



Accessibility

To some, it is a series of legislated requirements through the American with Disabilities Act, adopted Codes, and local regulations that impact the design, operation, and performance of facilities. To others, it represents what many take for granted – the ability to live lives and use sometimes essential services despite physical disabilities.

Americans with Disabilities Act Accessibility Guidelines (ADAAG) for Buildings and Facilities

In the past, I, like many of my peers, have turned to the ADAAG for Buildings and Facilities, ICC/ANSI A117.1 Accessible and Usable Buildings and Facilities, related Codes, and local building Codes to learn the minimums required for accessible services.

The minimums required were used as the starting points for design and, all too often, ended up being the final details of the end design. Even when design migrated to the bare minimums, I'd always felt that I'd done my part and helped create part of the facility that would serve accessibility needs. Why wouldn't I? Sketches depicting people in wheelchairs in the various Codes and handbooks pretty clearly showed that the systems could be used in the minimum configuration.

Understanding the Need

However, there is nothing like face-to-face interaction with the people who actually need the design features of a product to help understand their needs. Most elevator and facility designers I know never have the opportunity to really interact with people

having physical disabilities and come to understand how designs affect them. Sure, the minimums usually can be used with a little extra effort, but that doesn't mean it is the best solution. It was pretty obvious fairly quickly, not just from communicating with them, but observing the challenges in their locomotion that the minimums would often be extremely cumbersome to use. The observations, more than anything, helped me understand why they were communicating the need to have more space, larger operating buttons, more light, etc.

Regulatory Minimum

Here are some of the things that can be done to make systems that are more truly accessible in the nobler sense of the word rather than the strict regulatory minimums:

~ Many take for granted - the ability to live lives and use sometimes essential services despite physical disabilities. ~

1. A facility that loses accessible paths with the failure of a single elevator is not accessible. Strive to ensure that multiple elevator paths are available to help assure service is sustained when you can.
2. Meeting the minimums for door width and cab interiors is not the best solution – it's the minimum. To personalize this, think back to the last time you were stuck on a narrow street and had to make a 10-point turn to get out. This is what often happens with powered wheelchair systems.
3. Use pass-through cabs wherever possible to eliminate the need to maneuver within the cab with a wheel chair.



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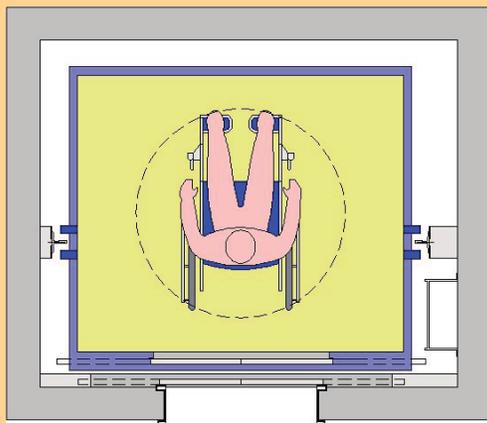
I have been fortunate over the last few months to be able to work directly with a group of individuals for whom accessibility is a key element for their lives.

The experience has been tremendously educational and has made me reconsider some of my own thoughts and outlooks on providing elevator systems in support of accessible facilities.

We sincerely hope that you find this information helpful in your day-to-day activities. Feel free to e-mail me directly at khamby@vtexcellence.com.



4. Work with 42" or larger doors for all configurations and not just centered doors.
5. On standard entry cabs with a single door, try to integrate auxiliary car operating panels on the right wall or rear wall to reduce the need to turn around within the cab with a wheel chair.
6. Maintain consistency in car operating and hall call station layouts – separating operating buttons from service and fireman's buttons as much as possible.
7. When designing, reviewing designs, or providing other professional services related to the facility – try to remember the old adage about walking a mile in another mans shoes to understand him. A little extra space, a wider door, larger operating buttons – they will add a little to the cost, but in my opinion, it is well worth it if you can make someone's day just a little easier.



This column is intended to discuss new or existing rules and interpretations that may affect the operations or planning of your vertical transportation systems. The rules within the A17.1 Code are intended to be clear and unambiguous, but sometimes there are unintended consequences to the rules that leave the reader confused as to the intention of the Code.

When is an elevator repair a modernization?

This is a common question for many of our clients with existing elevators. Often, it is a simple task to determine if an elevator needs a repair versus a more dramatic modernization and upgrade. However, the impact of an elevator modernization as defined by ASME A17.1 can have a ripple effect on other components of the elevator system. Those changes can also have an effect on the building systems (i.e. electrical, HVAC, etc.).

It is important to understand how ASME defines different issues related to elevator work. The first thing to understand is that there is no definition of an elevator "modernization." ASME refers readers to:

Alteration: any change to equipment, including its parts, components, and/or subsystems, other than maintenance, repair, or replacement.

This of course, requires a clear understanding of: maintenance, repair, and replacement!

Maintenance: a process of routine examination, lubrication, cleaning, and adjustment of parts, components, and/or subsystems for the purpose of ensuring performance in accordance with the applicable Code requirements.

Repair: reconditioning or renewal of parts, components, and/or subsystems necessary to keep equipment in compliance with applicable Code requirements.

Replacement: the substitution of a device or component and/or subsystems, in its entirety, with a unit that is basically the same as the original for the purpose of ensuring performance in accordance with applicable Code requirements.

Some easy examples:

- Changing hoist cables is clearly a repair.
- Examination, lubrication, cleaning, and adjustment of an elevator valve is a maintenance task.
- Changing a door operator is a replacement.
- Replacing a relay based controller and motor generator set with solid state controls and drives is an alteration.

It is the alteration that has the most significant aspect on the rest of the elevator and building systems. There are certainly gray areas that may be confusing. When confronted with this situation, it is our advice to speak to an expert familiar with both national and local codes.

This may be your elevator service company or a local elevator consultant. You may also look to your local jurisdiction for advice as well. You may well find that they have answered similar questions in the past and can be helpful in providing direction that will result in a smooth project!

If you still have a question, don't hesitate to send a request for interpretation to ASME. They are very diligent in responding to these requests.

If you have a question about a particular elevator or escalator situation, please feel free to write to me - pwelch@vtexcellence.com. While I am a member of several ASME A17.1 sub committees, my opinion cannot reflect the official position of ASME.

We at VTX deal with code issues on a regular basis. It is very likely that your question is not new to us, and we can help quickly. It is not uncommon for us to bring a request for interpretation for our clients before A17.1. Just remember that ASME wants the requirements to be clearly understood, so get it clarified, it could dramatically affect your project or operation!



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