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Rural Community Park Accessibility

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RURAL COMMUNITY PARK ACCESSIBILITY

by

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A Scholarly Project
Submitted to the Graduate Faculty

of the

University of North Dakota
in partial fulfillment of the requirements

for the degree of
Occupational Therapy Doctorate

Grand Forks, North Dakota

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This scholarly project, submitted by AshleyMarie Patricia Hirdler in partial fulfillment of the requirement for the Degree of Occupational Therapy Doctorate from the University of North Dakota, has been read by the Faculty Advisor under whom the work has been done and is hereby approved.

Cherie Graves, PhD, OTR/L

Cherie Graves, PhD, OTR/L

April 15, 2022

Date

PERMISSION

Title: Rural Community Park Accessibility
Department: Occupational Therapy
Degree: Occupational Therapy Doctorate

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AshleyMarie Patricia Hirdler

April 14th, 2022

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ABSTRACT

Title: Rural Community Park Accessibility

Background: Play is a primary occupation for children and is critical for development (Yogman et al., 2018). School readiness and relationships with others can be impacted when opportunity for play is limited. Play also benefits adults by reestablishing their passion for activities and reducing stress responses to everyday events (Yogman et al., 2018). Lynch et al. (2019) found that when playgrounds were not accessible, children and parents with disabilities felt odd and experienced increased stress due to limited opportunities. It is important for children and their families to have access to accessible parks and spaces for play.

Purpose: The purpose of this project was to develop a guide and provide recommendations for park board members to assist in ensuring accessibility at parks throughout a rural county in Minnesota (MN).

Methodology: An extensive literature review was conducted to better understand accessibility and what may be needed to increase accessibility throughout rural parks. Various databases and resources were utilized including, but not limited to, CINAHL Complete, State of MN, government and community of Isanti County resources and experts in the field. The Ecology of Human Performance (EHP) model (Dunn 2017; Dunn et al., 1994) was used to guide the development of the product. EHP is an occupational therapy model that defines interactions between the person, context, and task, and is used by interprofessional teams.

Results: Throughout the literature review, main concepts that arose include benefits and barriers to accessibility, importance of community values, possible accessibility modifications, and possible funding sources. Overall, it was found that access to accessible parks is valuable for development, relationships, well-being, and health (P&TC, 2018; Petrunoff et al., 2021; Xie et al., 2018; Yogman et al., 2018). Based on information gathered, a quick access guide and recommendations for increased accessibility were developed to provide to the agency.

Conclusion: Availability of accessible parks and spaces can have many benefits, however, there can be many barriers to accessibility, such as time and funding. The quick access guide can assist in a more efficient way of finding and ensuring regulations are being met throughout the parks. This gives the opportunity to improve accessibility and the experience of park goers.

Chapter I

Introduction

Parks are one of the favorite outdoor places to visit for Americans (National Recreation and Park Association [NRPA], 2019). There are many different reasons for visiting parks including health benefits, reduced stress, being in nature, and experiencing amenities (NRPA, 2019). However, with visits to parks, there are many things that need to be done in order to allow the continued visits. One of these things include accessibility to the parks and the amenities that are provided. Through observations and conversations with the leader of the Parks and Environmental Services Division in an upper midwest county, accessibility is an area of need, and something that the county parks have in mind, and want to continue improving (B. Wendorf, personal communication, June 22, 2021; B. Wendorf, personal communication, August 24, 2021).

The area of focus of this capstone project is to increase park accessibility throughout a rural upper midwest county. Throughout these communications with the leader of the Parks and Environmental Services Division and the county park board, final project ideas included a checklist, evaluation, recommendations for accessibility, and a quick access guide for accessibility (B. Wendorf, personal communication, June 22, 2021; B. Wendorf, personal communication, August 24, 2021; B. Wendorf, personal communication, February 2, 2022). There are many areas that are under development that were identified as priority to ensure that the spaces are accessible, as well as other existing areas that can be modified or adapted. There are many benefits that come with accessible parks and spaces, which includes, increased well-being and health, and a space to create relationships, and promote development (NRPA, 2019; P&TC, 2018; Petrunoff et al., 2021; Richardson et al., 2020; Smith et al., 2017; Xie et al., 2018;

Yogman et al., 2018). Overall, recommendations, a checklist for increased park accessibility in stages, and a quick access accessibility guide will be completed and provided to the partnered agency.

Objectives

The overall objective for the project was to assist a rural community increase accessibility at county parks. Through this objective, the desired outcome was to assist in increasing the possibilities that people of all abilities are able to participate in occupations throughout rural county parks and experience the benefits that come with participation.

Additional objectives that were identified for the completion of this project included, (a) evaluating factors that influence public policy and accessibility to the community parks throughout the rural county; (b) analyzing effects of inequalities on occupational engagement for park goers; (c) identify how accessibility affects social, emotional, and motor development; (d) understand what is needed to ensure accessibility and inclusivity, while keeping community wants and needs within the recommendations; (e) initiate communication with funding sources if needed; (f) assist in communicating needs from the community to the park board and stakeholders; (g) developing a plan for accessibility and longevity; (h) developing a process that assists communities to increase accessibility to outdoor community parks; (i) create directions, timelines and guidelines for recommendations, an outline for what is needed and ensuring that guidelines can be generalizable to other parks; (j) sharing project materials with occupational therapy professionals, students, the park board and community.

Various learning activities were completed to meet these objectives, which included; (a) gathering specific requirements and guidelines for community accessibility; (b) working with the park board to identify developments and areas of accessibility; (c) exploring and analyzing

literature on community accessibility, play, and park accessibility; (d) working with the community for their wants and needs and establishing a system for communication from the community; (e) review funding resources for community accessibility modifications; (f) review of the EHP model (Dunn, 2017; Dunn et al., 1994), community accessibility, community models and theories and review of legislation; (g) developing a plan for accessibility and longevity; (h) developing a document with recommendations for accessibility with what is needed and when it should be completed.

Theoretical Framework

The theoretical framework used to guide the design of recommendations is the Ecology of Human Performance (EHP) model (Dunn, 2017; Dunn et al., 1994). EHP is an occupational therapy model that is used to define the interaction between the person, context, and task. Although developed within the occupational therapy profession, the model is created to be used by an interprofessional team which is critical for this project involving many individuals from various professional backgrounds (Dunn, 2017; Dunn et al., 1994). This will be further discussed in Chapter II.

Significance to Practice

Throughout the many areas of occupations, play is considered the primary occupation throughout childhood and is crucial for development. When play is limited, it can have negative impacts in many aspects, such as school readiness and relationships with others (Yogman et al., 2018). Play is important for adults as well, and is something that can help adults reestablish their passion for activities and reduce stress responses to everyday events (Yogman et al., 2018).

There are many benefits that come from having access to accessible park spaces. These benefits include increased well-being and energy, reduced stress, and health benefits (NRPA,

2019; P&TC, 2018; Petrunoff et al., 2021; Richardson et al., 2020; Smith et al., 2017; Xie et al., 2018). It was also found that having access to these accessible park spaces is valuable for development and relationships for individuals (Yogman et al., 2018). With increased accessibility, there is also the chance that there can be an increase in participation in occupations at the rural community parks.

The next four chapters will discuss this information further. Chapter II will include a literature review that has research gathered and synthesized by the author to better understand benefits and barriers to accessibility, the importance of community values, possible accessibility modifications and possible funding sources. Chapter II also discusses the theoretical framework that was used to guide the project. Chapter III describes the methodology used throughout the project, including the product design, an overview of the theoretical framework used to guide the design, procedures for completion, timeline of the project, and inclusion and exclusion criteria. Chapter IV includes the presentation of results, their relation to project objectives, and the product that is provided to the site. In conclusion, Chapter V includes a summary of the key findings of the project, implications of the project, strengths and limitations, and proposed future recommendations for the project.

Chapter II

Literature Review

Accessible can mean many different things, however, according to Merriam-Webster (n.d.) accessibility is defined as something that is “capable of being reached” (para. 1), and “easily used or accessed by people with disabilities” (para. 1). There are federal regulations for accessibility, put forth by the Americans with Disabilities Act, which also includes parks and recreation (U.S. Department of Justice, n.d.). Through conversations with the leader of the Parks and Environmental Services Division in an upper midwest county, and the county park board, accessibility within the parks is an area of interest, something they are working toward, and something that is always improving (B. Wendorf, personal communication, June 22, 2021; B. Wendorf, personal communication, August 24, 2021).

Benefits of Accessibility

There are many overall benefits for having accessible park spaces, especially while in a rural community. Parks & Trails Council of Minnesota (P&TC, 2018) reported that parks and trails in Minnesota define quality of life, which has been ranked in the top 10 throughout the United States. The National Recreation and Park Association (NRPA, 2019) conducted a poll that found that local parks are among favorite outdoor places that Americans visit. Fifty-five percent of people surveyed, of all generations, visit local parks or picnic areas to experience different health benefits throughout nature, such as reduced stress and increased energy levels (NRPA, 2019). According to Petrunoff et al. (2021), spending time and engaging in physical activity in local parks has been associated with an increase in well-being. Along that idea, Smith et al. (2017) found that walkability and establishment of quality spaces had a positive impact on physical activity and an increase in visits and/or use of those spaces. It was also found that

providing adequate equipment (such as fitness or playground equipment) was likely to generate positive impacts on physical activity in the spaces and increase active transportation, such as biking or walking (Smith et al., 2017). Similarly, Richardson et al. (2020) reports that when walkability and aesthetics were improved, park attendance increased. Through this, it can be implied that improving the areas that surround the parks and ensuring that they are accessible will positively impact park use.

Findings from a study conducted by Xie et al. (2018) demonstrated a negative correlation between park accessibility and occurrence of chronic health conditions in older adults in China. The authors used their “low accessibility score (ACS)” (p. 482) as a reference when analyzing accessibility and the odds ratio (OR) of developing a chronic disease. The negative correlation for development of cardio-cerebral vascular diseases (CCVD), joint diseases (JD) and endocrine diseases (ED) were statistically significant as follows, “CCVD (OR: 0.577; 95% CI [0.366, 0.910]), JD (OR: 0.599; 95% CI [0.376, 0.952]), and ED (OR: 0.580; 95% CI [0.350, 0.962])” (Xie et al., 2018. p. 483). This shows that that the development of the above-mentioned diseases is less likely in the areas that have a high accessibility score, or those that have better accessibility to parks (Xie et al., 2018). Although there was a negative correlation reported, it was also discussed that there are other factors that should be considered that could affect park participation and the health benefits that may be achieved from participation, such as physical environment, and “sociopersonal contexts” which consist of age, education and health conditions (Xie et al., 2018. p. 477).

Having access to accessible outdoor spaces is something that is very important for children as well. In occupational therapy, play is considered the primary occupation during childhood and is critical for development. Yogman et al. (2018) emphasized the importance of

play on child development, social emotional skills, executive function, decision making, and foundational skills, such as motor, language and math skills, and self-regulation. These skills are important to have in the day-to-day world, and as children continue to grow and develop. The development of executive functioning also assists in the development of adaptive behaviors, building safe and nurturing environments and relationships, and assisting to buffer against stress that children may experience (Yogman et al., 2018). When a child's opportunity for play is limited, whether by accessibility or other barriers, it can have negative impacts on different aspects of their life, such as school readiness, and relationships with peers, friends, and family (Yogman et al., 2018). Although play is critical for child development, it is also important for adults. It is something that can help adults reestablish their passion for activities, as well as reduce stress responses to everyday events (Yogman et al., 2018). Lynch et al. (2019) found that when playgrounds were not accessible, children and parents with disabilities felt odd, and experienced increased stress due to limited opportunities and felt as if things were designed without them in mind. It is important for children and their families to have access to accessible parks and spaces for play to happen.

Although there are many benefits related to health, well-being, and quality of life, there are also economic impacts for the community. The Bureau of Economic Analysis (2021) reported that in 2020, outdoor recreation contributed to 89,331 (3.1%) of jobs in Minnesota. The P&TC (2018) also reported that "92% of Americans say parks benefit the local communities – NRPA 2016" (para. 2). These benefits demonstrate how valuable it is for individuals to have access to accessible parks and spaces for development, relationships, well-being, and health (NRPA, 2019; P&TC, 2018; Petrunoff et al., 2021; Richardson et al., 2020; Smith et al., 2017; Xie et al., 2018; Yogman et al., 2018).

Importance of Community Values

While talking with the leader of the Parks and Environmental Services Division and the county park board, they understood the accessibility concerns that were discussed, however they also had concerns of their own (B. Wendorf, personal communication, June 22, 2021; B. Wendorf, personal communication, August 24, 2021). The park board discussed that changes are made in phases and there is significant work that goes into making changes throughout the parks, and one of the park's master plan was brought to attention (B. Wendorf, personal communication, June 22, 2021; B. Wendorf, personal communication, August 24, 2021; Isanti County, n.d.-a). Community members are able to provide input during the development of master plans, providing opportunities for community and park users to state what they like, don't like, and changes that they would like to see at the identified park (Isanti County, n.d.-b). The master plans include pictures and plans of maps of the identified parks, what is available, things that are going to be developing or changing, as well as visions, costs, and other research that was conducted in the process (Isanti County, n.d.-a). In addition to the master plan resources, the cities within the county also have maps of the city parks, which include amenities and maps of the city parks (Braham, n.d.; Cambridge, Minnesota's Opportunity Community, n.d.; City of Isanti, n.d.). This information will be integrated when discussing and exploring accessibility of the spaces, as well as what is already included at the different parks across the county. Understanding what users of the spaces value can be done through communication with the community, looking at maps, amenities, and other resources at the parks.

Barriers

There are many reasons that having accessible spaces are beneficial for the community and users of the parks, however there are barriers that come along with that. Lynch et al. (2019)

talked with playground users and playground providers about accessible and inclusive spaces in the community parks and playgrounds. Although they found that it is ultimately important to have accessible spaces, they found challenges as well (Lynch et al., 2019). Some of the challenges that were identified include funding, balancing risk and safety of equipment, maintenance of the equipment and space, and ensuring that they are providing for many diverse groups of users (Lynch et al., 2019). A barrier identified during communication with the leader of the Parks and Environmental Services Division is that changes take time to happen. He reported that the master plans are normally developed for 5-year time periods with many different phases within them (B. Wendorf, personal communication, June 22, 2021). NRPA (2018) conducted a survey of park and recreational professionals and discovered that the greatest difficulty with keeping spaces inclusive includes “insufficient funding, inadequate staffing, facility space shortages, and lack of staff training” (p. 3). NRPA (2018) does highlight that 2 in 5 parks and recreation agencies that were included in this study, have a specific policy that ensures their spaces are inclusive for all members.

van Engelen et al. (2021) found that there are emotional and physical barriers when thinking about accessible spaces. In addition to physical barriers of not having access to areas, equipment, or spaces, there are emotional barriers and social stigmas that come with physical disabilities or the need for accessible equipment (van Engelen et al., 2021). The emotional barrier may include lack of autonomy, lack of self-esteem and self-solving abilities (van Engelen et al., 2021). Additionally, van Engelen et al. (2021) found that there are also professionals who don't believe that play is a priority for children and their development.

Overall, there are many barriers, both physical and emotional, to creating accessible spaces. Physical barriers that are important to consider when discussing and planning for

accessibility include equipment and trail maintenance, and space (B. Wendorf, personal communication, June 22, 2021; Lynch et al., 2019; NRPA, 2018; van Engelen et al., 2021).

There are also emotional barriers that should be considered, such as community stigmas and understanding that those emotional barriers impact different aspects of a person and possibly the use of spaces (B. Wendorf, personal communication, June 22, 2021; Lynch et al., 2019; NRPA, 2018; van Engelen et al., 2021). Other barriers also include funding, time, staffing and training, and providing opportunities for diverse groups (B. Wendorf, personal communication, June 22, 2021; Lynch et al., 2019; NRPA, 2018; van Engelen et al., 2021).

Accessibility Modifications

There are many different things that can be done to make a space accessible, starting with analyzing the entrances and availability of parking in these spaces. The leader of the Parks and Environmental Services Division identified a variety of spaces to be analyzed including parking, trail heads, trails, and other areas that will continue to be developed (B. Wendorf, personal communication, June 22, 2021; B. Wendorf, personal communication, August 24, 2021; B. Wendorf, personal communication, January 3, 2022). Kodjebacheva et al. (2015) looked at boundless playgrounds in Southeast Michigan and discussed many aspects that should be considered when looking at spaces, equipment, and accessibility. Some of the areas that were emphasized include accessible entrances, sufficient turnarounds, tables that are accessible, wheelchair accessible equipment, accessible bathrooms, and sensory areas (Kodjebacheva et al., 2015). Sensory areas or gardens include spaces that have different plants or flowers for the olfactory senses, but also areas that stimulate other senses such as nature sounds for auditory stimulation, and water or landscaping for visual stimulation (Kodjebacheva et al., 2015; Williams et al., 2019). Regulations and standards should be written into policies to ensure there

is continued inclusivity and accessibility to parks. NPRA (n.d.-b) has a resource describing best practices, areas of inclusivity, pertinent information to include in an inclusion policy, as well as individuals that should be included in the planning processes.

Possible Funding Sources

Creating accessible spaces or modifying spaces to assist with accessibility can be an expensive feat. Through conversations with the leader of the Parks and Environmental Services Division, budgets can be limited, especially when there are many different modifications that need to be made (B. Wendorf, personal communication, June 22, 2021; B. Wendorf, personal communication, August 24, 2021). NRPA (n.d.) provides resources including grant opportunities, promotional partners, and other partners that NRPA works with to support positive change for parks and recreation. The Department of Natural Resources (DNR, 2021) is an additional agency with funds available in many different categories that are awarded through grants. The resource available by the DNR includes requirements, dates, the amount of funding available and other important application information (DNR, 2021). Throughout these two sources, and conversations with the leader of the Parks and Environmental Services Division, there are many different grant opportunities, possible partnerships, and other resources that would be able to assist in having accessible spaces at the parks throughout Isanti County.

Theoretical Framework

The theoretical framework used to guide the design of recommendations is the Ecology of Human Performance (EHP) model (Dunn, 2017; Dunn et al., 1994). EHP is an occupational therapy model that is used to define the interaction between the person, context, and task (Dunn, 2017; Dunn et al., 1994). Although developed within the occupational therapy profession, the model is created to be used by an interprofessional team which is critical for this project

involving many individuals from various professional backgrounds (Dunn, 2017; Dunn et al., 1994).

The person construct of EHP is considered a combination of their past experiences, values, interests, sensorimotor, cognitive, and psychosocial skills (Dunn, 2017; Dunn et al., 1994). For the purposes of this project, the person construct will be focused on the leader of the Parks and Environmental Services Division, the park board members, stakeholders and the users of the parks and spaces.

EHP also considers many aspects when addressing contexts, occasionally referred to as the environment, such as temporal, physical, social, and cultural contexts (Dunn, 2017; Dunn et al., 1994). The contexts that are at the forefront include the parks, the environment surrounding them, the broader community, the time of day and year that parks are used the most and the least, the individuals that use the parks, the consideration of all age groups, and when the parks are used are they used individually, in groups, with friends, family, etc.

The tasks (otherwise known as occupations) of EHP contain small and large behaviors that are utilized to accomplish a goal (Dunn, 2017; Dunn et al., 1994). There are many tasks that should be considered. Tasks that need to be considered prior to the tasks that are engaged in while at the parks include accessing the park, the surrounding areas, the equipment and amenities, as well as the ability to engage and participate in these services. Individuals at the parks engage in tasks independently, with small groups of friends or family, and occasionally with large groups. These tasks include: walking (on paved, gravel, and mowed trails, and boardwalks), hiking, running, biking (mountain biking or fat tire biking), fishing, canoeing, disc golfing, observing nature, dog walking, geocaching, grilling, picnicking, horseback riding, participation on a playground, cross country skiing, dog sledding, snowshoeing, and sledding.

Lastly, the performance range is the amount and types of tasks that a person is able to do with their skills and abilities within a specific context (Dunn, 2017; Dunn et al., 1994).

