

ADA AND UNIVERSAL DESIGN IN PARKS AND RECREATION: Accessibility Audit of City Central Park Walker, MI



Kim M. Frost, Access Specialist
Disability Advocates of Kent County
6/25/2013

*Photo courtesy Marylu Dykstra, Disability
Advocates of Kent County.*



Frank Wash
Community Development Director
City of Walker
4243 Remembrance Rd. NW
Walker, MI 49534

June 25, 2013

RE: Accessibility Audit and Training, City Central Park, Walker

Dear Mr. Wash:

Our audit of City Central Park, conducted on June 5, 2013, along with our evaluation and recommendations, are complete. The audit evaluated park facilities and infrastructure based on the technical requirements found in the Americans with Disabilities Act, along with Universal Design principles for barrier free access.

For each type of facility audited, the report contains all of the applicable technical requirements and standards, a discussion of methodology, observations of current conditions, and recommendations for improvements.

Appendices to the report contain the full technical guidelines, proposed technical guidelines used in evaluation, and several additional useful evaluation tools.

I am pleased that DAKC could participate in the continued improvement of Walker parks and recreation facilities. If you have any questions, please contact me at (616) 949-1100 ext 257, or via email at kim.f@dakc.us.

Sincerely,

Kim Frost
Access Specialist
Disability Advocates of Kent County

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Attachments

Appendix A: 2010 ADA Standards for Accessible Design (ADAAG)

Appendix B: Proposed Accessibility Guidelines for Pedestrian Facilities in the Public Right-of-Way

Appendix C: Draft Final Accessibility Guidelines for Outdoor Developed Areas

Appendix D: ADA Checklist for Readily Achievable Barrier Removal - June 5 Audit of City Central Park

Appendix E: Removing Barriers to Health Clubs and Fitness Facilities: A Guide for Accommodating All Members, Including People with Disabilities and Older Adults

Appendix F: Designing Trails and Sidewalks for Access: Part II of II: Best Practices Design Guide: Chapter 13: Universal Trail Assessment Process

INTRODUCTION

BACKGROUND

The City of Walker is in the process of updating its 5-year Master Plan, including the 2013 Parks and Recreation Master Plan. In November 2012, City of Walker elected and appointed officials, staff and the parks master plan citizen's advisory committee created the 2013 Walker Parks and Recreation Master Plan Draft Goals and Objectives. The first two goals in that draft document touch directly on providing accessible, barrier free play and recreation opportunities for residents of all ages and abilities.

Following the creation of the draft goals, the decision was made that the City would be best served by having an audit performed to determine current implementation of the technical requirements of the Americans with Disabilities Act (ADA) and Universal Design principles, along with recommendations for future improvements. As a member of the citizen's advisory committee, Disability Advocates of Kent County (DAKC) was invited to submit a proposal to perform the audit.

After extensive discussion, DAKC and Walker staff decided that the City would be best served through an accessibility audit of a single property which could also be used as a training tool for City staff. This would optimize the use of financial resources while promoting a sustainable program of Universal Design within City infrastructure and facilities.

On June 5, 2013, Access Specialist Kim Frost, Program Director Marylu Dykstra, DAKC interns and volunteers Charlyne Martinez, Angela Mitchell, Gem Sabolboro, and Jessica Soblesky met with City of Walker Community Development Director Frank Wash, Building Official/Zoning Inspector Tim Musser, Recreation Programmer Sharon Johnson, Walker Ice and Fitness Center Customer Service staff Mary Kay Sherman, and Department of Public Works Director Mark Koning. Together, this team evaluated a number of facilities within City Central Park including trails, bathrooms, sports fields, playgrounds, wetlands features, parking lots, and signs.

It should be noted that to fit within the proscribed timeframe of the project, DAKC Access Specialist, Kim Frost, performed visual and/or physical measurements. City staff may wish to target specific areas for an in-depth study using the list of existing and proposed regulations or by using the appropriate, publicly available checklist (see Appendix D). Measurements should be taken using the appropriate tools whenever there is doubt whether existing conditions meet regulatory standards.



Figure 1: Staff and Volunteers perform an accessibility audit at City Central Park. Photo courtesy Marylu Dykstra, Disability Advocates of Kent County.

OBJECTIVES

The access audit and accompanying report are intended as tools to evaluate the accessibility of a facility or property, looking at possible barriers to individuals with a range of disabilities and the typical uses of the property. The audit and report do not address Federal, State, and local building codes, or other regulatory frameworks which may influence facility design.

This report makes use of language cues to differentiate between the minimum legal standards which must be met within the regulatory framework – using the words “*Shall*” and “*must*” – and proposed regulations, standards and guidelines – using the words “*should*” and “*could*” and “*may*.” Where regulations and guidelines offer multiple levels of accessibility, the least restrictive standard which meets minimum legal standards should be used to maximize the reduction and elimination of barriers to individuals of all abilities.

The accessibility audit of City Central Park and this coinciding report are intended to serve four distinct purposes. The first purpose is to evaluate the current conditions for accessibility at City Central Park and provide recommendations for improvement. Second, the audit report is intended to act as a template for accessibility audits of facilities in City Central Park which were not examined in detail, as well as the

remaining Walker Parks and Recreation properties. Tools for these additional audits can be found in the “Standards and Guidelines” section for each type of facility, with instruction in how to evaluate and apply these standards found in the “Evaluation Method” section for each facility type.

Third, because of clear recommendations for improvement, the City of Walker will be able to use this report to solicit grant funding for accessibility improvement projects within the parks system. These recommendations will help the City match necessary or desired improvements with appropriate funding sources, and outline specific expectations for how the money will be spent.

Finally, the Messaging and Communications section will help to tie the accessibility goals in the Master Plan Draft Goals and Objectives in with the audit recommendations in a way that will create a foundation for public outreach and support.

SUMMARY

Making parks and recreation facilities accessible for individuals with disabilities improves the quality of park experiences for everyone. The accessibility audit of City Central Park and the Walker Ice and Fitness Center (WIFC) performed by DAKC clearly shows that the City of Walker understands the value of accessibility and makes it a priority.

Many of the features within the property are already exemplary, and can provide a model for other parks, both within Walker and beyond its borders. These include wide trails throughout the park which allow ample room for walking and passing, alone or in groups, whether or not individuals are using mobility aids; all of the buildings – from the WIFC to the park restrooms, and even the picnic pavilion – have a level threshold, which makes it easy for everyone to move in and out of the facilities; door handles throughout the park are accessible and easy to use. The list could go on.

It’s also clear that commitment to accessibility from the City of Walker is ongoing. In the short time the City of Walker has been working with DAKC, an accessible playground swing has been installed, as well as automatic door openers at the WIFC.

We do recommend several major projects within the property which would significantly benefit accessibility:

- Improvements to the WIFC locker rooms – identified as a priority even before the audit – should be the first large scale priority;

- Provide playground access;
- Incorporating accessibility into the inline hockey rink entrances;
- Add signs within the park to assist with way-finding and provide information about accessibility, resulting in a dramatic difference for the overall accessibility of the park.

Other recommendations for improvement include:

- Provide accessible routes to trail amenities such as benches and trash cans, as well as to sport fields and courts, reducing railing heights on wetlands features;
- Add accessible spaces to parking lots;
- Ensure trail maintenance with an eye to accessibility needs
- Move trash cans in bathrooms

WALKING PATHS



Photo courtesy Marylu Dykstra, Disability Advocates of Kent County.

REQUIREMENTS AND STANDARDS

Currently, the United States Access Board does not have any regulations which cover pedestrian routes in either the public right-of-way or in recreation facilities, with the exception of curb ramps. However, there are proposed guidelines for both. The *Final Draft Developed Guidelines for Outdoor Developed Areas (Outdoor Developed Areas)* was available for public comment until December 18, 2009, and would apply only to federally owned or maintained properties as part of the Architectural Barriers Act, and contains guidance for creating accessible trails. The *Proposed Accessibility Guidelines for Pedestrian Facilities in the Public Right-of-Way (Rights-of-Way)* was available for public comment until May 14, 2013, and contains accessibility guidance for sidewalks and intersections.

Outdoor Developed Areas covers “Outdoor Recreation Access Routes” – referred to in this report as trails – while *Rights-of-Way* deals with “Pedestrian Circulation Paths” – referred to in this report as sidewalks. All pedestrian access routes not intended for recreation are treated as sidewalks for the purpose of this report.

In the absence of regulations, these proposed guidelines provide a clear baseline for creating facilities which are accessible to individuals of varying abilities, and are used by DAKC to evaluate existing and proposed infrastructure.

All of these non-binding guidelines can be found in Appendix B through C.

EVALUATION METHOD

A representative sample of existing trails and sidewalks was evaluated in the June 5, 2013 audit. The evaluation began at the trailhead to the northwest of the Ice and Fitness Center, and continued north until turning west at the tennis courts. At the eastern edge of the retention pond, the audit again turned north, turned west at the southern edge of the soccer fields, turned north to the western edge of the soccer fields and continued to the concession building next to the main baseball diamonds.

From the baseball diamonds, the audit moved south along the driveway, turning southwest between the Fire Department Station #1 and the Public Library until connecting with the Remembrance Road sidewalk. The audit then turned southeast until it reached the entrance for the Walker Ice and Fitness Center, where it proceeded northeast to complete the loop.

For clarity, the word “sidewalk” is used only when referencing pedestrian facilities within the public right-of-way. For purposes of this audit, all other pedestrian facilities

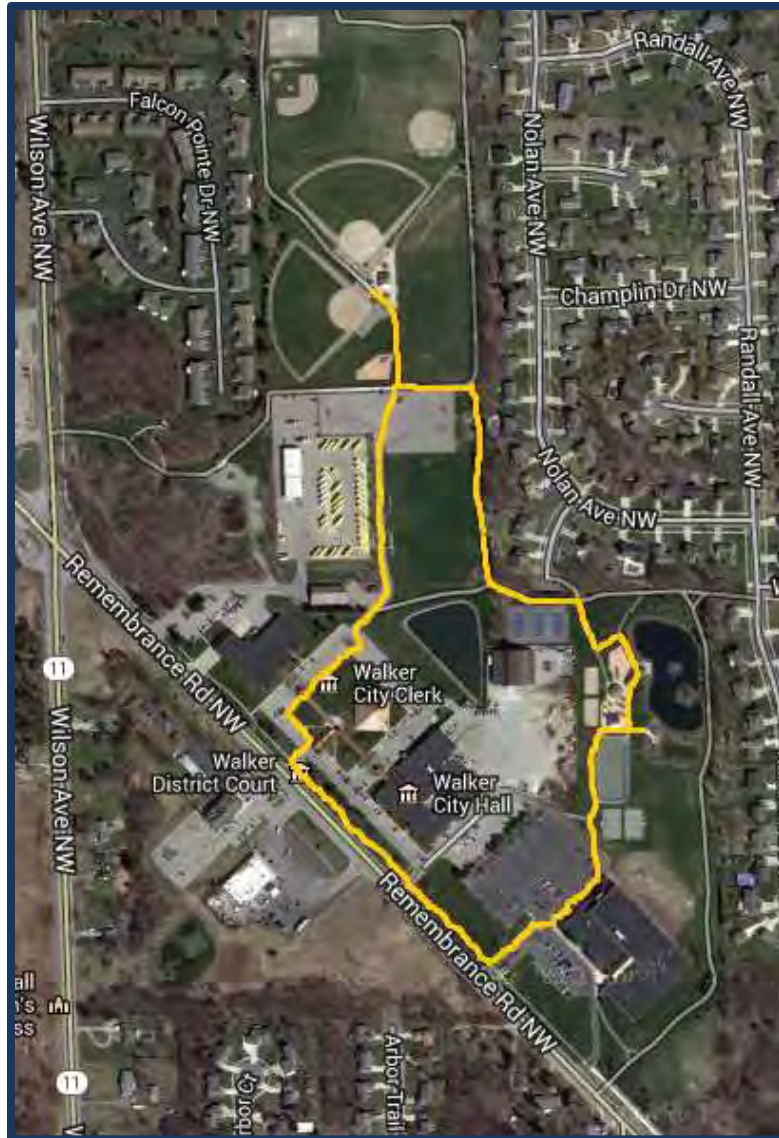


Figure 2: Access Audit route. *Original image taken from Google Maps*

Two distinct groups of people are considered when evaluating walking paths. The first group is individuals with mobility disabilities. This includes considerations ranging from an individual who uses a powered wheelchair for all of their mobility, to an individual who needs regular resting points to avoid fatigue but does not rely on mobility aids. When evaluating walking path accessibility for individuals with mobility disabilities, the primary considerations are space, surface, and slope.

Both walking paths and adjacent accommodations such as trash cans and benches must have sufficient clear width to accommodate individuals who use mobility aids, without separating individuals with disabilities from other walking path users (including companions) or result in a sense of crowding out other users. This clear width should extend from ground level to comfortably above the head of the typical user (for example,

84 inches is generally sufficient for a walking path, but maintaining a clear width up to 144 inches above ground level may be required for a mixed-use trail which includes equestrian use). Where adjacent plants and buildings prevent users from moving off the intended path, surfaces must be wider in order to accommodate the need for passing or turning outside of designated passing or resting spots and fully within the path boundaries.

Surfaces should be firm, stable, and slip-resistant. A firm surface ensures that mobility aids such as canes and wheelchairs will not sink into the path of travel, get caught or stuck. A stable, even surface provides maximum stability through foot placement and weight distribution. A slip-resistant surface provides predictability of movement. Although the consequences may be most obvious when considering someone who uses a wheelchair full time – if the chair is stuck, the individual is also prevented from moving – the consequences may be more severe for individuals who utilize hand-held mobility devices. Health consequences that last more than a few moments are unlikely for pedestrians using wheelchairs, unless surface imperfections are significant enough to cause a chair to tip. Hand held mobility aids may be used for both weight distribution and balance, so that if a cane slips or catches on a join, the user may fall.

The running slope and cross slope of a pedestrian route can be thought of as measures of energy and stability. It takes more energy to move up or down a slope than it does to move along a flat surface, particularly if someone is using a manual wheelchair, or moving up a slope where there is less leverage to use a handheld mobility aid for weight distribution. The amount of energy required also increases dramatically when there is cross slope, because individuals are then walking or rolling at an angle. When both running slope and cross slope are present, individuals may find the path completely unusable.

The second group of users consists of individuals with visual disabilities, and can include those with partial vision, as well as those with no vision. Primary considerations for individuals with visual impairments are way-finding and obstacles in the path of travel.

There are many indicators for way-finding, but the most common is means of determining how to get from one place to another is by following a designated path. For individuals with visual disabilities, the path can be just as easily designated by having a tactile transition where the pedestrian path ends. Tactile transitions include anything that indicates a clear difference between the two surfaces and can be felt when using a white cane, or where there is a physical boundary discouraging movement from one surface to another. Transitions and boundaries can include a paved path with a grass or brick shoulder, a raised path with a distinct edge, a raised curb at the edge of the path, or a fence. If a fence or similar barrier is used, however, there should not be holes or

gaps for a minimum distance of 4 inches above ground level, to avoid a white cane slipping or catching in the fencing.

The other major concern for individuals with visual impairments is obstacles in the path of travel. These can include signs, benches, fountains, and branches which protrude into the path of travel, as well as roots, holes, and separated joints within the path itself. Where protruding objects cannot be moved, a protective barrier should be placed so that the requirements for protruding objects are met.

STANDARDS AND GUIDELINES

Elements considered in the evaluation of trails include:

- **Surface material:** Trails should be surfaced using material which is firm and stable. (*Outdoor Developed Areas*, 1017.2) The type of material to maintain stability may vary based on location and conditions. For example, a level trail with significant natural drainage may maintain firmness and stability with packed dirt surfacing, where a steeper trail segment may require asphalt to prevent slipping, and a segment with significant water runoff might need rock fill for drainage.
- **Trail width:** Federal guidelines note a minimum clear tread width of 36 inches with limited exceptions (*Outdoor Developed Areas*, 1017.3). DAKC recommends a minimum clear width of 48 inches for hiking and other unpaved trails, and a minimum clear width of 72 inches for trails with asphalt or concrete paving. A minimum width of 48 inches provides sufficient space for an individual using an assistive device, such as a cane or guide dog, to move in a single direction. A minimum width of 72 inches provides comfortable passing space for individuals using an assistive device, as well as users traveling at higher than average speeds through the use of bicycles, skates, or similar recreation devices.
- **Trail slope:** No more than 30 percent of the total length of a trail shall have a running slope steeper than 1:12. The running slope of any segment of a trail shall not be steeper than 1:8. Where the running slope of a segment of a trail is steeper than 1:20, the maximum length of the segment shall be in accordance with Table 1017.7.1, and a resting interval complying with 1017.8 shall be provided at each end of the segment. (*Outdoor Developed Areas*, 1017.7.1)

Running Slope of Trail Segment		Maximum Length of Segment
Steeper than	But not Steeper than	
1:20	1:12	200 feet (61 m)
1:12	1:10	30 feet (9 m)
1:10	1:08	10 feet (3050 mm)

- **Trail cross slope:** Where the trail surface is concrete, asphalt, or boards, the trail cross slope should not be steeper than 1:48 (2%). For other surfaces, the cross slope should not be steeper than 1:20 (5%). (*Outdoor Developed Areas*, 1017.7.2)
- **Passing spaces:** If the clear tread width of the trail is less than 60 inches, passing spaces should be provided a minimum of every 1,000 feet. Passing spaces can be provided at the intersection of trail segments where an accessible trail segment progresses in at least three directions, as long as each trail segment continues for a minimum of 48 inches beyond the intersection. Passing spaces may also be provided within trail segments by increasing the tread width to a minimum of 60 inches, for a minimum of 60 inches along the path of travel. If the full length of trail does not comply with accessibility guidelines, a passing space should be placed at the end of the accessible trail segment. (*Outdoor Developed Areas*, 1017.4)

For maximum accessibility, DAKC recommends that passing spaces are placed less than 1,000 feet apart where visibility is limited by terrain, so that trail users are able to decide whether or not they need to wait at a passing space until the trail is sufficiently clear for their use. Unless prohibited by terrain, passing spaces less than 72 inches along the path of travel should not have a cross slope exceeding 1:48, regardless of surfacing.

