



Standard Classification for Serviceability of an Office Facility for Location, Access and Wayfinding^{1,2}

This standard is issued under the fixed designation E 1669; 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 contains 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 locating the building and finding the way inside the building.

1.2 Within that aspect of serviceability, each pair of scales, shown in Figs. 1-6, are for classifying one topic of serviceability. Each paragraph in an Occupant Requirement Scale (see Figs. 1-6) summarizes one level of serviceability on that topic, which occupants might require. The matching entry in the Facility Rating Scale (see Figs. 1-6) 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. 1-6) 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 E 1334. The scales in this classification are complimentary to and compatible with Practice E 1334. Each requires the other.

¹ This classification is under the jurisdiction of ASTM Committee E-6 on Performance of Buildings and is the direct responsibility of Subcommittee E06.25 on Whole Buildings and Facilities.

Current edition approved April 15, 1995. Published July 1995. Originally published as E 1669 – 95. Last previous edition E 1669 – 95.

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.

2. Referenced Documents

2.1 ASTM Standards:

E 631 Terminology of Building Constructions³

E 2334 Practice for Rating Serviceability of a Building or Building-Related Facility³

E 1679 Practice for Setting Requirements for Serviceability of a Building or Building-Related Facility³

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.

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 (see Terminology E 631).

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 (see Terminology E 631).

3.1.3 *office*—a place, such as a room, suite, or building, in which business, clerical or professional activities are conducted (see Terminology E 631).

3.1.4 For standard definitions of additional terms applicable to this classification, see Terminology E 631.

3.2 Definitions of Terms Specific to This Standard:

3.2.1 *transit*—bus or other scheduled public transportation.

3.2.2 *walking distance*—the distance that most staff would consider reasonable to walk to or from a public transit stop or shops, which is 500 m. This assumes a climate that provides

³ *Annual Book of ASTM Standards*, Vol 04.11.

⁴ Available from American National Standards Institute, 11 W. 42nd St., 13th Floor, New York, NY 10036.

reasonable conditions for walking, summer and winter, and terrain that is reasonably flat. Lacking this, the distance may be reduced to as little as 250 m in extreme conditions.

4. Significance and Use

4.1 Each Facility Rating Scale (see Figs. 1-6) 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 in Figs. 1-6 contain the basis for classification.

5.2 Instructions for the use of this classification are contained in Practices E 1334 and E 1679.

6. Keywords

6.1 building; building location; facility; facility occupants; function; office; performance; rating; rating scale; requirements; serviceability; wayfinding; in building

iTeh Standards
(<https://standards.iteh.ai>)
Document Preview

[ASTM E1669-95a\(1999\)](https://standards.iteh.ai/catalog/standards/sist/99dbbda1-62fa-4719-a92b-8afbcca94f9d/astm-e1669-95a1999)

<https://standards.iteh.ai/catalog/standards/sist/99dbbda1-62fa-4719-a92b-8afbcca94f9d/astm-e1669-95a1999>

A.14. Location, Access and Wayfinding

Scale A.14.1. Public transportation (urban sites)

