part of a window or door assembly that is intended to prevent movement horizontally or vertically of the door or movable sash.

"Luminaire" is a complete lighting device consisting of a light source together with its direct appurtenances, such as a globe, reflector, refractor, housing and such support that is integral with the housing. The pole, post or bracket is not considered a part of the luminaire.

"(Minimum Maintained) Foot-Candles of Light" is the amount of light falling on a point of a surface with the least illumination. This is calculated through application of a maintenance factor, which is a multiplier applied to account for aging of the lamp and for debris buildup on/in the luminaire during the period for which a lamp is in place.

"Panel (wood)" is a component forming part of a door, but distinguished from the rest of the surface by being raised above or depress below the general level of the door.

"Panic Hardware" is a latching device on a door assembly for use when emergency egress is required due to fire or other life threatening emergencies as defined in the Adopted Edition of the Building Code.

"Part" as distinguished from component, shall mean a unit (or subassembly), which combines with other units to make up a component.

"Rail" is the horizontal member of a window or door. A meeting rail is one which mates with a rail of another sash or a framing member of the door or window frame when the sash is in the closed position.

"Sash" is an assembly of stiles, rails, or mullions assembled into a single frame that supports the glazing material.

"Sill" is the lowermost horizontal member of a window frame.

"Single Cylinder Deadbolt" is a deadbolt lock that is activated from the outside by a key and from the inside by a knob, thumb-turn, lever or similar mechanism.

"Solid core door" is a door composed of solid wood or compressed wood or other materials equal in strength to solid wood construction.

"Stile" is a vertical framing member of a window or door.

"Strike" is a metal plate attached to or mortised into a door or doorjamb to receive and to hold a projected latch bolt or deadbolt in order to secure the door to the jamb.

"Swinging door" is a door hinged at the stile or at the head and threshold.

"U.L." is Underwriters Laboratory, Inc.

"U.L. Listed" is tested and listed by Underwriters Laboratory, Inc.

"Utility Door" is a door that is not designed primarily for pedestrian use, and includes overhead, swing-up, vertical lift, roll-up, sliding, swinging, accordion, and telescoping doors.

"Vandal Resistant" is the ability of the fixture to withstand extreme abuse. It includes any glazing constructed of materials meeting or exceeding current U.L. Standards for Burglary Resistant Glazing and a housing meeting or exceeding U.L. Standards.

"Weather Resistant" means designed to be used out-of-doors or in areas exposed to the natural elements.

"Window Assembly" is a unit that includes a window and the anchorage between the window and the wall.

"Window frame" is the part of a window that surrounds and supports the sashes and is attached to the surrounding wall. The members include the side jambs (vertical), header jamb, (upper, horizontal), sill and mullions.

Section II: Entry Doors

Except for utility doors, all exterior swinging and sliding doors shall be equipped as follows:

A. Wood frame parts:

1. Doorjambs shall be installed with solid wood backing in such a manner that no voids exist between the strike side of the jamb and frame opening for a vertical distance of six (6) inches on both sides of the strike.
2. Horizontal blocking shall be placed between the studs at the door lock height for three (3) stud spaces on the lock side of the door opening.

B. Wood jambs and strikes:

1. Doorstops for in-swinging doors shall be of one-piece construction with the jamb.
2. Strike plates shall be utilized with deadbolts and shall be constructed of a minimum .080 inch thick steel, bronze, or brass material and secured by a minimum of two (2) two and one-half (2 1/2) inch, 10 U. S. gauge, steel screws. The strike plate shall be designed to accept the required two screws a minimum of .312 inches from the vertical centerline of the strike on the jamb stop side. A permanently affixed notation stating on which side the jamb stop is to be installed shall be so noted on the strike plate. The screws must either penetrate at least two (2)

inches into the stud behind the jamb or directly into a door when a pair of doors is utilized.

C. Steel frames/jambs/strikes:

1. Doorjambs shall be constructed of sixteen (16) U.S. gauge steel.
2. When a pair of doors is less than sixteen (16) U. S. gauge steel, a strike plate shall be utilized.

D. Aluminum frames/jambs/strike/thresholds:

1. Doorframe members, including the threshold, shall be a minimum of one-eighth (1/8) inch in thickness.
2. The strike side of the jamb shall be of one-piece construction, or if two-piece, the removable section shall not be used on the door side.
3. A steel or aluminum plate, a minimum of one-eighth (1/8) inch in thickness shall be attached to the strike area covering the jamb side of the frame from edge to edge and extend a minimum of three (3) inches above and below the deadbolt point of engagement/imbedment. The plate shall be attached using minimum 10 U. S. gauge screws or minimum one-fourth (1/4) inch steel pop rivets and be non-removable from the outside when the door is in a closed and locked position; or,
4. A reinforced strike plate, constructed to withstand 1600 lbs. of outward pressure in all directions, so as to prevent violation of the strike shall be utilized. The strike plate shall extend a minimum of three (3) inches above and below the deadbolt point of engagement/ imbedment.

