Introduction

Welcome. My name is [Your Name] and I am the [Your Title] for Bradley. Today I will be presenting the titled course “Access Beyond Compliance: Emerging Trends in Commercial Restroom Design”.

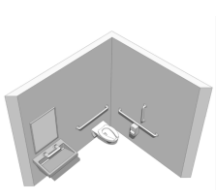
For over 100 years, Bradley has been working to be the industry's leading manufacturer of commercial plumbing fixtures and washroom accessories. Bradley serves a diverse customer base ranging from small local facilities to international corporations as the industry’s only single-source provider of commercial-grade washroom fixtures, partitions, lockers, accessories, emergency safety equipment and tankless water heater solutions.

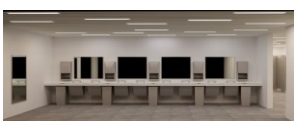
Next Slide>

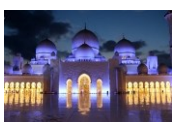
Daniel Hughes

Bradley Senior VDC Manager
Specifications & ADA Specialist

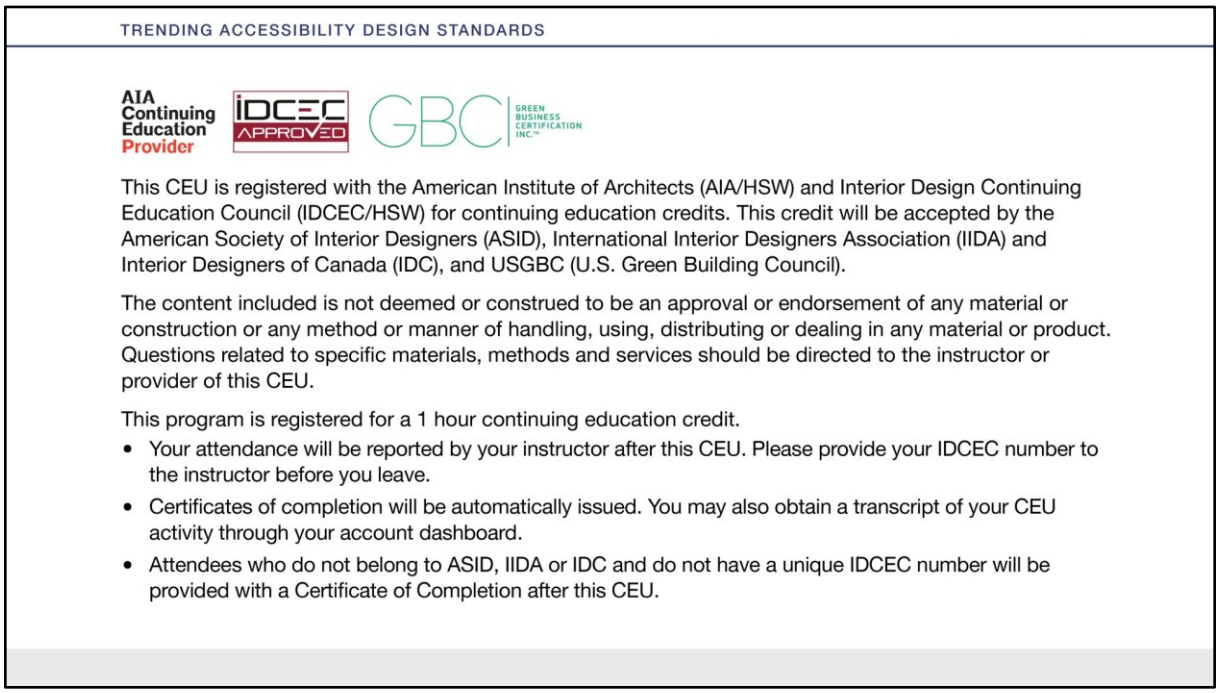
- Grow Bradley Global VDC Initiative for Design+ Construction
- Autodesk Strategic Project Consultant: AECO & Manufacturing
  - 220 AEC Firms, 35 Facility Owners, 150 Manufacturers
- National Educational Author & Speaker:
  - (AIA, CSI, ASPE, AGC, IIDA, ASID, IFMA)
- Corporate Owner Autodesk Software Reseller \ Consultancy
- Served with 5 Wisconsin Architectural-Engineering Firms
  - (Designer, PM, CM, CAD\ BIM\ VDC Managers, Marketing)







Daniel Hughes – Bradley Senior VDC Manager, Specifications & ADA Specialist.



Approvals

Before we begin, I would like to take a moment to review some important housekeeping items. This course has been approved for 1-hour credit. Stay until the end to receive instructions on receiving credit.

Next Slide>

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Learning Objectives

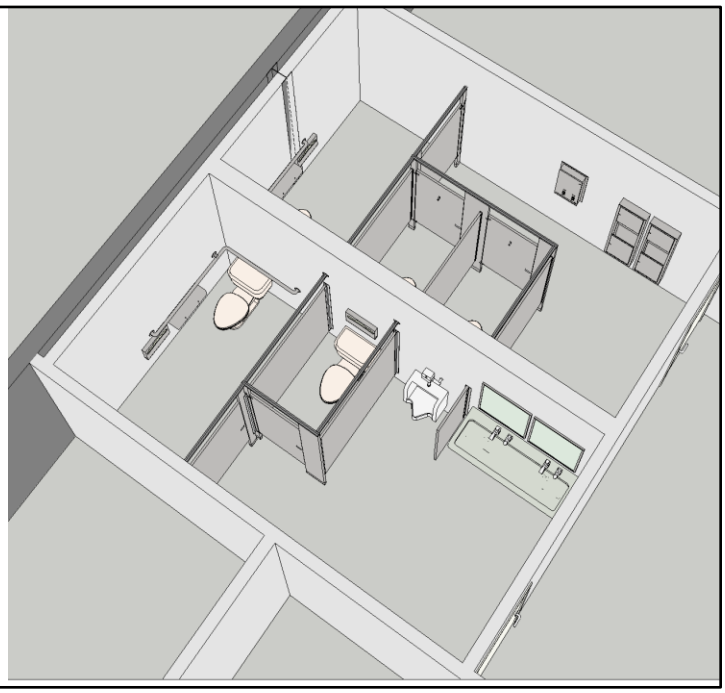
Let's begin with the learning objectives and what we will cover.

- Explore the historical evolution of accessible design and its influence on contemporary and future space planning, with the aim of ensuring the well-being of all occupants.
- Discuss the standards and principles that have influenced accessible design like ADA, Universal Design, etc.
- Examine emerging design elements and techniques essential for creating accessible commercial restrooms to ensure the well-being and safety of users.
- Analyze real-world case studies of innovative accessible spaces that incorporate these emerging trends.

Next Slide>

Accessible Design Checklists+

- ADA vs ANSI 117.1
- State Building Code \ Plumbing Code
- Floor Clearances
- Obstructed\Unobstructed Reach Ranges
- Circulation Path
- Protrusion Compliance
- Installation Heights
- Occupancy Type
- Enhanced Reach
- ADA & Ambulatory Stalls
- Entrance \ Exit Clearances
- Knee \ Toe Clearances



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Rubik's Cube of Accessible Design Checklists

- ADA vs ANSI 117.1
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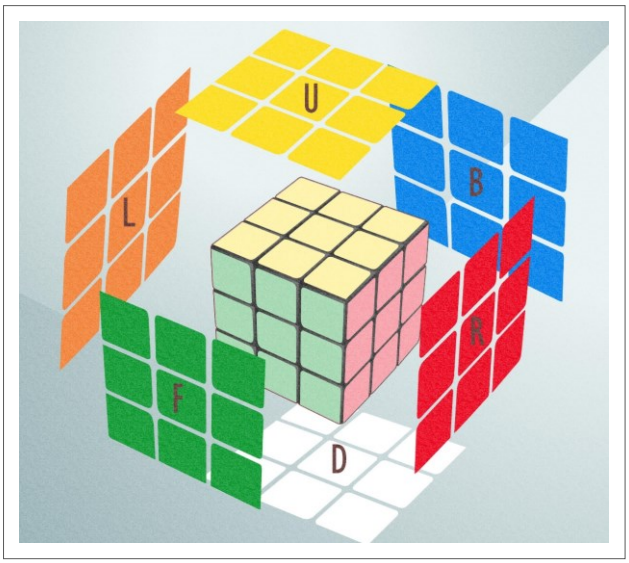

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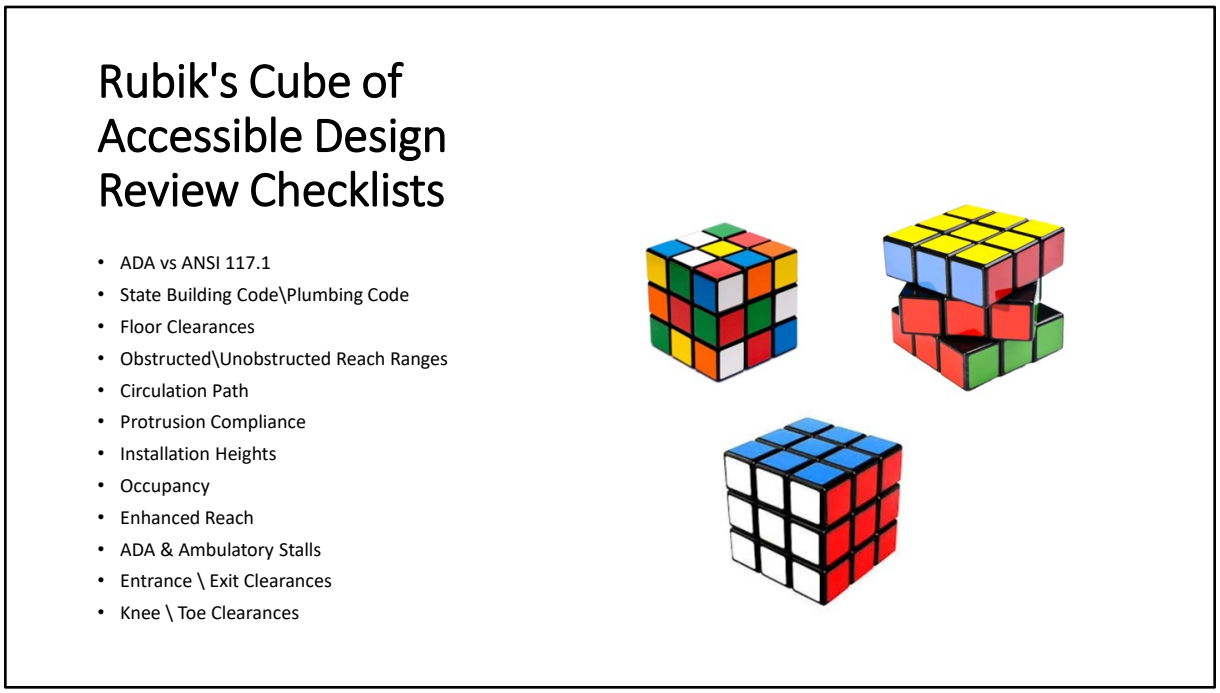

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Next Slide>

History and Overview of ADA

The Americans with Disabilities Act was signed into law in 1990. This law provides civil rights protections for people with disabilities and prevents discrimination in employment, public services, transportation and accommodations, commercial facilities and telecommunications. According to the act, a disability is defined as a “physical or mental impairment that limits one or more major life activities, such as seeing, speaking or standing.”

Over the years there have been revisions and updates to the ADA Accessibility Guidelines (ADAAG) but the most current set of standards was adopted in September 2010 which became effective in March 2012.

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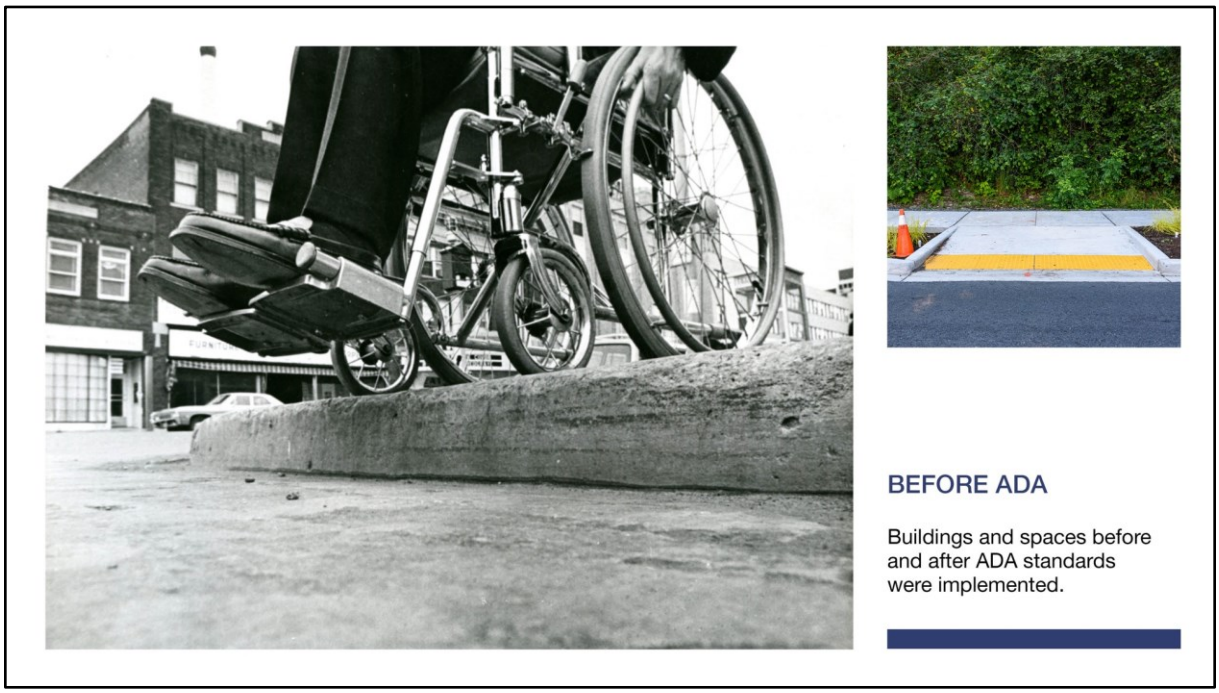
Source: ADA



Before ADA

Something as simple as a sidewalk was inaccessible to many people with differing abilities prior to this act passing. Take a look at some examples of buildings and spaces before and after ADA standards were implemented nationally.

Next Slide>

Universal Design

In addition to ADA Standards there are other sets of accessibility principles gaining popularity. One of those is Universal Design (UD) which focuses on creating products and a built environment to accommodate as many people as possible regardless of their age, ability, or status in life.

Universal design principles minimize the need for assistive technology, results in products compatible with assistive technology, and makes products more usable by everyone, not just individuals with different abilities.

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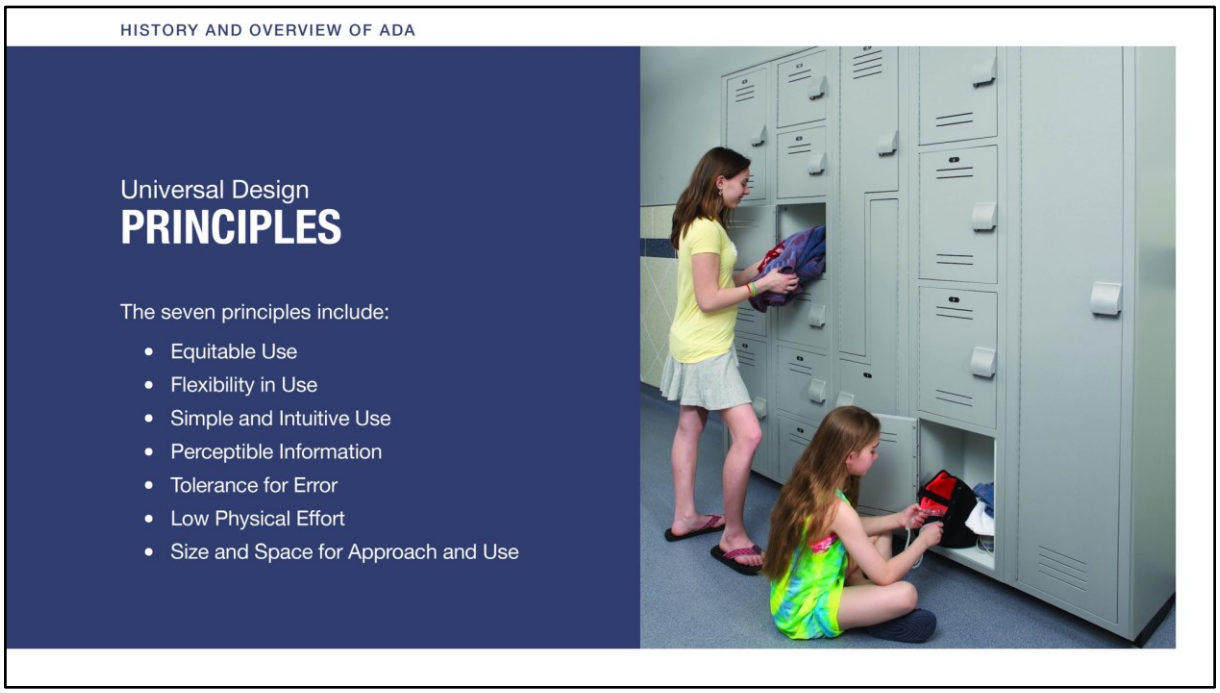
Source: Centre for Excellence in Universal Design



Universal Design Principles

There are seven principles that may be applied to evaluate existing designs, guide the design process and educate both designers and consumers about the characteristics of more usable products and environments. These seven principles are:

1. Equitable Use
2. Flexibility in Use
3. Simple and Intuitive Use
4. Perceptible Information
5. Tolerance for Error
6. Low Physical Effort
7. Size and Space for Approach and Use

Next Slide>

Like we talked about before, there are many accessibility principles being used. That's because there is no one all-defining, single source of accessibility requirements or information for design professionals. Because of this, designers usually need to integrate requirements from several sources and even resolve conflicts between different sets of requirements. In addition, special project requirements may lead to provisions in addition to those required under regulations. For Example, OSHA standards for Industrial facilities or Hospital Healthcare Standards.

