



Designation: E2844 – 23

# Standard Specification for Demonstrating That a Building's Location Provides Access to Public Transit<sup>1</sup>

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## 1. Scope

1.1 This specification provides requirements for demonstrating that a building's location provides a minimal level of access to public transit such that building occupants can rely on public transit to travel to places of employment and to run typical errands.

1.2 This specification addresses a single indicator regarding the environmental performance related to a building's location. It provides one option for evaluating whether a building is located in such a way as to minimize the impacts associated with occupants' travel.

NOTE 1—The indicator in and of itself is insufficient to imply any level of “sustainability” for the building or the neighborhood. Similarly, a building's failure to meet this specification does not necessarily signify a lack of sustainability. Other indicators may be more appropriate for that building or region; those indicators are outside the scope of this specification.

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

1.4 *This standard does not purport to address all of the safety concerns, if any, associated with its use. It is the responsibility of the user of this standard to establish appropriate safety, health, and environmental practices and determine the applicability of regulatory limitations prior to use.*

1.5 *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.*

<sup>1</sup> This specification is under the jurisdiction of ASTM Committee E60 on Sustainability and is the direct responsibility of Subcommittee E60.01 on Buildings and Construction.

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## 2. Referenced Documents

- 2.1 *ASTM Standards*:<sup>2</sup>
  - E631 [Terminology of Building Constructions](#)
  - E2114 [Terminology for Sustainability](#)

## 3. Terminology

### 3.1 Definitions:

3.1.1 For terms related to building, refer to Terminology E631.

3.1.2 For terms related to sustainability relative to the performance of buildings, refer to Terminology E2114.

### 3.2 Definitions of Terms Specific to This Standard:

3.2.1 *access location, n*—closest point for the public to board a transit vehicle on a given route.

3.2.2 *headway, n*—time interval between public transit vehicles moving in the same direction on a particular route.

3.2.2.1 *Discussion*—If multiple routes at a given stop share 60 % or more of their route, they can be viewed as the same route for purposes of calculating headways.

3.2.3 *local transit, n*—public transit that meets one or both of the following characteristics: (1) operates within the same right-of-way as automobile traffic or (2) the distance between its access locations averages less than 1/3 mile (0.5 km).

3.2.3.1 *Discussion*—Transit types that typically meet this definition include local bus and streetcar.

3.2.4 *off-peak hours, n*—all hours that are not peak hours.

3.2.5 *peak hours, n*—hour(s) of greatest commuting in the region in the morning and evening as identified by the local jurisdiction.

3.2.6 *public transit, n*—transportation by a land, aerial, or water conveyance that provides to the public regular and continuing transportation over fixed routes but does not include rideshare, private shuttle, school or charter bus, or intracity transportation such as a taxi.

<sup>2</sup> For referenced ASTM standards, visit the ASTM website, [www.astm.org](http://www.astm.org), or contact ASTM Customer Service at [service@astm.org](mailto:service@astm.org). For *Annual Book of ASTM Standards* volume information, refer to the standard's Document Summary page on the ASTM website.

3.2.7 *rapid transit, n*—public transit that has both of the following characteristics: (1) it operates within a dedicated right-of-way and (2) the average distance between its access locations is greater than 1/3 mile (0.5 km).

3.2.7.1 *Discussion*—Transit types that typically meet this definition include bus rapid transit, light rail, heavy or passenger rail, and ferry service.

#### 4. Significance and Use

4.1 Use of this specification will facilitate the decision-making process for selection of a building site that provides opportunities for occupants to use public transit.

4.2 Locating a building near public transit provides access to transportation or transportation alternatives to the users of the building and, thus, has the potential to reduce vehicle miles traveled and the pollution attributable to automobile travel.

4.3 The users of this specification include developers, planners, building owners, engineers, architects, landscape architects, and other design professionals, contractors, realtors, governmental agencies, developers of building codes and rating systems, and other building industry professionals.

#### 5. Requirements

5.1 *Public Transit Identification and Categorization*—Public transit access locations near the building site shall be identified and categorized as either local transit or rapid transit. Public transit eligible for consideration under this specification includes existing service and planned service to which necessary funding and other resources have been dedicated to ensure that the service is fully operational within one year of the building's occupancy certification date.

5.2 *Public Transit Access Location Proximity*—The building shall be served by a minimum of one public transit access location that meets the criteria described in 5.2.1, 5.2.2, or both. The walk distance between a primary building entrance and a public transit access location shall be as measured over a continuous network of all-weather surfaced walkways and dedicated public rights of way. If a public transit route has an inbound or an outbound access location that is located outside

the proximity criteria of 5.2.1 or 5.2.2, the average of the inbound and outbound access locations shall meet 5.2.1 or 5.2.2 to qualify.

5.2.1 A local transit access location is within 1/4 mile (400 m) of a primary building entrance.

5.2.2 A rapid transit access location is within 1/2 mile (800 m) of a primary building entrance.

##### 5.3 Public Transit Access:

5.3.1 The building shall be served by public transit operations of:

5.3.1.1 No longer than 15 min headways during peak hours and 30 min headways during off peak hours operating at a minimum of 14 h each weekday, and

5.3.1.2 No longer than hourly headways operating at a minimum of 14 h on at least one day each weekend.

5.3.2 Service for any given public transit route shall only be considered if its access location satisfies 5.2.1 or 5.2.2.

5.3.2.1 *Exception*—Buildings served only by passenger rail or ferry service shall be served by a minimum of 24 trips per weekday and six trips for at least one day each weekend. Trips in opposite directions shall be counted separately.

#### 6. Documentation

6.1 Documentation substantiating compliance with the requirements and criteria described in Section 5 shall include a scaled map of the vicinity of the proposed building with public transit access locations and walk routes clearly marked and dimensioned and a corresponding table containing transit service schedules and distances between public transit access locations and a building's primary entrance. Where public transit is planned, a supplemental document shall demonstrate that the planned public transit will be operational within one year of the building's occupancy certification date.

6.2 Satisfaction of the Section 5 requirements shall be demonstrated in conjunction with the site plan review.

#### 7. Keywords

7.1 green building; public transit; transit access; transit service; walkable; walking

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