Accessible spaces contribute to an increase in the performance range for many individuals (NRPA, 2019; P&TC, 2018; Petrunoff et al., 2021; Richardson et al., 2020; Smith et al., 2017; Xie et al., 2018; Yogman et al., 2018). An example of an increased performance range is if there was increased accessibility for areas within and surrounding the park, then the individual may be able to engage in an increased number of tasks throughout their experience at the park. So, if an individual is able to access different or more areas within the park, they may be able to engage in other tasks, such as fishing, or grilling that they were not able to engage in prior to the increased accessibility, therefore, increasing the performance range.

The EHP framework has five intervention strategies for practice: establish/restore, alter, prevent, adapt/modify, and create (Dunn, 2017; Dunn et al., 1994). Interventions may target any construct of EHP (Dunn, 2017; Dunn et al., 1994). The establish/restore strategy focuses on the person and improving their skills (Dunn, 2017; Dunn et al., 1994). An example of establish/restore in this area could be working with an individual or group to establish a schedule of when going to the park would have the most opportunities to engage in tasks while there. The alter strategy focuses on the context or environment that a person engages in (Dunn, 2017; Dunn et al., 1994). This could look like an individual changing the people that they go to a park with for more support, or changing the park that they are attending, because it provides more opportunities. The prevent strategy is when changes happen, to person, context, or task, to prevent negative outcomes from happening (Dunn, 2017; Dunn et al., 1994). An example of the prevent strategy would be to have a space where members of the community can easily place recommendations or communicate with the park board members for increased accessibility.

Another example of prevent could be to have staff, or a volunteer out at the parks, ensuring that park components are being maintained and upheld to ADA and ABA standards. The create approach does not assume there is a problem, and focuses on maximizing performance (Dunn, 2017; Dunn et al., 1994). A way this may be integrated throughout this project and in the future, is when there are new developments of the park, the create strategy is implemented to ensure that standards are being met prior to completion of development. Finally, the adapt/modify strategies focus on changes to the context and task features (Dunn, 2017; Dunn et al., 1994). This strategy is what will be used throughout the project and used to work towards adaptations for the park. Through the recommendations, the adapt/modify strategy is being used, as there are components that may need to be adapted or modified to ensure or increase accessibility.

Chapter III

Methodology

A resource guide that assists in identifying accessibility guidelines, as well as recommendations for increased accessibility for parks within a rural upper midwest county was created for this scholarly project. The resource and recommendations were developed in response to conversations with the leader of the Parks and Environmental Services Division, in response to the author bringing accessibility concerns to their attention. This product serves as a guide for the park board to increase accessibility to the current and planned developments, as well as ensure that guidelines are being met throughout new developments at parks in this rural county. The Ecology Human Performance (EHP) model (Dunn, 2017; Dunn et al., 1994) and the Occupational Therapy Practice Framework: Domain and Process, 4th edition (OTPF-4) (AOTA, 2020) was used throughout the scholarly project and served as a guide for the development of the project.

Project Design

Part of the development of the recommendations for increased accessibility to the county parks included going out to the parks throughout the county. Field visits were completed, measurements and notes were taken, as well as observations of what is provided and where high traffic areas were during these winter months. This, with continued review of guidelines and documents, went into the creation of the resource guide and recommendations for increased accessibility at parks throughout the county.

The resource guide is designed to be easily readable and accessible. It is organized with different guideline categories, such as accessible routes, benches, trails, fishing piers, etc. There are tables and pictures included throughout the guide where it would be beneficial to show

information or better understand content. The guide allows for fast and easy locating of guidelines that are applicable to the parks and for continued development of spaces. The recommendations that are being made are organized with the respective county park that it is recommended for. Within this document, the recommendations are also organized by importance or how soon the recommendations should be made for accessibility.

Following the project, the author will follow up with the site to have them complete a survey regarding opinions pertaining to sustainability, usability, and carry through. There will also be a future follow up with the site to check in if the recommendations were helpful, usable, and working.

Literature Search

The author completed a literature review that included various databases and resources including but not limited to, CINAHL Complete; Google Scholar; the American Occupational Therapy Association (AOTA); the American Journal of Occupational Therapy (AJOT); local and state community and governmental resources; and experts in the field, particularly those serving in the county park board. There were many search terms utilized throughout this process, including but not limited to, *park, playground, accessibility, barriers, community, county, rural, disability, ADA, and well-being*. Articles and resources were excluded if they were not published in English or published before 2013. Following the literature review, the author continued to review documents and resources that were provided by key stakeholders for more information on the parks throughout the county.

Theoretical Framework

The author chose the EHP model (Dunn, 2017; Dunn et al., 1994) to guide the development of this product. EHP is an occupational therapy model that is used to define the

interaction between the person, context, and task. This model is created to be used by interprofessional teams, which is critical for this project involving many individuals from various professional backgrounds. Throughout the duration of the DEP, the author communicated with many individuals of different professions. The use of EHP (Dunn, 2017; Dunn et al., 1994) assisted with aspects of the communication, as the model is more readily adapted and accepted by various different professions.

Throughout the project, the author considered all the different aspects of EHP (Dunn, 2017; Dunn et al., 1994). The construct that was at the forefront for much of the project was the task construct. The author considered the many tasks that park goers can participate in while at the parks and surrounding spaces during the development, design and work. During field visits and while reviewing the literature, the author considered how these tasks would be accessed, and what would be needed to access the spaces. The performance range was evaluated and considered during the project. The author reviewed how the performance range would be increased or decreased with the different accessibility options, as well as integrating the other constructs, person, environment, and task, into the performance range.

The person, the leader of the Parks and Environmental Services Division, park board members, stakeholders, and users of the parks and spaces, were considered throughout. This assisted in guiding the project and product throughout. The author wanted to ensure to keep the values and needs of all aspects of the person context when developing products and recommendations. The person was always at the forefront throughout the design of the project.

Timeline of Project

There was groundwork completed prior to arriving on-site. This groundwork consisted of idea generation, a needs assessment, topic proposals, memorandum of understanding, and other

communications. This took place from September 2020 to December 2021. The on-site time for this project spanned 14 weeks, from January 2022 to April 2022. The author split their time between working in the office at the agency and spending time out at the county parks. The author had a weekly schedule of objectives and corresponding learning activities that were addressed throughout the weeks. The first few weeks were spent reviewing information, laws and legislation regarding accessibility, documents regarding the parks and amenities from the agency and familiarizing themselves with the parks throughout the county. Throughout this time, the author and site mentor collaborated on what the project and the timelines would look like throughout this project. The latter part of the project consisted of field visits to the parks to gather information and measurements, continuing development of recommendations and the accessibility guide, identifying possible funding sources, and creation of a forum for the community to communicate needs and concerns. The author created a table of possible funding sources that could be used for modifications and developments for increased accessibility.

Following the 14 weeks, the author will follow up with the site to have them complete the above-mentioned survey, and check in to see if the recommendations were helpful, usable, and working.

Ethical Considerations

Although there was not a need for an Institutional Review Board (IRB) approval for this project, there were many ethical considerations that were taken into account throughout the project. Ethics that are relevant and were taken into consideration include beneficence, autonomy, justice and fidelity (AOTA, 2020). Beneficence is having concern for the well-being and safety of others, and taking action to benefit others (AOTA, 2020). Throughout this project, the author had concern for the accessibility of spaces throughout the parks and other spaces.

Through the recommendations, and the development of the quick access guide, this is taking action to benefit others, and ensuring that everything is being done to prevent harm or injury due to inaccessibility while at the parks.

Autonomy is respecting the right of a person to self-determination (AOTA, 2020).

Through recommendations and guidelines for accessibility, the author's aim is to assist in allowing individuals to have self-determination and being able to make choices on what tasks are participated in. With these tasks not being limited due to accessibility, it can help to increase autonomy.

Justice is another ethical consideration that was taken into account throughout the project. Justice is having equity and inclusion (AOTA, 2020). Overall, the aim and purpose of the project and its results is to increase inclusion and equity throughout the park spaces in the rural county.

Finally, fidelity was also considered throughout. Fidelity is treating people with respect, fairness, discretion, and integrity (AOTA, 2020). Throughout this project, the author worked with many professionals, and the results will be shared with professionals to ensure that those who are using the parks and spaces have fidelity when they are using the spaces. Having access to different aspects throughout parks and spaces promotes fidelity of the park goers.

Chapter IV

Product

Overview

The author created a quick access guide and recommendations for use in parks, specifically rural community parks. The purpose of the guide and recommendations are to increase accessibility to parks throughout rural areas. Based on the extensive literature review, there are many benefits for having access to accessible park spaces, but there are also barriers to accessibility. This guide and recommendations are produced to assist in reducing the barriers that may come with ensuring park spaces are accessible. Throughout the use of the guide, park directors and staff will have easier access to the Americans with Disabilities Act (ADA) and Architectural Barriers Act (ABA) regulations for accessibility in these spaces. This will assist with ensuring that modifications and new developments throughout park spaces meet the ADA and ABA regulations. Possible funding sources are also provided, which could assist in covering possible costs that may occur in ensuring accessibility.

The complete product includes (a) a quick access guide for accessibility; (b) recommendations for current modifications for increased accessibility; (c) potential funding options; and (d) access to a public forum where the community can communicate their needs and concerns. All information within the quick access guide for accessibility has been adapted from the ADA and ABA manuals (Department of Justice, 2010; U.S. Access Board, 2015). A complete copy of the guide and all other materials can be found in Appendix A.

Organization

The recommendations that were provided are organized by the park they are for, and further by importance for accessibility. The quick access guide that was provided is organized by

category, such as, accessible routes, floor and ground spaces, etc. This organization follows what is used in the ADA and ABA manuals (Department of Justice, 2010; U.S. Access Board, 2015). Throughout the quick access guide, there are areas that reference other regulations as they are needed. Potential funding options were organized into a table with headers that include the due date and other important dates, the funding source, and funding amount. Lastly, the public forum has questions with open-ended answers for individuals in the community to express their concerns and needs about the parks and accessibility throughout.

Guiding Theories

The author used the Ecology of Human Performance (EHP) (Dunn, 2017; Dunn et al., 1994) to guide the development of the products that are discussed above. All concepts of EHP (Dunn, 2017; Dunn et al., 1994) were considered throughout this process, although tasks were at the forefront through much of the process. The author considered the many tasks that park goers can participate in while at the parks and surrounding spaces during the development, design and work. It was considered how these tasks would be accessed, and what would be needed to access the spaces. The other concepts were considered and utilized throughout the development of the project. More information regarding this can be found in Chapter III.

Throughout, the author wanted the product to be accessible for others throughout many professions. EHP (Dunn, 2017; Dunn et al., 1994) also guided the author through this. While using EHP (Dunn, 2017; Dunn et al., 1994) and the person concepts, the author was able to look throughout the different professions that may be using the products and ensure that terminology throughout was inclusive for the users.

Summary

Overall, different pieces of a product were developed, which included a quick access guide for accessibility, recommendations for increased accessibility, possible funding partners and a place for the community to express their needs and concerns. This was all developed to assist in the completion of the author's objective to assist a rural community increase accessibility at county parks.

Chapter V

Summary

The overall purpose of this project was to increase park accessibility throughout a rural upper midwest county. Through conversations with the leader of the Parks and Environmental Services Division in an upper midwest county, accessibility is an area of need, and something that the county parks have in mind, and want to continue improving (B. Wendorf, personal communication, June 22, 2021; B. Wendorf, personal communication, August 24, 2021). This was done by developing a guide and providing recommendations for park board members to assist in ensuring accessibility at parks throughout a rural county in Minnesota (MN).

There are many different factors from the Ecology of Human Performance (EHP) model (Dunn, 2017; Dunn et al., 1994) that were considered throughout the development and analysis of the project. The person, the leader of the Parks and Environmental Services Division, the park board members, stakeholders and the users of the parks and spaces, were considered throughout the development of the products. The author wanted to ensure that materials that were included are relevant, readable, and usable to the person. Tasks were also important in the development of the guide and recommendations. The author considered tasks and related accessibility, which helped to guide the recommendations that were provided to the county parks. Part of the goal was to support the increase in the performance range of park goers. Overall, the author wanted to ensure that values and needs of the person were kept throughout the development and completed product.

Main concepts that were developed throughout the project include, benefits and barriers to accessibility, importance of community values, possible accessibility modifications, and possible funding sources. It is important for children and parents to have access to accessible

parks and spaces for opportunities for engagement in play (Yogman et al., 2018). Participating in occupations at parks also helps to decrease the occurrence of chronic health conditions, and increase well-being (Petrunoff et al., 2021; Xie et al., 2018).

Barriers for accessibility include funding, time, staffing and training, and providing opportunities for diverse groups of people (B. Wendorf, personal communication, June 22, 2021; Lynch et al., 2019; NRPA, 2018; van Engelen et al., 2021). Additional physical barriers include equipment, trail maintenance, and space (B. Wendorf, personal communication, June 22, 2021; Lynch et al., 2019; NRPA, 2018; van Engelen et al., 2021). One aspect of the product, the potential funding options, was developed to assist in possibly decreasing the barrier of funding and staffing. Through this, it gives the possibility to decrease the emotional barrier that comes with not having access to accessible parks or spaces (B. Wendorf, personal communication, June 22, 2021; Lynch et al., 2019; NRPA, 2018; van Engelen et al., 2021).

Implications for Practice

Initially, the scope of occupational therapy was relatively unknown in regard to how it could help the parks department. However, through this project, the profession of occupational therapy was considered an important part of collaborating with park boards and addressing accessibility due to occupational therapy practitioners' knowledge and tools. Overall, occupational therapy practitioners understand the impact that not having accessible spaces has on an individual's development, health, and well-being. This product was designed for use by park boards to view and assess accessibility guidelines easier throughout the parks. Dissemination of this product is encouraged to continue the promotion of accessibility in parks and their surrounding spaces. This would also promote engagement in many occupations for park goers and others in the community.

Strengths and Limitations

Strengths of the project include that the author is familiar with the area that the parks are located, as well as the resources that were available. The author had many resources available throughout this project. These resources included but were not limited to, the University of North Dakota (UND) School of Medicine and Health Sciences (SMHS) online library, an expert within the county parks, faculty resources, and accessibility resources available online. The author is also a student of occupational therapy and has the beginning of an educational background of accessibility and the effects that it can have on individuals.

Limitations of the project include that three quarters of the project was completed during a Midwest winter. Due to this, not all areas of the parks were able to be assessed or accessed, and the author was required to go from what was able to be accessed or through discussion and prior knowledge. Another limitation is that not all rural parks have the amenities or current capabilities to have everything accessible without a very high cost for modifications, such as electricity for drinking fountains. The products have not been used yet by the park board, although the guide has been reviewed by the park board. Lastly, the author is a student, so there is a lack of expertise and experience in areas of accessibility.

Future Recommendations

Future recommendations include continuing to assess the spaces and make suggested recommendations to increase accessibility. Another recommendation is to share these guidelines with other entities to assist in increasing accessibility in other areas that were not the target of this project. It is recommended that further research, development, and implementation of this manual be conducted.

Summary

Availability of accessible parks and spaces can have many benefits, however, there can be many barriers to accessibility, such as time and funding. The quick access guide can assist in a more efficient way of finding and ensuring regulations are being met throughout the parks. There are opportunities to increase the accessibility and experience of park goers through the use of the products that were developed and provided to the county parks.

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Appendix



Quick Guide for Accessibility Guidelines Within Parks

By: AshleyMarie Hirdler, OTDS

This was completed in 2022 as a part of the Doctoral Experiential Placement from the University of North Dakota, with collaboration with the leader of the Parks and Environmental Services Division.

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Authors Note

The purpose of this guide is to have accessibility regulations from the Americans with Disabilities Act (ADA, Department of Justice, 2010) and Architectural Barriers Act (ABA, U.S. Access Board, 2015) manuals in one document, where the information is focused on parks and outdoor spaces. The goal is to make it easier to access these regulations and guide spaces for increased accessibility. The guide is to be used as that, a guide, for regulations and standards for accessibility throughout parks.

All information that is included in this guide has been adapted from the following resources:

Department of Justice. (2010). 2010 ADA standards for accessible design.

<https://www.ada.gov/regs2010/2010ADAStandards/2010ADAStandards.pdf>

U.S. Access Board (2015). Architectural barriers act (ABA) standards (2015).

<https://www.access-board.gov/files/aba/ABASTandards.pdf>

There may be updates to the manuals in the future, which would be able to be found by following these links...

- ADA Manual: www.ada.gov under “Design Standards”
- ABA Manual: www.access-board.gov under “Guidelines & Standards” “Architectural Barriers Act”.

Throughout the guide, there are references to numbers, i.e., General (under Accessible Routes) (206.2). These numbers have been taken from the ADA and ABA manuals, and match to the listed standards under those numbers throughout the manual.

If there are additional guidelines referred to throughout a section, the name and number of the section is provided. There are instances when it is minimal in nature, it is included immediately following the reference.

All photos/images have been created by AshleyMarie Hirdler (author) or adapted from the above references.

Accessible Routes (206 and Chapter 4)

General (206.2)

- At least **one** accessible route provided within site from accessible parking spaces, public streets/sidewalks, to the accessible building or facility entrance.
- Accessible routes must serve all accessible entrances on the site.
- At least **one** accessible route should connect accessible buildings, facilities, elements, and spaces on the same site.
- At least **one** accessible route should connect accessible building/facility entrances with all accessible spaces and elements within the building/facility, which are otherwise connected.
- **Exercise machines and equipment** should be on an accessible route.
 - o At least **one** of each type of exercise machine and equipment should comply with Exercise Machines and Equipment (1004).
- **Fishing piers and platforms** should be on an accessible route.
- **Play areas** should have accessible routes in accordance with 206.2.17 (listed directly below), Chapter 4, and as modified by Accessible Routes (1008.2).
 - o At least **one** accessible route should be provided in the play area. This route should connect ground level play areas and elevated play areas.
- Accessible routes should consist of one or more of the following components
 - o Walking surfaces with a running slope, **not** steeper than **1:20** (for every inch of height change, 20 inches of route run).
 - o Doorways, ramps, curb ramps, excluding flared sides.

Location (206.3)

- Accessible routes should coincide with or be located in the same area as general paths. When there are interior paths, accessible routes should also be interior.

Entrances (206.4)

- Entrances should be provided within accordance to 206.4.
- Doors, doorways, and gates should comply with Doors, Doorways and Gates (404), and on an accessible route complying with 402, walking surfaces with a running slope **not** steeper than **1:20**.
- At **least 60%** of all public entrances should comply with Doors, Doorways and Gates (404).
- Where direct access is provided for pedestrians from a parking lot to a building or facility entrance, each direct access shall comply with Doors, Doorways and Gates (404).

Doors on Accessible Routes (206.5)

- Doors, doorways, and gates providing passage shall be provided in accordance with 206.5 and 404.
 - o Each entrance to a building or facility required to comply with 206.4, should have at least **one** door, doorway, or gateway complying with 404.

- Within a building or facility, at least **one** door, doorway, or gate serving each room or space complying with these requirements should comply with 404.

Security Barriers (206.8)

- Including but **not** limited to, security bollards and security checkpoints, should **not** obstruct a required accessible route or accessible means of egress.

Means of Egress (Exit Routes) (207)

- Means of egress should comply with section 1003.2.13 of the International Building Code (IBC) (2000 edition and 2001 Supplement) or section 1007 of the IBC (2003 edition).
 - IBC requires at least 2 means of egress from all spaces and buildings.
-

Floor or Ground Surfaces (302)

General (302.1)

- Floor and ground surfaces should be **stable, firm, and slip resistant**.
 - Stable: remains unchanged by contaminants or applied force.
 - Firm: resists deformation by either indentations or particles moving on the surface.
 - Slip resistant: provides sufficient frictional counterforce to the forces exerted in walking for safe movements.
- Exceptions
 - Exception 1: Within animal containment areas, floor and ground surfaces should **not** be required to be stable, firm, and slip resistant.
 - Exception 2: Areas of sport activity should **not** be required to comply with 302.

Openings (302.3)

- Openings in floor or ground surfaces should **not** allow passage of a sphere **more than ½ inch diameter**.
 - Elongated openings should be placed so that the long dimension is perpendicular to the dominant direction of travel.
-

Changes in Level (303)

General (303.1)

- Where changes in level are allowed in floor or ground surfaces, they should comply with 303.
- Exceptions
 - Exception 1: Animal containment areas should **not** be required to comply with 303.

- Exception 2: Areas of sport activity should **not** be required to comply with 303.