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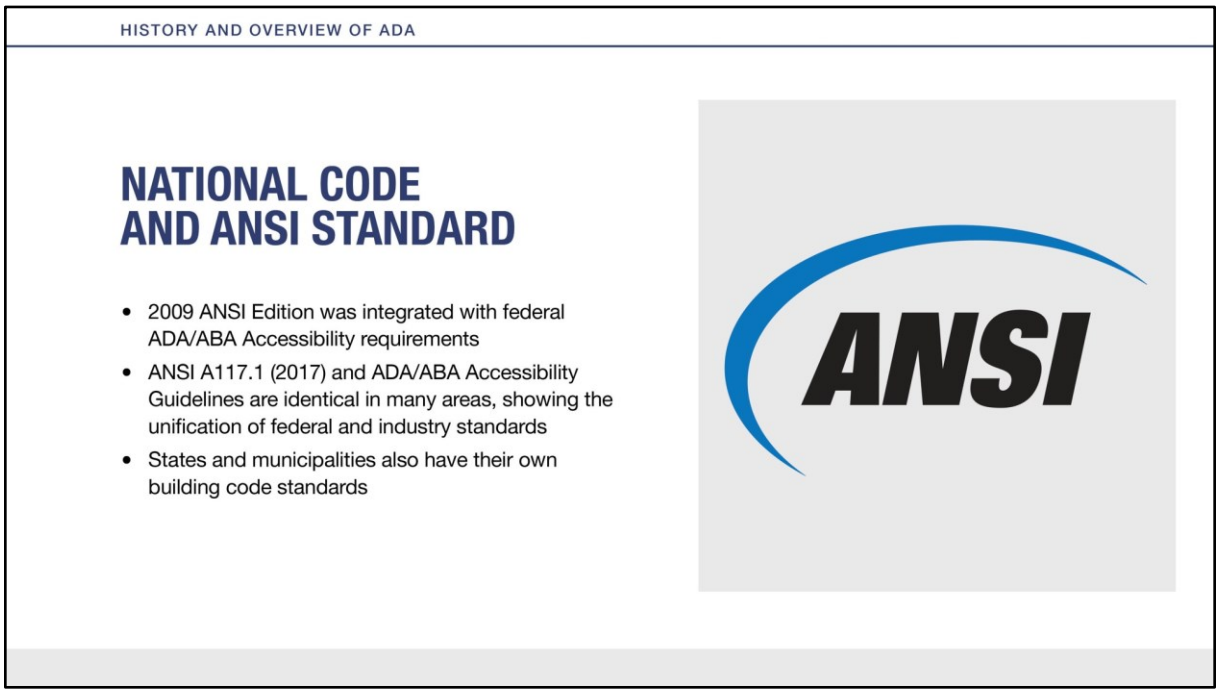

National Code and ANSI Standard

National model accessibility code rose from the ANSI standard. The 2009 ANSI Edition was integrated with federal ADA/ABA Accessibility requirements and one specific set of code ANSI A117.1, is published by the Integrated Codes Council (ICC). The 2017 ANSI Edition is the most current version. ANSI/ICC A117.1 is similar to the ADA/ABA Accessibility Guidelines which requires compliance for federal government projects.

The standards are identical in areas, indicating the unification of federal and industry standards over time.
State Building Codes continue to be changed IBC 2021 adopted A117.1-2017 in January 2021. 18 States have adopted this version.
by that adoption. March 2024 was the adoption date for the States of Ohio and Washington.

The ANSI A117.1-2017 Version may be purchased from ANSI at **www.ansi.org** or **www.iccsafe.org** and other online sources.

It's also important to consider states and municipalities who have developed or modified their own accessibility building code requirements.

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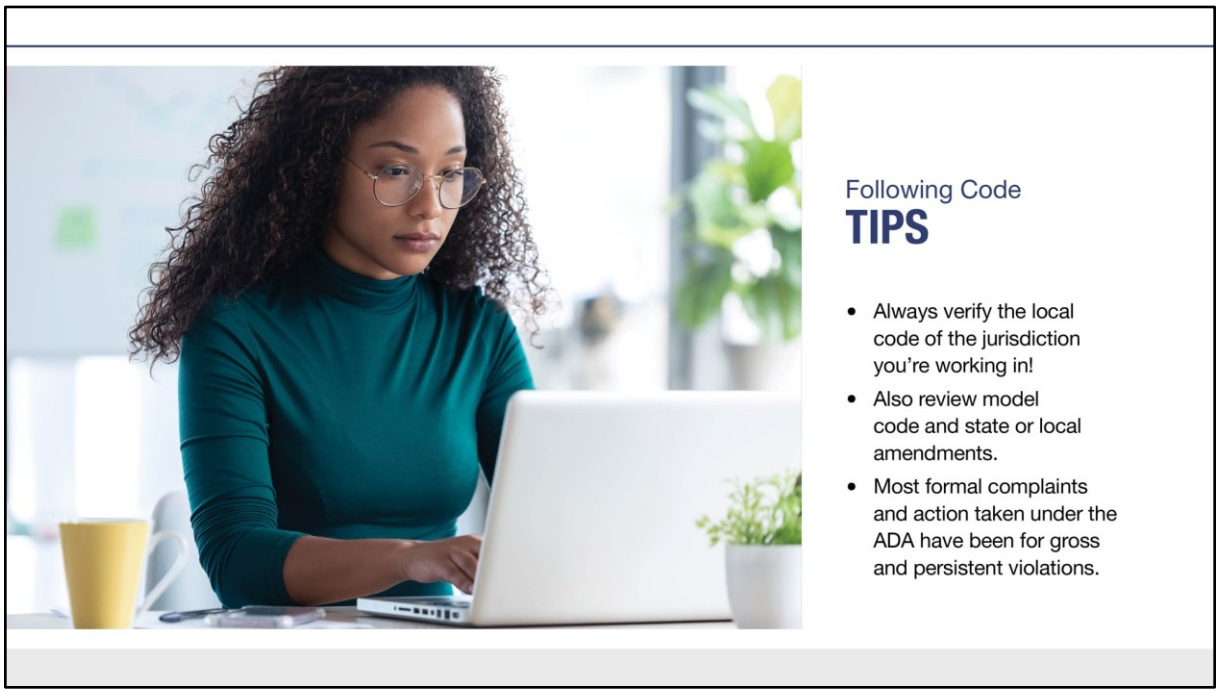
Source: ICC Codes



- The design professional should proceed with care when working in a new code jurisdiction. Always verify!
- Don't assume that meeting the ADA means you have met all accessibility requirements. Verify local code requirements as well, both the model code and state or local amendments.
- Likewise, don't assume that if you have met the local code requirements that you have also met the requirements of ADA!
- Most formal complaints and action taken under the ADA have been for gross and persistent violations.

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Accessible Design Trends

As better accessibility continues to be implemented across the nation, we are seeing a variety of innovations that create better spaces for everyone.

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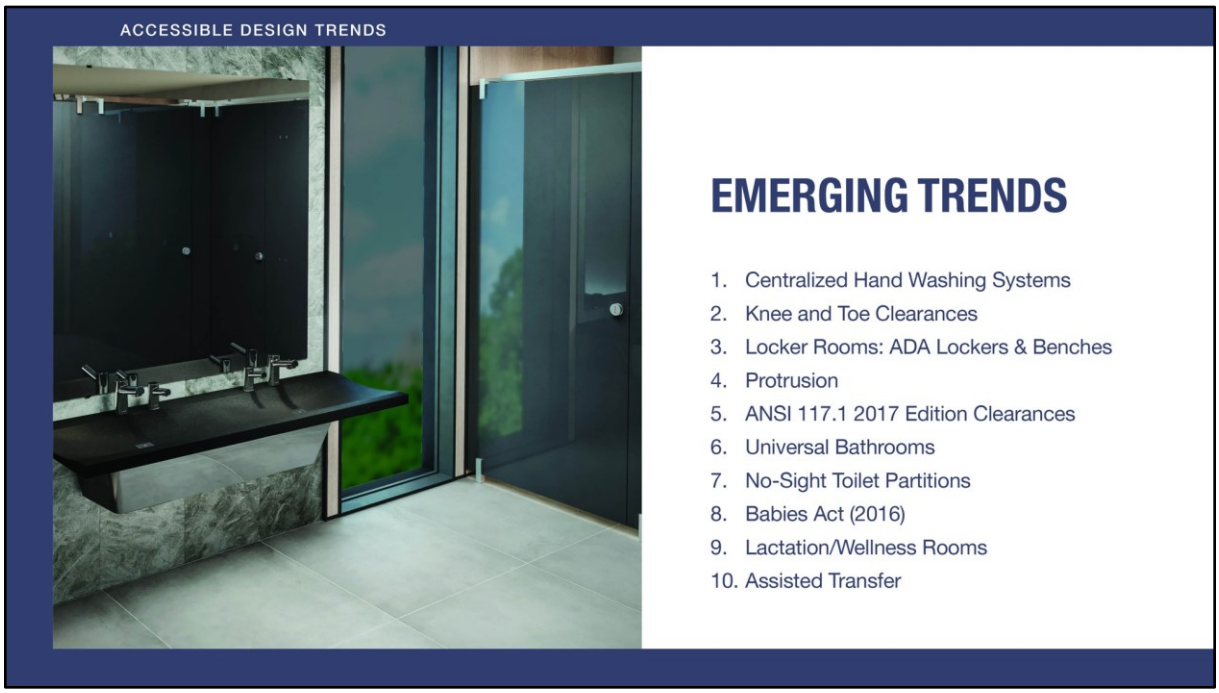

The 10 emerging accessibility trends we have identified include:

1. Centralized Hand Washing Systems
2. Knee and Toe Clearances
3. Locker Rooms: ADA Lockers & Benches
4. Protrusion
5. ANSI 117.1 2017 Edition Clearances
6. Universal Bathrooms
7. No-Sight Toilet Partitions
8. Babies Act (2016)
9. Lactation/Wellness Rooms
10. Bariatric and Assisted Transfer

We see these trends gaining popularity in the design market as architects and designers incorporate these elements into their design and construction projects.

Next Slide>

Centralized Hand Washing Systems

The first trends we'll explore is the centralized hand washing system. Since 2012, this system has grown in popularity, becoming a staple in 'smart technology' handwashing systems. Just by a person shifting their hands slightly from side to side, they can be provided with water, soap, and a gust of air that dries the hands. Centralized at the hand washing basin, users can easily access everything they need for clean hands. That goes for everyone, but especially visitors who, for example, use a wheelchair. There is no need to reach for a paper towel or even travel across the bathroom while touching wheelchair wheels with wet hands.

Next Slide>

The other benefit centralized hand washing systems offer is the ability to **reduce the bathrooms square footage** while maintaining accessibility. Additionally, their sustainable design lowers water consumption, eliminates paper towels & waste and improves cleanliness for both visitors and owners.

Centralizing this system also **reduces the amount of required accessible equipment to purchase & install** and reduces the total time for visitors to wash & dry hands. Most importantly, it minimizes the risk of slipping or falling on wet floors for all visitors.

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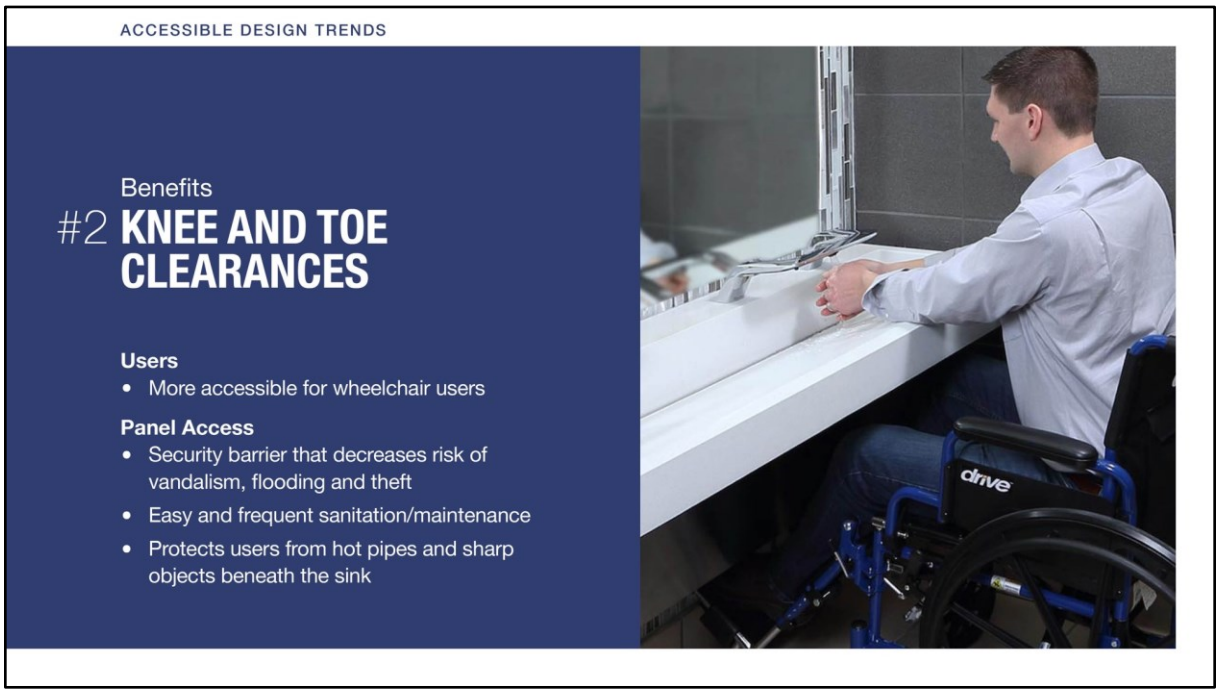

Knee and Toe Clearances – **ACCESS PANELS**

The next trend is knee and toe clearances. This is important because maintaining these clearances ensures a wheelchair user to access the faucet. Having knee and toe clearance also allows designers and architects to include access panels beneath the sink. This panel includes a cover for plumbing connection and mechanicals.

The benefits to this clearance access panel include:

- Security Barrier: The access panel prevents people from accessing under-sink electronics and plumbing connections and potentially risking vandalism, flooding and theft.
- Sanitization: Restrooms require both daily cleaning and sanitization to maintain a healthy and safe environment for the facility owners' visitors. Mold, mildew and nasty bacteria will grow in a restroom and will quickly become a health hazard without a daily/weekly cleaning

schedule. The panel makes it so that there are less surfaces to sanitize and clean daily.

- Maintenance: Having this access panel also limits time and effort put into cleaning and sanitizing this area. Cleaning a stainless-steel access panel is much faster compared to cleaning under the sink fixtures like pipes, wires, electronics and more.
- Safety: According to ADA/ANSI 117.1, the knee-toe clearance access to the sink and handwashing with a wheelchair also protects the visitors' knees from hot pipes and sharp objects beneath the sink.
- Accessible clearances for knee and toes; are defined to ensure a wheelchair can access the faucet.

