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An American National Standard

Standard Classification for Serviceability of an Office Facility for Facility Protection[1,2]

This standard is issued under the fixed designation E1665; the number immediately following the designation indicates the year of original adoption or, in the case of revision, the year of last revision. A number in parentheses indicates the year of last reapproval. A superscript epsilon (ε) indicates an editorial change since the last revision or reapproval.

1. Scope

1.1 This classification covers pairs of scales for classifying an aspect of the serviceability of an office facility, that is, the capability of an office facility to meet certain possible requirements for protection of a building or site.

1.2 Within that aspect of serviceability, each pair of scales, shown in Figs. 2-7, are for classifying one topic of serviceability. Each paragraph in an Occupant Requirement Scale (see Figs. 2-7) summarizes one level of serviceability on that topic, which occupants might require. The matching entry in the Facility Rating Scale (see Figs. 2-7) is a translation of the requirement into a description of certain features of a facility which, taken in combination, indicate that the facility is likely to meet that level of required serviceability.

1.3 The entries in the Facility Rating Scale (see Figs. 2-7) are indicative and not comprehensive. They are for quick scanning to estimate approximately, quickly, and economically, how well an office facility is likely to meet the needs of one or another type of occupant group over time. The entries are not for measuring, knowing, or evaluating how an office facility is performing.

1.4 This classification can be used to estimate the level of serviceability of an existing facility. It can also be used to estimate the serviceability of a facility that has been planned but not yet built, such as one for which single-line drawings and outline specifications have been prepared.

1.5 This classification indicates what would cause a facility to be rated at a certain level of serviceability but does not state how to conduct a serviceability rating nor how to assign a serviceability score. That information is found in Practice E1334. The scales in this classification are complimentary to and compatible with Practice E1334. Each requires the other.

2. Referenced Documents

2.1 *ASTM Standards:*[3]

E631 Terminology of Building Constructions

E1334 Practice for Rating the Serviceability of a Building or Building-Related Facility

E1679 Practice for Setting the Requirements for the Serviceability of a Building or Building-Related Facility

2.2 *ISO Document:*[4]

ISO 6240 International Standard, Performance Standards in Building—Contents and Presentation

3. Terminology

3.1 *Definitions:*

3.1.1 *facility*—a physical setting used to serve a specific purpose. **E631**

3.1.1.1 *Discussion*—A facility may be within a building, a whole building, or a building with its site and surrounding environment; or it may be a construction that is not a building. The term encompasses both the physical object and its use.

3.1.2 *facility serviceability*—the capability of a facility to perform the function(s) for which it is designed, used, or required to be used.

3.1.2.1 *Discussion*—The scope of this performance is of the facility as a system, including its subsystems, components and materials and their interactions, such as acoustical, hydrothermal, air purity, and economic; and of the relative importance of each performance requirement. **E631**

3.1.3 *office*—a place, such as a room, suite, or building, in which business, clerical or professional activities are conducted.

3.1.4 For standard definitions of additional terms applicable to this classification, see Terminology E631.

3.2 *Definitions of Terms Specific to This Standard:*

3.2.1 *easement*—a right held by one person in the land of another, such as the right to cross one parcel of land to get to another parcel of land; or to use the land, as for installation and maintenance of public utilities. (See Fig. 1.)

[1] This classification is under the jurisdiction of ASTM Committee E06 on Performance of Buildings and is the direct responsibility of Subcommittee E06.25 on Whole Buildings and Facilities.

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[2] Portions of this document are based on material originally prepared by the International Centre for Facilities (ICF) and © 1993 by ICF and Minister of Public Works and Government Services Canada. Their cooperation in the development of this standard is acknowledged.

[3] For referenced ASTM standards, visit the ASTM website, www.astm.org, or contact ASTM Customer Service at service@astm.org. For *Annual Book of ASTM Standards* volume information, refer to the standard's Document Summary page on the ASTM website.

[4] Available from American National Standards Institute (ANSI), 25 W. 43rd St., 4th Floor, New York, NY 10036, http://www.ansi.org.

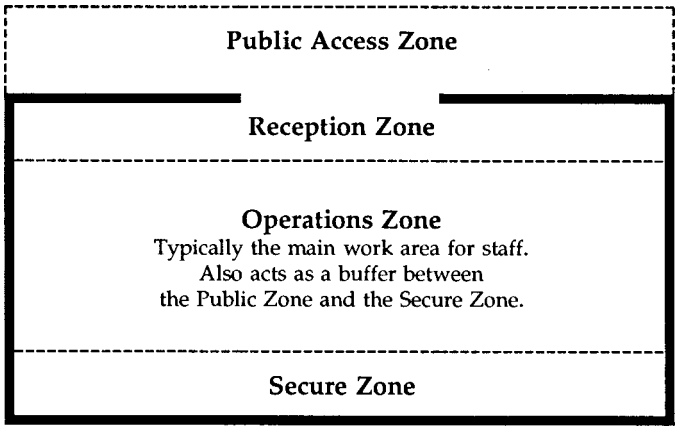

FIG. 1 Zones of Physical Security

3.2.2 *security functions:*

3.2.2.1 *detection*—devices and methods such as guards, alarms and access control, and monitoring systems designed to indicate, and possibly verify, attempted or actual unauthorized access.

