This international standard was developed in accordance with internationally recognized principles on standardization established in the Decision on Principles for the Development of International Standards, Guides and Recommendations issued by the World Trade Organization Technical Barriers to Trade (TBT) Committee.

Designation: E1661 – 95a (Reapproved 2018)

An American National Standard

Standard Classification for Serviceability of an Office Facility for Meetings and Group Effectiveness[1,2]

This standard is issued under the fixed designation E1661; 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 to enable work groups or project groups to function effectively and productively.

1.2 Within that aspect of serviceability, each pair of scales, shown in Figs. 1-4, are for classifying one topic of serviceability. Each paragraph in an Occupant Requirement Scale (see Figs. 1-4) summarizes one level of serviceability on that topic, which occupants might require. The matching entry in the Facility Rating Scale (see Figs. 1-4) 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. 1-4) 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.

1.6 The values stated in SI units are to be regarded as standard. The values given in parentheses are mathematical conversions to inch-pound units that are provided for information only and are not considered standard.

1.7 *This international standard was developed in accordance with internationally recognized principles on standardization established in the Decision on Principles for the Development of International Standards, Guides and Recommendations issued by the World Trade Organization Technical Barriers to Trade (TBT) Committee.*

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 (Withdrawn 2013)[4]

E1679 Practice for Setting the Requirements for the Serviceability of a Building or Building-Related Facility, and for Determining What Serviceability is Provided or Proposed

2.2 *ASHRAE Standards:*[5]

ASHRAE Standard 55 Thermal Environmental Conditions for Human Occupancy

ASHRAE Standard 62 Ventilation for Acceptable Indoor Air Quality

2.3 *ISO Standard:*[6]

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

[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] The last approved version of this historical standard is referenced on www.astm.org.

[5] Available from American Society of Heating, Refrigerating, and Air-Conditioning Engineers, Inc. (ASHRAE), 1791 Tullie Circle, NE, Atlanta, GA 30329, http://www.ashrae.org.

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

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A.2. Meetings and Group Effectiveness

Scale A.2.1. Meeting and conference rooms

Occupant Requirement Scale		Facility Rating Scale
9 ❑ ❍ **QUANTITY AND SIZE OF ROOMS:** Operations require many types and sizes of meetings, including conferences of about 25 plus observers. ❍ **LOCATION IN OFFICE:** On large floors, the meeting rooms need to be distributed throughout the office, and only a few of the largest rooms may be in a group at one location. ❍ **FREQUENCY OF MEETINGS:** Many meetings last for several hours and some all day. The frequency of meetings requires that many meeting rooms be used almost continuously by successive groups. Meetings often involve visitors from other organizations. ❍ **PRIVACY AND FREEDOM FROM DISTRACTION:** The nature of the work sometimes requires complete privacy, and much meeting work requires extended periods of concentration. ❍ **AUDIO VISUAL AIDS:** Audio-visual presentations are used extensively, e.g. video, overhead transparency, 35 mm slides, and display of computer information on large monitor or projection display, connected to local area network.		**9** ❑ ❍ **Mix, quantity:** Sufficient meeting rooms and conference rooms exist with full mix of size/type, including a large conference room with audience. ❍ **Floorplate and access:** There is sufficient space to add or enlarge a conference room, with direct, controlled entry from public access zone. No wayfinding difficulties for visitors to any meeting or conference rooms. ❍ **Acoustic control:** Excellent, e.g. raised voices or amplified sounds are not heard in adjacent spaces, and sounds from adjacent spaces are never distracting. It is easy to understand soft-spoken speech from across the room, and no echo or reverberation from loud or abrupt sounds. ❍ **Environment:** Excellent, e.g. ventilation rates (current ASHRAE Standards 62 and 55) and volume of air entering the space are maintained at all times that the rooms are in use (see introductory pages to this Aspect A2). Rooms are comfortable for full-day use. Local control of lighting, ventilation and temperature exists in all meeting rooms, including temporary flushing with 100% outside air. Separate illumination for wall-wash, for presentation at end of the room, and for work surfaces, all under instructor control. Meeting and conference rooms can be located at the outside or atrium, so all can have windows. ❍ **Fixtures and fixed equipment:** There is provision for full audio-visual presentations, e.g. screens and sound system. The present high-quality standards for meeting rooms are achievable in any location on the floor, including monitor or projected displays generated by a portable computer (which can be connected to a local area network). Ceiling height at screen end of room is at least 2.7 m in rooms with a long dimension of up to 4.5 m and a capacity of 10 people or less. Ceiling height at screen end of room is at least 3 m in larger rooms.
	8 ❑	
7 ❑ ❍ **QUANTITY AND SIZE OF ROOMS:** Operations require several types and sizes of meetings, including conferences of about 20 plus a few observers. ❍ **LOCATION IN OFFICE:** Meeting rooms may be grouped together at one location on a floor. ❍ **FREQUENCY OF MEETINGS:** Some meetings last for several hours or all day, but most are 2 hours or less. The frequency of meetings requires that some rooms be used almost continuously by successive groups. Meetings often involve visitors from other organizations. (continued)		**7** ❑ ❍ **Mix, quantity:** Meeting rooms exist with a good range of sizes, e.g. small, medium, large, and one medium size conference room. One large conference room with space for audience now exists, or capable of installing one easily. ❍ **Floorplate and access:** Capability for large conference room with audience, adjacent to public access zone, or one exists. No wayfinding difficulties for visitors. ❍ **Acoustic control:** Good, e.g. raised voices or amplified sounds are not understood in adjacent spaces, and sounds from adjacent spaces are rarely distracting. Soft-spoken speech from across the room can be understood. Only slight echo or reverberation from loud or abrupt sounds; or, only slight muffling of speech and loud sounds. ❍ **Environment:** Good, e.g. ventilation rates (current ASHRAE Standards 62 and 55) per person make the rooms comfortable for full-day use. If variable air volume boxes are used, volume never falls below required ventilation rates. Capability exists for added ventilation. There is a local thermostat, under occupant control, of ventilation and temperature. Local control of lighting exists in all meeting rooms. Meeting and conference rooms can be located at the outside or atrium with some difficulty. (continued)
	6 ❑	