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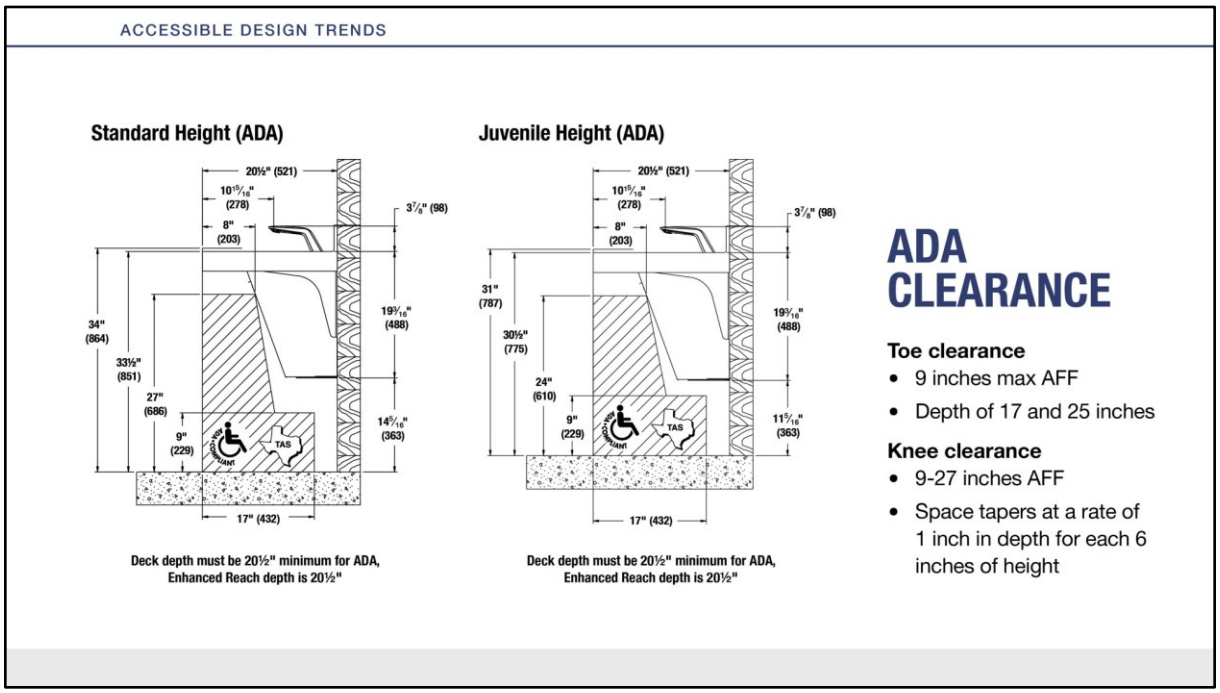
Source: ANSI 117.1



ADA Clearance

These are ADA clearances Standard and Juvenile Height.
Please review the latest California requirements, which adjust the top range of the ADA 27”.

According to the ADA standard, toe clearance should be 9 inches above the finished floor and should extend between 17 and 25 inches under the element that requires clear floor space. Space greater than 6 inches beyond the 9 inches above the floors are no longer considered toe clearance.

For Knee clearance, the standard states that the space under an element should be between 9 and 27 inches above the finished floor. At a depth of 25 inches, which is the maximum, the space under the element should be 9 inches above the finished floor or ground. The minimum clearance should be an 11 inch depth with a 9 inch height and a 8 inch depth with a 27 inch height. This clearance can be reduced at a rate of 1 inch in depth for each 6 inches in height of the knee clearance is between 9 and 27 inches.

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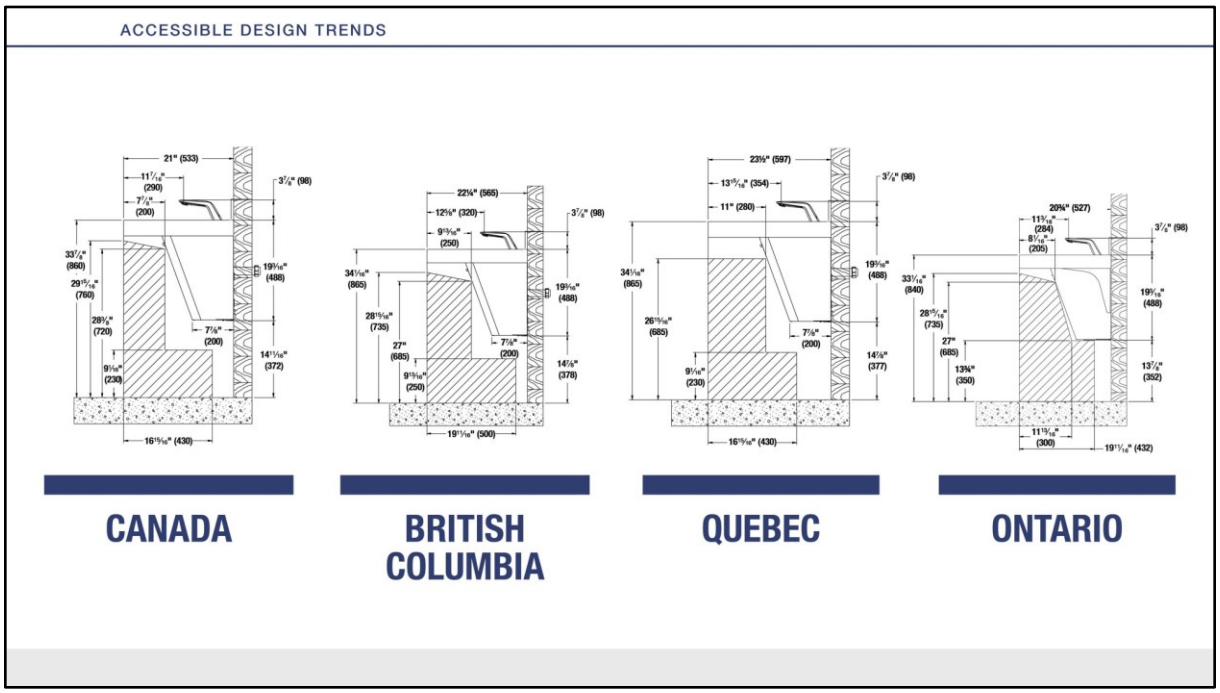
Source: ADA



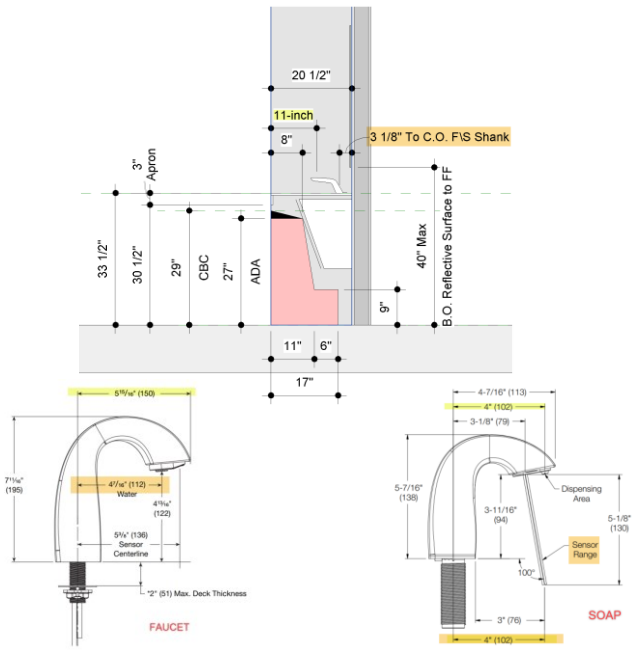
Canadian Clearance Codes

On this slide you'll see a variety of toe and knee clearance codes for provinces and municipalities in Canada.
We've found several major city code requirements, vary from the Province Requirements.
Provincial Codes vary from the Canadian Code Requirements.
The clearance dimensions are defined regionally which is why it's so important to verify accessibility code locally and regionally.

Next Slide>

Enhanced Reach Range: 11-inch: Front of Lavatory to Faucet-Soap

- **Where Enhanced Reach Range** [ERR] is required at lavatories, **faucets and soap dispenser controls** shall have a reach depth of 11 inches (280 mm) maximum.
- **Water and soap outlets** shall be provided with a reach depth of **11 inches (280 mm) maximum**.
- **Enhanced Reach Range** is required at lavatories in toilet rooms or bathing facilities **when there are six or more lavatories.** Specifically, at least one lavatory with enhanced reach range must be provided in such cases.



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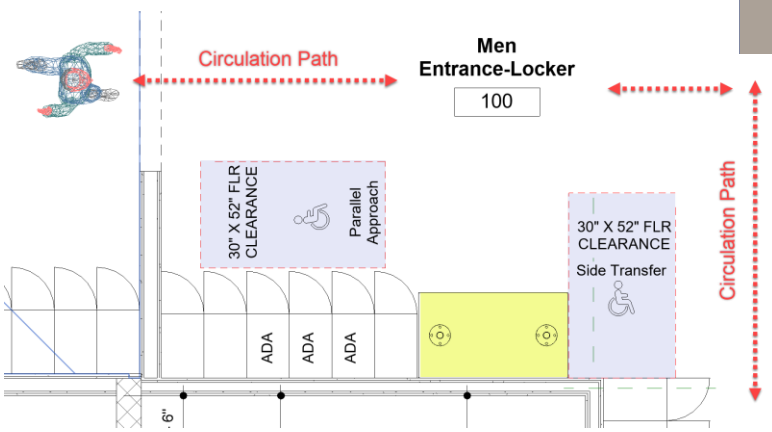
Next Slide>

Accessible Lockers

Let's move onto accessible lockers. ADA lockers should make up a least 5 percent of EACH locker-TYPE in a dressing, fitting, or locker room.
TYPE is defined as Single-Tier, Two-Tier, etc.
Each locker-TYPE has limits for meeting the enhanced reach height of 48" MAX above the floor (AFF)
They must include visible signs or logos to identify the locker as ADA.
Additionally, the opening latch mechanism should provide access while using less than 5 lbs of force.
Label ADA locker locations on both the PLAN & ELEVATIONS. Consider using KEYNOTE Labels to identify Locker-Types.

Next Slide>

ADA Lockers & Benches
2 - Floor Clearances



There are **2 floor clearance LOCATIONS** for locker rooms:
ADA Bench
Lockers

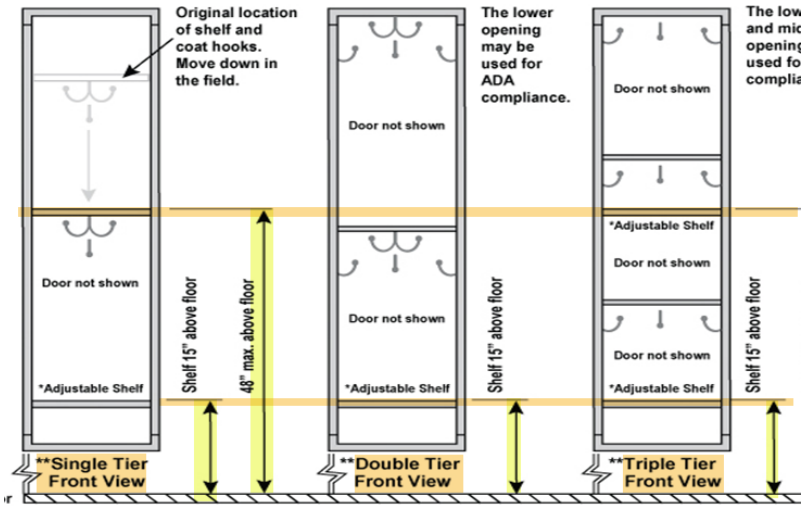
Two **floor clearance SIZES** based on project code jurisdiction will use one of these:
ADA 30x48
ANSI 117.1 30x52

At the **ADA Bench** we provide **Side Transfer** from wheelchair to bench
[easiest\safest\preferred method]

At the **Lockers** we provide a **Parallel \ Side Approach**.
[provides easiest access, providing maximum reach from the wheelchair)
Designing **parallel \ side approach** \ access to the lockers from both the **left or right** side of lockers.

Lastly, ensure the **wheelchair is not parked and blocking** the **Circulation Path** for accessing other portions of the locker room.
Ensure there's clearance around wheelchair, or the wheelchair is parked in an alcove area outside the path.

ADA Lockers: Reachable Range: 15”- 48” AFF



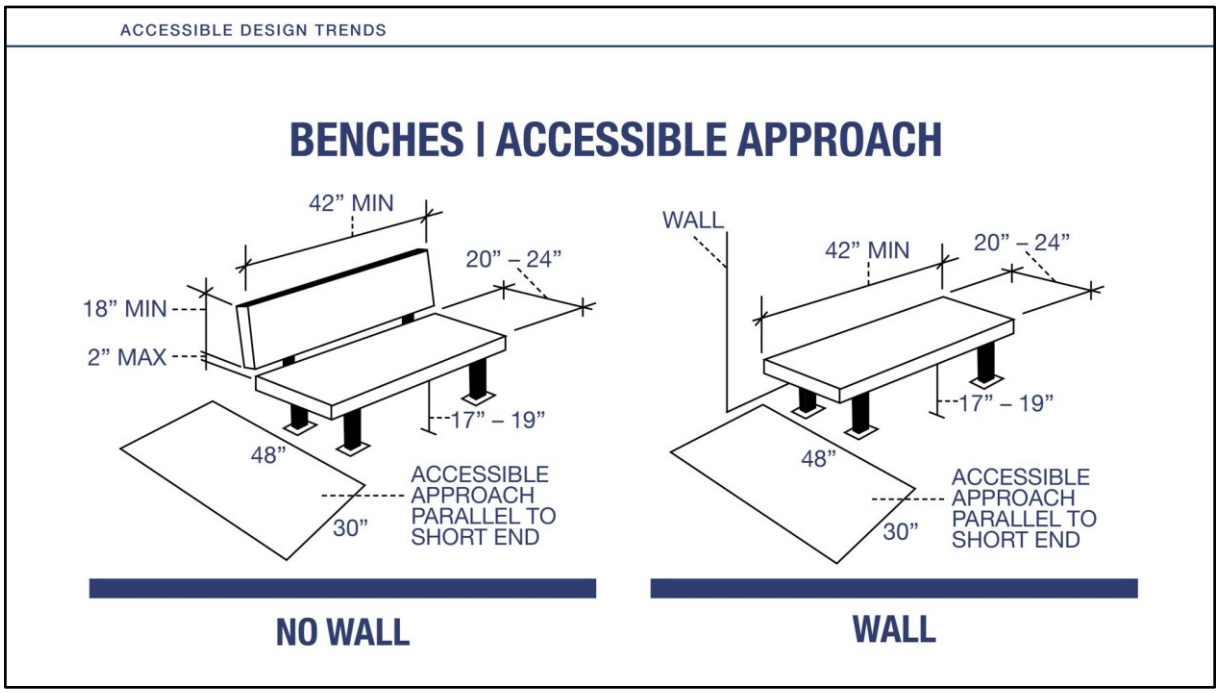
At the Lockers, **Reach Compliance** Starts at **15” AFF**, extending to **48” AFF**

Everything **below 15”AFF** and/or **above 48” AFF** is **NOT accessible.**

Ensure that the toe space or curb beneath the locker, does not push the Locker up and outside the reach range of 48” MAX AFF.

Doors must provide visible signage or logos to identify which locker(s) are configured for ADA access.

The latch mechanism must provide access with a maximum lift force of 5lbs.



Benches

Accessible lockers require ADA benches.
Within a dressing, fitting, or locker room, it is important to place near / next to the accessible lockers.
ADA benches can be installed free standing but require bench back support.
Benches can be installed next to a wall, where the wall serves as the back support.

There are 2 floor clearances for wheelchairs, one at the bench and one at the lockers:
One is at the Bench for **Side Transfer** from Wheelchair, and One **Parallel Approach** at the ADA Lockers.

Next Slide>

Protruding Objects

The next topic we’ll cover is protruding objects. People with vision impairments often travel closely along walls which can provide wayfinding cues sometimes called a “shoreline.” Objects mounted on walls, partitions, columns, and other elements along circulation paths can pose hazards unless their projection is limited.

1. Originally formulated to protect visually impaired users, limits on protruding objects help protect all users from injury.
2. Protruding clearances apply at the wall and above the person.
3. Specifying recessed accessories will keep the pathway clear.

Here you can see the clearance guideline dimensions for using a sight cane.
The 6” space on both sides of the person using a cane demonstrates how 4” protrusion requirement is applied.
Notice how the cane sweeps and the pace of the person.