3.2.2.2 *protection*—physical and psychological barriers that will delay or deter someone attempting unauthorized access.

3.2.2.3 *response*—reactions to attempted or actual unauthorized access, such as involvement of guard or police forces, damage assessments, and remedial measures to forestall a repetition of a security breach.

3.2.3 *hours of operation:*

3.2.3.1 *active hours*—the time when a facility is normally fully occupied and operational.

3.2.3.2 *normal working hours*—the time during the day when staff are normally at work, starting with the normal arrival in the morning of first staff and ending with the normal departure time of last staff. Excludes time of an evening or night shift, time when staff are working later than normal, weekends, and legal holidays.

3.2.3.3 *silent hours*—the period when a facility is essentially unoccupied, although security, cleaning, and building operations staff may be present.

3.2.3.4 *transitional hours*—the time in the morning after the first workers normally arrive until a facility is fully operational, and in the evening from the end of normal work until the normal workers have left, although security, cleaning, and building operations staff may be present.

3.2.4 *zones of physical security:*

3.2.4.1 *high-security zone*—an area that is continuously monitored and where access is limited to authorized personnel.

3.2.4.2 *occupant zone*—the occupant's premises, which includes all of the zones listed below. May be the same as the occupied area, if that does not include any public access zone.

3.2.4.3 *operations zone*—an area where access is limited to employees and to visitors with a legitimate reason for being there.

3.2.4.4 *public access zone*—that area to which the public has free access. Normally, these are the grounds of a facility, and the public corridors in multi-tenant buildings.

3.2.4.5 *reception zone*—an area to which the general public's access can be limited. Access could be limited to specific times of day or for specific reasons.

3.2.4.6 *secure zone*—an area that is continuously monitored and where access is controlled.

4. Significance and Use

4.1 Each Facility Rating Scale (see Figs. 2-7) in this classification provides a means to estimate the level of serviceability of a building or facility for one topic of serviceability and to compare that level against the level of any other building or facility.

4.2 This classification can be used for comparing how well different buildings or facilities meet a particular requirement for serviceability. It is applicable despite differences such as location, structure, mechanical systems, age, and building shape.

4.3 This classification can be used to estimate the amount of variance of serviceability from target or from requirement, for a single office facility, or within a group of office facilities.

4.4 This classification can be used to estimate the following:

4.4.1 Serviceability of an existing facility for uses other than its present use.

4.4.2 Serviceability (potential) of a facility that has been planned but not yet built.

4.4.3 Serviceability (potential) of a facility for which remodeling has been planned.

4.5 Use of this classification does not result in building evaluation or diagnosis. Building evaluation or diagnosis generally requires a special expertise in building engineering or technology and the use of instruments, tools, or measurements.

4.6 This classification applies only to facilities that are building constructions, or parts thereof. (While this classification may be useful in rating the serviceability of facilities that are not building constructions, such facilities are outside the scope of this classification.)

4.7 This classification is not intended for, and is not suitable for, use for regulatory purposes, nor for fire hazard assessment nor for fire risk assessment.

5. Basis of Classification

5.1 The scales shown in Figs. 2-7 contain the basis for classification.

A.9. Facility Protection

Scale A.9.1. Protection around building

Occupant Requirement Scale		Facility Rating Scale
9 ❑ **LEVEL OF PROTECTION FROM THREATS**: Operations require maximum protection from various threats. **POSSIBLE THREATS**: Entry from adjacent building(s), electronic or acoustic intrusion, overview of site, and activities of undesirable neighbours.		9 ❑ ○ **Electronic or acoustic intrusion**: The distance and terrain are sufficient to prevent acoustic or electronic intrusion. ○ **Overview of site**: There is a good overview from several surrounding buildings where this is desirable, or alternately, surrounding buildings do not permit an overview where there is a security concern. ○ **Information on activities in neighbouring buildings**: Information about activities and visitor traffic in neighbouring buildings is offered to prospective occupants, sufficient that they can assess any security threats and risks before deciding to move in, and take any necessary precautions, or to find alternate accommodation. ○ **Personal safety**: The immediate area is safe at all hours, with many people on foot nearby, or effective surveillance and patrol.
8 ❑		
7 ❑ ○ **LEVEL OF PROTECTION FROM THREATS**: Operations require special protection from various threats. ○ **POSSIBLE THREATS**: Entry from adjacent building(s), electronic or acoustic intrusion. Occupants to be warned before move-in of activities of neighbours in the building or immediate area that might increase risks.		7 ❑ ○ **Electronic or acoustic intrusion**: The distance to the adjacent building(s) prevents acoustic intrusion and reduces the possibility of electronic intrusion. ○ **Overview of site**: The surrounding buildings give a partial overview of the site where an overview is desirable, or alternately, give a minimum building overview where an overview is a security concern. ○ **Information on activities in neighbouring buildings**: Information about all relevant activities and visitor traffic is offered at occupant move-in. ○ **Personal safety**: The immediate area is safe at all hours, with many people about.
6 ❑		
5 ❑ ○ **LEVEL OF PROTECTION FROM THREATS**: Operations require protection from various threats. ○ **POSSIBLE THREATS**: Entry from adjacent building(s), acoustic intrusion. Description of activities of most neighbours in the building or immediate area to be available to occupants on request.		5 ❑ ○ **Electronic or acoustic intrusion**: The distance from the windows to the windows of adjacent building(s) is sufficient to prevent acoustic intrusion. ○ **Overview of site**: There is a direct view of the street side and rear of the site from adjacent properties. ○ **Information on activities in neighbouring buildings**: Information on most activities in neighbouring buildings, including about visitor traffic, is available at the request of the occupants. ○ **Personal safety**: The immediate area is safe for pedestrians during office hours with no recent history of attack in the area, day or night.
4 ❑		
3 ❑ ○ **LEVEL OF PROTECTION FROM THREATS**: Operations require minimum protection from various threats. ○ **POSSIBLE THREATS**: Entry from adjacent building(s), acoustic intrusion, activities of neighbours.		3 ❑ ○ **Electronic or acoustic intrusion**: There is acoustic glazing in windows in proximity to adjacent building(s). ○ **Overview of site**: A view of all parts of the site is normal from adjacent properties. ○ **Information on activities in neighbouring buildings**: There is minimum information on activities in neighbouring building(s), and no information on visitors is generated. ○ **Personal safety**: The immediate area is unsafe to pedestrians outside office hours with some history of attacks at night.
2 ❑		

