

DESIGN MEMO 6.03

To: Designers, Contractors, and City Departments
Date: January 10, 2023
Subject: Sidewalks
Category: Pedestrian and Bicycle Facilities

Table of Contents

1	Purpose.....	2
2	Applicability	2
3	Standards and References	2
4	Definitions	2
5	Zones of the Sidewalk Corridor	2
5.1	Buffer Zone.....	3
5.1.1	Roadside Ditches within the Buffer Zone	3
5.1.2	Street Tree Requirements	4
5.1.3	Transit Requirements	4
5.1.4	Relation to Adopted Streetscape Standards	4
5.2	Walk Zone	4
5.2.1	Pedestrian Access Route	5
5.2.2	Design Considerations	6
5.2.3	Sidewalk Finish	6
5.3	Frontage Zone.....	6
5.3.1	Sidewalk Dining.....	6
5.3.2	Building/Doorway Access.....	7
5.3.3	Relation to Adopted Streetscape Standards	7
6	Sidewalk Zone Widths by Land Use	7



1 Purpose

Sidewalks are the primary facility for accommodating pedestrians and play an important role in providing:

- Safe and efficient movement of pedestrians of all ages and abilities;
- The accessible pedestrian route as stipulated by the Columbus ADA Rules and Regulations;
- Access to properties, on-street parking, and transit;
- Space for above ground street utilities, traffic control, street scaping, green infrastructure, and street furniture; and
- Space for outdoor dining, street vendors, and other community life.

This memo focuses on specific factors that influence the design of pedestrian facilities. Pedestrian facility design decisions should be informed by the context of the complete roadway environment, including the adjacent and nearby land uses and traffic operations. The quality of the pedestrian environment is impacted by a number of factors, including traffic volumes and speeds, sidewalk widths, sidewalk buffer widths, block lengths, landscaping, lighting, and the design of street crossings, among others. The most impactful determinant of pedestrian safety is a person's proximity and exposure to motor vehicles while walking along streets and crossing streets.

2 Applicability

Until further notice, this direction will be used for scoping, design, and construction of any sidewalk being proposed and/or constructed within the City of Columbus right-of-way.

3 Standards and References

- City of Columbus [ADA Rules and Regulations](#)
- City of Columbus [Standard Drawings](#)
- City of Columbus [Downtown Streetscape Standards](#)
- City of Columbus [Sidewalk Dining Requirements](#)
- City of Columbus [Green Infrastructure Design Guidelines](#)
- City of Columbus [Executive Order 2015-01](#)
- COTA Transit Stop Design Guide

4 Definitions

Definitions of key terms in this memo are provided in City of Columbus Design Memo 1.00: Introduction.

5 Zones of the Sidewalk Corridor

The sidewalk corridor is the portion of the right-of-way intended for the use of pedestrians from the edge of the roadway to the edge of the right-of-way, generally along the sides of streets and between street corners. The sidewalk corridor functions to provide an environment for walking that is separated from vehicle movement. The sidewalk corridor has three distinct zones: the Buffer Zone, the Walk Zone, and



the Frontage Zone (see **Figure 1**). The intent and purpose of each of these zones is discussed in detail in sections that follow.