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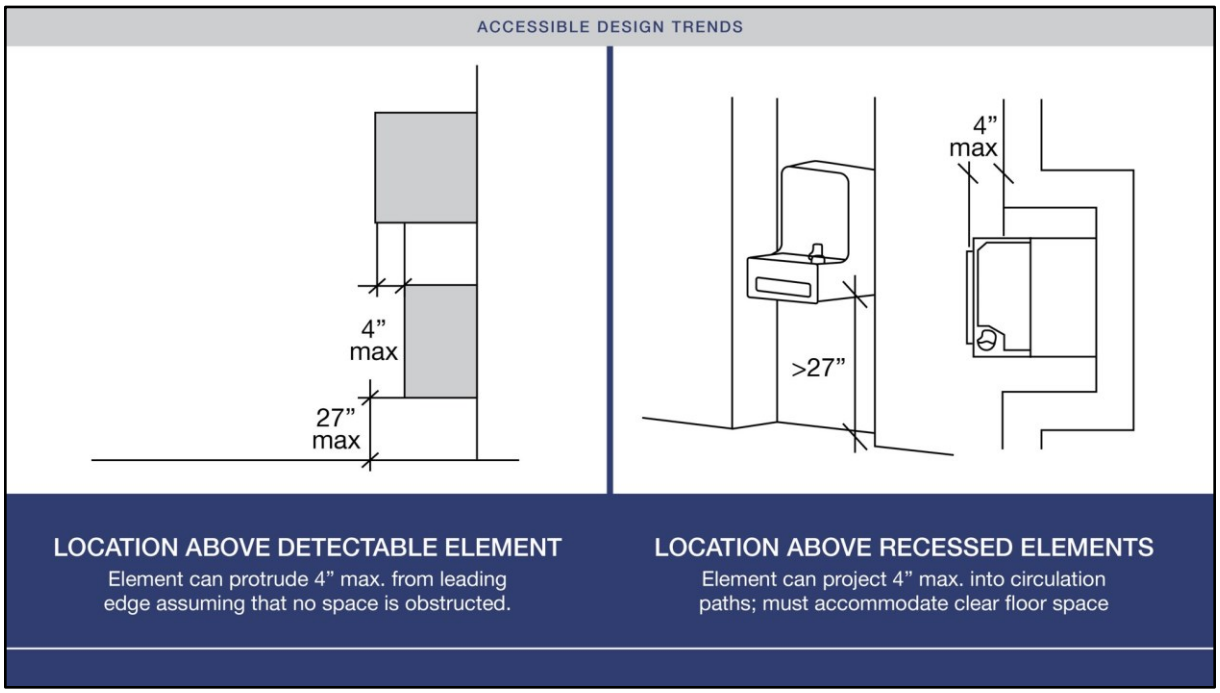
Source: ADA



For protruding objects, there are also locations above detectable elements and recessed elements. For the former, the element can protrude 4” maximum from the leading edge of such elements provided that any required reach or clear floor space is not obstructed.

Placing a **Paper Towel Dispenser** above a **Waste Can** is one example. Ensure the Towel Dispenser does not exceed 4” beyond the front rim of the waste can.

Sinks located along the Accessible Route, need to have wing walls at the end of the sinks. Half-Height walls or recessed into an alcove.
For **Countertop Sinks**, consider lowering the left/right sink aprons, so bottom of apron is 27” AFF. The cane can now detect the sink.

For the latter, objects can be recessed in alcoves so that they do not project more than 4” into circulation paths. Alcoves must be sized to accommodate required clear floor space at accessible elements. Elements, such as wheelchair accessible drinking fountains, must provide a knee clearance of

at least 27”.

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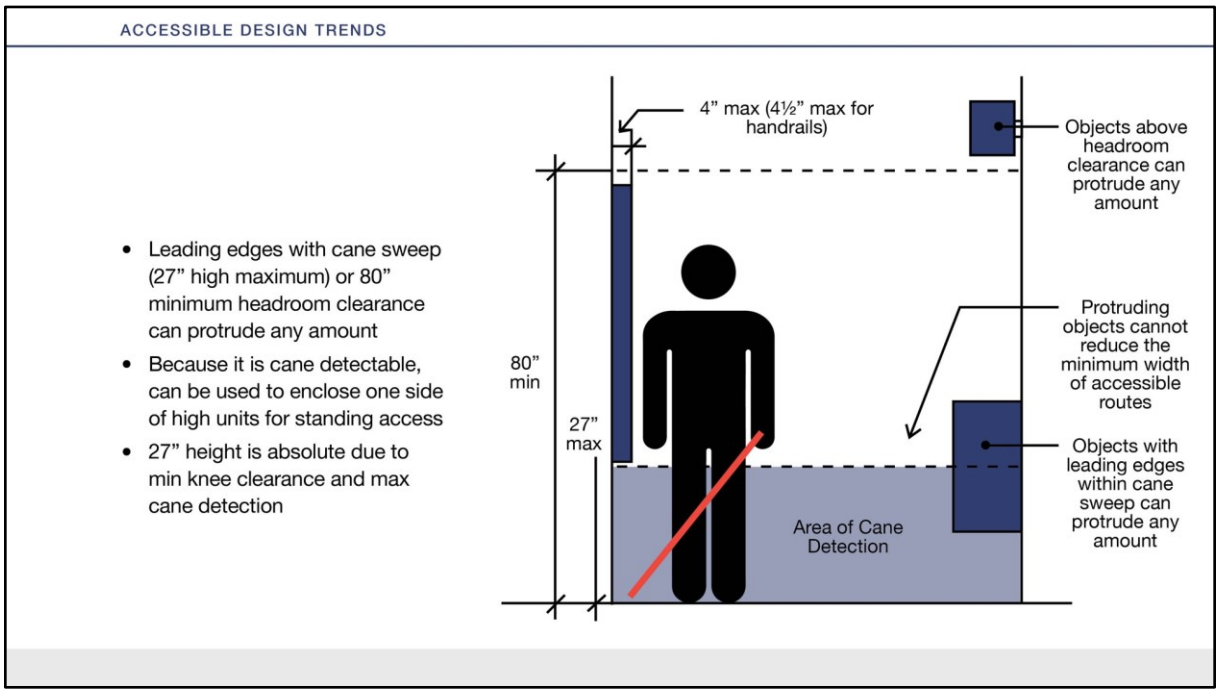
Source: ADA



Those with leading edges that are within cane sweep (27” high maximum) or that provide minimum headroom clearance (80” minimum) do not pose hazards and can protrude any amount.

Baby Changing Tables, located along Accessible Route, can often be installed, that when open, the Bottom of Open Changing Table is 27” AFF.
If someone leaves the Changing Table open, the Sight Cane can still detect it.

A wheelchair accessible unit located 27” absolute above the ground or floor is cane detectable and can be used to enclose one side of high units for standing access. In this Remember, the 27” height is the minimum required for knee clearance below a counter and the maximum specified for cane detection.

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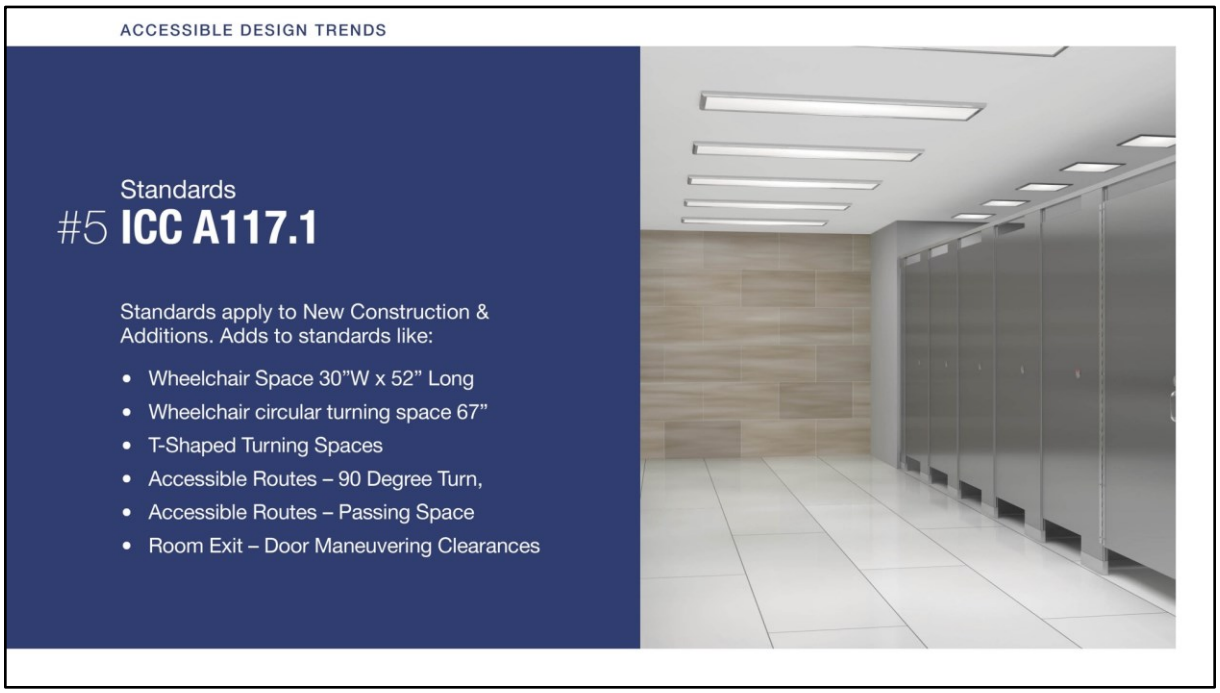
Source: ADA



ICC A117.1

Now let's turn to the ICC A117.1–2017 Standards. This revision document was adopted when it was first printed in May of 2018 and contains about 200 pages of information.
These standards apply to New Construction & Additions. Revisions affect the entire building. Consider focusing your review in the section titled "**Building Blocks"** for the new wheelchair space clearance updates for accessible restroom and locker

room design.

This includes additions to the standards like:

- Wheelchair Space 30”W x 52” Long
- Wheelchair circular turning space 67”
- T-Shaped Turning Spaces
- Accessible Routes – 90 Degree Turn,
- Accessible Routes – Turn Around Obstruction
- Accessible Routes – Passing Space
- Room Exit – Door Maneuvering Clearances
- Room Exit – Vestibule Clearances Between 2 Doors
- Accessible Toilet Partition to Accommodate the new 52” long wheelchair clearance.
- A new Accessible End-of-Row Stall Alternative Layout

As Always, Verify accessible codes both locally and regionally.

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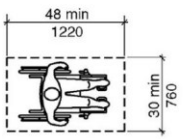
Source: ICC A117.1

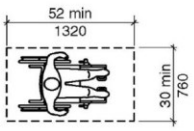
New Clearance Dimensions New Buildings

Wheelchair space

Existing – 48”

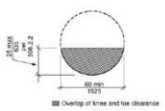


New – 52”

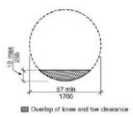


Turning space

Existing – 60”



New – 67”



Copyright 2017 International Code Council

The major change added 4” to the floor clearance, to create a 52” length. The Turning Space was revised from 60” Diameter to 67” Diameter.

The shaded area of the circles represent the ‘undercounter” or under-element floor clearance overlap.

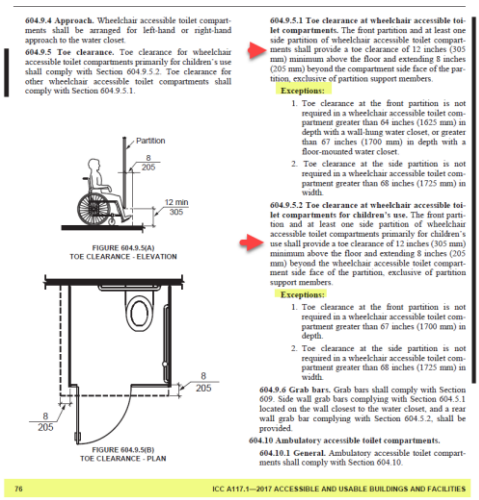
Electric Wheelchairs and Scooters, which are longer assistive devices, required this change.

IBC adopted the ICC A117.1-2017 Standard this standard in January 2021.

ICC A117.1 – 2017 Standards

New Clearance Dimensions New Buildings

604.9.5.1 Toe clearance at wheelchair accessible toilet compartments. The front partition and at least one side partition of wheelchair accessible toilet compartment shall provide a toe clearance of **12 inches minimum above the floor** and extending **8 inches** beyond the compartment side face of the partition exclusive of partition support.



604.9.4 Approach. Wheelchair accessible toilet compartments shall be arranged for left-hand or right-hand approach to the water closet.

604.9.5 Toe clearance. Toe clearance for wheelchair accessible toilet compartments primarily for children's use shall comply with Section 604.9.5.2. Toe clearance for other wheelchair accessible toilet compartments shall comply with Section 604.9.5.1.

Partition
8
205
12 min
305

FIGURE 604.9.5(A)
TOE CLEARANCE - ELEVATION

8
205
8
205

FIGURE 604.9.5(B)
TOE CLEARANCE - PLAN

604.9.5.1 Toe clearance at wheelchair accessible toilet compartments. The front partition and at least one side partition of wheelchair accessible toilet compartments shall provide a toe clearance of 12 inches (305 mm) minimum above the floor and extending 8 inches (205 mm) beyond the compartment side face of the partition, exclusive of partition support members.

Exceptions:

1. Toe clearance at the front partition is not required in a wheelchair accessible toilet compartment greater than 64 inches (1625 mm) in depth with a wall-hung water closet, or greater than 67 inches (1700 mm) in depth with a floor-mounted water closet.
2. Toe clearance at the side partition is not required in a wheelchair accessible toilet compartment greater than 68 inches (1725 mm) in width.

604.9.5.2 Toe clearance at wheelchair accessible toilet compartments for children's use. The front partition and at least one side partition of wheelchair accessible toilet compartments primarily for children's use shall provide a toe clearance of 12 inches (305 mm) minimum above the floor and extending 8 inches (205 mm) beyond the wheelchair accessible toilet compartment side face of the partition, exclusive of partition support members.

Exceptions:

1. Toe clearance at the front partition is not required in a wheelchair accessible toilet compartment greater than 67 inches (1700 mm) in depth.
2. Toe clearance at the side partition is not required in a wheelchair accessible toilet compartment greater than 68 inches (1725 mm) in width.

604.9.6 Grab bars. Grab bars shall comply with Section 609. Side wall grab bars complying with Section 604.5.1 located on the wall closest to the water closet, and a rear wall grab bar complying with Section 604.5.2, shall be provided.

604.10 Ambulatory accessible toilet compartments.

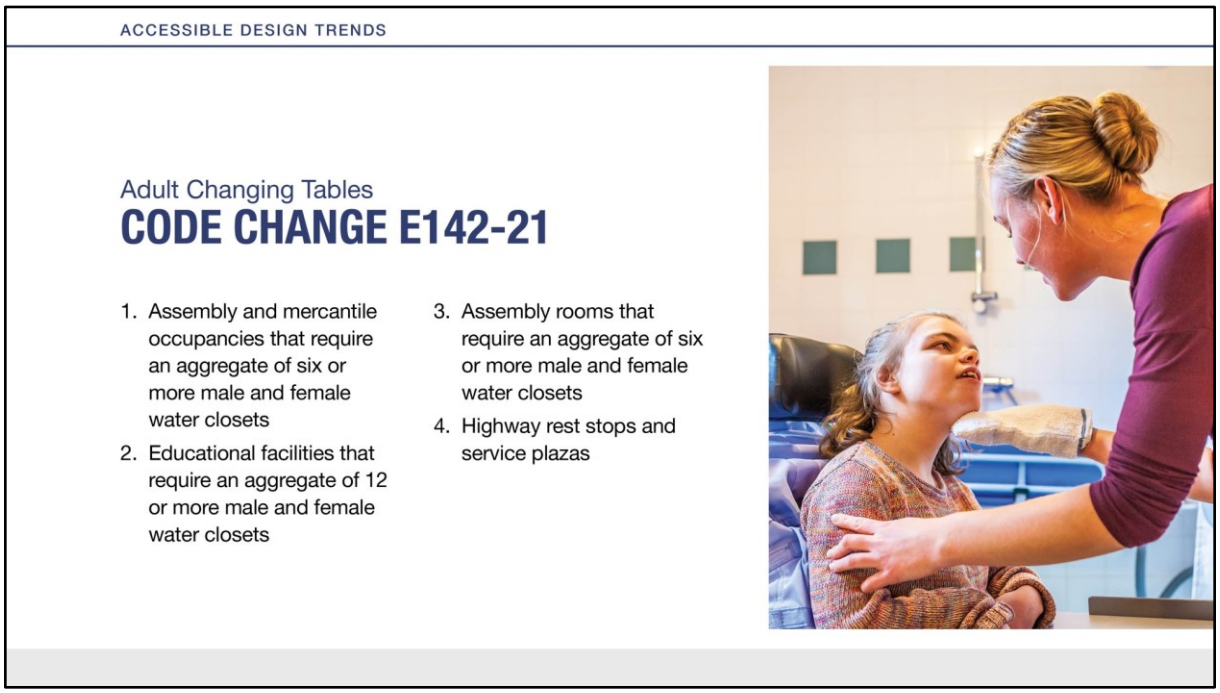
604.10.1 General. Ambulatory accessible toilet compartments shall comply with Section 604.10.

