

APPENDIX 7: BIKE AND PEDESTRIAN FEATURES



Bike lanes in Northampton

What are the objectives of zoning for bike and pedestrian features?

To develop a regional network of pedestrian and bicycle trail systems to provide residents with viable travel alternatives to the single occupancy vehicle.

Why do we need to encourage bike and pedestrian features in our community?

Walking and bicycling are important forms of transportation and recreation throughout Massachusetts. Unfortunately, the rate at

which people are walking or biking to work has decreased in many communities since 1990.

During this same period the number of people who are obese in Massachusetts increased significantly from 1990 to 2000 according to the Centers for Disease Control (CDC). These two trends are related, and creating a better built environment for walking and bicycling is a key element to rectifying this critical issue. As the costs of health care, energy, and transportation continue to escalate, walking and bicycling continue to be important solutions which require the support of policy, planning, and infrastructure.

How does the zoning for bike and pedestrian features work?

Communities can adopt regulations and bylaws that promote pedestrian and bicycle linkages, and to meet the following goals: 1) promoting the safety of pedestrian access, movement, and protection for the physically able, physically challenged, children or seniors within the community; 2) insuring that the ADA guidelines are met for all sidewalk or pathway installations, existing and proposed; 3) promoting attractive and well-constructed sidewalks or pathways that correspond to the character, aesthetic qualities, natural, environmental, and historical features of developing or existing neighborhoods; 4) connecting to existing and projected sidewalks or pathways whenever the opportunity arises to insure an interconnected pedestrian system; and 5) insuring that all development actively implements the building of sidewalks for new construction, reconstruction, or rehabilitation.

DID YOU KNOW...

That 79.3% of commuters in the Pioneer Valley drove alone to work. Only 0.3% bike to work, and 5% walk to work. (*US Census, 2000*)

EXAMPLES FROM THE PIONEER VALLEY



Connecticut Riverwalk and Bikeway

The Connecticut Riverwalk and Bikeway was proposed by PVPC in 1995 as a regional pedestrian and bicycle path along the banks of the Connecticut River, connecting the communities of Springfield, Chicopee, Agawam, West Springfield and Holyoke. The Riverwalk creates a linear park along both sides of the Connecticut River, which when completed, will extend over 20 miles in total distance. It links residential neighborhoods with urban employment centers and riverfront parks and amenities. Two segments of the Riverwalk have now been constructed at a cost of \$5 million, and opened to the

public, including a 3.7 mile segment in Springfield and a 2.1 mile segment in Agawam. Other segments are currently under design in Chicopee, Holyoke, West Springfield and Agawam.

Southwick and Westfield Rail Trail

The Southwick Rail Trail and Columbia Greenway in Westfield are part of a regional bike system that will connect the Farmington River Greenway in Connecticut to the Rail Trail in Northampton. The 9.5-mile trail segment in Southwick and Westfield will provide residents access to a variety of natural and culturally significant resources. Southwick Bike Trail follows an abandoned rail line and runs from the Connecticut border north to the town of Westfield. The trail will pass through residential neighborhoods, protected agricultural lands, and the Congamond Lakes region. Currently, the design stage for the Southwick Rail Trail is completed and construction on this project is scheduled to begin in spring 2008. The Columbia Greenway in Westfield is in the development stage, with construction also expected to begin in 2008. This greenway will run through the center of the city on an elevated rail bed, and provide a safe and easy route to the center of town for residents in surrounding neighborhoods.

[MODEL BICYCLE PARKING BYLAW](#)

[MODEL SIDEWALK REGULATIONS](#)

APPENDIX 7 (CON'T): MODEL SIDEWALK REGULATIONS – ZONING & SUBDIVISION

Prepared by the Pioneer Valley Planning Commission

ZONING BYLAWS

1.0 – SIDEWALK REGULATIONS

1.1 – PURPOSE

The purpose of this bylaw is to promote the health, safety and general welfare of the Town, and to ensure compliance with the following goals:

1. Promoting the safety of pedestrian access, movement, and protection for the physically able, physically challenged, children or seniors (or variously-abled) within the community;
2. Insuring that the ADA guidelines are met for all sidewalk or pathway installations, existing and proposed;
3. Promoting attractive and well-constructed sidewalks or pathways that correspond to the character, aesthetic qualities, natural, environmental, and historical features of developing or existing neighborhoods;
4. Connecting to existing and projected sidewalks or pathways whenever the opportunity arises to insure an interconnected pedestrian system;
5. Insuring that all development actively implements the building of sidewalks for new construction, reconstruction, or rehabilitation.

