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An American National Standard

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

This standard is issued under the fixed designation E1701; 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 (see Figs. 1-8) 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 manageability.

1.2 Within that aspect of serviceability, each pair of scales (see Figs. 1-8) are for classifying one topic of serviceability. Each paragraph in an Occupant Requirement Scale summarizes one level of serviceability on that topic, which occupants might require. The matching entry in the facility rating scale 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. 1-8) 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 Figs. 1-8 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 Documents:*[4]

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

ISO/DIS 7162 Draft International Standard, Performance Standards in Building—Contents and Format of Standards for Evaluation of Performance

ISO/DIS 7164 Draft International Standard, Performance Standards in Building—Definitions and Means of Expression for the Performance of a Whole Building

3. Terminology

3.1 *Definitions:*

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

3.1.1.1 *Discussion*—A facility may be within a building, or 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.

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

[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.

B.2. Manageability

Scale B.2.1. Reliability of external supply

Facility Management Requirement Scale		Facility Rating Scale
9 ❑ ○ **FREQUENCY OF POWER OUTAGES**: Required levels are: electrical power out not more than once, for less than 3 hours, in a 3 year period. ○ **FREQUENCY OF LOSS OF LISTED SERVICES**: Required levels are: no loss of building services (see Table B2-A.) in a 12 month period, or backup services available. ○ **WORK DURATION DURING LOSS OF SERVICES**: Required levels are: staff able to work for up to one day with loss of two building services, e.g. windows open, sufficient daylight for almost all people, or enough standby power to continue essential operations. ○ **NEED FOR EVACUATION**: Required levels are: no evacuations.	8 ❑	9 ❑ ○ **Electrical power supply**: There were no electrical power outages in the last 12 months. Electrical power (utility supply or on-site distribution) was out not more than once, for less than 3 hours, in the last 3 years. ○ **Building services (except power)**: From the list in Table B2-A. there was no loss of service in the last 12 months, or, there are backup services for continued operations.
7 ❑ ○ **FREQUENCY OF POWER OUTAGES**: Required levels are, for a 12 month period: electrical power out 1 or 2 times, each lasting less than half a day, or 3 times, each lasting less than 20 minutes. ○ **FREQUENCY OF LOSS OF LISTED SERVICES**: Required levels are, for a 12 month period: loss of building services (see Table B2-A.) 1 or 2 times, each lasting less than half a day, or 3 times, each lasting less than 30 minutes. ○ **WORK DURATION DURING LOSS OF SERVICES**: Required levels are, for a 12 month period: staff able to work for up to half a day with loss of two building services, e.g. sufficient daylight for most people, and windows open. ○ **NEED FOR EVACUATION**: Required levels are, for a 12 month period: no evacuations.	6 ❑	7 ❑ ○ **Electrical power supply**: Electrical power (utility supply or on-site distribution) was out 1 or 2 times in the last 12 months, with each occasion less than half a day. ○ **Building services (except power)**: From the list in Table B2-A. loss of service in the last 12 months was 1 or 2 outages, each less than half a day.
5 ❑ ○ **FREQUENCY OF POWER OUTAGES**: Acceptable levels are, for a 12 month period: electrical power out 1 or 2 times, each lasting less than half a day, or 3 times, each lasting less than 30 minutes. ○ **FREQUENCY OF LOSS OF LISTED SERVICES**: Acceptable levels are, for a 12 month period: loss of building services (see Table B2-A.) 2 or 3 times, each lasting less than half a day, or 5 times, each lasting less than 30 minutes. ○ **WORK DURATION DURING LOSS OF SERVICES**: Acceptable levels are, for a 12 month period: staff able to work for up to half a day with loss of one building service, e.g. sufficient daylight for most people, but windows do not open. ○ **NEED FOR EVACUATION**: Acceptable levels are, for a 12 month period: no evacuations.	4 ❑	5 ❑ ○ **Electrical power supply**: Electrical power (utility supply or on-site distribution) was out 2 or 3 times in the last 12 months, with one occasion more than half a day. ○ **Building services (except power)**: From the list in Table B2-A. loss of service in the last 12 months was 2 or 3 outages, each less than half a day.