- **Obstacles:** Where the trail surface is concrete, asphalt, or boards, tread obstacles – including but not limited to joints in concrete, board surfaces, tree roots, and plant growth between concrete joints – should not exceed ½ inch in height, measured vertically to the highest point. For other trail surfaces, tread obstacles should not exceed 2 inches in height, measured vertically to the highest point. Where possible, tread obstacles should be separated by a distance of at least 48 inches. (*Outdoor Developed Areas*, 1017.5)

DAKC recommends that tread obstacles not exceed $\frac{1}{4}$ inch wherever possible. Where settling is likely to occur, such as concrete joins and transitions between trail surfacing types, DAKC recommends that edges are beveled with a slope not more than 1:2 (50%) in compliance with ADAAG 303.3, to minimize maintenance needs.

- **Openings:** Openings in the surface of trails treads, passing spaces, and resting intervals should not allow the passage of a sphere more than $\frac{1}{2}$ inch diameter. Elongated openings should be placed so that the long dimension is perpendicular to the dominant direction of travel. (*Outdoor Developed Areas*, 1017.6)

DAKC further advises that for maximum accessibility, openings due to surface deterioration, such as cracking and pitting of asphalt or concrete, should be treated as openings in the surface of trail treads if they exceed $\frac{1}{2}$ inch in depth from the lowest point to the trail surface.

- **Resting intervals:** Resting intervals are not required. Where resting intervals are provided, they should be a minimum of 60 inches long. Where resting intervals are provided within the trail tread, they should be at least as wide as the widest segment of trail tread leading to the resting interval. Where resting intervals are provided adjacent to the trail tread, the resting interval should be a minimum of 36 inches wide, and a turning space complying with ADAAG 304.3 should be provided. Resting interval cross slope follows the same guidelines as trail cross slope. Resting intervals and turning spaces may overlap with passing spaces. (*Outdoor Developed Areas*, 1017.8, 1017.4)

In addition to the proposed federal guidelines, DAKC recommends that where the accessible trail length exceeds 1 mile, resting intervals be placed adjacent to the trail tread a minimum of every 2640 feet. These resting intervals should include a bench and adjacent clear ground space which is a minimum of 60 inches from the trail tread to the rear edge of the resting space and 48 inches from the edge of the bench to the side of the resting space. This allows individuals of all ability levels to rest for several minutes without obstructing the trail tread.

- **Protruding objects:** Objects with leading edges more than 27 inches and not more than 80 inches above the trail tread shall not protrude more than 4 inches into the circulation path. (*Outdoor Developed Areas*, 1017.9; ADAAG, 307.2)
- **Gates and barriers:** Where gates or barriers are constructed to control access to trails, they should have a clear width of no less than 32 inches, and operable parts which can be manipulated with one hand without tight grasping, pinching, or twisting of the wrist, located 34 inches minimum and 48 inches maximum

above the trail surface. (*Outdoor Developed Areas*, 1017.10; ADAAG 309.4, 404.2.3, 404.2.7)

- **Trail signs:** See *Way-finding, below*.
- **Trail maintenance:** DAKC recommends that maintenance staff regularly evaluate trails and perform ongoing maintenance as necessary. Common maintenance issues include obstacles created by tree roots pushing up trail surfacing or grass and weeds growing in between trail surfacing segments, openings and obstacles created by separation of trail surface segments or within trail segments as a result of weather, and trees or bushes which become protruding objects as they grow.

Elements considered in the evaluation of sidewalks include:

- **Width:** The continuous clear width of pedestrian access routes shall be a minimum of 48 inches, exclusive of the curb. (*Rights-of-Way*, R302.3)
- **Slope:** Where pedestrian access routes are contained within a street or highway right-of-way, the grade of pedestrian access routes should not exceed the general grade of the adjacent street or highway. Where pedestrian access routes are not contained within a street or highway right-of-way, the grade of pedestrian access routes shall not exceed 1:20. (*Rights-of-Way*, R302.5)
- **Cross slope:** The cross slope for pedestrian access routes should not exceed 1:48. (*Rights-of-Way*, R302.6)
- **Surfaces:** The surfaces of pedestrian access routes, as well as all surfaces to connected accessible elements such as pedestrian signal buttons, benches, and transit shelters, should be firm, stable, and slip resistant. (*Rights-of-Way*, R302.7)
- **Protruding objects:** Objects with leading edges more than 27 inches and not more than 80 inches above the trail tread shall not protrude more than 4 inches into the circulation path. (*Outdoor Developed Areas*, 1017.9; ADAAG, 307.2)
- **Tread obstacles:** tread obstacles should not exceed ½ inch in height, measured vertically to the highest point. Where there are vertical surface discontinuities greater than ½ inch, they should be beveled across the entire edge of the obstacle, with a slop of not more than 1:2. (*Rights-of-Way*, R302.7.2)
- **Horizontal Openings:** Horizontal openings in gratings and joints should not permit passage of a sphere more than ½ inch in diameter. Elongated openings in gratings should be places so that the long dimension is perpendicular to the dominant direction of travel. (*Rights-of-Way*, R302.7.3)

- **Curb ramps – general:** Although the proposed *Rights-of-Way* guidelines refer specifically to curb ramps. DAKC strongly recommends that the specifications for curb ramps be used for maximum accessibility any time the pedestrian route changes level to cross a vehicular path of travel, rather than limiting use to pedestrian crossings of the public right-of-way, where a curb is present. The one exception is the use of detectable warning surfaces.

DAKC recommends that detectable warning surfaces only be used at pedestrian crossings where vehicles may have the right-of-way, and should not be used at driveway crossings or similar pedestrian right-of-way crossings.

- **Curb ramp landings:** Curb ramps should have a landing or turning space at the top of the ramp which is a minimum of 48 inches by 48 inches, with a running slope of no more than 1:48, and is permitted to overlap other landings. Where the landing is constrained at the back-of-sidewalk for perpendicular curb ramps, or constrained on at least two for parallel curb ramps, the turning space should be a minimum of 60 inches in the direction of the ramp run. (*Rights-of-Way*, R304.2.1, 304.3.1) Although the proposed guidelines recommend larger landings, current regulations require that landing clear length shall be a minimum of 36 inches, and clear width shall be at least as wide as the curb ramp leading to the landing, excluding flared sides. (*ADAAG*, 406.4)
- **Curb ramp running slope:** The running slope of the curb ramp should be no less than 1:20, and shall be no more than 1:12. A ramp length of more than 15 feet is not required, even where the slope exceeds 1:12. (*Rights-of-Way*, R304.2.2, R304.3.2; *ADAAG* 405.2, 406.1) Where the terrain permits, DAKC recommends that longer ramps be used to maintain a slope of no more than 1:10 even if the resulting ramp is longer than 15 feet.
- **Curb ramp sides:** Where a pedestrian circulation path crosses the curb ramp, flared sides shall not exceed 1:10 slope. Where curb ramps are outside of the pedestrian circulation path, returned curbs are permitted, but no curb or flare is required. (*ADAAG*, 406.3; *Rights-of-Way*, R304.2.3)

While the use of flared sides allows the curb ramp to be part of the pedestrian circulation path, saving space, flared sides do not provide any directional indicators for individuals with visual disabilities. Where pedestrian routes cross vehicular paths, DAKC recommends the use of at least one returned curb to a depth of at least 24 inches in the intended direction of travel.

- **Curb ramp width:** The clear width or ramp runs (excluding any flared sides), blended transitions, and landings should be a minimum of 48 inches. (*Rights-of-*

Way, R304.5.1) Although the proposed guidelines recommend wider ramps and landings, current regulations require a minimum clear width of 36 inches. (ADAAG, 405.5, 406.1)

Note: An in-depth analysis of curb ramp accessibility is beyond the scope of this report. The functional accessibility is affected by direction of travel, detectable warning surface placement, edge type, the physical constraints of the right-of-way, and more – all of which is impacted by the terrain of the intersection. Not all curb cuts which meet existing and proposed guidelines are functionally accessible, and (more rarely) not all curb cuts which are functionally accessible meet existing and proposed guidelines. Additional training for engineers, as well as individual intersection analysis, are available separately from DAKC.

EXISTING FACILITIES

Evaluated trails located within Walker City Central Park are primarily paved with asphalt – although a wooden trail is provided to the wetlands overlook from the main trail – and exceed the 72 inch recommended width.

Trail and sidewalk segments which exceed a slope of 1:20 include (see marked map below; trails are marked in red, sidewalks are marked in yellow):

- Two segments from the northeast edge of the Ice and Fitness Center parking lot, to the basketball courts;
- The segment along the northern edge of the playground next to the fishing pier;
- The segment asphalt segment connecting the concrete path adjacent to the northern edge of the ball field parking lot to the main asphalt trail;
- The segment asphalt segment connecting the concrete path adjacent to the northern edge of the ball field parking lot to the playground and ball fields.



Figure 3: Paths with a slope exceeding 1:20. Original image taken from Google Maps

Although trail segment slopes were not measured, all but the last of these trail segments has an estimated slope of less than 1:12, and is shorter than 200 feet, meeting accessibility guidelines. The final segment, from the northern edge of the parking lot to the ball fields, has an estimated average slope of 1:4, over a distance of approximately 80 feet.

There are benches in several places near the recreation trail, including near the wetlands overlook, north of the tennis courts, and east of the temporary soccer fields. All benches are set several feet back from the trail, lacking a firm, stable, slip-resistant means of access.



Figure 4: Bench and trash can set back from trail. *Photo courtesy Marylu Dykstra, Disability Advocates of Kent County.*

Most of the trails and sidewalks are in excellent repair. There are some areas, however, where maintenance is a concern. There is pitting in the asphalt and concrete in several areas, most notably southwest of the basketball courts, at the approach to the wetlands overlook, and at the western curb ramp at the street entrance to the Ice and Fitness Center. In addition, there is significant bowing and puckering of the asphalt due to tree roots on the west side of the trail, immediately south of the entrance to the wetlands overlook. Other maintenance issues include loose gravel on the southern approach to the inline hockey rink, grass growing in the joins of trails and sidewalks throughout the park, and a settling of the bricks where the concrete sidewalk to the northwest of the library crosses the covered brick sidewalk between the library and firehouse, creating obstacles at both sides of the brick sidewalk.



Figure 5: Loose gravel and weeds on the trail west of inline rink. Photo courtesy Marylu Dykstra, Disability Advocates of Kent County.



Figure 6: Tree roots pushing up asphalt trail west of wetlands overlook. *Photo courtesy Marylu Dykstra, Disability Advocates of Kent County.*

Sidewalks within City Central Park connect all four primary buildings – the fire house, the library, City Hall, and the Ice and Fitness Center – both along Remembrance Road and within the Park itself. There are several pedestrian connections which lack sidewalk curb ramps, however, including the southernmost corner of the sidewalk around the library, and adjacent to the western corner of City Hall, where pedestrian traffic from the bus stop enters.

Along Remembrance Road, the two curb ramps on either side of the southern driveway to City Hall have a slope of 7:8 – much steeper than the required 1:12. At all of the observed curb ramps, however, have curbs and gutters which are poured as a single piece, preventing many of the common maintenance issues such as tread obstacles, which occur when the curb and gutter separate due to weather, wear, and settling.

Sidewalks which connect Remembrance Road with City buildings are quite steep, often exceeding slopes of 1:1. The sidewalk connecting Remembrance Road with the Fitness Center poses additional difficulties, ending in a diagonal curb ramp which does not meet current ADA standards, and directs people diagonally across an intersection within the parking lot.

RECOMMENDATIONS

DAKC has identified four areas for improvement within City Central Park – amenities adjacent to trails, curb ramps, sidewalks connecting Remembrance Road to City Central Park, and maintenance.

TRAIL AMENITIES

Along the recreation trails, a number of benches and trash cans are currently provided. However, of the facilities audited, only the benches and trash cans near the picnic pavilion and fishing pier, and near the baseball diamonds, are situated on accessible routes. While the current placement encourages use of the park's green space, individuals who are not able to walk across the grass are prevented from using them. DAKC recommends that all benches and trash cans intended for the benefit of trail users be made accessible, in the following order of priority:

1. At least one bench and trash in each area of interest within the park;
2. Benches located more than 100 yards from other seating areas;
3. Trash cans located more than 50 yards from other disposal units;
4. Other benches intended for trail users;
5. Other trash cans intended for trail users.

To make trash cans located immediately adjacent to the existing trail accessible:

- The trail width shall not be less than 66 inches, to provide clear ground space outside of the minimum trail width (*ADAAG*, 305.3);
- The trail shall extend no less than 30 inches beyond the centerline of the trash can, to provide clear ground space (*ADAAG*, 305.7);
- The leading edge of the trash can shall be located not more than 10 inches from the edge of the trail and not more than 48 inches from the trail surface (*ADAAG*, 308.3.1)

For trash cans located on a separate access route or at a trail terminus:

- A turning space shall be provided which is either
 - A circular turning space no less than 60 inches in diameter (*ADAAG*, 304.3.1); or
 - A T-shaped turning space within a 60 inch square minimum with arms and base 36 inches wide minimum. Each arm of the T shall be clear of obstructions 12 inches minimum in each direction and the base shall be clear of obstructions 24 inches minimum (*ADAAG*, 304.3.2, see *Figure 7*)
- The leading edge of the trash can shall be located not more than 8 inches from the edge of the trail and not more than 44 inches from the trail surface, or not

more than three inches from the trail edge and not more than 48 inches from the trail surface (*ADAAG*, 306.2-306.3, 308.2.2)

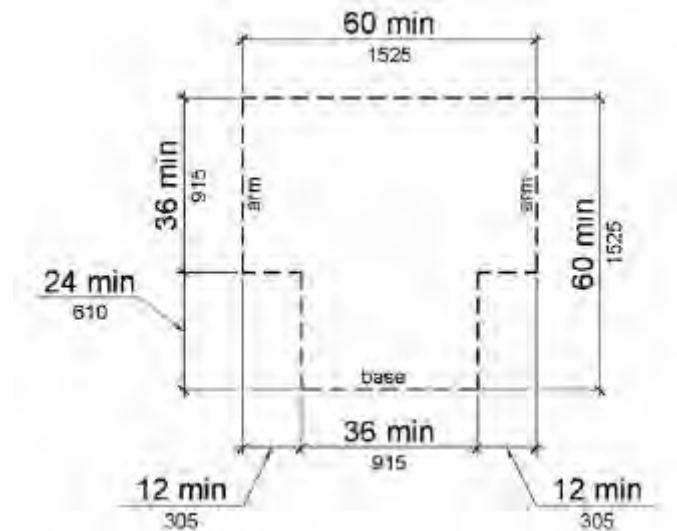


Figure 7: T-Shaped Turning Space. *ADAAG* 304.3.2

To make benches adjacent to trails accessible:

- Benches should be installed on a firm, stable, slip resistant surface such as concrete;
- Clear ground space shall be provided at a minimum of 48 inches deep by 30 inches wide, and shall be positioned at the end of the bench seat and parallel to the short axis of the bench (*ADAAG*, 305.3, 903.2);
- Benches should be positioned so that the rear edge of the bench seat is no less than 12 inches from the rear edge of the clear ground space, to allow a wheelchair user and a companion to sit level to one another;
- Benches shall have seats that are 42 inches long minimum and 20 inches deep minimum and 24 inches deep maximum (*ADAAG*, 903.3);
- Benches shall provide for back support or shall be affixed to a wall. Back support shall be 42 inches long minimum and shall extend from a point 2 inches maximum above the seat surface to a point 18 inches minimum above the seat surface. Back support shall be 2 ½ inches maximum from the rear edge of the seat measured horizontally (*ADAAG*, 903.4);
- The top of the bench seat shall be 17 inches minimum and 19 inches maximum above the ground surface (*ADAAG*, 903.5).