76 ICC A117.1—2017 ACCESSIBLE AND USABLE BUILDINGS AND FACILITIES

IBC adopted the ICC A117.1-2017 Standard this standard in January 2021.

12” above finished floor at ADA Stall is required for **BOTH** adults and children.
There are Exceptions to this standard, when a wider and deeper stall is used.

Verify accessible codes both locally and regionally.



Code Change E142-21

Adult / Special Needs / Seniors Changing Tables

In addition to the changes made to ANSI 117.1 in 2017, there are changes being made for the 2024 International Building CODE (IBC). Code change E142-21 was approved as modified to require adult changing stations in the following locations:

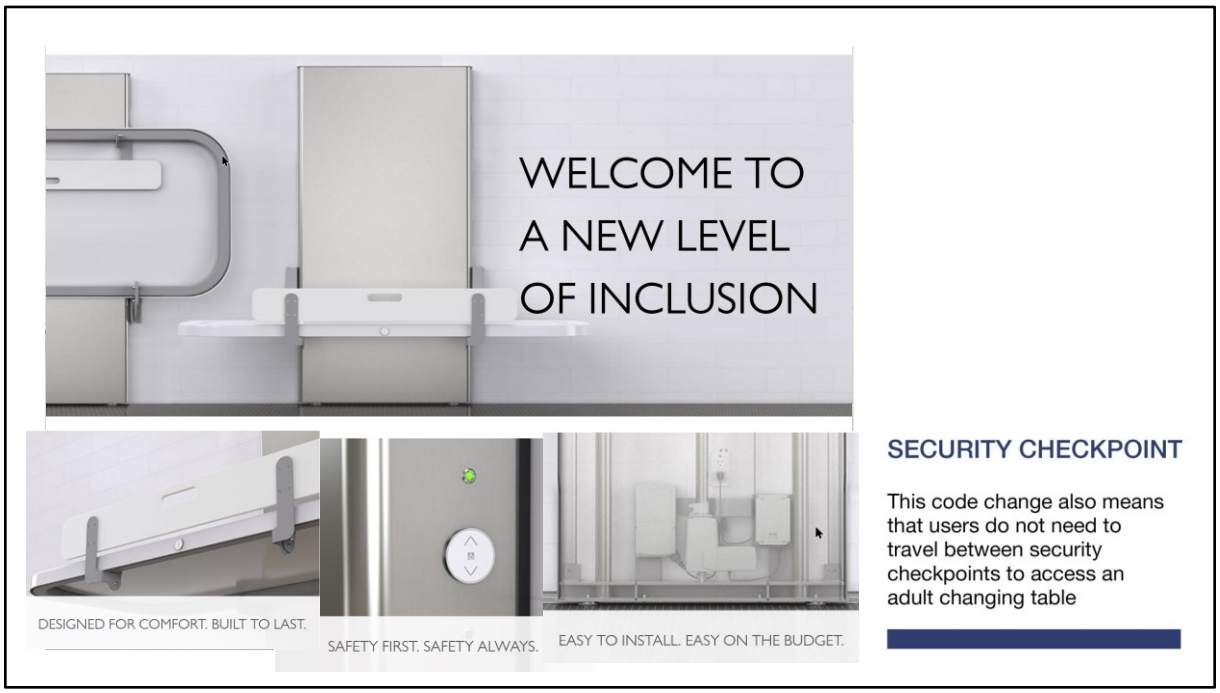
1. Assembly and mercantile occupancies that require an aggregate of six or more male and female water closets (e.g., multiplex movie theaters, sports stadiums, airports and malls).
2. Group B provides educational facilities that require an aggregate of 12 or more male and female water closets (e.g., college assembly halls and classroom buildings).
3. Group E occupancies at assembly rooms that require an aggregate

of six or more male and female water closets (e.g., high school basketball gymnasiums where the number of occupants in the seating would require six or more water closets — not the school itself).

4. Highway rest stops and service plazas (e.g., the rest stops provided directly on the major highway — not the rest stops at exits).

The first item in the list might sound familiar, as this is where a family/assisted-use toilet room is also required.
The intent is to provide adult changing stations in the same room as family/assisted-use toilet rooms, but not to require an additional toilet room.

Next Slide>
Source: ICC Safe



Security Checkpoint

Adjusting the required locations also means that people will no longer need to go back and forth between security checkpoints. In the past this was mainly for airports, but it could apply to other facilities that had certain areas with limited admittance, like a suites floor in a sporting venue.

For those large facilities, the travel distance allowances to the adult changing facility were two stories and 2,000 feet; the requirement also calls for an adult changing facilities in every other family/assisted-use toilet room. The International Plumbing Code allows for 500 feet of travel to separate-sex toilet rooms, and then the IBC allows for another 500 feet and one story to get to the family/assisted-use toilet rooms from the separate sex toilet rooms.

Next Slide>

Adult Changing Tables

Along with the where the adult changing tables will be required, ANSI also proposed more details on the required components and standards.

Looking at a diagram of the changing table, you can see that the changing surfaces should be at least 70 inches in length and 30 inches in width. The table should be between 17 and 38 inches from the floor. There is a 36 inch clearance required along the side and end of the table, measured from the outermost extent of the table.

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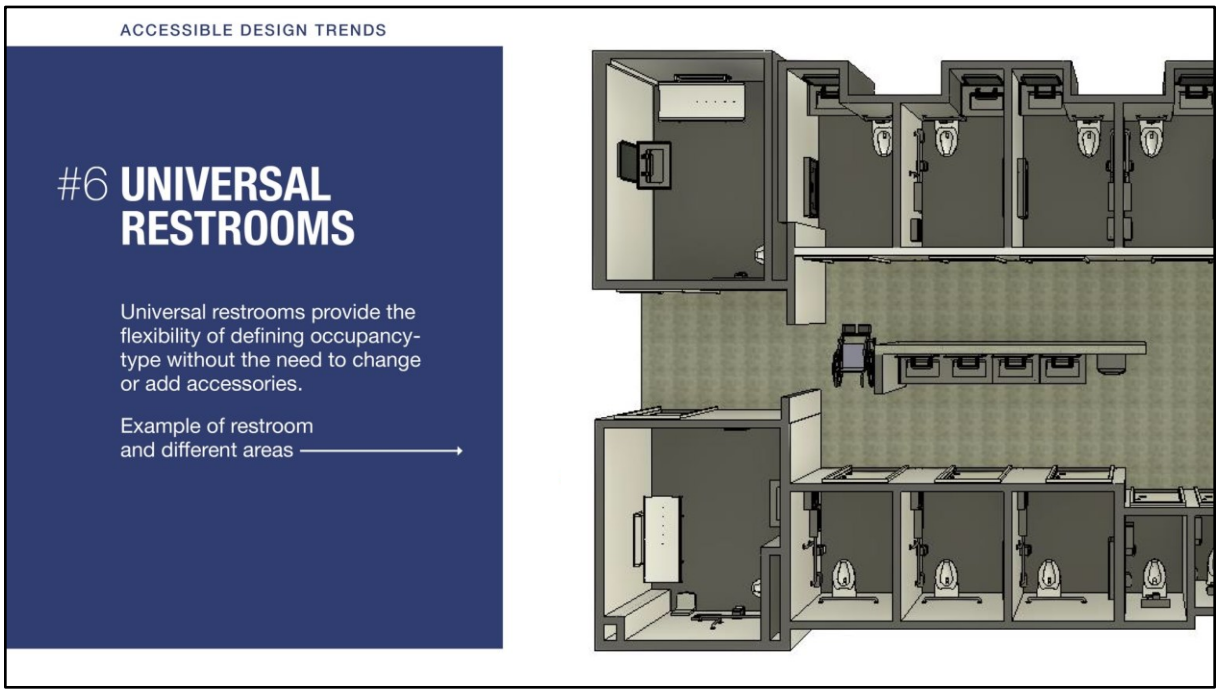

Universal Restrooms

Universal Toilet Rooms or **All Gender Restrooms** continue to grow with changes in the 2024 International Plumbing Code.
These restrooms provide designated, private toilet rooms for both Standard and ADA accessible occupancy.

Airports, Retail, Large Sports Facilities, Manufacturing, Industrial,

1. Centralized Handwashing ‘ Island ‘ for all visitors.
2. Universal restrooms provide the same accessories to all users.
3. Includes Individual ADA and Non-ADA Toilet Rooms.
4. This accessible toilet room layouts sometimes include recessed sinks in the back of the room.
5. Family Restrooms include Universal Changing Stations, Baby Changing Station, Handwashing and Water Closets.

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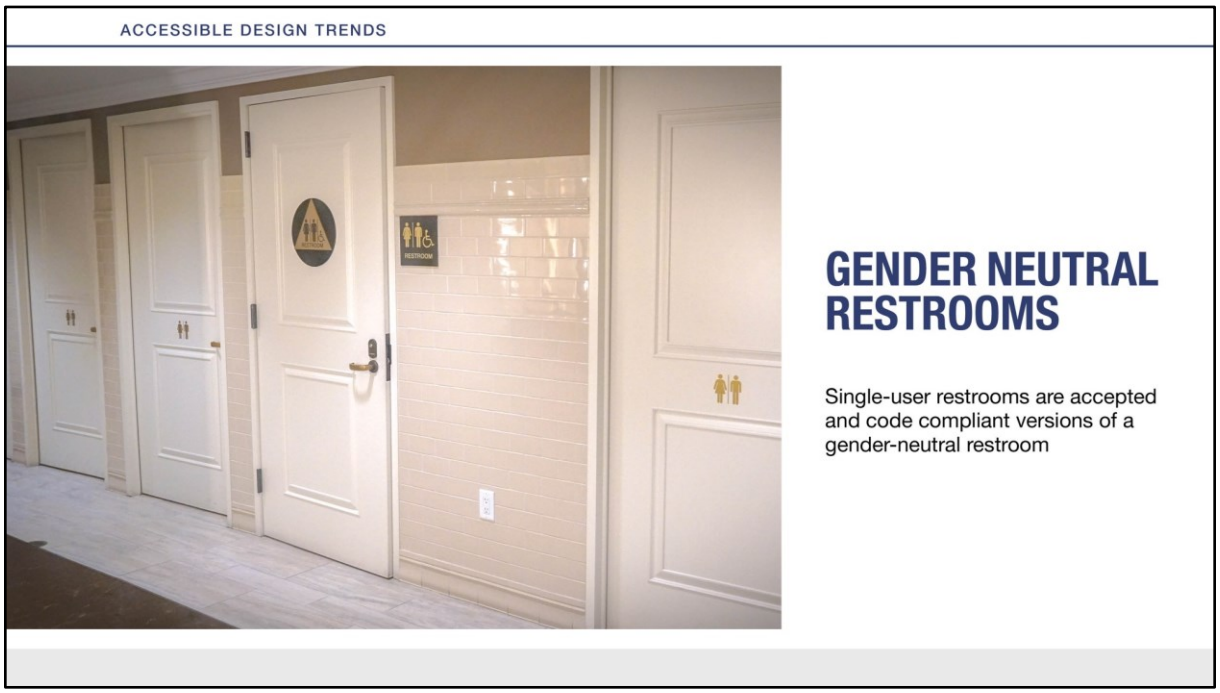


Gender Neutral Restrooms

These restrooms are also universal in that they cater to people regardless of their gender. This is known as an all-gender or gender-neutral bathroom.

As of the most recent edition of the International Plumbing Code (IPC) a single-user restroom is the generally accepted and code compliant version of a gender-neutral restroom. This solution already exists in many buildings and can be simply renamed with more gender inclusive verbiage.

There's also the multi-stall route like we saw in the last slide which emphasizes more stall privacy and safety while providing more stalls for whoever might need it.

Next Slide>

Source: Stalled

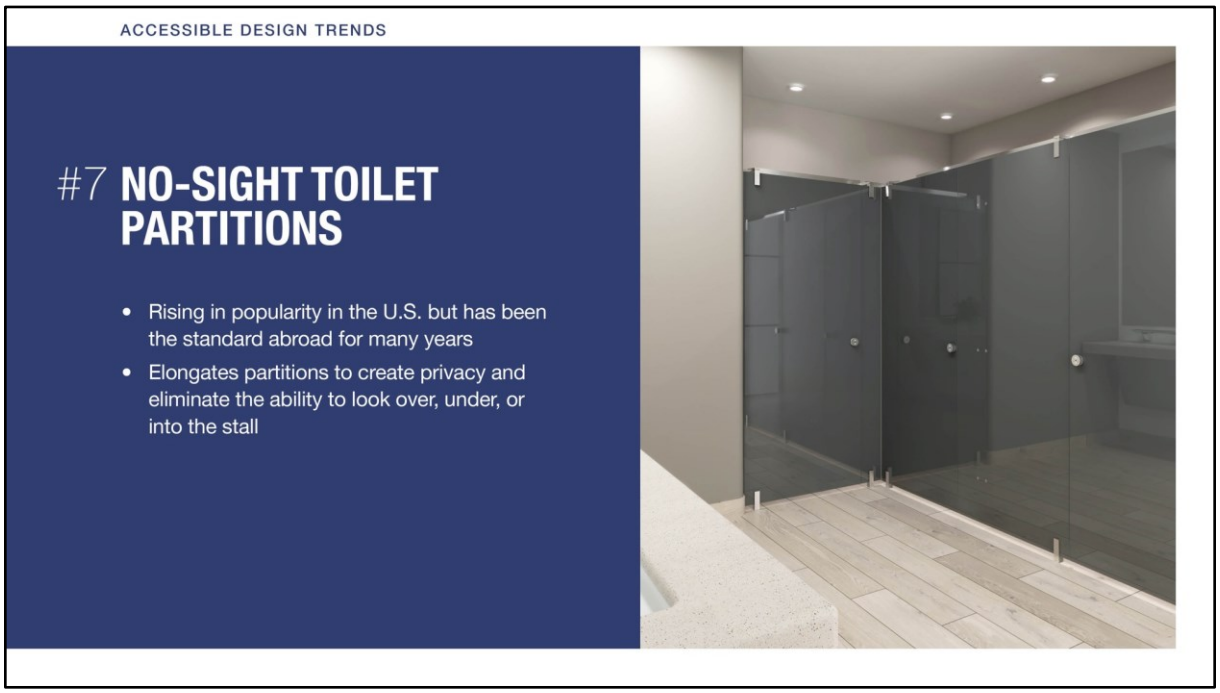
International Versions

Areas of the world like Scandinavia and Canada also prioritize a more inclusive bathroom experience for locals and visitors. In Scandinavia, in countries like Sweden and Denmark, single occupancy restrooms are common for public restrooms so that the occupants have full privacy.

The U.S. and Canada now also follow IAPMO/ANSI/CAN Z124.10 which is a standard that emphasizes a level of privacy and security for users of bathrooms and urinals, providing a greater comfort for people of all gender backgrounds. By province, there are also more specific guidelines for universal washroom facility design.

One example is Alberta. You'll see examples of the plan view depending on the intention behind the bathroom.

Source: Bloomberg, IAPMO, Alberta



No-Sight Toilet Partitions

This higher threshold of privacy in public restrooms is leading facility owners to select variations of **no-sight Toilet Partitions** to create a stall. Although this is a trend in the U.S. currently, it has been the standard for many countries for at least a decade. Countries in Europe have normalized these levels of privacy so much that travelers from other countries are baffled once they encounter U.S. public restrooms. It's even on a YouGov list of things Americans should embrace from international perspectives.

A no-sight solution can provide **blocked visibility** at the side edge of the door. The partition side panels that separate the stalls will use new elongated dimensions that can go from floor to ceiling. Designers can also add length to the top and bottom of a door panel to create privacy. Either way, the ability to look into the stall or over/under the door is eliminated.

Next Slide>
Source: YouGov

ADA BATHROOM PARTITION

Front toe clearances are not required when:

- The stall is 65”+ with floor mounted toilet
- The stall is 62”+ with wall mounted toilet.

Side toe clearance not required when the stall is 66” from side to side.

EXCEPTIONS

Despite this increased privacy, there are some accessibility concerns. The ADA stall may need to become wider and/or deeper to accommodate the complete turning of the wheelchair within the stall, as toe clearances are no longer applicable under the panels.

Front toe clearances are not required for an adult wheelchair stall when:

- The stall is 65” or more from back to front with a floor mounted toilet.
- The stall is 62” or more from back to front with a wall mounted toilet.