Scale B.2.1. continued on next page

FIG. 1 Scale B.2.1 for Reliability of External Supply

B.2. Manageability

Scale B.2.1. Reliability of external supply (continued)

Facility Management Requirement Scale		Facility Rating Scale
3 ❑ ○ **FREQUENCY OF POWER OUTAGES**: Acceptable levels are, for a 12 month period: electrical power out 2 or 3 times, each lasting less than 1 day, or 4 to 6 times, each lasting less than 30 minutes. ○ **FREQUENCY OF LOSS OF LISTED SERVICES**: Acceptable levels are, for a 12 month period: loss of building services (see Table B2-A.) up to 3 times, each lasting less than one day, or 4 to 6 times, each lasting less than 1 hour. ○ **WORK DURATION DURING LOSS OF SERVICES**: Acceptable levels are, for a 12 month period: staff able to work for up to 2 hours, e.g. sufficient daylight for some people, but windows do not open. ○ **NEED FOR EVACUATION**: Acceptable levels are, for a 12 month period: occasional full or partial evacuation of the building, e.g. once in 1 to 3 years.	2 ❑	3 ❑ ○ **Electrical power supply**: Electrical power (utility supply or on-site distribution) was out 2 or 3 times in the last 12 months, each less than 1 day. ○ **Building services (except power)**: From the list in Table B2-A. loss of service in the last 12 months was up to 3 outages, each lasting less than 1 day.
1 ❑ ○ **FREQUENCY OF POWER OUTAGES**: Acceptable levels are, for a 12 month period: electrical power out more than 3 times, lasting more than 1 day on one of the occasions. ○ **FREQUENCY OF LOSS OF LISTED SERVICES**: Acceptable levels are, for a 12 month period: serious loss of building services (see Table B2-A.) more than 3 times, each lasting a day or more. ○ **WORK DURATION DURING LOSS OF SERVICES**: Acceptable levels are, for a 12 month period: staff unable to work during that time; e.g. not enough daylight, windows do not open. ○ **NEED FOR EVACUATION**: Acceptable levels are, for a 12 month period: full or partial evacuation of the building 2 or more times.		1 ❑ ○ **Electrical power supply**: Electrical power (utility supply or on-site distribution) was out more than 3 times, or more than 1 day, in the last 12 months. ○ **Building services (except power)**: From the list in Table B2-A. there was serious loss of service, e.g. more than 3 times in the last 12 months, with each lasting a day, or more.

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

NOTES *Space for handwritten notes on Requirements or Ratings*

FIG. 1 Scale B.2.1 for Reliability of External Supply *(continued)*

3.1.4 For standard definitions of additional terms applicable to this classification, as well as those in 3.1.1-3.1.3, see Terminology E631.

4. Significance and Use

4.1 Each facility rating scale in this classification (see Figs. 1-8) 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 aslocation, 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.

B.2. Manageability

Scale B.2.2. Anticipated remaining service life

Facility Management Requirement Scale		Facility Rating Scale
9 ❑ ○ **REMAINING SERVICE LIFE OF BUILDING COMPONENTS AND SYSTEMS**: The acceptable level is a total of 26 or more points from Table B2-B. with remedial action budgeted or approved on remaining items.	8 ❑	9 ❑ ○ **Major building components**: A total of 26 or more points are scored from Table B2-B., with remedial action budgeted and approved on the remaining items.
7 ❑ ○ **REMAINING SERVICE LIFE OF BUILDING COMPONENTS AND SYSTEMS**: The acceptable level is a total of 22 to 25 points from Table B2-B.	6 ❑	7 ❑ ○ **Major building components**: A total of 22-25 points are scored from Table B2-B.
5 ❑ ○ **REMAINING SERVICE LIFE OF BUILDING COMPONENTS AND SYSTEMS**: The acceptable level is a total of 16 to 21 points from Table B2-B.	4 ❑	5 ❑ ○ **Major building components**: A total of 16-21 points are scored from Table B2-B.
3 ❑ ○ **REMAINING SERVICE LIFE OF BUILDING COMPONENTS AND SYSTEMS**: The acceptable level is a total of 11 to 15 points from Table B2-B.	2 ❑	3 ❑ ○ **Major building components**: A total of 11-15 points are scored from Table B2-B.
1 ❑ ○ **REMAINING SERVICE LIFE OF BUILDING COMPONENTS AND SYSTEMS**: The acceptable level is less than 10 points from Table B2-B.		1 ❑ ○ **Major building components**: Less than 10 points are scored from Table B2-B.

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

NOTES *Space for handwritten notes on Requirements or Ratings*

FIG. 2 Scale B.2.2 for Anticipated Remaining Service Life

4.4.3 Serviceability (potential) of a facility for which a 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 fire risk assessment.

5. Basis of Classification

5.1 The scales in Figs. 1-8 contain the basis for classification.

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

6. Keywords

6.1 building; energy consumption in office buildings; facility; facility occupants; function; maintenance and operation; ease of; manageability; of building; office; performance; rating; rating scale; requirements; serviceability