Vertical (303.2)

- Changes in level of **¼ inch high maximum** should be allowed to be vertical.

Beveled (303.3)

- Changes in level between **¼ inch high minimum and ½ inch high maximum** should be beveled with a slope **not** steeper than **1:2**.
- Advisory
 - A change in level of **½ inch is allowed to be ¼ inch vertical plus ¼ inch beveled**. However, in **no** case should the combined change in level exceed ½ inch. Changes in level that **exceed ½ inch** must comply with Ramps (405) or Curb Ramps (406).

Ramps (303.4)

- Changes in level **greater than ½ inch high** should be **ramped** and should comply with Ramps (405) or Curb Ramps (406).
-

Turning Space (304)

Floor or Ground Surfaces (304.2)

- Floor or ground surfaces of a turning space should comply with 302.
- Changes in level are **not** allowed.
- Exception: Slopes **not** steeper than **1:48** should be allowed.

*****Advisory*****

- As used throughout this section, the phrase “changes in level” refers to the surfaces with slopes and surfaces with abrupt rise exceeding that allowed in Beveled (303.3).
- Such changes in level are prohibited in required clear floor and ground spaces, turning spaces, and similar spaces where people using wheelchairs and other mobility devices must park their mobility aids, such as in wheelchair spaces, or maneuver to use elements such as doors, fixtures, and telephones.
- The exception allows slopes **not** steeper than **1:48**.

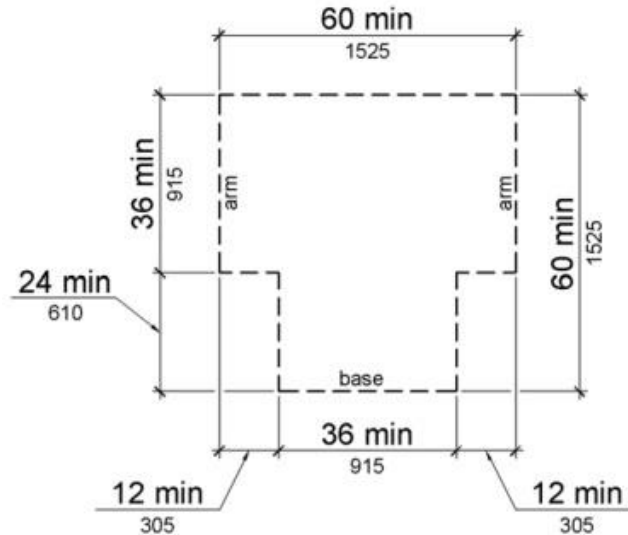
Size (304.3)

Circular Space (304.3.1)

- The turning space should be a space of **60 inches diameter minimum**.
- The space should be allowed to include knee and toe clearance complying with Knee and Toe Clearance (306).

T-Shaped Space (304.3.2)

- The turning space should be a T-Shaped space within a **60 inch square minimum with arms and base 36 inches wide minimum.**
- Each arm of the T should be clear of obstructions **12 inches minimum in each direction** and the **base should be clear of obstructions 24 inches minimum.**
- The space should be allowed to include knee and toe clearance complying with Knee and Toe Clearance (306) only at the end of either the base or one arm.



Door Swing (304.4)

- Doors should be allowed to swing into turning spaces.

Clear Floor or Ground Space (305)

Floor or Ground Surfaces (305.2)

- Floor or ground surfaces of a clear floor or ground space should comply with Floor or Ground Surfaces (302).
- Changes in level are **not** allowed.
- Exception: Slopes **not** steeper than **1:48** should be allowed.

Size (305.3)

- The clear floor or ground space should be **30 inches minimum by 48 inches minimum.**

Knee and Toe Clearance (305.4)

- Unless otherwise specified, clear floor or ground space should be allowed to include knee and toe clearance complying with Knee and Toe Clearance (306).

Position (305.5)

- Unless otherwise specified, clear floor or ground space should be positioned for either forward or parallel approach to an element.

Approach (305.6)

- **One full** unobstructed side of the clear floor or ground space should adjoin an accessible route or adjoin another clear floor or ground space.

Maneuvering Clearance (305.7)

- Where a clear floor or ground space is located in an **alcove** or **otherwise confined on all or part of three sides**, additional maneuvering clearance should be provided in accordance with the Forward Approach (305.7.1) and Parallel Approach (305.7.2) guidelines.

Forward Approach (305.7.1)

- Alcoves should be **36 inches wide minimum where the depth exceeds 24 inches**.

Parallel Approach (305.7.2)

- Alcoves should be **60 inches wide minimum where the depth exceeds 15 inches**.

Knee and Toe Clearance (306)

General (306.1)

- Where space beneath an element is included as part of clear floor or ground space, or turning space, the space should comply with 306.
- Additional space should **not** be allowed beneath an element but should **not** be considered as part of the clear floor or ground space or turning space.

*****Advisory*****

- Clearances are measured in relation to the usable clear floor space, not necessarily to the vertical support for an element.
- When determining clearance under an object for required turning or maneuvering space, care should be taken to ensure the space is clear of any obstructions.

Toe Clearance (306.2)

General (306.2.1)

- Space under an element between the finish floor or ground and **9 inches above the finish floor or ground** should be considered toe clearance and should comply with Toe Clearance (306.2)

Maximum Depth (306.2.2)

- Toe clearance should **extend 25 inches maximum** under an element.

Minimum Required Depth (306.2.3)

- Where toe clearance is required at an element as part of a clear floor space, the toe clearance should **extend 17 inches minimum** under the element.

Additional Clearance (306.2.4)

- Space extending greater than 6 inches beyond the available knee clearance at **9 inches above the finish floor or ground** should **not** be considered toe clearance.

Width (306.2.5)

- Toe clearance should be **30 inches wide minimum**.

Knee Clearance (306.3)

General (306.3.1)

- Space under an element **between 9 inches and 27 inches above** the finish floor or ground should be considered knee clearance and should comply with Knee Clearance (306.3).

Maximum Depth (306.3.2)

- Knee clearance should **extend 25 inches maximum under an element at 9 inches above** the finish floor or ground.

Minimum Required Depth (306.3.3)

- Where knee clearance is required under an element as part of a clear floor space, the knee clearance should be **11 inches deep minimum at 9 inches above** the finish floor or ground, and **8 inches deep minimum at 27 inches above** the finish floor or ground.

Clearance Reduction (306.3.4)

- **Between 9 inches and 27 inches** above the finish floor or ground, the knee clearance should be allowed to **reduce** at a rate of **1 inch in depth for each 6 inches in height**.

Width (306.3.5)

- Knee clearance should be **30 inches wide minimum**.

Protruding Objects (307)

Protrusion Limits (307.2)

- Objects with leading edges **more than 27 inches** and **not more than 80 inches** above the finish floor or ground should protrude 4 inches maximum horizontally into the aisle/path.
- Exception: Handrails should be allowed to **protrude 4½ inches maximum**.

Post-Mounted Objects (307.3)

- Free-standing objects mounted on posts or pylons should overhang aisles/paths **12 inches maximum** when located **27 inches minimum and 80 inches maximum** above the finish floor or ground.
- Exception: The sloping portions of handrails serving stairs and ramps should not be required to comply with Post-Mounted Objects (307.3).

Vertical Clearance (307.4)

- Should be **80 inches high minimum**.
- Guardrails or other barriers should be provided where the vertical clearance is less than 80 inches high.
- The leading edge of such guardrail or barrier should be located **27 inches maximum** above the finish floor or ground.
- Exception: Door closers and door stops should be allowed to be **78 inches minimum** above the finish floor or ground.

Required Clear Width (307.5)

- Protruding objects should **not** reduce the clear width required for accessible routes.

Reach Ranges (308)

*There is a table on page 65 in Clear Floor or Ground Space (1008.4.2) that has the reach ranges for children. This table provides reach ranges for components that are designed for use primarily by children. *

Forward Reach (308.2)

Unobstructed (308.2.1)

- Where a forward reach is unobstructed, the **high forward** reach should be **48 inches maximum** and the **low forward** reach should be **15 inches minimum** above the finish floor or ground.

Obstructed High Reach (308.2.2)

- Where a high forward reach is over an obstruction, the clear floor space should extend beneath the element for a distance not less than the required reach depth over the obstruction.
- The **high forward** reach should be **48 inches maximum** where the reach depth is **20 inches maximum**.
- Where the reach depth **exceeds 20 inches**, the high forwards reach should be **44 inches maximum**, and the reach depth should be **25 inches maximum**.

Side Reach (308.3)

Unobstructed (308.3.1)

- Where a clear floor or ground space allows a parallel approach to an element and the side reach is unobstructed, the high side reach should be **48 inches maximum**, and the low side reach should be **15 inches minimum** above the finish floor or ground.
- Exceptions
 - o Exception 1: An obstruction should be allowed between the clear floor or ground space and the element where the depth of the obstruction is **10 inches maximum**.
 - o Exception 2: Operable parts of fuel dispensers should be permitted to be **54 inches maximum** measured from the surface of the vehicular way where fuel dispensers are installed on existing curbs.

Obstructed High Reach (308.3.2)

- Where a clear floor or ground space allows a parallel approach to an element and the high side reach is over an obstruction, the **height** of the obstruction should be **34 inches maximum**, and the **depth** of the obstruction should be **24 inches maximum**.
- The high side reach should be **48 inches maximum** for a reach depth of **10 inches maximum**.
- Where the reach **depth** exceeds **10 inches**, the high side reach should be **46 inches maximum** for a reach **depth** of **24 inches maximum**.

Operable Parts (309)

Clear Floor Space (309.2)

- A clear floor or ground space complying with Clear Floor or Ground Space (305) should be provided.

Height (309.3)

- Operable parts should be placed within one or more of the reach ranges that are specified in Reach Ranges (308).

Operation (309.4)

- Operable parts should be operable with one hand and should **not** require tight grasping, pinching, or twisting of the wrist.
 - The **force required** to activate operable parts should be **5 pounds maximum**.
-

Walking Surfaces (403)

- Floor or ground surfaces shall comply with Floor or Ground Surfaces (302).

Slopes (403.3)

- The running slope of walking surfaces should **not** be steeper than **1:20**.
- The cross slope of walking surfaces should **not** be steeper than **1:48**.
 - o Cross slope is the slope of the surface perpendicular to the direction of travel.

Changes in Level (403.4)

- Changes in level should comply with Changes in Level (303), which is listed below as well.
 - o Vertical
 - Changes in level of **¼ inch high maximum** should be allowed to be vertical.
 - o Beveled
 - Changes in level between **¼ inch high minimum and ½ inch high maximum** should be beveled with a slope **not** steeper than **1:2**.
 - o Ramps
 - Changes in level **greater than ½ inch high** should be ramped and should comply with Ramps (405) or Curb Ramps (406).

Clearances (403.5)

- The clear width of walking surfaces should be **36 inches minimum**.
 - o Exception: The width should be permitted to be **reduced to 32 inches minimum** for a **length of 24 inches maximum**, considering the reduced width segments are separated by segments that are **48 inches long minimum and 36 inches wide minimum**.
- When the accessible route makes a **180° turn around** which is **less than 48 inches wide**, clear width should be **42 inches minimum** when **approaching** the turn, **48 inches minimum** at the turn and **42 inches minimum** leaving the turn.
 - o Exception: When the clear width at the turn is **60 inches minimum**, compliance of above measurements are **not** required.

Passing Spaces (403.5.3)

- An accessible route with a **width less than 60 inches** should provide passing spaces at intervals of **200 feet maximum**.

- Passing spaces can look like...
 - o A space **60 inches minimum by 60 inches minimum**.

or

- o An intersection of two walking surfaces providing a T-Shaped space complying with T-Shaped Space (304.3.2) (under Size (304.3) in Turning Space), where the base and arms of the T-shape extend **48 inches minimum** beyond the intersection.
 - Please refer to this section, and page 16 for a diagram of the measurements and space.

Handrails (403.6)

- When provided along walking surfaces with running slopes **not** steeper than **1:20**, they should comply with Handrails (505).

Doors, Doorways, and Gates (404)

- Doors, doorways, and gates that are part of an accessible route should comply with 404.

Manual Doors, Doorways, and Manual Gates (404.2)

- Revolving doors, revolving gates, and turnstiles should **not** be part of an accessible route.
- Double-leaf doors and gates
 - o At least one of the active leaves of the doorways with two leaves should comply with clear width and maneuvering clearances.

Clear Width (404.2.3)

- Door openings should provide a clear width of **32 inches minimum**.
- Clear openings of doorways with swinging doors should be measured between the face of the door and the stop, with the door open 90°.
- Openings **more than 24 inches deep** should provide a clear opening of **36 inches minimum**.
- There should **not** be projections into the required clear opening width **lower than 34 inches above** the finish floor or ground.
 - o Projections into the clear opening width between **34 inches and 80 inches above** the finish floor/ground should **not** exceed **4 inches**.
- Door closers and door stops should be permitted to be **78 inches minimum** above the finish floor/ground.

Maneuvering Clearances (404.2.4)

- Maneuvering clearances should extend the full width of the doorway and the required latch side or hinge side clearance.

- Swinging doors and gates should have maneuvering clearances complying with the below table, Maneuvering Clearances at Manual Swinging Doors and Gates.

Maneuvering Clearances at Manual Swinging Doors and Gates

Types of Use		Minimum Maneuvering Clearance	
Approach Direction	Door or Gate Side	Perpendicular to Doorway	Parallel to Doorway (beyond latch side unless noted)
From front	Pull	60 inches	18 inches
From front	Push	48 inches	0 inches ¹
From hinge side	Pull	60 inches	36 inches
From hinge side	Pull	54 inches	42 inches
From hinge side	Push	42 inches ²	22 inches ³
From latch side	Pull	48 inches ⁴	24 inches
From latch side	Push	42 inches ⁴	24 inches

1. Add 12 inches if closer and latch are provided.
2. Add 6 inches if closer and latch are provided.
3. Beyond hinge side.
4. Add 6 inches if closer is provided.

- Doorways without doors or gates, sliding doors, and folding doors
 - o Doorways less than **36 inches wide** without doors or gates, sliding doors, or folding doors shall have maneuvering clearances complying with the below table, Maneuvering Clearances at Doorways without Doors or Gates, Manual Sliding Doors, and Manual Folding Doors.

Maneuvering Clearances at Doorways without Doors or Gates, Manual Sliding Doors, and Manual Folding Doors

Approach Direction	Minimum Maneuvering Clearance	
	Perpendicular to Doorway	Parallel to Doorway (beyond stop/latch side unless noted)
From front	48 inches	0 inches
From side ¹	42 inches	0 inches
From pocket/hinge side	42 inches	22 inches ²
From stop/latch side	42 inches	24 inches

1. Doorway with no door only.
2. Beyond pocket/hinge side

- Recessed doors and gates
 - o Maneuvering clearances for forward approach should be provided when any obstruction within **18 inches** of the latch side of a doorway projects **more than 8**

inches beyond the face of the door, measured perpendicular to the face of the door or gate.

- Floor or Ground Surface within required maneuvering clearances should comply with Floor or Ground Surfaces (302). Changes in level are **not** permitted.
 - o Exceptions: Slopes **not** steeper than **1:48** should be allowed. Changes in level at thresholds complying with Thresholds (404.2.5) should be permitted.

Thresholds (404.2.5)

- If provided at doorways should be $\frac{1}{2}$ **inch high maximum**. Raised thresholds and changes in level at doorways should comply with Floor or Ground Surfaces (302) and Changes in level (303).
- Exception: Existing or altered thresholds $\frac{3}{4}$ **inch high maximum** that have a beveled edge on each side with a slope that is **not** steeper than 1:2 should **not** be required to comply.

Doors and Gates in Series (404.2.6)

- The distance between two hinged or pivoted doors or gates in a series should be **48 inches minimum plus the width of the doors or gates swinging into the space**.

Door and Gate Hardware (404.2.7)

- Handles, pulls, latches, locks, and other operating parts on doors and gates should comply with Operation (309.4), which is listed below as well.
 - o Operable parts should be placed within **one or more** of the reach ranges as specified in Reach Ranges (308).
 - o Should be operable with one hand and should **not** require tight grasping, pinching, or twisting of the wrist.
 - o The force required to activate operable parts should be **5 pounds maximum**.
- Operable parts should be **34 inches minimum** and **48 inches maximum** above the finish floor or ground.
- Where sliding doors are in the fully open position, operating hardware should be exposed and usable from both sides
- ****Door hardware that can be operated with a closed fist or a loose grip accommodates the greatest range of users. Hardware that requires simultaneous hand and finger movements require greater dexterity and coordination, and is **not** recommended.****

Closing Speed (404.2.8)

- Door and gate closers should be adjusted so that from an open position of **90°**, the time required to move the door to a position of **12°** from the latch is **5 seconds minimum**.
- Door and gate **spring hinges** should be adjusted so that from the open position of **70°**, the door or gate should move to the closed position in **1.5 seconds minimum**.

Door and Gate Opening Force (404.2.9)

- Fire doors should have a minimum opening force allowable by the appropriate administrative authority.
- Interior hinged doors and gates: **5 pounds maximum**
- Sliding or folding doors: **5 pounds maximum**.
- This does **not** apply to the force required to retract latch bolts or disengage other devices that hold the door/gate in a closed position.
- The force listed above applies to continuous need of force necessary to fully open the door, **not** the initial force needed. It also does **not** apply to the force that is required to retract bolts or disengage devices that are used to keep doors closed.

Door and Gate Surfaces (404.2.10)

- Swinging door and gate surfaces **within 10 inches** of the finish floor or ground measured vertically should have a smooth surface on the push side extending the full width of the door/gate.
- Parts creating horizontal or vertical joints in these surfaces should be **within 1/16 inch** of the same plane as the other.

Vision Lights (404.2.11)

- Doors, gates, and side lights adjacent to doors or gates, containing one or more glazing panels that allow viewing through the panels should have the bottom of at least **one** glazed panel located **43 inches maximum** above the finish floor.

Automatic and Power-Assisted Doors and Gates (404.3)

- Full-powered automatic doors should comply with ANSI/BHMA A156.10.
 - Low-energy and power-assisted doors should comply with ANSI/BHMA A156.19 (1997 or 2002 edition).
 - Doorways should provide a **clear opening** of **32 inches minimum** in power-on and power-off mode. The minimum clear width for automatic door systems in a doorway should be based on the clear opening that is provided when all leaves are in the open position.
 - Maneuvering clearance, thresholds, doors/gates in series should comply with all listed above.
 - Manual operating controls should comply with Operation (309.4) guidelines, also listed above in Door and Gate Hardware (404.2.7).
 - Where doors and gates without standby power are part of a means of egress, the clear break out opening at the swinging or sliding doors/gates should be **32 inches minimum** when operated in emergency mode.
-

Ramps (405)

Slope (405.2)

- Ramp runs should have a running slope **not** steeper than **1:12**.

Maximum Ramp Slope and Rise

Slope ¹	Maximum Rise
Steeper than 1:10 but not steeper than 1:8	3 inches
Steeper than 1:12 but not steeper than 1:10	6 inches

1. A slope steeper than 1:8 is prohibited.

- ****To accommodate the widest range of users, provide ramps with the least possible running slope and, wherever possible, accompany ramps with stairs for use by those individuals for whom distance presents a greater barrier than steps (i.e., people with limited stamina or endurance).**

Cross Slope (405.3)

- Cross slope of the ramp should **not** be steeper than **1:48**.
 - o Cross slope is the slope of the surface that is perpendicular to the direction of travel.

Floor or Ground Surfaces (405.4)

- Floor and ground surfaces should be **stable, firm, and slip resistant**.
 - o Changes in level other than the running and cross slopes are **not** permitted on ramp runs.

Clear Width (405.5)

- This includes the ramp run, where handrails are provided, the clear width between the handrails should be **36 inches minimum**.

Rise (405.6)

- The rise for the ramp run should be **30 inches maximum**.

Landings (405.7)

- There should be landings at the top and bottom of each ramp run.
- Ramps that do **not** have level landings at the changes in direction can create a compound slope that will **not** meet requirements.
- A level landing is needed at the accessible door to allow maneuvering and simultaneously door operations.
- Changes in level are **not** permitted at the landings, however slopes that are **not** steeper than **1:48** should be allowed.

