



Universal Design Standards

Updated August 2025

Table of Contents

3	Part I – Introduction Mission from AISD Desired Outcomes from Universal Design Standards How to Use This Document
6	Part II – Universal Design Definition and Intent ADA Compliant vs. Universal Design
11	Part III – The Seven Principles Equitable Use Flexibility in Use Simple & Intuitive Use Perceptible Information Tolerance for Error Low Physical Effort Size and Space for Approach and Use
15	Part IV – Universal Design Standards Multi-Sensory Experiences Access and Mobility Assembly & Gathering Spaces Outdoor Play & Learning Environments Furniture
38	Part V – Implementation Community Outreach Internal Learning Opportunities
40	Appendix Appendix A Appendix B



Part I

Introduction

Mission

Universal Design Standards align and support Austin Independent School District's (AISD) Strategic Framework (<https://www.austinisd.org/strategic-plan#framework>) by improving facility accessibility for everyone including persons with physical and mental differences.

These standards are meant to ensure that AISD accommodates and provides positive and caring teaching and learning environments for persons with various abilities, needs, and backgrounds. These standards identify potential areas where it is necessary to exceed previous facility standards to create more inclusive facilities for all students, staff, and community members.

With these guidelines AISD encourages its design professionals to embrace the challenge to create learning environments that all can use and enjoy. Our commitment to Universal Design is foundational to our promise to Austin families that **'All Means All'**.



Introduction

Desired Outcomes from Universal Design Standards

Austin ISD is committed to providing equal access and opportunities to all students, staff, and community members. Schools are community centers and the activities that occur on campuses positively impact AISD students and the entire Austin metro area. These standards are created to remove obstacles that impede all stakeholders from fully participating in the vibrant learning activities occurring on Austin ISD campuses each day.

During the creation of this document, many stories were shared by district representatives that make the “why” resonate deeply.

Examples include:

- A third grader who uses a wheelchair spends the majority of her recess in a separate play area away from her classmates because the main playground is covered with an inaccessible ground surface and she cannot move across it.
- A sixth grader misses every school-wide assembly because the sensory experience in the large open space in the gym is overwhelming and there is no way for him to mitigate the way sound and light travel through the room.
- A proud grandmother cannot attend her grandchild’s performance because it is held in a part of a school that is only reachable by walking down a steep ramp that she cannot physically navigate.
- A high school sophomore with visual impairments struggles to find the meeting for the club she wants to join because the signage in the school hallway uses small, low-contrast lettering.

How to Use this Document

This document is created to foster the design and construction of inclusive facilities. Designers are typically trained to approach accessible design as another checklist of prescriptive standards that come with penalties if they are not followed. Similarly, the design of “accessible” products such as grab bars, door openers, and wheelchair lifts can often appear utilitarian.

This document is intended to support teams to design and construct facilities inclusive to children and adults with varying degrees of physical and mental needs and abilities. These Universal Design guidelines outline both descriptive and prescriptive measures as a supplement to the AISD Educational Specifications (Ed Specs) and Project Development Manual (PDM). As with the Ed Specs and PDM, these Universal Design standards are an evolving document that will be amended as improvements and challenges are encountered with modernization projects to improve the learning experience of the AISD community.

These guidelines do not replace scoping and technical requirements of the applicable Texas Architectural Barriers Act or Americans with Disabilities Act. AISD’s Universal Design Standards support accessibility and inclusion opportunities beyond requirements design professionals need to meet per Texas Accessibility Standards.

Universal Design Standards have been created for new construction and renovation (retrofitting) projects. Specific standards may be waived for renovation projects if implementation is deemed unpractical and cost-prohibitive.

AISD’s Universal Design Standards include standards and recommendations for design professionals to follow throughout each design phase and project closeout to document communications and established priorities of the Campus Architectural Team (CAT) and campus staff for both new construction and renovation projects. Design professionals are expected to advocate for the broader community and users of all abilities in developing inclusive designs. These guidelines are a framework to support communications, inform design strategies, and realize building improvements for more accessible, inclusive, and safe learning environments.



Part II

Universal Design

Definition and Intent

The Centre for Excellence in Universal Design defines it as the thoughtful design and composition of an environment so that it can be accessed, understood and used to the greatest extent possible by all people regardless of their age, size, culture, ability or disability.

Universal Design promotes independence and the ability to access and use a facility without the need for special adaptation or assistive devices. This is not a special requirement for the benefit of only a minority of the population. It is a fundamental condition of good design.

Architect Ronald Mace coined the term, advocating for accessible building codes but also for an inclusive philosophy of design so that all people can access and easily use products and physical environments.

Further Reading: <https://universaldesign.ie/about-universal-design>

TABA vs. ADA vs. UD

The Texas Architectural Barriers Act (TABAA), the Americans with Disabilities Act (ADA), and Universal Design (UD) are all approaches aimed at creating inclusive environments, but they differ in several ways. TABAA and ADA are both legal requirements at the state and federal levels that set a minimum standard for architectural barrier removal. Universal Design is a mindset and approach that includes 7 principles outlined in Part III. These are standards representing a design philosophy approved for use by Austin ISD. Universal Design aims to provide an inclusive learning environment while reducing the number of specific modification or accommodation requests and goes above the minimum legal standards for accessibility.

Texas Architectural Barriers Act (TABAA) Texas Accessibility Standards (TAS)

The Texas Architectural Barriers Act is a Construction Law that requires all construction related activities to public accommodation areas, including all properties owned by AISD to comply with the Texas Accessibility Standards. Compliance is not obligated if no construction activities take place. For all construction related activities between 1991 and 2012, the 1994 TAS is applicable. For all construction related activities from March 15, 2012 to current, the 2012 TAS is applicable. TAS is subject to change and projects will need to comply with the version in force at the time of design and construction. Any administrative rules under the Texas Government Code, Chapter 469 may also apply.

Basis for Americans with Disabilities Act (ADA) Standards for Accessible Design

The ADA is a federal civil rights law covering more than just architectural barriers and includes:

- Title I Employment
- Title II State & Local Government
- Title III Public Accommodations
- Title IV Telecommunications
- Title V Miscellaneous Provisions

Some key differences between TAS Compliant, ADA Compliant, and Universal Design are outlined below.

TAS Compliance

1. **Legal Compliance:** TAS compliance is a legal requirement in the State of Texas. It focuses on construction related activities only and does not include other areas such as program access, employment practices or effective communication, etc.
2. **Minimum Standards:** Texas Department of Licensing and Regulation (TDLR) sets minimum standards via the Texas Accessibility Standards to eliminate discrimination against individuals with disabilities by architectural barriers. The focus is on removing barriers for people with disabilities.
3. **Retrofitting:** When a renovation takes place, the TAS only requires the areas being renovated to be compliant with the TAS, except when primary function is triggered, which then requires some existing elements to be brought into compliance such as parking, path of travel, restrooms, and drinking fountains (when applicable).
4. **Individual Accommodations:** TABA is a construction law and does not have provisions for providing reasonable accommodations or reasonable modifications. Those would fall under ADA purview, and not the jurisdiction of the TABA.