B.2. Manageability

Scale B.2.3. Ease of operation

Facility Management Requirement Scale		Facility Rating Scale
9 ❑ ○ **STOREROOM FOR BUILDING OPERATIONS**: Require well located, well ventilated storeroom for supplies and parts for building operations. ○ **SPACE FOR BUILDING OPERATION PERSONNEL**: Require space for building operation personnel that is quiet, convenient, and well ventilated.		9 ❑ ○ **Storeroom**: A good size storeroom for supplies and small consumables for building operations is provided. It is well located, with good humidity control and air quality. ○ **Space for building operation personnel**: The operator's office and locker space are well ventilated, and quiet, with a convenient location. ○ **Operating instructions for services and equipment**: Operating instructions are complete and up-to-date for instruction and verification.
	8 ❑	
7 ❑ ○ **STOREROOM FOR BUILDING OPERATIONS**: Require well located, well ventilated storeroom for supplies for building operations. ○ **SPACE FOR BUILDING OPERATION PERSONNEL**: Require space for building operation personnel that is quiet, convenient, and well ventilated.		7 ❑ ○ **Storeroom**: An adequate storeroom for supplies and small consumables for building operations is provided. ○ **Space for building operation personnel**: The operator's office, adjacent to the mechanical room, is well ventilated, and quiet. There are lockers in the corridor. ○ **Operating instructions for services and equipment**: Operating manuals are up-to-date, and adequate for instruction and verification.
	6 ❑	
5 ❑ ○ **STOREROOM FOR BUILDING OPERATIONS**: Basic storeroom for building operations is needed. ○ **SPACE FOR BUILDING OPERATION PERSONNEL**: Size and condition of space for building operator's office are not important.		5 ❑ ○ **Storeroom**: A barely adequate storeroom for supplies and small consumables for building operations is provided. ○ **Space for building operation personnel**: The operator's office is just adequate, e.g. noisy, small, ventilation just adequate. There are lockers in the corridor. ○ **Operating instructions for services and equipment**: Operating manuals are just adequate, e.g. mostly up-to-date.
	4 ❑	
3 ❑ ○ **STOREROOM FOR BUILDING OPERATIONS**: No need for a building operations storeroom on-site.		3 ❑ ○ **Storeroom**: There is no building operations storeroom on-site, but shelving and storage lockers are provided in shops and mechanical spaces. ○ **Space for building operation personnel**: The operator's area is inadequate, e.g. operator's desk and lockers are in the mechanical room or passage. ○ **Operating instructions for services and equipment**: Operating manuals are poor, e.g. incomplete operating instructions.
	2 ❑	
1 ❑ ○ **STOREROOM FOR BUILDING OPERATIONS**: No need for a building operations storeroom on-site.		1 ❑ ○ **Storeroom**: There is no building operations storeroom on-site. ○ **Space for building operation personnel**: There is no allocated space for the operator. ○ **Operating instructions for services and equipment**: Manuals are mostly missing, or non-existent.

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

NOTES *Space for handwritten notes on Requirements or Ratings*

FIG. 3 Scale B.2.3 for Ease of Operation

B.2. Manageability

Scale B.2.4. Ease of maintenance

Facility Management Requirement Scale		Facility Rating Scale
9 ❑ ○ **REQUIRED LEVEL OF MAINTENANCE:** Building operations require that there be no delays due to failure of the ventilating, heating or cooling systems. ○ **STORAGE AND WORKSHOP:** An ample storeroom for tools and spares, and a well equipped workshop ○ **ACCESS TO CONTRACTORS AND PARTS:** Easy access to maintenance contractors, and same-day access to replacement parts/equipment. ○ **DATA FOR INVENTORY AND MAINTENANCE PROGRAM:** Complete data for an inventory and maintenance program. ○ **EASE OF MAINTENANCE AND REPAIRS OF SURFACES AND MATERIALS:** Surfaces and materials need to be very easy to maintain and repair.		9 ❑ ○ **Storeroom for maintenance**: The storeroom is generous for tools and spares, and conveniently located. ○ **Maintenance workshop**: A well-equipped workshop is on-site. ○ **Maintenance contractors**: To fix or replace key or major equipment in each of the main categories, there is a choice of competing maintenance contractors available locally to fix or replace key/major equipment. ○ **Availability of replacement parts**: Important replacement parts/equipment for all major units are available for same-day delivery or installation. ○ **Data for maintenance**: Complete data is available for inventory and maintenance program. ○ **Painting and repairs**: Surfaces and materials require little attention. Where required, they are very easy to paint or repair. Repairs require average skill.
7 ❑ ○ **REQUIRED LEVEL OF MAINTENANCE:** Building operations require an above average level of maintenance. ○ **STORAGE AND WORKSHOP:** An adequate storeroom for tools and a minimum of spares, and a basic workshop. ○ **ACCESS TO CONTRACTORS AND PARTS:** Access to maintenance contractors, and same-day access to replacement parts/equipment. ○ **DATA FOR INVENTORY AND MAINTENANCE PROGRAM:** Adequate data for an inventory and maintenance program. ○ **EASE OF MAINTENANCE AND REPAIRS OF SURFACES AND MATERIALS:** Surfaces and materials that are easy to maintain and repair.	8 ❑	7 ❑ ○ **Storeroom for maintenance**: The storeroom is quite adequate for tools and minimum spares, and is conveniently located. ○ **Maintenance workshop**: A basic workshop is on-site. ○ **Maintenance contractors**: At least one firm of each type of maintenance contracting is locally available to fix or replace all categories of key or major equipment. ○ **Availability of replacement parts**: Important replacement parts/equipment for most key equipment are available for same-day delivery or installation. ○ **Data for maintenance**: Data is available for most parts of an inventory and maintenance program. ○ **Painting and repairs**: Surfaces and materials are easy to paint or repair. Repairs require average skill.
5 ❑ ○ **REQUIRED LEVEL OF MAINTENANCE:** Building operations require an average level of maintenance. ○ **STORAGE AND WORKSHOP:** An adequate storeroom for tools and a minimum of spares, and a basic workshop. ○ **ACCESS TO CONTRACTORS AND PARTS:** Access to maintenance contractors, and access to replacement parts/equipment within 24 hours. ○ **DATA FOR INVENTORY AND MAINTENANCE PROGRAM:** Adequate data for an inventory and maintenance program. ○ **EASE OF MAINTENANCE AND REPAIRS OF SURFACES AND MATERIALS:** Surfaces and materials that are reasonably easy to maintain and repair.	6 ❑ 4 ❑	5 ❑ ○ **Storeroom for maintenance**: The storeroom is adequate for tools and minimum spares, but not conveniently located. ○ **Maintenance workshop**: Workshop functions are carried out in a section of one of the mechanical rooms, or in part of a storeroom. ○ **Maintenance contractors**: At least one firm of each type of maintenance contracting is available either locally or within 24 hours to fix or replace key or major equipment. ○ **Availability of replacement parts**: Important replacement parts/equipment are available within 24 hours. ○ **Data for maintenance**: Basic data is available for the start of an inventory and maintenance program, but it is incomplete. ○ **Painting and repairs**: Surfaces and materials are reasonably easy to paint or repair. Repairs require average skill.