- The clear width of the landing should be at least as wide as the widest ramp run leading to the landing.
- The landing clear length should be **60 inches long minimum**.
- When a ramp changes direction between runs at landings should have a clear landing **60 inches minimum by 60 inches minimum**.
- When there are doorways that are located adjacent to a ramp landing, maneuvering clearances that are required by Maneuvering Clearances (404.2.4) and Doors and Gates in Series (404.2.6) should be allowed to overlap the required landing area.

Handrails (405.8)

- Ramp runs with a rise **greater than 6 inches** should have handrails complying with Handrails (505).

Edge Protection (405.9)

- Edge protection should **not** be required
 - o On ramps that are **not** required to have handrails and have sides complying with 406.3 (pertaining to curbs).
 - o On the sides of ramp landings serving an adjoining ramp run or stairway.
 - o On the sides of ramp landings having a vertical drop-off of $\frac{1}{2}$ **inch maximum within 10 inches** horizontally of the minimum landing area.
- The floor or ground surface of the ramp run, or landing should extend **12 inches minimum** beyond the inside face of a handrail.
- A curb or barrier should be provided that prevents the passage of a **4-inch diameter sphere**, where any portion of the sphere is **within 4 inches** of the finish floor or ground surface.

Wet Conditions (405.10)

- Landings that are subject to wet conditions should be designed to prevent the accumulation of water.

Curb Ramps (406)

Counter Slope (406.2)

- Counter slopes of adjoining gutters and road surfaces immediately adjacent to the curb ramp should **not** be steeper than **1:20**. The adjacent surfaces at transitions at curb ramps to walks, gutters, and streets should be at the same level.

Sides of Curb Ramps (406.3)

- Where provided, curb ramp flares should **not** be steeper than **1:10**.

Landings (406.4)

- Should be provided at the tops of curb ramps.

- The clear length should be **36 inches minimum**. The landing clear width should be **at least** as wide as the curb ramp, excluding flared sides, leading to the landing.
 - o Exception: In alterations where there is no landing at the top of curb ramps, curb ramp flares should be provided and **not** be steeper than **1:12**.

Location (406.5)

- Curb ramps and the flared sides of the curb ramps should be located so that they do **not** project into vehicular traffic lanes, parking spaces, or parking access aisles.
- When at marked crossings, they should be wholly contained within the markings, excluding any flared sides.

Diagonal Curb Ramps (406.6)

- Diagonal or corner type curb ramps with returned curbs or other well-defined edges should have the edges parallel to the direction of pedestrian flow.
- The bottom of diagonal curb ramps should have a clear space **48 inches minimum** outside active traffic lanes of the roadway.
- When provided at marked crossings, they should provide the **48 inches minimum** clear space within the markings.
- When having flared sides, should have a segment of curb **24 inches long minimum** located on each side of the curb ramp and within the marked crossing.

Islands (406.7)

- Raised islands in crossings should be cut through level with the street or have curb ramps at both sides.
- Each of the curb ramps should have a level area **48 inches long minimum by 36 inches wide minimum** at the top of the curb ramp in the park of the island that is intersected by the crossings.
- Each **48 inch minimum by 36 inch minimum** area should be oriented so that the **48 inch minimum length** is in the direction of the running slope of the curb ramp that it is serving.
- The **48 inch minimum by 36 inch minimum** areas and the accessible route should be permitted to overlap.

Parking Lots and Spaces (502 and 208)

Parking Spaces

Total Number of Spaces Provided	Minimum Number of Required Accessible Spaces		
	Standard Spaces	Van Spaces	Total Spaces
1 to 25	0	1	1
26 to 50	1	1	2
51 to 75	2	1	3
76 to 100	3	1	4

Total Number of Spaces Provided	Minimum Number of Required Accessible Spaces		
	Standard Spaces	Van Spaces	Total Spaces
101 to 150	4	1	5
151 to 200	5	1	6
201 to 300	5	2	7

- When there are multiple parking areas, the number of accessible spaces should be established based on the spots at each area.
- Spaces should be on the shortest *accessible* route from parking to an entrance.

Space Measurements (502.2 and 502.3)

- When measuring access aisles and spaces, measurements should be made from the centerline of space markings.
- Car spaces should be **96 inches wide minimum**.
- Van spaces should be **132 inches wide minimum**.
 - o Van spaces can be **96 inches wide** when the access aisle is also **96 inches wide minimum**.
- Access Aisles
 - o 2 parking spaces can share an access aisle
 - When sharing a car and van access aisle, consider locating spaces so the van space has the access aisle on the passenger side.
 - o Access aisles should be **60 inches wide minimum**.
 - If wanting to have van space be “typical” measurements (96 inches), access aisle is required to be **96 inches wide**.
 - o Access aisle should be the full length of the parking space.
 - o Access aisles can be on either side of the space.
 - However, if access aisles are alongside angled van spots, the access aisle should be on the passenger side.

Floor and Ground Surfaces (502.4)

- Shall comply with Floor or Ground Surfaces (302), which is listed below as well.
 - o Floor and ground surfaces should be **stable, firm, and slip resistant**.
 - Stable: remains unchanged by contaminants or applied force.
 - Firm: resists deformation by either indentations or particles moving on the surface.
 - Slip resistant: provides sufficient frictional counterforce to the forces exerted in walking for safe movements.
- Access aisles should be at the same level as the parking spaces
- Slopes **not** steeper than **1:48**.

Identification (502.6)

- Signs should include the International Symbol of Accessibility (complying with Symbols (703.7.2 and 703.7.2.1)).



- Signs that identify a van space should contain “van accessible” signage.
- Signs should be 60 inches minimum above the ground surface, measured to the bottom of the sign.

Parking Signs (216.5) (also included in Signs (703 and 216))

- Parking spaces that comply with Parking Lots and Spaces (502) should be identified by signs complying with Identification (502.6).
- Exceptions
 - o Exception 1: Where a total of **four or less** parking spaces, including accessible parking spaces, are provided on a site, identification of accessible parking spaces should **not** be required.

Miscellaneous

- Parking spaces and access aisles should **not** obstruct the required clear width of an accessible route (**36 inches minimum**)
 - o Wheel stops are effective for this if needed, so that vehicles are not pulled too far forward into an accessible route.

Stairways (504 and 210)

General (210)

- Interior and exterior stairs that are part of a means of egress should comply with the guidelines listed below.
- Exception 3: In assembly areas, aisle stairs should not be required to comply with the guidelines listed below.
- Exception 4: Stairs that connect play components should not be required to comply with the guidelines listed below.

Treads and Risers (504.2, 504.3 and 504.4)

- All steps on a flight of stairs should have **uniform riser heights** and **uniform tread depths**.

- Risers should be **4 inches high minimum** and **7 inches high maximum**.
- Treads should be **11 inches deep minimum**.
- Open risers are **not** permitted.
- Stair treads should comply with Floor or Ground Surfaces (302). Changes in level are **not** permitted.
 - Exception: Treads should be permitted to have a slope **not** steeper than **1:48**.

**Consider providing visual contrast on tread nosings, or at the leading edges of treads without nosings, so that stair treads are more visible for people with low vision.

Nosings (504.5)

- The radius of curvature at the leading edge of the tread should be **½ inch maximum**.
- Nosings that project beyond risers should have the underside of the leading edge curved or beveled.
- Risers should be permitted to slope under the tread at an angle of **30° maximum** from vertical.
- The permitted projection of the nosing should extend **1½ inches maximum** over the tread below.

Handrails (504.6)

- Stairs should have handrails complying with Handrails (505).

Wet Conditions (504.7)

- Stair treads and landings subject to wet conditions should be designed to prevent the accumulation of water.

Handrails (505)

General (505.1)

- Handrails are required on ramp runs with a rise greater than 6 inches and on certain stairways.
- Handrails are **not** required on walking surfaces with running slopes less than **1:20**.
 - If they are provided on these walking surfaces, they still are required to comply with the guidelines listed below.

Where Required (505.2)

- Handrails should be provided on both sides of stairs and ramps.

Continuity (505.3)

- Handrails should be continuous within the full length of each stair flight or ramp run.
 - Inside handrails on switchback or dogleg stairs and ramps should be continuous between flights or runs.

- Ramps should be continuous between flights or runs.

Height (505.4)

- Top of the gripping surfaces of handrails should be **34 inches minimum** and **38 inches maximum** vertically above the walking surfaces, stair nosings, and ramp surfaces.

Clearance (505.5)

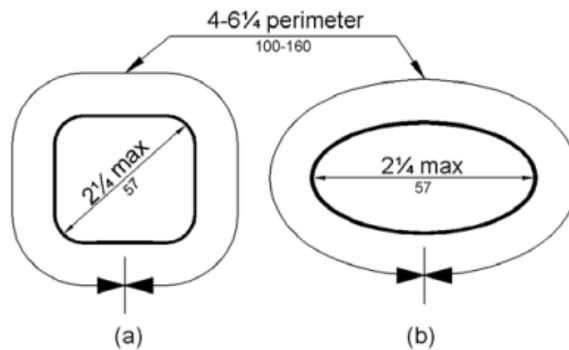
- Clearance between the handrail gripping surfaces and adjacent surfaces should be **1½ inches minimum**.

Gripping Surface (505.6)

- Gripping surfaces should be continuous along their length and should not be obstructed along their tops or sides.
- The bottoms of gripping surface should **not** be obstructed for more than **20% of their length**.
- Horizontal projects should occur **1½ inches minimum** below the bottom of the handrail gripping surface.
 - Exception: When handrails are provided along walking surfaces with slopes that are **not** steeper than **1:20**, the bottoms of the handrail gripping surfaces should be permitted to be obstructed along their entire length where they are vital to crash rails or bumper guards.
 - Exception: The distance between horizontal projections and the bottom of the gripping surface should be permitted to be reduced by **1/8 inch for every ½ inch** of additional handrail perimeter dimension that **exceeds 4 inches**.

Cross Sections (505.7)

- Circular cross section: Should have an outside diameter of **1¼ inches minimum** and **2 inches maximum**.
- Non-circular cross section: Should have a perimeter dimension of **4 inches minimum** and **6¼ inches maximum**, and a cross-section dimension of **2¼ inches maximum**.



**Figure 505.7.2
Handrail Non-Circular Cross Section**

Surfaces (505.8)

- Gripping surfaces and any surfaces adjacent to them should be free of sharp or abrasive elements and should have rounded edges.

Fittings (505.9)

- Handrails should **not** rotate within their fittings.

Handrail Extensions (505.10)

- Gripping surfaces should extend beyond and in the same direction of stair flights and ramp runs.
 - Exception: Extensions should not be required for continuous handrails at the inside turn of switchback or dogleg stairs and ramps.
 - Exception: In alterations, full extensions of handrails should not be required where such extensions would be hazardous due to plan configuration.
 - Top and Bottom Extensions for Ramps
 - o Ramp handrails should extend horizontally above the landing for **12 inches minimum** beyond the top and bottom of ramp runs.
 - o Extensions should return to a wall, guard, or the landing surface, and should be continuous to the handrail of an adjacent ramp run.
 - Top Extension at Stairs
 - o Should extend horizontally above the landing for **12 inches minimum** beginning directly above the first riser nosing.
 - o Extensions should return to a wall, guard, or the landing surface, or should be continuous to the handrail of an adjacent stair flight.
 - Bottom Extension at Stairs
 - o Should extend at the slope of the stair flight for a horizontal distance at least equal to one tread depth beyond the last riser nosing.
 - o Extensions should return to a wall, guard, or the landing surface, or should be continuous to the handrail of an adjacent stair flight.
-

Drinking Fountains (602 and 211)

General (211)

- Where drinking fountains are provided on an exterior site, on a floor, or within a secured area, that should be provided in accordance with 211.

Minimum Number (211.2)

- No fewer than two drinking fountains should be provided.
- One drinking fountain should comply with Clear Floor Space through Water Flow (602.1 through 602.6), and one drinking fountain should comply with Drinking Fountains for Standing Persons (602.7).

- Exception: When a single drinking fountain complies with Water Flow (602.1 through 602.6), and one drinking fountain should comply with Drinking Fountains for Standing Persons (602.7), it should be allowed to be substituted for two separate drinking fountains.

More than Minimum Number (211.3)

- Where the minimum number of drinking fountains are provided, 50% of the total number of drinking fountains should comply with Clear Floor Space through Water Flow (602.1 through 602.6), and 50% of the total number of drinking fountains provided, should comply with Drinking Fountains for Standing Persons (602.7).

Clear Floor Space (602.2)

- Units should have a clear floor or ground space that complies with Clear Floor or Ground Space (305), positioned for a forward approach and centered on the unit.
- Knee and toe clearance complying with Knee and Toe Clearance (306) should be provided.

Operable Parts (602.3)

- Should comply with Operable Parts (309)
 - o Operable parts should be placed within one or more of the reach ranges as specified in Reach Ranges (308).
 - o Should be operable with one hand and should **not** require tight grasping, pinching, or twisting of the wrist.
 - o The force required to activate operable parts should be **5 pounds maximum**.

Spout Height (602.4)

- Spout outlets should be **36 inches maximum** above the finish floor or ground.

Spout Location (602.5)

- Spout should be located **15 inches minimum** from the vertical support and **5 inches maximum** from the front edge of the unit, including bumpers.

Water Flow (602.6)

- Spout should provide a flow of water **4 inches high minimum** and should be located **5 inches maximum** from the front of the unit.
- The angle of the water stream should be measured horizontally relative to the front face of the unit.
- Where spouts are located **less than 3 inches** from the front of the unit, the angle of the water stream should be **30° maximum**.
- When spouts are located between **3 inches and 5 inches maximum** from the front of the unit, the angle of the water stream should be **15° maximum**.
- ****The purpose of requiring the drinking fountain spout to produce a flow of water 4 inches high minimum is so that a cup can be inserted under the flow of water.****

Drinking Fountain for Standing Persons (602.7)

- Spout outlets of drinking fountains for standing persons should be **38 inches minimum** and **43 inches maximum** above the finish floor or ground.
-

Toilet and Bathing Rooms (213 and 603)

Exceptions (213.2)

- Where multiple single user portable toilet or bathing units are clustered at a single location, no more than **5%** of the toilet units and bathing units at each cluster should be required to comply with the guidelines listed below.
- Portable toilet units and bathing units complying with the guidelines listed below should be identified by the International Symbol of Accessibility.



- Where multiple single user toilet rooms are clustered at a single location, no more than **50%** of the single user toilet rooms for each use at each cluster should be required to comply with the guidelines listed below.

Unisex (Single Use or Family) Toilet and Unisex Bathing Rooms (213.2.1)

- Unisex toilet rooms should contain **no** more than **one** lavatory, and **two** water closets without urinals or **one** water closet and **one** urinal.
- Unisex bathing rooms should contain **one** shower or **one** shower and **one** bathtub, **one** lavatory, and **one** water closet.
- Doors to unisex toilet rooms and bathing rooms should have privacy latches.

Clearances (603.2)

- Turning space that complies with Turning Space (304) should be provided within the room.
- Required clear floor spaces, clearance at fixtures, and turning space should be allowed to overlap.
- Doors should **not** swing into the clear floor space or clearance required for any fixture. However, doors are permitted to swing into the required turning space.
 - o At the time the door is installed, and if the door swing is reversed in the future, the door must meet all requirements specified in Doors, Doorways and Gates (404).
 - o The door swing **cannot** reduce the required width of an accessible route.

Mirrors (603.3)

- Where mirrors are provided, at least **one** should comply with the guidelines listed below.
- When located above lavatories or countertops, they should be installed with the bottom edge of the reflective surface **40 inches maximum** above the finish floor or ground.
- When not located above lavatories or countertops, they should be installed with the bottom edge of the reflective surface **35 inches maximum** above the finish floor or ground.
- A single floor length mirror can accommodate a greater number of people.
 - o The top edge of mirrors should be **74 inches minimum** from the floor or ground.

Coat Hooks and Shelves (603.4)

- Where coat hooks or shelves are provided in toilet rooms without toilet compartments, at least one of each type should comply with the guidelines listed below.
 - Coat hooks should be located within one of the reach ranges specified in Reach Ranges (308).
 - Shelves should be located **40 inches minimum** and **48 inches maximum** above the finish floor.
-

Water Closets and Toilet Compartments (604 and 213)

Plumbing Fixtures and Accessories (213.3)

Toilet Compartments (213.3.1)

- Where toilet compartments are provided, at least one toilet compartment should comply with Wheelchair Accessible Compartments (604.8.1) listed below. In addition, at least one compartment should comply with Ambulatory Accessible Compartments (604.8.2) where six or more toilet compartments are provided, or where the combination of urinals and water closets totals six or more fixtures.

Water Closets (213.3.2)

- Where water closets are provided, at least one should comply with the guidelines listed below.

Location (604.2)

- The water closet should be positioned with a wall or partition to the rear and to one side.
- The centerline of the water closet should be **16 inches minimum** to **18 inches maximum** from the side wall or partition.
- In ambulatory accessible water closets, it should be **17 inches minimum** and **19 inches maximum** from the side wall or partition.
- Water closets should be arranged for a left-hand or right-hand approach.

Clearance (604.3)

- Clearance around a water closet should be **60 inches minimum** measured perpendicular from the side wall and **56 inches minimum** measured perpendicular from the rear wall.
- The required clearance around the water closet should be permitted to overlap the water closet, associated grab bars, dispensers, sanitary napkin disposal units, coat hooks, shelves, accessible routes, clear floor space and clearances required at other fixtures, and the turning space.
 - o When the door to the toilet room is directly in front of the water closet, the water closet cannot overlap the required maneuvering clearance for the door inside the room

Seats (604.4)

- The seat height of a water closet above the finish floor should be **17 inches minimum** and **19 inches maximum** measured to the top of the seat,
- Seats should **not** be sprung return to a lifted position.

Grab Bars (604.5)

- Grab bars should comply with Grab Bars (609).
- Grab bars should be provided on the side wall closest to the water closet and on the rear wall.
- Reinforcement must be sufficient to permit the installation of rear and side wall grab bars that fully meet all accessibility requirements including, but not limited to, required length, installation height, and structural strength.
- The side wall grab bar should be **42 inches long minimum**, located **12 inches maximum** from the rear wall, and extending **54 inches minimum** from the rear wall.
- The rear wall grab bar should be **36 inches long minimum** and extend from the centerline of the water closet **12 inches minimum** on one side and **24 inches minimum** on the other side.
 - o Exception: The rear grab bar should be allowed to be **24 inches long minimum**, centered on the water closet, where wall space doesn't allow a length of **36 inches minimum** due to the location of a recessed fixture adjacent to the water closet.

Flush Controls (604.6)

- Flush controls should be hand operated or automatic.
- Hand operated flush controls should comply with Operable Parts (309).
- Flush controls should be located on the open side of the water closet except in the ambulatory accessible compartments.
- If plumbing valves are located directly behind the toilet seat, flush valves and related plumbing can cause injury or imbalance when an individual leans against them. To prevent this, the plumbing can be located behind walls or to the side of the toilet, or if approved, provide a toilet seat.

Dispensers (604.7)

- Toilet paper dispensers should be **7 inches minimum** and **9 inches maximum** in front of the water closet measured to the centerline of the dispenser.
- The outlet of the dispenser should be **15 inches minimum** and **48 inches maximum** above the finish floor and should **not** be located behind grab bars.
- Dispensers should **not** be of a type that controls delivery or that doesn't allow continuous flow of paper.
- If the dispensers are installed above the side wall grab bar, the outlet of the dispenser must be **48 inches maximum** above the finish floor and the top of the gripping surface of the grab bar must be **33 inches minimum** and **36 inches maximum** above the finish floor.