E. Hinges and door pivots for out-swinging doors shall be equipped with non-removable hinge pins or a mechanical interlock to preclude removal of the door from the exterior by removing the hinge pins.

F. When flush bolts are utilized, strike plates or receiving guides constructed of a minimum .050 inch thick steel, bronze or brass material shall be secured to the header by a minimum of two (2) screws which must penetrate at least one (1) inch into the stud behind the frame header. Wood thresholds shall be equipped with a strike plate.

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- G. All exterior doors equipped with lever-action locking devices that operate the deadbolt shall have a handicapped accessible threshold complying with the provisions of applicable Building Codes.
 - H. Exterior doors, used primarily for emergency exiting and not used primarily for ingress, shall have no exterior mounted knobs, pull handles, levers, or any similar device which can be used to pull the door open, and shall close and lock automatically unless Building or Fire Codes require otherwise.
 - I. All stairway doors in multiple tenant buildings, except required emergency exit doors, shall automatically lock to restrict access into individual floors from stairwells. Floors with single tenant occupancy shall incorporate a deadbolt into the locking system that shall meet "fire/life safety" requirements.
 - J. Interior individual suite entry double doors shall have a fire rated; full-length astragal attached to the exterior. The astragal shall be constructed of a minimum of one-eighth (1/8) inch steel, two (2) inches wide and overlapping at least one (1) inch on the active leaf. Astragals must be approved for fire rated assemblies.
 - K. Interior or hallway service corridors which have recessed door entries or vestibules exceeding twelve (12) inches in depth shall have 45 degree corner cut-offs, beginning a distance half the depth of the recessed area or to a maximum of eighteen (18) inches, measured from the intersection point of the service corridor wall and recessed entry wall.
 - L. Except for three (3) hour rated fire doors, all rear unit doors shall have a viewing device that meets required fire rating, with a minimum viewing angle of 180 degrees, installed not more than fifty-eight (58) inches from the bottom of the door.
 - M. Except when double cylinder deadbolts are utilized, openings used for deposit of U.S. Mail in doors, windows or walls, within thirty-six (36) inches of any part of the locking mechanism, shall conform to the following provisions:
 - 1. A minimum of fourteen (14) U.S. gauge metal shield, a minimum of six (6) inches wide, shall be installed on the inside, at a maximum of a 45 degree angle to

the vertical surface of the door and be able to deter forceful removal from the exterior.

N. Door Construction

1. Wood doors shall be of solid core construction with a minimum thickness of one and three-quarter (1 3/4) inches.
2. Wood panel doors with panels less than one (1) inch thick shall be covered on the inside with a minimum sixteen (16) U.S. gauge sheet steel, or its equivalent, which is attached with screws a maximum of six (6) inches apart around the perimeter of the door.
3. Hollow steel doors shall be a minimum of sixteen (16) U.S. gauge and have sufficient reinforcement to maintain the designed thickness of the door when any locking device is installed.
4. Unless otherwise required by local regulation all doors shall be equipped with a deadbolt locking device or its equivalent. The installed device shall have a bolt projection of one (1) inch or more and shall utilize at least a five (5) pin lock cylinder with cylinder guard.
5. Double doors shall be equipped with automatic flushbolts on the inactive leaf with a header and threshold imbedment of at least five-eighths (5/8) inch.

O. Panic Hardware

1. Panic hardware shall contain a minimum of two locking points on each door; or
2. Panic hardware on single doors shall have a minimum of one locking point that is not located only at either the top or bottom of the doorframe. When mortise hardware is utilized, a protective astragal consisting of minimum of .125 thick steel shall be attached to the exterior of the door and rendered non-removable from the exterior. It shall be two (2) inches wide and extend a minimum of five (5) inches above and below the strike opening and extend a minimum of one (1) inch beyond the edge of the door.

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3. Double doors containing panic hardware shall have an astragal attached to the doors at their meeting point that will close the opening between them, but not interfere with the operation of either door. Fire rated astragals meeting specifications of the Building Code shall be utilized when required. Astragals are not required when panic hardware is equipped with push pads offset a minimum of three (3) inches from the door edges.
 - P. Interior doors leading to public corridors, hallways or stairways shall meet the same requirements as exterior doors.
 - Q. Horizontal sliding doors shall meet the same construction standards, and equivalent locking standards, as swinging doors and shall be equipped with a metal guide track at the top and bottom. The sliding door shall be so designed as to preclude it from being lifted from its track when in the locked position.