ADA Compliance

1. **Legal Compliance:** ADA compliance is a legal requirement in the United States. It focuses on adhering to specific regulations outlined in the Americans with Disabilities Act.
2. **Minimum Standards:** ADA sets minimum standards to eliminate discrimination against individuals with disabilities. The focus is on removing barriers and providing equal access to facilities, programs, and services for people with disabilities. The technical standards for architectural barrier removal are the 2010 Standards for Accessible Design.
3. **Retrofitting:** ADA compliance often involves retrofitting existing structures to meet the specified standards. It addresses issues such as ramps, elevators, accessible restrooms, and signage.
4. **Individual Accommodations:** ADA is primarily concerned with making accommodations for individuals with disabilities based on their specific needs. It is reactive and aims to address barriers on a case-by-case basis.

Universal Design (UD) Concepts

AISSD's UD Standards provide further guidance for designers and contractors to enhance education by improving accessibility for all people in the physical environment by removing physical or sensory barriers and exceeding the minimum standards defined by the design and construction standards of the TAS and ADA.

1. **Inclusive from the Start:** Universal Design is proactive and focuses on creating environments that are inclusive from the start. It goes beyond legal compliance to embrace diversity and promote accessibility for everyone.
 2. **Flexibility and Diversity:** Universal Design considers the diverse needs of all individuals, including those with disabilities, different learning styles, and preferences. It promotes flexibility in teaching methods, materials, and assessments.
 3. **Curricular and Instructional Design:** Universal Design for Learning is a related concept that extends beyond physical accessibility to encompass curricular and instructional design. It encourages the use of multiple means of representation, engagement, and expression to cater to a wide range of learners. This is reflected in designs of spaces used primarily for learning.
 4. **Anticipatory Design:** Unlike ADA compliance, which often involves retroactive measures, Universal Design anticipates and addresses potential barriers in the initial design phase. This proactive approach aims to create an inclusive environment for everyone.
 5. **Continuous Improvement:** Universal Design is a continuous improvement process that encourages feedback and adjustments based on evolving needs. It recognizes that inclusivity is an ongoing commitment rather than a one-time compliance effort.
- In summary, the TAS is required for meeting state legal requirements, ADA compliance is essential for meeting federal legal requirements and eliminating discriminatory barriers, Universal Design takes a broader and more proactive approach by fostering inclusivity from the outset and addressing the diverse needs of all individuals, regardless of age, health, or physical abilities.

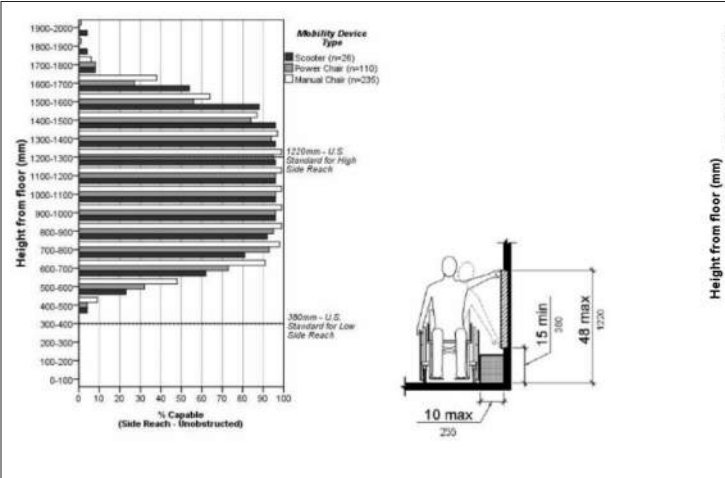
Anthropomorphic Studies

The ‘Anthropometry of Wheeled Mobility Project’ was prepared for the US Access Board in 2010. The study was prepared by the Center for Inclusive Design and Environmental Access (IDeA), School of Architecture and Planning at the University of Buffalo, NY.

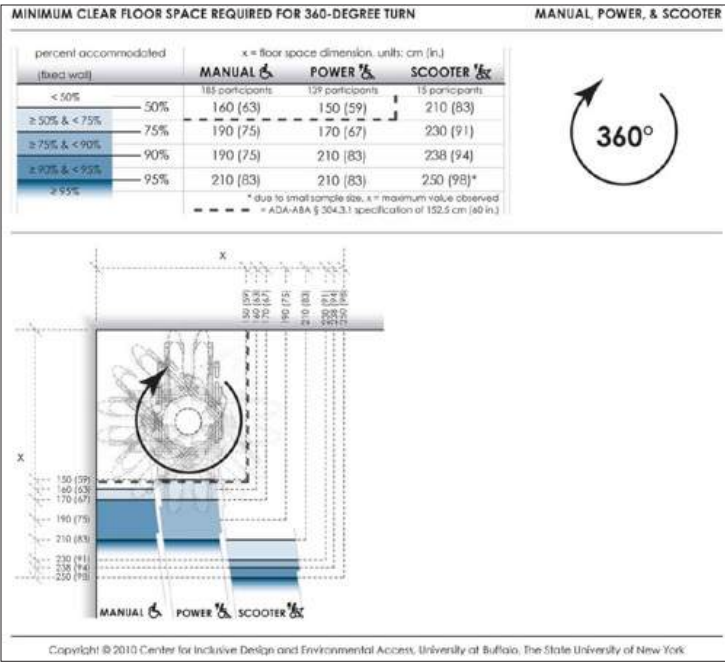
This report contains quantitative measurement of 500 people who use wheeled mobility devices, including but not limited to manual wheelchairs, power chairs, and scooters, in three different cities (Buffalo, Pittsburgh, and Ithaca).

Key findings and data included but was not limited to users’ body characteristics and abilities in clear floor area, knee space, maneuvering clearances, reach ranges, grip force and door usability factors.

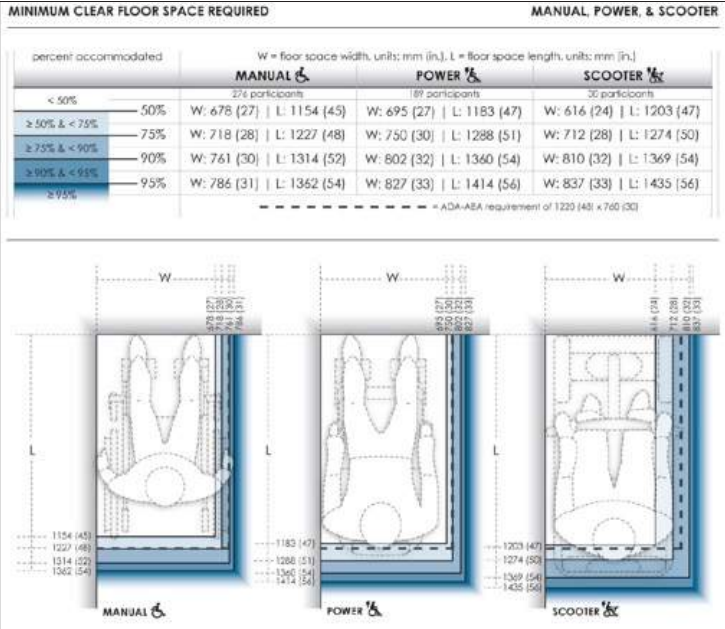
In summary, per research and findings, a team at IDeA concludes that the current Accessibility Standards in place do not meet the needs of a significant percentage of people who used wheeled mobility devices in our built environment.



The figure above shows side reach ranges and illustrates that when an obstruction is less than 10”, nearly all users could reach the element when mounted in the general range of 28”-48” off the ground. However, when an obstruction exceeded 10” and the user had to reach to the side greater than this, less than 35% of users could reach the element when in the optimal height range. This demonstrates the need for providing elements with less need for reaching over obstructions than is permitted in the current TAS and ADA standards.



