

A Citizen's Guide to Accessibility

-Written by Marissa Bell

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OVERVIEW

Accessibility in the United States has been guided by the Americans with Disabilities Act (ADA) since the 1990s. However, there was a major domain of accessibility that the act failed to touch on: the public right of way. The Public Right-of-Way Accessibility Guidelines (PROWAG) address this subject, but there is still a long way to go towards incorporating the input of individuals who need accessible infrastructure the most.

My name is Marissa Bell, and I am a 4th year civil engineering student at The University of Texas at Austin. This semester, I have undertaken a research project on accessibility, gaining the opinions and insight of those that matter most. These inputs include those that work in the field of accessibility law, engineering, and those that experience disability firsthand. Through this report, I hope to shed light on some of the aspects of accessibility that are often overlooked and underdiscussed.



Photo from Disability Rights Education & Defense Fund

To give a brief history of the topic, The Americans with Disabilities Act (ADA) was adopted by the United States Department of Justice and Department of Transportation and written into law as the standard to follow for accessible design in 1990. Then in 2004, The ADA Accessibility Guidelines (ADAAG) from 1991 were revisited and adopted without adjustments by the Department of Justice in 2010 and with adjustments by the Department of Transportation in 2016.

Adoption of the ADA and the subsequent amendments have been the greatest achievements of the disability rights movement to date. The ADA is not just a law about accessible design; it is a major civil rights law that prohibits the discrimination of those with disabilities in areas such as employment, transportation, and education in public and private spaces.

Despite all this progress, the ADA still lacks in addressing accessibility in areas known as the “public right-of-way,” which includes sidewalks, crosswalks, curb ramps, public transit stops, etc. PROWAG was written in 2011 to address this gap. Since then, it has been considered best practice but was not legally enforceable. Finally, on September 7th, 2023, PROWAG was adopted by the US Access Board, but it still needs adoption by the Departments of Justice and Transportation so that it can become a standard and not just a best practice.

Once PROWAG is adopted, it could have truly life-changing impacts on the way people are able to get around in the public domain of streets and sidewalks, affecting not just those with mobility disabilities, but everyone that utilizes these public spaces.

ACCESSIBILITY IS FOR EVERYONE



Graphic from United Disabilities Services

Upon many conversations had with those involved in accessibility work, the resounding takeaway was that “accessibility is for everyone.” We often think of accessible design only being for those with a disability, but accessible infrastructure serves a much bigger purpose. Curb ramps help those who are in wheelchairs, those who are visually impaired, small children, those with small children in strollers, those on bicycles or scooters, those with a suitcase, and so many more. Ramps and other accessible infrastructure make life easier for everyone; it is vital that they are designed correctly or even designed at all.

A great example of best practice to create accessible communities is 8 80 Cities, a Toronto-based not-for-profit organization featured in AARP Livable Communities and founded by Gil Penalosa to help cities worldwide “move from talking to doing” by developing accessible public parks, promoting walkable and bikeable streets, and fostering well-being, physical activity and equitable access to healthy places. The organization operates under the idea that communities should be accessible for anybody in the range of an 8-year-old to an 80-year-old.

An important concept to keep in mind as stated by Andrea LaCour, Registered Accessibility Specialist (RAS) and Co-Founder of Contour Collective, is that “we are all only temporarily able.” We will all experience a disability at some point in our lives, whether that be a diagnosed mental or physical disability, or simply old age. Chris Tabb, Orientation and Mobility Consultant, explained to me the importance of keeping this idea in mind while working that it could be a loved one or even us one day struggling to use the infrastructure that is supposed to be designed to be accessible for all people.

SIDEWALKS AND CURB CUTS

Among nine interviews with people of different backgrounds and specialties in the field of accessibility, the most frequently critiqued infrastructure was sidewalks and curb cuts. There are many easy fixes to improve sidewalks that simply aren't done for what seems like a lack of care by governing bodies. Scott Meyer, Orientation and Mobility Specialist at the Criss Cole Rehabilitation Center, explained how one of the best things to improve sidewalks is simply keeping them clear of foliage and obstructions. Scott uses a mobility cane to help navigate the public right-of-way and shared this experience.



Photo of a sidewalk lined with leaves by Heyden Black Walker

Beyond this, there are many sidewalks that are designed poorly without taking users into account. This includes sidewalks that just end abruptly, sidewalks that intersect driveways, and sidewalks without curb ramps. This also includes sidewalks that aren't regularly maintained and may include cracks and other imperfections in addition to foliage, obstructions, and debris that may cause a user to get injured, whether that be rolling over these imperfections in a wheelchair or stumbling over them on foot. According to the City of Austin Sidewalk Master Plan, about 80% of existing sidewalks in Austin are functionally deficient due to vegetation, maintenance, and obstructions.

