

4 – PEDESTRIAN ACCESSIBILITY STANDARDS

4.1 General

- A. Pedestrian Access Routes (PARs) are continuous unobstructed paths designated for pedestrian use that connects accessible elements, spaces, and other Pedestrian Access Facilities (PAFs) within the town's right-of-way.
- B. In accordance with federal American with Disabilities Act (ADA), state (28 CFR 35.151 & 2004 ADAAG), Public Right of Way Accessibility Guidelines (PROWAG), Massachusetts Architectural Access Board (MAAB), and these Standards, all PAFs or a portion thereof within the town's right of way that is constructed or altered shall be designed and constructed in such manner that the PAFs or portion thereof is readily accessible to and usable by individuals with disabilities.

4.2 Design

4.2.1 Criteria

- A. The design and construction of **new** pedestrian facilities within the public right-of-way shall conform to the ADA, ADAAG, MAAB, PROWAG and these Standards.
- B. The re-design and reconstruction of **existing** pedestrian facilities with in the public right-of-way shall conform to the ADA, ADAAG, MAAB, PROWAG and these Standards.
- C. It is recognized that there are times when full compliance with federal and state laws and these Standards cannot be achieved due to structural impracticality, technical infeasibility, or would result in excessive and unreasonable costs without any substantial benefit to individuals with disabilities. See the "**Technical Infeasibility Determination Process and Policy**" in Appendix 1 for maintaining compliance in such scenarios.

4.2.2 Plan Review/Content

- A. Any project requiring approval by a Town Board or Commission which proposes new PAFs or the reconstruction of PAFs, design plans or details shall be submitted to said Board or Commission for distribution to CPW-Engineering Division and approval by the Town Engineer or his/her designee.
- B. Any project **not** requiring approval by a Town Board or Commission which proposes new PAFs or the reconstruction of PAFs, design plan(s) or details shall be submitted to CPW-Engineering Division directly with the ROW permit application. The plan(s) shall be reviewed and conditionally approved by the Town Engineer or his/her designee through the issuance of a ROW permit.
- C. The plan, or portion thereof, shall require a technical review and comply, at a minimum, with the sections of 1.2.1 (A-F) of the Standards. The applicant is responsible to submit the plan with satisfactory detail which provides sufficient documentation that a determination of compliance can be adequately established by the town. Often, this will include greater detail than the minimum thresholds outlined in the aforementioned section.
- D. All design plans shall provide the following information in addition to the requirements of section 1.2.1 of these Standards:

1. The design plans shall provide all proposed dimensions including cross slopes(perpendicular to path of travel), running slopes (parallel to path of travel), lengths, widths, transitions, top and bottom of curb elevations, existing and proposed spot grades within the PAF at critical grade changes, etc. necessary to verify that the design is compliant. Please refer to RS-26 for a typical plan detail of a curb ramp.
 2. It is recognized that there are times when PAFs must transition into pre-existing non-compliant features. These transition areas shall be clearly labeled as such and shall be designed in accordance with all federal, state, and local laws, regulations and standards.
 3. All design material for PAFs or other public access facilities proposed to be constructed and/or altered shall be clearly labeled.
- E. A note shall be placed on all plans stating: *“The Town of Concord Public Works Engineering Division shall be notified a minimum of 48 hours prior to the installation of materials to inspect and verify that the lines and grades of any form work needed to construct the pedestrian facilities (i.e. curb ramps, concrete sidewalks, etc.) are in reasonable conformance with the design plans. This inspection does not constitute acceptance of such infrastructure by the Town of Concord.”*

4.3 Pedestrian Access Facilities

4.3.1 Sidewalks

- A. Shall comply with R302 of the PROWAG and the Standards herein.
- B. Sidewalks shall be constructed of either cement concrete, bituminous concrete, and in some instances stone dust.
- C. The continuous width of a sidewalk shall be five (5) foot minimum, exclusive of the width of curb.
- D. Cross slopes of sidewalks shall be 1.5 percent and may not exceed 2 percent.
- E. A sidewalk’s running grade shall be consistent and match as closely as possible to the street grade.

4.3.2 Pedestrian Street Crossing

- A. Pedestrian street crossing shall comply with the **“Town of Concord Crosswalk Policy and Design Guidelines”** and the standards herein.
- B. Pedestrian street crossings without yield or stop control shall have a cross slope not to exceed 5 percent perpendicular to the PAR.
- C. Pedestrian street crossings with yield or stop control shall have a cross slope not to exceed 2 percent perpendicular to the PAR.

4.3.3 Alternate Pedestrian Access Routes

- A. No closures, disruptions, or relocations of PARs are permitted without providing the most convenient and compliant alternative possible.