Similarly, side toe clearance is not required when the stall is 66” from side to side.

These dimensions are larger in comparison to the smallest adult use ADA bathroom partition layout which is 60” wide by 56” deep and the typical layout which is 60” wide by 60” deep.

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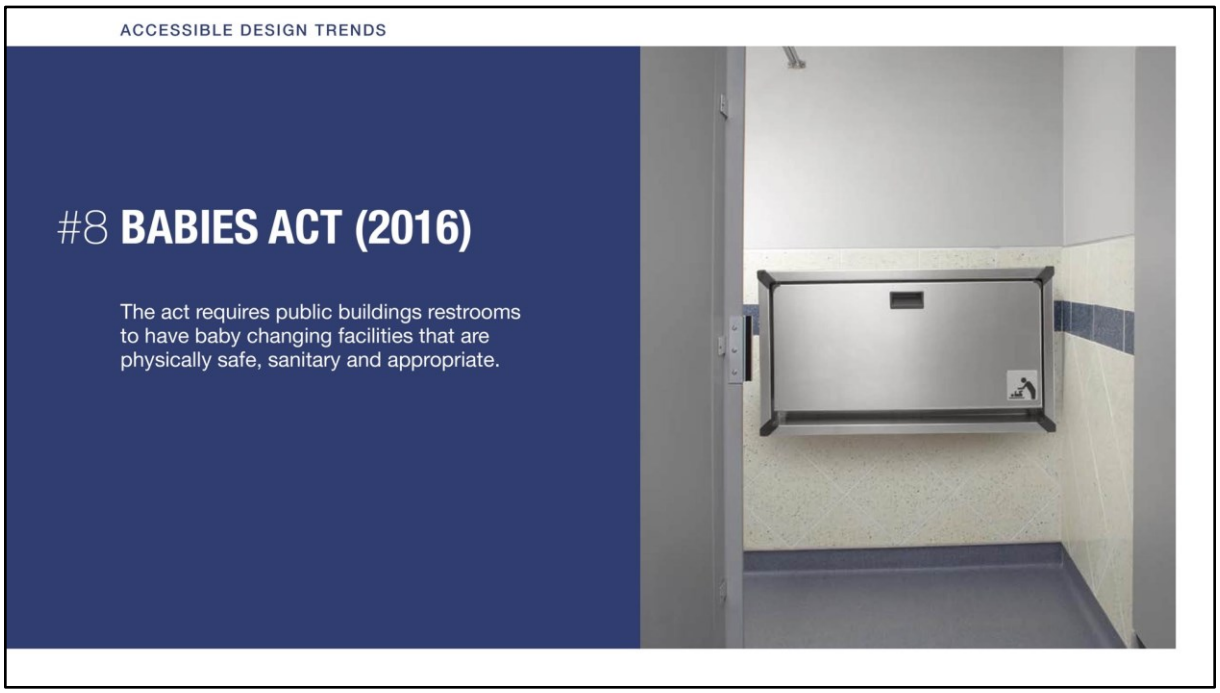
Source: ADA



Babies Act (2016)

Similar to what we discussed earlier with the expanding adult changing room standard, we have the Bathrooms Accessible in Every Situation (BABIES) Act of 2016. This act makes it a requirement for restrooms in public buildings to be equipped with baby changing facilities that are physically safe, sanitary and appropriate.

To clarify, here are some vocabulary terms to go over:

1. Public building.--The term `public building' means a public building as defined in section 3301 and controlled by the Public Building Service of the General Services Administration.
2. Baby changing facility.--The term `baby changing facility' means a table or other device suitable for changing the diaper of a child aged 3 or under.

The Bill has several exceptions listed; where this requirement for an existing public building may not apply. Consider how other public building requirements have many times become private building standards.

Next Slide>

Source: Congress

States, Counties, Cities

The rule has also been extended to include men and women's bathrooms in areas like California, New York, Miami-Dade, Champagne, IL, Michigan, and Nevada.

Examples: Requiring Baby Changing Tables in Both Men/Women Room

- Illinois, Wisconsin, Michigan, New York
- Arizona, California, Oklahoma, Nevada, Utah
- New Mexico [new construction]
- Miami-Dade, District of Columbia, NYC, Baltimore
- Champagne-IL, Dallas-TX, San Antonio-TX, Spokane WA

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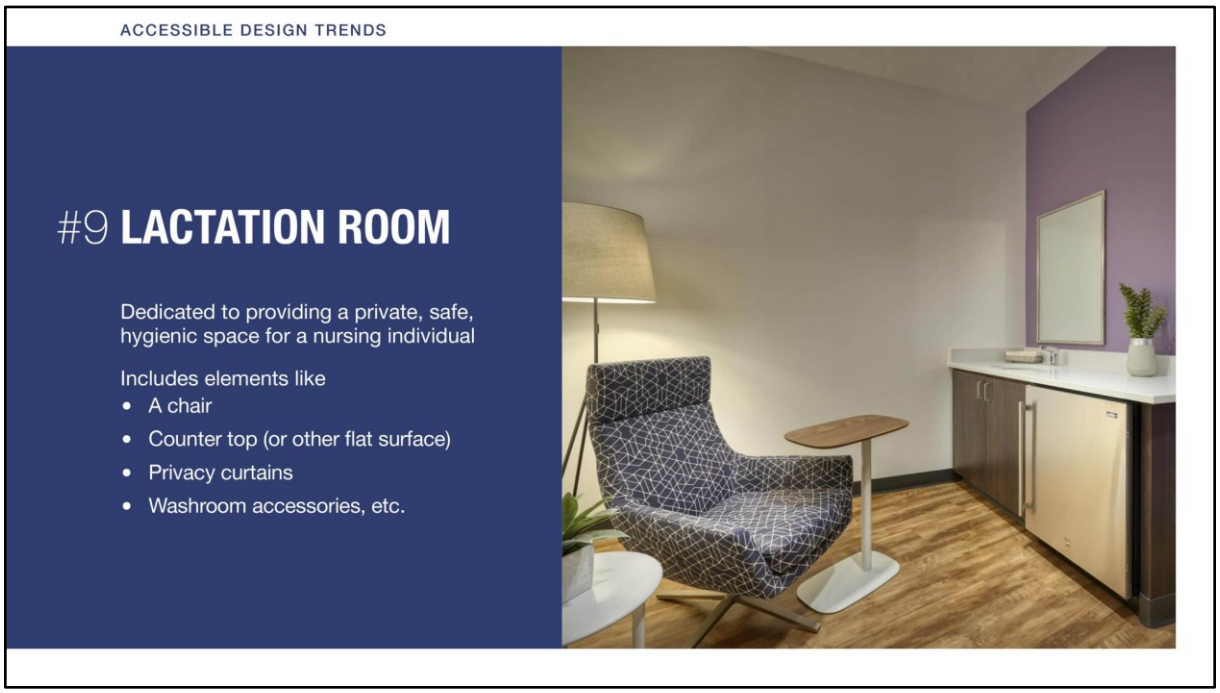

Lactation Rooms

Another related addition to public and private facilities is a lactation room. This is a room dedicated to providing a private, safe, hygienic space for a nursing individual to pump milk. As the demand for these spaces grows, design firms are responding by adding these to new and renovated construction projects.

Important that the Pregnant Workers Fairness Act ("**PWFA**") and the **Providing Urgent Maternal Protections for Nursing Mothers Act** (**"PUMP Act")** were signed into federal law and took effect in 2023.

This space should include elements like

- A chair
- A flat surface for the breast pump like a countertop
- A lock that signifies whether the room is occupied or not
- Washroom accessories
- Diaper changing facilities
- Sight-screen partitions

- A small fridge
- Privacy Curtains, among other equipment

Overall the equipment and tools in the room should make the life of someone breastfeeding easier while prioritizing relaxation and reliability.

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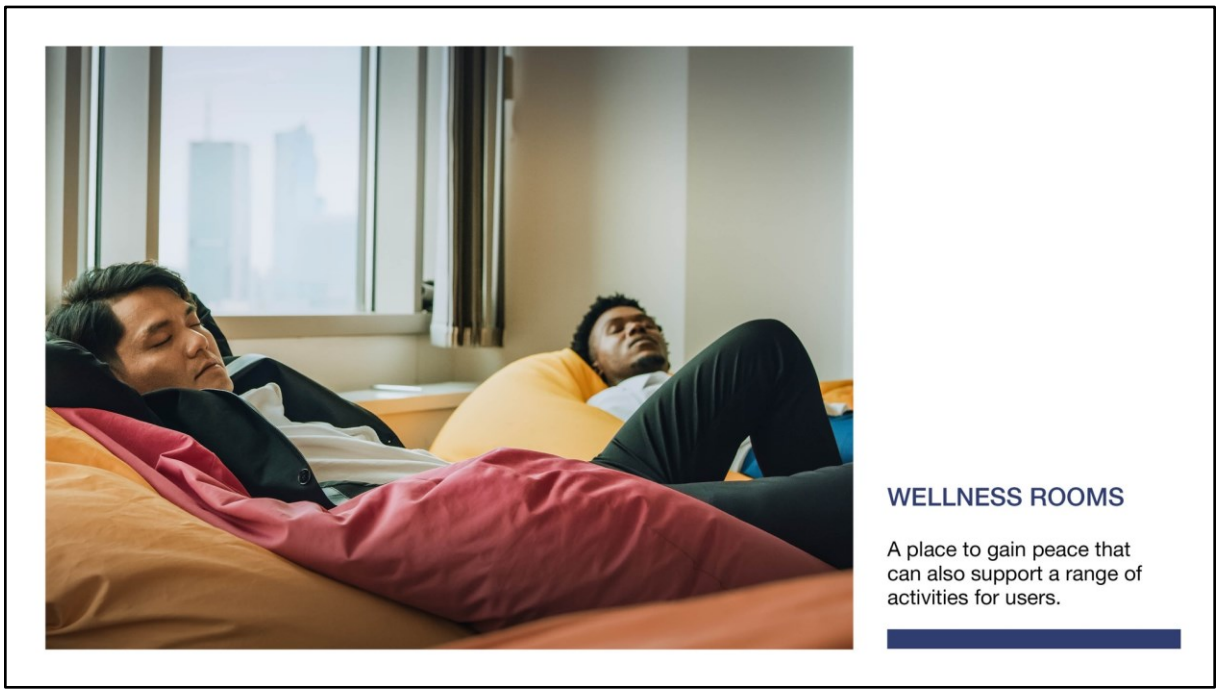
Source: VeryWellFamily, JonesDay



Wellness Rooms – SHARED SPACE – PRAYER ROOMS – MEDITATION ROOMS

Wellness rooms are similar in that they act as a dedicated, reliable space where people can gain peace but are more general compared to a lactation room. These rooms, also referred to as rejuvenation spaces, allow employees a space to take time and take care of their own personal health needs.

A wellness room should have furniture and other elements that promote relaxation. The room can not only support a range of activities, it can also have equipment more specific to a purpose like exercise or meditation. In some cases, a wellness room can also act as a lactation room.

Next Slide>

Source: Mamava, OpenSourceWorkPlace

Assisted Transfer

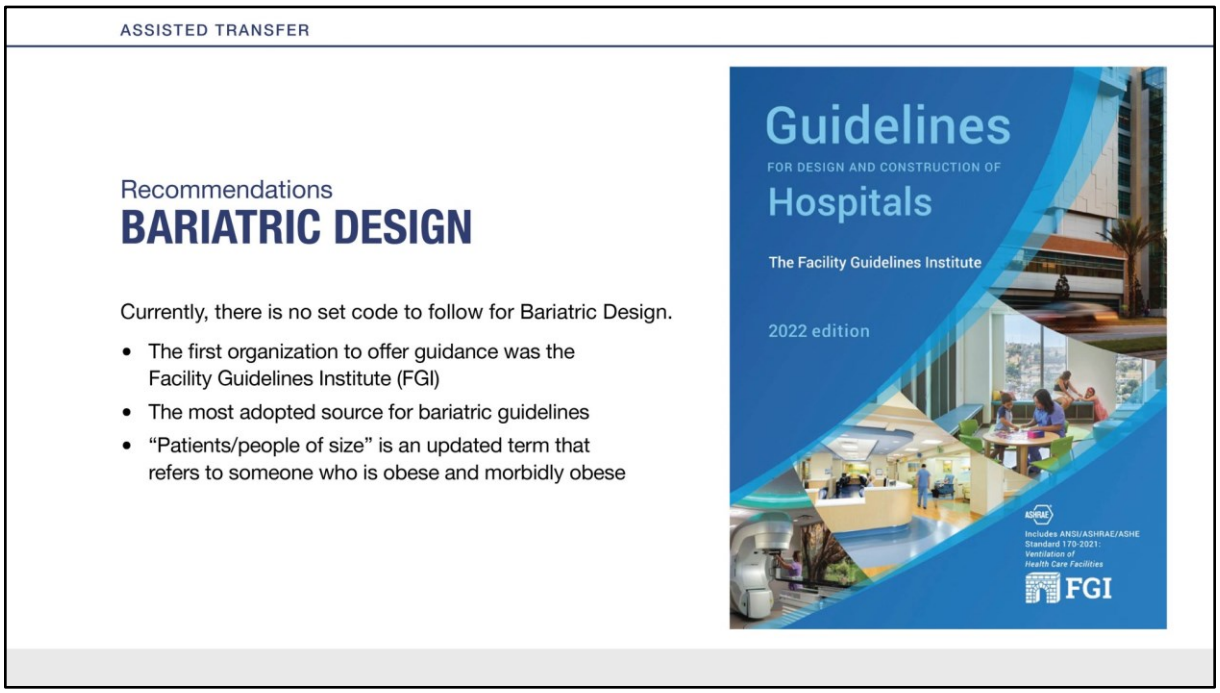
Assisted transfer, focuses on the additional space required around wheelchair floor clearance to accommodate the caregiver who is assisting in movement in various spaces. Let's take a closer look. This is especially helpful for transferring Bariatric or People of Size.

Next Slide>

Based on data collected between 2017 and 2020, 41.9% of adults in the U.S. have obesity. The World Obesity Federation predicts that by 2030, one in five women and one in seven men will have obesity. That's why a growing trend is to cater healthcare spaces to make people of size feel welcome and safe in any environment. Bariatrics is the branch of medicine that deals with the causes, treatment, and prevention of obesity.

As Ron Mace of the center for universal design said, "the design of products and environments to be usable by all people, to the greatest extent possible, without the need for adaptation or specialized design."

Next Slide>
Source: Forbes



Bariatric Design Recommendations

Currently, there is no set code to follow for Bariatric Design.

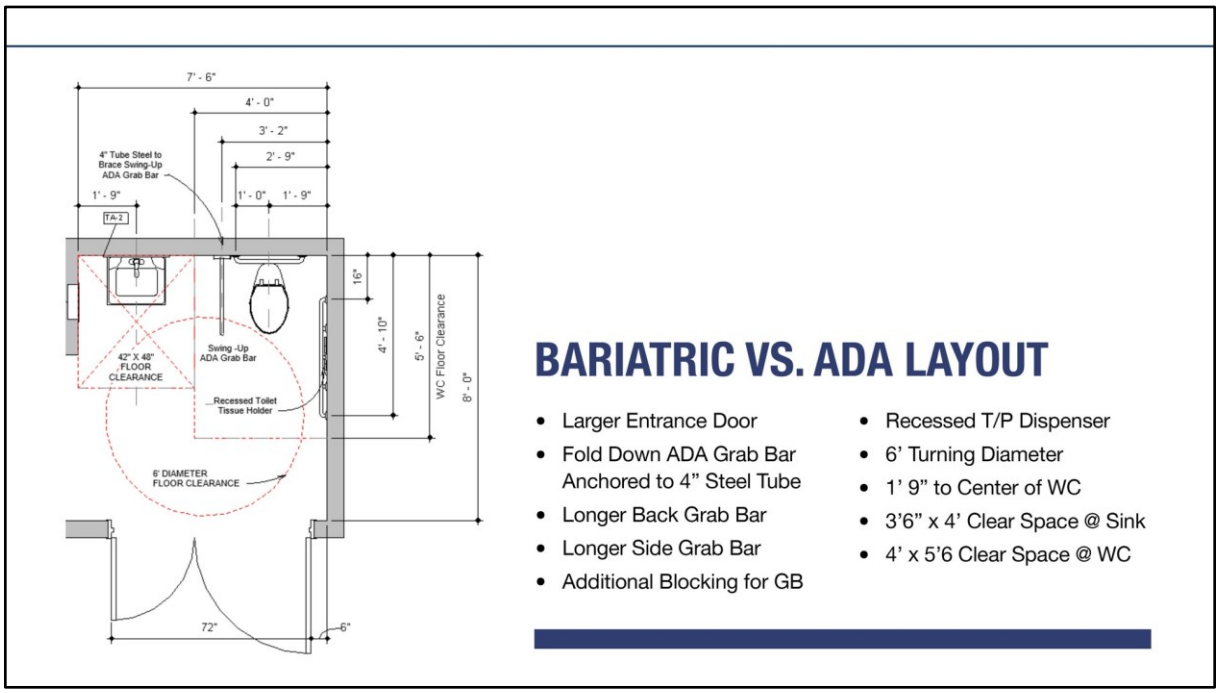
1. The Facility Guidelines Institute (FGI) was the first organization to offer guidance in their 2010 edition of "Guidelines for Design and Construction for Healthcare Facilities".
2. As of July 2017, FGI is the most adopted source for Bariatric Guidelines.
3. In 2018, FGI replaced the term "bariatric patients" with "patients/people of size", referring to someone who is Obese and Morbidly Obese. This means they have a BMI (Body Mass Index) of

30% or greater.