This figure shows the results of the study indicating that the minimum 5’ turning space in the current TAS and ADA standards meets the needs of less than 50% of wheelchair users. In order to meet the needs of all users in this study, the turning space would need to be close to 8’ across.



The above figure shows results indicating that the minimum 30” x 48” clear floor space in the current TAS and ADA Standards only meets the needs of 50%-75% of wheelchair users. To meet the needs of all wheelchair users in this study, the clear floor space would need to be closer to 36” x 60”.

Examples of ADA Compliant vs. Universal Design



ADA Compliant

The image illustrates only one clear pathway that is an ADA compliant accessible route. This route is all one material and color.



ADA Compliant + Universal Design

The image shows an ADA compliant accessible route that is intuitively and clearly delineated by the lighter colored pavers. There are also a few areas along the walkway where a user can pull off the main path and take a break, or continue traveling but at a slower pace.



ADA Compliant

The image is a large gathering space that is ADA compliant, does not have any protruding objects, and provides circulation through the space. The floor surface and texture all appear to be the same. Any flexibility in the space will have to be provided with furniture. With all the hard surfaces, acoustics may be a problem.



ADA Compliant + Universal Design

The above image is a similar large gathering space that is ADA compliant but also provides choice and flexibility in how it is used. There are nooks built in to the wall that allow for users who may want a quieter space or a different sensory experience.



Part III

The Seven Principles

Universal Design expands the community of use to all people of diverse abilities.

Products, services, and physical environments that have been designed thoughtfully in this way are more inclusive and can be used by individuals of all abilities to their fullest extent. Universal design solutions inherently promote safety, flexibility, and adaptability.

The original Principles of Universal Design were developed by the Center for Universal Design at North Carolina State University under the leadership of Ron Mace and originally published in 1997. The seven principles form the basis of Universal Design to create a truly universal user experience. Before we identify the specific AISD Universal Design Standards, it is important to have a basic understanding of these general principles.



1. Equitable Use

The design is useful and marketable to people with diverse abilities.

Guidelines:

- Provide the same means of use for all users: identical whenever possible; equivalent when not.
- Avoid segregating or stigmatizing any users.
- Make provisions for privacy, security, and safety equally available to all users.
- Make the design appealing to all users.

Example: A common level building entry instead of stairs allows easier mobility and access for all.



2. Flexibility in Use

The design accommodates a wide range of individual preferences and abilities.

Guidelines:

- Provide choice in methods of use.
- Accommodate right-or left-handed access and use.
- Facilitate the user's accuracy and precision.
- Provide adaptability to the user's pace.

Example: Furniture desks and tables with simple to operate height adjustability.



3. Simple & Intuitive Use

Use of the design is easy to understand, regardless of the user's experience, knowledge, language skills, or current concentration level.

Guidelines:

- Eliminate unnecessary complexity.
- Be consistent with user expectations and intuition.
- Accommodate a wide range of literacy and language skills.
- Arrange information consistent with its importance.
- Provide effective prompting and feedback during and after task completion.

Example: Use of universally identifiable graphic symbols or pictograms to provide instructions or wayfinding signage that is clear and intuitive.



4. Perceptible Information

The design communicates necessary information effectively to the user, regardless of ambient conditions or the user's sensory abilities.

Guidelines:

- Use different modes (pictorial, verbal, tactile) for redundant presentation of essential information.
- Maximize "legibility" of essential information.
- Differentiate elements in ways that can be described (i.e., make it easy to give instructions or directions).
- Provide compatibility with a variety of techniques or devices used by people with sensory limitations.

Example: Building comprehensive wayfinding strategies including consistency of color, texture, and pictograms.



5. Tolerance for Error:

The design minimizes hazards and the adverse consequences of accidental or unintended actions.

Guidelines:

- Arrange elements to minimize hazards and errors: most used elements, most accessible; hazardous elements eliminated, isolated, or shielded.
- Provide warnings of hazards and errors.
- Provide fail safe features.
- Discourage unconscious action in tasks that require vigilance.

Example: Use of contrasting colors or materials at changes in level or between pedestrian to vehicular zones.



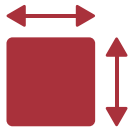
6. Low Physical Effort

The design can be used efficiently and comfortably and with a minimum of fatigue.

Guidelines:

- Allow users to use low physical effort or reasonable operating forces while maintaining their neutral posture.
- Minimize repetitive actions.
- Minimize sustained physical effort.

Example: Use of mechanically operated door openers for all common, shared entries.



7. Size and Space for Approach and Use

The design provides appropriate size and space for approach, reach, manipulation, and use, regardless of the user's body size, posture, or mobility.

Guidelines:

- Provide a clear line of sight to important elements for any seated or standing user.
- Make reach to all components comfortable for any seated or standing user.
- Accommodate variations in hand and grip size.
- Provide adequate space for the use of assistive devices or personal assistance.

Example: : Generous 42" wide door opening widths throughout a facility.