Scale A.9.1. continued on next page

FIG. 2 Scale A.9.1 for Protection Around Building

A.9. Facility Protection

Scale A.9.1. Protection around building (continued)

Occupant Requirement Scale	Facility Rating Scale
1 ❑ ○ **LEVEL OF PROTECTION FROM THREATS:** No protection required at this level. ○ **POSSIBLE THREATS:** No protection required at this level.	1 ❑ ○ **Electronic or acoustic intrusion**: Close proximity of building windows to adjacent building(s) windows allows easy acoustic or electronic intrusion. ○ **Overview of site**: View of the site is normal from adjacent properties. ○ **Information on activities in neighbouring buildings**: No information concerning activities in neighbouring building(s), or on visitors, is generated. ○ **Personal safety**: The immediate area is dangerous with a history of attacks on pedestrians during day and night.

❑ Exceptionally important. ❑ Important. ❑ Minor Importance.	
Minimum Threshold level =	❑ NA ❑ NR ❑ Zero ❑ DP

NOTES *Space for handwritten notes on Requirements or Ratings*

FIG. 2 Scale A.9.1 for Protection Around Building *(continued)*

5.2 Instructions for the use of this classification are contained in Practices E1334 and E1679.

6. Keywords

6.1 building; building; protection of; facility; facility occupants; function; office; performance; rating; rating scale; requirements; serviceability

A.9. Facility Protection

Scale A.9.2. Protection from unauthorized access to site and parking

Occupant Requirement Scale		Facility Rating Scale
9 ❑ ○ **PROTECTION OF SITE**: The entire site needs maximum protection against unauthorized intrusion. Easements through the site cannot be tolerated. Emergency work by utilities must be supervised by security staff. ○ **CONTROL OF PARKING USE**: The parking area requires control against unauthorized use. ○ **PROTECTION OF ON-SITE STORED VEHICLES**: Organization's stored vehicles on-site require maximum protection.	8 ❑	9 ❑ ○ **Perimeter control**: The entire site is fenced. The gate is attended during active and transition hours, and has intercom and camera surveillance during silent hours. ○ **Easements**: There are no easements within the fenced site. ○ **Permission for access to site**: Utility companies requiring access must obtain prior permission to enter, and must work under the control of the occupant security personnel, even in emergencies. ○ **Control of access**: Indoor parking with attended control station and no outdoor parking. ○ **Security of stored vehicles**: Company stored vehicles in indoor parking with TV monitoring in silent hours.
7 ❑ ○ **PROTECTION OF SITE**: A portion of the site needs special protection against unauthorized intrusion. Easements through the secure area can only be entered with permission of the occupants, and can only perform work under supervision of security staff. ○ **CONTROL OF PARKING USE**: The parking area requires control against unauthorized use. ○ **PROTECTION OF ON-SITE STORED VEHICLES**: Organization's stored vehicles on-site require special protection.	6 ❑	7 ❑ ○ **Perimeter control**: Restricted areas of the site are fenced. The gate is attended during active hours, and key control is used at other times. ○ **Easements**: Easements within the fenced security area require permission of the occupants to enter. ○ **Permission for access to site**: Utility companies must obtain prior permission to enter, and must work under the control of a building security guard. ○ **Control of access**: Outdoor parking with attended control station. ○ **Security of stored vehicles**: Company vehicles in fenced compound, or indoor parking, with card reader access.
5 ❑ ○ **PROTECTION OF SITE**: A portion of the site needs protection against unauthorized intrusion. Easements within 15 m of the building require that restricted access or work only be performed under supervision of security staff. ○ **CONTROL OF PARKING USE**: Parking areas require limited control against unauthorized use. ○ **PROTECTION OF ON-SITE STORED VEHICLES**: Organization's stored vehicles on-site require basic protection.	4 ❑	5 ❑ ○ **Perimeter control**: Restricted areas of the site are fenced and there is a locked gate. ○ **Easements**: Easements within 15 m of the building require permission of the occupants to enter and crews must work under the control of a building security guard. ○ **Permission for access to site**: For work beyond 15 m of the building, no permission is required for access by utility crews arriving unannounced. ○ **Control of access**: Visitor and staff parking in separate areas, with intermittent guard patrol. ○ **Security of stored vehicles**: Company vehicles in fenced compound, or indoor parking, locked during silent hours with key access.
3 ❑ ○ **PROTECTION OF SITE**: Portions of the site need minimum protection from public trespass. Work on easements within 15 m of the building require advance notice. ○ **CONTROL OF PARKING USE**: Parking areas require minimum control against unauthorized use. ○ **PROTECTION OF ON-SITE STORED VEHICLES**: Organization's stored vehicles on-site require minimum protection.	2 ❑	3 ❑ ○ **Perimeter control**: Signage on the site indicates areas that are public and areas that are restricted from public trespass. ○ **Easements**: Some easements on the site are within 15 m of the building. ○ **Permission for access to site**: Utility crews must give one day notice if working within 15 m of the building. ○ **Control of access**: Parking area controlled by signage. ○ **Security of stored vehicles**: Company vehicles stored on-site in separate area, illuminated at night.

