

smart
growth



TOOLKIT FOR

Smart Growth



Catalyst for Regional Progress

PVPC

PIONEER VALLEY
SUSTAINABILITY TOOLKIT

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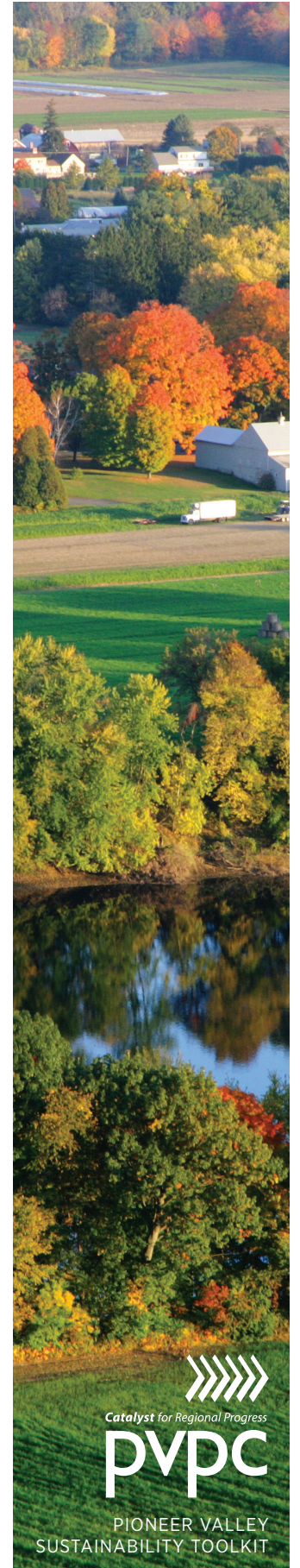
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SMART GROWTH BYLAWS



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Adaptive Reuse & Infill Development

What is the objective of this strategy?

Through Adaptive Reuse and Infill Development, communities can encourage more investment or reinvestment of underutilized buildings and lots in downtown areas and encourage more efficient use of existing infrastructure resources, improve streetscapes in downtown urban core and village areas, further economic development opportunities, and to promote historic preservation.

Why should we implement this strategy?

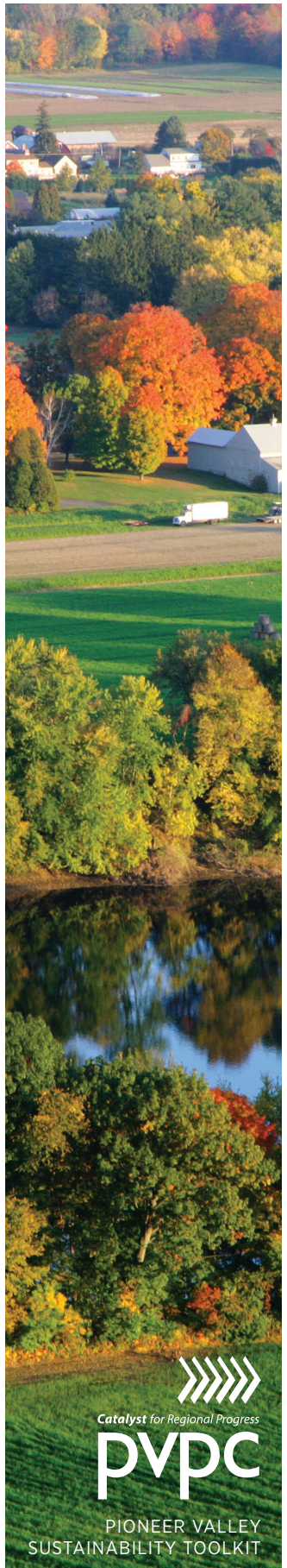
Adaptive reuse, along with infill development, is seen by many as a key factor in land conservation and reducing the amount of sprawl. For those who prescribe to the smart growth concept, it is more efficient and environmentally responsible to redevelop older buildings closer to urban cores, where infrastructure such as water, sewer, and roads already exist, rather than build new construction on faraway greenfield sites. In addition, adaptive reuse and infill development can provide opportunities for mixed-use development, a variety of housing options, and encourage economic development in commercial centers.