Section III: Utility Doors

Doors used primarily to cover openings in buildings, which are not designed specifically for pedestrian use, are to comply with the provisions of this Section. All utility type and overhead type doors, including swing-up, vertical lift, roll-up, sliding, swinging, accordion, and telescoping doors shall be constructed as follows:

- A. Door Construction - General Requirements
 1. Pedestrian and pilot door assemblies, including the strike, shall conform to the specifications of swinging doors, windows/doors with glass/vision panels, and vents as required by this Standard.
 2. Utility doors utilizing a cylinder lock shall have a minimum five (5) pin tumbler operation with the locking bar or bolt extending into the receiving guide a minimum of one (1) inch. Cylinders shall have a cylinder guard, or be protected so as to resist cutting, drilling, prying, pulling, or wrenching with common tools.
 3. All doors must have a locking device as described in this Section with at least one (1) lock receiving point. Doors between twelve (12) feet and nineteen (19) feet in width shall have two (2) lock receiving points which engage at opposite ends of the door. All

swing-up, sliding, and accordion doors shall have lock receiving points located at a height not to exceed twenty-four (24) inches from ground level.

4. For horizontal bi-parting sliding doors, there must be at least two (2) center lock receiving points, one (1) at the door meeting point and the other at either the threshold or frame header.
5. Slide type bolts shall embed into the lock receiving point a minimum of one (1) inch. Interior mounted spring bolts shall be embedded into the lock receiving point a minimum of five-eighths (5/8) inch and be protected against prying or slipping by common tools.
6. Lock assemblies shall be attached using fasteners that are non-removable from the exterior. Fasteners may include through bolts, lag bolts, or welding. Exterior mounted lock assemblies shall not use rivets.
7. All glazing materials shall meet requirements of this Standard.
8. When in the locked position, no portion of the bottom twelve (12) inches of the door shall be capable of being flexed outward, inward, or upward more than five (5) inches before meeting the resistance of the locking device.
9. Exterior locking assemblies utilizing a padlock shall have a protective cover designed to prevent the padlock or lock accepting staple, from being cut or wrenched and shall be constructed of a minimum of .125 inch thick steel.
10. Hinge plate fasteners and hinge pins shall not utilize rivets and be rendered non-removable from the exterior.

B. Door construction - Special Provisions

1. All door panels shall be designed as follows:
 - a. Wood doors shall have panels a minimum five-sixteenths (5/16) inch in thickness with the locking hardware being attached to the support frame with non-removable bolts from the exterior.

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- b. Aluminum doors shall be a minimum of .0537 inches thick, uncoated, from the bottom of the door to a height of seven (7) feet.
 - c. Fiberglass or any type of plastic material exceeding 96 square inches within a door is not to be utilized unless the materials have been tested to meet U.L. Burglary Resistant Glazing Standards.
2. Doors utilizing slide bolt assemblies shall have frames a minimum of .125 inches in thickness, with a minimum bolt diameter of one-half (1/2) inch and protrude at least one (1) inch into the receiving guide.

Section IV: Windows/Doors with Glazing/Vision Panels

All openable exterior windows, composite windows and sliding glass doors shall meet the standards set forth in this Section.

- A. Louvered windows, or doors, if accessible, shall not be utilized.
- B. Glazing shall be deemed accessible if any portion is within twelve (12) feet vertically or eight (8) feet horizontally from any exterior accessible surface or any adjoining roof, balcony, landing, stair tread, platform or similar structure. Glazing that is not accessible shall be exempt from the provisions of this Section.
- C. Sliding glass doors which have fixed glazing not exceeding ninety-six (96) square inches with the smallest dimension not exceeding six (6) inches and not within thirty-six (36) inches of any locking device shall be exempt from the provisions of this Section
- D. All accessible glazing shall meet the current standards set forth by ASTM for: Security Glazing Materials and Systems.
- E. Glazing panels shall be rendered non-removable from the exterior and be secured to the frame with a sealant creating a bead on the inside, lowermost edge and shall make full contact with both the frame and the glazing. The sealant shall meet or exceed current standards as set forth by ASTM for: Elastomeric Joint Sealants and Adhesion-in-Peel of Elastomeric Joint Sealants, as appropriate.
- F. Any grating device used on windows or doors of any building shall be installed to the interior of the building.

Additionally, any such grating shall comply with all applicable building, fire and life safety codes.

Section V: Miscellaneous Openings

All accessible roof openings, including skylights, vents, hatches and air conditioning ducts, shall be designed and protected as follows:

