

The formulae $\frac{\partial \rho U_i}{\partial t} + \frac{\partial}{\partial x_j} (\rho U_j U_i) = -\frac{\partial p}{\partial x_i} + \frac{\partial}{\partial x_j} \left(\mu \frac{\partial U_i}{\partial x_j} \right) + g_i (\rho - \rho_s)$ for building $\frac{\partial}{\partial x_j} (\rho U_j \bar{H}) = -\frac{\partial p}{\partial x_i} + \frac{\partial}{\partial x_j} \left(\mu \frac{\partial \bar{H}}{\partial x_j} - \rho u_j' u_i' \right) + g_i (\rho - \rho_s)$ state of the art $\frac{\partial}{\partial x_i} (\rho U_i \bar{H}) = \frac{\partial}{\partial x_i} \left(\lambda \frac{\partial \bar{H}}{\partial x_i} - \rho u_i' \bar{H}' \right)$ biomedical research facilities.

Accessibility Law: ABA and ADA Differences

Accessibility is a universal requirement for all Federal facilities for which the Division of Technical Resources (DTR) cannot grant a waiver. As a federal entity, the National Institutes of Health must follow the requirements in the Architectural Barriers Act (ABA) standard (Design Requirements Manual, Section 1.9). While they are very similar, there are also some differences between what the ABA standard requires for accessibility and what the American with Disabilities Act (ADA) standard requires.

Accessibility Laws

The ABA of 1968 was the first federal law to address accessibility. The ABA standard applies to facilities built or altered with federal funds (grant or loan) or leased by the federal government. The standard also applies to structures built on “behalf” of the federal government (i.e. built on federal land with private sector funding). The U.S. Access Board enforces the ABA standard; complaints alleging federal facility noncompliance can be filed with the Access Board.

The Access Board develops the minimum accessibility guidelines for both the ABA and ADA standards. Note that the “F” in front of the scoping requirements in the ABA standards stands for federal. The “F” denotation is only shown in the ABA Standards.

The ADA of 1990 is a civil rights law enforced by the U.S. Department of Justice. It provides access for people with disabilities by establishing standards for design and construction. The Access Board develops the minimum design guidelines, standards, and construction requirements set forth in the ADA standards as adopted by the Department of Justice. New construction and alteration requirements apply to both private and public entities. Public entities such as state and local governments are covered by Title II. Private entities such as commercial facilities and places of public accommodation are covered by Title III.

Key ABA and ADA Differences

- **Employee Work Areas:** Specific to the ADA standard is 203.9 Employee Work Areas. Many of the access requirements no longer apply in an area if it is used only by employees to do their work. The minimum requirements for work areas are that employees are entitled to “reasonable accommodations” (ADA standard Advisory 226.1 General). ABA standards do not include this exception; all work areas must be accessible as if open to the public unless otherwise stated.
 - **ABA Standard Advisory F226.1 General:** In facilities covered by the ABA standard, this requirement applies to work surfaces used by employees. Five percent, but not less than one, of permanently installed work surfaces in each work area must be accessible.
- **Modifications and Waivers:** The ABA standard authorizes modifications or waives the accessibility standards for buildings and

facilities covered by the ABA standard on a case-by-case basis. This is not an option in the ADA standard.

- **Leasing Requirements:** The ABA standard has leasing requirements, but the ADA standard does not. These requirements only apply where the federal government leases in whole or in part, and do not apply where money is given to a non-federal entity which then leases a facility. The ABA standard can apply to non-federal entities where a grant or loan is provided for design, construction, or alteration.
- **Barrier Removal Obligation Requirements:** The ABA standard has no barrier removal obligation requirements, unlike the ADA standard. Under the ABA, access requirements are triggered when alterations are done. Also, the scope of the alteration triggers the size of the improvement. There is no cost ceiling for renovations (meaning no 20% provision) under the ABA standard, unless it is technically infeasible.
- **Vehicles:** The ABA standard does not apply to vehicles such as buses and trains, unlike the ADA standard. The ABA standard is limited to buildings and facilities.
- **Privately-Owned Residential:** Privately-owned residential structures not leased by the federal government are not subject to the ABA. Even if the structure received federal funding, the design work is not subject to ABA requirements. ADA requirements still apply to these structures.
- **Vertical Access Exceptions:** Under the ADA standard, accessible routes between stories are not required in private sector facilities under three stories tall or having less than 3000 square feet per story. There is no similar exemption in the ABA standard. Most new construction two-story buildings covered by the ABA must provide vertical access. The only exception is for two-story facilities where one floor does not have public space and the second floor has a maximum occupancy of 5 persons or fewer. This last exception is part of both the ABA and the ADA standards.

Summary

Designers of federal facilities must be familiar with the differences between the ABA and ADA. When appropriate, the ABA must be applied in its entirety, and requests for exceptions, waivers, and interpretations should be directed to the US Access Board.

Resources

US Access Board: <https://www.access-board.gov/>

Guide to the ABA Standards: <https://www.access-board.gov/guidelines-and-standards/buildings-and-sites/about-the-aba-standards/guide-to-the-aba-standards>

US Department of Justice - Americans with Disabilities Act: <https://www.ada.gov/>

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Further details on this month’s topic are available on the DRM website Section 4.6 Furnishings and Equipment

www.orf.od.nih.gov/TechnicalResources/Pages/DesignRequirementsManual2016.aspx/Pages/DesignRequirementsManual2016