Adaptive reuse of the old Baystate Hotel and infill development on Strong Avenue, Northampton

How does Adaptive Reuse / Infill Development work?

Adaptive reuse is the act of finding a new use for a building. The recycling of buildings has long been an important and effective historic preservation tool. Buildings and neighborhoods with interesting spaces and unusual appearance are particularly attractive to developers and buyers.



Infill development is the process of developing vacant or under-used parcels within existing urban areas that are already largely developed. Often within urban core areas and downtowns, there exists vacant or under utilized lots that do not meet current zoning standards such as frontage and lot area. Through the use of an infill development ordinance/bylaw, these vacant nonconforming lots can be brought back into productive use.

DID YOU KNOW...

In 1997, *Builder* magazine published a survey of 516 new-home shoppers. While one-third said they preferred life in suburbia, nearly two-thirds objected to the extra driving suburbia typically requires.

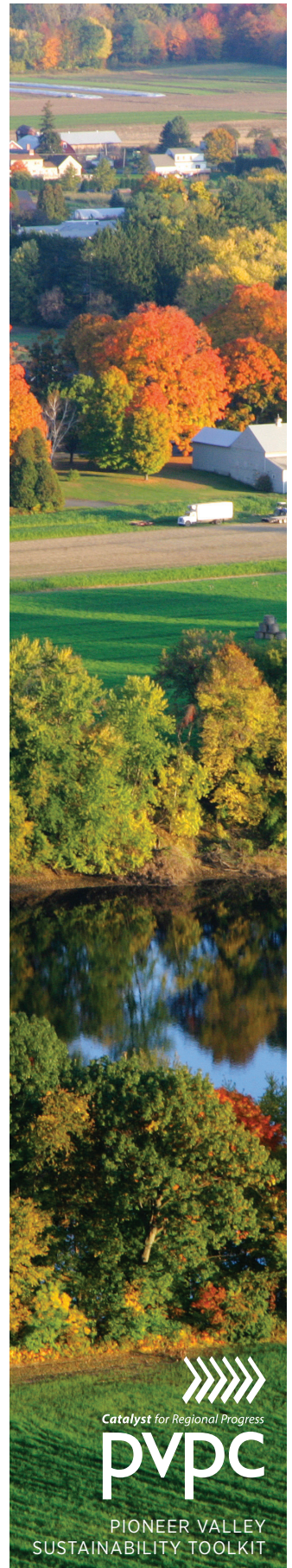
Some 84 percent desired proximity to a town center with shops, cafes, and small parks.

(Source: Northeast Midwest Institute, "Strategies for Successful Infill Development, 2001)

EXAMPLES FROM THE PIONEER VALLEY

Eastworks, Easthampton

The redevelopment of the Eastworks building was the first in a series of public and private actions to revitalize the center of Easthampton. Formerly the Stanley Home Products factory, the Eastworks building in Easthampton is a vibrant mixed-use mill redevelopment containing 75 businesses and 32 housing units. Purchased in 1997, the 500,000 square foot complex houses public retail space, a restaurant, an art and photography school, offices for non-profit organizations and professional businesses, and a branch office for the Registry of Motor Vehicles. This adaptive reuse project has generated 170 new or retained jobs and eventually will provide housing for 46 households. In recognition of their achievements, the City of Easthampton received a 2005 Smart Growth Governor's Award.



A model bylaw or strategy is included in the Pioneer Valley Sustainability Toolkit.

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Bike And Pedestrian Features

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.



Bike lanes in Northampton

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.

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)

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.