Scale B.2.4. continued on next page

FIG. 4 Scale B.2.4 Ease of Maintenance

B.2. Manageability

Scale B.2.4. Ease of maintenance (continued)

Facility Management Requirement Scale		Facility Rating Scale
3 ❑ ○ **REQUIRED LEVEL OF MAINTENANCE:** Building operations require a basic level of maintenance. ○ **STORAGE AND WORKSHOP:** A storeroom for tools and essential spares, and a basic workshop. ○ **ACCESS TO CONTRACTORS AND PARTS:** Access to some types of maintenance contractors, and access to replacement parts/equipment within several days or weeks. ○ **DATA FOR INVENTORY AND MAINTENANCE PROGRAM:** Maintenance data for some components. ○ **EASE OF MAINTENANCE AND REPAIRS OF SURFACES AND MATERIALS:** Surfaces and materials may be very difficult to paint or repair, and repairs may require above average skill.	2 ❑	3 ❑ ○ **Storeroom for maintenance**: The storeroom is just adequate for essential spares, tools. ○ **Maintenance workshop**: No maintenance workshop is provided, but some space could be converted. ○ **Maintenance contractors**: Maintenance contractors or technicians are not locally available for some key components. ○ **Availability of replacement parts**: It takes several days or weeks to replace essential parts/equipment. ○ **Data for maintenance**: Maintenance data is missing on some key components. **painting and repairs**: Surfaces and materials are difficult to paint or repair. Repairs require above average skill, e.g. broadloom carpet under partitions, complicated shapes, difficult access, poor condition of substrate.
1 ❑ ○ **REQUIRED LEVEL OF MAINTENANCE:** Ease of maintenance or speed of repairs is either completely irrelevant or completely unimportant to occupants.		1 ❑ ○ **Storeroom for maintenance**: No storeroom is provided, and no space is available for future installation. ○ **Maintenance workshop**: No workshop is provided, and no space is available for future installation. ○ **Maintenance contractors**: There are no maintenance contractors in the locality. ○ **Availability of replacement parts**: It takes several weeks or a month to replace essential parts/equipment. ○ **Data for maintenance**: No manuals are available for performance verification, inventory, and maintenance program. ○ **Painting and repairs**: Surfaces and materials are very difficult to paint or repair. Repairs require above average skill, e.g. broadloom carpet under partitions, complicated shapes, difficult access, poor condition of substrate.