- A. A roof opening shall be deemed accessible if any portion of the roof is within twelve (12) feet vertically or eight (8) feet horizontally from any accessible surface or any adjoining roof, balcony, landing, stair tread, platform or any climbable pole, tree or any surface providing a foothold.
- B. All skylights shall have glazing which meets ASTM Test Standards for glazing impact and be securely attached to the roof with bolts spaced no more than eight (8) inches on center around the skylight's frame. If the skylight is openable or has an explosion relief system, there shall be solid iron bars, at least one-half (1/2) inch in diameter, spaced no more than four (4) inches on center. Crossmembers shall be spot welded at each contact point of intersection. The entire assembly shall be affixed to the roof frame with non-removable fasteners or carriage bolts.
- C. All roof hatches shall be lockable from the interior with a slide bar or bolt which extends into a receiver at least one (1) inch and secured with a hasp and padlock having a minimum three-eighths (3/8) inch thick shackle.
- D. All air ducts or air vent openings exceeding ninety-six (96) square inches shall be designed and protected as follows:
 - 1. There shall be solid #4 iron bars, of at least one-half (1/2) inch in diameter, spaced no more than four (4) inches on center. Crossmembers shall be spot welded at each point of intersection. The entire assembly shall be affixed to the roof frame with non-removable fasteners or carriage bolts; or,
 - 2. Iron or steel grilles (#4) of at least one-eighth (1/8) inch material with a maximum two (2) inch mesh and securely fastened to the building infrastructure on the interior.
 - 3. The barrier (bars or grilles) shall be secured with bolts that are non-removable.

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4. The barrier must not interfere with airflow requirements or conflict with the provisions of the Building Code.
 5. All air duct or air vent openings exceeding ninety-six (96) square inches that are prohibited from bar or screen placement shall be designed and protected as follows:
 - a. Ducts, flanges and parts attached thereto, shall be constructed of at least eighteen (18) U.S. gauge stainless steel, sixteen (16) U.S. gauge steel or fourteen (14) U.S. gauge aluminum. All seams shall be welded with a continuous bead of welding material.
 - b. Clean-out and access trap doors over ninety-six (96) square inches shall not be openable from the exterior of the building unless secured with a high security padlock. Hinges shall have non-removable pins when using pin type hinges. Hinges and hasp assemblies shall be welded in place or attached with non-removable bolts or carriage bolts. Screws shall not be used.
 - E. There shall be no exterior electrical or phone panels that are unsecurable or uncovered. These utilities shall be housed within their own lockable space whether interior or exterior. The locks and hinges will conform to the requirements of this Standard.

Exception: Exterior electrical service panels in soffits, with an opening exceeding ninety-six (96) square inches and having access to an attic or plenum shall have an interior one (1) hour firewall separating the soffit from the individual units.
 - F. Exterior mounted ladders and exterior stairways that extend from ground level to any floor above the ground floor are prohibited.

Section VI: General Lighting Provisions

Buildings, open parking lots, walkways and access thereto shall conform to the following lighting standards:

- A. All exterior doors shall be illuminated during the hours of darkness, with a minimum maintained one (1) foot-candle of light, measured within a five (5) foot radius on each side

of the door at ground level. The light source shall be controlled by a photocell device or timer with an astronomic feature and capable of functioning during a power outage.

- B. Recessed areas of buildings or fence lines, directly accessible to within ten (10) feet of a walking surface edge with a minimum of depth on one (1) foot and minimum height of three (3) feet which is capable of human concealment, shall be illuminated with a minimum maintained fifty one-hundredths (0.50) foot-candle of light at ground level during the hours of darkness.
- C. Stairways shall be illuminated with a minimum maintained one (1) foot-candle of light on all landings and stair treads, during the hours of darkness.
- D. Interior corridors, stairways, and elevators shall be illuminated with a minimum maintained one (1) foot-candle of light on the walking surface, with vandal resistant fixtures.
- E. All exterior pedestrian walkways, interior common corridors, and open parking lots shall be illuminated with a minimum maintained one (1) foot-candle of light on the walking or driving surface during the hours of operation to include one half hour prior to opening, and one hour after the close of the business day.
- F. Accessible luminaries utilized to meet the requirements of this Standard shall have vandal resistant light fixtures and be not less than three (3) feet in height from ground level when used to illuminate walkways and a minimum of fourteen (14) feet in height from ground level when illuminating surfaces associated with vehicles. Light fixtures shall be deemed accessible if mounted less than fourteen (14) feet vertically or eight (8) feet horizontally from any accessible surface or any adjoining roof, balcony, landing, stair tread, platform or similar structure.

Section IX: Additional Considerations

- A. Restrooms: Except when located within a suite or employee controlled area, common area restrooms with more than one (1) toilet, accessible to the public, shall have self-closing doors with automatic dead-latching lock which cannot be manually locked from the interior, and can only be unlocked by a key, keycard, or similar device.

B. Pay Phones: Should be located within the building or outside of the building a minimum of thirty (30) feet away from any entry door and restricted to outgoing calls only.

C. Public Use Rooms:

1. Unless required for security purposes, doors on interview rooms should not be lockable from the inside during normal business hours.
2. Public use room doors should be equipped with a window providing visibility into the room from the outside. Privacy curtains may be installed.

D. Employee/Visitor Identification:

In facilities where all employees and visitors are not immediately recognizable, consideration should be given to an Identification Badge/Card system. Employees and visitors should be required to wear this identification while on the airport property.

E. Signage

1. Where applicable display signage listing property rules, trespassing prohibitions, etc.



PUTTING IT ALL TOGETHER

This manual was not developed to make you a security expert. Effective airport security planning is a complex process requiring the knowledge and skills of a highly trained security professional.