EXAMPLES FROM THE PIONEER VALLEY

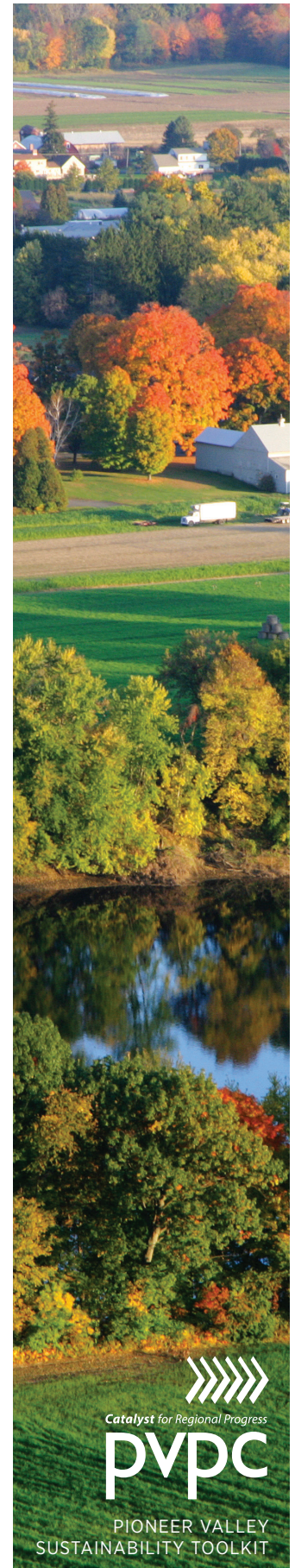
Connecticut Riverwalk and Bikeway

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.

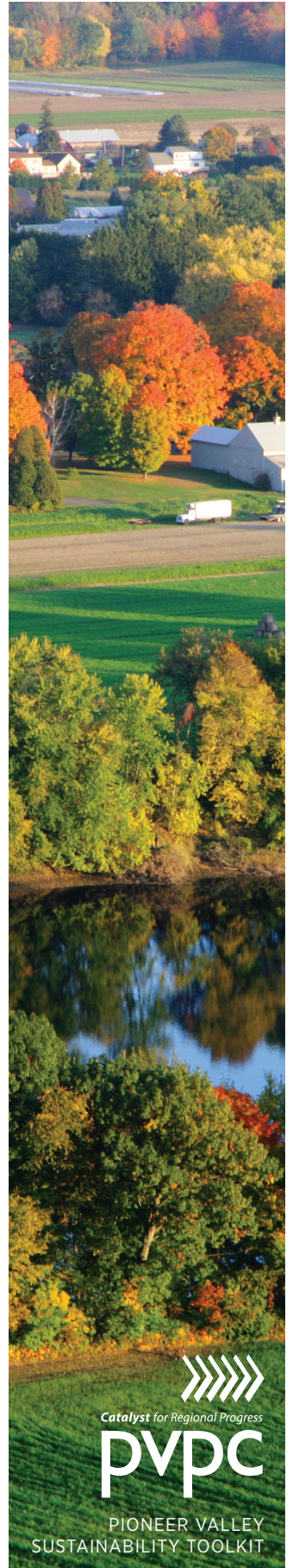
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Brownfield Inventories



Demolition of the HB Smith Boiler Company, Westfield. | Photo provided by Tighe & Bond

What are the objectives of a brownfield inventory?

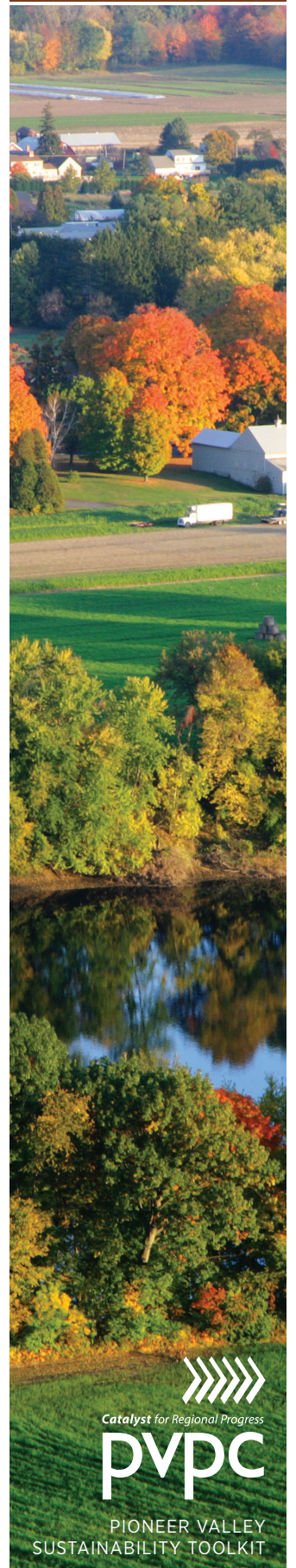
A brownfield is a property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant. An inventory can assist in the prioritization of brownfield sites for redevelopment and create a marketing tool for interested redevelopment partners.