Toilet Compartments (604.8)

Wheelchair Accessible Compartments (604.8.1)

- Wheelchair accessible compartments should be **60 inches wide minimum** measured perpendicular to the side wall, and **56 inches deep minimum** for wall hung water closets and **59 inches deep minimum** for floor mounted water closets measured perpendicular to the rear wall.
- The minimum space required in toilet compartments is provided so that a person using a wheelchair can maneuver into position at the water closet.
 - o This space cannot be obstructed by baby changing tables, other fixtures, or conveniences, except otherwise previously specified.
 - o Convenience fixtures, such as baby changing tables, must also be accessible to individuals with disabilities, as well as to other users.
- Toilet compartment doors, including door hardware, should comply with Doors, Doorways and Gates (404).
 - o Except that if the approach is to the latch side of the compartment door, clearance between the door side of the compartment and any obstruction should be **42 inches minimum**.
- Doors should be located in the front partition or in the side wall or partition farthest from the water closet.
 - o When located in the front partition, the door opening should be **4 inches maximum** from the side wall or partition farthest from the water closet.
 - o When located in the side wall or partition, the door opening should be **4 inches maximum** from the front partition.
- The door should be self-closing.
- A door pull complying with Door and Gate Hardware (404.2.7), which below as well, should be placed on **both** sides of the door near the latch.
 - o Operable parts should be placed within one or more of the reach ranges as specified in Reach Ranges (308).
 - o Should be operable with one hand and should **not** require tight grasping, pinching, or twisting of the wrist.

- The force required to activate operable parts should be **5 pounds maximum**.
- Operable parts should be **34 inches minimum** and **48 inches maximum** above the finish floor or ground.
- ****Door hardware that can be operated with a closed fist or a loose grip accommodates the greatest range of users. Hardware that requires simultaneous hand and finger movements require greater dexterity and coordination, and is **not** recommended****
- Toilet compartment doors should **not** swing into the minimum required compartment area.
- The front partition and at least one side partition should provide a toe clearance of **9 inches minimum** above the finish floor and **6 inches deep minimum** beyond the compartment-side face of the partition, exclusive of partition support members.
 - Exception: Toe clearance at the front partition is not required in a compartment **greater than 62 inches deep** with a wall-hung water closet or **65 inches deep** with a floor-mounted water closet.
 - Exception: Toe clearance at the side partition is not required in a compartment greater than **66 inches wide**.
- Grab bars should comply with Grab Bars (609).
- A side-wall and rear-wall grab bar should be provided in compliance with the above listed regulations.

Ambulatory Accessible Compartments (604.8.2)

- Ambulatory accessible compartments should have a depth of **60 inches minimum** and a width of **35 inches minimum** and **37 inches maximum**.
- Toilet compartment doors, including door hardware should comply with Doors, Doorways, and Gates (404).
 - Except that if the approach is to the latch side of the compartment door, clearance between the door side of the compartment and any obstruction should be **42 inches minimum**.
- The door should be self-closing.
- A door pull complying with Door and Gate Hardware (404.2.7), which is listed below as well, should be placed on both sides of the door near the latch.
 - Operable parts should be placed within one or more of the reach ranges as specified in Reach Ranges (308).
 - Should be operable with one hand and should **not** require tight grasping, pinching, or twisting of the wrist.
 - The force required to activate operable parts should be **5 pounds maximum**.
 - Operable parts should be **34 inches minimum** and **48 inches maximum** above the finish floor or ground.
 - ****Door hardware that can be operated with a closed fist or a loose grip accommodates the greatest range of users. Hardware that requires simultaneous hand and finger movements require greater dexterity and coordination, and is **not** recommended.****

- Toilet compartment doors should **not** swing into the minimum required compartment area.
 - Grab bars should comply with Grab Bars (609).
 - A side-wall grab bar should be provided on both sides of the compartment in compliance with the above listed regulations.
 - Coat hooks should be located within one of the reach ranges specified in Reach Ranges (308).
 - Shelves should be located **40 inches minimum** and **48 inches maximum** above the finish floor.
-

Urinals (605 and 213)

****Stall-type urinals provide greater accessibility for a broader range of persons****

Plumbing Fixtures and Accessories (213.3)

Urinals (213.3.3)

- Where more than one urinal is provided, at least one should comply with the guidelines listed below.

Height and Depth (605.2)

- Should be the stall-type or the wall-hung type with the rim of **17 inches maximum** above the finish floor or ground.
- Should be **13½ inches deep minimum** measured from the outer face of the urinal rim to the back of the fixture.

Clear Floor Space (605.3)

- A clear floor or ground space that complies with Clear Floor or Ground Space (305), positioned for forward approach should be provided.

Flush Controls (605.4)

- Flush controls should be hand operated or automatic.
 - Hand operated flush controls should comply with Operable Parts (309).
-

Lavatories and Sinks (606 and 213)

Plumbing Fixtures and Accessories (213.3)

Lavatories (213.3.4)

- Where lavatories are provided, at least one should comply with the guidelines listed below, and should **not** be located in a toilet compartment.

****Advisory****

- If soap and towel dispensers are provided, they **must** be located within the reach ranges specified by Reach Ranges (308).
- Locate soap and towel dispensers so that they are conveniently usable by a person at the accessible lavatory.

Clear Floor Space (606.2)

- A clear floor space that complies with Clear Floor or Ground Space (305), positioned for a forward approach, and knee and toe clearance that complies with Knee and Toe Clearance (306) should be provided.
- Exception: The dip of the overflow should not be considered in determining knee and toe clearance.
- Exception: No more than **one** bowl of a multi-bowl sink should be required to provide knee and toe clearance that complies with Knee and Toe Clearance (306).

Height (606.3)

- Lavatories and sinks should be installed with the front of the higher of either the rim or counter surface **34 inches maximum** above the finish floor or ground.

Faucets (606.4)

- Controls for faucets should comply with Operable Parts (309).
- Hand-operated metering faucets should remain open for **10 seconds minimum**.

Exposed Pipes and Surfaces (606.5)

- Water supply and drain pipes under lavatories and sinks should be insulated or configured to protect against contact.
- There should be **no** sharp or abrasive surfaces under lavatories and sinks.

Grab Bars (609)

- Grab bars in toilet facilities should comply with the guidelines listed below.

Cross Section (609.2)

- Circular cross section: Should have an outside diameter of **1¼ inches minimum** and **2 inches maximum**.
- Non-circular cross section: Should have a cross-section dimension of **2 inches maximum** and a perimeter dimension of **4 inches minimum** and **4.8 inches maximum**.

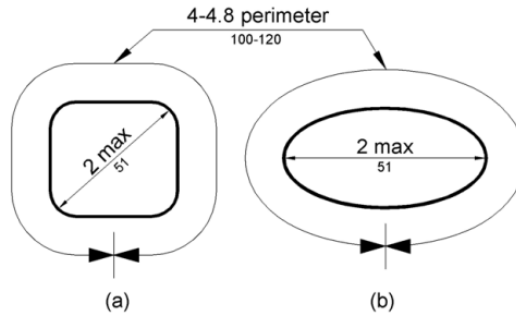


Figure 609.2.2
Grab Bar Non-Circular Cross Section

Spacing (609.3)

- The space between the wall and the grab bar should be **1½ inches**.
- The space between the grab bar and projecting objects below and at the ends should be **1½ inches minimum**.
- The space between the grab bar and projecting objects above should be **12 inches minimum**.

Position of Grab Bars (609.4)

- Grab bars should be installed in a horizontal position, **33 inches minimum** and **36 inches maximum**, above the finish floor measured to the top of the gripping surface.

Surface Hazards, Fittings, and Installations (609.5, 609.6, and 609.7)

- Grab bars and any wall or other surfaces adjacent to the grab bars should be free of sharp or abrasive elements and should have rounded edges.
- Grab bars should **not** rotate within their fittings.
- Should be installed in any manner that provide a gripping surface at the specified locations and that doesn't obstruct the required clear floor space.

Structural Strength (609.8)

- Allowable stresses should **not** be exceeded for materials used when a vertical or horizontal force of **250 pounds** is applied at any point on the grab bar, fastener, mounting device, or supporting structure.

Signs (703 and 216)

General (216.1 and 703.1)

- Signs provided should comply with the guidelines listed below.
- Where both visual and tactile characters are required, either one sign with both visual and tactile characters, or two separate signs, one with visual, and one with tactile characters, should be provided.

- Exceptions
 - o Exception 1: Building directories, menus, seat and row designations in assembly areas, occupant names, building addresses, and company names and logos should not be required to comply with Signs (216).
 - o Exception 3: Temporary, 7 days or less, signs should **not** be required to comply with Signs (216).

Designations (216.2)

- Interior and exterior signs identifying permanent rooms and spaces, should comply with General (703.1), Raised Characters (703.2) and Visual Characters (703.5).
- Where pictograms are provided as designations of permanent interior rooms and spaces, the pictograms should comply with Pictograms (703.6) and should have text descriptors complying with Raised Characters (703.2) and Visual Characters (703.5).
- Exception: Exterior signs that are not located at the door to the space they serve should not be required to comply with Raised Characters (703.2).
- Advisory
 - o This section applies to signs that provide designations, labels, or names for interior rooms or spaces where the sign is not likely to change over time.
 - o Examples include, interior signs labeling restrooms, room and floor numbers or letters, and room names.
 - o Tactile text descriptors are required for pictograms that are provided information about a room or space, such as “no smoking”, occupant logos, and the International Symbol of Accessibility, are not required to have text descriptors.

Directional and Informational Signs (216.3)

- Signs that provide direction to or information about interior spaces and facilities of the site should comply with Visual Characters (703.5).

Means of Egress (216.4)

Exit Doors (216.4.1)

- Doors at exit passageways, exit discharge, and exit stairways should be identified by tactile signs complying with General (703.1), Raised Characters (703.2) and Visual Characters (703.5).

Areas of Refuge (216.4.2)

- Signs required by section 1003.2.13.5.4 of the International Building Code (2000 edition) or section 1007.6.4 of the International Building Code (2003 edition) to provide instructions in areas of refuge should comply with Visual Characters (703.5).

Directional Signs (216.4.3)

- Signs required by 1003.2.13.6 of the International Building Code (2000 edition) or section 1007.7 of the International Building Code (2003 edition) to provide directions to accessible means of egress should comply with Visual Characters (703.5).

Parking (216.5) (also included in Parking (502 and 216)).

- Parking spaces that comply with Parking Lots and Spaces (502) should be identified by signs complying with Identification (502.6).
- Exceptions
 - o Exception 1: Where a total of four or less parking spaces, including accessible parking spaces, are provided on a site, identification of accessible parking spaces should not be required.

Entrances (216.6)

- When not all entrances comply with Doors, Doorways and Gates (404), entrances complying with Doors, Doorways, and Gates (404) should be identified by the International Symbol of Accessibility.



- Directional signs that comply with Visual Characters (703.5) that indicate the location of the nearest entrance complying with Doors, Doorways, and Gates (404) should be provided at entrances that do not comply with Doors, Doorways and Gates (404).
- Advisory: Where a directional sign is required, it should be located to help minimize backtracking. At times, this may mean the sign should be located at the beginning of the route, **not** just at the inaccessible entrance.

Toilet and Bathing Rooms (216.8)

- Where existing toilet rooms or bathing rooms do **not** comply with Toilet and Bathing Rooms (603), directional signs indicating the location of the nearest toilet room or bathing room that complies with Toilet and Bathing Rooms (603) within the facility should be provided.
- Signs should comply with Visual Characters (703.5) and should include the International Symbol of Accessibility.



- Where existing toilet rooms or bathing rooms do **not** comply with Toilet and Bathing Rooms (603), the toilet rooms or bathing rooms complying with Toilet and Bathing Rooms (603), should be identified by the International Symbol of Accessibility (shown above).
- Where clustered single user toilet rooms or bathing facilities are allowed to use exceptions that are listed under Exceptions (213.2) under Toilet and Bathing Rooms (603), toilet rooms or bathing facilities that comply with Toilet and Bathing Rooms (603) should be identified by the International Symbol of Accessibility, unless all toilet rooms and bathing facilities comply with Toilet and Bathing Rooms (603).

****NOTE****

- Where both visual and tactile characters are required, either one sign with both visual and tactile characters, or two separate signs, one with visual and one with tactile characters should be provided.

Raised Characters (703.2)

****Signs that are designed to be read by touch should not have sharp or abrasive edges.****

- Raised characters should be **1/32-inch minimum** above their background
- Characters should be **uppercase**.
- Characters should be **sans serif**. They should **not** be italic, oblique, script, highly decorative, or of other unusual forms.

Character Proportions (703.2.4)

- Characters should be selected from fonts where the width of the uppercase letter “O” is **55% minimum** and **110% maximum** of the height of the uppercase “I”.

Character Height (703.2.5)

- Character height measured vertically from the baseline of the character should be **5/8-inch minimum** and **2 inches maximum** based on the height of the uppercase letter “I”.
 - o Exception: Where there are separate raised and visual characters with the same information provided, raised character height should be allowed to be **½ inch minimum**.

Stroke Thickness (703.2.6)

- Stroke thickness of the uppercase letter “I” should be **15% maximum** of the height of the character.

Character Spacing (703.2.7)

- Character spacing should be measured between the two closest points of adjacent raised characters within a message, excluding word spaces.

- When characters have rectangular cross sections, spacing between individual raised characters should be **1/8-inch minimum** and **4 times** the raised character stroke width maximum.
- When characters have other cross sections, spacing between individual raised characters should be **1/16-inch minimum** and **4 times** the raised character stroke width maximum at the base of the cross sections and **1/8-inch minimum** and **4 times** the raised character stroke width maximum at the top of the cross sections.
- Characters should be separated from raised borders and decorative elements **3/8-inch minimum**.

Line Spacing (703.2.8)

- Spacing between the baselines of separate lines of raised characters within a message should be **135% minimum** and **170% maximum** of the raised character height.

Braille (703.3)

- Braille should be contracted (Grade 2).

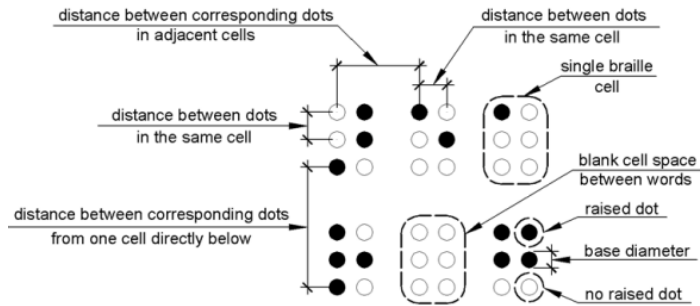
Dimensions and Capitalization (703.3.1)

- Braille dots should have a domed or rounded shape and should comply with the below table, Braille Dimensions.
- The indication of an uppercase letter(s) should only be used before the first word of sentences, proper nouns and names, individual letters of the alphabet, initials, and acronyms.

Braille Dimensions

Measurement Range	Minimum in Inches Maximum in Inches
Dot base diameter	0.059 to 0.063
Distance between two dots in the same cell ¹	0.090 to 0.100
Distance between corresponding dots in adjacent cells ¹	0.241 to 0.300
Dot height	0.025 to 0.037
Distance between corresponding dots from one cell directly below ¹	0.395 to 0.400

1. Measured center to center



**Figure 703.3.1
Braille Measurement**

Position (703.3.2)

- Braille should be positioned below the corresponding text.
- If the text is multi-lined, braille should be placed below the entire text.
- Braille should be separated **3/8-inch minimum** from any other tactile characters and **3/8-inch minimum** from raised borders and decorative elements.

Installation Height and Location (703.4)

Height Above Finish Floor or Ground (703.4.1)

- Tactile characters on signs should be located **48 inches minimum** above the finish floor or ground surface, measured from the baseline of the lowest tactile character and **60 inches maximum** above the finish floor or ground surface, measured from the baseline of the highest tactile character.

Location (703.4.2)

- Where a tactile sign is provided at a door, the sign should be located alongside the door on the latch side.
- When a tactile sign is provided at double doors with one active leaf, the sign should be located on the inactive leaf.
- Where a tactile sign is provided at double doors with two active leaves, the sign should be located to the right of the right hand door.
- Where there is no wall space at the latch side of a single door or at the right side of double doors, signs should be located on the nearest adjacent wall.
- Signs containing tactile characters should be located so that a clear floor space of **18 inches minimum** by **18 inches minimum**, centered on the tactile characters, is provided beyond the arc of any door swing between the closed position and **45° open position**.
 - o Exception: Signs with tactile characters should be allowed on the push side of doors with closers and without hold-open devices.

Visual Characters (703.5)

Finish and Contrast (703.5.1)

- Characters and their background should have a **non-glare finish**.

- Characters should contrast with their background with either light characters on a dark background or dark characters on a light background.
- ****Signs are more legible for persons with low vision when characters contrast as much as possible from the background.****
 - o Additional factors that could affect the ease of which text can be distinguished from its background includes, shadows cast by lighting sources, surface glare, and the uniformity of the text and its background colors and textures.

Where visual characters comply with the above regulations, Raised Characters (703.2), and are accompanied by braille complying with Braille (703.3), should not be required to comply with the below regulations in Visual Characters (703.5).

Case (703.5.2)

- Characters should be uppercase or lowercase or a combination of both.

Style (703.5.3)

- Characters should be conventional in form.
- Characters should **not** be italic, oblique, script, highly decorative, or of other unusual forms.

Character Proportions (703.5.4)

- Characters should be selected from fonts where the width of the uppercase letter “O” is **55% minimum** and **110% maximum** of the height of the uppercase letter “I”.

Character Height (703.5.5)

- Minimum character height should comply with the below table, Visual Character Height.
- Viewing distance should be measured as the horizontal distance between the character and an obstruction preventing further approach towards the sign.
- Character height should be based on the uppercase letter “I”.

Visual Character Height

Height to Finish Floor or Ground from Baseline of Character	Horizontal Viewing Distance	Minimum Character Height
40 inches to less than or equal to 70 inches	Less than 72 inches	5/8 inch
	72 inches and greater	5/8 inch, plus 1/8 inch per foot of viewing distance above 72 inches
Greater than 70 inches to less than or equal to 120 inches	Less than 180 inches	2 inches
	180 inches and greater	2 inches, plus 1/8 inch per foot of viewing distance above 180 inches
Greater than 120 inches	Less than 21 feet	3 inches

Height to Finish Floor or Ground from Baseline of Character	Horizontal Viewing Distance	Minimum Character Height
	21 feet and greater	3 inches, plus 1/8 inch per foot of viewing distance above 21 feet

Height From Finish Floor or Ground (703.5.6)

- Visual characters should be **40 inches minimum** above the finish floor or ground.

Stroke Thickness (703.5.7)

- Stroke thickness of the uppercase letter “I” should be **10% minimum** and **30% maximum** of the height of the character.

Character Spacing (703.5.8)

- Character spacing should be measured between the two closest points of adjacent characters, excluding word spaces.
- Spacing between individual characters should be **10% minimum** and **35% maximum** of character height.

Line Spacing (703.5.9)

- Spacing between the baselines of separate lines of characters within a message should be **135% minimum** and **170% maximum** of the character height.

Pictograms (703.6)

Pictogram Field (703.6.1)

- Pictograms should have a field height of **6 inches minimum**.
- Characters and braille should **not** be located in the pictogram field.

Finish and Contrast (703.6.2)

- Pictograms and their field should have a non-glare finish.
- Pictograms should contrast with their field with either a light pictogram on a dark field or a dark pictogram on a light field.
- ****Signs are more legible for persons with low vision when characters contrast as much as possible from the background.****
 - o Additional factors that could affect the ease of which text can be distinguished from its background includes, shadows cast by lighting sources, surface glare, and the uniformity of the text and its background colors and textures.

Text Descriptors (703.6.3)

- Pictograms should have text descriptors located directly below the pictogram field.

Symbols of Accessibility (703.7)

Finish and Contrast (703.7.1)

- Symbols of accessibility and their background should have a non-glare finish. Symbols of accessibility should contrast with their background with either a light symbol on a dark background or a dark symbol on a light background.
- ****Signs are more legible for persons with low vision when characters contrast as much as possible from the background.****
 - o Additional factors that could affect the ease of which text can be distinguished from its background includes, shadows cast by lighting sources, surface glare, and the uniformity of the text and its background colors and textures.

Symbols (703.7.2)

- International Symbol of Accessibility



Detectable Warnings (Raised Dome Warnings on Curb Cut Outs or Drop Offs) (705)

Detectable warnings (a standardized surface feature built in or applied to walking surfaces or other elements to warn of hazards) should consist of a surface of truncated domes.

Dome Size (705.1.1)

- Truncated domes in a detectable warning surface should have a base diameter of **0.9-inch minimum and 1.4 inches maximum**, a top diameter of **50%** of the base diameter minimum to **65% of the base diameter maximum**, and a **height of 0.2 inch**.