Scale A.9.2. continued on next page

FIG. 3 Scale A.9.2 for Protection from Unauthorized Access to Site and Parking

A.9. Facility Protection

Scale A.9.2. Protection from unauthorized access to site and parking (continued)

Occupant Requirement Scale	Facility Rating Scale
1 ❑ ○ **PROTECTION OF SITE**: There is no requirement at this level. ○ **CONTROL OF PARKING USE**: There is no requirement at this level. ○ **PROTECTION OF ON-SITE STORED VEHICLES**: There is no requirement at this level.	1 ❑ ○ **Perimeter control**: There are no restrictions on access to the site. ○ **Easements**: Easements on the site are adjacent to the building. ○ **Permission for access to site**: Utility crews have no obligation to give notice to work on the site. ○ **Control of access**: Parking area uncontrolled. ○ **Security of stored vehicles**: No security for stored vehicles.

❑ Exceptionally important. ❑ Important. ❑ Minor Importance.	
Minimum Threshold level =	❑ NA ❑ NR ❑ Zero ❑ DP

NOTES *Space for handwritten notes on Requirements or Ratings*

FIG. 3 Scale A.9.2 for Protection from Unauthorized Access to Site and Parking *(continued)*

A.9. Facility Protection

Scale A.9.3. Protective surveillance of site

Occupant Requirement Scale		Facility Rating Scale
9 ❑ ○ **LEVEL OF PROTECTION FROM INTRUDERS**: Operations require maximum protection of the facility from intruders. ○ **LEVEL OF PROTECTION OF STAFF AND VISITORS**: Staff and visitors require maximum physical protection entering and leaving the facility. ○ **AFTER HOURS AND SHIFT WORK**: Staff work after-hours and on shifts. ○ **SURVEILLANCE OF INTRUDERS**: There must be no obstruction to effective surveillance of the site, and no hiding places for intruders on the site.		9 ❑ ○ **Illumination of site**: Overall illumination of the site, to a minimum of 50 lux and a maximum of 200 lux as required by TV cameras, with colour of light source controlled to give true colour rendition for TV monitors. ○ **Monitoring of site**: Colour monitor of building entrances, building perimeter and site fences. ○ **Patrol of site**: Guard patrol of building perimeter and fence perimeter. ○ **Placement of planting material**: Planting 6 m clear of building and pathways and none adjacent to parking. ○ **Selection of planting material**: All trees have high branches and all shrubs low to give full surveillance standing or in a van. ○ **Berms and walls**: No obstructing berms or walls.
7 ❑ ○ **LEVEL OF PROTECTION FROM INTRUDERS**: Operations require special protection of the facility from intruders. ○ **LEVEL OF PROTECTION OF STAFF AND VISITORS**: Staff and visitors require special physical protection entering and leaving the facility. ○ **AFTER HOURS AND SHIFT WORK**: Staff work after-hours and on shifts. ○ **SURVEILLANCE OF INTRUDERS**: There must be no obstruction to surveillance of site, and no hiding places for intruders in areas where staff walk to parking or to public street, and around buildings.	8 ❑	7 ❑ ○ **Illumination of site**: Site illuminated by a combination of street lighting, site lighting and building lighting to an overall level of 25 lux, with 50 lux at perimeter fences and 100 lux at night-staff entrances, with maximum contrast ratio of 1: 10. ○ **Monitoring of site**: Black and white monitor of all entrances and building perimeter. ○ **Patrol of site**: Guard patrol of building perimeter. ○ **Placement of planting material**: Planting 6 m clear of building, pathways and parking. ○ **Selection of planting material**: Most trees have high branches and shrubs are low, giving generally good view for site surveillance. ○ **Berms and walls**: No obstructing berms or walls.
5 ❑ ○ **LEVEL OF PROTECTION FROM INTRUDERS**: Operations require basic physical protection of the facility. ○ **LEVEL OF PROTECTION OF STAFF AND VISITORS**: Staff and visitors require basic physical protection entering and leaving the facility. ○ **AFTER HOURS AND SHIFT WORK**: Few staff work after-hours, and there is no shift work. ○ **SURVEILLANCE OF INTRUDERS**: There must be no hiding places for intruders in areas where staff must walk to parking or to public street.	6 ❑	5 ❑ ○ **Illumination of site**: Site illuminated by a combination of street lighting and building mounted lights. ○ **Monitoring of site**: Black and white monitoring of all building entrances and security gate. ○ **Patrol of site**: One guard patrol to check locked entrances and gates at beginning of silent hours. ○ **Placement of planting material**: Planting 6 m clear of building. ○ **Selection of planting material**: Half of trees and all shrubs give clear view that would not allow intruders to hide. ○ **Berms and walls**: Berms and walls placed so no hiding place for intruders.
	4 ❑	