Why do we need brownfield inventories?

A Brownfield Inventory can assist a municipality in prioritizing sites for redevelopment by identifying its assets and liabilities in terms of redevelopment potential. With all of this information compiled, potential redevelopment partners identify sites that have the criteria they are looking for to locate their project. Easily accessible information facilitates communication with potential developers and can expedite site selection for a project. The inventory also helps the municipality keep track of issues which may be complicating site redevelopment for certain properties, therefore allowing them to dedicate resources, such as grant funding, to sites that have a higher potential for redevelopment.

How is a brownfield inventory created?

There is no standardized methodology for creating an inventory. It is important that the type of data compiled in the inventory can meet the goals of all potential users including municipal staff as well as potential redevelopment partners. Given the needs of the parties the inventory will serve, the types of information relevant to each must be identified and the data sought. To create an inventory, data must be gathered from a number of sources including, but not limited to: the Massachusetts Department of



Environmental Protection, Mass GIS, the local assessor's office, local records of past use, and neighborhood surveys and interviews. Specific information about the property such as its structural integrity, proximity to public water and sewer service, access to major transportation routes, lien status, existing infrastructure, available parking, neighboring land use and zoning, MCP status, etc. Once this information is compiled and weighted as to relevance or importance for redevelopment, a prioritization schedule can be assigned to each property.

DID YOU KNOW...

It is estimated that there are more than 450,000 brownfields in the United States (US Environmental Protection Agency) Demolition of the HB Smith Boiler Company, Westfield. Photo provided by Tighe & Bond

SPRINGFIELD AND HOLYOKE, MASSACHUSETTS

The Pioneer Valley Planning Commission (PVPC) and the Center for Urban and Regional Policy (CURP) of Northeastern University partnered with the cities of Springfield and Holyoke to develop brownfield inventories for each of their communities. Data was gathered from the Massachusetts Department of Environmental Protection, Mass GIS, the cities local records of past use, and property assessment records. The inventory was built in Excel and linked to GIS for map locations of all of the sites.



For more information on brownfield redevelopment, please refer to the state's [Smart Growth/ Smart Energy toolkit](#), developed by the Executive Office of Energy and Environmental Affairs.

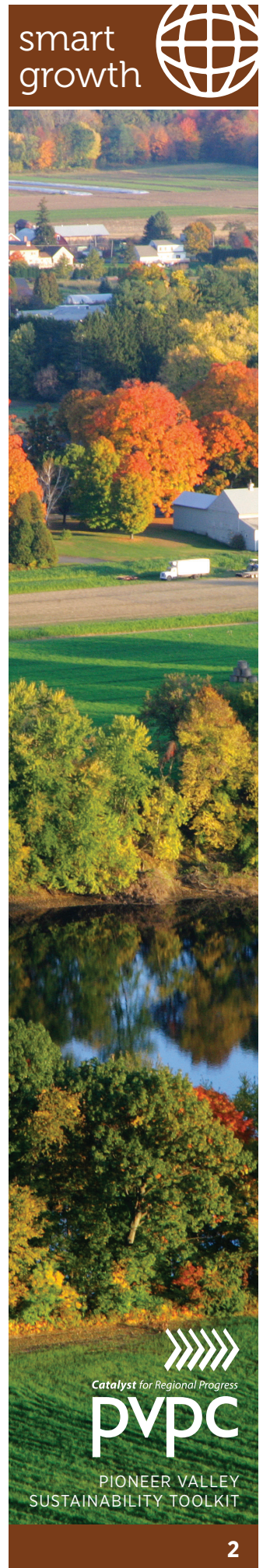
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Business Improvement Districts



Logo courtesy of City of Springfield BID

What are the objectives of Business Improvement Districts?