CURB RAMPS

Curb ramps that meet or exceed accessibility guidelines should be present whenever a pedestrian route crosses a raised curb. Of the curb ramps examined, two curb ramps should be replaced for ADA compliance, two ramps should be installed, and one ramp needs maintenance. The ramps adjacent to the southern driveway leading to City Hall are both steeper than is allowed within the ADAAG. To rectify this, the ramps should be extended for a distance which will allow a slope of no more than 1:12. Decreasing the slope of the curb ramp may necessitate moving the connection to the sidewalk adjacent to the driveway to prevent cross slope on the NW-SE sidewalk.

Curb ramps should be installed at the northernmost corner of the sidewalk adjacent to the library, and on the City Hall side of the crossing from the sidewalk which connects the existing bus stop to the western corner of City Hall, to provide barrier free access to City buildings while minimizing travel through parking lots.

SIDEWALKS

Of the area audited, there are four areas of sidewalk which require more than maintenance levels of improvement. All four areas are between Remembrance Road and City buildings, and all are significant accessibility improvements as the terrain is steeper than recommended for accessibility when traveling perpendicular to Remembrance Road.

The sidewalk nearest the current bus stop, the sidewalk at the northeast City Hall driveway, and the sidewalk to the west of the Ice and Fitness Center all exceed the proposed maximum slope for sidewalks outside of the public right-of-way. One solution, which would maximize accessibility while contributing to the overall feel of a single City and park complex, is to remove the three existing sidewalks which connect Remembrance Road to City Hall and the Ice and Fitness Center, and install five new pedestrian paths as shown below in Figure 8. This configuration would allow for shallower sidewalk slopes, while also addressing the need for pedestrian access from Remembrance Road to the central library plaza, and preventing the need for pedestrians to back-track regardless of their initial direction of travel.

Note that if this solution is implemented, a map should also be installed at the sidewalk nexus located along Remembrance Road, between City Hall and the Ice and Fitness Center (discussed in detail under “Way-finding”). Pedestrian routes should cross the parking lot perpendicular to the vehicular path of travel, and must have curb ramps on both sides of the crossing.



Figure 8: Recommended sidewalk positions. *Original image taken from Google Maps*

If a complete reconfiguration of sidewalks is not desired or not viable, there are several upgrades which should be made. First, at the driveway nearest to the library, there is a covered brick sidewalk which connects the southwest parking lot with the central plaza southwest of the library. However, there is no sidewalk which connects Remembrance Road with this covered brick sidewalk. DAKC recommends that a sidewalk meeting the proposed guidelines for sidewalks outlined above be installed, along with a corresponding curb ramp at the covered brick sidewalk.

Second, curb ramps should be installed on the City Hall side of pedestrian crossings of the parking lot for the sidewalks originating at the current bus stop, and the sidewalk at the southwest driveway for city hall.

Finally, the northeastern end of the sidewalk to the west of the Ice and Fitness Center should be reconfigured. Currently, the sidewalk segment ends in a curb cut with significant slope and cross slope, and which directs pedestrians diagonally across a parking lot intersection. DAKC recommends moving the curb cut on that segment south, to facilitate a two-stage crossing. The first stage would cross to the existing landscape island, perpendicular to the path of vehicle travel, and the second stage would cross from the landscape island to the Ice and Fitness Center, perpendicular to the path of travel. This reconfiguration would not only provide curb ramps that are functionally accessible and meet current accessibility standards, it would also provide a safer

crossing for individuals with visual disabilities. These individuals determine when it is safe to make a pedestrian crossing based on the sound of traffic. Crossing perpendicular to traffic flow allows traffic to be heard clearly.

Independent of any sidewalk reconfiguration along Remembrance Road, a curb ramp should be installed at the sidewalk terminus directly north of the library. Although there is currently a trail terminus roughly 130 feet northeast, and it is expected that pedestrians will share the drive to the baseball diamonds, there is currently no clear means of accessing the sidewalks after entering the library parking lot. A curb cut at this northern point would provide that access.

MAINTENANCE

Ongoing maintenance is vital to maintaining accessible infrastructure. Of the areas audited, there are two maintenance concerns which should be addressed as soon as possible. The first is the tree roots growing under the trail and pushing up the asphalt to the south of the wetlands overlook and picnic area. These roots present a significant obstacle, raising the asphalt several inches in some places, and obstruct a large segment of the trail.

The second area of maintenance which should be prioritized is the brick sidewalk west of the library, leading to the fire house, where it crosses the concrete sidewalk. The warping of the brick path, seen in Figure 9, has created tread obstacles where the brick has sunk below the concrete edging, and has created significant cross slope in these sections of the sidewalk. For individuals using a cane for stability, (specifically a single-foot cane) at a level lower than the individuals feet, or having a 3- or 4-foot can which is not resting on a flat plane, may result in impaired balance and stability.

Other maintenance issues – such as loose gravel, pitting of trails and sidewalk joins, and removal of plants from within trail treads – are routine, but should be addressed as soon as is practical.

Finally, the hole at the top of the trail to the baseball diamonds should be filled in or capped. The hole had been used to secure a stanchion limiting vehicle access. The stanchion has since been removed leaving a 1 ½ inch hole in the center of a pitted concrete footing.



Figure 9: Brick sidewalk requiring repairs. *Photo courtesy Marylu Dykstra, Disability Advocates of Kent County.*



Figure 10: Hole in sidewalk after removal of stanchion. *Photo courtesy Marylu Dykstra, Disability Advocates of Kent County.*

BATHROOMS

Photo courtesy Marylu Dykstra, Disability Advocates of Kent County.

REQUIREMENTS AND STANDARDS**EVALUATION METHOD**

Three bathrooms were examined within City Central Park – the women’s locker room at the Walker Ice and Fitness Center, as well as the women’s bathroom near the fishing pier and wetlands overlook, and the men’s bathroom near the baseball diamonds.

In each of the restrooms, the individual elements outlined in Standards and Guidelines were examined. Circulation paths between elements were also inspected for obstructions and intuitive use. For each restroom audited, the audit team made the assumption that the complimentary restroom at the same location was functionally identical. In addition to measurements taken onsite, some measurements have been estimated from photographs taken in the course of the audit.

STANDARDS AND GUIDELINES**Entrance Doors:**

- **Door Clear Width:** door openings shall provide a clear width of 32 inches minimum. Clear openings of doorways with swinging doors shall be measured

between the face of the door and the stop, with the door open 90 degrees. There shall be no projections into the required clear opening width lower than 34 inches above the finish floor or ground. Projections into the clear opening width between 34 inches and 80 inches above the finish floor or ground shall not exceed 4 inches. (ADAAG, 404.2.3)

- **Maneuvering Clearance:** Minimum maneuvering clearances at doors and gates shall extend the full width of the doorway and the required latch side or hinge side clearance. (ADAAG, 404.2.4, 404.2.4.1)

404.2.4.1 Maneuvering Clearances at Manual Swinging Doors and Gates			
Type 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 (1525 mm)	18 inches (455 mm)
From front	Push	48 inches (1220 mm)	0 inches (0 mm) ¹
From hinge side	Pull	60 inches (1525 mm)	36 inches (915 mm)
From hinge side	Pull	54 inches (1370 mm)	42 inches (1065 mm)
From hinge side	Push	42 inches (1065 mm) ²	22 inches (560 mm) ³
From latch side	Pull	48 inches (1220 mm) ⁴	24 inches (610 mm)
From latch side	Push	42 inches (1065 mm) ⁴	24 inches (610 mm)

1. Add 12 inches (305 mm) if closer and latch are provided.
2. Add 6 inches (150 mm) if closer and latch are provided.
3. Beyond hinge side.
4. Add 6 inches (150 mm) if closer is provided.

- **Door Hardware:** Operable parts shall be 34 inches minimum and 48 inches maximum above the finish floor or ground. They shall be operable with one hand and shall not require tight grasping, pinching, or twisting of the wrist. The force required to activate operable parts shall be 5 pounds maximum. A door pull shall be placed on both sides of the door near the latch. (ADAAG, 309.4, 404.2.7)
- **Thresholds:** Thresholds, if provided at doorways, shall be ½ inch high maximum. (ADAAG, 404.2.5)
- **Mirrors:** Mirrors not located above lavatories or countertops shall be installed with the bottom edge of the reflecting surface 35 inches maximum above the finish floor or ground. In order for mirrors to be usable by people who are ambulatory and people who use wheelchairs, the top edge of mirrors should be 74 inches minimum from the floor or ground. (ADAAG, 603.3)

- **Coat hooks and shelves:** coat hooks shall be located within one of the reach ranges. If the reach range is unobstructed the height forward to reach shall be 48 inches maximum and the low forward reach shall be 15 inches minimum above the finish floor. When a high forward reach is over an obstruction the clear floor space shall extend beneath the element for a distance no less than the required reach depth over the obstruction. Shelves shall be located 40 inches minimum and 48 inches maximum above the finish floor. (*ADAAG*, 308.2, 603.4)
- **Protrusion limits:** Objects with leading edges more than 27 inches and not more than 80 inches above the finish floor or ground shall protrude 4 inches maximum horizontally into the circulation path.

Locker Room:

- **Lockers:** At least 5 percent, but not fewer than one, of each type of locker in each cluster shall have clear floor space which is 30 inches minimum by 48 inches minimum, and have one of the following reach ranges:
 - **Unobstructed forward reach:** Where a forward reach is unobstructed, the high forward reach shall be 48 inches (1220 mm) maximum and the low forward reach shall be 15 inches (380 mm) minimum above the finish floor or ground.
 - **Obstructed high reach:** Where a high forward reach is over an obstruction, the clear floor space shall extend beneath the element for a distance not less than the required reach depth over the obstruction. The high forward reach shall be 48 inches (1220 mm) maximum where the reach depth is 20 inches (510 mm) maximum. Where the reach depth exceeds 20 inches (510 mm), the high forward reach shall be 44 inches (1120 mm) maximum and the reach depth shall be 25 inches (635 mm) maximum.
 - **Unobstructed side reach:** Where a clear floor or ground space allows a parallel approach to an element and the side reach is unobstructed, the high side reach shall be 48 inches (1220 mm) maximum and the low side reach shall be 15 inches (380 mm) minimum above the finish floor.
 - **Obstructed high side reach:** 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 shall be 34 inches (865 mm) maximum and the depth of the obstruction shall be 24 inches (610 mm) maximum. The high side reach shall be 48 inches (1220 mm) maximum for a reach depth of 10 inches (255 mm) maximum. Where the reach

depth exceeds 10 inches (255 mm), the high side reach shall be 46 inches (1170 mm) maximum for a reach depth of 24 inches (610 mm) maximum.

Operable parts shall be operable with one hand and shall not require tight grasping, pinching, or twisting of the wrist. The force required to activate operable parts shall be 5 pounds maximum. (ADAAG, 222.1, 225.2.1, 305.3, 308, 309, 811)

- **Benches:** Benches shall have seats that are 42 inches long minimum and 20 inches deep minimum and 24 inches deep maximum. The bench shall provide for back support or shall be affixed to a wall. Back support shall be 24 inches long minimum and shall extend from a point 2 inches maximum above the seat surface to a point 18 inches minimum above the seat surface. Back support shall be 2 ½ inches maximum from the rear edge of the seat measured horizontally. The top of the bench seat surface shall be 17 inches minimum and 19 inches maximum above the finish floor. Clear floor space measuring 30 inches minimum by 48 inches minimum shall be provided and shall be positioned at the end of the bench seat and parallel to the short axis of the bench. (ADAAG, 305.3, 903)

Wheelchair Accessible Toilet Compartments

- **Scoping:** Where toilet compartments are provided, at least one toilet compartment shall be a wheelchair accessible compartment. (ADAAG, 213.3.1)
- **Size:** Wheelchair accessible compartments shall be 60 inches wide minimum measured perpendicular to the side wall, and 56 inches deep minimum for wall hung closets and 59 inches deep minimum for floor mounted closets measured perpendicular to the rear wall. (ADAAG, 604.8.1.1)
- **Door location:** Toilet compartment doors, including door hardware, shall meet the same standards as entrance doors 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 shall be 42 inches minimum. Doors shall be located in the front partition or in the side wall or partition farthest from the water closet. Where located in the front partition, the door opening shall be 4 inches maximum from the side wall or partition farthest from the water closet. Where located in the side wall or partition, the door opening shall be 4 inches maximum from the front partition. The door shall be self-closing. (ADAAG, 604.8.1.2)

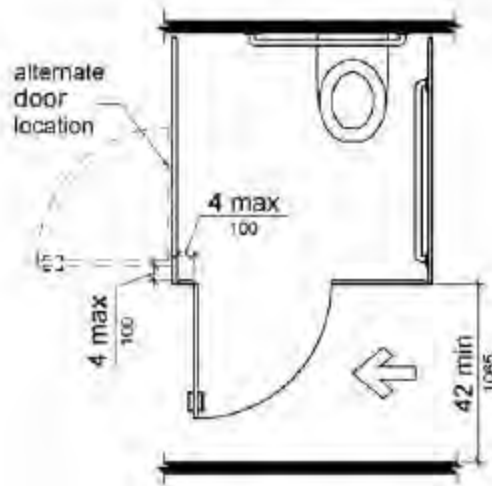


Figure 11: Wheelchair Accessible Toilet Compartment Doors.

ADAAG, 604.8.1.2.

- **Door swing:** Doors shall not swing into the clear floor space or clearance required for any fixture. Doors shall be permitted to swing into the required turning space. Toilet doors shall not swing into the minimum required compartment area. (*ADAAG, 603.2.3, 604.8.1.2*)
- **Door Hardware:** Operable parts shall be 34 inches minimum and 48 inches maximum above the finish floor or ground. They shall be operable with one hand and shall not require tight grasping, pinching, or twisting of the wrist. The force required to activate operable parts shall be 5 pounds maximum. A door pull shall be placed on both sides of the door near the latch. (*ADAAG, 309.4, 404.2.7, 604.8.1.2*)
- **Approach:** Compartments shall be arranged for left-hand or right-hand approach to the water closet. (*ADAAG, 604.8.1.3*) This allows for either a side transfer or front transfer from wheelchair to toilet if desired.
- **Toe Clearance:** The front partition and at least one side partition shall 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. 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. Toe clearance at the side partition is not required in a compartment greater than 66 inches wide. (*ADAAG, 604.8.1.4*)

- **Toilet location:** The toilet shall be positioned with a wall or partition to the rear and to one side. The centerline of the water closet shall be 16 inches minimum to 18 inches maximum from the side wall or partition. (*ADAAG*, 604.2)
- **Toilet seats:** the seat height of the toilet above the finish floor shall be 17 inches minimum and 19 inches maximum measured to the top of the seat. (*ADAAG*, 604.4)
- **Dispensers:** Toilet paper dispensers shall be operable with one hand and shall not require tight grasping, pinching, or twisting of the wrist. Dispensers shall not be of a type that controls delivery or that does not allow continuous paper flow. Dispensers shall 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 shall be 15 inches minimum and 48 inches maximum above the finish floor and shall not be located behind grab bars. (*ADAAG*, 309.4, 604.7)
- **Flush controls:** Flush controls shall be hand operated or automatic, shall be operable with one hand and shall not require tight grasping, pinching, or twisting of the wrist. The force required to activate flush controls shall be 5 pounds maximum. Flush controls shall be located on the open side of the toilet. If plumbing valves are located directly behind the toilet seat, flush valves and related plumbing can cause injury or imbalance to a person when they lean back against them. To prevent causing injury or imbalance, the plumbing should be located behind walls or to the side of the toilet or have a toilet seat lid. (*ADAAG*, 309.4, 604.6)
- **Coat hooks:** Where coat hooks are provided within stalls, coat hooks shall be located 48 inches maximum and 15 inches minimum above the finish floor. (*ADAAG*, 603.4)

DAKC recommends providing two coat hooks in wheelchair accessible compartments when coat hooks are provided in standard compartments. These hooks should be located at 60 inches and 42 inches above the finished floor, to provide both ambulatory and wheelchair hook access.

- **Grab Bars – Location:** Grab bars shall be provided on the side wall closest to the toilet and on the rear wall. The side wall grab bar shall 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 shall 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. (*ADAAG*, 604.5)

- **Grab Bars – Cross Section:** Grab bars with circular cross sections shall have an outside diameter of 1 ¼ inches minimum and 2 inches maximum. Grab bars with non-circular cross sections shall have a cross-section dimension of 2 inches maximum and a perimeter dimension of 4 inches minimum and 4.8 inches maximum. (ADAAG, 609.2)
- **Grab Bars – Spacing:** The space between the wall and the grab bar shall be 1 ½ inches. The space between the grab bar and projecting objects below and at the ends shall be 1 ½ inches minimum. The space between the grab bar and projecting objects above shall be 12 inches minimum. (ADAAG, 609.3)
- **Grab Bars – Position:** Grab bars shall 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. (ADAAG, 609.4)

It is increasingly common to install a third, vertical grab bar near the end of the side grab bar furthest from the toilet. For this vertical grab bar to be useful, the gripping surface nearest the toilet should be 42 inches maximum from the rear wall and 44 inches maximum from the finished floor to the lowest edge of the gripping surface. If a toilet paper dispenser is present above the horizontal grab bar, there should be a minimum of 12 inches between the dispenser and the vertical grab bar. This should be increased if the dispenser protrudes more than 9 inches from the side partition. In addition, if the vertical grab bar is placed above the horizontal grab bar rather than being part of a single piece, a minimum of 12 inches must be maintained between the top of the horizontal grab bar and the lowest protruding point of the vertical grab bar.