- B. Advanced notification of temporary closures, disruptions, or relocations of PARs shall be provided to the Engineering Division as part of the traffic management plan required as part of the right-of-way permit application.
- C. Alternate PARs shall be provided when existing PARs are temporarily closed, disrupted, or relocated due to construction, alterations, maintenance operations, and other conditions for the protection of safety and welfare of the public. Alternate PARs shall comply with sections 6D.01, 6D.02, and 6G.01 of the MUTCD 2009 edition.
 - 1. The alternate PAR shall be constructed to provide convenience and accessibility that replicates the existing PAR that is being blocked, obstructed, or relocated to the maximum extent practicable.
 - 2. A smooth, continuous suitable surface shall be provided throughout the temporary PAR, free of obstructions, uneven surfaces, curbing, and sudden grade changes.
- D. If pedestrian barricades and channelizing devices are used, such devices shall comply with sections 6F.63, 6F.68, and 6F.71 of the MUTCD 2009 edition.
 - 1. Devices used to channelize pedestrians shall be detectable to users of long canes and visible to persons having low vision to the maximum extent practicable.
 - 2. Pedestrian channelizing devices shall be constructed with baseboard with a maximum gap of 2 inches from the ground and a railing no lower than 32 inches. Please refer to RS-27 for a typical plan detail of a pedestrian channeling device.

4.3.4 Curb Ramps

- A. Provides a transition between PARs across streets, driveways, islands, etc.
 - 1. Shall comply with R304 of the PROWAG and the Standards herein.
 - 2. The turning space and ramp portion of the curb ramps shall be constructed of Portland Cement Concrete.
 - 3. Refer to details RS-10, RS-11, RS-12, RS-13, RS-13A, and RS-14 for “typical” curb ramp design. For non-typical curb ramps, refer to section 4.2.B of these standards.
 - 4. A 4ft minimum by 4ft minimum turning space shall be provided at the top of curb ramps and shall be permitted to overlap other turning spaces. Turning spaces with constraints on one or more sides, the turning space shall be 5ft minimum in the direction of the constraint.
 - 5. The running slope of a curb ramp shall be a maximum of 8.3 percent. The running slope shall not exceed a ramp length of 15ft. When installing a parallel ramp in the direction of the roadway travel, the running slope shall not exceed 15ft when attempting to match existing grade. The slope shall be a consistent and unvarying in grade.
 - 6. There shall be a 4ft by 4ft (4' X 4') clear space beyond the bottom of the grade break and shall be provided within the pedestrian street crossing. The clear space shall be outside of the parallel vehicle travel lane and within a crosswalk.

4.3.5 Blended Transitions

- A. Similar to curb ramps, blended transitions provide an accessible route between PARs across street, driveways, islands, etc.
 - 1. Shall comply with R304.4 and 304.5 of the PROWAG and the standards herein.
 - 2. The running slopes of blended transitions shall be 5 percent maximum.
 - 3. The cross slope of blended transitions shall be 2 percent maximum.

4.4 Detectable Warning Surfaces

4.4.1 Purpose

- A. A standardized surface feature built in or applied to walking surfaces and/or ramps to warn visually impaired people of hazards on a PAR. (ADAAG)

4.4.2 Fabrication

- A. The detectable warning panels shall be constructed of cast iron.
- B. Shall be “un-dipped” or non-coated to provide an oxidized (weathered) steel appearance.
- C. Shall consist of truncated domes aligned in square or radial grid pattern. (Refer to detail RS-13 of the construction detail section herein)

4.4 .3 Installation

- A. Detectable warning panels shall contrast visually with the ramp, street, or adjacent PAR.
- B. Detectable warning surfaces shall extend 2ft in depth in the direction of travel and span across the width of the ramp runs, blended transition, or turning spaces.
- C. The placement of detectable warning surfaces shall comply with R305.2

4.5 On-Street Parking Spaces

- A. To ensure that there is a minimum number of accessible parking spaces which are strategically located and properly designed in order to accommodate those with disabilities.
 - 1. Shall comply with R214 and R309 of the PROWAG and Standards herein.
 - 2. Where on-street parking is provided on the block perimeter and the parking is marked **or** metered, accessible parking spaces shall be provided in accordance with the following table:

Total Number of Marked or Metered Parking Spaces on the Block Perimeter	Minimum Required Number of Accessible Parking Spaces
1 to 25	1
26 to 50	2
51 to 75	3
76 to 100	4
101 to 150	5
151 to 200	6
201 and over	4 percent of total

3. Where parking on part of the block perimeter is revised or altered, the minimum number of accessible parking spaces required shall be provided. The minimum number is based on the total number of marked or metered parking spaces on the block perimeter regardless of the amount of accessible spaces are present at the time of construction. This may require a project proponent to make improvements within the block outside of the original project limit of work.
4. Shall adhere to the provisions for pavement marking in section 3B.19 of the MUTCD.
5. Accessible parking spaces must be identified by signs displaying the International Symbol of Accessibility (R211.3 and R411).
6. Accessible parking spaces should be “centrally” located, to allow for easily accessing key destinations within the block (i.e. schools, public buildings, etc.).
7. The sidewalk adjacent to accessible parallel parking spaces should be free of signs, street furniture, and other obstructions to permit the deployment of a side-lift or ramp. Accessible parallel parking spaces located at the end of the block face should be usable by vans that have rear lifts and cars that have scooter platforms.
8. The town has Narrow Sidewalk widths (less than 14.0 ft.) in public street parking areas. Accessible parking spaces shall adhere to section R309.2.2 of the PROWAG.