Further Reading

<https://universaldesign.ie/about-universal-design/the-7-principles>



Part IV

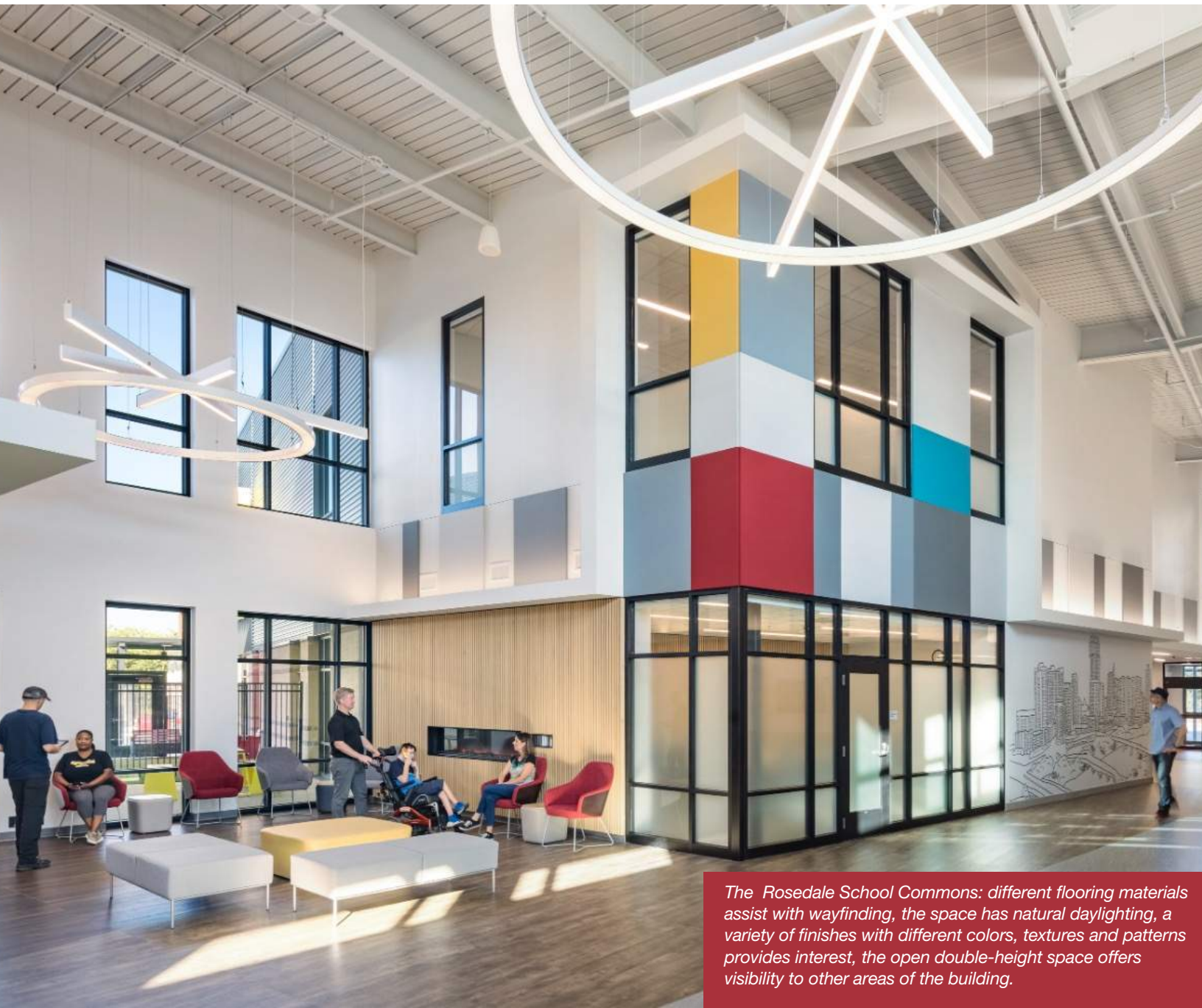
AISD Universal Design Standards

AISD Universal Design Standards

The following Universal Design Standards are specific to Austin ISD. The purpose of these standards is to create more consistent and equitable opportunities for learner and community participation across all district facilities.

Design professionals are to incorporate these standards with the contractual requirements within the district's Educational Specifications (Ed Specs) and Project Development Manual (PDM) for new construction and renovation projects. Any recommendations in this document augment those in the PDM and Ed Specs.

These standards cover requirements for: sensory experiences, mobility and access, gathering spaces, outdoor play environments, and furniture.



The Rosedale School Commons: different flooring materials assist with wayfinding, the space has natural daylighting, a variety of finishes with different colors, textures and patterns provides interest, the open double-height space offers visibility to other areas of the building.

Multi-Sensory Experiences

Principles Represented

- Equitable Use
- Flexibility in Use
- Tolerance for Error



Multi-Sensory Experiences

Multi-Sensory Experiences

Multi-sensory experiences support universal design by ensuring information and interactions are accessible to people with diverse abilities and preferences. Learning environment designs shall include multiple sensory experiences in support of a variety of learners' abilities and comfort levels.

Designs should thoughtfully incorporate experiences of multiple senses: hearing, sight, touch, and smell. Incorporating user control and adjustability is essential in allowing for a variety of user needs and experiences. These standards represent Equitable Use, Flexibility in Use, and Tolerance for Error from the 7 Principles of Universal Design.

Acoustics

Acoustics can support universal design by ensuring spaces are accessible and comfortable for everyone regardless of their hearing ability or preferences. Creating comfortable settings for students and community users requires a careful balance between enhancing certain types of sound and controlling unwanted noise. Too much unwanted noise and high sound volumes can create stress. Aging can reduce the ability to clearly distinguish speech. Design strategies will vary with the range of room types and uses. The following strategies support a healthier acoustical experience:

- Design studio spaces with appropriate acoustics to control reverberation, background noise, and sound transmission per 2017 ANSI 808 for enhanced acoustics. (This is in addition to ANSI/ASA standards referenced in PDM Chapter 5.)
- Incorporate assistive listening devices such as hearing loops or FM systems allows individuals with hearing impairments to connect directly to sound sources, improving their ability to participate in conversations and activities.
- In large gathering areas, use a variety of sound absorbing systems and materials to control sound volumes. Create quiet and active zones to minimize auditory disruption.
- Provide alternate experiences (for people not comfortable with crowds or loud noises). Specifically, provide an AV feed between the gathering space and a designated overflow space, such as an Empower Center, Media Resources or Maker Space.
- Provide user-controlled white noise in offices, study rooms, or other quiet spaces. Provide integrated sound masking systems in open areas to enhance speech privacy. System

characteristics and locations should be reviewed with Campus/user group.

- Provide options for portable acoustic panels that can be adjusted based on specific needs and activities.
- Be aware of equipment that can cause electromagnetic field interference with assistive hearing devices.

Lighting Quality

Lighting plays a crucial role in supporting universal design by ensuring spaces are accessible, safe, and comfortable for people of all ages, abilities, and preferences. People react to lighting differently so it is important to consider context and activity types. For example, someone with low vision may need brighter lighting to navigate their environment, whereas someone who is neurodivergent may be bothered by overhead lighting that is too bright or flickering. Considerations of the type of activities and anticipated room configurations are important in designing productive, efficient, and aesthetically pleasing lighting systems.

- Provide sufficient, well-distributed lighting throughout spaces.
- Prioritize abundant natural daylighting for common circulation and learning studios. Incorporate circadian lighting systems that adjust lighting to mimic natural daylight cycles to support well-being and focus.
- Avoid excessive direct lighting that may cause glare or shadows.
- Provide consistent and balanced LED task lighting on work surfaces. If general lighting does not provide 40 footcandles on the work surface, provide supplemental task lighting.
- Provide LED lighting with a zone control and dimming capabilities in studios and gathering areas. (See PDM, Chapter 5, Division 26) Controls should be available to users and not purely automated.
- For all studios, incorporate dimming capabilities. White light color tuning lighting system can be added.
- Reduce potential hazards across the campus by providing well-lit entries and pathways from parking lots, exterior staircases, and exterior restroom facilities.

Multi-Sensory Experiences



Provide well-distributed lighting while prioritizing natural daylight for common circulation and learning studios.

Multi-Sensory Experiences

Visibility and Privacy

Designing spaces with unobstructed sight lines enables people of all heights and mobility levels to navigate safely, efficiently, and with greater situational awareness. Consider the privacy needs of all learners without limiting the benefits of ‘learning on display’ and passive supervision. (See also PDM Chapters 4 and 6.)

- Provide interior windows adjacent to doors to provide visibility between circulation paths and rooms they serve.
- Provide roller shades or curtains at studio windows and doors to support the security, privacy, and dignity of students.
- Peace Centers in learning studios to support learner self-regulation should be located away from the entry door to maintain privacy and safety. Per Section 37.0021 of the Texas Education Code, Peace Centers must be three sided with access into or out of peace center unobstructed by a door or physical object. Peace Centers can also be built using furniture and movable partitions.



Peace Centers in learning studios can support learner self-regulation.

Texture

Touch is an important and often overlooked way to experience space. It can be used on wall, ceiling or floor surfaces to facilitate wayfinding and safety as well as stimulate interest. Tactile indicators can help indicate critical decision points in wayfinding, like intersections and doorways. Texture of seating and work surfaces and other things people touch regularly can elicit different responses.

- Use distinct textures as part of the wayfinding scheme.
- Select finish materials that are durable and easy to clean so that touching can be encouraged. Avoid tackable surfaces in circulation or heavy use areas.
- When selecting furniture, provide a variety of fabrics and work surfaces to give people choices.