Due to the difficulties in meeting regulatory requirements while maintaining functional accessibility, DAKC does not provide recommendations about the use of vertical grab bars.

Ambulatory Accessible Toilet Compartments

- **Scoping:** In addition to the wheelchair accessible compartment, at least one compartment shall be an ambulatory accessible compartment where six or more toilet compartments are provided, or where the combination of urinals and water closets totals six or more fixtures. (ADAAG, 213.3.1)
- **Size:** Ambulatory accessible compartments shall have a depth of 60 inches minimum and a width of 35 inches minimum and 37 inches maximum. (ADAAG, 604.8.2.1)

- Door location:** Toilet compartment doors, including door hardware, shall meet the same standards as entrance doors 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 shall be 42 inches minimum. Doors shall be located in the front partition or in the side wall or partition farthest from the water closet. Where located in the front partition, the door opening shall be 4 inches maximum from the side wall or partition farthest from the water closet. Where located in the side wall or partition, the door opening shall be 4 inches maximum from the front partition. The door shall be self-closing. (ADAAG, 604.8.2.2)

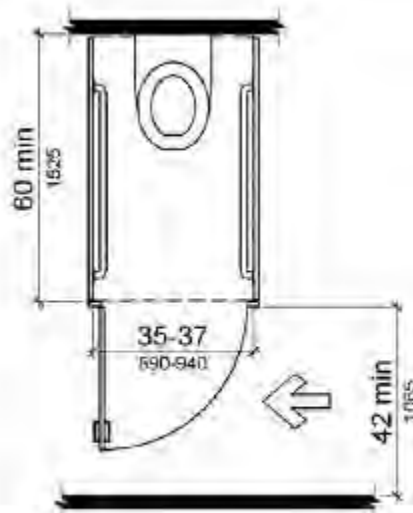


Figure 12: Ambulatory Accessible Toilet Compartment.
ADAAG 604.8.2.

- Toilet location:** The toilet shall be positioned with a wall or partition to the rear and to one side. The centerline of the water closet shall be 17 inches minimum to 19 inches maximum from the side wall or partition. (ADAAG, 604.2)
- Flush controls:** Flush controls shall be hand operated or automatic, shall be operable with one hand and shall not require tight grasping, pinching, or twisting of the wrist. The force required to activate flush controls shall be 5 pounds maximum. Flush controls shall be located on the open side of the toilet except in ambulatory accessible compartments. If plumbing valves are located directly behind the toilet seat, flush valves and related plumbing can cause injury or imbalance to a person when they lean back against them. To prevent causing injury or imbalance, the plumbing should be located behind walls or to the side of the toilet or have a toilet seat lid. (ADAAG, 309.4, 604.6)

- **Grab Bars – Location:** A side-wall grab bar which is 42 inches long minimum, located 12 inches maximum from the rear wall and extending 54 inches minimum from the rear wall shall be provided on both sides of the compartment. (ADAAG, 604.5.1, 604.8.2.3)
- **Grab Bars – Cross Section:** Grab bars with circular cross sections shall have an outside diameter of 1 ¼ inches minimum and 2 inches maximum. Grab bars with non-circular cross sections shall have a cross-section dimension of 2 inches maximum and a perimeter dimension of 4 inches minimum and 4.8 inches maximum. (ADAAG, 609.2)
- **Grab Bars – Spacing:** The space between the wall and the grab bar shall be 1 ½ inches. The space between the grab bar and projecting objects below and at the ends shall be 1 ½ inches minimum. The space between the grab bar and projecting objects above shall be 12 inches minimum. (ADAAG, 609.3)
- **Grab Bars – Position:** Grab bars shall 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. (ADAAG, 609.4)

Sinks and Mirrors

- **Mirrors:** Mirrors located above lavatories or countertops shall be installed with the bottom edge of the reflecting surface 40 inches maximum above the finish floor or ground. In order for mirrors to be usable by people who are ambulatory and people who use wheelchairs, the top edge of mirrors should be 74 inches minimum from the floor or ground. (ADAAG, 603.3)
- **Dispensers and outlets located behind sinks:** Where a forward reach is over an obstruction, the clear floor space shall extend beneath the element for a distance not less than required reach depth over the obstruction. The high forward reach shall be 48 inches maximum where the reach depth is 20 inches maximum. Where the reach depth exceeds 20 inches, the high forward reach shall be 44 inches maximum and the reach depth shall be 25 inches maximum.

Where a clear floor allows a parallel approach to an element and the high side reach is over an obstruction, the height of the obstruction shall be 34 inches maximum and the depth of the obstruction shall be 24 inches maximum. The high side reach shall be 48 inches maximum for a reach depth of 10 inches maximum. Where the reach depth exceeds 10 inches, the high side reach shall be 46 inches maximum for a reach depth of 24 inches maximum. (ADAAG, 308.2)

- **Sink height:** Sinks shall be installed with the front of the higher of the counter surface 34 inches maximum above the finish floor. (*ADAAG*, 606.3)
- **Clear floor space:** Clear floor space shall be 30 inches minimum by 48 inches minimum shall be provided to at least one sink, adjoining an accessible route or adjacent to another clear floor space. (*ADAAG*, 305.3, 305.6, 606.2)
- **Knee clearance:** Space under a sink between 9 inches and 27 inches above the finish floor shall be considered knee clearance and shall extend 25 inches maximum under a sink at 9 inches above the finish floor. Knee clearance shall be 30 inches wide minimum, 11 inches deep minimum at 9 inches above the finish floor, and 8 inches deep minimum at 27 inches above the finish floor. Between 9 inches and 27 inches above the finish floor, the knee clearance shall be permitted to reduce at a rate of 1 inch in depth for each 6 inches in height. (*ADAAG*, 306.3, 606.2)

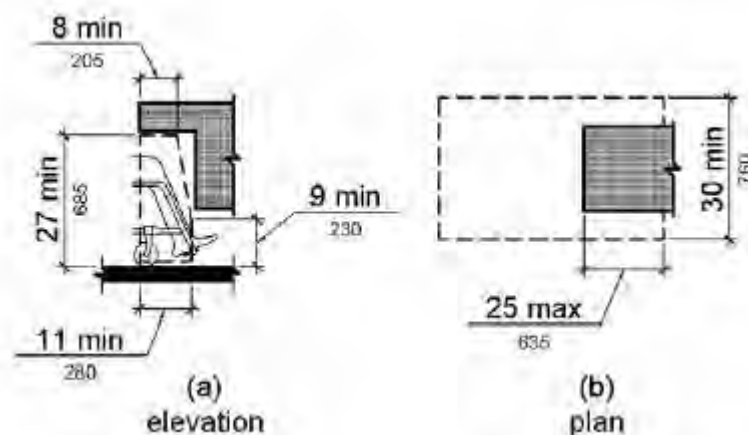


Figure 13: Knee Clearance. ADAAG 306.2

- **Toe clearance:** Where space beneath a sink is included as part of clear floor space, toe clearance shall be provided between the finish floor and 9 inches above the finish floor. Toe clearance shall be 30 inches wide minimum and extend 17 inches minimum and 25 inches maximum under a sink. Space extending greater than 6 inches beyond the available knee clearance at 9 inches above the finish floor shall not be considered toe clearance. (*ADAAG*, 306.2, 606.2)

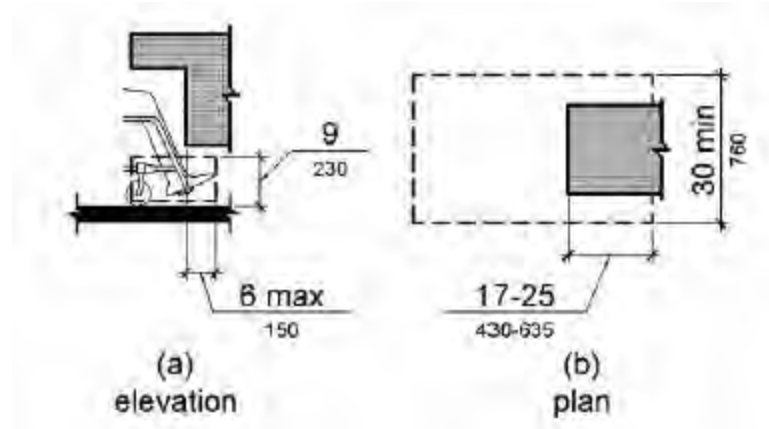


Figure 14: Toe Clearance. ADAAG 306.3

- **Operable parts:** Operable parts shall be operable with one hand and shall not require tight grasping, pinching, or twisting of the wrist. The force required to activate operable parts shall be 5 pounds maximum. Hand operated metering faucets shall remain open for 10 seconds minimum. (ADAAG, 309, 606.4)
- **Exposed pipes and surfaces:** Water supply and drain pipes under sinks shall be insulated or otherwise configured to protect against contact. There shall be no sharp or abrasive surfaces under sinks. (ADAAG, 606.5)

Paper Towel Dispensers and Trash Cans

- **Clear floor space:** Clear floor space shall be 30 inches minimum by 48 inches minimum shall be provided to at least one paper towel dispenser and trash can, adjoining an accessible route or adjacent to another clear floor space. (ADAAG, 305.3, 305.6)
- **Unobstructed forward reach:** Where a forward reach is unobstructed, the high forward reach shall be 48 inches maximum and 15 inches minimum above the finish floor. (ADAAG, 308.2.1) This occurs when the paper towel dispenser and trash can are a single unit, so that the front edge of the paper towel and the front edge of the trash can are in the same vertical plane.
- **Obstructed forward reach:** Where a high forward reach is over an obstruction, the clear floor space shall extend beneath the element for a distance not less than the required reach depth over the obstruction. The high forward reach shall be 48 inches maximum where the reach depth is 20 inches maximum. Where the reach depth exceeds 20 inches, the high forward reach shall be 44 inches maximum and the reach depth shall be 25 inches maximum (ADAAG, 308.2.2)

In almost all circumstances, if a forward approach is necessary, it will not be possible to have a detached trash can located under the paper towel dispenser, because the required knee and toe clearances cannot be provided.

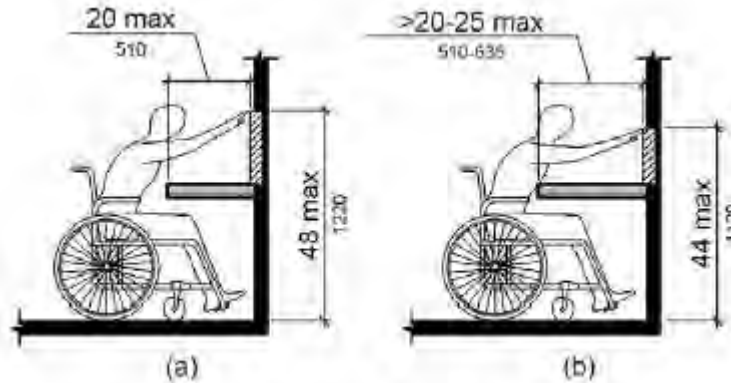


Figure 15: Obstructed High Forward Reach. ADAAG 308.2.2

- Unobstructed side reach:** Where a clear floor space allows a parallel approach to the paper towel dispenser and the side reach is unobstructed, the high side reach shall be 48 inches maximum and the low side reach shall be 15 inches minimum above the finish floor. An obstruction shall be permitted between the clear floor and the paper towel dispenser where the depth of the obstruction is 10 inches maximum. (ADAAG, 308.3.1)
- Obstructed side reach:** Where a clear floor space allows a parallel approach to the paper towel dispenser and the high side reach is over an obstruction, the height of the obstruction shall be 34 inches maximum and the depth of the obstruction shall be 24 inches maximum. The high side reach shall be 48 inches maximum for a reach depth of 10 inches maximum. Where the reach depth exceeds 10 inches, the high side reach shall be 46 inches maximum for a reach depth of 24 inches maximum. (ADAAG, 308.3.2)

Although the allowed 24 inch depth will accommodate many trash cans, DAKC recommends placing trash cans outside the clear floor space for paper towel dispensers if they are not part of a single unit or recessed into the wall for maximum accessibility.

- Operable parts:** Operable parts shall be operable with one hand and shall not require tight grasping, pinching, or twisting of the wrist. The force required to activate operable parts shall be 5 pounds maximum. Hand operated metering faucets shall remain open for 10 seconds minimum. (ADAAG, 309, 606.4)

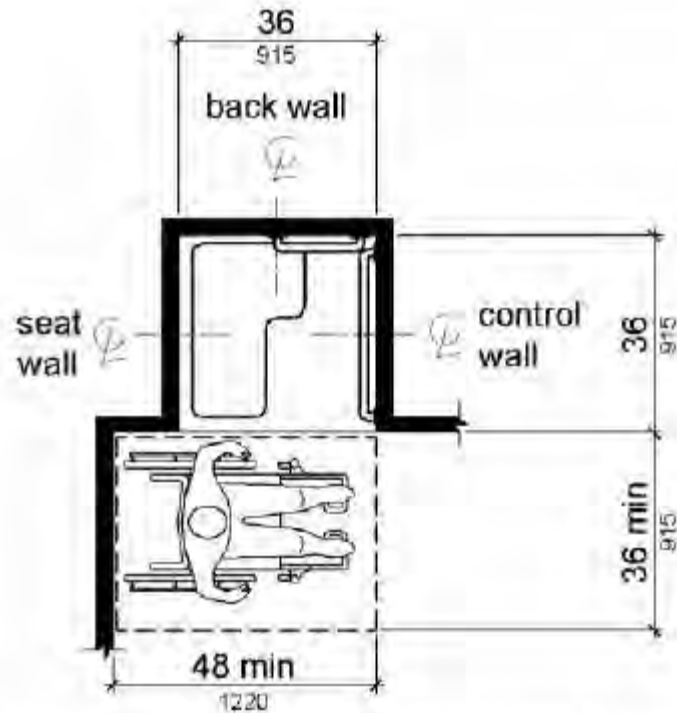
Transfer Showers

- **Scoping:** There are currently no requirements to provide accessible showers, even where showers are otherwise provided in locker rooms. DAKC recommends providing at least one transfer type shower, and including a roll in shower if space permits.

- **Transfer Type Shower Compartments:** Transfer type shower compartments shall be 36 inches by 36 inches clear inside dimensions measured at the center points of opposing sides and shall have a 36 in wide minimum entry on the face of the shower compartment. Clearance of 36 inches wide minimum by 48 inches long minimum measured from the control wall shall be provided. (ADAAG, 608.2.1)

Note that the interior shower dimensions are fixed, and are not minimums. This is because leaning too far forward or sitting at the edge of the seat to reach controls can result in an individual falling off the shower seat. However, by using a shower bench that folds up, a 36 inch by 36 inch shower compartment may be used as both a transfer shower and a standard shower as long as there is sufficient room outside of the shower compartment for transfer. See Appendix E, *Removing Barriers to Health Clubs and Fitness Facilities*, page 18 for a good reference.

- **Transfer shower grab bars:** Grab bars with circular cross sections shall have an outside diameter of 1 ¼ inches minimum and 2 inches maximum. Grab bars with on-circular cross sections shall have a cross-section dimension of 2 inches maximum and a perimeter dimension of 4 inches minimum and 4.8 inches maximum. The space between the wall and the grab bar shall be 1 ½ inches. The space between the grab bar and projecting objects below and at the ends shall be 1 ½ inches minimum. The space between the grab bar and projecting objects above shall be 12 inches minimum. The space between the grab bars and shower controls, shower fittings, and other grab bars above shall be permitted to be 1 ½ inches minimum. Grab bars shall 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. (ADAAG, 609.2.1, 609.2.2, 609.3, 609.4)



Note: inside finished dimensions measured at the center points of opposing sides

Figure 16: Transfer Type Shower Compartment Size and Clearance. ADAAG 608.2.1.

In transfer type compartments, grab bars shall be provided across the control wall and back wall to a point 18 inches from the control wall. (ADAAG, 608.3.1)

- **Transfer shower seats:** A folding or non-folding seat shall be provided in transfer type shower compartments. The seat shall extend from the back wall to a point within 3 inches of the compartment entry. The top of the seat shall be 17 inches minimum and 19 inches maximum above the bathroom finish floor.