Occupant Requirement Scale	Facility Rating Scale
<p>9 <input type="checkbox"/> ○ ORIGIN OF STAFF AND VISITORS: Staff and visitors come from all parts of the city or town. ○ PROXIMITY TO TRANSIT ROUTES: The office must be near a major transit centre. ○ FREQUENCY OF VISITORS: There are many visitors each day, e.g. more than 100 members of the public per day. ○ OFFICE HOURS: Office hours are fixed, e.g. no flex-time.</p> <p>7 <input type="checkbox"/> ○ ORIGIN OF STAFF AND VISITORS: Staff and visitors come from most parts of the city or town. ○ PROXIMITY TO TRANSIT ROUTES: The office must be within walking distance of most major transit route(s). ○ FREQUENCY OF VISITORS: There are many visitors each day, e.g. 50 per day. ○ OFFICE HOURS: Office hours are fixed for many staff, e.g. limited flex-time.</p> <p>5 <input type="checkbox"/> ○ ORIGIN OF STAFF AND VISITORS: Staff come from many parts of the city or town. ○ PROXIMITY TO TRANSIT ROUTES: The office must be within walking distance of several major transit routes. ○ FREQUENCY OF VISITORS: There are some visitors each day, e.g. less than 35 per day, a few from homes, but most from work locations. ○ OFFICE HOURS: Flex-time is available to most staff.</p> <p>3 <input type="checkbox"/> ○ ORIGIN OF STAFF AND VISITORS: Staff come from the local community, or a few parts of town. Some staff drive to work. ○ FREQUENCY OF VISITORS: There are a few visitors, and most do not return. Visitors typically come by car or taxi.</p> <p>1 <input type="checkbox"/> ○ ORIGIN OF STAFF AND VISITORS: Staff come from the local community, most within walking distance, or drive to work. ○ FREQUENCY OF VISITORS: There are no visitors, or visitors are rare and tend to come by car or taxi.</p>	<p>9 <input type="checkbox"/> ○ Staff commuting during peak hours: Staff can commute by transit from all parts of the community, with frequent service and express options during peak hours. ○ Distance to transit stops: Transit stops are within two blocks. ○ Visitors use of public transportation during off-peak hours: Transit frequency is 20 minutes or less during off-peak hours.</p> <p>7 <input type="checkbox"/> ○ Staff commuting during peak hours: Staff can commute by transit from all parts of the community with frequent service during peak hours. ○ Distance to transit stops: Transit stops are within close walking distance, e.g. 10 minutes. ○ Visitors use of public transportation during off-peak hours: Visitors can reach the site from homes or offices by transit. Transit frequency is half-hour or less.</p> <p>5 <input type="checkbox"/> ○ Staff commuting during peak hours: Staff can commute by transit from most parts of the community. ○ Distance to transit stops: Transit stops are within walking distance, e.g. 15 minutes. ○ Visitors use of public transportation during off-peak hours: Visitors can reach the site from homes or offices by transit, but service is not convenient. Transit frequency is longer than half-hour intervals.</p> <p>3 <input type="checkbox"/> ○ Staff commuting during peak hours: Staff can commute by public transit from a few parts of the community. ○ Distance to transit stops: Transit stops are within a long walking distance. ○ Visitors use of public transportation during off-peak hours: Few visitors can reach the site by public transit from homes or offices.</p> <p>1 <input type="checkbox"/> ○ Staff commuting during peak hours: There is no public transit for commuting to the building. ○ Distance to transit stops: Transit stops are an unacceptably long walking distance. ○ Visitors use of public transportation during off-peak hours: There is no public transit for visitors to the building.</p>
8 <input type="checkbox"/>	6 <input type="checkbox"/>
4 <input type="checkbox"/>	4 <input type="checkbox"/>
2 <input type="checkbox"/>	2 <input type="checkbox"/>

<input type="checkbox"/> Exceptionally important. <input type="checkbox"/> Important. <input type="checkbox"/> Minor Importance.	
Minimum Threshold level =	<input type="checkbox"/> NA <input type="checkbox"/> NR <input type="checkbox"/> Zero <input type="checkbox"/> DP

NOTES Space for handwritten notes on Requirements or Ratings

FIG. 1 Scale A.14.1 for Public Transportation (Urban Sites)