Numerous lawsuits have been filed on this topic of sidewalks not being accessible; these are civil rights cases because not designing infrastructure with those with disabilities in mind is a discriminatory practice. These cases include but are not limited to:

- *Betancourt-Colon v City of San Juan* (2022)
- *Hamer v City of Trinidad* (2020)
- *Liberty Resources v City of Philadelphia* (2019)
- *Dougherty v Allegheny County* (2019)
- *Reynoldson v City of Seattle* (2015)
- *Willits v City of Los Angeles* (2013)
- *Frame v City of Arlington* (2010)
- *Tinker v Town of Tilton* (2005)
- *Barden v City of Sacramento* (2002)

These court cases span a significant period, showing how municipalities have had considerable time to bring sidewalks up to the conditions required by ADAAG, yet many still fail to do so. Several of these court cases were brought to my attention by Erin Eurek of Kimley-Horn and Lia Sifuentes Davis of the Texas Law Civil Rights Clinic.



Photo of a sidewalk that dead ends by Heyden Black Walker

The biggest conflict in the realm of accessibility though seems to be the infamous truncated dome. According to the US Access Board, truncated domes, also known as detectable warnings, tactile paving, tactile warning surfaces, and an array of other names, are “a distinctive surface pattern of domes detectable by cane or underfoot that alert people with vision impairments of their approach to street crossings and hazardous drop-offs.”



Photo of truncated domes on a curb ramp by Marissa Bell

Just about everybody I interviewed had something to say about these often poorly placed bumps. Scott Meyer said an important factor for him in the design of these domes is making them a different material than the rest of the sidewalk so that when a mobility cane hits this material, it will make a different sound, alerting the user that they are about to walk into the street. However, he explained that what helps even more on curb ramps than the truncated domes are having the ramps designed to the proper slope. PROWAG will now specify this proper slope, as well as details on how to properly install these truncated domes, as explained by Edward Erfurt, Director of Community Action for Strong Towns. Scott Meyer and Edward Erfurt both noted that these truncated domes must be a different color than the rest of the sidewalk to visually stand out to users.

Another issue with truncated domes is that they are often installed incorrectly. Gabe Cazares, Executive Director of LINK Houston, noted that he had even experienced them placed along the whole sidewalk before. These domes are meant to alert those moving over them that they are about to enter the street. If they are not placed correctly, then they do not serve their intended purpose and rather cause confusion as opposed to clarity.

An important factor to consider when designing these truncated domes and any other accessible infrastructure is all the different people who might be using the infrastructure. It was pointed out by Chris Tabb that although these domes are meant to help those who experience a visual impairment, they could be more of an obstacle to those in a wheelchair. This was further explained by Scott Meyer, who noted that the truncated domes create too much vibration for those in wheelchairs.



Graphic of ADA compliant truncated dome placement from Access Tile Tactile Systems

Providing another opinion on the topic, Nancy Crowther of ADAPT Texas said that in her experience the bumps, which she called “sidewalk braille,” provide better traction to wheelchair users, especially if it is raining. Nancy is a motorized wheelchair user, herself, and shared these opinions from a firsthand account. She explained that before the ADA, there were flat ramps with lines on them that would fill up with water and freeze in the winter, creating a major safety hazard. This provides another important consideration that weather has a large impact on access.

This also shows how important it is to take into consideration the input of all the different users of these domes in order to design them to be as accessible as possible for all people. There has been much progress on ramps and curb cuts through the ADA, but we still face challenges with how their design and installation have been implemented. There is continuously more progress to be made, and PROWAG will help when it comes to better specifying the ideal design and placement of these truncated domes.



Photo of a sidewalk closed for construction by Heyden Black Walker

Another important factor to note about sidewalks and accessible infrastructure is construction. Oftentimes, even when accessible infrastructure is being designed, there are not accessible options provided during the construction process. This is seen in the above photo where construction is occurring in the area, so the sidewalk is closed off. This future construction might even involve fixing the sidewalk to be more accessible, but in the temporary condition, it is not. This is an aspect of the design process that needs to be reviewed and reworked to provide accessible routes while the construction process is taking place.

As brought to my attention by Scott Meyer, something everyone should know about accessibility is what to do if they see infrastructure that isn't accessible. This includes knowing how to contact city services; in Austin, Texas, the number to dial is 3-1-1. Based on the examples in this guide, it is important to call this number when confronted with infrastructural barriers such as sidewalks covered in foliage, sidewalks that have a dead end, and sidewalks closed for construction. If we don't all take part in making sure infrastructure is accessible, even in the simplest ways such as this, then we will never achieve the kinds of communities people want to live in.

AUDIBLE PEDESTRIAN SIGNALS AND CROSSWALKS

The next major areas of concern still needing work when it comes to accessibility are crosswalks and audible pedestrian signals. For those with a vision or hearing disability, crossing the street can be a major safety concern. Gabe Cazares said that oftentimes the volume of the audible pedestrian signals is turned down so low that it can be difficult to hear over traffic at busy intersections. Gabe uses a mobility cane to help him navigate the public right-of-way and shared this volume concern from personal experience.