Seats shall be either rectangular or L-shaped. For rectangular seats, the rear edge shall be 2 ½ inches maximum and the front edge 15 inches minimum and 16 inches maximum from the seat wall. The side edge of the seat shall be 1 ½ inches maximum from the adjacent wall.

The rear edge of an L-Shaped seat shall be 2 ½ inches maximum and the front edge 15 inches minimum and 16 inches maximum from the seat wall. The rear edge of the “L” portion of the seat shall be 1 ½ inches maximum from the wall and the front edge shall be 14 inches minimum and 15 inches maximum from the wall. The end of the “L” shall be 22 inches minimum and 23 inches maximum from the main seat wall. (ADAAG, 608.4, 610.3)

- **Transfer shower controls:** In transfer type shower compartments, the controls, faucets, and shower spray unit shall be installed on the side wall opposite the seat, 38 inches minimum and 48 inches maximum above the shower floor and shall be located on the control wall 15 inches maximum from the centerline of the seat toward the shower opening. (*ADAAG*, 608.5.1)
- **Shower spray unit and water:** A shower spray unit with a hose 59 inches long minimum that can be used both as a fixed-position shower head and as a hand-held shower shall be provided. The shower spray unit shall have an on/off control with a non-positive shut-off. If an adjustable-height shower head on a vertical bar is used, the bar shall be installed so as not to obstruct the use of grab bars. A fixed shower head located at 48 inches maximum above the shower finish floor shall be permitted instead of a hand-held spray unit in facilities that are not medical care facilities, long-term care facilities, transient lodging guest rooms, or residential dwelling units. (*ADAAG*, 608.6)
- **Transfer shower thresholds:** Thresholds in transfer type shower compartments shall be ½ inch high maximum and shall be beveled, rounded, or vertical. (*ADAAGI*, 608.7)

Roll-in Showers

- **Roll-in shower compartments:** Standard roll-in type shower compartments shall be 30 inches wide minimum by 60 inches deep minimum clear inside dimensions measured at center points of opposing sides and shall have a 60 inch wide minimum entry on the face of the shower compartment. A 30 inch wide minimum by 60 inch long minimum clearance shall be provided adjacent to the open face of the shower compartment. Alternative roll-in type shower compartments shall be 36 inches wide and 60 inches deep minimum clear inside dimensions measured at center points of opposing sides. A 36 inch wide minimum entry shall be provided at one end of the long side of the compartment. (*ADAAG*, 608.2.2, 608.2.3)

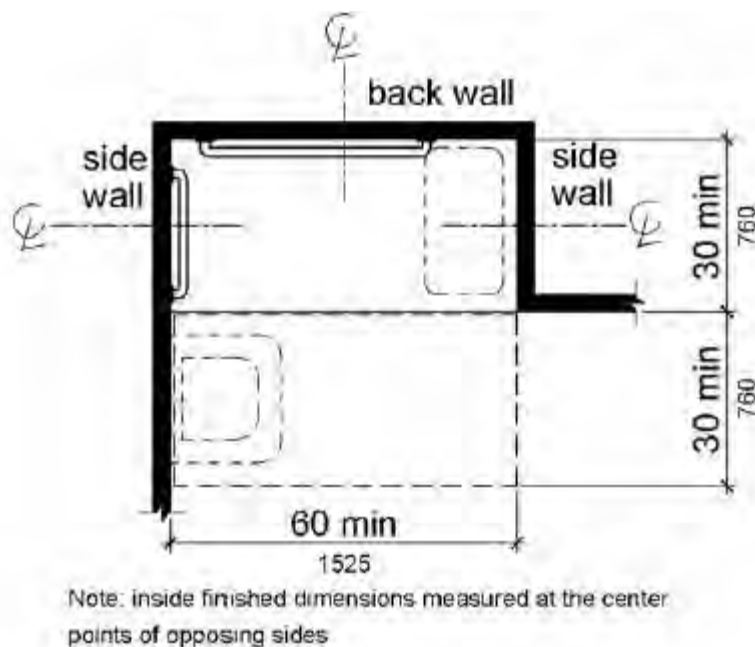


Figure 17: Standard Roll-In Type Shower Compartment Size and Clearance. ADAAG 608.2.2.

- Shower Grab bars:** Grab bars with circular cross sections shall have an outside diameter of 1 ¼ inches minimum and 2 inches maximum. Grab bars with on-circular cross sections shall have a cross-section dimension of 2 inches maximum and a perimeter dimension of 4 inches minimum and 4.8 inches maximum. The space between the wall and the grab bar shall be 1 ½ inches. The space between the grab bar and projecting objects below and at the ends shall be 1 ½ inches minimum. The space between the grab bar and projecting objects above shall be 12 inches minimum. The space between the grab bars and shower controls, shower fittings, and other grab bars above shall be permitted to be 1 ½ inches minimum. Grab bars shall 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. (ADAAG, 609.2.1, 609.2.2, 609.3, 609.4)

Where a seat is provided in standard roll-in type shower compartments, grab bars shall be provided on the back wall and the side wall opposite the seat. Grab bars shall not be provided above the seat. Where a seat is not provided in standard roll-in type shower compartments, grab bars shall be provided on three walls. Grab bars shall be installed 6 inches maximum from adjacent walls. (ADAAG, 608.3.2)

In alternate roll-in type shower compartments, grab bars shall be provided on the back wall and the side wall furthest from the compartment entry. Grab bars shall not be provided above the seat. Grab bars shall be installed 6 inches maximum from adjacent walls. (ADAAG, 608.4)

- **Roll-in shower seats:** A folding seat should be provided in roll-in type shower compartments, but is not required. The seat shall extend from the back wall to a point within 3 inches of the compartment entry. The top of the seat shall be 17 inches minimum and 19 inches maximum above the bathroom finish floor.

Seats shall be either rectangular or L-shaped. For rectangular seats, the rear edge shall be 2 ½ inches maximum and the front edge 15 inches minimum and 16 inches maximum from the seat wall. The side edge of the seat shall be 1 ½ inches maximum from the adjacent wall.

The rear edge of an L-Shaped seat shall be 2 ½ inches maximum and the front edge 15 inches minimum and 16 inches maximum from the seat wall. The rear edge of the “L” portion of the seat shall be 1 ½ inches maximum from the wall and the front edge shall be 14 inches minimum and 15 inches maximum from the wall. The end of the “L” shall be 22 inches minimum and 23 inches maximum from the main seat wall. (ADAAG, 608.4, 610.3)

- **Roll-in shower controls:** In standard roll-in type shower compartments, the controls, faucets, and shower spray unit shall be located above the grab bar, but no higher than 48 inches maximum above the shower floor. Where a seat is provided, the controls, faucets, and shower spray unit shall be installed on the back wall adjacent to the seat wall and shall be located 27 inches maximum from the seat wall. (ADAAG, 608.5.2)

In alternate roll-in type shower compartments, the controls, faucets, and shower spray unit shall be located above the grab bar, but no higher than 48 inches above the shower floor. Where a seat is provided, the controls, faucets, and shower spray unit shall be located on the side wall adjacent to the seat 27 inches maximum from the side wall behind the seat or shall be located on the back wall opposite the seat 15 inches maximum, left or right, of the centerline of the seat. Where a seat is not provided, the controls, faucets, and shower spray unit shall be installed on the side wall farthest from the compartment entry. (ADAAG, 608.5.3)

- **Shower spray unit and water:** A shower spray unit with a hose 59 inches long minimum that can be used both as a fixed-position shower head and as a hand-held shower shall be provided. The shower spray unit shall have an on/off control with a non-positive shut-off. If an adjustable-height shower head on a vertical bar

is used, the bar shall be installed so as not to obstruct the use of grab bars. A fixed shower head located at 48 inches maximum above the shower finish floor shall be permitted instead of a hand-held spray unity in facilities that are not medical care facilities, long-term care facilities, transient lodging guest rooms, or residential dwelling units. (*ADAAG*, 608.6)

- **Roll-in shower thresholds:** Thresholds in roll-in type shower compartments shall be $\frac{1}{2}$ inch high maximum. Thresholds more than $\frac{1}{4}$ inch high shall be beveled. (*ADAAGI*, 608.7, 303.3)

Saunas and Steam Rooms

- **Door Clear Width:** door openings shall provide a clear width of 32 inches minimum. Clear openings of doorways with swinging doors shall be measured between the face of the door and the stop, with the door open 90 degrees. There shall be no projections into the required clear opening width lower than 34 inches above the finish floor or ground. Projections into the clear opening width between 34 inches and 80 inches above the finish floor or ground shall not exceed 4 inches. (*ADAAG*, 404.2.3)
- **Maneuvering Clearance:** Minimum maneuvering clearances at doors and gates shall extend the full width of the doorway and the required latch side or hinge side clearance. (*ADAAG*, 404.2.4, 404.2.4.1)
- **Door Hardware:** Operable parts shall be 34 inches minimum and 48 inches maximum above the finish floor or ground. They shall be operable with one hand and shall not require tight grasping, pinching, or twisting of the wrist. The force required to activate operable parts shall be 5 pounds maximum. A door pull shall be placed on both sides of the door near the latch. (*ADAAG*, 309.4, 404.2.7)
- **Thresholds:** Thresholds, if provided at doorways, shall be $\frac{1}{2}$ inch high maximum. Changes in level of $\frac{1}{4}$ inch high maximum shall be permitted to be vertical. Changes in level between $\frac{1}{4}$ inch high minimum and $\frac{1}{2}$ inch high maximum shall be beveled with a slope not steeper than 1:2. (*ADAAG*, 303.2, 303.3, 404.2.5)
- **Seating:** When seating is provided in saunas and steam rooms, at least one bench shall have clear floor space positioned at the end of the bench seat and parallel to the short axis of the bench. (*ADAAG*, 612.2, 903.2)

WALKER ICE AND FITNESS CENTER

EXISTING FACILITIES

ROUTES

The door to the women's locker room has a front, pull side approach from the outside well above the required maneuvering clearances. The door clearance is more than 32 inches when open at a 90 degree angle, and the door has a hanger door pull which can be opened with 4 pounds of force using a closed fist or loose grip.

Upon entering the locker room, there are several large, full-length mirrors along the far wall. These mirrors provide a full body reflection, regardless of seated or standing position. Hallways within the locker room – which run from the entry vestibule to the locker area, into the toilet area, and into the shower and sauna area – are all sufficiently wide and free of obstructions.

LOCKER AREA

Within the locker area, there are lockers lining three walls as well as center islands with two rows of lockers each. The placement of lockers is mixed. Pairs of half-height lockers alternate with full height lockers. The bottom of the full-height lockers and the lower of the paired lockers is at approximately 28 inches from the finish floor. The hardware for the lower paired lockers is at approximately 42 inches. Benches with seats approximately 24 inches above the finish floor, and approximately 12 inches deep, are built in front of all of the lockers.



Figure 18: Lockers in WIFC Women's Locker Room. *Photo courtesy Marylu Dykstra, Disability Advocates of Kent County.*

SINK AREA

Entering the sink area from the locker area, there is a wall mounted fire extinguisher which protrudes 5 inches into the pedestrian path and has a leading edge 25 ½ inches above the finish floor. Also within this area, there is a dual sanitary napkin and tampon dispenser.

Sinks in the women's locker room fully meet accessibility standards. In the sink area, the top of the sinks are at 33 ¾ inches, and the bottom of sink counters are at 29 inches. The counter depth is 24 inches. The space from the front of the counter to the

front of the sink bowl, when measured below the counter as part of knee clearance, is 10 ½ inches. When entering the sink area from the locker area, the forward right-most sink has pipes enclosed with PVC to protect users. All audited sink hardware requires less than 5 pounds of force to operate.

Above the sinks, there are wall mounted soap dispensers, wall mounted hair dryers, and electrical outlets. The outlets are approximately 37 inches above the finish floor. The operable parts of the soap dispensers are at approximately 44 inches above the finish floor. The lowest edge of each hair dryer is mounted approximately 53 inches above the finish floor.

Separate paper towel dispensers and trash cans are provided. Trash cans are set into the wall, with the top of the opening at approximately 44 inches. Paper towel dispensers are mounted on the wall next to trash cans. The dispensers have a lever on the front right side which is easily operable with one hand using less than 5 pounds of force. The lower edge of the dispenser is mounted at approximately 51 inches. In a resting position, the lever is at approximately 60 inches above the finish floor.

TOILET AREA

There are seven toilet stalls provided within the women's locker room. Of these stalls, five of them are standard toilet compartments, one is an ambulatory accessible toilet compartment, and one is a wheelchair accessible toilet compartment.

The ambulatory accessible compartment is approximately 36 inches wide and more than 60 inches deep. The door to the ambulatory accessible compartment opens outward, and the latch is easily operable with one hand using less than 5 pounds of force. There are grab bars on both sides which measure at least 42 inches, and are mounted less than 12 inches from the rear wall. The bottom edge of the toilet dispenser is mounted approximately 1 ½ inches above the grab bar. Toilet plumbing is located behind the seat of the toilet, and the toilet does not have a lid.

The wheelchair accessible compartment exceeds the minimum required width and is more than twice the minimum required depth. The door to the wheelchair accessible compartment opens outward, and the latch is easily operable with one hand using less than 5 pounds of force. Grab bars to the rear and right of the toilet exceed the minimum required lengths. The bottom edge of the toilet dispenser is mounted approximately 3 inches above the grab bar, and the disposal bin is located approximately 3 inches below the grab bar. The toilet seat is placed 17 ½ inches above the finish floor, and toilet plumbing is located behind the seat of the toilet. The toilet does not have a lid.



Figure 19: Ambulatory Accessible Toilet Stall. *Photo courtesy Marylu Dykstra, Disability Advocates of Kent County.*



Figure 20: Wheelchair accessible toilet stall. *Photo courtesy Marylu Dykstra, Disability Advocates of Kent County.*

SHOWER AREA

In the shower area, there are four shower compartments, one sauna, and one steam room. Three of the shower compartments are 32 inches wide without any accessibility features. The fourth shower compartment is a roll-in shower compartment approximately 58 inches wide. All shower compartments are approximately 80 inches deep. There are no transfer shower compartments.

The accessible shower appears to have been configured so that it could be used as both a roll-in shower and a transfer shower. Currently, the soap dispenser and controls are located approximately 42 inches from the provided bench, making them difficult to reach from a seated position.

The accessible shower compartment is zero entry, with no threshold. The bench is L-shaped, has a folding seat, and is beginning to detach from the wall. The top of the bench is approximately 15 inches above the finish floor. The back of the bench is approximately 1 inch from the seat wall, the front of the bench is approximately 14 inches from the seat wall, and the main bench is approximately 30 inches long. The rear of the "L" portion of the seat is approximately 1 inch from the side wall, the front of the "L" is approximately 14 inches from the side wall, and the far edge of the "L" is approximately 22 inches from the seat wall.



Figure 21: Accessible shower compartment. *Photo courtesy Marylu Dykstra, Disability Advocates of Kent County.*

SAUNA AND STEAM ROOM

The sauna and steam room doors are 32 inches wide, with accessible door handles. The pull weight of the sauna door is less than 5 pounds, but the pull weight of the steam room door far exceeds 5 pounds. Controls for the sauna are located approximately 52 inches above the finish floor, and controls for the steam room are located approximately 44 inches above the finish floor. Both rooms have thresholds above ½ inch.

In the sauna, the tops of the benches are approximately 19 inches above the finish floor and 14 inches deep. They are placed with the back of the bench flush with the wall. The benches run the full length of the rear and right walls. A table with hot rocks is located on the left wall nearest the door. Between the table and the rear bench is clear floor space approximately 30 inches long and 30 inches deep.



Figure 22: Sauna. *Photo courtesy Marylu Dykstra, Disability Advocates of Kent County.*

In the steam room, the tops of the benches are approximately 24 inches above the finish floor and 14 inches deep. They are placed with the back of the bench flush with the wall. The benches run the full length of the rear, right, and left walls.



Figure 23: Steam room. *Photo courtesy Marylu Dykstra, Disability Advocates of Kent County.*

RECOMMENDATIONS

LOCKER AREA

Currently, the latch controls for the lower paired lockers are within the allowed reach range for an obstructed high reach. Although the height of interior locker elements was not checked, hooks and shelves in the lower paired lockers should also be located no more than 46 inches above the finish floor if the current bench configuration is maintained, or 48 inches above the finish floor if benches are removed. If the benches are removed from in front of the lockers, then locker use becomes much easier for everyone, particularly for individuals using wheelchairs. Removing the existing benches would also allow the lockers to be lowered to floor height, providing more accessible area within all lockers.

The most accessible locker room configuration which would maintain the current number of lockers would be to remove all of the existing benches and lower the lockers to floor height. Benches conforming to the above ADAAG §903 standards (page 31) should be placed in the center of aisles, leaving a minimum of 36 inches of clear floor space on either side, and a preferred aisle width of 48 inches on either side of benches. Each bench run should have two segments of 42 inches each with backs, facing in opposite directions to serve both banks of lockers. These backed portions could be located either in the center or at the outside edges of benches. At least one bench in each aisle should be shortened to allow 30 inch wide clear floor space for wheelchair seating.