Dome Spacing (705.1.2)

- Truncated domes in a detectable warning surface should have a **center-to-center spacing of 1.6 inches minimum and 2.4 inches maximum**, measured between the most adjacent domes on a square grid.
- They should have a **base-to-base spacing of 0.65-inch minimum**, measured between the most adjacent domes on a square grid.

Contrast (705.1.3)

- Surfaces should contrast visually with adjacent walking surfaces either light-on-dark, or dark-on-light.

Assembly Areas, Wheelchair Spaces, Companion Seats, and Designated Aisle Seats (802 and 221)

General (221.1)

- Assembly areas should provide wheelchair spaces, companion seats, and designated aisle seats complying with the guidelines listed below.

Wheelchair Spaces (221.2 and 802.1)

- Wheelchair spaces complying with the following should be provided in assembly areas with fixed seating.

Number and Location (221.2.1)

- General Seating
 - o Wheelchair spaces complying with Wheelchair Spaces (802.1) should be provided in accordance with the table, Number of Wheelchair Spaces in Assembly Areas, below.

Number of Wheelchair Spaces in Assembly Areas

Number of Seats	Minimum Number of Required Wheelchair Spaces
4 to 25	1
26 to 50	2
51 to 150	4
151 to 300	5
301 to 500	6
501 to 5000	6, plus 1 for each 150, or fraction thereof, between 501 through 5000
5001 and over	36, plus 1 for each 200, or fraction thereof over 5000

Integration (221.2.2)

- Wheelchair spaces should be an integral part of the seating plan.

Floor or Ground Surface (802.1.1)

- Should comply with Floor or Ground Surfaces (302). Changes in level are **not** permitted.
- Slopes **not** steeper than **1:48** should be allowed.

Width (802.1.2)

- A single wheelchair space should be **36 inches wide minimum**.
- Where two adjacent wheelchair spaces are provided, each wheelchair space should be **33 inches wide minimum**.

Depth (802.1.3)

- Where a wheelchair space can be entered from the front or rear, the space should be **48 inches deep minimum**.
- Where a wheelchair space can be entered only from the side, the space should be **60 inches deep minimum**.

Approach (802.1.4)

- Wheelchair spaces should adjoin accessible routes.
- Accessible routes should **not** overlap wheelchair spaces.
- Because accessible routes serving the wheelchair spaces are not allowed to overlap the clear floor space at the wheelchair spaces, access to any wheelchair space cannot be through another wheelchair space.

Overlap (802.1.5)

- Wheelchair spaces should **not** overlap aisle width required for assembly occupancy.
- When the aisle/path is wider than the requirements, the wheelchair space may intrude to that portion of the aisle that is provided in excess of the required aisle width.

Lines of Sight (221.2.3 and 802.2)

This includes lines of sight to screens, performance area, or playing field for spectators in wheelchair spaces.

Lines of Sight and Dispersion (221.2.3)

- Wheelchair spaces should provide lines of sight that comply with the guidelines listed below.
- In providing lines of sight, **wheelchair spaces should be dispersed**.
- Wheelchair spaces should provide spectators with choices of seating locations and viewing angles that are **substantially equivalent to, or better than**, the choices of seating locations and viewing angles of all other spectators.
- When the number of wheelchair spaces required by the table above has been met, further dispersion should not be required.
- Advisory: Individuals who use wheelchairs must be provided equal access so that their experience is substantially equivalent to that of other members of the audience.
- Horizontal Dispersion
 - o Wheelchair spaces should be **dispersed horizontally**
 - o Exceptions
 - Exception 1: Horizontal dispersion should not be required in assembly areas with 300 or fewer seats if the companion seats and wheelchair spaces are located within the 2nd or 3rd quartile of the total row length. Immediate aisles should be included in determining the total row length.
 - If the row length in the 2nd and 3rd quartile of a row is insufficient to accommodate the required number of companion seats, wheelchair

spaces should be allowed to be located in the 1st and 4th quartile of the row.

- Exception 2: In row seating, two wheelchair spaces should be allowed to be located side-by-side.
- Vertical Dispersion
 - Wheelchair spaces should be **dispersed vertically** at **varying distances** from the screen, performance area, or field.
 - In addition, **wheelchair spaces should be located in each balcony or mezzanine** that is located on an accessible route.
 - Exceptions
 - Exception 1: Vertical dispersion should **not** be required in assembly areas with 300 or fewer seats if the wheelchair spaces provide viewing angles that are equivalent to, or better than, the average viewing angle provided in the facility.
 - Exception 2: In bleachers, wheelchair spaces should **not** be required to be provided in rows other than rows at points of entry to bleacher seating.
 - Advisory: When wheelchair spaces are dispersed vertically in an assembly facility, they are placed at different locations within the seating area from front-to-back so that the distance from the focal point is varied among wheelchair spaces.
 - Advisory: Points of entry to bleacher seating may include, but is not limited to, cross aisles, concourses, vomitories, and entrance ramps and stairs. Vertical, center, or side aisles adjoining bleacher seating that are stepped or tiered are **not** considered entry points.

Lines of Sight Over Seated Spectators (802.2.1)

- Where spectators are provided lines of sight over the heads of spectators seated in the first row in front of their seats, spectators seated in **wheelchair spaces should be allowed lines of sight over the heads** of seated spectators in the first row in front of wheelchair spaces.
- Where spectators are provided lines of sight over the shoulders and between the heads of spectators seated in the first row in front of their seats, spectators seated in **wheelchair spaces should be allowed lines of sight over the shoulders and between the heads** of seated spectators in the first row in front of wheelchair spaces.

Lines of Sight Over Standing Spectators (802.2.2)

- Where standing spectators are provided lines of sight over the heads of spectators standing in the first row in front of their seats, spectators in wheelchair spaces **should be allowed lines of sight over the heads** of standing spectators in the first row in front of wheelchair spaces.
- Where spectators are provided lines of sight over the shoulders and between the heads of spectators standing in the first row in front of their seats, spectators in wheelchair spaces **should be allowed lines of sight over the shoulders and between the heads** of standing spectators in the first row in front of wheelchair spaces

Companion Seats (221.3 and 802.3)

- At least **one** companion seat that complies with the guidelines listed below, should be provided **for each** wheelchair space that is required by the above table, Number of Wheelchair Spaces in Assembly Areas.

Alignment (802.3.1)

- While in row seating, companion seats should be located to provide shoulder alignment with adjacent wheelchair spaces.
- Shoulder alignment point of the wheelchair space should be measured **36 inches from the front of the wheelchair space**.
- The floor surface of the companion seat should be at the **same elevation** as the floor surface of the wheelchair space.

Type (802.3.2)

- Companion seats should be equivalent in size, quality, comfort, and amenities to the seating in the immediate area.
- These seats should also be allowed to be movable.

Designated Aisle Seats (221.4 and 802.4)

- At least **5%** of the total number of aisle seats provided should comply with the guidelines listed below and should be the aisle seats located closest to accessible routes.

Armrests (802.4.1)

- When armrests are provided on the seating in the immediate area, **folding or retractable armrests** should be provided on the aisle side of the seat.

Identification (802.4.2)

- Each designated aisle seat should be identified by a sign or marker.
- Seats with folding armrests are intended for use by those who have difficulty walking. Consider identification on seats with signs that contrast (light-on-dark or dark-on-light) that are also photo luminescent.

Lawn Seating (221.5)

- Lawn seating areas and exterior overflow seating areas, where fixed seats are **not** provided, should connect to an accessible route.

Dining Surfaces and Work Surfaces (902)

Dining surfaces include but are **not limited to**, bars, tables, lunch counters and booths.

Work surfaces include writing surfaces, study carrels, student lab stations, baby changing and other tables or fixtures for personal grooming.

Clear Floor or Ground Space (902.2)

- A clear floor space complying with Clear Floor or Ground Space (305) positioned for a forward approach should be provided.
- Knee and toe clearance should comply with Knee and Toe Clearance (306).

Height (902.3)

- The tops of dining surfaces and work surfaces should be **28 inches minimum** and **34 inches maximum** above the finish floor or ground.

Benches (903)

Clear Floor or Ground Space (903.2)

- A clear floor or ground space complying with 305 should be provided and should be positioned at the end of the bench seat and parallel to the short axis of the bench.

Size (903.3)

- Benches should have seats that are **42 inches long minimum** and **20 inches deep minimum** and **24 inches deep maximum**.

Back Support (903.4)

- Benches should provide back support or should be affixed to a wall.
- Back support should be **42 inches long minimum** and should extend from a point **2 inches maximum above** the seat surface to a point **18 inches minimum above** the seat surface.
- Back support should be **2½ inches maximum** from the rear edge of the seat measured horizontally.

Height (903.5)

- The top of the bench seat surface should be **17 inches minimum** and **19 inches maximum** above the finish floor or ground.

Structural Strength (903.6)

- Allowable stresses should **not** be exceeded for materials used when a vertical or horizontal force of **250 pounds** is applied at any point on the seat, fastener, mounting device, or supporting structure.

Wet Locations (903.7)

- When installed in wet locations, the surface of the seat should be slip resistant and should **not** accumulate water.
-

Recreational Boating Facilities (235 and 1003)

Boarding Piers at Boat Launch Ramps (235.3)

- Where boarding piers are provided at boat launch ramps, at least **5%**, but **no fewer than one**, of the boarding piers should comply with Boarding Piers at Boat Launch Ramps (1003.3.2) listed below.

Accessible Routes (1003.2)

- Accessible routes serving recreational boating facilities, including gangways, and floating piers, should comply with Chapter 4, except as modified by the exceptions listed below.
 - o Exception 1: Where an existing gangway or series of gangways is replaced or altered, an increase in the length of the gangway should **not** be required to comply, unless required by 202.4 (listed below).
 - An alteration that affects, or could affect the usability or access to an area containing a primary function should be made to ensure that, to the maximum extent practicable, the path of travel to the area that was altered, including the restrooms, drinking fountains, are readily accessible to and usable by individuals with disabilities, unless these alterations are disproportionate to the overall alterations in terms of cost and scope, as determined under the criteria established by the Attorney General.
 - o Exception 2: Gangways should **not** be required to comply with the maximum rise specified in Rise (405.6).
 - o Exception 3: Where the total length of a gangway or series of gangways serving as part of a required accessible route is **80 feet minimum**, gangways should **not** be required to comply with Slope (405.2).
 - o Exception 5: Where gangways connect to transition plates, landings specified by Landings (405.7) should **not** be required.
 - o Exception 6: Where gangways and transition plates connect and are required to have handrails, handrail extensions should **not** be required. Where handrail extensions are provided on gangways or transition plates, the handrail extensions should **not** be required to be parallel with the ground or floor surface.
 - o Exception 7: The cross slope specified in Automatic and Power-Assisted Doors and Gates (403.3) and Cross Slope (405.3) for gangways, transition plates, and floating piers that are part of accessible routes should be measured in the static position.
 - o Exception 8: Changes in level complying with Beveled (303.3) and Ramps (303.4) should be permitted on the surfaces of gangways and boat launch ramps.

Boarding Piers at Boat Launch Ramps (1003.2.2)

- Accessible routes serving floating boarding piers should be allowed to use Exceptions 1, 2, 5, 6, 7, and 8 that are listed above.

- Where the total length of the gangway or series of gangways serving as part of a required accessible route is **30 feet minimum**, gangways should **not** be required to comply with Slope (405.2).
- Where the accessible route serving a floating boarding pier or skid pier is located within a boat launch ramp, the portion of the accessible route located within the boat launch ramp should **not** be required to comply with Ramps (405).

Clearances (1003.3)

Although the minimum width of the clear pier space is **60 inches, it is recommended that piers be **wider than 60 inches** to improve the safety for persons with disabilities. **

Boarding Pier Clearances (1003.3.2)

- Boarding piers at boat launch ramps should provide clear pier space **60 inches wide minimum** and should extend the full length of the boarding pier.
- **Every 10 feet maximum** of linear pier edge should contain **at least one** continuous clear opening **60 inches wide minimum**.
- Exceptions
 - o Exception 1: The clear pier space should be allowed to be **36 inches wide minimum** for a **length of 24 inches maximum** provided that **multiple 36 inch wide segments** are separated by segments that are **60 inches wide minimum** and **60 inches long minimum**.
 - o Exception 2: Edge protection should be allowed at the continuous clear openings provided that it is **4 inches high maximum** and **2 inches wide maximum**.
- These requirements do **not** establish a minimum length for accessible boarding piers at boat launch ramps. The accessible boarding pier should have a length of at least equal to the other boarding piers that are provided.
 - o If no other boarding pier is provided, the accessible pier should have a length equal to what would have been provided if no access requirements applied.
- The entire length of accessible boarding piers would be required to comply with the same technical provisions that apply to accessible boat slips.
 - o I.e., if a 20 foot long accessible boarding pier is provided, the entire 20 feet must comply with the pier clearance requirements.

Exercise Machines and Equipment (236 and 1004)

General (236.1)

- At least **one** of each type of exercise machine and equipment should comply with the guidelines listed below.

Clear Floor Space (1004.1)

- Exercise machines and equipment should have a clear floor space complying with Clear Floor or Ground Space (305) positioned for transfer or for use by an individual seated in a wheelchair.
- Clear floor or ground spaces required at exercise machines and equipment should be allowed to overlap.

****Advisory****

- One clear floor or ground space is allowed to be shared between two pieces of exercise equipment. To optimize space use, designers should carefully consider layout options such as connecting ends of the row and center aisle spaces.
 - The position of the clear floor space may vary greatly depending on the use of the equipment or machine.
-

Fishing Piers and Platforms (237 and 1005)

Accessible Routes (1005.1)

- Accessible routes serving fishing piers and platforms, including gangways and floating piers, should comply with Chapter 4 (Accessible Routes).
- Exceptions
 - o Exception 1: Accessible routes serving floating fishing piers and platforms should be permitted to use Exceptions 1, 2, 5, 6, 7, and 8 in 1003.2 (Accessible Routes).
 - o Exception 2: Where the total length of the gangway or series of gangways serving as part of a required accessible route is **30 feet minimum**, gangways should **not** be required to comply with Slope (405.2).

Railings (1005.2)

Height (1005.2.1)

- At least **25%** of the railings, guards, or handrails should be 34 inches maximum above the ground or deck surface.

Dispersion (1005.2.1.1)

- Railings, guards, or handrails should be dispersed throughout the fishing pier or platform.
- Advisory
 - o Portions of the railings that are lowered to provide fishing opportunities for persons with disabilities must be located in a variety of locations on the fishing pier or platform to give people a variety of locations to fish.
 - o Different fishing locations may provide varying water depths, shade (at certain times of the day), vegetation, and proximity to the shoreline or bank.

Edge Protection (1005.3)

- Where railings, guards, or handrails are provided, edge protection should be provided.
- Advisory
 - o Edge protection is required only where railings, guards, or handrails are provided on a fishing pier or platform.
 - o Edge protection will prevent wheelchairs or other mobility devices from slipping off of the fishing pier or platform.
 - o Extending the deck of the fishing pier or platform **12 inches** where **the 34 inch high railing** is provided is an alternative design, permitting individuals using wheelchairs or other mobility devices to pull into a clear space and move beyond the face of the railing.

Curb or Barrier (1005.3.1)

- Curbs or barriers should extend **2 inches minimum** above the surface of the fishing pier or platform.

Extended Ground or Deck Surface (1005.3.2)

- The ground or deck surface should extend **12 inches minimum** beyond the inside face of the railing.
- Toe clearance should be provided and should be **30 inches wide minimum** and **9 inches minimum** above the ground or deck surface beyond the railing.

Clear Floor or Ground Space (1005.4)

- At each location where there are railings, guards, or handrails, a clear floor or ground space complying with Clear Floor or Ground Space (305) should be provided.
- Where there are no railings, guards, or handrails, at least one clear floor or ground space complying with Clear Floor or Ground Space (305) should be provided on the fishing pier or platform.

Turning Space (1005.5)

- At least one turning space that complies with Size (Circular and T-Shaped) (304.3) should be provided on fishing piers and platforms.
 - o Please refer to this section, and page 16 for a diagram of the measurements and space.

Play Areas (240 and 1008)

General (240.1)

- Play areas for children ages 2 and over should comply with the guidelines listed below.
- Where separate play areas are provided within a site for specific age groups, each play area should comply with the guidelines listed below.

- Exception 2: In existing play areas, where play components are relocated for the purpose of creating safe use zones and the ground surface is not altered or extended for more than one use zone, the play area should **not** be required to comply with Play Areas (240).
- Exception 4: Where play components are altered, and the ground surface is not altered, the ground surface should **not** be required to comply with Ground Surfaces (1008.2.6) unless required by 202.4 (listed below).
 - o An alteration that affects, or could affect the usability or access to an area containing a primary function should be made to ensure that, to the maximum extent practicable, the path of travel to the area that was altered, including the restrooms, drinking fountains, are readily accessible to and usable by individuals with disabilities, unless these alterations are disproportionate to the overall alterations in terms of cost and scope, as determined under the criteria established by the Attorney General.

Additions (240.1.1)

- Where play areas are designed and constructed in phases, the requirements of Play Areas (240), should apply to each successive addition, so when the play area is completed, it complies with all applicable requirements.

Play Components (240.2)

Ground Level Play Components (240.2.1)

- Ground level play components should be provided in the number and types required by the table, Ground Level Play Components Required to be on Accessible Routes listed below.
- Where **two or more** required ground level play components are provided, they should be dispersed throughout the play area and integrated with other play components.

****Advisory****

- Examples of ground level play components may include **spring rockers, swings, diggers, and stand-alone slides**. When distinguishing between the different types of ground level play components, consider the general experience that is provided by the play component.
- Ground level play components accessed by children with disabilities **must be integrated** into the play area.
- Ramps are preferred over transfer systems, since not all children may be able to use, or choose to use transfer systems.
 - o Where ramps are used to connect elevated play components, the **maximum rise** of any ramp run is limited to **12 inches**. When possible, it is encouraged that provided ramps should have a slope less than the **1:12 maximum**.
 - o Berms or sculpted dirt may be used to provide elevation and may be part of an accessible route to composite play structures.

Minimum Number and Types (240.2.1.1)

- Where ground level play components are provided, at least **one** of each type should be on an accessible route and should comply with Play Components (1008.4).

Additional Number and Types (240.2.1.2)

- Where elevated play components are provided, ground level play components should be provided in accordance with the following table and should comply with Play Components (1008.4).
- Exception: If at least 50% of the elevated play components are connected by a ramp and at least 3 of the elevated play components connected by the ramp are different types of play components, the play area should **not** be required to comply with the table, Ground Level Play Components Required to be on Accessible Routes, below.

Ground Level Play Components Required to be on Accessible Routes

Number of Elevated Play Components Provided	Minimum Number of Ground Level Play Components Required to be on an Accessible Route	Minimum Number of Different Types of Ground Level Play Components Required to be on an Accessible Route
1	Not applicable	Not applicable
2 to 4	1	1
5 to 7	2	2
8 to 10	3	3
11 to 13	4	3
14 to 16	5	3
17 to 19	6	3
20 to 22	7	4
23 to 25	8	4
26 and over	8, plus 1 for each additional 3, or fraction thereof, over 25	5

Elevated Play Components (240.2.2)

- Where elevated play components are provided, at least 50% should be on an accessible route and should comply with Play Components (1008.4).

Accessible Routes (1008.2)

- Accessible routes that serve play areas, should comply with Accessible Routes (Chapter 4), and should be allowed to use the exceptions in Ground Level and Elevated Play Components (1008.2.1) and Water Play Components (1008.2.3).
- Where accessible routes serve ground level play components, the vertical clearance should be **80 inches high minimum**.

Accessible routes for the below topics (Ground Level and Elevated Play Components (1008.2.1), Soft Contained Play Structures (1008.2.2), and Water Play Components (1008.2.3)), should be allowed to use the exceptions that are listed.

Ground Level and Elevated Play Components (1008.2.1)

- Exception 1: Transfer systems complying with Transfer Systems (1008.3) should be allowed to connect elevated play components except where **20 or more** elevated play components are provided no more than **25%** of the elevated play components should be allowed to be connected by transfer systems.
- Exception 2: Where transfer systems are provided, an elevated play component should be allowed to connect to another elevated play component as part of an accessible route.

Soft Contained Play Structures (1008.2.2)

- Exception 1: Transfer systems complying with Transfer Systems (1008.3), should be allowed to be used as part of an accessible route.