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

NOTES *Space for handwritten notes on Requirements or Ratings*

FIG. 4 Scale B.2.4 Ease of Maintenance *(continued)*

B.2. Manageability

Scale B.2.5. Ease of cleaning

Facility Management Requirement Scale		Facility Rating Scale
9 ❑ ○ **EASE OF CLEANING OF SURFACES:** Ease of cleaning is important. Surfaces need to be of a type that minimize the need for cleaning. ○ **EASE OF CLEANING OF FITTINGS AND FIXTURES:** Equipment, fixtures, fittings and furniture need to be very easy to clean, and surfaces and materials need to be in excellent condition. Excellent access for cleaning is needed. ○ **FACILITIES FOR PROPER WASTE REMOVAL AND RECYCLING:** To encourage proper removal and recycling of waste, facilities for waste handling must be particularly convenient, functional and clean, with an excellent facility for sorting and holding for recycling, and for keeping food waste separate from other waste. Waste containers should be self-contained, with drip pans, etc., to avoid attracting rats.		9 ❑ ○ **Types of surfaces and materials**: Surfaces and materials are soil and mark resistant. ○ **Fixtures, furniture, etc.**: Most items of equipment, fixtures, fittings and furniture are very easy to clean, and none are difficult. ○ **Condition**: All surfaces and materials are in excellent condition and easily kept clean with average effort and skill. ○ **Accessibility**: Access is excellent for cleaning. ○ **Waste handling**: Waste containers are accessible from inside the building via a locked door. The containers are adjacent to a freight elevator. Food waste is kept separate from other waste. Waste containers are self-contained, with drip pans, etc., to avoid attracting rats. Have capacity to hold 3 extra days of garbage in case of delay in collection. ○ **Recycling**: Facility for containers for sorting and holding waste to be recycled is adjacent to a freight elevator, and accessible from inside the building via a locked door.
7 ❑ ○ **EASE OF CLEANING OF SURFACES:** Surfaces should be inherently easy to clean. ○ **EASE OF CLEANING OF FITTINGS AND FIXTURES:** Most equipment, fixtures, fittings and furniture need to be easy to clean, and surfaces and materials need to be in good condition, with adequate access for cleaning. ○ **FACILITIES FOR PROPER WASTE REMOVAL AND RECYCLING:** To encourage proper removal and recycling of waste, facilities for waste handling must be accessible and functional, with adequate facility for sorting and holding for recycling, and for keeping food waste separate from other waste. Waste containers should be self-contained, with drip pans, etc., to avoid attracting rats.	8 ❑ 6 ❑	7 ❑ ○ **Types of surfaces and materials**: Most types of surfaces and materials are inherently soil and mark resistant, e.g. brushed chrome, semi-gloss paint. ○ **FIXTURES, furniture, etc.**: Most items of equipment, fixtures, fittings and furniture are easy to clean. ○ **Condition**: Surfaces and materials are in good condition and can be kept clean with average effort and skill. ○ **Accessibility**: Access is adequate for cleaning. ○ **Waste handling**: Waste containers are accessible from the street or alley and have good access to a loading dock and freight elevator. Food waste is kept separate from other waste. Waste containers are self-contained, with drip pans, etc., to avoid attracting rats. Have capacity to hold 1 extra day of garbage in case of delay in collection. ○ **Recycling**: Facility for sorting and holding waste to be recycled is adequate, with good access to a loading dock and freight elevator.

Scale B.2.5. continued on next page

FIG. 5 Scale B.2.5 for Ease of Cleaning

B.2. Manageability

Scale B.2.5. Ease of cleaning (continued)