If some lockers are removed, aisles may be widened to provide additional aisle width around center benches. If this approach is used, a minimum of 60 inches on either side of benches is recommended to allow comfortable passing space while someone is seated on a bench.

An alternate configuration, which would provide comparably accessible seating but somewhat more limited access to lockers and would not create as much useable locker space would be to maintain the existing configuration, but drop the tops of benches and the bottoms of lockers to 18-19 inches above the finish floor. Although a height of 17 inches is allowed, it is not recommended by DAKC. At least once bench in each aisle should be shortened to allow 30 inch wide clear floor space for wheelchair seating.

With either of these configurations, it is recommended that at least one bench segment in each aisle is maintained at the current 24 inch height for individuals who have more difficulty standing from a fully seated position. These segments should be a minimum of 42 inches long.

If no major modifications are possible, at least one bench conforming to the above ADAAG standards should be placed along the shower-side wall, which does not currently contain lockers.

SINK AREA

There are very few changes that need to be made in the sink area. First, to comply with ADA accessibility standards, the paper towel dispensers should be lowered so that the top of the dispenser lever is no more than 48 inches above the finish floor. Second, bring the hair dryers down to 42 inches above the finish floor so that they are comfortably within the reach range specified in the ADAAG.

DAKC has four other recommendations which will make the sink area easier to use for individuals with disabilities. The pipes below all of the sinks should be wrapped or covered with PVC. This covering protects the legs of wheelchair users from heat or cold

burns as a result of contact with the pipes. Since this is currently the only distinction between sinks, covering all of the pipes will allow wheelchair users to safely use any sink.

In addition, it is recommended that soap dispensers be moved to the counter top, at the same depth as the sink controls, to make the reach easier. At least one electrical outlet should be moved from behind the sinks onto an outer wall for the same reason.

Finally, if at all possible, it is recommended that the sanitary napkin and tampon dispenser be changed, either as a whole unit or just the lever mechanism. The turning mechanism should take less than 5 pounds of force to operate using one hand without tight grasping, pinching, or twisting of the wrist. This may be a challenge, however. Although a Google search indicates that there may be one brand of dispenser that uses push buttons instead of the common turn handles, feminine hygiene product dispensers that are ADA compliant are extremely rare.

TOILET AREA

There are only three recommended changes in the toilet area. First, the toilet paper dispensers should be moved up so that the bottom of the dispenser is at least 12 inches above the grasping surface of the grab bars, and no more than 48 inches above the finish floor. This will allow use of the grab bars below the toilet paper dispensers from both a seated and standing position.

Second, having exposed plumbing behind the toilet seat can present a hazard, particularly for individuals with balance problems. Leaning back against the exposed pipes can cause injury, and may result in a fall. There are several possible solutions. The best solution from an accessibility standpoint is to place the pipes inside the wall, with flush controls placed at least 6 inches from the centerline of the toilet. With new toilets, the same level of accessibility can be achieved through the use of toilets with tanks.

A second possible solution is to fabricate rectangular enclosures for the pipes. These false tanks should be at least 9 inches wide to provide stability, and centered on the toilet centerline. The cheapest solution would be to install toilet lids. Care should be taken to ensure that these lids are able to bear weight if a person leans back against them.

Finally, door hardware should be installed on the exterior of accessible stall doors. If possible, emergency latches should also be installed on the door exterior to allow assistance to enter if needed while maintaining privacy.

SHOWER AREA

Ideally, the shower area should have both a transfer stall with a folding seat, which can also be used as a standard shower stall, and a roll-in shower stall. With the current configuration as a starting point, an additional 4 inches of interior stall space would be needed for a 36 inch transfer stall and a 60 inch roll-in stall. If these two stalls are placed next to one another, the additional 12 inches needed for transfer space in the transfer stall can be created by reducing the entry space in the roll-in stall from 60 inches to 48 inches.

If only a partial reconfiguration of the shower area is possible and a choice must be made between a transfer shower and a roll-in shower, a transfer shower is preferred as there are more wheelchair users who choose to transfer out of their chairs onto a bench than who choose to, or are able to, remain in their wheelchair during a shower.

Even if structural reconfiguration of the shower area is not possible, there are several recommended changes. First and most importantly, the seat in the accessible stall needs to be repaired. The seat is disengaging from the wall, presenting a potential danger for users.

Second, the soap dispenser and shower controls should be moved so that they are adjacent to the seat, no more than 27 inches from the seat wall, at least 12 inches above the grab bar, and no less than 48 inches above the finish floor.

Third, the fixed shower head should be replaced with a shower head connected to a hose at least 58 inches long that can be used either in a fixed position or as a hand-held spray. To add additional accessibility, a vertical bar can be installed which will allow the shower head to slide up and down, allowing users with gripping difficulties to adjust the height of the spray. Note that the handle of the spray unit should not be more than 48 inches above the finish floor in its highest position.

Finally, the rear grab bar should be extended so that it is no more than 6 inches from either side wall, to provide full functionality throughout the shower.

SAUNA AND STEAM ROOM

There are three issues common to both the sauna and steam room. The most important issue is that both rooms have significant thresholds, preventing wheelchair users from accessing them. Threshold ramps not steeper than 1:8 for a maximum rise of 3 inches, or 1:10 if the threshold is higher than 3 inches, should be installed. Note that there should be a minimum of 36 inches between the lowest edge of the threshold ramp and the front edge of the showers.

The second common issue is benches. Although there is currently sufficient clear floor space in each room for a wheelchair user, clear floor space a minimum of 30 inches wide adjacent to the short side of benches is preferred. Additionally, neither room has benches at an accessible height for transfer.

Finally, the controls should be located no more than 48 inches from the finish floor, and a preferred 32 inches above the finish floor. Only the sauna controls are currently above 48 inches, but both would need to be moved for ideal accessibility.

In addition to problems common to the two rooms, changes should be made to the steam room door to reduce the necessary opening force. From an accessibility standpoint, the ideal solution is to install an automatic door opener. However, it is possible that installing automatic door controls inside the steam room may be difficult from an electrical standpoint – although controls designed to withstand outdoor weather may also work within the steam room. An alternative may be a power-assisted door system, where force placed on the door to open it will trigger electrical assistance.

PARK RESTROOMS

The restrooms within City Central Park meet or exceed accessibility standards with a few exceptions:

- Currently, toilet paper dispensers are installed directly below the grab bars. Dispensers should be installed so that the bottom of the dispenser is at least 12 inches above the grab bars, and no more than 48 inches above the finish floor;
- Plumbing behind the toilet seat is exposed, risking injury or falls. Plumbing should be enclosed or lids installed. See “Toilet Area” at page 55 for detailed recommendations;
- Trash cans are placed directly under paper towel dispensers, reducing the access to the dispensers. Trash cans should be moved to the side to provide at least 30 inches of clear floor space;
- Operable parts for the paper towel dispensers are outside of the accepted reach range. Dispensers should be lowered so that all operable parts are less than 48 inches above the finish floor;
- Handles should be installed on the outside of accessible stall doors.



Photo courtesy Marylu Dykstra, Disability Advocates of Kent County.

DAKC has three additional recommendations to improve the accessibility of park restrooms:

- Wrap or cover the pipes of both sinks so that either sink is equally accessible;
- Round off the exposed corner of the shelf placed just inside of each restroom to help prevent injuries;
- Oil or adjust restroom door handles so that the hardware requires 5 pounds of force or less to operate;
- Install exterior latch access to accessible restrooms to allow assistance if needed.

PARKING LOTS



Photo courtesy Marylu Dykstra, Disability Advocates of Kent County.

REQUIREMENTS AND STANDARDS

EVALUATION METHOD

There are two primary parking lots in City Central Park – one lot to the north near the baseball diamonds and soccer fields, and a lot outside of the WIFC. The number of spaces in each lot was counted. Access aisles and space distribution were both evaluated as well.

STANDARDS AND GUIDELINES

- Accessible Aisle:** Accessible routes must connect parking spaces to accessible entrances. In parking facilities where the accessible route must cross vehicular traffic lanes, marked crossing enhance pedestrian safety, particularly for people using wheelchairs and other mobility aids. Access aisles serving car and van parking spaces shall be 60 inches wide minimum. Access aisles shall extend the full length of the parking spaces they serve. Access aisles shall be marked so as to discourage parking in them. When a van and car share an access aisle, consider locating the van space so that the access aisle is on the passenger side of the van space. This will help individuals who use wheel chair lifts. (ADAAG, 502.3,502.3.1,502.3.2,502.3.3. 502.3.4)

- Floor and Ground Surfaces:** Access aisles are required to be nearly level in all directions to provide a surface for wheelchair transfer to and from vehicles. The exception for this is when there is a slope for drainage. Built-up curb ramps are not permitted to project into access aisles and parking spaces because they would create slopes greater than 1:48. (ADAAG, 502.4)
- Identification:** Parking space identification signs shall include the international symbol of accessibility. Signs identifying van parking spaces shall contain the designation “van accessible.” Signs shall be 60 inches minimum above the finish floor or ground surface measured to the bottom of the sign. Car and Van parking spaces shall be marked with lines. The width measurements of parking spaces and accessible aisles shall be made from the centerline of the markings. Car parking spaces shall be 96 inches width minimum and van parking spaces shall be 132 inches width minimum. They shall be marked to define the width and shall have an adjacent access aisle. (ADAAG, 502.1,502.2,502.6)
- Number of Parking Spaces:**

ADAAG 208.2 Parking Spaces		
Total Number of Parking Spaces Provided in Parking Facility	Minimum Number of Required Accessible Parking Spaces	Minimum Number of Required Van Accessible Parking Spaces
1 to 25	1	1
26 to 50	2	1
51 to 75	3	1
76 to 100	4	1
101 to 150	5	1
151 to 200	6	1
201 to 300	7	2
301 to 400	8	2
401 to 500	9	2
501 to 1000	2 percent of total	1 van accessible space for every 6, or fraction of 6, accessible spaces
1001 and over	20, plus 1 for each 100, or fraction thereof, over 1000	

EXISTING FACILITIES AND RECOMMENDATIONS

In the northern parking lot near the soccer fields there are currently 178 total parking spaces, with 5 of them accessible. To meet ADA standards, at least one more accessible parking space should be added. At least one of the total number of accessible spaces should be van accessible. Currently, access aisles are placed

between each accessible space. With ADAAG regulations allowing two spaces to share an access aisle, there should be sufficient room to reconfigure the existing accessible parking to add a space without losing any of the existing parking.



Figure 24: Accessible Parking in the North Lot. *Photo courtesy Marylu Dykstra, Disability Advocates of Kent County.*

In the WIFC parking lot, there are currently 272 total parking spaces, with 6 of them accessible. To meet ADA standards, the lot should have at least 7 accessible parking spaces, and two of the total number of accessible spaces should be van accessible. Accessible parking spaces should be distributed between the WIFC entrance and the northern trail head, with at least one van accessible space in each location.

For van accessible spaces, DAKC recommends using a 132 inch space with a 60 inch marked access aisle. This provides sufficient space for van lift use, while still discouraging parking in access aisles. All accessible parking spaces should be adjacent to an access aisle and marked with a sign at least 60 inches above the ground, which has the international symbol of accessibility. In addition, van accessible spaces should have the designation "Van Accessible." Signs can be used to designate more than one parking space as long as it is clear from the sign which spaces are designated.

COURTS AND PLAY FIELDS



Photo courtesy Marylu Dykstra, Disability Advocates of Kent County.

REQUIREMENTS AND STANDARDS

EVALUATION METHOD

Courts and play fields were evaluated for access to at least one type of each play field, including player areas. Spectator accessibility was also evaluated.

STANDARDS AND GUIDELINES

- **Court Sports:** In court sports, at least one accessible route shall directly connect both sides of the court. (ADAAG, 206.2.12)
- **Location:** Assessable routes shall coincide with or be located in the same area as general circulation paths. Where circulation paths are interior, required accessible routes shall also be interior. (ADAAG, 206.3)

TENNIS AND BASEBALL

Currently, the baseball diamonds and tennis courts are fully accessible. However, the accessible route to the tennis court is not visible when approaching the court from the southeast. DAKC recommends placing a sign on the east side of the tennis court fence pointing to the accessible route.

In addition, DAKC recommends creating wheelchair space adjacent to the short end of the players' bench in baseball dugouts when benches or fencing is replaced.

INLINE RINK

The inline hockey rink, by contract, is almost entirely inaccessible. Currently, the only wheelchair access onto the rink is via the maintenance entrance to the north. The operable parts on all entrance gates are heavy, and require significantly more than 5 pounds of force to operate.



Figure 25: Inline Rink Maintenance Gate. *Photo courtesy Marylu Dykstra, Disability Advocates of Kent County.*

From an accessibility standpoint, the best thing would be to reconfigure the thresholds for both player boxes so that all thresholds are $\frac{1}{2}$ inch high or less. This would allow all players to enter and exit in the same place, as well as to utilize both penalty boxes. While it may be possible to add permanent or folding threshold ramps to the existing entrances – particularly the threshold from the trail into the player box on the west side of the rink – care should be taken to ensure that ramps do not protrude into the accessible route.



Figure 26: Inline Rink Thresholds. *Photo courtesy Marylu Dykstra, Disability Advocates of Kent County.*

BASKETBALL, VOLLEYBALL, AND SOCCER

Currently, there are no accessible routes to basketball courts, volleyball courts, and permanent soccer fields. At least one of each type of play field should have an accessible route, at least 36 inches wide with a firm, stable surface, to both sides of the play area. Because the basketball court is already firm and stable, the accessible route to the far side of the play area may go across the court.

Benches and bleachers at both the basketball courts and soccer fields should also include accessible seating. This can be achieved by adding a concrete seating space no less than 30 inches wide by 48 inches long adjacent to the short ends of benches and bleachers, and adjacent to the accessible route.

WETLANDS FEATURES



Photo courtesy Marylu Dykstra, Disability Advocates of Kent County.

REQUIREMENTS AND STANDARDS

EVALUATION METHOD

Two primary elements were examined when auditing wetlands features. First, transitions from the asphalt trail to wooden platforms were examined for threshold height. Second, railing heights were evaluated for visibility and use from a seated position.

STANDARDS AND GUIDELINES

- **Railings:** at least 25% of the railings, guards, or handrails shall be 34 inches maximum above the ground or desk surface. (ADAAG, 1005.2)
- **Dispersion:** 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. Different fishing locations may provide varying water depths, shade, vegetation and proximity to the shoreline or bank. (ADAAG, 1005.2.1.1)
- **Edge Protection:** Edge protection is required only where railings, guards, or handrails are provided on a fishing pier or platform. Edge protection will prevent wheelchairs or other mobility devices from slipping off the fishing pier or platform.

Extending the deck of the fishing pier or platform 12 inches where the 34 inch high railing is provided as 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. In such design, curbs or barriers are not required. (ADAAG, 1005.3)

- **Curb or Barrier:** Curbs or barriers shall extend 2 inches minimum above the surface of the fishing pier or platform. (ADAAG, 1005.3.1)
- **Extended Ground or Deck Surface:** The ground or deck surface shall extend 12 inches minimum beyond the inside face of the railing. Toe clearance shall be provided and shall be 30 inches wide minimum and 9 inches minimum above the ground or deck surface beyond the railing. At least one turning space shall be provided on fishing piers and platforms. (ADAAG, 1005.3.2)
- **Accessible Routes:** Walking surfaces must have running slopes no steeper than 1:20. Other components of accessible routes, such as ramps and curb ramps are permitted to be more steeply sloped. The running slope of walking surfaces shall not be steeper than 1:20. The cross slope of walking surfaces shall be no steeper than 1:48. The clear width of walking surfaces shall be 36 inches minimum. (ADAAG, 1005.1)

EXISTING FACILITIES AND RECOMMENDATIONS

At both wetlands features, the wood planks at the trail transition should be beveled. This is most needed at the wetlands overlook, but having a beveled edge at both the overlook and fishing pier will reduce the amount of maintenance needed to preserve accessible transitions.

Currently all railings at both the overlook and fishing pier are 37 inches high. At least 25 percent of railings at the fishing pier should be lowered to 34 inches so that they can be better utilized from a seated position, as well as by children who would like to fish. While accessible railings at the overlook are not required by ADA regulations, DAKC recommends that at least one segment of the railing at the overlook is also lowered to 34 inches, and the possibility of lowering all overlook railings should be considered.

Where railings are lowered to 34 inches at the fishing pier, a curb or barrier at least 2 inches high should be provided at the edge of the pier beyond the railing. While providing 9 inches of toe clearance below the rail and extending the pier at least 12 inches beyond the inside edge of the railing is allowed, this not recommended because of the pier's proximity to a playground.

PLAYGROUNDS



Photo courtesy Marylu Dykstra, Disability Advocates of Kent County.