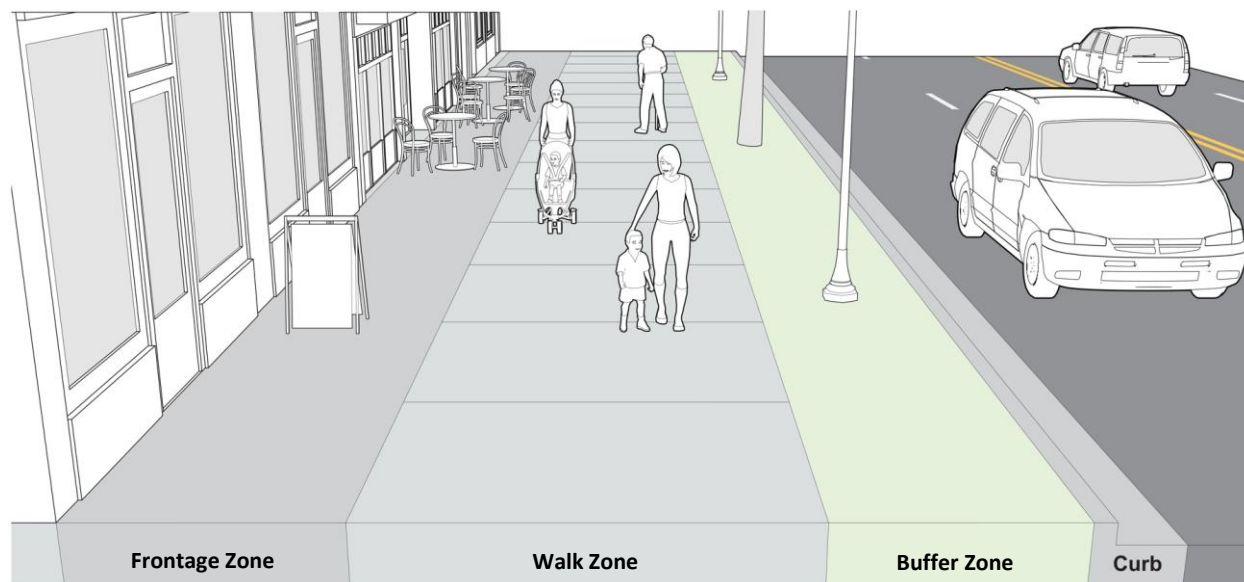


Figure 1: Sidewalk Zones along Curbed Roadway

5.1 Buffer Zone

The Buffer Zone lies between the curb or edge of pavement and the Walk Zone. This zone is where street trees, stormwater elements, street lights, signage, hydrants, benches, bicycle racks, public art, trash and recycling receptacles, transit stops, signal and lighting, control boxes, and utility hatch covers should be located. This zone includes objects that would obstruct pedestrian flow, and simultaneously provides a buffer for pedestrians from the adjacent roadway. Vertical objects in the Buffer Zone must be strategically placed to not obstruct sight lines and to prevent damage from vehicles on the street. The minimum operational offset between the face of curb and objects within the Buffer Zone is 1.5 feet (3 feet at intersections).

In the Downtown District or other higher-intensity commercial areas, the Buffer Zone may include hardscape pavement, pavers, curbed tree planters, or tree grates. In residential or lower-intensity areas, it is commonly a planted strip, often referred to as a tree lawn or utility strip.

The Buffer Zone may extend into the parking lane by using curb extensions to provide additional space for trees, pedestrian ramps, bus shelters, bicycle parking, waiting areas, or other needs. See City of Columbus Design Memo 6.04: Curb Extensions.

Width and design requirements for stormwater facilities within the Buffer Zone can be found in the City of Columbus *Green Infrastructure Design Guidelines*.

5.1.1 Roadside Ditches within the Buffer Zone

When a roadway is uncurbed and surface runoff is collected in a roadside ditch or drainage swale, the swale may be located between the Walk Zone and traveled way to provide a buffer similar to the Buffer Zone. The location of the drainage swale or ditch in relation to the Walk Zone will vary depending on the context of the facility.



5.1.2 *Street Tree Requirements*

Street trees shall comply with the City of Columbus Tree Guide.

Trees shall be placed so as not to conflict with intersection sight distance. Where street lighting is present, a minimum distance of 10 feet should be maintained between the tree trunk and the light pole.

5.1.3 *Transit Requirements*

Transit stops shall have an area free of obstructions with dimensions of no less than 5 feet in width parallel to the curb or edge of pavement and 8 feet in depth away from the curb or edge of pavement with a slope no greater than 1.56% in any direction. This area is referred to as the ADA landing pad. The ADA landing pad is typically constructed as concrete sidewalk and may include a portion of the Walk Zone in addition to the Buffer Zone. In addition to the ADA landing pad, the cross slope within the Buffer Zone shall be no greater than 3.00% for the 24-foot boarding zone, which begins at the front of the ADA landing pad. Refer to Section 3 of the COTA *Transit Stop Design Guide* for more information.