Current State Adoption/Compliance is found here:
https://fgiguidelines.org/guidelines/adoption-map
https://fgiguidelines.org/

Hover your cursor over a state in the map below. Learn how that state uses the Hospital, Outpatient, and Residential *Guidelines*—which edition, what facility types are covered, and more.

Next Slide>
Source: World Obesity, CDC



Bariatric vs. ADA Layout

Let's compare and contrast a Bariatric Layout to an ADA layout. A bariatric layout has increased clearance space, structural support and large components requirement compared to a standard ADA layout. This includes elements like:

- Larger Entrance Door
- Fold Down ADA Grab Bar Anchored to 4" Steel Tube
- Longer Back Grab Bar
- Longer Side Grab Bar
- Additional Blocking for Grab Bars
- Recessed T/P Dispenser
- 6' Turning Diameter
- 1' 9" to Center of WC
- 3'6" x 4' Clear Space @ Sink
- 4' x 5'6 Clear Space @ Water Closet for Front Approach

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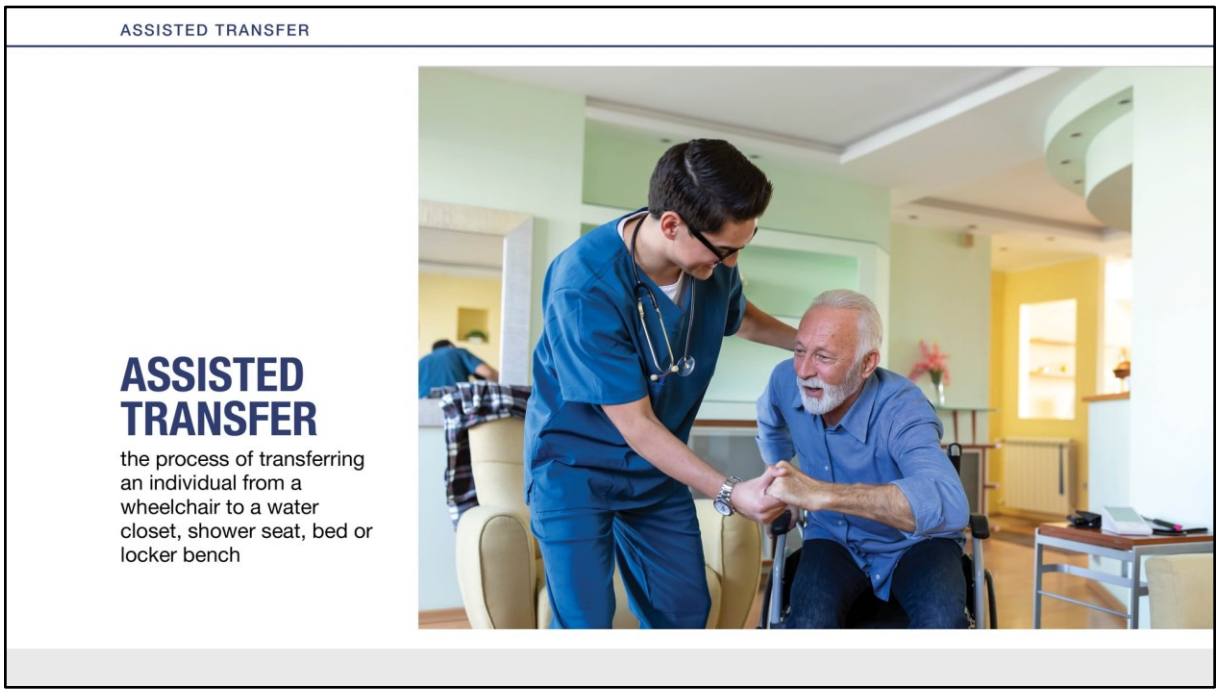

Assisted Transfer

The National ADA Accessible Standards and the ICC ANSI 117.1 Accessibility Standards define Accessible transfer as the process of transferring an individual from a wheelchair to a water closet, shower seat, bed or locker bench.

There are different methods of transfer, which is defined as the required accessible clearances at and around water closes, shower seats, beds, and locker benches to complete the transfer. Methods include side or front transfers.

Next Slide>
Source: ICC A117.1

Common Transfer Processes

In addition to the method, we must also consider the process. There are two common transfer processes. First, there's the independent transfer where the individual transfers themselves to a fixture, furniture, or accessory. The other common process is assisted transfer which includes one or more people assisting the individual to transfer to a fixture, furniture, or accessory.

The assisted transfer process is defined as an individual in a wheelchair or Hoyer lift needing one or more people to assist them with their transfer to a water closet, shower seat, bed or locker bench. The individual might also be using a cane, walker or crutches rather than a wheelchair. On the screen you can see two examples of what this process might look like.

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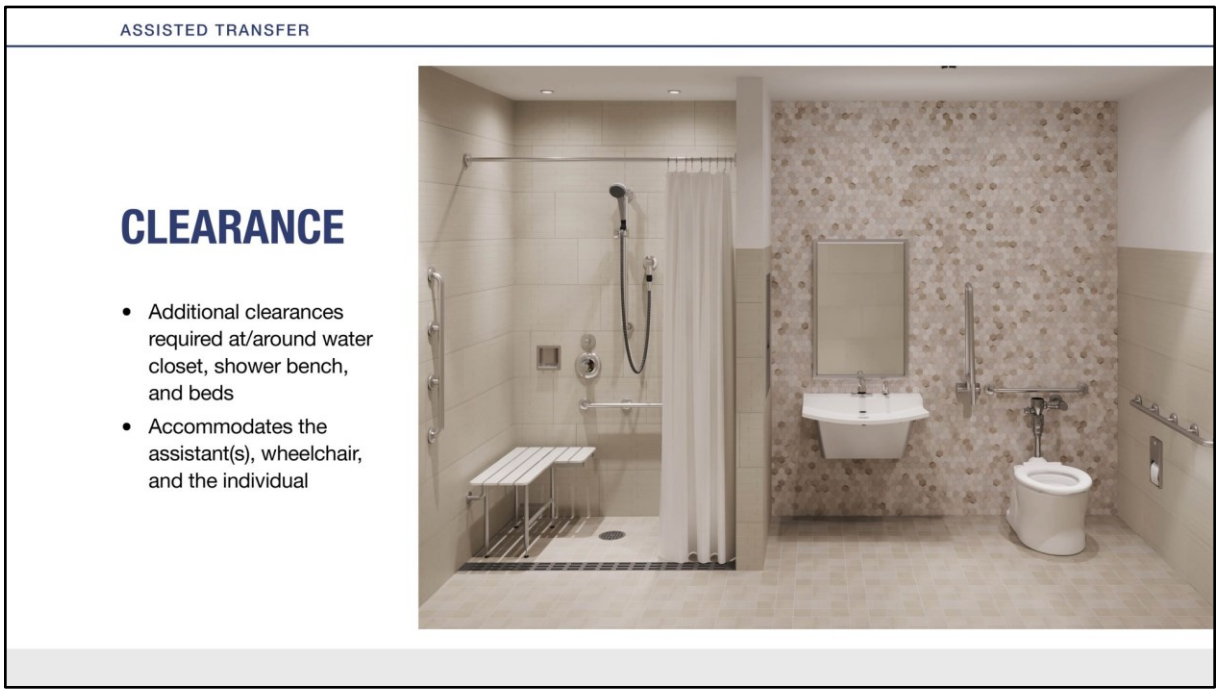

Assisted Transfer Clearance

During this transfer, the individual requires a CNA and/or Nurse and/or caregiver to assist with their transfer. Additional clearances are required at and around the water closet, shower bench, and beds to accommodate the assistant(s), wheelchair, and the individual. Unlike ADA, the ANSI Accessible Standards, provides clearance requirements for Assisted-Transfer which are referenced in the State Building Codes.

Having the clearance for an additional person to help in this project is major. After the years of progress we've made by providing accessible space for all types of disabilities, we are now able to comfortably account for these important individuals.

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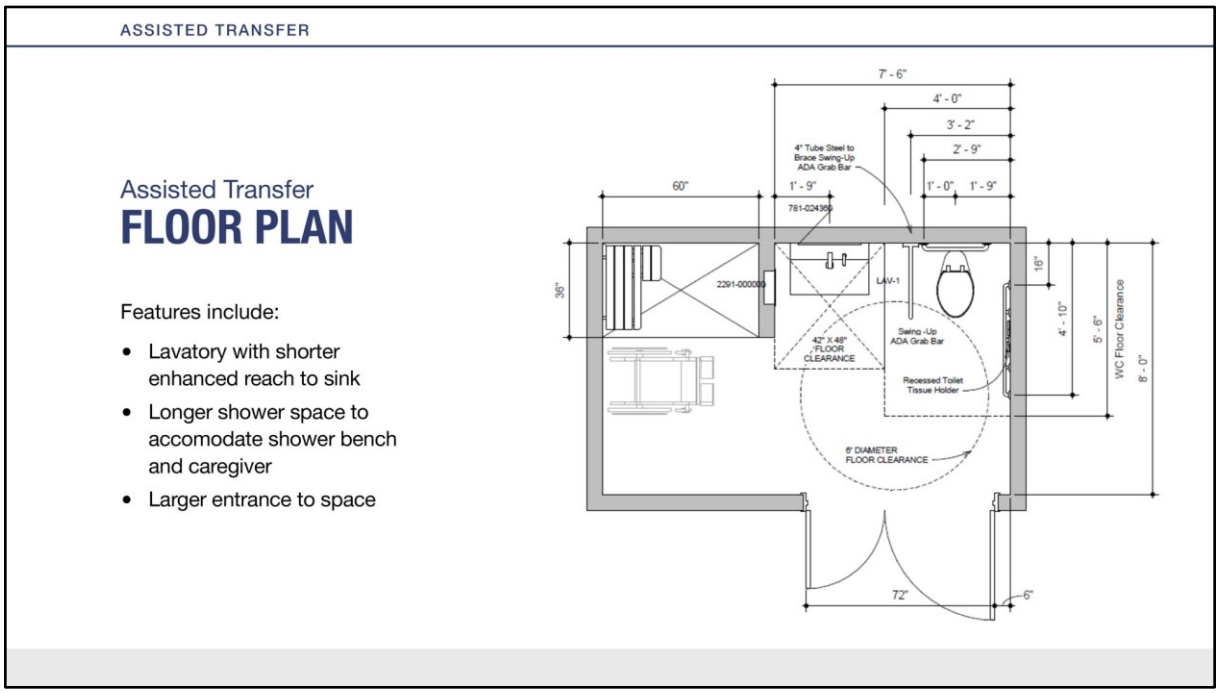

Assisted Transfer Floor Plan

To put all this information together, here is an assisted-transfer shower room and restroom floor plan.

The lavatory, which has a shorter enhanced reach (11” from face of sink to water), complements the assisted-transfer assistants. The shower space is longer to accommodate a shower bench with room for nursing or caregiver assistance.

Consider how the necessary space for these types of accommodations will play into your design. While there are general best practices, it’s important to get specific with the standards for certain audiences

Next Slide>

Why ADA? Case Studies

Now that we've gone through the history, trends, and best practices surrounding accessibility we can answer the question: Why do we need ADA? To bring the answer to life, let's look at some real world project examples.

Next Slide>

Bradford Beach – Milwaukee, Wisconsin

Bradford Beach, located in Milwaukee, Wisconsin has accessible features like a 100-foot ramp, free beach wheelchairs and portable maps. With the addition of these features, Bradford Beach is the most accessible beach in America.

This project was possible due a five-year accessibility plan created in collaboration with a non-profit called “Ability Center” and their Ramp Up Milwaukee project. The permanent concrete ramp goes the 100 feet and the rest of the journey to the water is completed with portable mats. The modifications made to this beach allow people in walkers, wheelchairs or anyone who might struggle to move on sand easily access the beach and water.

According to county data, more than 25% of households have at least one

family member with a disability. Giving people standards that help create equal access spaces is exactly why ADA is so important.

Next Slide>
Source: CBS58, Milwaukee Journal Sentinel

MacDonald High School

MacDonald High school in San Jose, CA wanted their institution's bathrooms to be upgraded to increase functionality and efficiency while maintaining the high-tech aesthetic of the space. By specifying an all-in-one hand washing station, users now have a more accessible and hygienic experience in the restroom. To go with this system, the architect team selected a basin made of non-porous and seamless natural quartz that helps eliminate water dropping onto the user, walls or floor.

Next Slide>

Starbucks Coffee Company

In 2017, Starbucks' Corporate Design was seeking new accessible, touchless handwashing specifications for their Stores.

The Centralized Handwashing Solution, passed 16-months of field testing, and met these design-driven specification requirements.

Design Solution Specifications:

- Accessible Design
- Sustainable Design
- Vandal Resistant Design
- Reduced Daily Maintenance & Cleaning [Labor Time & Costs]
- Faster Installation Time and Pre-Construction Planning
- Risk Mitigation: Water on Floor

Centralized Handwashing System became Basis-of-Design Product Spec in July 2022.

Starbucks Coffee Company

Centralized Handwashing Systems are now installed in Starbucks Standard Store, Reserve, Roastery locations.

Trend: Post-Covid, Centralized Handwashing Systems are often located outside the restroom.
It provides immediate accessible handwashing for the over 20% of Customers that need handwashing, but do not need to use the toilet room.

Starbucks Reserve and Roastery facilities, use 'Handwashing Islands' that are surrounded by ADA & Individual Toilet Rooms, which meet their All-Gender Inclusive Restroom Design Intent and Specifications

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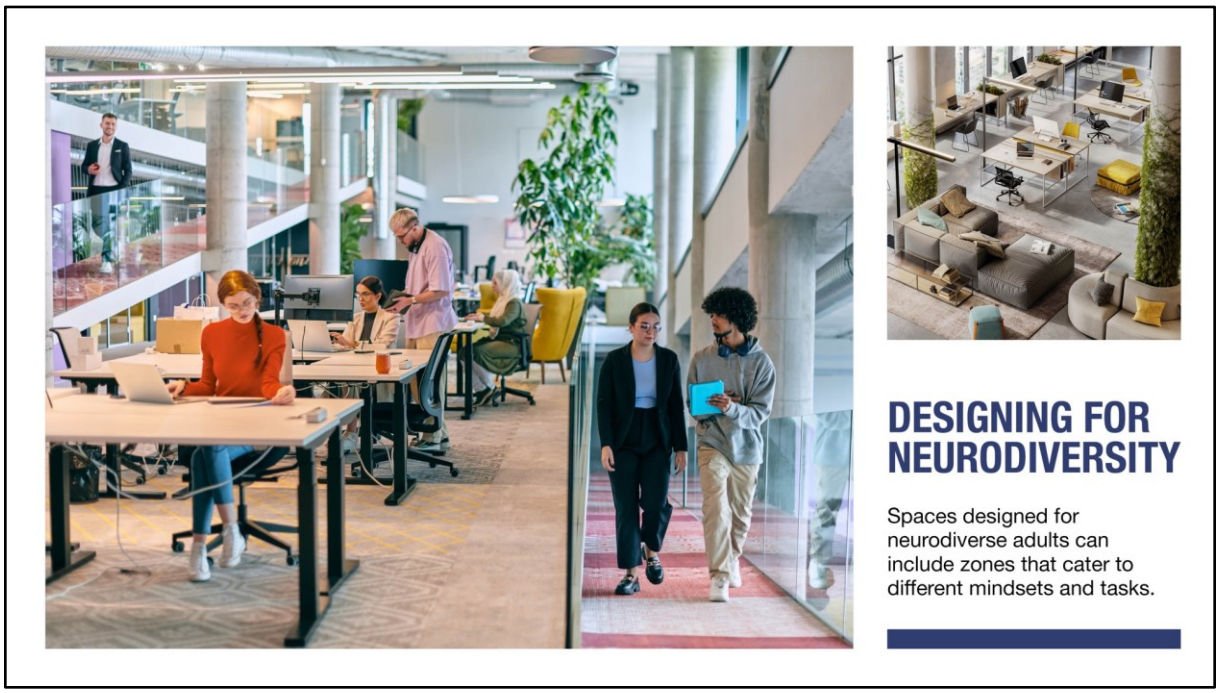

Neurodiversity Design

Spaces designed with neurodiversity in mind are often catered toward children with ADHD, Autism, and more but there is a growing movement to provide inclusive spaces for older people. What does this look like in a work environment? Zoning spaces make it so that different mindsets and tasks have specific locations. This includes sections for community, collaboration, communicative, or concentration based work. Some ways to divide these spaces are with the use of sensory elements like color, light, sound and temperature.