Scale A.9.3. continued on next page

FIG. 4 Scale A.9.3 for Protective Surveillance of Site

A.9. Facility Protection

Scale A.9.3. Protective surveillance of site (continued)

Occupant Requirement Scale		Facility Rating Scale
3 ❑ ○ **LEVEL OF PROTECTION FROM INTRUDERS**: Operations require minimal physical protection of the facility. ○ **LEVEL OF PROTECTION OF STAFF AND VISITORS**: Staff enter and leave in groups at fixed hours. ○ **AFTER HOURS AND SHIFT WORK**: No staff after-hours or shift work. ○ **SURVEILLANCE OF INTRUDERS**:	2 ❑	3 ❑ ○ **Illumination of site**: No site lighting but there is light from adjacent streets. ○ **Monitoring of site**: Black and white monitor of after-hours building entrance only. ○ **Patrol of site**: No guard patrol. ○ **Placement of planting material**: Planting 3 m clear of building, pathways and parking. ○ **Selection of planting material**: Some trees and shrubs give clear view that would not allow intruders to hide. ○ **Berms and walls**: Berms and walls placed so few hiding places for intruders.
1 ❑ ○ **LEVEL OF PROTECTION FROM INTRUDERS**: There is no requirement at this level. ○ **LEVEL OF PROTECTION OF STAFF AND VISITORS**: There is no requirement at this level. ○ **AFTER HOURS AND SHIFT WORK**: There is no requirement at this level. ○ **SURVEILLANCE OF INTRUDERS**: There is no requirement at this level.		1 ❑ ○ **Illumination of site**: Site is dark at night. ○ **Monitoring of site**: No monitoring of site. ○ **Patrol of site**: No guard patrol. ○ **Placement of planting material**: Planting adjacent to building, pathways and parking. ○ **Selection of planting material**: Dense trees and high shrubs extend to ground level. ○ **Berms and walls**: Earth berms and retaining walls obstruct clear view of site.

❑ Exceptionally important. ❑ Important. ❑ Minor Importance.	
Minimum Threshold level =	❑ NA ❑ NR ❑ Zero ❑ DP