5.1.4 *Relation to Adopted Streetscape Standards*

The Columbus Downtown Streetscape Standards and the West Franklinton – 315 Gateway District Streetscape Standards describe a separate Amenity Zone and Curb Zone. The Buffer Zone is the combination of these two zones.

The Buffer Zone is also referred to as the Tree Lawn Zone within the West Franklinton – 315 Gateway District Streetscape Standards for neighborhood mixed-use streetscapes.

5.2 **Walk Zone**

The Walk Zone is the portion of the sidewalk used for pedestrian travel. For it to function properly and meet accessibility requirements, it should be kept clear of above-ground permanent and temporary objects to provide an obstruction-free, continuous corridor for people to travel. Gratings and other utility covers should be placed outside of the Walk Zone to the maximum extent feasible. Where present within the Walk Zone, gratings and utility covers shall meet accessibility requirements. Horizontal openings within the Walk Zone (such as utility or drainage grates or joints) shall not be greater than 0.5 inches in diameter, with the elongated opening of the grate placed perpendicular to the predominant direction of travel.

The widths for the Walk Zone identified in **Table 1** in Section 6 are determined based on adjacent land use and volume (or expected volume) of people walking within the area of that land use – higher volumes of pedestrians warrant wider sidewalk facilities. An average adult walking comfortably and in a straight line has a width of around 2.5 feet. Other individuals, including those carrying bags or using mobility devices have wider width requirements, between 3 and 4 feet. **Table 1** in Section 6 establishes a 6-foot preferred width for the Walk Zone which allows, at minimum, two people to walk side by side or pass each other in opposing directions in relative comfort. **Figure 2** illustrates the range of comfortable walking widths. Other factors to consider include the available right-of-way, anticipated pedestrian volumes, ridership projections for nearby transit stops, and the locations of bus shelters for transfer points.

In areas with greater expected pedestrian traffic such as the Downtown District, commercial areas, and areas with institutions that generate pedestrian demand, an 8-foot or 12-foot preferred width provides comfortable space for three people to walk together or to pass others on the sidewalk.