However, by understanding and applying the basic concepts outlined here while completing the accompanying **Security Assessment Checklist**, you can perform an effective security evaluation of your airport. With the completed evaluation in hand, you can then take the steps necessary to eliminate risk areas.

Since security hardware can be costly, the primary focus of this manual is the implementation of risk reduction methods that minimize the need for hardware solutions. Where it is determined that hardware enhancements are required, applications having the greatest deterrent value should be given the highest priority. When developing your protection strategy focus on the areas of greatest risk first. Always look to protect people before protecting property. Fortunately, a prevention-based security plan creates an environment that serves as a deterrent to crime of all types.

Now that you have concluded your review of this manual, it is time to begin your Security Assessment utilizing the **Security Assessment Checklist**.



Assessment Checklist

Overview

This Security Assessment Checklist and accompanying Physical Security Assessment Manual are provided to help you assess and understand potential security threats to your airport. The Checklist is presented as a series of **Yes** or **No** questions. Each **No** answer indicates a possible weakness in your physical security program. As you eliminate the **No** answers, your level of protection increases. Questions are structured so that a positive response suggests the desired situation or condition. In some cases, questions are duplicated in different sections. This is intentional. Duplication is necessary to ensure that all circumstances are adequately addressed.

This Checklist was developed for use in a wide variety of airport types. Consequently, you may find that some questions do not apply to your circumstances. Just ignore those questions. Conversely, you may be aware of security situations at your airport that are not addressed by the Checklist. In these instances, information contained in the Security Assessment Manual may prove helpful.

Before beginning this Checklist, it is important that you review the accompanying Security Assessment Manual. The information contained in the Manual forms the foundation on which this Checklist is built. Without a basic understanding of crime prevention theory and security standards, it is difficult to accurately evaluate security risks.

This Checklist is not intended to make you a security expert, and completing it won't guarantee that your airport will be crime free. It will however, provide an indication of your airport's security risk level. With that knowledge, you can begin to develop a security program that provides the type of individualized protection your airport requires.

Questions?

If you find a situation or circumstance that is not address in this Manual and Checklist feel free to contact us. We will be happy to help you address the issue.



Instructions

This Checklist was designed to be comprehensive, yet simple and easy to use. Read through the questions carefully and systematically. Note your answers and comments in the **Comments** column. When the Checklist is completed, use your findings to formulate a security risk reduction program.

Be sure to look at your airport at night and on weekends as well as during normal business hours. After hours may be your most vulnerable time.

Now let's get started.



Airport Grounds

Public Parking Areas

1. If appropriate, are employee, tenant, and public parking areas clearly designated? *Note: This may not apply in all facility locations.*
2. Are nighttime lighting levels adequate? *Test: Can you comfortably read a newspaper under existing lighting conditions?*
3. Are parking areas and entrances observable by as many people as possible?
4. Are parking areas fully lit during all hours that people are on the property?
5. If parking areas have experienced significant levels of criminal activity, have efforts been made to deter such activity through the use of security measures such as limiting access or the use of surveillance cameras or security personnel? *Note: Unmonitored or "dummy" security cameras should not be used. To do so could expose the property and management staff to legal liability.*
6. If appropriate, have parking areas been properly posted to permit law enforcement personnel to take enforcement action when necessary? *Examples: Restricted Parking Zones, Handicapped Parking, etc.*
7. Are bicycle racks or bicycle storage lockers provided?

Restricted Access Areas

1. Are barriers such as fences and locked gates installed to prevent unauthorized vehicle and pedestrian access to hangar, aircraft tiedown, and fuel areas?
2. Are ramp personnel and regular airport users instructed to report unauthorized individuals in restricted areas and other suspicious persons and

activities to airport management or law enforcement authorities?

3. Are restricted areas properly posted to keep out unauthorized individuals?
4. Is outdoor signage prominently displayed near areas of public access warning against tampering with aircraft or unauthorized use of aircraft?
5. Is signage indicating the phone number for reporting suspicious activity placed in areas where pilots and/or ramp personnel gather?

Storage Areas

1. Are outside storage areas and yards fully enclosed?
2. Are fences and walls in good repair?
3. Are fences high enough?
4. Are gates in good repair?
5. Are storage areas and yards provided with adequate lighting during the hours of darkness?
6. Are gates secured with high security padlocks or equivalent locking devices?
7. Are padlocks equipped with heel and toe locking, a five-pin tumbler and a minimum of a 9/32" shackle made of case hardened steel?
8. Are padlocks locked in place when gates open?
9. Are hasps constructed of hardened steel with non-removable fasteners?
10. Are high value storage areas protected by an electronic security system?