Facility Management Requirement Scale		Facility Rating Scale
5 ❑ ○ **EASE OF CLEANING OF SURFACES**: Average ease of cleaning is required, e.g. surfaces should be inherently easy to clean. ○ **EASE OF CLEANING OF FITTINGS AND FIXTURES**: Most equipment, fixtures, fittings and furniture need to be reasonably easy to clean, and surfaces and materials need to be in fair condition, with access for cleaning mostly adequate. ○ **FACILITIES FOR PROPER WASTE REMOVAL AND RECYCLING**: Facilities for waste handling must be accessible from a freight elevator, and must include capability for holding a portion of waste for recycling. Sorting for recycling is not required.	4 ❑	5 ❑ ○ **Types of surfaces and materials**: Many types of surfaces and materials are inherently soil and mark resistant, e.g. brushed chrome, semi-gloss paint, but some types require extra care and time. ○ **Fixtures, furniture, etc.**: Most items of equipment, fixtures, fittings and furniture can be cleaned without significant difficulty. ○ **Condition**: Surfaces and materials are in fair condition but can be kept looking clean with average effort and skill. ○ **Accessibility**: Most access for cleaning is adequate. ○ **Waste handling**: Waste containers are accessible from the street or alley and have good access to a freight elevator. ○ **Recycling**: Waste to be recycled is held accessible from the street or alley, with good access to a freight elevator.
3 ❑ ○ **EASE OF CLEANING OF SURFACES**: Difficulty in cleaning can be tolerated, e.g. surfaces and materials that are difficult to keep clean. ○ **EASE OF CLEANING OF FITTINGS AND FIXTURES**: Equipment, fixtures, fittings and furniture that are difficult to clean, deteriorated condition of surfaces, awkward layout. ○ **FACILITIES FOR PROPER WASTE REMOVAL AND RECYCLING**: Recycling of waste is not required.	2 ❑	3 ❑ ○ **Types of surfaces and materials**: Some types of surfaces and materials are difficult to keep clean, e.g. bright chrome, flat paint, that easily show soil and finger marks. ○ **Fixtures, furniture, etc.**: Some equipment, fixtures, fittings and furniture are difficult to clean, e.g. complicated shapes. ○ **Condition**: The deteriorated condition of surfaces make cleaning difficult, e.g. worn carpet, abraded surfaces, stains, old paint. ○ **Accessibility**: Access is awkward, e.g. furniture is against some windows, a crowded layout of furniture and equipment. ○ **Waste handling**: The waste area is not close to a freight elevator. Bins are inadequate for holding waste. ○ **Recycling**: No recycling program in effect.
1 ❑ ○ **EASE OF CLEANING OF SURFACES**: The ease of cleaning of surfaces and materials, and recycling of waste, are either completely irrelevant or completely unimportant to occupants.		1 ❑ ○ **Types of surfaces and materials**: Most types of surfaces and materials are very difficult to keep clean, e.g. bright chrome and flat paint, that easily show soil and finger marks. ○ **Fixtures, furniture, etc.**: Equipment, fixtures, fittings and furniture are all very difficult to clean, e.g. complicated shapes. ○ **Condition**: The deteriorated condition of surfaces make cleaning extremely difficult, e.g. badly worn carpet, abraded surfaces, heavy stains, old and deteriorated paint. ○ **Accessibility**: Access is very difficult, e.g. furniture is against windows, a crowded layout of furniture and equipment. There is no hoist, but a stage or platform is used for window cleaning outside. ○ **Waste handling**: No area is provided for waste handling, or, the area is very remote from a freight elevator. Bins are insufficient or inadequate for holding the waste. ○ **Recycling**: No recycling program in effect.

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

NOTES *Space for handwritten notes on Requirements or Ratings*

FIG. 5 Scale B.2.5 for Ease of Cleaning *(continued)*

B.2. Manageability

Scale B.2.6. Janitorial services

Facility Management Requirement Scale		Facility Rating Scale
9 ❑ ○ **LEVEL OF JANITOR FACILITIES**: Well above average facilities for janitors are needed. ○ **SPACES FOR JANITOR FACILITIES**: Generous and well-kept lockable storage space for supplies, separate room or closet for cleaning equipment, convenient to elevators, storage space for bulk supplies in a separate area from cleaning equipment, one or more cleaning closets on each floor, space available for loading and unloading cleaning supplies from trucks. ○ **AMENITIES FOR JANITORIAL CONTRACTORS AND STAFF**: Generous and efficient facilities for contractors and staff, including staff lockers and use of lunchroom, secure vehicle parking.	8 ❑	9 ❑ ○ **Supplies store**: There is a generous and well-kept supplies store, locked, and with a desk for inventory control. A separate cleaning equipment room or closet is provided close to the elevators. ○ **Closets on each floor**: One or more well-appointed cleaning closets are provided on each typical rental floor, with shelving and locked cabinets. ○ **Parking and facilities**: Generous, efficient and pleasant facilities are provided for cleaning and janitorial personnel, whether staff or contract. Truck parking is provided, with ample space for loading and unloading.
7 ❑ ○ **LEVEL OF JANITOR FACILITIES**: Above average facilities for janitors are needed. ○ **SPACES FOR JANITOR FACILITIES**: Adequate storage space for supplies and cleaning equipment, convenient to elevators, storage space for bulk supplies in a separate area from cleaning equipment, cleaning closets on each floor, space available for loading and unloading cleaning supplies from trucks. ○ **AMENITIES FOR JANITORIAL CONTRACTORS AND STAFF**: Adequate facilities for contractors and staff, including staff lockers and use of lunchroom, secure vehicle parking.	6 ❑	7 ❑ ○ **Supplies store**: Adequate supplies storage facilities are provided. Bulk supplies are kept in a separate room from cleaning equipment. Cleaning equipment is in a storage space convenient to elevators. ○ **Closets on each floor**: An adequate cleaning closet is provided on each typical rental floor, with limited shelving. ○ **Parking and facilities**: There is space for loading and unloading cleaning equipment from a truck. Adequate facilities are provided for in-house janitors, including staff lockers and use of lunchroom in a large building, or, if contract janitors, there is adequate secure vehicle parking.
5 ❑ ○ **LEVEL OF JANITOR FACILITIES**: Adequate facilities for janitors are needed. ○ **SPACES FOR JANITOR FACILITIES**: Adequate storage space for supplies and cleaning equipment, or storage space available in other areas, cleaning closets on each floor, space available for loading and unloading cleaning supplies from trucks. ○ **AMENITIES FOR JANITORIAL CONTRACTORS AND STAFF**: Minimal facilities such as lockers, chairs and tables for contractors or staff.	4 ❑	5 ❑ ○ **Supplies store**: The supplies store is just adequate for minimum supplies, or other spaces used, e.g. bulk supplies are in a locked closet within a room containing cleaning equipment. The location is convenient to the elevators. ○ **Closets on each floor**: An adequate cleaning closet is provided on each typical rental floor, with no shelving or cabinet. ○ **Parking and facilities**: Space is available for loading and unloading cleaning equipment from a truck. Minimal facilities are provided for contract or staff janitors, e.g. lockers, chairs and table in the supplies store.