A.14. Location, Access and Wayfinding

Scale A.14.2. Staff visits to other offices

Occupant Requirement Scale	
<input type="checkbox"/> 9 ○ PROXIMITY TO DESTINATION: Operations require very close proximity. <input type="checkbox"/> ○ ACCESS TO DESTINATION: Sheltered access to external organizations, or to other offices of the same organization, e.g. staff hand-deliver documents or visit others nearby on a regular basis.	8 <input type="checkbox"/>
<input type="checkbox"/> 7 ○ PROXIMITY TO DESTINATION: Operations require close proximity. <input type="checkbox"/> ○ ACCESS TO DESTINATION: Within walking distance, to external organizations, or to offices of other branches or divisions of the same organization.	6 <input type="checkbox"/>
<input type="checkbox"/> 5 ○ PROXIMITY TO DESTINATION: Operations require reasonably close proximity. <input type="checkbox"/> ○ ACCESS TO DESTINATION: Within one-half hour driving time. This is typically for staff or managers needing to visit others on a regular basis, or for outside staff needing to visit the office.	4 <input type="checkbox"/>
<input type="checkbox"/> 3 ○ PROXIMITY TO DESTINATION: <input type="checkbox"/> ○ ACCESS TO DESTINATION: Staff, or people from other offices, rarely need to visit each other. When visits are necessary, access is normally by car.	2 <input type="checkbox"/>
<input type="checkbox"/> 1 ○ PROXIMITY TO DESTINATION: <input type="checkbox"/> ○ ACCESS TO DESTINATION: There is no need for staff, or people from other offices, to visit each other.	

Facility Rating Scale	
<input type="checkbox"/> 9 ○ Location of other offices visited during work: Frequently visited sites are on the same or adjacent block. <input type="checkbox"/> ○ Convenience of access to other sites: Other sites are within close walking distance, and the route is sheltered from extremes of weather, e.g. it is indoors or covered.	
<input type="checkbox"/> 7 ○ Location of other offices visited during work: Frequently visited sites are within walking distance. <input type="checkbox"/> ○ Convenience of access to other sites: The route to other sites is out of doors and not sheltered. Transit or car are not needed.	
<input type="checkbox"/> 5 ○ Location of other offices visited during work: Frequently visited sites are beyond walking distance. Driving time, office to office, is up to one-half hour. Visitor parking at the destination is within walking distance. <input type="checkbox"/> ○ Convenience of access to other sites: Transit to other sites takes more than one-half hour. Visitor parking is usually available at the destination.	
<input type="checkbox"/> 3 ○ Location of other offices visited during work: Frequently visited sites are remote. Driving time, office to office, is between one-half hour and one hour. <input type="checkbox"/> ○ Convenience of access to other sites: There is no transit to other sites, or, transit takes more than one hour. Visitor parking at the destination is usually full during working hours.	
<input type="checkbox"/> 1 ○ Location of other offices visited during work: Frequently visited sites are remote. Driving time, office to office, is one hour or more. <input type="checkbox"/> ○ Convenience of access to other sites: There is no transit or visitor parking at most other sites.	

<input type="checkbox"/> Exceptionally important.	<input type="checkbox"/> Important.	<input type="checkbox"/> Minor Importance.
Minimum Threshold level =	<input type="checkbox"/> NA	<input type="checkbox"/> NR <input type="checkbox"/> Zero <input type="checkbox"/> DP