Photos of audible pedestrian signal system and crosswalk

Another issue faced with audible pedestrian signals is crossing times. Crossing signals are typically designed by able-bodied adult men, and signal timing is based on their walking speed. Anyone who moves slower than that walking speed, because of a disability, age, or even leg length, may not be able to cross before the signal times out and traffic enters the intersection. This could create an extremely unsafe situation if a person is still attempting to cross the street when cars are also allowed to be crossing the intersection. This is a prime example of how decisions are made regarding accessibility and infrastructure without taking the input and opinions of disabled persons into account. This was explained by Nancy Crowther who also discussed challenges faced by people in wheelchairs, such as reaching the button used to trigger walk signals. Thinking of children, those in wheelchairs, and anybody at a lower height, these buttons that provide access to public infrastructure need to be placed at a reasonable height for all people to make them accessible.

Besides just the signals to cross the street, the crosswalks also pose some challenges to pedestrians and drivers. If crosswalks are not made visible enough, then drivers won't know where to stop and people won't know where to cross. Another simple fix to maintain an accessible public space, pointed out by Scott Meyer, is to just maintain and regularly repaint the crosswalks. Oftentimes crosswalks are faded and not very well maintained. This can pose problems for blind and visually impaired pedestrians. If the crosswalk lines were maintained and repainted as needed to stay that bright white color, everyone can better cross the road safely.

VEHICLE SIZE

SUV

Sedan



Graphic from Smart Growth America

Beyond just the accessible design of public infrastructure, there are many other factors that play into how accessible the public right-of-way is. A major component of this is the increasing height of vehicles. As the truck market produces taller and taller trucks, the point at which these trucks would hit a pedestrian becomes more and more fatal. Even an SUV hits at a more fatal body height than a sedan. Some trucks and SUVs are now so tall that if a child or someone in a wheelchair were in front of the vehicle, the driver wouldn't even be able to see them, as seen below.



Photos of an aftermarket lifted Ford truck (left) and a new stock model Chevrolet truck on display at the 2020 Washington Auto Show. Photos by Stephen Lee Davis.

Again, accessibility isn't just for those experiencing a disability; it is also for children, the elderly, and all people that get around. Therefore, our public-rights-of-way like sidewalks and streets need to be accessible to all these groups. These larger SUVs and trucks in the public right-of-way make an unsafe space for children and those in wheelchairs to feel comfortable even crossing the road knowing that those operating the vehicles on the road may not be able to see them.

SUMMARY AND TAKEAWAYS

It is apparent that accessibility should not be treated as an “afterthought,” as explained by Tanya Lavelle of Disability Rights Texas. There is so much depth to the term “disability,” causing it to account for such a significant number of people that should not be excluded from the design process. The CDC states that 61 million adults in the United States live with a disability. This is no minority and should not be treated as one in the design world. Accessible design provides for so many more groups than just those classified as having a disability, including children, bicyclists, and so many more. Accessibility truly is for everyone and should be treated as such by those who design public infrastructure. Having infrastructure made accessible to us is a civil right that many of us take for granted in our day-to-day lives. People shouldn’t have to fight for the right to an accessible life.

To reiterate all the opinions included in this guide, accessibility is for everyone. Accessibility is something we should all get to experience. We all have a part to play in advancing accessibility. We should keep this in mind when putting in the effort to achieve accessibility in our communities and all communities.

FINAL NOTE

It should be noted that this is not an all-inclusive guide. I am grateful to the experts I spoke to regarding blindness and visual impairment, epilepsy, and wheelchair use. However, people around the world experience various forms of disability that have not been covered in this guide. Omission from this guide in no way denotes a lack of importance. For the public realm to be truly accessible it must be accessible to everyone, and the best way for designers to achieve this is to consult disabled persons with a wide variety of needs, and to listen to the voices of designers and engineers with disabilities.

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Edward Erfurt, Director of Community Action, Strong Towns

Gabe Cazares, Executive Director, LINK Houston

Nancy Crowther, Community Volunteer, ADAPT Texas

Chris Tabb, Orientation and Mobility Consultant, Sensory Travel, formerly employed at Texas School for the Blind and Visually Impaired

Scott Meyer, Orientation and Mobility Specialist, Texas Department of Assistive and Rehabilitative Services, Criss Cole Rehabilitation Center

Andrea LaCour, RAS, Co-Founder, Contour Collective

Tanya Lavelle, Policy Specialist, Disability Rights Texas

It has been a privilege to conduct these interviews and research to gain a better perspective of the experiences of those with disabilities and the design knowledge of those that work in accessibility. Through this experience, I have realized that these perspectives and opinions are ones all people should know about, so much so that there was a need for a guide to pass the message along. Thank you to those that contributed to this guide and those that are reading this guide for putting in so much effort to make an accessible and inclusive world for all. Being an informed citizen is the first step on the path towards making change; I hope that this knowledge I have gained is just the starting point in the work that I will contribute to accessible design.