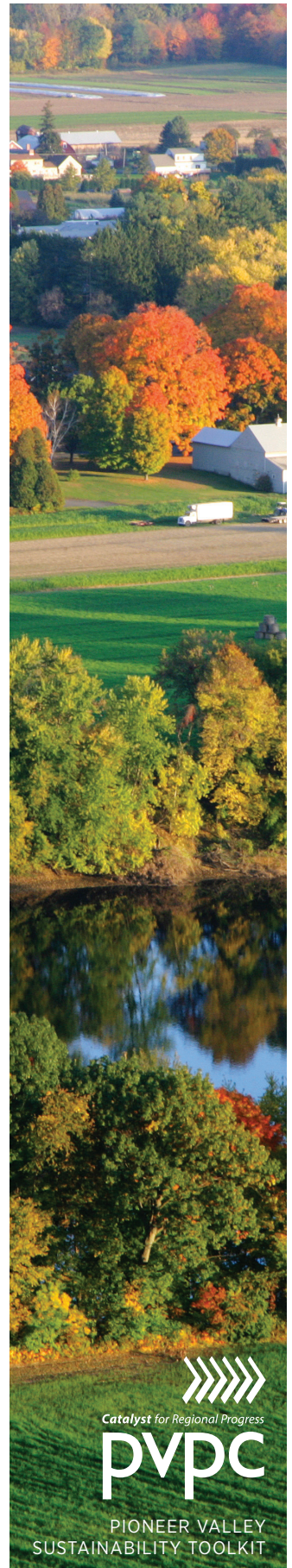
To encourage investment/reinvestment in downtown urban core and village areas; create a more pedestrian friendly environment in these areas; improve urban streetscapes and infrastructure in downtown urban core and village areas to further economic development; and to promote historic preservation.

Why do we need a Business Improvement District?

A key element in reducing sprawl is to encourage growth and revitalization in existing downtowns and other urban centers. With revitalization, downtowns serve prominent and important roles within their communities. There are many important reasons to revitalize downtowns, including the fact that downtown areas are usually centrally located and already contain water and sewer lines and streets. Downtowns are walkable and well served by public transit, allowing reduced car use. It is more economical to use existing and necessary support systems rather than pay for extensions outside of the area. Downtowns also have large employment opportunities, a community focus, and greater functional diversity than outlying areas. In many communities, downtowns still serve as a center for retail stores, financial institutions, public agencies and local government offices, local public transportation, historic areas, and cultural and educational institutions.

How does a Business Improvement District work?

A business improvement district formed pursuant to M.G.L. Chapter 400 is a contiguous geographic area with clearly defined boundaries in which at least three-fourths of the area is zoned or used for commercial, industrial, retail, or mixed uses. As part of the creation of a BID, an "Improvement plan" must be submitted and approved by the local municipal governing body as part of the creation of the BID. An Improvement Plan is



the strategic plan for the BID which sets forth the supplemental services and programs, revitalization strategy, budget and fee structure, as well as the management entity for the business improvement district. Presently, there are only three BIDs in Massachusetts: Hyannis, Springfield, and Westfield.

DID YOU KNOW...

The rights and powers of a BID approved by a municipal governing body include:

- » Retain or recruiting businesses
- » Administer and manage central and neighborhood business districts
- » Promote economic development
- » Design, engineering, construction, maintenance or operation of buildings, facilities, urban streetscapes or infrastructures to further economic development
- » Conduct historic preservation activities
- » Lease, own, acquire, or option real property
- » Undertake planning, feasibility, and market analyses

EXAMPLES FROM THE PIONEER VALLEY

Town of Springfield Business Improvement District (SBID)

The City of Springfield established a BID on November 18, 1998. The SBID calls for an aggressive beautification plan which includes: cleaner streets and sidewalks, more attention to the aesthetics of downtown parks, historic buildings and care for new and existing trees, perennials, annuals and hanging baskets. Through the SBID, local businesses band together to enhance City services and take public safety, community responsibility, and carefully planned growth to a new level. It's a lean, well organized coalition of property owners, tenants, city officials and other groups with a stake in Springfield's success. Property owners pay fees set by their peers, an 11-member Board of Directors. The City collects the funds but keeps them in a separate account, exclusively for the BID.

A model bylaw or strategy is included in the Pioneer Valley Sustainability Toolkit.