Scale B.2.6. continued on next page

FIG. 6 Scale B.2.6 for Janitorial Facilities

B.2. Manageability

Scale B.2.6. Janitorial services (continued)

Facility Management Requirement Scale		Facility Rating Scale
3 ❑ ○ **LEVEL OF JANITOR FACILITIES**: Some basic facilities are needed. ○ **SPACES FOR JANITOR FACILITIES**: A low level can be tolerated, e.g. inadequate storage space for supplies and cleaning equipment, cleaning closets on each floor although not conveniently located, no space to park or unload trucks. ○ **AMENITIES FOR JANITORIAL CONTRACTORS AND STAFF**: Janitors are contractors, who are rarely on-site.	2 ❑	3 ❑ ○ **Supplies store**: A supplies store is provided, but is inadequate to hold all the supplies and cleaning equipment. ○ **Closets on each floor**: Closets are on each floor, but are inadequate in size and not located adjacent to washrooms. ○ **Parking and facilities**: There is no off-street space to park or unload a truck. In a large building, no on-site facilities for contractors or staff are provided, e.g. lockers, lunchroom.
1 ❑ ○ **LEVEL OF JANITOR FACILITIES**: No special facilities for janitors are needed, or the janitorial facilities are irrelevant to occupants.		1 ❑ ○ **Supplies store**: No supplies store is provided. Supplies and equipment are kept in other locations, e.g. corridors, washrooms, electrical closet. ○ **Closets on each floor**: No closets are provided. Janitors use the washrooms. ○ **Parking and facilities**: No space is provided to park or unload a truck. In a large building, no on-site facilities for contractors or staff are provided, e.g. lockers, lunchroom.

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

NOTES *Space for handwritten notes on Requirements or Ratings*

FIG. 6 Scale B.2.6 for Janitorial Facilities *(continued)*

B.2. Manageability

Scale B.2.7. Energy consumption

Facility Management Requirement Scale		Facility Rating Scale
9 ❑ ○ **REQUIREMENT FOR HEATING AND COOLING COSTS**: Require relatively low heating and cooling costs.	8 ❑	9 ❑ ○ **Building envelope and systems**: Building envelope and systems are excellent. Energy consumption is well below average with no evidence of problems due to building envelope. *Refer to Table B2-C for examples of causes and evidence.* ○ **Effects**: There are low heating and cooling costs in relation to other buildings in the locality.
7 ❑ ○ **REQUIREMENT FOR HEATING AND COOLING COSTS**: Require below average heating and cooling costs.	6 ❑	7 ❑ ○ **Building envelope and systems**: Building envelope and systems are good. Energy consumption is below average. There is evidence of few problems due to building envelope, and remedial action is budgeted and approved. *Refer to Table B2-C. for examples of causes and evidence.* ○ **Effects**: Heating and cooling costs are below average in relation to other buildings in the locality.
5 ❑ ○ **REQUIREMENT FOR HEATING AND COOLING COSTS**: Require average heating and cooling costs.	4 ❑	5 ❑ ○ **Building envelope and systems**: Building envelope and systems are adequate. Energy consumption is average. There is evidence of some problems due to building envelope, but most could be rectified easily. *Refer to Table B2-C. for examples of causes and evidence.* ○ **Effects**: Heating and cooling costs are average in relation to other buildings in the locality.
3 ❑ ○ **REQUIREMENT FOR HEATING AND COOLING COSTS**: Significant heat losses or gains can be tolerated, as can relatively high heating and cooling costs.	2 ❑	3 ❑ ○ **Building envelope and systems**: There are significant heat losses or gains in many parts of the building due to poor envelope design, construction, or inadequate maintenance. Energy consumption is high. *Refer to Table B2-C. for examples of causes and evidence.* ○ **Effects**: Heating and cooling costs are high in relation to other buildings in the locality.
1 ❑ ○ **REQUIREMENT FOR HEATING AND COOLING COSTS**: Heat losses and gains in the building, and the cost of heating and cooling are either completely irrelevant or completely unimportant.		1 ❑ ○ **Building envelope and systems**: Massive heat losses or heat gains are experienced throughout the building due to poor building envelope design, construction or maintenance. Energy consumption is very high. *Refer to Table B2-C. for examples of causes and evidence.* ○ **Effects**: Heating and cooling costs are extremely high in relation to other buildings in the locality.