Finish Contrast, Color and Pattern

Visual impairments, aging, and certain eye diseases can cause people to have lower ability to detect contrast easily. Individuals who have color vision deficiency see hues differently. Color contrast and patterns can help people with reduced vision better navigate their environment. However, too much color and pattern can be overstimulating. See PDM Chapter 4 for general finish requirements.

- Use vibrant colors as accents in conjunction with a neutral color palette.
- Use consistent color coding to assist with wayfinding.
- Use material patterns purposefully to create visual language and order.
- Use changes in color or pattern to stimulate interest, mark transition between spaces, and facilitate wayfinding.
- Avoid visual clutter in studios to help with cognition and focus.
- Use non-reflective surfaces to minimize glare in areas with high light exposure.

Consider...

Blue and green background colors contrast with skin tones and can reduce eye strain in lecture room settings. <https://infoguides.rit.edu/deafspace/principles>

The following are a couple of resources for “colorblind safe palettes”: <https://davidmathlogic.com/colorblind>; <https://www.nceas.ucsb.edu/science-communication-resources>

Limit display of learning anchors and student work on walls to minimum required for learning to avoid visual clutter and overstimulation. https://eddesignaward.com/research/wp-content/uploads/2021/12/clever-classrooms-summary-report-of-the-head-the-project_peter-barrett.pdf

Access and Mobility

Principles Represented

- Equitable Use
- Flexibility in Use
- Simple and Intuitive Use
- Perceptible Information
- Tolerance for Error
- Low Physical Effort
- Size & Space for Approach & Use



Access and Mobility

Access and Mobility

Equitable experiences of arrival and departure beyond life safety egress routes are significant determinants to shared, inclusive experiences or potentially inequitable and isolating experiences among individuals. Whenever possible a single, shared path of travel must be provided for all users to enter and exit the school building. Shared common paths of travel should be provided for primary access to any additional buildings on campuses with multiple buildings. The following standards further support equitable arrival, access and safety of all building users.

These standards represent Equitable Use, Flexibility in Use, Simple and Intuitive Use, Perceptible Information, Tolerance for Error, Low Physical Effort, and Size and Space for Approach and Use from the 7 Principles of Universal Design.

Wayfinding and Navigational Features

Wayfinding systems including material cues and signage play a significant role in supporting universal design by providing clear and effective directional communication to people of all abilities.

- Use a mix of color, contrast, patterns, and textures on interior and exterior building surfaces particularly along hallways and other transitions between different use spaces. Tactile wayfinding supports all learners and particularly those within the visually impaired or neurodiverse community.
- Signage should be prominently displayed with unobstructed views and optimized for comprehension.
- Provide a consistent hierarchy of information and consistent display. Ensure contrast to promote visual and textural legibility.
- Provide lighting on signs or back-lit signs for site primary directional signs.
- Incorporate pictograms and symbols to supplement text to communicate information.
- Include braille on signage for individuals who are blind or have visual impairments ensuring they can navigate and access facilities independently.
- Include multi-language signage to suit campus and community population.

Common Pathway and Enhanced Clearances

People of all abilities should be able to navigate to common spaces by the same route as everyone else. This includes clearances along these routes for safe movements and access. The minimum clearances outlined in the TAS and ADA standards are not large enough to serve the needs of AISD students and staff. Below are requirements for improved access routes and clearances.

- Do not require people in wheelchairs to take a substantially different route or use different entrances. Locate ramps, stairs and elevators adjacent to one another, so that entry/exit locations are close to one another.
- At new construction and major renovations, provide 42" wide doors used by students and community.
- At new construction and major renovations, have redundancy in elevators – a single elevator will eventually require repair or maintenance.
- Avoid using wheelchair lifts for stage access.
- At new construction and major renovations, swing doors into rooms or create a recessed alcove where doors swing outward to prevent collisions along circulation paths.
- Provide enhanced turning spaces*.
- At new construction enhanced clear floor spaces should be at least 36" wide by 60" long.
- At new construction provide generous corridors* to permit two-way travel.
- At new construction, provide enhanced door maneuvering clearances of 18" push/24" pull on the latch side of doors extending to the hinge and for a depth of 6' for the push and pull side of all user passage doors.
- Avoid abrupt level changes on the floor or ground surface. Limit changes in level to thresholds at doorways or within ramped areas.

*Definitions:

Enhanced turning space - 6'-3" at existing/renovations and 7'-0" at new construction. Either a circle or comparable T turn is permitted.

Enhanced corridor width is 12'-0" for new high schools and middle schools and 10'-0" for new elementary schools. At existing schools corridors should maintain at least 8'-0".

Turning spaces may utilize knee space and toe clearance under fixed elements or underneath furniture. If knee space and toe clearance is not available underneath permanent elements including furniture, the turning space must be provided beyond that element.

Access and Mobility



Different textured tile offers another way of navigating.



Easy-to-read font, high contrast text and directional arrows support easy navigation.



Consistent hierarchy of information and prominent wayfinding display supports universal design.

Access and Mobility

Drop Off, Loading and Parking Areas

Drop off, loading, and parking areas require special attention since they are the first places students and visitors to the campus encounter. Designate and clearly mark pedestrian routes from parking areas to building entrances to ensure safety and accessibility. Curb cut heights and sufficient area for bus wheelchair lifts to lay flat to the sidewalk are imperative. (See also PDM Chapter 5).

- Prioritize locations of accessible parking spaces to main entries and public event facilities for proximity and ease of access to these entries.
- Provide clear site signage to identify visitor and accessible parking areas, bus drop off zones, and parent drop off zones.
- Provide covered areas for students who are waiting to be picked up and covered walkways to bus loading/unloading.
- There should be a TAS compliant loading zone at both car drop off and bus drop off. Use flat transitions between roadway and sidewalk.
- Make sure covered bus drop-off is long enough to accommodate all buses queuing at once.



Covered bus drop-off with overhang and column protection at flat curb.

Public Transportation and Pedestrian Experience

Many students in urban areas arrive to school on public transportation. Pedestrian access to the school entry needs to be carefully planned for student safety and a positive experience.

- Walkways with a slope less than 5% (or 1:20), are preferable to accessible ramps.
- Minimize pedestrian paths from right-of-way crossing vehicular traffic lanes.
- Provide shade for pedestrians from the public way to the main entry.
- Exterior doors used for entry should have awnings or a canopy to protect individuals from inclement weather.

Automatic Door Openers

Factors such as air pressure differential, door size/weight, or door approach can make opening a door difficult for any user. Automatic door openers support individual access for all users.

- Provide automatic door operators at common use doors – primary/secondary entrances, common spaces as noted in the PDM Chapter 4. This includes the main entry vestibule, bus entrance, playground entrance, library, Empower Center, gymnasium, theater, and learning neighborhoods. Review any potential additional locations with the campus
- Motion sensor operators with visual confirmation of operation are preferred to the push button type.
- Make sure the doors do not swing into the wheelchair turning space - locking the user behind the open doors.



<https://us.beasensors.com/en/magic-switch/>

Access and Mobility

Secure Vestibules

To increase the security of all school building occupants, all schools should have a secure vestibule. It is an important feature for access control and safety. However, if not designed thoughtfully it can create barriers to entry.