Designs like this not only benefit neurodiverse users, it's great for a post-COVID world where hybrid work formats must be accommodated.

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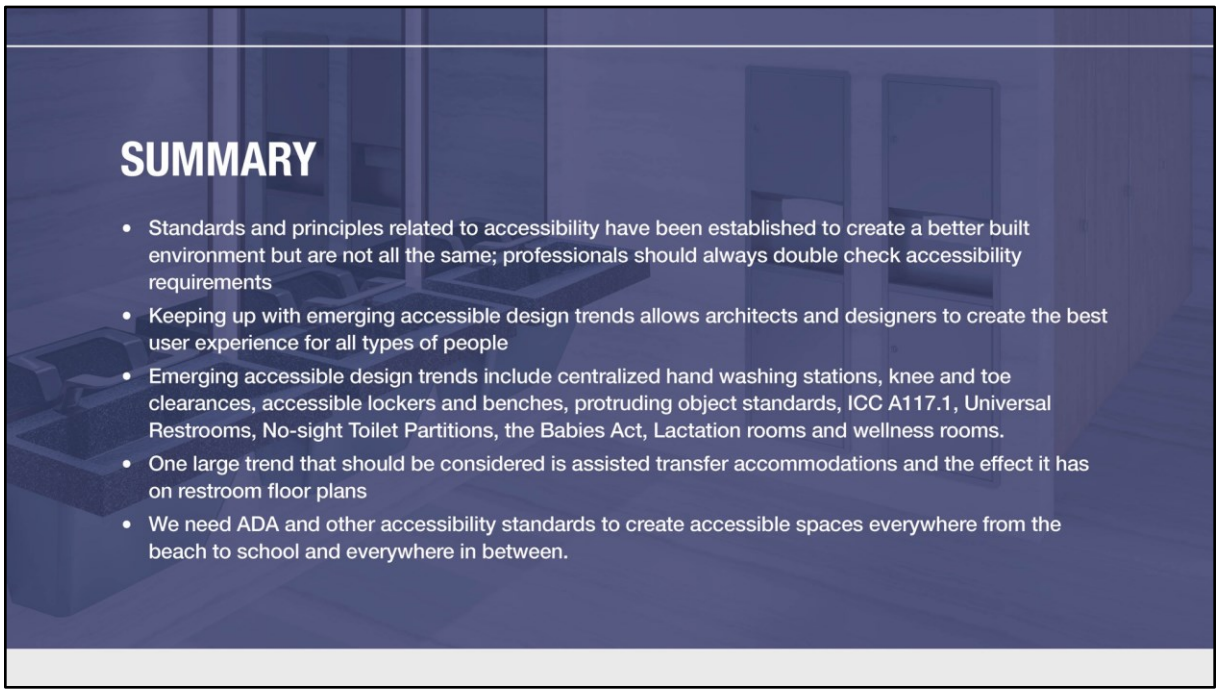
Source: Nookpod, LOM



Review

As we come to the end of our CEU course, let's review today's material.

- Standards and principles related to accessibility have been established to create a better built environment but are not all the same; professionals should always double check accessibility requirements
- Keeping up with emerging accessible design trends allows architects and designers to create the best user experience for all types of people
- Emerging accessible design trends include centralized hand washing stations, knee and toe clearances, accessible lockers and benches, protruding object standards, ICC A117.1, Universal Restrooms, No-sight Toilet Partitions, the Babies Act, Lactation rooms and wellness rooms.
- One large trend that should be considered is assisted transfer accommodations and the effect it has on restroom floor plans
- We need ADA and other accessibility standards to create accessible spaces everywhere from the beach to school and everywhere in

between.

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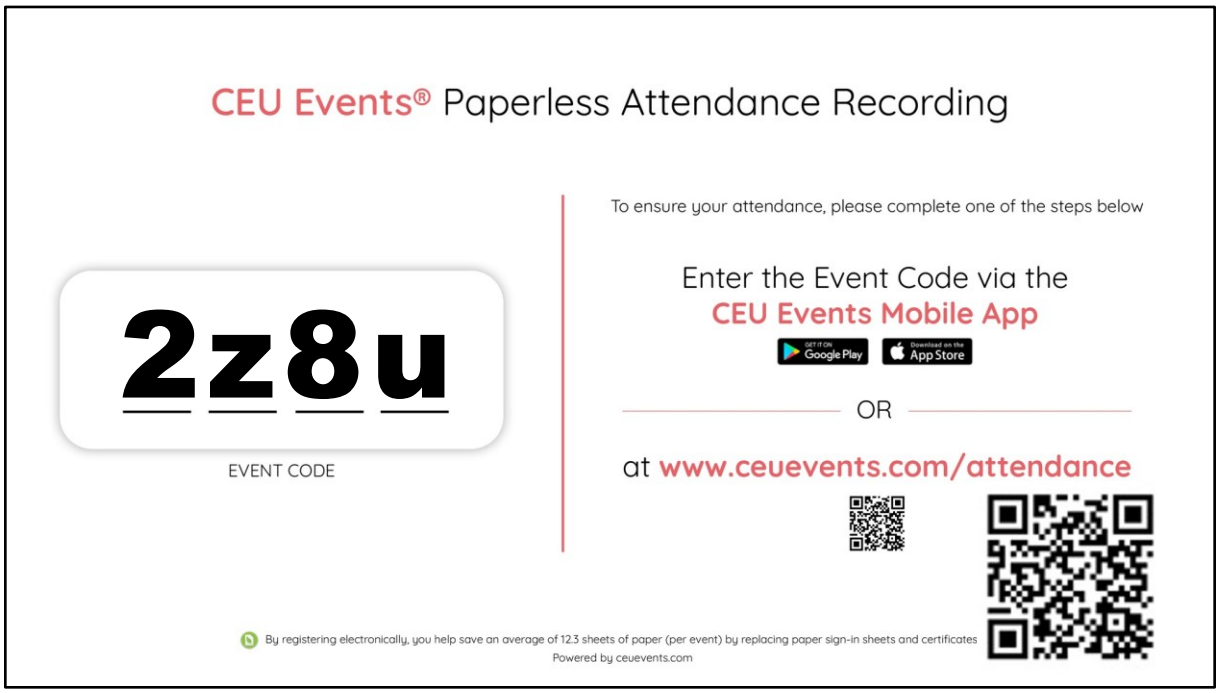

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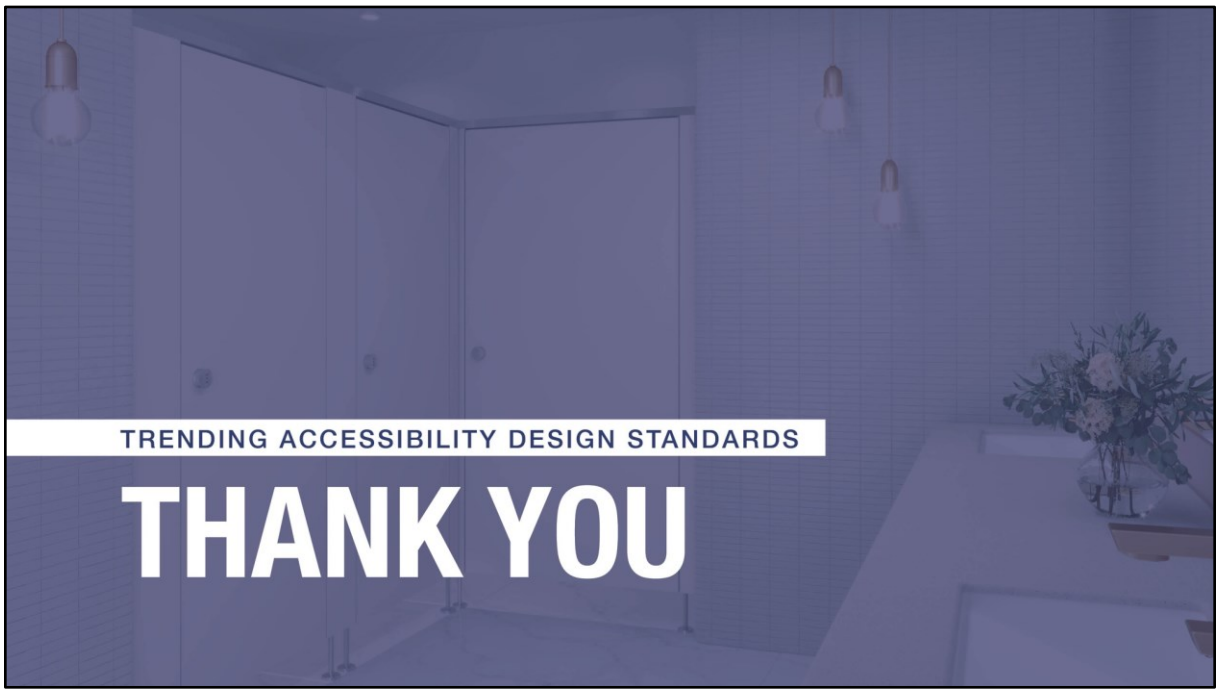
www.ceuevents.com/attendance



This is the end of the accredited portion of our CEU Course titled, ‘TBD’ by Bradley. I hope the material was interesting and educational for you. Please let us know if you have any questions and once again, I want to thank you for taking the time to participate in this CEU Course.

Next Slide>

Resources

Before we go, we want to go over some resources Bradley has for architects and interior designers who want to create a more accessible future with their next projects.

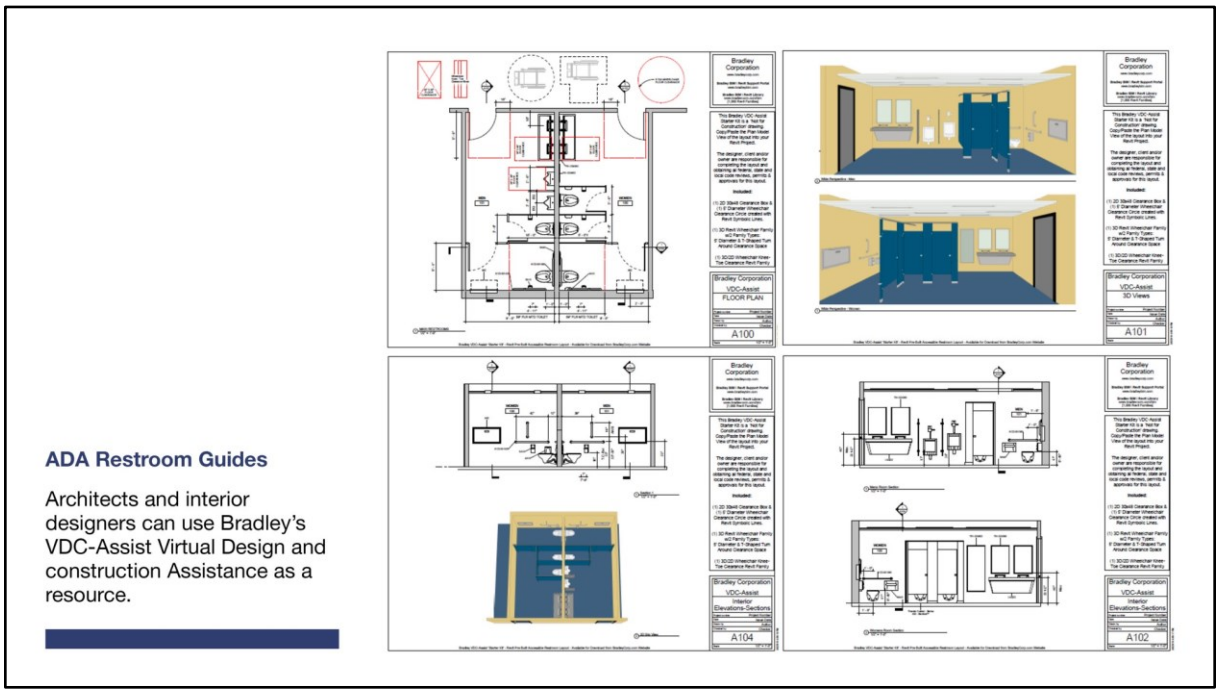
Next Slide>

Access Board Educational Resources

The Access Board has published a series of MP4 animation files that are in the public domain and may be downloaded and used without permission. We respectfully request that the animations be attributed to the U.S. Access Board wherever they are used. www.access-board.gov

View or Download Videos Here: **https://www.bradleycorp.com/access-board-videos**
Videos\Animations are 5-9 minutes long.

Next Slide>



ADA Restroom Guides

Take a look at Bradley's layout configurations for different bathrooms which include PDF previews and provide plans, sections, elevations, 3D views as well as plumbing and accessory schedules. All layouts are available in AutoCAD.

Access & Download Prebuilt Restroom & Locker Rooms [Revit, AutoCAD, PDF formats] Here:
https://www.bradleycorp.com/online-ada-design-guide

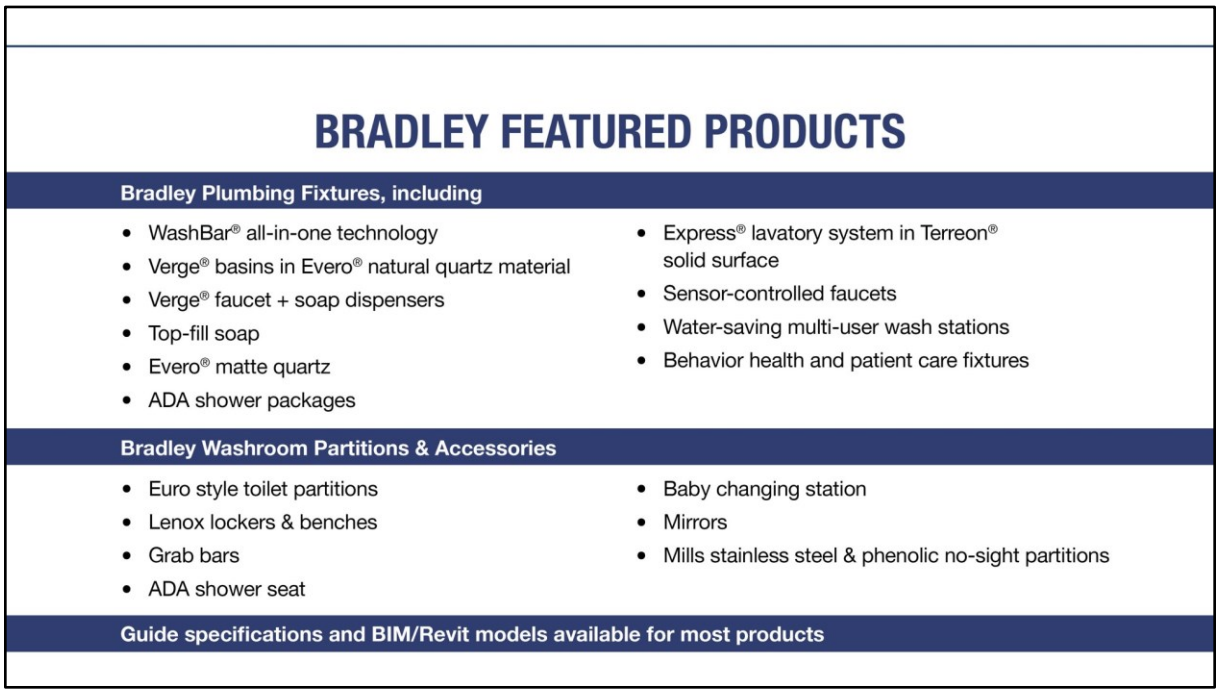
Bradley's VDC-Assist Virtual Design and construction Assistance is an available resource for architects and interior designers.

Next Slide>

Universal Design and ADA Guides

More resources from Bradley include their Universal Design Guidance and online ADA design guide.

Next Slide>



Lastly, here is a list of featured products from this course. Please reach out to me as a contact at any time if you have questions about any of our resources or products. Thanks again and we look forward to working with you on your next project.

Next Slide>