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

NOTES *Space for handwritten notes on Requirements or Ratings*

FIG. 7 Scale B.2.7 for Energy Consumption

B.2. Manageability

Scale B.2.8. Energy management and controls

Facility Management Requirement Scale		Facility Rating Scale
9 ❑ ○ **LEVEL OF ENERGY MANAGEMENT AND CONTROLS:** The acceptable level is a total of 15 or more points scored from Table B2-D.		9 ❑ ○ **Energy system components**: A total of 15 or more points are scored from Table B2-D.
	8 ❑	
7 ❑ ○ **LEVEL OF ENERGY MANAGEMENT AND CONTROLS:** The acceptable level is a total of 13 to 14 points scored from Table B2-D.		7 ❑ ○ **Energy system components**: A total of 13-14 points are scored from Table B2-D.
	6 ❑	
5 ❑ ○ **LEVEL OF ENERGY MANAGEMENT AND CONTROLS:** The acceptable level is a total of 10 to 12 points scored from Table B2-D.		5 ❑ ○ **Energy system components**: A total of 10-12 points are scored from Table B2-D.
	4 ❑	
3 ❑ ○ **LEVEL OF ENERGY MANAGEMENT AND CONTROLS:** The acceptable level is a total of 6 to 9 points scored from Table B2-D.		3 ❑ ○ **Energy system components**: A total of 6-9 points are scored from Table B2-D.
	2 ❑	
1 ❑ ○ **LEVEL OF ENERGY MANAGEMENT AND CONTROLS:** The acceptable level is less than 5 points scored from Table B2-D.		1 ❑ ○ **Energy system components**: Less than 5 points are scored from Table B2-D.

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

NOTES *Space for handwritten notes on Requirements or Ratings*

FIG. 8 Scale B.2.8 for Energy Management and Controls

TABLE 1 Anticipated Remaining Service Life[A]

Count[B]	Remaining Useful Life at Least: Equal to
3 =	Building envelope: seals, joints = 10 years or more
4 =	Roofing and flashing = 15 years or more
5 =	HVAC prime movers and main systems = 20 years or more
3 =	HVAC secondary distrib., for example, small fans = 10 years or more
4 =	HVAC controls = 10 years or more
3 =	Elevators and escalators = 20 years or more
4 =	Ceiling systems, including fixtures = 15 years or more
3 =	Interior finishes, for example, coverings = 10 years or more
3 =	Operable items, for example, doors, windows = 20 years or more
2 =	Other systems, for example, plumbing = 20 years or more
2 =	Site, for example, paving, sidewalks, etc. = 15 years or more
2 =	Electrical system = 15 years or more
2 =	Life safety system = 20 years or more

[A] The anticipated remaining service life on the items listed in this table should be on file, likely in an asset management plan for the facility. Otherwise, rating on this aspect of serviceability requires expert judgement on each item, and cannot be completed within a normal half-day site visit. If information is not available, then omit this item from the rating, and note that on the rating form.
[B] Do not add pro rata counts for any remaining life that is estimated to be less than the threshold years given in the legend. The count in this table is not a sliding scale, for example, give all points or no points.

TABLE 2 Causes and Evidence of Energy Consumption

Causes of Excessive Energy Consumption	Evidence on Energy Consumption
Air leakage around windows and doors	Expert opinion such as building operator, engineering technical expert
Inadequate roof insulation	
Inadequate wall and window insulation, or none	Occupants' verbal reports, based on direct experience
Defective vapor retarder, or none	Observable defects, for example, stains, icicles, moisture/condensation, drafts
Inappropriate orientation of building	
No solar control, or not effective	Specifications and drawings for the facility
Inefficient systems or equipment for HVAC	Technical reports based on field measurements
Improperly sized HVAC equipment	Operating records
Poor energy management and controls (see Table 3).	Energy bills, compared with similar facilities

TABLE 3 Energy Management and Controls

NOTE—The first two items go together, but a building could have one feature without the other:

Count	
3 =	Occupant participation in energy conservation program
4 =	Automatic response to user-control, for example, if windows are opened
2 =	Flushing program adjusted in extreme weather conditions

NOTE—A building can only have 1 out of the next 3 choices:

5 =	Computerized direct digital control of building systems,
or 4 =	Only monitoring and control are computerized.
or 2 =	Only time clocks (automatic shutdown).
1 =	Heat recovery or heat pump system.
2 =	Night setback.
1 =	Renewable energy source (for example, solar).
2 =	On-site or "district" power generation or cogeneration.
3 =	Energy use data is collected, targets set and met.

TABLE 4 Building Services (other than electrical power)

Telecommunications
Gas supply
Water supply system
Sewage or drainage system
Heating, ventilating, and air conditioning system
Elevators and escalators