Water Play Components (1008.2.3)

- Exception 1: Where the surface of the accessible route, clear floor, or ground spaces, or turning spaces serving water play components is submerged, compliance with Floor or Ground Surfaces (302), Slopes (403.3), Slope (405.2), and Cross Slope (405.3), should **not** be required.
- Exception 2: Transfer systems complying with Transfer Systems (1008.3), should be allowed to connect elevated play components in water.
- Advisory
 - o Personal wheelchairs and mobility devices may not be appropriate for submerging in water when using play components in water.
 - o Some may have barriers, motors, and electrical systems that when submerged in water may cause damage to the personal mobility device or wheelchair or may contaminate the water.
 - o Providing an aquatic wheelchair made of non-corrosive materials and designed for access into the water will protect the water from contamination and avoid damage to personal wheelchairs.

Clear Width (1008.2.4)

- Ground Level
 - o At ground level, the clear width of accessible routes should be **60 inches minimum**.
 - o Exceptions
 - Exception 1: In play areas **less than 100 sq. ft.**, the clear width of accessible routes should be allowed to be **44 inches minimum**, if at least one turning space complying with Size (Circular and T-Shaped) (304.3) is provided where the restricted accessible route exceeds **30 feet in length**.

- Please refer to this section, and page 16 for a diagram of the measurements and space.
 - Exception 2: The clear width of accessible routes should be allowed to be **36 inches minimum** for a distance of **60 inches maximum** provided that multiple reduced width segments are separated by segments that are **60 inches wide minimum and 60 inches long minimum**.
- Elevated
 - The clear width of accessible routes connecting elevated play components should be **36 inches minimum**.
 - Exceptions
 - Exception 1: The clear width of accessible routes connected elevated play components should be allowed to be reduced to **32 inches minimum** for a distance of **24 inches maximum** provided that the reduced width segments are separated by segments that are **48 inches long minimum** and **36 inches wide minimum**.
 - Exception 2: The clear width of transfer systems connecting elevated play components should be allowed to be **24 inches minimum**.

Ramps (1008.2.5)

- Ground Level
 - Ramp runs connecting ground level play components should have a running slope **not** steeper than **1:16**.
- Elevated
 - The rise for any ramp run connecting elevated play components should be **12 inches maximum**.
- Handrails
 - Where required on ramps serving play components, the handrails should comply with Handrails (505), except as modified by the below exceptions.
 - Exceptions
 - Exception 1: Handrails should **not** be required on ramps located within ground level use zones.
 - Handrail extensions should **not** be required.
 - Handrail Gripping Surfaces
 - Handrail gripping surfaces with a circular cross section should have an **outside diameter of 0.95-inch minimum** and **1.55 inches maximum**.
 - Where the shape of the gripping surface is non-circular, the handrail should provide an equivalent gripping surface.
 - Handrail Height
 - The top of handrail gripping surfaces should be **20 inches minimum** and **28 inches maximum** above the ramp surface.

Transfer Systems (1008.3)

Advisory

- Where transfer systems are provided, consideration should be given to the distance between the transfer system and the elevated play components.
- Moving between a transfer platform and a series of transfer steps requires extensive exertion for some children. Designers should minimize the distance between the points where a child transfers from a wheelchair or mobility device and where the elevated play components are located.
- Where elevated play components are used to connect to another elevated play component instead of an accessible route, careful consideration should be used in the selection of the play components used for this purpose.

Transfer Platforms (1008.3.1)

- Transfer platforms should be provided where transfer is intended from wheelchairs or other mobility aids.
- Size
 - o Transfer platforms should have level surfaces **14 inches deep minimum** and **24 inches wide minimum**.
- Height
 - o The height of transfer platforms should be **11 inches minimum** and **18 inches maximum** measured to the top of the surface from the ground or floor surface.
- Transfer Space
 - o A transfer space complying with Floor or Ground Surfaces (305.2) and Size (305.3) should be provided adjacent to the transfer platform.
 - o The **48 inch long minimum** dimension of the transfer space should be centered on and parallel to the **24 inch long minimum** side of the transfer platform.
 - o The side of the transfer platform serving the transfer space should be unobstructed.
- Transfer Supports
 - o At least **one** means of support for transferring should be provided.

Transfer Steps (1008.3.2)

- Transfer steps should be provided where movement is intended from transfer platforms to levels with elevated play components required to be on accessible routes.
- Size
 - o Transfer steps should have level surfaces **14 inches deep minimum** and **24 inches wide minimum**.
- Height
 - o Each transfer step should be **8 inches high maximum**.
- Transfer Supports
 - o At least **one** means of support for transferring should be provided.
 - o Advisory

- Transfer supports are required on transfer platforms and transfer steps to assist children when transferring.
 - Examples include: a rope loop, a loop type handle, a slot in the edge of a flat horizontal or vertical member, poles or bars, or D rings on the corner posts.

Play Components (1008.4)

- Ground level play components on accessible routes and elevated play components connected by ramps should comply with the following.

Turning Space (1008.4.1)

- At least **one** turning space complying with Turning Space (304) should be provided on the same level as play components.
- Where swings are provided, the turning space should be located immediately adjacent to the swing.

Clear Floor or Ground Space (1008.4.2)

- Clear floor or ground space that complies with Floor or Ground Surfaces (305.2) and Size (305.3) should be provided at play components.
- Advisory
 - Clear floor or ground spaces, turning spaces, and accessible routes are allowed to overlap within play areas.
 - When play components include a seat or entry point, designs that provide for an unobstructed transfer from a wheelchair or other mobility device are recommended.
 - When designing play components with manipulative or interactive features, consider appropriate reach ranges for children seated in wheelchairs.
 - The table, Children’s Reach Ranges, below has guidance on reach ranges for children seated in wheelchairs. These reach ranges are for forward or side reaches.

Children’s Reach Ranges

Forward or Side Reach	Ages 3 and 4	Ages 5 through 8	Ages 9 through 12
High (maximum)	36 inches	40 inches	44 inches
Low (minimum)	20 inches	18 inches	16 inches

Play Tables (1008.4.3)

- Where play tables are provided, knee clearance **24 inches high minimum, 17 inches deep minimum, and 30 inches wide minimum** should be provided.
- The tops of rims, curbs, or other obstructions should be **31 inches high maximum**.

- Exception: Play tables designed and constructed primarily for children 5 years and younger should not be required to provide knee clearance where the clear floor or ground space required by the above listed requirements is arranged for a parallel approach.

Entry Points and Seats (1008.4.4)

- Where play components require transfer to entry points or seats, the entry points or seats should be **11 inches minimum** and **24 inches maximum** from the clear floor or ground space.
 - o Exception: Entry points of slides should **not** be required to comply with this.

Transfer Supports (1008.4.5)

- Where play components require transfer to entry points or seats, at least one means of support for transferring should be provided.

Outdoor Constructed Features (1011)

Clear Ground Space (1011.2)

Size and Location (1011.2.1)

- The size and location of the clear ground space should be in accordance with the following table, Size and Location Requirements of Clear Ground Space.
- Unless specified in the table, Size and Location Requirements of Clear Ground Space, one full unobstructed side of the clear ground space should adjoin or overlap an outdoor recreation access route or a trail, or another clear ground space.

Size and Location Requirements of Clear Ground Space

Outdoor Constructed Feature	Minimum Size and Location
Picnic tables	36 inches on all usable sides of the table measured from the back edge of the benches.
Fire rings, grills, fireplaces, and wood stoves	48 inches by 48 inches on all usable sides of the fire ring, grill, fireplace, and woodstove. Center the space on each usable side of the grill, fireplace, and woodstove.
Trash and recycling receptacles	36 inches by 48 inches positioned for forward approach to the receptacle opening; or 30 inches by 60 inches positioned for a parallel approach to the receptacle opening
Water hydrants	72 inches by 48 inches with the long side of the space adjoining or overlapping an outdoor recreation access route or trail, as applicable, or another clear ground space.

Outdoor Constructed Feature	Minimum Size and Location
Water hydrants	Locate the space so that the water spout is 11 inches minimum and 12 inches maximum from the rear center of the long side of the space.
Utility and sewage hookups	<p>30 inches by 60 inches with the long side of the space adjoining or overlapping an accessible parking space or pull-up space for recreational vehicles.</p> <p>Locate the space so that the hook-ups are at the rear center of the space.</p> <p>Bollards or other barriers should not obstruct the clear ground space in front of the hook-ups.</p>
Outdoor rinsing showers	<p>60 inches by 60 inches centered on the shower heads.</p> <p>Locate the space so that the shower pedestal or wall with the shower head are at the rear end of the space.</p>
Benches	<p>36 inches by 48 inches positioned near the bench with one side of the space adjoining an outdoor recreation access route or trail, as applicable.</p> <p>The clear ground space should not overlap the outdoor recreation access route or trail, or another clear ground space.</p>
Viewing scopes	<p>36 inches by 48 inches positioned for forward approach to the viewing scope.</p> <p>Provide knee and toe clearance complying with Knee and Toe Clearance (306) under the viewing scope.</p> <p>Locate the space so that the eyepiece is centered on the space.</p>

Surface (1011.2.2)

- The surface of the clear ground space should be **stable, firm, and slip resistant**.
 - o **Stable:** remains unchanged by contaminants or applied force.
 - o **Firm:** resists deformation by either indentations or particles moving on the surface.
 - o **Slip resistant:** provides sufficient frictional counterforce to the forces exerted in walking for safe movements.

Slope (1011.2.3)

- The slope of the clear ground space surface should **not** be steeper than **1:48** in any direction.
- Exception: Where the surface is a material other than asphalt, concrete, or boards, slopes **not** steeper than **1:20** should be allowed when necessary for drainage.

Openings (1011.2.4)

- Openings in the clear ground space surface should **not** allow the passage of a sphere more than **½ inch in diameter**.

Operable Parts (1011.3)

- Operable parts should comply with Height (309.3) and Operation (309.4).
- Exceptions
 - o Exception 1: Fire rings, grills, fireplaces, wood stoves, water hydrants, and water utility hookups should comply with Operation (309.4) to the extent practicable.
 - o Exception 2: Trash and recycling receptacles with hinged lids and controls to keep out large animals should comply with Operation (309.4) to the extent practicable.
 - o Exception 3: Dumpster type trash and recycling receptacles should not be required to comply with Height (309.3) and Operation (309.4).
 - o Exception 4: Sewage hatches should not be required to comply with Height (309.3) and Operation (309.4).

Picnic Tables (1011.4)

Height (1011.4.1)

- The tops of picnic tables should comply with Height (902.3).

Wheelchair Space (1011.4.2)

- Picnic tables should provide at least one wheelchair space for each **24 linear feet of usable table surface perimeter**.
- Wheelchair spaces should be **30 inches minimum** by **48 inches minimum**.
- Wheelchair spaces should be positioned for a forward approach to the table and provide knee and toe clearance that complies with Knee and Toe Clearance (306) under the table.

Fire Rings, Grills, Fireplaces, and Wood Stoves (1011.5)

- Advisory: Fire rings with double walls or insulation on the sides are recommended to prevent burns.

Fire Building Surfaces (1011.5.1)

- Fire building surfaces should be **9 inches minimum** above the ground.

Cooking Surfaces (1011.5.2)

- Where provided, cooking surfaces should be **15 inches minimum** and **34 inches maximum** above the ground.

Raised Edges or Walls (1011.5.2)

- Where fire rings, grills, or fireplaces are constructed with raised edges or walls, the depth of the raised edge or wall should be **10 inches maximum**.

Water Spouts (1011.6)

- Water spouts at water hydrants and water utility hook-ups should be **28 inches minimum** and **36 inches maximum** above the ground.

Viewing Scopes (1011.8)

- Eyepieces on viewing scopes should be **43 inches minimum** and **51 inches maximum** above the ground.

Park Shelters (Referred to as Camp Shelters throughout the ABA manual) (1014)

General (1014.1)

- Exceptions:
 - o Exception 1: When an entity determines that a condition in Conditions for Exceptions (1019) does not allow full compliance with a specific provision in Park Shelters (1014), the park shelter should comply with the provision to the extent practicable.
 - o Exception 2: Park shelters should not be required to comply with Protruding Objects (307).

Entrance (1014.2)

Transfer Access (1014.2.1)

- Where transfer access is provided at the entrance to a park shelter, the entrance should comply with the guidelines listed below.

Clear Ground Space (1014.2.1.1)

- A clear ground space should be provided at the entrance to the park shelter.
- The clear ground space should be **36 inches minimum** by **48 inches minimum** and should be positioned for a parallel approach to the park shelter.
- One full unobstructed side of the clear ground space should adjoin or overlap an outdoor recreation access route or trail, as applicable, or another clear ground space.
- Surface
 - The surface of the clear ground space should be **stable, firm, and slip resistant**.
 - o Stable: remains unchanged by contaminants or applied force.
 - o Firm: resists deformation by either indentations or particles moving on the surface.
 - o Slip resistant: provides sufficient frictional counterforce to the forces exerted in walking for safe movements.
- Slope
 - o The slope of the surface of the clear ground space should **not** be steeper than **1:48** in any direction.

- Exception: Where the surface is a material other than asphalt, concrete, or boards, slopes **not** steeper than **1:20** should be allowed where necessary for drainage.

Floor Height (1014.2.1.2)

- The park shelter floor at the entrance should be **19 inches high maximum** measured from the clear ground space.

Roll-In Access (1014.2.2)

- Where roll in-access is provided at the entrance to a park shelter, the entrance should comply with the guidelines listed below.
- Level or Sloped Entry Route
 - Park shelters providing roll-in access should have a level or sloped entry route that complies with Outdoor Recreation Access Routes (1016) or Trails (1017), as applicable.
- Turning Space
 - A turning space that complies with Size (Circular and T-Shaped) (304.3) should be provided within the park shelter.
 - Please refer to this section, and page 16 for a diagram of the measurements and space.

Floor (1014.3)

Surface (1014.3.1)

- The floor surface should be **stable, firm, and slip resistant**.
 - Stable: remains unchanged by contaminants or applied force.
 - Firm: resists deformation by either indentations or particles moving on the surface.
 - Slip resistant: provides sufficient frictional counterforce to the forces exerted in walking for safe movements.

Slope (1014.3.2)

- The slope of the floor surface should **not** be steeper than **1:48** in any direction.
- Exception: Where the floor surface is a material other than asphalt, concrete, or boards, slopes **not** steeper than **1:20** should be allowed when necessary for drainage.

Viewing Areas (1015)

General (1015.1)

- Exception: In alterations, when an entity determines that a condition in Conditions for Exceptions (1019) does not permit full compliance with a specific provision in Viewing Areas (1015), the viewing area should comply with the provision to the extent practicable.

Clear Ground Space (1015.2)

- Clear ground space should be provided at each distinct viewing location.
- The space should be **36 inches minimum** by **48 inches minimum** and should be positioned for either a forward or parallel approach to the viewing location.
- One full unobstructed side of the space should adjoin or overlap an outdoor recreation access route or trail, as applicable, or another clear ground space.

Viewing Space (1015.3)

- Each distinct viewing location should provide a viewing space that is adjacent to the clear ground space that is required above, through which the interest point is viewable.
- The viewing space should be **32 inches maximum** and **51 inches minimum** high above the ground and should extend the full width of the clear ground space.
- Exception: Guards or other similar safety barriers should be allowed to obstruct the viewing space to the extent that the said obstruction is necessary for the guard or barrier to serve its intended purpose.

Turning Space, Surface, and Slope (1015.4, 1015.5, and 1015.6)

- A turning space that complies with Size (Circular and T-Shaped) (304.3) should be provided.
 - o Please refer to this section, and page 16 for a diagram of the measurements and space.
 - The surface should be **stable, firm, and slip resistant**.
 - o Stable: remains unchanged by contaminants or applied force.
 - o Firm: resists deformation by either indentations or particles moving on the surface.
 - o Slip resistant: provides sufficient frictional counterforce to the forces exerted in walking for safe movements.
 - The slope of the surface should **not** be steeper than **1:48** in any direction.
 - o Exception: Where the surface is a material other than asphalt, concrete, or boards, slopes **not** steeper than **1:20** should be allowed when necessary for drainage.
-

Outdoor Recreation Access Routes (1016)

General (1016.1)

- Exceptions
 - o Exception 1: In alterations to existing camping and picnic facilities and trailheads, when an entity determines that a condition in Conditions for Exceptions (1019) does not allow full compliance with a specific provision in 1016 on a portion of an outdoor recreation access route, the portion of the outdoor recreation access route should comply with the provision to the extent that is practicable.

- Exception 2: At viewing areas, when an entity determines that a condition in Conditions for Exceptions (1019) does not allow full compliance on a portion of an outdoor recreation access route with a specific provision in Outdoor Recreation Access Routes (1016), the portion of the outdoor recreation access route should comply with the provision to the extent practicable.
- Exception 3: Where outdoor recreation access routes are provided within vehicular ways, outdoor recreation access routes should not be required to comply with Passing Spaces (1016.4), Slopes (1016.7), and Resting Intervals (1016.8).

Surface (1016.2)

- The surface of outdoor recreation access routes, passing spaces, and resting intervals should be **stable, firm, and slip resistant**.
 - Stable: remains unchanged by contaminants or applied force.
 - Firm: resists deformation by either indentations or particles moving on the surface.
 - Slip resistant: provides sufficient frictional counterforce to the forces exerted in walking for safe movements.

Clear Width (1016.3)

- The clear width of outdoor recreation access routes should be **36 inches minimum**.

Passing Spaces (1016.4)

- Outdoor recreation access routes with a clear width **less than 60 inches** should provide passing spaces at intervals of **200 feet maximum**.
- Passing spaces and resting intervals should be allowed to overlap.
- Note
 - Consider providing either a **60 inches minimum** clear width on routes or passing spaces at shorter intervals if the clear width is less than **60 inches**, where the route is either, heavily used or adjoins elements that are heavily used, or a boardwalk or otherwise not at the same level as the ground surface adjoining the route.

Size (1016.4.1)

- The passing space should be
 - A space **60 inches minimum** by **60 inches minimum**
or
 - The intersection of two outdoor recreation access routes, therefore providing a T-Shaped space that complies with T-Shaped Space (304.3.2) where the base and the arms of the T-Shaped space extend **48 inches minimum** beyond the intersection. Vertical alignment at the intersection of the outdoor recreation access routes that form the T-Shaped space **should be as flat as possible**.
 - Please refer to this section, and page 16 for a diagram of the measurements and space.

Obstacles (1016.5)

- Obstacles on outdoor recreation access routes, passing spaces, and resting intervals should **not** exceed ½ **inch** in height vertically to the highest point.
- Exception: Where the surface is a material other than asphalt, concrete, or boards, obstacles should be allowed to **not** exceed 1 inch in height vertically to the highest point.
- ****Advisory****
 - o The vertical alignment of joints in concrete, asphalt, or board surfaces can be obstacles.
 - o Natural features such as tree roots and rocks on outdoor recreation access routes can also be obstacles.
 - o Where possible, obstacles that cross the full width of outdoor recreation access routes should be separated by a distance of **48 inches minimum**.

Openings (1016.6)

- Openings in the surface of outdoor recreation access routes should **not** allow the passage of a sphere more than ½ **inch** in diameter.

Slopes (1016.7)

Maximum Running Slope and Segment Length (1016.7.1)

- The running slope of any segment of an outdoor recreation access route should **not** be steeper than **1:10 (10%)**.
- Where the running slope is steeper than **1:20 (5%)**, the maximum length of the segment should be in accordance with the following table, Maximum Running Slope and Segment Length, and a resting interval that complies with Resting Intervals (1016.8) should be provided at the top and bottom of each segment.

Maximum Running Slope and Segment Length

Running Slope of Outdoor Recreation Access Route Segment		Maximum Length of Segment
Steeper than	But not steeper than	
1:20 (5%)	1:12 (8.33%)	50 feet
1:12 (8.33%)	1:10 (10%)	30 feet

- ****Advisory****: Gradual running slopes are more usable by individuals with disabilities. Where the terrain results in steeper running slopes, resting intervals are required more frequently, and when there are less severe running slopes, resting intervals are allowed to be further apart.

Cross Slope (1016.7.2)

- The cross slope should **not** be steeper than **1:48**.