NOTES Space for handwritten notes on Requirements or Ratings

FIG. 2 Scale A.14.2 for Staff Visits to Other Offices



A.14. Location, Access and Wayfinding

Scale A.14.3. Vehicular entry and parking

Occupant Requirement Scale	Facility Rating Scale
<p>9 <input type="checkbox"/> MINIMIZE PEDESTRIAN / VEHICLE ACCIDENTS: Operations require complete separation between pedestrians and vehicles, and between cars and delivery/service vehicles, e.g. to avoid the risk of an accident, despite a high volume of traffic and a large population.</p> <p>PARKING AT URBAN SITES: The parking policy for urban sites is to provide parking for all the organization's owned vehicles. Parking for staff and visitor cars is provided within 1 block, at a low charge.</p> <p>PARKING AT SMALL TOWN OR SUBURBAN SITES: The parking policy for a small town or suburban site is to provide parking on-site for all who need space, at a low charge or no charge.</p>	<p>9 <input type="checkbox"/> Separation of pedestrians and vehicles: Vehicle routes are separate from pedestrian approaches and entry. Vehicles are not a hazard to pedestrians.</p> <p>Separation of cars and trucks: The entry route for cars is separate from the route for trucks. The route and holding area for service vehicles is separate from both. <i>Only one of the next two features can be applicable:</i></p> <p>Parking at urban site: There is reserved parking on-site for all the organization's owned vehicles. Reserved parking for staff is on-site or within 1 block and is not expensive. Visitor parking is available within 1 block, at typical hourly charges in that locality.</p> <p>Parking at small town or suburban site: There is adequate on-site parking for occupants plus adequate parking for overlap during shift change. Visitor parking is separate from occupant parking, with adequate capacity for peak requirement, with no charge.</p>
<p>7 <input type="checkbox"/> MINIMIZE PEDESTRIAN / VEHICLE ACCIDENTS: Operations require complete separation between pedestrians and vehicles, and between cars and delivery/service vehicles, to avoid the risk of accident, despite a high volume of traffic or a large population.</p> <p>PARKING AT URBAN SITES: The parking policy for urban sites is to provide parking for all the organization's owned vehicles. Parking for staff and visitor cars is to be provided within 1 block, at a low charge.</p> <p>PARKING AT SMALL TOWN OR SUBURBAN SITES: The parking policy for a small town or suburban site is to provide parking on-site or within walking distance for all on-site staff and visitors, except at peak hours.</p>	<p>7 <input type="checkbox"/> Separation of pedestrians and vehicles: Vehicle routes are separate from pedestrian approaches and entry. Vehicles are a minor hazard to pedestrians.</p> <p>Separation of cars and trucks: The entry route for cars is separate from the route for trucks and service vehicles. <i>Only one of the next two features can be applicable:</i></p> <p>Parking at urban site: There is reserved parking on-site or in the same block for the organization's owned vehicles. Public parking is available for most staff within 1 block. Public parking for visitors is available within walking distance, at typical hourly charges in that locality.</p> <p>Parking at small town or suburban site: There is adequate reserved parking on-site, or within 500 m, for all the organization's owned vehicles and 75% of one shift of staff. For visitors, separate parking is available with adequate capacity except at occasional peak visiting hours, with no charge.</p>
<p>5 <input type="checkbox"/> MINIMIZE PEDESTRIAN / VEHICLE ACCIDENTS: Operations require normal caution between pedestrians and drivers of vehicles entering the site or making deliveries, e.g. to reduce the risk of accident in moderate volumes of traffic and moderate population.</p> <p>PARKING AT URBAN SITES: The required ratio of parking stalls to staff: in central core of town or city is 1:20 with no special provision for visitors.</p> <p>PARKING AT SMALL TOWN OR SUBURBAN SITES: The required ratio in periphery of core area is 1:3 plus visitor parking if none is available within walking distance; if public transit is not an available option for staff to come to work during peak hours, then the ratio is 1:1</p>	<p>5 <input type="checkbox"/> Separation of pedestrians and vehicles: Vehicle routes are adjacent to pedestrian approaches and entry. Pedestrians are expected to pay attention in order to avoid vehicles.</p> <p>Separation of cars and trucks: The entry route for cars is adjacent to the route for trucks or service vehicles, so special driver caution is required. <i>Only one of the next two features can be applicable:</i></p> <p>Parking at urban site: Reserved parking is available on the same or adjacent block for the organization's owned vehicles. Public parking is available within 1 block for up to half of the staff but is considered by staff to be expensive. For visitors, public parking is within walking distance at typical hourly charges in that locality.</p> <p>Parking at small town or suburban site: There is adequate parking on-site, or within walking distance, for the organization's owned vehicles and 75% of occupants and visitors, except at peak visiting hours. Charge for parking, if any, is consistent/competitive with normal practice in that locality.</p>

Scale A.14.3. continued on next page

FIG. 3 Scale A.14.3 for Vehicular Entry and Parking

A.14. Location, Access and Wayfinding

Scale A.14.3. Vehicular entry and parking (continued)