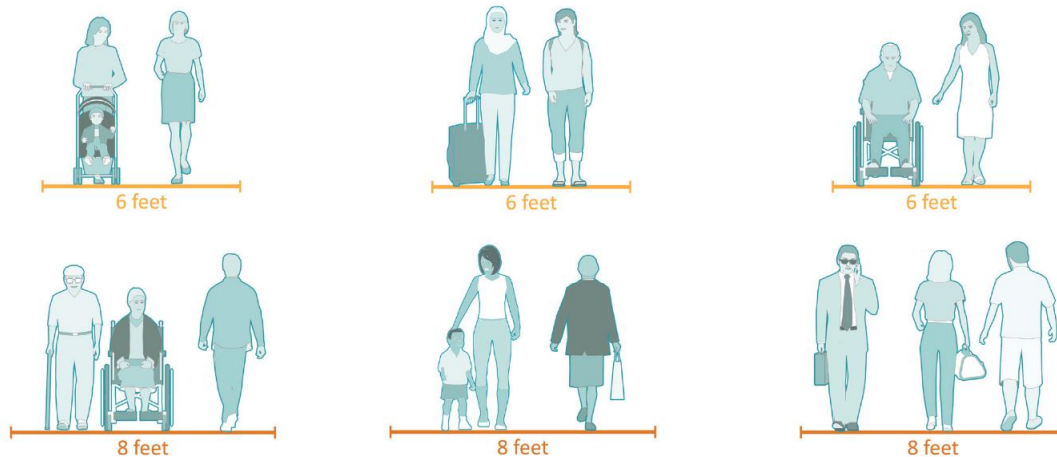


Figure 2: Comfortable Walking Widths

5.2.1 Pedestrian Access Route

Pedestrian Access Route (PAR) requirements are established by the City of Columbus *ADA Rules and Regulations*. The PAR should extend the entire width of the Walk Zone. In some situations, it may be necessary to steepen a portion of the Walk Zone beyond the maximum slope permitted within the PAR to meet existing conditions if these grades cannot be made up within the Buffer Zone and/or Frontage Zone. In these situations, it is acceptable to reduce the PAR to a subsection of the Walk Zone, where the PAR has a maximum slope of 1.56% for a minimum width of 4 feet and the remainder of the Walk Zone has a steeper slope. In this situation, the maximum slope within the Walk Zone outside of the PAR is 4%. See **Figure 3**.

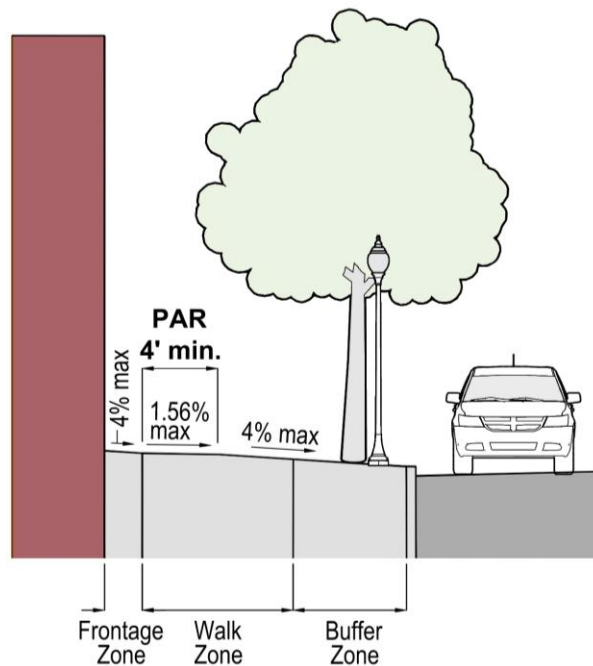


Figure 3: Example of the PAR as a Subsection of the Walk Zone



5.2.2 Design Considerations

- **Walk Zone must remain clear.** The Walk Zone is the area intended for pedestrian travel. This zone should be free of permanent and temporary objects, including above-ground utilities, traffic control devices, trees, and furniture. Vertical and horizontal encroachments into the Walk Zone should be avoided. When reconstructing sidewalks and relocating utilities, obstructions should be located outside of the Walk Zone wherever possible.
- **An accessible corridor is an intuitive corridor.** While sidewalks do not need to be perfectly straight, the Walk Zone should not weave back and forth in the right-of-way. **Figure 4** illustrates two accessible corridors. For pedestrians with vision disabilities, a straight, wide corridor free from obstacles (as shown in the photo on the left) is easier to navigate than one requiring maneuvers or adjustments to the travel path to avoid obstacles (as illustrated in the photo on the right).
- **Zone dimensions may need to be balanced.** In high-volume, high-density pedestrian areas, the Walk Zone may need to be wider than the preferred widths specified in **Table 1** to accommodate large amounts of pedestrian traffic.



Figure 4: Photos show an accessible and intuitive Walk Zone (left) versus a compliant but unintuitive Walk Zone (right)

5.2.3 Sidewalk Finish

Sidewalks shall be gray concrete with a light to medium broom finish or buff wash finish. A consistent finish should be used between public street intersections.

5.3 Frontage Zone

The Frontage Zone is the area between the back of the Walk Zone and the property line which may coincide with the face of a building. In urban contexts, the Frontage Zone may be an extension of the sidewalk to an adjacent building face, while in other areas, it may be occupied by front stairs, lawns, or other landscape elements that extend to the Walk Zone edge. The Frontage Zone of commercial properties might include architectural features or projections, outdoor retailing displays, café seating, awnings, signage, and other intrusions into or use of the public right-of-way. These items are typically privately maintained and may require a permit.