- Provide multiples ways for a person requesting entry to communicate with school staff (visual and auditory) both from outside the secure vestibule and inside.
- Provide a clear line of sight between office staff and visitor from inside the secure vestibule.
- Provide ample space for turning in a wheelchair or mobility device and maneuvering with equipment, backpacks, etc.
- Tight entry spaces can present an unwelcome atmosphere.
- Provide a video call box outside the secure vestibule.

Restroom Access

- Restrooms used by students, staff, and guests should all provide enhanced turning spaces (as defined earlier).
- Provide an enhanced turning area in the accessible stall or single user toilet room for new construction.
- Provide enhanced toe clearance of 12" height and 8" depth when utilizing toe clearance in a stall or room.
- For new construction all stall doors should swing out to allow for greater maneuverability in the stall. Make sure this does not impede required clear areas at adjacent fixtures.
- Provide an ambulatory stall (grab bars on both sides, 35"-37" width, and water closet seat height at 17"-19") when the restroom has three or more plumbing fixtures.
- Provide a waste receptacle within reach of the water closet.
- Install vertical grab bars at accessible water closets and accessible showers.
- At new construction provide enhanced reach ranges to faucets and dispensers at sinks per ANSI 2017 603.6 and 606.5
- Provide soap dispenser and paper towel dispenser or hand dryer within reach of the accessible sink so a user doesn't have to relocate with wet hands.
- At new construction, provide indicator locks on stall/room doors to show if it is occupied or vacant. (See also PDM Chapter 4).
- Provide at least one restroom large enough to provide an adult changing table, lift equipment, and space for 2 assistants.

This should be provided in a restroom serving large gathering spaces for public events and at least one restroom serving students during the school day. If one restroom serves both purposes, that is sufficient.

- Provide a baby changing table in either the family assist restroom or another restroom that permits all gender access.

Areas of Refuge

Areas of refuge are designated spaces in a building where individuals can seek temporary safety during an emergency. In the event of an emergency requiring evacuation, areas of refuge serve as safe locations where individuals with disabilities can wait for assistance.

- Provide an area of refuge on upper floor levels at egress stairs (even where not required by the building code) with an emergency call button or communication device to summon help if needed.
- Area of refuge to include visual and auditory communication systems such as alarms, flashing lights, and intercoms that provide instructions and updates during emergencies.

Further Reading

Meanwhile Backstage: Public Bathrooms and the Interaction Order, by Spencer E. Cahill with William Distler, Cynthia Lachowetz, Andrea Meaney, Robyn Tarallo and Teena Wil-lard.

<https://www.stalled.online/>

Access and Mobility

Restroom Access

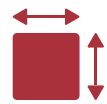


All learner restrooms - East Side Memorial

Assembly and Gathering Spaces

Principles Represented

- Equitable Use
- Size & Space for Approach & Use



Assembly / Gathering Spaces

Auditorium Seating and Stage Access

Many individuals with mobility challenges find auditoriums and stages difficult to access. They also often experience being singled out from their peers for events including graduations, award ceremonies, and fine arts performances.

- Consider access to the stage from the audience (for events such as graduation, award ceremonies, etc.). A single shared path of travel must be provided for all users to access both front and back of stage.
- Using wheelchair lifts is discouraged. Unlike a wheelchair lift, this common path of travel does not put wheelchair users “on display” and does not require special access.
- Designate a separate overflow space with an AV system to accommodate persons who are overstimulated by noise and/or lights. This overflow space can be a group meeting room, studio or other similar programmed space.

Athletic Event Spaces

Athletic event spaces can provide challenges for individuals with limited mobility, especially those who may be attending events for the first-time including family members or visiting team spectators.

- Provide clear and consistent signage to identify parking, entry, and support spaces throughout the facility.
- Texas Accessibility Standards outlines requirements and exclusions for access and dispersed seating requirements.

Collaboration Areas

Collaborative learning opportunities in group rooms and collaboration areas should not be limited for students with mobility challenges or heightened sensory experiences.

- Provide adjustable height furnishings with ability to reconfigure easily to adapt to learner needs. (See also PDM Chapter 6).
- Plan for accessible routes and turning space in group rooms to allow individuals in wheelchairs to participate equally.
- Provide power receptacles at multiple heights for charging

assistive devices, such as tablets and power chairs, and medical equipment such as feeding pumps.

Dining Commons/Serving Lines

Of all school assembly spaces, the Dining Commons presents some of the most challenging obstacles for many students to participate in given number of occupants and sensory experiences. Sound control being the most common complaint for all users in the space. The following design requirements should be implemented:

- Incorporate adjustable-height tables and chairs to accommodate students of various ages, heights, and mobility needs.
- Use clear signage with easy-to-read fonts and symbols to indicate different food stations, seating areas, and amenities. Menus and food labels should be in large print, with high contrast and no glare.
- At new construction self-service food and beverage areas should be arranged so that people who are right or left-handed can easily use and reach from a standing or seated position.
- Add acoustic wall or ceiling treatments to help with noise control.
- Include some smaller alcoves or booth-type seating that could be used by people sensitive to noise and stimulation.
- Where possible provide doors and windows to an outdoor dining area which also provides natural daylighting for better visibility.

Further Reading

[Food Service | WBDG - Whole Building Design Guide](#)

Outdoor Play and Learning Environments

Principles Represented

- Equitable Use
- Flexibility in Use
- Simple and Intuitive Use
- Perceptible Information
- Tolerance for Error
- Low Physical Effort
- Size & Space for Approach & Use



Outdoor Play and Learning Environments

Outdoor Learning and Gardens

Nature affects a person's physical, mental, and emotional state and should be available to everyone. Plants in and around the outdoor play and learning elements invite all to engage their senses. Students can engage in individual and group learning. This promotes social and leadership skills while advancing knowledge about the environment and personal interests.

Neurodivergent and sight impaired individuals can be overstimulated or adversely affected by glare or too much light so shade must be provided at gathering spaces, entrances, and places of interest including portions of play areas. Cochlear implants may be affected by background noises or equipment sound frequency.

The current Project Development Manual includes specific features for Outdoor Learning spaces. As of this issue, Required Features include seating, shade elements and writable surfaces. The PDM also requires the design team to include a number of additional features from a list of options. The list below focuses on options that support AISD's Universal Design goals:

- Develop sensory gardens with plants that engage various senses through scent, texture and color.
- Provide worktables at various heights. Include knee clearance for learners using wheelchairs.
- Provide a knowledge base for all learners by including signage at entry points and near specific areas or elements with information about plants, equipment, and materials. Signage should use graphics and simple language. Include braille or raised graphic elements.
- Locate learning areas away from noisy streets, delivery areas, or heating and cooling equipment to improve hearing for all students and limit distractions.
- Define walkway edges, ramps, or changes in elevation with surface material, texture, color or a combination of these elements.
- "Stump" seating can provide a natural seating surface with a backrest carved into the stump.



Outdoor Play and Learning Environments

Play Areas with Equal Access

Play areas should encourage exploration and growth for a range of skillsets both physically and mentally.