Building Exterior

Landscaping & Grounds

1. Are building entrances accentuated through architectural elements, lighting, landscaping and/or paving features?
2. Are public entrances clearly defined by walkways and signage?
3. Are landscape features maintained to provide good visibility around buildings?
4. Is vegetation trimmed to eliminate potential hiding places near doors, windows, walkways and other vulnerable areas of the property?
5. Do trees or other landscape features provide access to the roof or other upper levels of buildings? *Note: Any climbable object should be kept at least eight (8) feet away from the building.*
6. Are hedges and similar vegetation barriers utilized to control pedestrian movement where appropriate?
7. Are trees and vegetation kept trimmed to prevent them from interfering with lighting and visibility? *Note: As trees grow, they can block light sources and seriously degrade lighting levels.*
8. Do dumpsters and trash enclosures create blind spots or hiding areas?
9. Are property perimeters clearly defined by landscaping or fencing?
10. Are perimeter fences designed to maintain visibility from street?
11. Are exterior private areas easily distinguishable from public areas?

Lighting:

1. Are building exteriors, fuel pumps and other critical areas illuminated to recommended levels during hours of darkness?
2. Are proper lighting levels maintained at all door and window openings and other vulnerable points, during hours of darkness?
3. Has a maintenance inspection schedule been established to ensure that lights are in good working order at all times?

Building & Hangars

Doors

1. Are all exterior doors of a metal, metal and glass, or solid core wood design? *Note: Refer to **Sample Security Standards** for all items in this section.*
2. Are all unused doors permanently sealed?
3. Is exterior hardware removed from all doors that are not used to provide access from the outside?
4. Is glazing material in doors that are located in concealed or secluded areas either made of a polycarbonate material or protected by bars, heavy screen or security film? *Note: **Securing existing glass with a high strength security film is a relatively inexpensive way increase security.***
5. Are all doors designed so that the lock release cannot be reached by breaking out glazing or lightweight panels?
6. Are sliding glass doors equipped with supplemental pin locks and anti-lift devices?
7. Do exposed hinges have non-removable pins?
8. Is a good quality deadbolt lock used whenever possible?

9. Is the lock designed, or the doorframe constructed, so that the door cannot be forced open by spreading the frame?
10. Is the outside lock cylinder protected from twisting or prying?
11. Is the lock a cylinder type with at least a five-pin tumbler?
12. Are keys issued only to persons who actually need them?
13. Are doors with panic hardware properly secured to prevent activation from the exterior?
14. Do you check panic hardware on each exit door regularly to ensure that it is properly closed and in good working order?
15. Is there a policy in place mandating that all doors that are not required to be unlocked during business hours be closed and secured when not in use?
16. Is shrubbery trimmed away from windows to prevent concealment of someone attempting to break in?
17. Whenever possible are other visual obstacles around doors removed? Note: Doors that are easily observed by passers-by are less vulnerable to attack.
18. Are exterior doors well lit during hours of darkness?

Windows

1. Are unused windows permanently sealed?
2. Are accessible windows protected by burglary resistant glazing, security film, heavy screen, or bars wherever possible?
3. Are window locks designed or located so they cannot be defeated by merely breaking the glass?

4. Are horizontal sliding windows equipped with secondary locks and anti-lift devices?
5. Is shrubbery trimmed away from windows to prevent concealment during break ins?
6. Whenever possible are other visual obstacles around windows removed. *Note: Windows that are easily observed by passers-by are less vulnerable to attack.*
7. Where appropriate, are landscaping features such as thorny shrubs or similar vegetation used to prevent access to vulnerable windows?
8. Are windows obstructed with signs?
9. Where necessary, are accessible windows adequately lit during hours of darkness?

Other Openings

1. Have skylights been protected by bars or polycarbonate glazing?
2. Are roof hatches securely locked?
3. Are ventilator shafts, air conditioning ducts and fan openings adequately protected with bars or wire mesh?
4. Are roof ladders and other roof access points either removed or secured against unauthorized use? *Example: Sheet metal covers can be installed over ladder rungs.*
5. Are roll-up and sliding doors properly mounted and secured with high quality locking devices?
6. Are utility rooms both inside and outside the building properly secured? *Note: Doors and locking devices should meet the same standards as required for entry doors.*

Building & Hangar Interior

Public Access Areas

1. Are security and/or reception areas positioned to view all public entrances?
2. Are all public areas of the building clearly marked?
3. Are the boundaries between public and non-public areas clearly defined?
4. Have secure barriers been installed to prevent easy movement between public and non-public areas?
5. Are all doors leading to private offices and other non-public areas secured by high quality locking devices? *Note: Electronic or keypad style locks work well in office settings.*
6. Are public counters and reception areas provided with a barrier to prevent easy physical access to employees?
7. Have weapon detectors been installed in facilities where there is a continuing risk of violent confrontations between employees and visitors?
8. Are security guards employed in areas where there is a strong likelihood of criminal activity or trespassing?
9. Are interior public restrooms observable from nearby offices or reception areas?
10. Are exterior public restrooms and pilot lounges located in high traffic and easily observable areas?