NOTES *Space for handwritten notes on Requirements or Ratings*

FIG. 4 Scale A.9.3 for Protective Surveillance of Site *(continued)*

A.9. Facility Protection

Scale A.9.4. Perimeter of building

Occupant Requirement Scale		Facility Rating Scale
9 ❑ ○ **PROTECTION FROM UNAUTHORIZED ENTRY AND ATTACK**: Operations require maximum security and protection from unauthorized entry or attack. ○ **AVOIDING FUMES IN VENTILATION AIR INTAKE**: Maximum protection required against fumes in ventilation air intake.	8 ❑	9 ❑ ○ **Entry from adjacent building(s)**: Access to the building from adjacent building(s) is prevented by a separating distance of 6 m (20 ft), (wide enough for a driveway or fire truck route). ○ **Access to roof from adjacent building(s)**: Access to the roof is prevented by a separating distance of 4 m. ○ **Access to building**: Silent hours entry is controlled by security guard who personally verifies identity; or by guard at security station who uses TV monitor and card reader to verify identity. ○ **Doors and windows secure**: Doors and windows at grade are secured with heavy duty hardware, doors, windows and frames, with security glazing and security deadlocks. ○ **Air intake location**: Air intake is remote from exhaust and vehicle fumes. The building's alarm system is equipped with smoke detectors and CO detectors. ○ **Alarms, monitors and guards**: Doors and windows at grade are alarmed for opening and breakage to central control, with TV monitoring of perimeter. Guards observe monitors of multiple TV cameras at perimeter.
7 ❑ ○ **PROTECTION FROM UNAUTHORIZED ENTRY AND ATTACK**: Operations require very good security and protection from unauthorized entry. ○ **AVOIDING FUMES IN VENTILATION AIR INTAKE**: Good protection required against fumes in ventilation air intake.	6 ❑	7 ❑ ○ **Entry from adjacent building(s)**: Access to the building from adjacent building(s) is prevented by a separating distance of 3 m (10 ft), (too wide to bridge unobtrusively or jump). ○ **Access to roof from adjacent building(s)**: Access to the roof is inhibited by a separating distance of 3 m. ○ **Access to building**: Silent hours access to the building is controlled by card reader or security guard, but persons must proceed to security desk. ○ **Doors and windows secure**: Doors and windows at grade are secured with heavy duty hardware and heavy duty doors, windows and frames. Security glazing or bars on windows. ○ **Air intake location**: Air intake is sufficiently remote and high that it cannot entrain smoke from building exhaust or vehicle exhaust. ○ **Alarms, monitors and guards**: Doors and windows at grade are alarmed to central control when opened, with TV monitoring at front and parking entrances. Guards patrol the perimeter, and observe TV monitors of entrances.
5 ❑ ○ **PROTECTION FROM UNAUTHORIZED ENTRY AND ATTACK**: Operations require basic security and protection against unauthorized entry. ○ **AVOIDING FUMES IN VENTILATION AIR INTAKE**: Protection required against fumes in ventilation air intake.	4 ❑	5 ❑ ○ **Entry from adjacent building(s)**: Access to the building from adjacent building(s) is inhibited by barriers. ○ **Access to roof from adjacent building(s)**: Access to the roof from the roof of adjacent building(s) is inhibited by a high roof fence. ○ **Access to building**: Traffic from all parking must pass central lobby security control point to access office floors. During silent hours, access is by key or card reader. ○ **Doors and windows secure**: Doors and windows at grade are secured with commercial grade hardware. ○ **Air intake location**: Air intake is sufficiently remote that it cannot entrain smoke from building exhaust or vehicle exhaust, except under rare air movement conditions around the building. ○ **Alarms, monitors and guards**: Local alarms ring when locked perimeter doors open. Guard at interior control station does not patrol perimeter.

Scale A.9.4. continued on next page

FIG. 5 Scale A.9.4 for Perimeter of Building

A.9. Facility Protection

Scale A.9.4. Perimeter of building (continued)

Occupant Requirement Scale		Facility Rating Scale
3 ❑ ○ **PROTECTION FROM UNAUTHORIZED ENTRY AND ATTACK**: Operations require minimum security and protection against unauthorized entry. ○ **AVOIDING FUMES IN VENTILATION AIR INTAKE**: Operations require minimum security and protection against unauthorized entry.	2 ❑	3 ❑ ○ **Entry from adjacent building(s)**: Access to the building from adjacent building(s) is difficult but not impossible. ○ **Access to roof from adjacent building(s)**: There is access to the roof from the roof of adjacent building(s), but roof openings are secured against intruders. ○ **Access to building**: With minor modifications, traffic from parking could be directed to a central lobby control point. ○ **Doors and windows secure**: Doors and windows at grade are secured with a mixture of marginal and adequate hardware. ○ **Air intake location**: Air intake is located to prevent entrainment of smoke from exhaust, or vehicle exhaust, except during periods of high winds. ○ **Alarms, monitors and guards**: No alarms on building perimeter and no guards.
1 ❑ ○ **PROTECTION FROM UNAUTHORIZED ENTRY AND ATTACK**: There is no requirement at this level. ○ **AVOIDING FUMES IN VENTILATION AIR INTAKE**: There is no requirement at this level.		1 ❑ ○ **Entry from adjacent building(s)**: Access to the building from adjacent building(s) is possible from upper level cornices or inter-connected basements. ○ **Access to roof from adjacent building(s)**: Access is easy to the roof from the roof of adjacent building(s). ○ **Access to building**: Access from parking to the building by several uncontrolled entry points. ○ **Doors and windows secure**: Doors and windows at grade are marginally secured with residential grade hardware. ○ **Air intake location**: Air intake is vulnerable to smoke from building exhaust or vehicle exhaust. ○ **Alarms, monitors and guards**: No alarms on building perimeter and no guards.

❑ Exceptionally important. ❑ Important. ❑ Minor Importance.	
Minimum Threshold level =	❑ NA ❑ NR ❑ Zero ❑ DP