Scale A.2.1. continued on next page

FIG. 1 Scale A.2.1 for Meeting and Conference Rooms

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A.2. Meetings and Group Effectiveness

Scale A.2.1. Meeting and conference rooms (continued)

	Occupant Requirement Scale		Facility Rating Scale
	7 (continued) ❍ **PRIVACY AND FREEDOM FROM DISTRACTION:** The work requires good concentration, and above average privacy and freedom from distraction. ❍ **AUDIO VISUAL AIDS:** Frequent audio-visual presentations, e.g. video, overhead transparency, 35 mm slides, use of portable or notebook computer connected to local area network, with large monitor display.		**7** (continued) ❍ **Fixtures and fixed equipment:** There is provision for full audio-visual presentations, and for using portable computer with large display monitor and connection to local area network. Ceiling height at screen end of room is at least 2.7 m in rooms with a long dimension of up to 4.5 m and a capacity of 10 people or less. Ceiling height at screen end of room is at least 3 m in larger rooms.
5 ❑	❍ **QUANTITY AND SIZE OF ROOMS:** Operations require meetings of a few types and sizes that can be accommodated by two or three room sizes. Large meetings can be held in open areas or in leased or borrowed accommodation, but may justify the addition of a conference room in the future. ❍ **LOCATION IN OFFICE:** Meeting rooms may be grouped together and the location is not critical. ❍ **FREQUENCY OF MEETINGS:** Meetings typically last for an hour or two, and sometimes up to half a day. The frequency of meetings usually means that each room remains unused for part of the day. Visitors infrequently or hardly ever use meeting rooms. ❍ **PRIVACY AND FREEDOM FROM DISTRACTION:** Need average levels of concentration, privacy, and freedom from distraction. ❍ **AUDIO VISUAL AIDS:** Audio-visual aids are used occasionally, mainly overhead transparencies.	**4** ❑	❍ **Mix, quantity:** Present and potential meeting room sizes are mainly small or medium. There are barely enough meeting rooms. No medium or large conference rooms exist, but have space and capability in existing open plan area for meetings of 25 plus an audience. ❍ **Floorplate and access:** Floorplate permits large conference room with audience. It is difficult to place meeting rooms near reception from the public access zone. Some wayfinding difficulties for visitors. ❍ **Acoustic control:** Only raised voices or amplified sounds are understood in adjacent spaces. Sounds from adjacent spaces are occasionally distracting; difficult and costly to fix. Easy to understand normal speaking voice across the room. Soft-spoken speech is sometimes hard to understand, or distinct but hard to hear. ❍ **Environment:** Adequate, e.g. ventilation rates reach target (current ASHRAE Standards 62 and 55) for meeting rooms and are comfortable for half-day use. Ventilation and temperature are controlled by thermostat with fixed settings which cannot be adjusted by occupants. Limited capability exists for added ventilation. Local control of lighting in meeting rooms is possible, but difficult and costly. Difficult and expensive to locate meeting and conference rooms at the outside, so windows to the outside are mostly not practicable. ❍ **Fixtures and fixed equipment:** There is basic provision for audio-visual presentations, e.g. screens are installed and basic sound system, and projection of video or computer images, or video monitors can conveniently be used. Ceiling height is 2.6 m to 2.7 m for rooms with a long dimension of up to 6.5 m, and 3 m ceiling height for larger rooms.