- Exception: Where the surface is a material other than asphalt, concrete, or boards, slopes **not** steeper than **1:20** should be allowed when necessary for drainage.

Resting Intervals (1016.8)

Length (1016.8.1)

- The resting interval should be **60 inches long minimum**.

Width (1016.8.2)

- Where resting intervals are provided within an outdoor recreation access route, resting intervals should be at least as wide as the widest segment of the outdoor recreation access route leading to the resting interval.
- Where resting intervals are provided adjacent to an outdoor recreation access route, the resting interval should be **36 inches wide minimum**.

Slope (1016.8.3)

- Resting intervals should have slopes that are **not** steeper than **1:48** in any direction.
- Exception: Where the surface is a material other than asphalt, concrete, or boards, slopes **not** steeper than **1:20** should be allowed when necessary for drainage.

Turning Space (1016.8.4)

- Where resting intervals are provided adjacent to an outdoor recreation access route, a turning space that complies with T-Shaped Space (304.3.2) should be provided.
 - o Please refer to this section, and page 16 for a diagram of the measurements and space.
- Vertical alignment between the outdoor recreation access route, turning space, and resting interval **should be as flat as possible**.

Protruding Objects (1016.9)

- Constructed elements on outdoor recreation access routes, passing spaces, and resting intervals should comply with Protruding Objects (307).

Trails (1017)

General (1017.1)

- Exceptions
 - o Exception 1: When an entity determines that a condition in Conditions for Exceptions (1019) does not allow full compliance with a specific provision in Trails (1017) on a portion of a trail, the portion of the trail should comply with the provision to the extent practicable.

- Exception 2: After applying Exception 1, when an entity determines that it is impracticable for the entire trail to comply with Trails (1017), the trail should not be required to comply with Trails (1017).
- ****Advisory****
 - An entity must apply Exception 1 before using Exception 2.
 - The entity should consider the portions of the trail that can and cannot fully comply with the specific provisions in Trails (1017) and the extent of compliance where full compliance cannot be achieved when determining whether it would be impracticable for the entire trail to comply with Trails (1017).

Surface (1017.2)

- The surface of trails, passing spaces, and resting intervals should be **stable, firm, and slip resistant**.
 - Stable: remains unchanged by contaminants or applied force.
 - Firm: resists deformation by either indentations or particles moving on the surface.
 - Slip resistant: provides sufficient frictional counterforce to the forces exerted in walking for safe movements.

Clear Tread Width (1017.3)

- The clear tread width of trails should be **36 inches minimum**.

Passing Spaces (1017.4)

- Trails with a clear tread width less than **60 inches** should provide passing spaces at **intervals of 1000 feet maximum**.
 - Where the full length of a trail does not comply with Trails (1017), a passing space should be located at the end of the trail segment that fully complies with Trails (1017). Passing spaces and resting intervals should be allowed to overlap.
 - ****Advisory****
 - Entities should consider providing either a **60 inches minimum** clear tread width or passing spaces at shorter intervals if the clear tread width is **less than 60 inches**, where a trail is
 - Heavily used
- or**
- A boardwalk or otherwise **not** at the same level as the ground surface adjoining the trail.
 - Where the full length of the trail does not fully comply with Trails (1017), locating a passing space at the end of the trail segment that fully complies with Trails (1017) enables a person who uses a mobility device to turn and exit the trail.

Size (1017.4.1)

- The passing space should be either
 - o A space **60 inches minimum** by **60 inches minimum**
or
 - o The intersection of two outdoor recreation access routes, therefore providing a T-Shaped space that complies with T-Shaped Space (304.3.2) where the base and the arms of the T-Shaped space extend 48 inches minimum beyond the intersection. Vertical alignment at the intersection of the outdoor recreation access routes that form the T-Shaped space **should be as flat as possible**.
 - Please refer to this section, and page 16 for a diagram of the measurements and space.

Tread Obstacles (1017.5)

- Tread obstacles on trails, passing spaces, and resting intervals should **not** exceed $\frac{1}{2}$ **inch in height** vertically to the highest point.
- Exception: Where the surface is a material other than asphalt, concrete, or boards, obstacles should be allowed to **not** exceed 1 inch in height vertically to the highest point.
- ****Advisory****
 - o The vertical alignment of joints in concrete, asphalt, or board surfaces can be obstacles.
 - o Natural features such as tree roots and rocks on outdoor recreation access routes can also be obstacles.
 - o Where possible, obstacles that cross the full width of outdoor recreation access routes should be separated by a distance of **48 inches minimum**.

Openings (1017.6)

- Openings in the surface of trails, passing spaces, and resting intervals should **not** allow the passage of a sphere more than $\frac{1}{2}$ **inch in diameter**.

Slopes (1017.7)

Maximum Running Slope and Segment Length (1017.7.1)

- **Not** more than **30%** of the total length of a trail should have a running slope steeper than **1:12 (8.33%)**.
- The running slope of any segment of a trail should **not** be steeper than **1:8 (12%)**.
- Where the running slope of a segment of a trail is steeper than **1:20 (5%)**, the maximum length of the segment should be in accordance with the following table, Maximum Running Slope and Segment Length, and a resting interval that complies with Resting Intervals (1017.8) should be provided at the top and bottom of each segment.

Maximum Running Slope and Segment Length

Running Slope of Trail Segment		Maximum Length of Segment
Steeper than	But not steeper than	
1:20 (5%)	1:12 (8.33%)	200 feet
1:12 (8.33%)	1:10 (10%)	30 feet
1:10 (10%)	1:8 (12%)	10 feet

- ****Advisory****: Gradual running slopes are more usable by individuals with disabilities. Where the terrain results in steeper running slopes, resting intervals are required more frequently, and when there are less severe running slopes, resting intervals are allowed to be further apart.

Cross Slope (1017.7.2)

- The cross slope should **not** be steeper than **1:48**.
- Exception: Where the surface is a material other than asphalt, concrete, or boards, slopes **not** steeper than **1:20** should be allowed when necessary for drainage.

Resting Intervals (1017.8)

Length (1017.8.1)

- The resting interval should be **60 inches long minimum**.

Width (1017.8.2)

- Where resting intervals are provided within the trail tread, resting intervals should be at least as wide as the widest segment of the trail tread leading to the resting interval.
- Where resting intervals are provided adjacent to the trail tread, the resting interval clear width should be **26 inches minimum**.

Slope (1017.8.3)

- Resting intervals should have slopes **not** steeper than **1:48** in any direction.
- Exception: Where the surface is a material other than asphalt, concrete, or boards, slopes **not** steeper than **1:20** should be allowed when necessary for drainage.

Turning Space (1017.8.4)

- Where resting intervals are provided adjacent to the trail tread, a turning space that complies with T-Shaped Space (304.3.2) should be provided.
 - o Please refer to this section, and page 16 for a diagram of the measurements and space.
- Vertical alignment between the outdoor recreation access route, turning space, and resting interval **should be as flat as possible**.

Protruding Objects (1017.9)

- Constructed elements on trails, passing spaces, and resting intervals should comply with Protruding Objects (307).

Trailhead Signs (1017.10)

- Trail information signs at trailheads should include the following
 - o Length of the trail or trail segment
 - o Surface type
 - o Typical and minimum tread width
 - o Typical and maximum running slope
 - o Typical and maximum cross slope.

Conditions for Exceptions (1019)

- Exceptions to specific provisions in Outdoor Constructed Features (1011), Park Shelters (1014), Viewing Areas (1015), Outdoor Recreation Access Routes (1016), and Trails (1017) should be allowed when an entity determines that any of the following conditions does not permit full compliance with the provision:
 1. Compliance is not practicable due to terrain.
 2. Compliance cannot be accomplished with the prevailing construction practices.
 3. Compliance would fundamentally alter the function or purpose of the facility or setting.
 4. Compliance is limited or precluded by any of the following laws, or by decisions or opinions issued or agreements executed pursuant to any of the following laws:
 - Endangered Species Act (16 U.S.C. §§ 1531 et seq.)
 - National Environmental Policy Act (42 U.S.C §§ 4321 et seq.)
 - National Historic Preservation Act (16 U.S.C §§ 470 et seq.)
 - Wilderness Act (16 U.S.C §§ 1131 et seq.)

or

- Other federal, state, or local law the purpose of which is to preserve threatened or endangered species; the environment; or archaeological, cultural, historical, or other significant natural features.

References

The above information has been adapted from the following references:

Department of Justice. (2010). 2010 ADA standards for accessible design.

<https://www.ada.gov/regs2010/2010ADAStandards/2010ADAStandards.pdf>

U.S. Access Board (2015). Architectural barriers act (ABA) standards (2015).

<https://www.access-board.gov/files/aba/ABAstandards.pdf>

All photos/images have been created by AshleyMarie Hirdler (author) or adapted from the above references.

Recommendations for County Parks

Overall, there are many good things that are being done at the county parks. It was initially difficult to find the recommendations, as there isn't anything at the parks that are glaring and stand out for accessibility concerns. The most common accessibility concerns include the drop off that happens at the park shelters due to runoff and erosion that happens.

The items provided in this list were developed by myself, AshleyMarie Hirdler, OTDS, a student of occupational therapy, with collaboration of the leader of the Parks and Environmental Services Division. These are recommendations for increased accessibility. There are going to be some recommendations that may not be feasible, due to terrain, or altering the intended purpose of the area (such as the interactive natural play area). In these instances, it is alright to not make recommendations, however making things accessible to the extent practicable is required.

#1 County Park

Meeting Standards

- Accessible restrooms
- Picnic tables
- Grills
- Accessible routes
- Adequate turnaround space at bird observation platform
- Room for accessible parking spaces
- Brochure holder height

Recommendations for Increased Accessibility (ordered by importance)

Priority:

- Drop off on edges of park shelter.
 - o Possibly adding gravel to raise at a slight slope to raise the path to meet the park shelter floor level.
- Identification of accessible parking spaces.
- Ensuring that paths remain firm and stable, which may require additional gravel or other means. Otherwise having a turnaround space and signage when the path would then become inaccessible.

Important but not urgent:

- Depth of bench seats.
 - o Bird observation bench is 18 inches, and other benches are 16 inches. Guidelines recommend 20-inch seat depths.
- Signage stating what is accessible versus what is not (if there are additional areas that are not accessible).

As available:

- Water fountain (hand pump).
 - o When/if electricity is provided, provide a drinking fountain that is accessible.
 - o This currently is something that would fall under an exception, as it is not feasible at this time to provide it.

#2 County Park

Meeting Standards

- Accessible restrooms
- Picnic tables
 - o The picnic table that is off of the hiking trail is accessible
 - o The picnic table that is at the entrance to the park is also accessible, except for the height from the ground (see below).
- Accessible routes
- Room for accessible parking spaces
- Brochure holder height
- Boardwalks

Recommendations for Increased Accessibility (ordered by importance)

Priority:

- Picnic table at the entrance of the park
 - o There looks to be some erosion of the ground around the picnic table, which makes the height 36 inches from the ground. Guidelines state that the top should be 28 inches to 34 inches. Possible to add gravel, dirt, or other material here to raise the ground level up to make accessible.
- Gate at the front entrance
 - o Although the space is accessible with measurements, it is off of the accessible path, and may be difficult to access the route past the gate. Making the current path accessible would help with this.
- Ensuring that paths remain firm and stable, which may require additional gravel or other means. Otherwise having a turnaround space and signage when the path would then become inaccessible.

Important but not urgent:

- Depth and height of bench seat on boardwalk.
 - o Benches are 18 inches. Guidelines recommend 20-inch seat depths.
 - o The height of the bench is 20 inches. The guidelines recommend 17 inches to 19 inches.
- Signage stating what is accessible versus what is not (if there are additional areas that are not accessible).

As available:

- Bollards at the boardwalk.
 - o Although they are accessible with the measurements, they may be difficult to access the boardwalk and other accessible routes.

#3 County Park

Meeting Standards

- Accessible restrooms
- Picnic tables
- Grills
- Accessible routes (paved, gravel and mowed)
- Room for accessible parking spaces
- Brochure holder height
- Drinking/water fountain
- Boardwalk and turnaround/overlook spaces
- Floating dock
- Interactive play area ground cover (woodchips)
- Entrance to interactive play area
- Anti Glare glass signage

Recommendations for Increased Accessibility (ordered by importance)

Priority:

- Drop off on edges of park shelter.
 - o Possibly adding gravel to raise at a slight slope to raise the path to meet the park shelter floor level.
- Ensure accessible parking spaces are identified at other parking areas throughout.
- Ensuring that paths remain firm and stable, which may require additional gravel or other means. Otherwise having a turnaround space and signage when the path would then become inaccessible.

Important but not urgent:

- Depth of bench seats.
 - o Benches are 16 inches. Guidelines recommend 20-inch seat depths.
- Signage stating what is accessible versus what is not (if there are additional areas that are not accessible).

Future Development

- Ensuring that there are accessible parking spaces at all new parking areas.
- When installing gates for a dog park, recommend making a double gate entry (with a 60 inch by 60 inch space between gates) for ease of use for those with disabilities, but also gives a place for dog owners to leash pets before leaving.
- Boardwalks that are 60 inches across are considered accessible and leave areas for turn around as needed on the boardwalk.
- If there are going to be developments that are not accessible, ensure that signage is posted stating such, and providing adequate turnaround space.

#4 County Park

Meeting Standards

- Accessible restrooms
- Picnic tables
- Grills
- Accessible routes
- Accessible parking spaces (and identification)
- Brochure holder height
- Drinking/water fountain
- Entrance gate

Recommendations for Increased Accessibility (ordered by importance)

Priority:

- Drop off on edges of park shelter.
 - o Possibly adding gravel to raise at a slight slope to raise the path to meet the park shelter floor level.
- Checking possible erosion from traffic and weather conditions under picnic benches that do not have concrete or other hard surfaces under them.
 - o Making sure that the top of the picnic table is 28 inches to 34 inches from the ground.
- Ensuring that paths remain firm and stable, which may require additional gravel or other means. Otherwise having a turnaround space and signage when the path would then become inaccessible.

Important but not urgent:

- Depth of bench seats.
 - o Benches are 16 inches. Guidelines recommend 20-inch seat depths.
- Signage stating what is accessible versus what is not (if there are additional areas that are not accessible).

Future Development

- Ensure the number of parking spaces to accessible spaces are included in increased parking.
- At trail heads, ensure that signage is posted to show what areas are accessible versus not accessible.
- Ensure that exercise machines/equipment is on the accessible route.

#5 County Park

Meeting Standards

- Accessible restrooms
- Picnic tables
- Grills
- Accessible routes
 - o Paved and firm/stable routes
- Accessible parking spaces (and identification)
- Brochure holder height
- Stair treads and risers meet measurement guidelines
- Constructed bench on stairs to fishing pier
- Fishing pier
 - o Railings are lowered throughout the fishing pier, allowing access.
 - o There is adequate turning space.
 - o Clear floor/ground space is also provided.

Recommendations for Increased Accessibility (ordered by importance)

Priority:

- Drop off on edges of park shelter.
 - o Possibly adding gravel to raise at a slight slope to raise the path to meet the park shelter floor level.
- Ensuring that paths remain firm and stable, which may require additional gravel or other means. Otherwise having a turnaround space and signage when the path would then become inaccessible.

Important but not urgent:

- Depth of bench seats.
 - o Benches are 16 inches. Guidelines recommend 20-inch seat depths.
- Signage stating what is accessible versus what is not (if there are additional areas that are not accessible).

As available:

- Stair risers.
 - o They are currently open risers, and those are not permitted, although stairs overall meet guidelines otherwise.
 - o This may not be a feasible modification, and that is alright, it should then just be posted on signage or elsewhere where the alternative is to get to the fishing pier.
- Handrail on stairs.
 - o The stairs are not considered accessible, due to the open risers (see above). Therefore, the handrail is not required to meet accessibility requirements.

However, if the stairs were to be modified and become accessible, the handrail would need to be modified as well.

- Water fountain (hand pump).
 - When/if electricity is provided, provide a drinking fountain that is accessible.
 - This currently is something that would fall under an exception, as it is not feasible at this time to provide it.

#6 County Park

Meeting Standards

- Accessible restrooms
- Picnic tables
- Grills
- Accessible routes
- Accessible parking spaces (and identification)
- Brochure holder height
- Boardwalks

Recommendations for Increased Accessibility (ordered by importance)

Priority:

- Drop off on edges of park shelter.
 - o Possibly adding gravel to raise at a slight slope to raise the path to meet the park shelter floor level.
- Ensuring that paths remain firm and stable, which may require additional gravel or other means. Otherwise having a turnaround space and signage when the path would then become inaccessible.

Important but not urgent:

- Signage stating what is accessible versus what is not (if there are additional areas that are not accessible).

As available:

- Bollards at the boardwalk.
 - o Although they are accessible with the measurements, they may be difficult to access the boardwalk and other accessible routes.

Name of Grant	Entity	Dates & Contact Information	Amount	Important Details
Federal Recreational Trail Program	MN DNR and Federal Highway Trust Fund	<p>Application due in February</p> <p>Dan Golner, 651-259-5599 (as of 4/13/2022)</p> <p>https://www.dnr.state.mn.us/grants/recreation/trails_federal.html</p>	<p>Minimum request: \$2,500</p> <p>Maximum request: \$150,000</p> <p>A 25% cash or in-kind match is required (reimbursement cannot be used for payroll).</p>	<p>The amount of funding is a reimbursement, so products need to be paid for prior to the grant.</p> <p>This funding can be used for, motorized and non-motorized trail projects, maintenance/restoration of existing recreational trails, development/rehabilitation of trail linkages (including trail head facilities)</p>
Parks and Trails Legacy Grant Program	MN DNR and Greater MN Regional Parks and Trails Commission (GMRPTC)	<p>Application due date varies, although most recent closes in May 2022.</p> <p>Mai Neng Moua, 651-259-5638 (as of 4/13/2022)</p> <p>https://www.gmrptcommission.org/</p>	Amount varies	<p>Park must have a master plan, and be a part of the GMRPTC.</p> <p>Must fulfill a pillar of the Legacy Plan; Connect People to the Outdoors, Acquire Land Create Opportunities, Take Care of What We Have, Coordinate Among Partners.</p> <p>This funding can be used for many things including, rehabilitation and redevelopment of existing facilities, accessibility enhancements</p>

Name of Grant	Entity	Dates & Contact Information	Amount	Important Details
Hydro Flask: Parks for All	Hydro Flask and National Park Trust	<p>Closed for 2022, however information for 2023 comes out in August 2022.</p> <p>https://www.hydroflask.com/parks-for-all</p> <p>PFA@hydroflask.com.</p>	Unknown	Must be dedicated to building, restoring, maintaining, or providing more equitable access to, or education around, parks and recreational public lands and/or beaches and coastal areas
American Trails and Trails Move People Coalition Trail Fund	American Trails	<p>Annually, April 15th. Awards announced by May 15th.</p> <p>https://www.americantrails.org/apply-for-the-trail-fund</p> <p>trailfund@americantrails.org</p>	<p>Amount varies. It states to list the amount that is needed, and funding is awarded based on application, what is needed, and maintenance/resources required for trails. States, \$2,000 to \$15,000. Requires a cash or in-kind match of 20%</p>	Funding is only available for trail maintenance, research, and stewardship training,

Name of Grant	Entity	Dates & Contact Information	Amount	Important Details
Outdoor Recreation Grant Program	MN DNR, Land & Water Conservation Fund, and Natural & Scenic Area Grant Program	Closed for 2022. However, the application due date was in March. Mai Neng Moua, 651-259-5638 (as of 4/13/2022) https://www.dnr.state.mn.us/grants/recreation/outdoor_rec.html	Reimbursed up to 50% of the project, with a max of \$300,000.	The amount of funding is a reimbursement, so products need to be paid for prior to the grant. NOT for Greater Minnesota Regional Parks Park acquisition and/or development/redevelopment including, park trails, picnic shelters, playgrounds, boat accesses, and fishing piers.

This is not an extensive list of grants that are available. These are just a few possible grants that could be applied to for funding for accessibility modification

Thank you for visiting our County Parks!

Are there concerns or needs with
accessibility that you
noticed?

Let us know by scanning
the QR code!



With any other questions or concerns please contact:

Parks Director at 555-5555

or

visit the *** County Parks Facebook Page.