



City of Boston Public Works Department Sidewalk Construction and Rehabilitation Standards

The purpose of this document is to provide design guidance for the reconstruction of sidewalks triggered by site developers appearing before the Public Improvement Commission. These guidelines apply only when sidewalks are to be fully reconstructed. These are not the City's standard construction practices used to maintain existing sidewalks. Topics covered below, include:

1. Materials to be used for the construction of sidewalks
2. Procedures to follow when a developer is reconstructing a sidewalk adjacent to an existing tree or when planting a new tree
3. Materials to be used, and maximum slopes allowable, for the construction of pedestrian ramps

This document is a complement to Boston Complete Streets which provides conceptual design guidance for City of Boston streetscapes. Construction of sidewalks by site developers must follow the Rules and Specifications for Street Openings as published by the Public Works Department

Sidewalk Reconstruction

When constructing new sidewalks in the City of Boston, it is the desire of the Public Works Department for the new sidewalk surface to be smooth, stable and slip-resistant. New sidewalks should have minimal gaps, rough surfaces and vibration-causing features.

New sidewalks, as part of a reconstruction project or through the construction of a new roadway shall be composed of concrete. This policy will be amended under the following conditions:

1. **Historic Districts** – In historic districts, existing sidewalks that are brick shall be reconstructed with wire cut bricks on a bed of asphalt or concrete per PWD standards with the following exceptions:
 - a. Existing sidewalks that are concrete shall be reconstructed with concrete if the width of the sidewalk is less than 5 feet. If the sidewalk is greater than five feet the sidewalk will be constructed of concrete in the path of travel and, with Public Works approval, include a brick feature strip along the curb line. In no case shall the concrete portion (path of travel) of the sidewalk be less than 4 feet.
 - b. When repairing small areas of existing brick sidewalk (2 foot x 2 foot sections) the bricks may be replaced in kind with mortared joints. For sections of sidewalks where the entire width is to be replaced, then wire cut bricks with non-mortared joints over a bed of asphalt shall be used.

2. **Non-Historic Districts** – All sidewalk reconstruction projects and new sidewalks shall be constructed with concrete.
 - a. If an existing sidewalk is constructed with brick it will only be replaced with brick if the aesthetic surroundings lend itself to a brick sidewalk and there is an agreement between the Disability Commission and neighborhood residents approving a non-concrete wearing surface.
3. **Liability and Maintenance Indemnification (LMI) Agreements** – If a developer or owner of a building proposes a new sidewalk on a public way around a particular group of buildings or development that does not match the existing sidewalk or does not fit within these guidelines, the city's Public Improvement Commission may grant a request to use a different paving material provided that the party enters into a binding LMI agreement with the city.
 - a. Such sidewalk materials shall be approved by the Disability Commission Advisory Board and the City of Boston Public Works Department. Upon entering into the agreement, the developer and/or subsequent owners will be responsible for maintenance of the sidewalk. Contact the Public Improvement Commission for more information on this process.
4. **Asphalt Sidewalks** – Asphalt sidewalks, when being reconstructed, will be replaced with asphalt.
 - a. When residents of a street request that asphalt sidewalk be replaced with concrete, the Public Improvement Commission will require residents abutting that section of the street to pay one half of the cost difference between the construction of an asphalt sidewalk and a concrete sidewalk.

Trees and Tree Pit Construction

Trees are an essential and aesthetic part of the cities neighborhoods. It is the desire of the Public Works Department that sidewalks are constructed so that there is sufficient open porous area around the trees so that water can infiltrate into the ground and provide nourishment to the tree. When rain water cannot infiltrate through the ground and to the tree roots, then the tree roots will remain near the surface of the ground and eventually heave the sidewalk and create a non-accessible path of travel. Proper sizing of trees and tree pits are important to maintaining the integrity of the sidewalks and the health of trees.

1. The minimum tree pit width (measured perpendicular to the curb) is 2.5 feet. The preferable length of a tree pit is 10 feet. New trees will not be installed in sidewalks where the width of the sidewalk is less than 7 feet unless a variance is granted by the State's Architectural Access Board. However, in no case shall the accessible width of travel on a sidewalk be less than 33 inches. The desired path of travel shall be 4 feet in width but shall not be less than 3 feet in width.
2. The soil at the tree pit shall be covered with wood based mulch.
3. When a section of a heaved sidewalk is being repaired a representative from the Parks Department shall visually inspect the tree to determine if trimming the roots near the

- ground surface can be performed without significantly damaging the health of the tree. If it is anticipated that the tree may survive with the trimming the roots then the tree will remain. The sidewalk will be constructed around the tree with a minimum 2.5 foot by 10 foot tree pit. In no case shall the width of the sidewalk, at the location of the tree pit, provide less than a 3 foot wide sidewalk. If it is determined that the tree will not survive if the roots are trimmed then the tree will be removed. A new tree may be planted in place. The type of tree that will be planted will be based on the location, its ability to grow to its fullest and size of the root ball. Tree selection will be made by the Parks Department. In some instances if the chance of survival of a new tree is minimal or if it will interfere with streetlights, traffic signals or utility lines, then the tree pit will be abandoned. If possible, a new location within the project limits will be selected to plant a new tree.
4. When new trees that are being proposed, a suitable amount of soil shall be excavated and replaced with sand based structural soil to help aid and improve tree growth.

Pedestrian Ramps

For reconstruction projects, compliant pedestrian ramps are to be located at crosswalks and street corners. Pedestrian ramps will also be constructed adjacent to mid-block parking spaced for the disabled. The geometry of the ramp will be based on ADA requirements. The following table provides the desirable and maximum slopes for pedestrian Ramps.

Location	Design Slope	Maximum Slope
Ramp to street	7.5%	8.33%
Ramp wings	7.5%	10.00%
Landing	1.5%	2.00%

All components new accessibility ramps built will be constructed with concrete. In order to provide a stable, firm surface for people with mobility impairments, differentiation for people with limited vision, brick or other specialty paver ramps will not be allowed.

At the base of the ramp a 2 foot tactile warning strip will be installed. The standard color of the strip will be pale yellow. In historic districts where there is a brick sidewalk, the tactile strip shall be brick red.

Public Alleys

Public alleys are labeled as such and are located in many locations throughout the city. Most of the alleys, however, are located within Boston Proper and are located between two rows of buildings on two different streets. The Alleys serve as access to buildings for the purposes of resident parking, deliveries and service vehicles.

The standard materials used in reconstructing alleyways will consist of asphalt pavement and concrete sidewalks. For reconstruction projects, designers shall study the feasibility of including the construction of at least one 3'-6" (including 6" curb) wide concrete sidewalk. Given the close proximity of buildings and property lines there may not be feasible to include a travel way for vehicles and a pedestrian sidewalk. When it is not feasible to add a sidewalk, the designer

shall seek the approval of a variance from the disability commission and the Architectural Access Board