5.3.1 Sidewalk Dining

For streets with higher-intensity commercial land uses such as within the Downtown District and other non-residential areas, the Frontage Zone width may allow for some extension of a business on the sidewalk corridor. Sidewalk dining requires a permit and shall be designed to ensure there is consistent



and adequate space for unobstructed pedestrian movement. Sidewalk dining should not reduce the Walk Zone width below the preferred widths in **Table 1**, and shall not restrict the PAR to less than the minimum Walk Zone widths in **Table 1**. See the City of Columbus Sidewalk Dining Requirements for additional information on sidewalk dining.

5.3.2 *Building/Doorway Access*

The Frontage Zone provides an area to transition elevation changes between adjacent building floor elevations and the sidewalk elevation at entry doors to help meet ADA access requirements. In areas where buildings are adjacent to the right-of-way, the Frontage Zone provides a buffer for pedestrians from opening doors. Steps are not permitted within the right-of-way and opening doors may not extend into the right-of-way. Where doors on existing buildings swing into the right-of-way, designers should ensure opening doors do not extend into the PAR.

5.3.3 *Relation to Adopted Streetscape Standards*

The Frontage Zone is referred to as the Building Zone in the Columbus Downtown Streetscape Standards. The Frontage Zone is referred to as both the Building Zone and the Yard Zone in the West Franklinton – 315 Gateway District Streetscape Standards.

6 Sidewalk Zone Widths by Land Use

Table 1 shows the preferred and minimum widths for sidewalk corridors overall and for each zone of the sidewalk corridor, based on adjacent land use. While Columbus City Code Section 905.07 specifies a minimum sidewalk width of 4 feet, this width does not meet accessibility requirements and does not provide sufficient space for people traveling in opposite directions (see Section 5.2).

Preferred values should be the minimum widths provided in all new construction projects. Preferred values should also be the minimum widths provided in alteration projects where possible. Widths less than the preferred values should only be used if there are existing conditions that prevent the use of preferred values.

Per Columbus City Code Section 905.07, the Buffer Zone shall be a minimum of 3 feet. In certain constrained contexts where the Buffer Zone cannot be provided, sidewalk adjacent to the curb is provided instead of providing separate Walk Zones and Buffer Zones. The minimum width of sidewalk adjacent to the curb shall be 6 feet in residential areas and 7 feet in all other contexts. The use of sidewalk adjacent to the curb shall be limited to locations where existing site conditions prevent the provision of the minimum or preferred Buffer and Walk Zone widths and shall only be permitted with Department of Public Service approval.



Table 1: Sidewalk Corridor Widths by Land Use

Land Use		Frontage Zone (feet)	Walk Zone (feet) (B)	Buffer Zone (feet) (C)	Total Width (feet)
Downtown District (A)	Preferred	2	12	7	21
	<i>Minimum</i>	<i>0</i>	<i>5.5</i>	<i>2.5</i>	<i>8</i>
Non-Residential	Preferred	2	8	7	17
	<i>Minimum</i>	<i>0</i>	<i>5</i>	<i>5</i>	<i>10</i>
Residential	Preferred	1	6	5	12
	<i>Minimum</i>	<i>0</i>	<i>5</i>	<i>3</i>	<i>8</i>
Industrial	Preferred	1	6	5	12
	<i>Minimum</i>	<i>0</i>	<i>5</i>	<i>3</i>	<i>8</i>

- (A) See Columbus Downtown Streetscape Standards for more information on sidewalk zones within the Downtown District.
- (B) In constrained conditions where existing conditions prevent the use of minimum values, the Walk Zone width may be reduced to 4 feet with Department of Public Service approval, although this width does not provide adequate space for pedestrians passing in opposite directions and requires at least a 5-foot wide by 5-foot long passing section every 200 feet (see PROWAG Section R302.4).
- (C) In certain constrained contexts where the Buffer Zone cannot be provided, sidewalk adjacent to the curb may be provided instead of providing separate Walk Zones and Buffer Zones. The minimum width of sidewalk adjacent to the curb shall be 6 feet in residential areas and 7 feet in all other contexts.