1.2 – DEFINITIONS

Bi-walk: A sidewalk or pathway designated shared use for bicycles, other non-motorized transportation, and pedestrians.

Crosswalk: Any portion of a roadway at an intersection or elsewhere that is distinctly indicated for pedestrian crossing. If there is no marking, a sidewalk crossing is implied at each leg of every intersection by the extension of the lateral lines of the sidewalk on each side, or where the sidewalk would be if there is none.

Driveway: A private roadway providing access for vehicles to a parking space, garage, dwelling, or other structure.

Infrastructure: Any public facility, system, or improvement including, without limitation, water and sewer mains and appurtenances, storm drains and structures, streets and sidewalks, trees and landscaping in public right-of-way, City/Town-owned and non-City/Town-owned utilities, and public safety equipment.

Pedestrian Friendly: The presence of facilities and design features that make an environment safe and attractive to pedestrians. These include: walkable distances between uses, (i.e. under ¼ mile); sidewalks, paths and walkways; continuous visual interest (i.e. uninterrupted line of buildings, attractive barrier in front of parking lots, murals on blank walls, infill development, pocket parks, etc.); consumer uses (i.e. restaurants, shops, cinemas, housing); trees for shade; awnings for shelter; buildings and landscaping elements sited to avoid wind tunnel effect, and to provide sheltered areas; visual texture in the streetscape (i.e. interesting storefronts, public

art, plantings, pavement patterns, etc.); people presence (i.e. sidewalk cafes, street vendors, late business hours, residents using front porches and yards); good maintenance and inclusion of site amenities; buffers between cars and pedestrians (i.e. planted medians, on-street parking, grade separation); paths connecting adjacent uses; crosswalks and ramps; traffic calming devices; traffic lights; over- and underpasses.

Sidewalk: The area between the curb or edge of the street and the property line, whether or not it is improved. Also such parts of any streets or highway as shall be established or used and determined as foot-walks or sidewalks.

1.3 - REGULATIONS

1.31 Sidewalks. Sidewalks shall be constructed in any area of the community where:

- a. Sidewalks are necessary to provide adequate and safe routes for school children to and from their dwellings and to and from educational facilities;
- b. Pedestrian traffic is not adequately accommodated by existing sidewalks;
- c. No sidewalks are in existence;
- d. There is an opportunity to make connections between existing or proposed sidewalks;
- e. The health, welfare, and safety of the public require that adequate sidewalks be provided for the public convenience; and
- f. All new development or redevelopment, construction or reconstruction.

1.32 Pedestrian Circulation Plan. The Planning Board requires inclusion of a pedestrian circulation plan and sidewalk profiles for all proposed subdivisions, site plan reviews and special permits. It shall include:

- a. The location of streets and roads adjacent to the site and proposed roads within the site;
- b. The location of existing walkways and paths on and off the site; the location of bus stops, parking lots, parking spaces, and driveways; the location of recreation facilities, religious structures, schools, industries, retail establishments, offices, and any other destination facilities; the location of residences; and any other structures or uses that may be requested by the Planning Board, DPW, Selectboard or other government body;
- c. Links between sidewalks and pathways within the development, and to neighborhood destinations and existing or projected sidewalks or pathways in the surrounding area.
- d. A description of estimated daily and peak-hour pedestrian trips to be generated by the site and flow patterns for pedestrians showing adequate access to and from the site and adequate circulation within the site; and
- e. An interior traffic and pedestrian circulation plan designed to minimize conflicts and safety problems.

1.33 Standards

- a. Sidewalks shall be at least 3 feet in width and shall meet the requirements set forth in the Americans with Disabilities Act of 1990.

- b. Changes in level up to 1/4 in (6 mm) may be vertical and without edge treatment. Changes in level between 1/4 in and 1/2 in (6 mm and 13 mm) shall be beveled with a slope no greater than 1:2. Changes in level greater than 1/2 in (13 mm) shall be accomplished by means of a ramp that complies with these regulations.
- c. Gratings. If gratings are located in walking surfaces, then they shall have spaces no greater than 1/2 in (13 mm) wide in one direction. If gratings have elongated openings, then they shall be placed so that the long dimension is perpendicular to the dominant direction of travel.