- Equipment and play elements shall incorporate sensory play including auditory, olfactory, visual, proprioceptive, and tactile senses, balancing activities, quiet spaces, and a variety of opportunities for social interaction.
- Spaces within the play area shall include opportunities for solitary play, interactive play with others, spaces for observation, and opportunities to play next to others and learn from their experiences without physical and/or social cooperation.
- Integrated or free standing shade structures and natural shade (such as trees) shall be included at or near play areas and located to provide maximum amount of shade coverage on majority of play equipment and play areas.
- Unitary ground surface shall provide wide paths or routes between equipment. Poured in place rubberized surface is preferred. Artificial turf must be static free for persons with cochlear or other devices that may be impacted by static electricity.
- Locate inclusive play equipment in central location or within pathway from one play area to another.

Accessible equipment typically has a larger footprint and may be used as a visual and physical anchor within the play area.

- Provide a minimum of one ground level play component that does not require transfer for those with mobility devices. Provide enhanced turning space adjacent to it. Equipment shall be flush with ground and provide space for two or more persons at the same time and shall have motion. Examples include but are not limited to spinners and gliders.
- Provide additional free standing inclusive play element, minimum of one play component, that provides space for minimum of two or more persons at the same time. Provide enhanced turning space adjacent to it. Equipment must not require a separate fenced area. Examples include, but are not limited to nest or friendship swings, gliders, or see-saws.
- Provide a minimum of one freestanding play house, dome, or covered activity panel. Provide enhanced turning space adjacent to it.

Large play areas can be overstimulating with motion and sounds. Elements such as the play house and activity panel provide a space for students to isolate themselves and observe their surroundings while staying visually connected to the larger group.

- Additional quiet, intimate spaces may be included in larger playscapes.
- Provide consistent use of a limited color palette on all equipment and ground surface material. Consider pastel colors that mimic nature like sky blue, grass green, yellow or orange flowers, or secondary colors instead of primary colors that can be visually disruptive or over stimulating.



<https://www.proludic.com/inspirations/themes-and-environments/inclusive-play-equipment/>

Outdoor Play and Learning Environments

Pathways and Ground Materials

- Pathways to gathering areas and play areas shall be a minimum of 8' wide to allow persons in a powerchair or other mobility device and another student, care giver, or instructor to navigate the space side by side.
- Use ramps instead of stairs to access gathering areas.
- Provide physical and visual access to learning areas. Those who are younger, of shorter stature, or who use mobility devices may need a higher vantage point. Provide smooth, gentle grade changes to allow variety of vantage points to see the speaker and surrounding areas.
- Provide a minimum of 1 rest space adjacent to pathway(s) from building to play area for self-guided learning, small group instruction, or respite from noise or large group activity and movement. The rest space shall include the following:
 - Enhanced turning space (see Access and Mobility section/Definitions)
 - Shade
 - Seating
 - Plants with variety of textures, flowers or aromas to create a calming, restful place
- Use a variety of materials and textures to encourage sensory exploration including boulders, timber, or plant beds to delineate the edges of learning areas.
- Provide alternate walkways to learning and play areas that are visible from primary pathways for sensory exploration. Use a variety of sensory ground plane elements to create spaces, define edges, and provide unique learning opportunities. Materials include smooth concrete, colored concrete, concrete with smooth stones less than 1/4" high embedded, artificial turf that is static resistant, natural grass, reinforced grass or grasscrete, permeable or concrete pavers, stabilized gravel or decomposed granite or gravelpave.
- When using pathway material that may be undesirable to some students because of textures, sights, smells, or sounds, include a parallel path to allow continuous interaction between people on both pathways.
- Ground materials should be smooth, with visual or tactile elements to define edges or grade changes that can be traversed in hot, cold, dry or wet conditions.
- Use shock-absorbing surfaces in play areas to reduce risk of injury.



W.E. Carter School Sensory Garden
Boston, MA

- | | | | |
|---|---|--|--|
| ● VARIETY OF SPACES <ul style="list-style-type: none">• Group gathering• Individual path• Enclosed by tree canopy or structure | ● ORGANIC FEATURES <ul style="list-style-type: none">• Curved paths• Raised planters• Music equipment• Large stones | ● GROUND SURFACE MATERIAL <ul style="list-style-type: none">• Defined path edges• Colorful, smooth surface• Wide paths and ramps• Bridge | ● PLANTS and FURNISHINGS <ul style="list-style-type: none">• Plants next to paths with different texture and colors along paths• Natural materials for seating |
|---|---|--|--|

Resource: Photo - <https://www.db-la.com/WECarterDetail.htm>

Outdoor Play and Learning Environments



Resource: BCI Burke

Further Reading

Louv, R. (2008) *Last Child in the Woods: Saving our children from nature-deficit disorder*.

Green School Yards of America - <https://www.greenschoolyards.org/inclusive-design>

Children in Nature Network - <https://www.childrenandnature.org/resource-hub/resources/>

Child Friendly Plants - <https://tpwd.texas.gov/education/bioblitz/tpwd-child-friendly-plant-flyer-final.pdf>

Ground cover options - <https://playgroundgrass.com>; <https://corkeen.com/en/>



<https://www.playlsi.com/en/commercial-playground-equipment/playground-components/we-saw/>

Furniture

Principles Represented

- Flexibility in Use
- Simple and Intuitive Use
- Low Physical Effort



Furniture

Importance of Furniture Selection

Properly planned and selected furniture has a significant impact on learners' daily experience and ability to comfortably engage with educational and social activities throughout the school day. Furniture provides the most direct physical connection to the learner and if properly incorporated can adapt for adjustments in positioning and use for multiple activities. Furniture can support universal design by being adaptable, comfortable, and ultra-accessible.

Considerations for Furniture Selection

Related specifically to the 7 principles of Universal Design, KI Furnishing recommends designers use the following questions to guide selection of furniture for equitable engagement and participation of learners:

1. Equitable Use: Can every person access it? Does this work easily for everyone?
2. Flexibility in Use: Can people use it in different ways or to accommodate different preferences?
3. Simple and Intuitive Use: Is it easy for people to figure out how to use it without prior knowledge or experience?
4. Perceptible Information: Does it have visual cues or other means of communication that help people figure out how to use it?
5. Tolerance for Error: Does it minimize hazards if someone doesn't use it as intended?
6. Low Physical Effort: Can people use it comfortably and without fatigue?
7. Size and Space for Approach and Use: Is there enough space for people with diverse abilities to approach and use it?

Flexibility and Adaptability

The AISD Educational Specifications outline the variety of functional activities furniture elements need to support for each learning space. Learning spaces are expected to be dynamic and alterable.

- Select furniture that can be quickly adapted for use by different working group participants and abilities.
- Furniture should allow for quick arrangement and freedom

to be configured from the learning wall focus to small group workshop setting.

- Furniture adjustment mechanisms should be easy to manage and allow for use while sitting and standing.
- Select furniture that can be easily stacked and stored when not in use.

Ergonomics and Movement

In choosing furniture for a variety of activities and student abilities, it is important to identify the range and diversity of students' needs related to comfort, usability, and safety.

- Furniture shall allow for student movement when using the furniture elements including ease of height adjustment as well as configured in appropriate groupings within the learning space.
- Furniture configuration shall allow clear pathways around the furniture to support access throughout the learning space as well as knee space and clearance for a student in a wheelchair to work side by side with peers.

Color, Texture and Materials

Furniture color and texture can aid in accessibility. Color contrast assists students with visual impairments, while diverse textures cater to tactile needs. Furniture elements can improve sensory comfort including improving acoustics and noise control within active learning areas.