Occupant Requirement Scale	Facility Rating Scale
<p>3 <input type="checkbox"/> ○ MINIMIZE PEDESTRIAN / VEHICLE ACCIDENTS: Operations involve minimal risk of accident between pedestrians and vehicles, e.g. there are very few vehicular movements and most are at times when few people need to enter or leave the building.</p> <p>○ PARKING AT URBAN SITES: The parking policy for urban sites is to provide parking for a few of the organization's owned vehicles, but no provision for on-site parking for staff or visitors. Staff and visitors must rely on public parking facilities within walking distance.</p> <p>○ PARKING AT SMALL TOWN OR SUBURBAN SITES: The parking policy for a small town or suburban site is to provide on-site parking or parking within walking distance for 50% of staff and visitors, except at peak hours.</p> <p>2 <input type="checkbox"/> ○ MINIMIZE PEDESTRIAN / VEHICLE ACCIDENTS: Operations involve negligible risk of accident between pedestrians and vehicles, e.g. there are no deliveries by truck on a regular basis, and the organization has no owned vehicles.</p> <p>○ PARKING AT URBAN SITES: The parking policy for urban sites does not provide for any parking.</p> <p>○ PARKING AT SMALL TOWN OR SUBURBAN SITES: The parking policy for a small town or suburban site is to provide on-site parking or parking within walking distance for less than 50% of staff, and visitors park at the curb.</p> <p>1 <input type="checkbox"/> ○ MINIMIZE PEDESTRIAN / VEHICLE ACCIDENTS: Operations involve negligible risk of accident between pedestrians and vehicles, e.g. there are no deliveries by truck on a regular basis, and the organization has no owned vehicles.</p> <p>○ PARKING AT URBAN SITES: The parking policy for urban sites does not provide for any parking.</p> <p>○ PARKING AT SMALL TOWN OR SUBURBAN SITES: The parking policy for a small town or suburban site is to provide on-site parking or parking within walking distance for less than 50% of staff, and visitors park at the curb.</p>	<p>3 <input type="checkbox"/> ○ Separation of pedestrians and vehicles: Vehicle routes cross pedestrian approaches and entry. There is a potential hazard to pedestrians, and pedestrians must take care to avoid an accident.</p> <p>○ Separation of cars and trucks: Truck delivery and service vehicles use the same routes as cars, creating a potential accident hazard.</p> <p><i>Only one of the next two features can be applicable:</i></p> <p>○ Parking at urban site: Limited reserved parking is available for the organization's owned vehicles. Public parking for staff and visitors is within walking distance, but is limited or expensive compared to market rates, or both.</p> <p>○ Parking at small town or suburban site: There is parking on-site, or within a short walking distance, for 50% of staff. Visitor parking is limited to a few spaces on-site, or at the curb with parking meters.</p> <p>2 <input type="checkbox"/> ○ Separation of pedestrians and vehicles: Vehicle routes cross pedestrian approaches and entry. There is a significant hazard to pedestrians.</p> <p>○ Separation of cars and trucks: Truck delivery and service vehicles use the same routes as cars, creating a significant accident hazard.</p> <p><i>Only one of the next two features can be applicable:</i></p> <p>○ Parking at urban site: There is no parking within walking distance.</p> <p>○ Parking at small town or suburban site: Parking is on-site or within a short walking distance for less than 50% of staff. Visitor parking is only at the curb with parking meters.</p> <p>1 <input type="checkbox"/> ○ Separation of pedestrians and vehicles: Vehicle routes cross pedestrian approaches and entry. There is a significant hazard to pedestrians.</p> <p>○ Separation of cars and trucks: Truck delivery and service vehicles use the same routes as cars, creating a significant accident hazard.</p> <p><i>Only one of the next two features can be applicable:</i></p> <p>○ Parking at urban site: There is no parking within walking distance.</p> <p>○ Parking at small town or suburban site: Parking is on-site or within a short walking distance for less than 50% of staff. Visitor parking is only at the curb with parking meters.</p>

<input type="checkbox"/> Exceptionally important.	<input type="checkbox"/> Important.	<input type="checkbox"/> Minor Importance.
Minimum Threshold level =	<input type="checkbox"/> NA	<input type="checkbox"/> NR <input type="checkbox"/> Zero <input type="checkbox"/> DP

NOTES Space for handwritten notes on Requirements or Ratings

FIG. 3 Scale A.14.3 for Vehicular Entry and Parking (continued)