1.34 Curb and Intersection Corner Ramps

- a. Engineer shall have included, either within the corner or within the curb area immediately adjacent thereto, ramps allowing access to the sidewalk and street by variously-abled persons.
- b. The ramps referred to in Subsection A shall be constructed in a good and substantial manner and in accordance with the plans and specifications established by the Engineer. The particular plan to be used at a given intersection corner shall be appropriate to the location as determined by the City/Town Engineer.

1.35 Driveways. A driveway shall be considered part of the sidewalk:

- a. After a driveway has been constructed, it shall be deemed a part of the sidewalk whether or not there is a sidewalk improvement extending along the balance of the frontage property, for all purposes of repair or reconstruction. Requirements relating to construction or reconstruction of a sidewalk as provided in this Chapter shall be applicable to reconstruction of a driveway which portion is in the sidewalk area of the right-of-way.
- b. Wherever possible driveway aprons should not intrude into the pedestrian way. The sidewalk cross slope of 1:50 should be maintained across the entire driveway. The driveway apron should be located in the tree belt between the pedestrian way and the roadway.
- c. Where sidewalk widths are too constrained, a “dropped driveway” may be used where the sidewalk on either side of the driveway is sloped downward to the driveway which is at street grade.

1.36 Locations for Curb Extensions:

- a. Curb extensions may be used at any corner location, or at any mid-block location where there is a marked crosswalk, provided there is a parking lane into which the curb may be extended. They may include transit stops.
- b. Curb extensions are not generally used where there is no parking lane because of the potential hazard to bicycle travel.
- c. Curbs may be extended into one or both streets at a corner. No obstructions or private use should occur in the curb extension.

1.37 Crosswalks

- a. Crosswalks are a critical element of the pedestrian network to enable sidewalk transportation users to safely and conveniently cross intervening streets. Safe crosswalks support other transportation

modes as well; transit riders, motorists, and bicyclists all may need to cross the street as pedestrians at some point in their trip.

- b. Parking is prohibited within a crosswalk.

1.38 Bi-walks

- a. Sidewalks shall be constructed to form connections to and from public schools. These sidewalks or pathways shall be designated for bicycle and other non-motorized transportation use for students in all school grades.
- b. When desirable for public convenience, a pedestrian or bicycle way may be required to connect to a cul-de-sac or to pass through an unusually long or oddly shaped block or otherwise provide appropriate circulation or continuity to a pedestrian or bicycle circulation system.

2.0 SUBDIVISION RULES AND REGULATIONS

(Under Rules and Regulations for Subdivision of Land, a paragraph inserted in the *Design Standards* section provides a direct way for the community to benefit.)

2.1 - SIDEWALKS

2.11 Sidewalk requirements:

- a. Sidewalks shall be required on both sides of all new public streets.
- b. Exceptions will be considered under the following conditions:
 - i. Sidewalks shall be required on one side of the street if the right-of-way has severe topographic or natural resource constraints, or the street is a cul-de sac with four or fewer dwelling units.
 - ii. In such cases where the sidewalk is excepted to one side of the street, the developer may install an equal number of feet of sidewalk in another area of the community as deemed by the DPW Director, Municipal Engineer, and Planning Board. The developer may as an alternative devote that amount of work to the repair of sidewalk as deemed by the DPW Director, Municipal Engineer, and the Planning Board.
- c. Sidewalks shall be required for all ANR lots that are part of a new subdivision.
- d. Sidewalks shall be required for all new construction on ANR lots on all ways.
- e. A buffer strip of four feet width between the pedestrian way and the road shall be required for all sidewalks to further provide a safe pedestrian environment. Shade trees shall be planted at thirty-foot intervals in a tree belt established in the buffer strip.
- f. Pedestrian and bicycle ways: When desirable for public convenience, a pedestrian or bicycle way may be required to connect to a cul-de-sac or to pass through an unusually long or oddly shaped block or otherwise provide appropriate circulation or continuity to a pedestrian or bicycle circulation system.
- g. Additional Right-of-Way Improvements: The Planning Board may require right-of-way improvements in excess of the right-of-way improvement requirements set forth in this section, if

public right-of-way improvements that directly benefit and are necessary to serve the subject property or development require additional right-of-way improvements.