Scale A.2.1. continued on next page

FIG. 1 Scale A.2.1 for Meeting and Conference Rooms *(continued)*

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A.2. Meetings and Group Effectiveness

Scale A.2.1. Meeting and conference rooms (continued)

Occupant Requirement Scale		Facility Rating Scale
3 ❑ ❍ **QUANTITY AND SIZE OF ROOMS:** Operations require only limited types and sizes of meetings, readily accommodated in one size room. ❍ **LOCATION IN OFFICE:** If the most common need is for a medium or small size room, a small conference room may be justified in the future. Large meetings are not normally held, or can be held in open plan or in rented or borrowed accommodation. ❍ **FREQUENCY OF MEETINGS:** Meetings are mostly of short duration, e.g. one hour or less, and do not normally occur in close succession. Visitors infrequently or hardly ever use meeting rooms. ❍ **PRIVACY AND FREEDOM FROM DISTRACTION:** No special needs for privacy. ❍ **AUDIO VISUAL AIDS:** No special need for use of audio-visual presentations.	**2** ❑	**3** ❑ ❍ **Mix, quantity:** Meeting rooms now are mainly one size, e.g. either small or medium, and there are too few. No conference room exists, but one could be installed. There is marginally enough space in open plan area for meetings of 25 plus an audience. ❍ **Floorplate and access:** It would be difficult to install meeting rooms near reception. Some wayfinding difficulties exist for visitors. ❍ **Acoustic control:** Poor, e.g. discussion is understood in adjacent spaces, and sounds from adjacent spaces are often distracting. Fixing this is possible, but difficult and costly. In some parts of the room, a normal speaking voice is hard to understand, or hard to hear. ❍ **Environment:** Poor, e.g. ventilation rates per person are not at target (current ASHRAE Standards 62 and 55) for meeting rooms. Limited capability exists for some added ventilation, but not sufficient to meet target. Local control of lighting in meeting rooms is possible but difficult and costly. ❍ **Fixtures and fixed equipment:** Limited provision exists for audio-visual presentations, e.g. screens only, and low ceilings (2.4 m) which prevent the use of projection screens higher than 1.5 m.
1 ❑ ❍ **QUANTITY AND SIZE OF ROOMS:** Operations require a few types and sizes of meetings. ❍ **LOCATION IN OFFICE:** Larger meetings can occur in open plan areas, or elsewhere. No foreseeable need for a conference room. ❍ **FREQUENCY OF MEETINGS:** Held only infrequently and generally of short duration. Most meetings do not have more than 4 participants. Visitors do not use meeting room(s). ❍ **PRIVACY AND FREEDOM FROM DISTRACTION:** Privacy and freedom from distraction not seen as significant. ❍ **AUDIO VISUAL AIDS:** Audio-visual presentations rarely or never used.		**1** ❑ ❍ **Mix, quantity:** No meeting rooms exist, or rooms are one size only, e.g. small, and there are too few. There is no conference room or area in open plan that is large enough for meetings of 25 plus an audience, or to install a conference room. ❍ **Floorplate and access:** It is difficult or impossible to install meeting rooms near reception. Staff must escort visitors to meeting places because of wayfinding difficulty. ❍ **Acoustic control:** Bad, e.g. discussion is understood in adjacent spaces, and sounds from adjacent spaces are continually distracting. ❍ **Environment:** Bad, e.g. ventilation rates per person are effectively lower than in an open office, are not increased for the density of population in meetings, and more ventilation cannot be added. Local control of lighting would be very difficult and costly. ❍ **Fixtures and fixed equipment:** No provision for audio-visual presentations, and very difficult or expensive to install.

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

NOTES ***Space for handwritten notes on Requirements or Ratings***

FIG. 1 Scale A.2.1 for Meeting and Conference Rooms *(continued)*

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