REQUIREMENTS AND STANDARDS

EVALUATION METHOD

There are two playgrounds within City Central Park, one on the east side of the park near the fishing pier and picnic area, and one to the north of the park near the baseball diamonds and soccer fields. Both were examined.

In considering playground accessibility, the needs of children with a variety of disabilities are considered, including those who use wheelchairs, walkers, and canes. In addition, the needs of parents with disabilities to get to and play with their children are considered. When auditing playgrounds, four major areas are examined – ground level play components, raised play components, surfacing and routes, and observation benches.

STANDARDS AND GUIDELINES

- **Accessible routes:** Walking surfaces must have running slopes no steeper than 1:20. Other components of accessible routes, such as ramps and curb ramps are permitted to be more steeply sloped. The running slope of walking surfaces shall not be steeper than 1:20. The cross slope of walking surfaces shall be no steeper than 1:48. Where accessible routes serve ground level play components, the

vertical clearance shall be 80 inches high minimum. (ADAAG, 402.2, 403.3, 1008.2)

- **Ground Level and Elevated Play Components:** Transfer systems shall be permitted to connect elevated play components except where 20 or more elevated play components are provided no more than 25% of the elevated play components shall be permitted to be connected by transfer systems. Where transfer systems are provided, an elevated play component shall be permitted to connect to another elevated play component as part of an accessible route. Transfer systems for soft contained play structures shall be permitted to be used as part of an accessible route. (ADAAG, 1008.2.1 & 1008.2.2)
- **Clear width:** at ground level, the clear width of accessible routes shall be 60 inches minimum. In play areas less than 1000 square feet, the clear width of accessible routes shall be permitted to be 44 inches minimum, if at least one turning space is provided where the restricted accessible route exceeds 30 feet in length. The clear width of accessible routes shall be permitted 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. The clear width of accessible routes connecting elevated play components shall be 36 inches minimum. The clear width of accessible routes connecting elevated play components shall be permitted to be reduced to 32 inches minimum for a distance of 24 inches maximum provided that reduced width segments are separated by segments that are 48 inches long minimum and 36 inches wide minimum. The clear width of transfer systems connecting elevated play components shall be permitted to be 24 inches minimum. (ADAAG, 1008.2.4 & 1008.2.4.2)
- **Ramps:** Ramp runs connecting ground level play components shall have a running slope no steeper than 1:16. The rise of any ramp run connecting elevated play components shall be 12 inches maximum. (ADAAG, 1008.2.5, 1008.2.5.1, 1008.2.5.2)
- **Handrails:** 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. However, handrails are required when they are provided on walking surfaces with running slopes less than 1:20. Handrails shall be provided on both sides of stairs and ramps. Handrails shall be continuous within the full length of each stair flight or ramp run. Inside handrails on switchback or dogleg stairs and ramps shall be continuous between flights or runs. Top of gripping surfaces of handrails shall be 34 inches minimum and 38 inches maximum vertically above walking surfaces, stair nosings, and ramp

surfaces. When children are the principal users in a building or facility a second set of handrails at an appropriate height can assist them and aid in preventing accidents. A maximum height of 28 inches measured to the top of the gripping surface from the ramp surface or stair nosing is recommended for handrails designed for children. Handrail gripping surfaces with a circular cross section shall have an outside diameter of 0.95 inches minimum and 1.55 inches maximum. Where the shape of the gripping surface is non-circular the handrail shall provide an equivalent gripping surface. (ADAAG, 505 & 1008.2.5.3)

- **Ground Surfaces:** Ground surfaces must be inspected and maintained regularly to ensure continued compliance with the ASTM F 1951.
- **Use Zones:** Ground surfaces located within use zones shall comply with ASTM F 1292.
- **Transfer Systems:** 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. Transfer platforms shall be provided where transfer is intended from wheelchairs or other mobility aids. Transfer platforms shall have level surfaces 14 inches deep minimum and 24 inches wide minimum. The height of the transfer platforms shall be 11 inches minimum and 18 inches maximum measured to the top of the surface from the ground or floor surface. A transfer space shall be provided adjacent to the transfer platform. The 48 inch long minimum dimension of the transfer space shall be centered on and parallel to the 24 inch long minimum side of the transfer platform. The side of the transfer platform serving the transfer space shall be unobstructed. At least one means of support for transferring shall be provided. Transfer steps shall be provided where movement is intended from transfer platforms to levels with elevated play components required to be on accessible routes. Transfer steps shall have level surfaces 14 inches deep minimum and 24 inches wide minimum. Each transfer step shall be 8 inches high maximum. At least one means of support for transferring shall be provided. Transfer supports are required on transfer platforms and transfer steps to assist children when transferring. (ADAAG, 1008.3)

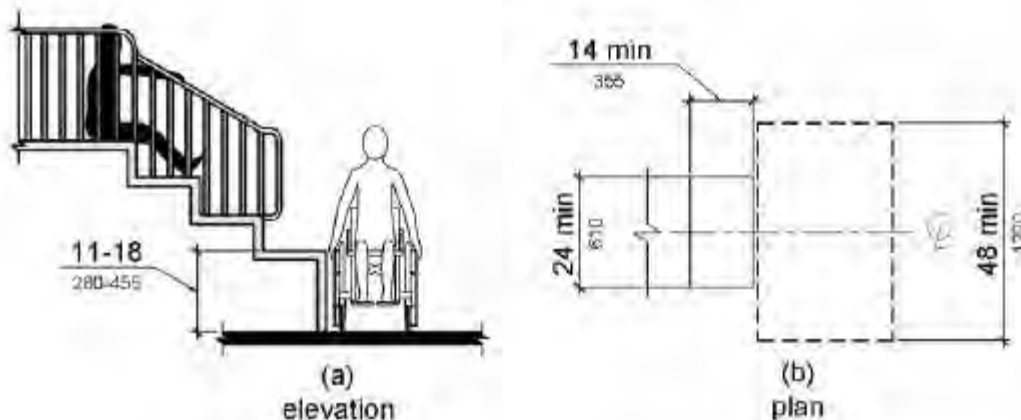


Figure 27: Transfer Platforms. ADAAG 1008.3.

- Play Components:** at least one turning space shall be provided on the same level as play components. Where swings are provided, the turning space shall be located immediately adjacent to the swing. Clear floor or ground spaces, turning spaces, and accessible routes are permitted to overlap with play areas. A specific location has not been designated for the clear floor or ground spaces or turning spaces, except swing because each play component may require that the spaces be placed in a unique location. 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. (ADAAG, 1008.4)
- Children's Reach Ranges:** ADAAG, 1008.4.2

Children's Reach Ranges			
Forward or Side Reach	Ages 3 and 4	Ages 5 through 8	Ages 9 through 12
High (maximum)	36 in (915 mm)	40 in (1015 mm)	44 in (1120 mm)
Low (minimum)	20 in (510 mm)	18 in (455 mm)	16 in (405 mm)

- Play tables:** where play tables are provided, knee clearance 24 inches high minimum, 17 inches deep minimum, and 30 inches wide minimum shall be provided. The tops of rims, curbs, or other obstructions shall be 31 inches high maximum. Play tables designed and constructed primarily for children 5 years and younger shall not be required to provide knee clearance where the clear floor or ground space required is arranged for a parallel approach. (ADAAG, 1008.4.3)
- Entry points and Seats:** Where play components require transfer to entry points or seats, the entry points or seats shall be 11 inches minimum and 24 inches maximum from the clear floor or ground space. Where play components require

transfer to entry points or seats, at least one means of support for transferring shall be provided. (ADAAG, 1008.4.4)

EXISTING FACILITIES AND RECOMMENDATIONS

Both playgrounds in City Central Park currently have accessible routes to the playground entrance, loose woodchip surfacing, and composite play structure, a swing set, and benches at the interior edge of the playground. At the eastern playground, one of the swings is accessible. There is a picnic table at the northern playground.

The first priority for both playgrounds should be the installation of accessible playground surfacing. Without the ability to move within the playground, accessible play components and benches are still largely inaccessible. There are a number of options for accessible playground surfacing, ranging from bonded wood particulates to composite rubber surfaces, although not all of these surfaces also meet impact attenuation requirements for use zones.

For composite play structures, an accessible route should be provided to at least 50 percent of elevated play components, including slides. An accessible route can include either a ramp or a stepped transfer system that complies with ADAAG 1008.3 for composite structures with fewer than elevated 20 play components. Currently, the eastern playground has one elevated play component which is ramp accessible. No elevated play components at the northern playground are accessible. Neither playground currently has any accessible ground-level play components as part of the composite structure. At the eastern playground, however, the accessible elevated play component could also be used as an accessible ground-level play component, once accessible surfacing is in place, by moving it to the other side of the landing where it is located. This would provide sufficient clear ground space for accessible play.



Figure 28: Eastern (left) and Northern (right) Composite Play Structures. *Photo courtesy Marylu Dykstra, Disability Advocates of Kent County.*

At the eastern playground, installing accessible surfacing throughout the playground would also provide wheelchair accessible seating adjacent to viewing benches. At the northern playground, additional area around benches should be created for adjacent wheelchair seating.

WAY-FINDING



Photo courtesy Marylu Dykstra, Disability Advocates of Kent County.

REQUIREMENTS AND STANDARDS

EVALUATION METHOD

Way-finding and informational signs are a critical component of accessibility. Signs provide necessary information about where various features and places of interest are located, as well as information about the conditions of paths between features. This allows individuals to make informed decisions about where they want to go within the property, as well as how they will get there.

STANDARDS AND GUIDELINES

- **Sign requirements:** Interior and exterior signs identifying permanent rooms and spaces shall have both visual and tactile characters meeting the specifications below. (ADAAG, 216.2 Signs that provide direction to or information about interior spaces and facilities of the site shall have visual characters meeting the specifications below.
- **Raised Characters:** When 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, shall be provided. Tactile characters on signs shall 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. (ADAAG, 703.1, 703.2)
- **Visual Characters:** Characters and their background shall have a non-glare finish. Characters shall 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 with their background. Additional factors affecting the ease with which the text can be distinguished from its background include shadows cast by lighting sources, surface glare, and the uniformity of the text and its background colors and textures. Characters shall be uppercase or lowercase or a combination of both. Characters shall be conventional in form. Characters shall not be italic, oblique, script, highly decorative, or of other unusual forms.

Characters shall be selected from fonts where the width of the uppercase letter “O” is 55 percent minimum and 110 percent maximum of the height of the uppercase letter “I”. Character viewing height shall be measured as the horizontal distance between the character and an obstruction preventing further approach towards the sign. Visual characters shall be 40 inches (1015 mm)

minimum above the finish floor or ground. Stroke thickness of uppercase letter “I” shall be 10 percent minimum and 30 percent maximum of the height of the character. Character spacing shall be measured between the two closest points of adjacent characters, excluding word spaces.

Spacing between individual characters shall be 10 percent minimum and 35 percent maximum of character height. Spacing between the baselines of separate lines of characters within a message shall be 135 percent minimum and 170 percent maximum of the character height. (ADAAG, 703.5)

- **Trailhead Signs:** Where new signs are provided at trailhead on newly constructed or altered trails, the signs shall include the following information:
 1. Length of the trail or trail segment;
 2. Surface type;
 3. Typical and minimum tread width;
 4. Typical and maximum running slope; and
 5. Typical and maximum cross slope. (ODA, 247.4.1, 1017.11)

EXISTING FACILITIES AND RECOMMENDATIONS

Currently, the only way-finding signs within City Central Park are the park entrance signs, visual park maps at the outdoor restrooms, and the required signs marking outdoor restrooms. Although the existing signs are very clear and readable, and no further signs are currently required, two additional types of signs were discussed during the park audit.

The first recommended sign is a full wooden park map, placed at the primary property entrance as marked by the bus stop. With the current bus stop location, the map would be placed near the public right-of-way sidewalk, beside the private sidewalk into the property. If the bus stop is moved to the rear of the library, the map should also be moved. The map should be made so that it is both visual and tactile, and shows trails, buildings, and primary park features. Major trail distances could also be included.

For the best results in creating a successful tactile map, DAKC recommends consulting with the Association for the Blind and Visually Impaired of Michigan – (616) 458-1187 or abvi@abvimichigan.org. The actual creation of signs can be an excellent project for volunteer groups such as the Girl Scouts or Boy Scouts. Additional tactile maps could be placed near the wetlands picnic pavilion and near the concessions building in the north of the park.

To supplement the park map or maps, directional signs may be beneficial to direct people to features or buildings, particularly in vehicle traffic areas.

The second recommended set of signs should contain trail information. These signs should be placed at trail heads and primary trail intersections. At a minimum, they should include:

- Length of trail or trail segment;
- Surface type;
- Typical and minimum tread width;
- Typical and maximum running slope;
- Typical and maximum cross slope.

Additional information which could be included is:

- Allowed types of traffic;
- Existence and placement of resting intervals;
- Park features on trail segment;
- Park or segment facts.



Figure 29: Sample Trail Sign. Image courtesy of AmericanTrails.org.

<http://www.americantrails.org/resources/accessible/Beneficial-Designs-accessible-trails.html>.

OTHER



Photo courtesy Marylu Dykstra, Disability Advocates of Kent County.

REQUIREMENTS AND STANDARDS

EVALUATION METHOD

There are six other elements within the WIFC and City Central Park which were discussed during the accessibility audit:

- Lighting in the WIFC atrium;
- Fully automatic doors in the WIFC entrance;
- Picnic tables;
- Drinking fountains;
- Concessions counter near the baseball diamonds;
- Parking berms.

STANDARDS AND GUIDELINES

- **Automatic and power-assisted Doors and Gates:** Doorways shall 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 shall be based on the clear opening provided by all leaves in the open position. (ADAAG, 404.3)
- **Carpeting:** The carpet shall be securely attached and have a firm cushion, pad, or backing or no cushion pad. The carpet shall have a level loop, textured loop,

level cut pile, or level cut/uncut pile texture. Pile height shall be ½ inch maximum. Exposed edges of carpet shall be fastened to floor surfaces and shall have trim on the entire length of the exposed edge. (ADAAG, 302.2)

- **Picnic Unit scoping:** In newly constructed picnic facilities which contain two or fewer picnic units, each picnic unit shall be accessible. In newly constructed facilities which contain more than two picnic units, at least 20 percent but not less than two of the picnic units shall be accessible. Where picnic units are altered or added, the requirements shall apply only to the picnic units that are altered or added until the number of accessible picnic units complies with the minimum number required for new construction. Accessible picnic units shall provide choices of picnic units comparable to, and integrated with, those available to others. (ODA, F245.1, F245.2, F245.3)
- **Clear ground space for picnic units:** Clear ground space shall be provided at picnic tables which is 36 inches along all useable sides of the table measured from the back edge of the benches. (ODA, 1011.2.1)
- **Picnic tables:** Picnic tables shall provide at least one wheelchair space for each 24 linear feet of usable table surface perimeter. Wheelchair spaces shall be 30 inches minimum by 48 inches minimum. Wheelchair spaces shall be positioned for a forward approach to the table and provide knee and toe clearance under the table. (ODA, 1011.4)
- **Drinking Fountains:** Spout outlets shall be 36 inches maximum above the finish floor or ground. The spout shall be located 15 inches minimum from the vertical support and 5 inches maximum from the front edge of the unit, including bumpers. The spout shall provide a flow of water 4 inches high minimum and shall be located 5 inches maximum from the front of the unit. The angle of the water stream shall be measured horizontally relative to the front face of the unit. Where spouts are located less than 3 inches of the front of the unit, the angle of the water stream shall be 30 degrees maximum. Where spouts are located between 3 inches and 5 inches maximum from the front of the unit, the angle of the water stream shall be 25 degrees maximum. Drinking fountains for standing persons: spout outlets of drinking fountains for standing persons shall be 38 inches minimum and 43 inches maximum above the finish floor or ground. (ADAAG, 602)
- **Sales and Service Counters:** A portion of the counter surface that is 30 inches long minimum and 36 inches high maximum shall be provided. Knee and toe space complying shall be provided under the counter. A clear floor or ground space shall be positioned for a forward approach to the counter. (ADAAG, 904.4)

EXISTING FACILITIES AND RECOMMENDATIONS

WIFC LIGHTING

Currently, the lighting in the WIFC atrium is very dim. Although recent attempts have been made to increase the lighting levels in the atrium, the end result is not as bright as expected and is still not sufficient to provide accessible levels of lighting for individuals with visual impairments. Lighting levels should be increased if possible. Although there are no technical guidelines for lighting levels at this point, a good rule of thumb is that lighting should be at least as bright as a typical office building to provide sufficient illumination and visibility. If a complete lighting redesign is not possible, primary use signs should be separately illuminated.

WIFC DOORS

Fully automated doors have recently been installed at the entrance to the WIFC. Both doors in the sequence are separately automated, providing excellent timing for people to move through the entrance way. The automated doors are each part of a pair, and while the individual doors provide sufficient clear width to meet accessibility regulations, automating both doors in each pair would further increase accessibility. In addition, there is currently a rug which runs between the door pairs to help reduce water and debris tracked into the WIFC. While the design and material of the rug is very accessible, it is bunching and folding at the edges. The rug should either be tacked down or removed entirely.