- Furniture shall be of appropriate size and material finish, including options for reduced possibility of self-harm, and including weighted or padded furniture elements for neurodiverse learners. Design teams are encouraged to explore furniture solutions designed for healthcare environments that are becoming increasingly used in educational settings.
- Furniture selected needs minimize the effects of excessive noise to create calmer, more therapeutic spaces.
- Choose hypoallergenic materials for upholstery to accommodate students with allergies and sensitivities.



Further Reading

[What is the Role of Universal Design in Education? | KI](#)

[VS | Ergonomic school furniture \(vsamerica.com\)](#)

<https://us.pineapplecontracts.com/environment-category/behavioral-health/>



Part V

Implementation

Community Outreach

During the Schematic Design phase of a project, a portion of at least one Campus Architectural Team (CAT) meeting should introduce concepts of Universal Design. During the Design Development phase a follow up CAT meeting should include a discussion of how AISD Universal Design Standards have been incorporated into the project.

AISD can provide a template Universal Design presentation to help design teams communicate these concepts to the CAT.

AISD can develop incentives to embrace Universal Design in the development of projects. The incentive should include recognition of exemplary projects and design teams.

AISD should encourage feedback from educators, parents and students to assess if facilities are meeting the needs of all users.

Internal Learning Opportunities

To promote implementation, AISD should develop an in-house training program for all AISD staff at the district and campus level. Ideally, this would be an ongoing effort with yearly updates. In addition, consultants hired as project managers and design teams should go through a training program suited to their role and contract duration.





Appendix

Appendix A - Project Team

Development of the Austin ISD (AISD) Universal Design Standards has been a combined effort of key representatives from Austin ISD, led by Randall Sakai, Director of Project Management for AISD, and a team of subject matter experts led by Page. The team conducted two half-day workshops held on 12/15/2023 and 2/1/2024 in Page's office. Before the workshops, there were also facility tours of Morgan's Wonderland in San Antonio, TX and the Rosedale School in Austin, TX. These two projects represent successful implementation of Universal Design principles.

The first workshop covered the seven principles of Universal Design, highlighting how these concepts are different from the Americans with Disabilities Act. During the workshop there were presentations which shared the lived experiences of people encountering barriers in their daily activities, and a reflection on the impact these barriers can have on people's lives. There was also a discussion on ways to avoid barriers in designing buildings and outdoor spaces, and an examination of which aspects of Universal Design were a priority for AISD.

After this workshop the Page/Consultant Team developed a first draft of the AISD Universal Design Standards for review and comment by the AISD project team. These comments were discussed in detail at the second workshop. In general the AISD Project Team agreed that the AISD Universal Design Standards should use prescriptive language rather than suggestive language. For example, sentences such as "Consider using wider doorways..." would become "Use wider doorways...", so that design teams reading this document would have a clear understanding of what was expected and so that AISD would have clear guidance on how to enforce the Standards. The AISD Project Team also felt that it was important to state why development of these Standards was important to the District and to tie it into the District's Long-range Plan, which was developed using a process called Equity by Design.

AISD's Planning & Asset Management department (PAM) will be the champions of the Universal Design Standards, which are a companion to the AISD Educational Specifications. Any changes or clarifications to the Standards will be issued by PAM. The Page Consultant team is available to assist PAM with answering questions and developing training materials for AISD staff and project design teams.

Special thanks to Gordon Hartman and his Morgan's Wonderland staff for allowing the committee to tour their facility and for taking the time to meet and share their insights on creating an inclusive facility.

Appendix A - Project Team

AISD Project Team

Sheri Albin Project Manager, Construction Management Department, parent of ASD child.

Amanda Braziel City of Austin, Watershed Protection Department, separated from AISD in March 2024.

Dr. Raechel French Director of Planning Services

Colleen Garland Outdoor Learning Specialist

Bailey Gates Director Instructional Delivery, Inclusion & Related Services

April Glenn Bond Implementation former principal and teacher, parent of a special needs child, retired in January 2025

Kris Hafezizadeh Executive Director-Transportation & Vehicle Services

Paul Kretchmer Coordinator Instructional Visual Arts, retired June 2024, replaced by Dr. Kara Czepiel, Coordinator of Fine Arts.

Cherry Lee Executive Director Instructional Delivery & Inclusion

Michael Mann Executive Director of Construction Management

Maria Martinez Administrative Supervisor Instructional Programs

Jaime Miller, P.E. Senior Executive Director of Operations

Luis Montes De Oca Safety Supervisor Transportation & Vehicle Services

Melfi Penn Assistant Director Bond Controls, now Director of Controls

Zachary Reagan Emergency Management Specialist

Randall Sakai Director of Architecture, now Director of Project Management

Marisa Santangelo Senior Project Manager, separated from AISD in May 2025

David Simon Director of Emergency Management

Christine Steenport Operations Officer

Phillip Taylor Executive Director of Fine Arts

Pat Werner Director Physical Education & Coordinated School Health, retired November 2024, *replaced by Francina Hollingworth, Assistant Director of Physical Education & Coordinated School Health*

Beth Wilson Executive Director of Planning & Asset Management

Page/Consultant Team

Andrea LaCour, RAS, ADAC Contour Collective, Co-Founder

Archer Hadley Advocate

Chad Johnson, AIA, LEED AP, REFP Page, Principal, Academic Sector Director PK-12

Christina Moon, PLA, ISA Asakura Robinson, Landscape Architect, Associate Principal

Craig Egan Page, Associate, Designer

Elaine Andersen, RAS ADAC Contour Collective, Co-Founder

Elizabeth Dickey, M.Ed., M.A., LPC-A Consultant, retired principal of the Rosedale School

Molly Smith ThinkSmart Planning

Todd Ray, FAIA, LEED AP Page, Principal, Design Director

Tyler Thompson, AIA, NCARP, LEED AP Page, Architect

Linda Tsai, AIA, LEED AP Page, Senior Project Manager

Appendix B - Universal Design Outline

The outline below is intended to serve as quick reference for design teams to document their Universal Design strategies in a narrative form.

This narrative can be submitted at the 100% Design Development stage and include any applicable drawing or specification references.

Multi-Sensory Experiences ◦ Acoustics – sound control strategies · Sound separation · Reverberation · White noise · Assistive listening ◦ Lighting Quality · Daylighting · Dimming capability ◦ Visibility and Privacy ◦ Finish Contrast, Color and Pattern · Color palette · Color/pattern language ◦ Texture	Access and Mobility Wayfinding and Navigational Features · Signage (color/text selection, lighting, placement) · Other navigation features ◦ Common Pathway and Enhanced Clearances · Ramp/stair locations · Door width and maneuvering clearances · Turning radii ◦ Drop-off, Loading and Parking Areas ◦ Public Transportation and Pedestrian Experience ◦ Automatic Door openers ◦ Secure Vestibules ◦ Restroom Access · Enhanced clearances in accessible stalls · Ambulatory stalls · Enhanced reach ranges · Emergency call button · At least one restroom with adult changing facilities ◦ Area of refuge at upper levels
Assembly & Gathering Spaces ◦ Auditorium Seating and Stage Access ◦ Athletic Event Spaces ◦ Collaboration Areas ◦ Dining Commons/Serving Line	
Outdoor Play & Learning Environments ◦ Pathways ◦ Raised plant beds ◦ Play equipment ◦ Ground Materials	Furniture ◦ Flexibility and Adaptability ◦ Ergonomics and Movement ◦ Color, texture and materials