NOTES *Space for handwritten notes on Requirements or Ratings*

FIG. 5 Scale A.9.4 for Perimeter of Building *(continued)*

A.9. Facility Protection

Scale A.9.5. Public zone of building

Occupant Requirement Scale		Facility Rating Scale
9 ❑ ○ **CONTROL OF STAFF ENTRY OUTSIDE OF ACTIVE HOURS:** Operations require maximum control over entry of staff to building public zone outside active hours. ○ **SECURITY OF ENTRY TO OCCUPANT ZONE:** Operations require maximum security against unauthorized entry to occupant zone. ○ **OVERFLOW CROWDS IN RECEPTION ZONE:** Occupant operations include large crowds which must be accommodated when the occupant reception zone overflows. ○ **SEPARATE STAFF TOILETS:** Occupant operations require toilets for staff separate from public toilets to avoid attack from disturbed visitors.	9 ❑	○ **Entry security desk**: Occupant personnel arriving after-hours require positive identification by security personnel, and may only go directly to occupant's own space. ○ **Separation of public and occupant zones**: Public zones, e.g. elevator lobbies, exit stairs and routes to stairs, and public toilets, are accessible to the public without entering occupant zone. Separation between the public zone and occupant zone is masonry, concrete or equivalent hard material, continuous from floor to structure above. Any duct that traverses the separation have security barriers and sound baffles. ○ **Support for crowd control**: A crowd in a typical occupant reception zone can overflow to the public area without disrupting lobby or corridors. Building layout includes provision for crowd holding areas near some occupants, and restricting access between public area near any one occupant group zone and rest of the building. ○ **Public toilets**: Occupants requiring secure toilets for staff have separate facilities from public toilets on their occupant floor.
7 ❑ ○ **CONTROL OF STAFF ENTRY OUTSIDE OF ACTIVE HOURS:** Operations require good control over entry of staff to building public zone after-hours. ○ **SECURITY OF ENTRY TO OCCUPANT ZONE:** Good security against unauthorized entry from building public zone to occupant zone. **OVERFLOW CROWDS IN RECEPTION ZONE:** Occupant operations include crowds that must be accommodated when they overflow the reception zone. ○ **SEPARATE STAFF TOILETS:** No requirement for separate staff toilets.	8 ❑	7 ❑ ○ **Entry security desk**: Occupant personnel arriving after-hours must identify themselves and sign record book at security desk. ○ **Separation of public and occupant zones**: Public zones, e.g. elevator lobbies, exit stairs and routes to stairs, and public toilets, are accessible to the public without entering occupant zone. Separation between the public zone and occupant zone extends to structure above. Ducts passing through are securely enclosed. ○ **Support for crowd control**: A crowd in a typical occupant reception zone can overflow to the public area without disrupting lobby or corridors. Building layout permits restricting access between public area near any one occupant and rest of the building. ○ **Public toilets**: Public toilets with corridor access on all office floors.
5 ❑ ○ **CONTROL OF STAFF ENTRY OUTSIDE OF ACTIVE HOURS:** Operations require basic control over entry of staff to building public zone after-hours. ○ **SECURITY OF ENTRY TO OCCUPANT ZONE:** Basic security against intruders to building public zone. ○ **OVERFLOW CROWDS IN RECEPTION ZONE:** Operations include some need for overflow crowd control in corridor. ○ **SEPARATE STAFF TOILETS:** No requirement for separate staff toilets.	6 ❑	5 ❑ ○ **Entry security desk**: Occupant personnel arriving after-hours must sign record book at security desk before proceeding to office elevators. ○ **Separation of public and occupant zones**: Public zones, e.g. elevator lobbies, exit stairs and routes to stairs, and public toilets, are accessible to the public without entering occupant zone. Walls separating the public zone and occupant zone extend above hung ceiling using open mesh or other barrier, or hung ceiling has fixed panels which are difficult and time-consuming to pierce. ○ **Support for crowd control**: If a crowd in an occupant reception zone overflows, people must wait in public corridor. Corridors are wide enough to accommodate a small, orderly queue and still allow free passage to other offices. Difficult or impractical to restrict access between public area near any one occupant and rest of the building. ○ **Public toilets**: Public toilets are accessible from public corridor on multi-tenant office floors.
	4 ❑	

Scale A.9.5. continued on next page

FIG. 6 Scale A.9.5 for Public Zone of Building

A.9. Facility Protection

Scale A.9.5. Public zone of building (continued)

Occupant Requirement Scale		Facility Rating Scale
3 ❑	○ **CONTROL OF STAFF ENTRY OUTSIDE OF ACTIVE HOURS:** Operations require minimum control over entry of staff to building public zone after-hours. ○ **SECURITY OF ENTRY TO OCCUPANT ZONE:** Minimum protection from intruders to building public zone. ○ **OVERFLOW CROWDS IN RECEPTION ZONE:** No need for overflow crowd control. ○ **SEPARATE STAFF TOILETS:** No requirement for public toilets.	3 ❑ ○ **Entry security desk**: Occupant personnel entering building after-hours by key are requested to sign record book at unmanned desk. ○ **Separation of public and occupant zones**: Some public zones, e.g. elevator lobbies, exit stairs, public toilets, are normally accessible from the occupant zone. Separation would require costly change, e.g. install walls from floor to structure above ceiling, constructing corridors. ○ **Support for crowd control**: Standard-size corridor or elevator lobby is the only space for a crowd. No capability to restrict access between entry to occupant reception zone and remainder of the building. ○ **Public toilets**: If public toilets are provided, they are in a public zone on street level(s), or basement level(s).
2 ❑		
1 ❑	○ **CONTROL OF STAFF ENTRY OUTSIDE OF ACTIVE HOURS:** There is no requirement at this level. ○ **SECURITY OF ENTRY TO OCCUPANT ZONE:** There is no requirement at this level. ○ **OVERFLOW CROWDS IN RECEPTION ZONE:** There is no requirement at this level. ○ **SEPARATE STAFF TOILETS:** There is no requirement at this level.	1 ❑ ○ **Entry security desk**: There is no security desk at entry. ○ **Separation of public and occupant zones**: Some public zones, e.g. elevator lobbies, exit stairs, public toilets, are only accessible from the occupant zone. ○ **Support for crowd control**: No means of restricting crowd access around any one occupant without restricting access to all occupants on that floor. ○ **Public toilets**: Toilets are not in public zone.