Office Security

1. Do you restrict office keys to those who actually need them?

2. Do you keep complete, up-to-date records of the disposition of all office keys?
3. Do you have adequate procedures for collecting keys from terminated employees?
4. Do you secure all typewriters, calculators, computers, etc. with some type of locking device?
5. Do you prohibit duplication of office keys except for those that are specifically ordered by you in writing?
6. Do you require that all office keys be marked "Do not duplicate" to prevent legitimate locksmiths from making copies without your knowledge?
7. Have you established a policy that keys will not be left unguarded on desks or cabinets - and do you enforce the policy?
8. Have you established a policy that facility keys and key rings will not be marked with information that identifies the facility to which they belong?
9. Do you require that filing cabinet keys be removed from locks and placed in a secure location when not actually in use?
10. Do you have procedures to deter unauthorized persons from reporting a "lost key" and getting a "replacement"?
11. Do you routinely obliterate code numbers on all keys to prevent unauthorized duplication?
12. Do you have a responsible person in charge of your key control program?
13. Are all keys systematically stored in a secure wall cabinet of either your own design or from a commercial key control system?
14. Do you keep a record showing issuance and return of every key, including name of person, date and time?

15. Do you use telephone locks to prevent unauthorized phones usage when offices are unattended?
16. Do you provide secure areas for employees to store their personal property?
17. Do you have a sufficient number of security filing cabinets to properly secure sensitive documents?
18. Do you leave interior lights on at night?
19. Do you record all equipment serial numbers and file them in a safe place?
20. Do you shred sensitive documents before discarding them?
21. Do you lock briefcases and bags containing important material in a safe place when not actually in use?
22. Do you insist on proper identification from all vendors and repair persons who come into your facility?
23. Do you clear desks of important papers every night?
24. Do you frequently change the combination to your safe?
25. When employees work alone at night do they set the door lock to prevent anyone from entering uninvited?
26. Are emergency phone numbers posted near all phones?
27. Is computer access restricted to authorized personnel?
28. Are all windows, transoms and ventilators properly protected?
29. Is there a closing routine established to make sure that everything is properly secured prior to leaving?

30. Have you instituted an employee identification badge system?
31. Have you installed mail-screening equipment to protect against letter and package bombs?
32. If you employ guards after hours, do you periodically make unannounced visits to ensure that they are doing their job properly?

Cash Handling

1. Are cash registers and cash drawers located beyond the reach of customers?
2. Do you make regular bank deposits or utilize an armored transport service to avoid keeping large sums of money in the office overnight?
3. Are employees trained in proper cash handling procedures?
4. Are employees trained in proper procedures to follow during and after a robbery?
5. Have you installed panic/robbery alarm stations for use by employees during robberies or emergency situations?
6. Are cash registers and cash drawers left empty and open after hours? *Note: This procedure will minimize damage to equipment should a break-in occur.*
7. Do you use a safe for storage of cash and other valuables overnight?

Safes

1. Is your safe designed for both burglary and fire protection?
2. If your safe weighs less than 750 pounds is it secured in place and are the wheels removed?
3. If possible, is your safe well lit and visible from outside, especially after hours?
4. Do you spin the dial when you lock the safe?

5. Is the combination changed when personnel possessing it terminate?

Alarms

1. Do your buildings have an alarm system?
2. Is the alarm system certified by Underwriters Laboratory?
3. Is the system tested daily?
4. Does it report to an alarm company central station or police facility?
5. Does it have an automatic back-up power supply that activates during power failures?
6. Is the system free from false alarms?
7. Is the system designed to fully protect all vulnerable areas?
8. Does your system include robbery and fire protection as well as burglary protection?
9. Does the system employ anti-tamper technology?

Other Considerations

1. Do night time closing procedures ensure that the safe is locked; doors and windows are secure, lights are on; the alarm is set and working, and no one is hiding in the building?
2. Are airport vehicles such as fuel trucks and tractors properly secured and parked in high visibility areas when not in use?
3. Has the airport been surveyed by a certified security management professional?

Policies & Training

1. Do you have a written Airport Security Policy?

2. Do you have a written Crisis Media Management Policy?
3. Do you have a written Disaster Preparedness and Response Plan?
4. Do you review these policies on a regular basis?
5. Do you provide on-going training to employees at all levels of the organization regarding these policies?