PICNIC TABLES

There are two areas with picnic tables within City Central Park – a covered picnic area near the eastern playground, and several picnic tables near the baseball diamonds. The covered picnic area used to have accessible picnic tables, which were later broken. These tables should be replaced, and tables near the baseball diamonds added or modified, so that at least 20 percent at each location, but not fewer than 2 of the tables in each area, are accessible.

DRINKING FOUNTAINS

There are several drinking fountains throughout City Central Park, placed in pairs, with both standing height and seated height fountains. This configuration is ideal for accessibility as it provides access for wheelchair users as well as individuals who have difficulty bending. Fountains should be checked to ensure that operable parts require no

more than 5 pounds of force to use, and that water flow is at least 4 inches high so that a cup can be filled by those unable to bend over a fountain.

CONCESSIONS

The concession stand counter is currently 37 inches high. Although accessibility regulations require that service counters are no more than 36 inches high, this change is a very low priority because the front of the counter is easily within reach range and there will always be an employee placing food on the counter when the concession stand is open who can ensure that it is placed to the front. If the concession stand is renovated, the counter should be lowered to no more than 36 inches above the ground, although DAKC recommend counter tops at 32 inches above the finish floor.

PARKING BERMS

Finally, there are several areas where parking is adjacent and perpendicular to sidewalks within the park. In these spaces, it is common for parked vehicles to overhang the sidewalk, reducing the clear tread width, which may prevent clear passage for a wheelchair user. To maintain the minimum clear width, parking berms should be installed at the front of spaces adjacent to sidewalks.

CONCLUSION

The City of Walker has done an exemplary job of providing accessible facilities for residents and community members at City Central Park and the Walker Ice and Fitness Center. While there are still improvements to be made – both major and minor – the City staff and the facilities themselves clearly demonstrate a commitment to create an inclusive, welcoming community.

DAKC believes that by implementing the changes outlined in this report, the City of Walker will move closer to implementing the Master Plan goals and providing accessible, barrier free play and recreation opportunities for residents of all ages and abilities. The information in the report can be used in City Central Park, with other Parks and Recreation properties, and throughout the City of Walker to make the City and our Community accessible and enjoyable for everyone.

MESSAGING AND COMMUNICATIONS

INTRODUCTION

The following material presents an approach to support the City of Walker in its messaging and communication plan development pursuant to the Accessibility Assessment. Tools have been provided to increase the depth and breadth of the messaging that may be developed by City staff.

1. COMMUNICATION PLAN

The communication plan addresses multiple communication modes using both a push and passive approach.

- Push
 - Media Approaches
 - Press release
 - Release presenting the results of the recent accessibility assessment (with the positive comments by Disability Advocates of Kent County, Accessibility Specialist, Kim Frost).
 - Ongoing press release topics.
 - Newsletters
 - Education
 - New features
 - Social Media
 - Education
 - New features
 - Town hall / City meetings
 - Announcements
 - Photos
- Passive
 - Signage
 - Did you know? Educational components

2. PRESS RELEASE MESSAGING

The following messages may be incorporated within any of the modes desired by the City. Some 'external' resources were utilized, sources are footnoted.

MESSAGING POINTS:

1. CITY OF WALKER PARKS AND RECREATION FACILITIES ENHANCEMENTS DEMONSTRATE THE VALUE OF ACCESSIBILITY FOR ALL.

The City of Walker is demonstrating the value of its parks and public recreation facilities by applying resources, including personnel, equipment, and building solutions to enhance the physical accessibility of both internal and external features. Accessibility is defined as: making a facility usable for people with disabilities. According to the Americans with Disabilities Act of 1990, there are four priorities recommended by the Title III regulations, specific to removal of barriers:

1. Accessible approach and entrance
2. Access to goods and services
3. Access to public toilet rooms
4. Access to other items such as water fountains and public telephones

2. CITY OF WALKER PARKS AND RECREATION IS ALL ABOUT MAKING THINGS USABLE TO **ALL PEOPLE**, WHATEVER THEIR ABILITIES.

Making public spaces for people with disabilities, makes the same spaces that much more convenient and safe for others. A person in a wheelchair faces similar obstacles to a person with a child in a stroller. Curb cuts, crosswalks, and seating space for sports events, create a sense of safety and comfort for all.

3. CITY OF WALKER GOES ABOVE AND BEYOND 'STANDARD' PARKS ASSESSMENT TOOLS WITH ITS ACCESSIBILITY ENHANCEMENTS.

Typical parks assessment tools address a park's "accessibility" insofar as its proximity to its population density as well as transportation connectivity (streets, sidewalks, and public transportation). Taking "accessibility" further, the City of Walker acknowledges that "accessibility" should be about eliminating barriers and creating spaces that honor the needs of all people, regardless of ability.

Aspects of accessibility extend beyond what most people believe are common practices, such as grab bars in rest room facilities to the less obvious, but just as

important. Accessible play equipment, including swings (Figure 31) and built structures need to accommodate children of varying abilities.

Providing access is also defined by allowing people to move uninhibited from one area to another. This may require adjustments to parking areas and adjacent sidewalks to accommodate the space required for mobility equipment. (Figure 30)

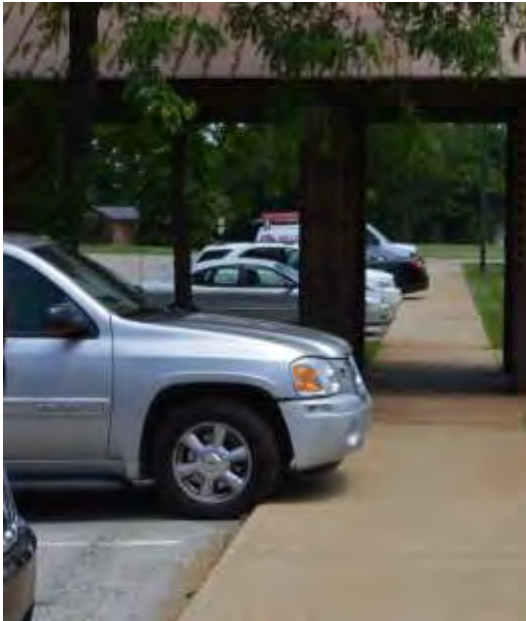


Figure 30: Front bumper overhangs sidewalk reducing space for comfortable mobility. *Photo courtesy Marylu Dykstra, Disability Advocates of Kent County.*



Figure 31: An Adaptive Swing. *Photo courtesy Marylu Dykstra, Disability Advocates of Kent County.*

4. CITY OF WALKER TAKES A CLOSER LOOK AT THE ACCESSIBILITY OF ITS PARK AND RECREATION FACILITIES.

Modification and enhancements encompass both the 'obvious' and the less noticeable, providing important features that provide comfort and safety for people of all abilities.

1. Obvious modifications to eliminate a barrier may include:
 1. Providing way-finding signage with proximity to public transportation and parking areas, adding or improving curb cuts from sidewalks to have way-finding designed to direct people with visual impairments to a safe area rather than directing people directly into traffic.

2. Adjusting cross walks and directional aids for better visibility. Imagine a person transitioning from a sidewalk to traverse across a parking facility or car entrance. The person is required to move with the cars in the street or driveway, creating a pedestrian versus car situation.
3. Eliminating or modifying the slope of a sidewalk or ramp to reduce or eliminate hazards.
4. Adding small ramps and/or eliminating door thresholds.



Figure 32: Examining the height of threshold to in-line skating rink. Photo courtesy Marylu Dykstra, Disability Advocates of Kent County.

2. Less obvious modifications that increase safety and comfort may include:

1. Adding space to a concrete pad near bleachers. This allows a person in a wheelchair to sit with their family and/or friends, rather than be segregated.
2. Providing access onto play structures for children with disabilities or the

means for a caregiver to engage with a child in the same area rather than from the sidelines.

3. Providing paved access to park benches adjacent to the pond, or outdoor spaces, allowing persons with mobility aids to enjoy the same scenery as able-bodied persons. (Photo 4)
4. Providing signage indicating accessible entrances to tennis courts, and the outdoor hockey rink. (Photo 3) People of all abilities want to engage in sports activities, and providing the way in, gives people the way to play.
5. Paved access to trash receptacles for people using mobility equipment. (Photo 4)



Figure 33: Examining Access to Bench and Trash Receptacle. Photo courtesy Marylu Dykstra, Disability Advocates of Kent County.

5. CITY OF WALKER STAFF TAKE PRIDE IN CONTRIBUTING TO THE ACCESSIBILITY ENHANCEMENTS.

Frank Wash, Community Development Director, shared his perspective after a recent Accessibility Assessment performed by Disability Advocates of Kent County:

“Walker citizens value their parks, trees, trails and open spaces. We want to make certain these quality of life features are available, creative, diverse, well maintained and accessible to all people.”

During the assessment Frank remarked that the City of Walker staff takes their work seriously, understanding that the changes they are making impact lives, by making it better for all. It's not just about how many 'handicapped' spaces are available, it is more about the opportunity for people of all abilities to access and enjoy the recreational facilities.

3. MESSAGING TOOLS (AUDIENCE MESSAGE GRID)

Audience Message Grid template:

Audiences	What do they know now?	What do we want them to know?	What do we want them to do?	Key Messages	Delivery
Internal Audiences					
External Audiences					

Audience Message Grid: Walker Parks Example

Audience	What do they know now	What do we want them to know	Key Messages	Method 1-1/email	AKUS
Staff	<ul style="list-style-type: none"> — Know that Walker parks and recreation facilities exists — Parking facilities have handicap spaces 	<ul style="list-style-type: none"> — The value of the parks and recreation facilities — The value of accessibility to all people — What is accessibility — How does accessibility for people with disabilities makes it 'better' for all people — Examples of accessibility — What does it take to make a facility accessible? 	FILL THIS IN FROM THE MESSAGING	Peer to peer	Need all of it.
Facility users		<ul style="list-style-type: none"> — Above, plus: <ul style="list-style-type: none"> — Added value to users — Cost (if any to users) — Will the changes impact usage at the facilities 		Newsletters, posters, direct mail	
Community at large		<ul style="list-style-type: none"> — Above, plus: <ul style="list-style-type: none"> — Cost to community (if any) — Invitation to come and see the modifications 		Newsletters, through media Town hall	
Media		<ul style="list-style-type: none"> — Above, plus: <ul style="list-style-type: none"> — Time frame for work — Invitation to come and see the modifications (follow the process) 		Press releases Direct communication	

A – Awareness
 K – Knowledge
 U – Understanding
 S – Skill

ID it exists
 Explain it
 Apply it
 Working it

RESEARCH RESOURCES

1. AMERICANS WITH DISABILITIES ACT OF 1990¹

Title II—Public entities (and public transportation) See [42 U.S.C. §§ 12131–12165](#).

Title II prohibits disability discrimination by all public entities at the local (*i.e.* school district, municipal, city, county) and state level. Public entities must comply with Title II regulations by the [U.S. Department of Justice](#). These regulations cover access to all programs and services offered by the entity. Access includes physical access described in the ADA Standards for Accessible Design and programmatic access that might be obstructed by discriminatory policies or procedures of the entity.



Title III—Public accommodations (and commercial facilities) See [42 U.S.C. §§ 12181–12189](#).

The ADA sets standards for construction of accessible public facilities. Shown is a sign indicating an accessible fishing platform at Drano Lake, Washington.

Under Title III, no individual may be discriminated against on the basis of disability with regards to the full and equal enjoyment of the goods, services, facilities, or accommodations of any place of *public accommodation* by any person who owns, leases (or leases to), or operates a place of *public accommodation*. "Public accommodations" include most places of lodging (such as inns and hotels), recreation, transportation, education, and dining, along with stores, care providers, and places of public displays, among other things.

Under Title III of the ADA, all "new construction" (construction, modification or alterations) after the effective date of the ADA (approximately July 1992) must be fully compliant with the Americans With Disabilities Act Accessibility Guidelines (ADAAG)^[1] found in the [Code of Federal Regulations](#) at 28 C.F.R., Part 36, Appendix A.

Title III also has application to existing facilities. One of the definitions of "discrimination" under Title III of the ADA is a "failure to remove" architectural barriers in existing facilities. See [42 U.S.C. § 12182\(b\)\(2\)\(A\)\(iv\)](#). This means that

¹ http://en.wikipedia.org/wiki/Americans_with_Disabilities_Act_of_1990

even facilities that have not been modified or altered in any way after the ADA was passed still have obligations. The standard is whether "removing barriers" (typically defined as bringing a condition into compliance with the ADAAG) is *readily achievable*, defined as "...easily accomplished without much difficulty or expense."

The statutory definition of *readily achievable* calls for a [balancing test](#) between the cost of the proposed "fix" and the wherewithal of the business and/or owners of the business. Thus, what might be "readily achievable" for a sophisticated and financially capable corporation might not be readily achievable for a small or local business.

2. ACCESSIBILITY IN PARKS

Access to Parks and Recreation²

With ongoing population growth, the amount of parkland per resident continues to shrink. Similarly, a lack of funding and rising land values render expanding and maintaining parks and open spaces a difficult task.

Especially in disadvantaged low-income and minority neighborhoods with limited resources with higher poverty rates, access to parks, open space and recreational facilities is undermined by the lack of safe and nearby parks and playgrounds. Inability to access parks and recreational facilities is associated with fewer opportunities for physical activity, thus increasing risk for chronic diseases, poor health conditions, and obesity within those communities.

Apart from addressing the health needs of the community, parks and recreational facilities need to respond to the diverse social and cultural needs of the communities in which they are located. With programs and facilities that target all age groups and respect the cultural sensitivity of the community, parks can help engage community members in various physical activities that help promote their health and foster their sense of belonging and ownership.

Planners play a major role in eliminating the barriers to accessing parks and recreational facilities through harnessing the community efforts and promoting public, private, and nonprofit partnerships to create safe, well-designed parks, open spaces, and recreation areas.

² <http://planning.org/nationalcenters/health/parks.htm>

3. MEASURING THE ECONOMIC VALUE OF A CITY PARK SYSTEM³

Since 2003, The Trust for Public Land's Center for City Park Excellence has carried out ground-breaking research into the economic value that cities and urban residents receive from their park and recreation systems. The ramifications of this work have galvanized the city parks movement nationally while also providing pragmatic data in the specific cities where the research has been carried out.

Measuring the Economic Value of a City Park System provides an explanatory overview of the process the Center for City Park Excellence uses in determining dollar value by way of seven attributes:

- Property value
- Tourism
- Direct use
- Health
- Community cohesion
- Clean water
- Clean air

Register to [download the report here](#)

According to Adrian Benepe, Senior Vice President and Director of City Park Development for The Trust for Public Land, "You can't have a great city without great parks," said. "Parks bring neighbors together and help create a sense of community. They give kids and parents a place to play, walk around, and just relax and experience nature."⁴

4. ADA CHECKLIST FOR READILY ACHIEVABLE BARRIER REMOVAL⁵

Helps concerned professionals identify accessibility problems and solutions in existing facilities in order to meet their obligations under the ADA. The goal of the survey process is to plan how to make an existing facility more usable for people with disabilities.

The checklist is based on the four priorities recommended by the Title III regulations for planning readily achievable barrier removal projects:

³ <http://www.tpl.org/publications/books-reports/ccpe-publications/measuring-the-economic-value.html>

⁴ <http://www.tpl.org/news/press-releases/minneapolis-ranked-best-parks.html>

⁵ <http://www.adachecklist.org/>

- Priority 1: Accessible approach and entrance
- Priority 2: Access to goods and services
- Priority 3: Access to public toilet rooms
- Priority 4: Access to other items such as water fountains and public telephones

Note that not *all* sections of the 2010 ADA Standards for Accessible Design (2010 Standards) are covered—because full compliance with the 2010 ADA Standards is required only for new construction and alterations. However, whenever possible, the 2010 ADA Standards should be used in making readily achievable modifications. If complying with the 2010 ADA Standards is not readily achievable, a modification that does not fully comply with the 2010 ADA Standards may be undertaken as long as it poses no health or safety risk.

5. PARKS AND NEIGHBORHOODS

You can't have a great city without great parks," said Adrian Benepe, Senior Vice President and Director of City Park Development for The Trust for Public Land. "Parks bring neighbors together and help create a sense of community. They give kids and parents a place to play, walk around, and just relax and experience nature. That's why we believe that that cities with great park systems tend to be healthier and have lower rates of obesity." ⁶

6. DIGITAL INCLINOMETER

A digital inclinometer looks like a builder's level, except it has a digital readout that indicates percent slope, degrees, or pitch (inches of rise per foot of run). Measuring slope in percentage is all that is needed to determine whether a slope is compliant.

⁶ <http://www.tpl.org/news/press-releases/minneapolis-ranked-best-parks.html>