❑ Exceptionally important. ❑ Important. ❑ Minor Importance.	
Minimum Threshold level =	❑ NA ❑ NR ❑ Zero ❑ DP

NOTES *Space for handwritten notes on Requirements or Ratings*

FIG. 6 Scale A.9.5 for Public Zone of Building *(continued)*

A.9. Facility Protection

Scale A.9.6. Facility protection services

Occupant Requirement Scale		Facility Rating Scale
9 ❑ ○ **PROTECTION OF SERVICES TO THE BUILDING**: Operations require maximum protection of mechanical, electrical and communications services to the building. ○ **PROTECTION AGAINST THREATS INSIDE THE BUILDING**: Operations require maximum protection inside the building against sabotage by intruders or demonstrators.	8 ❑	9 ❑ ○ **Locking**: Security locks on service rooms and closets and on main access doors to utility shafts. ○ **Access doors**: Access doors to ceilings and utility shafts are locked. ○ **Alarms**: Intrusion alarms in mechanical and electrical rooms. Alarm on doors to utility closets. Alarms report to a 24 hour security station, on-site. ○ **External communication routing**: Cabling on-site and off-site are underground, with access to underground vaults locked. ○ **Communications redundancy**: Alternate communications links with lasers and/or microwave, along protected paths.
7 ❑ ○ **PROTECTION OF SERVICES TO THE BUILDING**: Operations require special protection of mechanical, electrical and communications services to the building. ○ **PROTECTION AGAINST THREATS INSIDE THE BUILDING**: Operations require special protection inside the building against sabotage by intruders or demonstrators.	6 ❑	7 ❑ ○ **Locking**: Security locks on mechanical and electrical rooms and utility closets ○ **Access doors**: Security screw fastenings on access doors to ceilings or utility shafts. ○ **Alarms**: Alarm on doors to mechanical and electrical rooms and utility closets. Alarms report to a 24 hour police or security station, on-site or nearby. ○ **External communication routing**: Cabling underground through site. ○ **Communications redundancy**: Redundant second underground service from opposite side of site from normal service, to a different telephone exchange.
5 ❑ ○ **PROTECTION OF SERVICES TO THE BUILDING**: Operations require basic protection of mechanical, electrical and communications services to the building. ○ **PROTECTION AGAINST THREATS INSIDE THE BUILDING**: Operations require basic protection inside the building against sabotage by intruders or demonstrators.	4 ❑	5 ❑ ○ **Locking**: Building locks on mechanical and electrical rooms and utility closets ○ **Access doors**: Screw fastenings on access doors to ceilings or shafts. ○ **Alarms**: Alarm on door to main mechanical and electrical rooms. Alarms report to a security service in the locality. ○ **External communication routing**: Cabling is overhead through the site, and in conduit when external on poles or building wall from ground to a length/height of 3 m. ○ **Communications redundancy**: Redundancy by provision for temporary overhead service from property line.
3 ❑ ○ **PROTECTION OF SERVICES TO THE BUILDING**: Operations require minimum protection of mechanical, electrical and communications services to the building. ○ **PROTECTION AGAINST THREATS INSIDE THE BUILDING**: Operations require minimum protection inside the building against sabotage by intruders or demonstrators.	2 ❑	3 ❑ ○ **Locking**: Building locks on mechanical and electrical rooms. Latches on closets. ○ **Access doors**: Screw fastenings on access doors to shafts. ○ **Alarms**: Alarm on door to main mechanical area. ○ **External communication routing**: Normal communication links with no enhanced protection. ○ **Communications redundancy**: Not provided.

Scale A.9.6. continued on next page

FIG. 7 Scale A.9.6 for Facility Protection Services

A.9. Facility Protection

Scale A.9.6. Facility protection services (continued)

Occupant Requirement Scale	Facility Rating Scale
1 ❑ ○ **PROTECTION OF SERVICES TO THE BUILDING:** There is no requirement at this level. ○ **PROTECTION AGAINST THREATS INSIDE THE BUILDING:** There is no requirement at this level.	1 ❑ ○ **Locking:** No locks on mechanical rooms or closets. ○ **Access doors:** Latches or lift-out access doors to ceilings and shafts. ○ **Alarms:** No alarms on utility spaces. ○ **External communication routing:** Communication links easily accessible for external interference. ○ **Communications redundancy:** Not provided.

❑ Exceptionally important. ❑ Important. ❑ Minor Importance.	
Minimum Threshold level =	❑ NA ❑ NR ❑ Zero ❑ DP

NOTES *Space for handwritten notes on Requirements or Ratings*

FIG. 7 Scale A.9.6 for Facility Protection Services *(continued)*