On The Flight line

FBO's & Flight Training Facilities

The FAA has issued guidelines for flight training facilities. The follow are based on those recommendations:

1. Do you use an aircraft ignition key that differs from the door lock key?
2. Is the identity of individuals renting or purchasing an aircraft or joining a flying club validated by checking a government-issued photo ID?
3. Are only authorized personnel issued keys to rental/flying club aircraft, or an alternate system implemented to protect against unauthorized use of an aircraft?
4. Are pilots and ramp personnel advised to be on the lookout for suspicious activity on or near airports? Including:
 - Aircraft with unusual or unauthorized modifications
 - Persons loitering for extended periods in the vicinity of parked aircraft or in air operations areas
 - Pilots who appear to be under the control of other persons

- Persons wishing to obtain aircraft without presenting proper credentials or persons who present apparently valid credentials but do not have a corresponding level of aviation knowledge
5. Do you limit student pilot access to aircraft keys until the student pilot has reached a specific point in the training curriculum, i.e., successful completion of the pre-solo written test?
 6. Before solo, do you keep student pilots under the supervision of a flight instructor at all times, regardless of the student's age?
 7. Do you have any student pilot check in with a specific employee-i.e., dispatcher, aircraft scheduler, a flight instructor, or some other "management" official-before being allowed access to parked aircraft; or have the student sign or initial a form and not receive keys until an instructor or other "management official" also signs or initials?
 8. Have you established positive identification of any student pilot before every flight lesson?
 9. If the student pilot is not yet a legal adult at the time of enrollment, do have the enrollment application, if applicable, co-signed by a parent or legal guardian?

Aircraft Security

1. Are aircraft owners encouraged to practice good security with regard to their aircraft?
2. Are logbooks removed from aircraft and stored in a secure place?
3. Are cockpit windows covered to prevent thieves from observing avionics and other contents?
4. Are locking avionics stack covers employed in parked aircraft?
5. Have stock door locks been replaced with high quality, high security locks?

6. Are propeller locks and/or wheel locks employed?
7. Are suspicious people on the flight line reported?
8. Is periodic safety and security training provided for airport users?
9. Has an "airport watch" program been instituted?
10. Prior to engine start, do pilots ensure that the identity of all occupants is verified, all occupants are aboard by invitation of the owner/operator, and that all baggage and cargo is known to the occupants?



Learning From The Past

Have you had incidents of criminal activity at your airport in the past? Have you analyzed the circumstances surrounding them and taken steps to prevent similar incidents in the future? A fresh look at these incidents using the information contained in this Checklist and the Physical Security Assessment Manual may prove to be a valuable property protection exercise.



About The Author



Robert A. Gardner, CPP has been involved with the aviation community since the early 1970's. He currently holds a Private Pilot-Fixed Wing rating and is working towards his Private Pilot-Rotorcraft rating.

He is a former Corporate Security Manager, Law Enforcement Administrator, and Police Crime Prevention Specialist with more than 30 years of experience evaluating, developing, implementing, and managing security and loss prevention programs.

His expertise includes business, lodging, aviation, personal, and housing security and architectural/environmental design for security. He serves as a technical advisor to property managers, developers, homeowners, business managers and government officials in the recognition and reduction of security risks and the implementation of effective security, crime prevention and crisis management programs. He also acts as an expert witness in security related litigation.

He was an advisor on architectural/environmental security and workplace violence prevention to "America's Safest City", and managed that City's commercial and residential crime prevention programs.

He has been designated a *Certified Protection Professional* (CPP) by the American Society for Industrial Security and a *Certified Security Professional* (CSP) by the California Association of Licensed Investigators.

He is a graduate of the California Crime Prevention Institute, the California Crime Prevention Institute's Advanced Crime Prevention Through Environmental Design Course, the California State Police Executive Protection Course, the California Department of Justice Dignitary Security Course, the California Specialized Training Institute's Terrorism Course, several Emergency Management Courses and the Department of Defense Information School.

He is a member of the: International Association of Professional Security Consultants, International CPTED Association, American Society for Industrial Security (ASIS), California Crime Prevention Officer's Association, California Association of Licensed Investigators (CALI), Aircraft Owners and Pilots Association, California Pilots Association

He is a licensed Private Investigator and Security Consultant with offices in California and Nevada.



ABOUT WOLF AVIATION FUND

"Promoting and Supporting General Aviation and the Public's Understanding of it"



The Alfred L. and Constance C. Wolf Aviation Fund was created to help individuals work together in support of general aviation.

To that end the Fund provides assistance and information intended to help aviators, aviation groups, and others improve the state of the art in general aviation and also tell their stories so the public can gain a wider understanding of this important activity.

Mission and History

Mission Statement: "The Foundation shall promote and support the advancement of personal air transportation by seeking and funding the most promising individuals and worthy projects which advance the field of general aviation; by increasing the public's knowledge of aviation through publications, seminars, and other information media; by informing the aviation and scientific community of the existence and purpose of the Fund; and by soliciting and receiving feedback concerning Foundation-supported projects."

History: The Wolf Aviation Fund was established in the wills of Alfred L. and Constance C. Wolf. Its activities are supervised by a board of trustees, aided by a council of advisors and a team of consultants.

How We Help

Fund activities include providing tools to help people learn about aviation, operate airport support groups and public benefit flying organizations, and conduct efforts to improve aviation safety and technology. Information, guidance in using tools such as software, and help in finding funding are all available from the Fund's website.