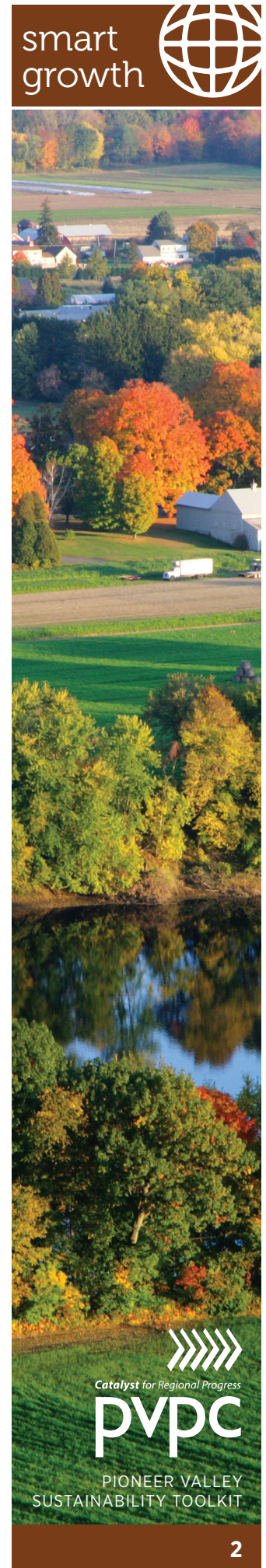
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District Improvement Financing & Tax Increment Financing



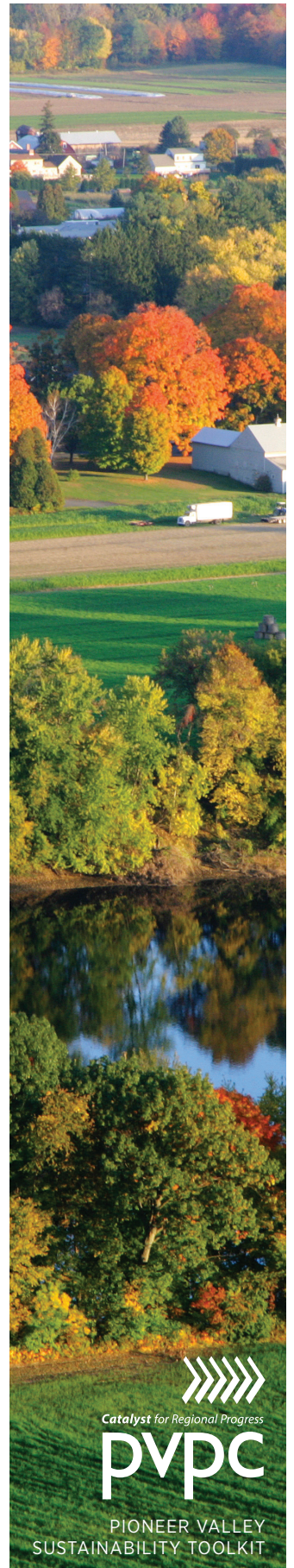
The X in Springfield

What are the objectives of a District Improvement Financing and Tax Increment Financing?

To encourage investment/reinvestment in downtown village and urban core areas; improve urban streetscapes and infrastructure to further economic development. District Improvement Financing (DIF) and Tax Increment Financing (TIF) are economic tools that promote redevelopment by use of public/private partnerships. TIF offers tax breaks to developers, while DIF channels tax dollars into targeted redevelopment districts.

Why do we need District Improvement Financing and Tax Increment Financing?

Many municipalities in the Pioneer Valley Region as well as throughout Massachusetts are faced with blighted, distressed, or simply underutilized areas. Many of these sites contain abandoned or contaminated facilities, while others are characterized by dilapidated infrastructure and commercial operations that simply are not economically viable. These areas often see a decrease in assessed property values with a corresponding decrease in municipal revenue. At the same time, they pose a drain upon municipal services. Often, it is difficult to attract private investment to these areas.



DIF and TIF provide opportunities to redevelop areas in ways which can lead to increased property values, increased tax revenue, improved infrastructure, enhanced transportation services, increased housing supply, new jobs and an overall improvement in quality of life for the inhabitants of the city or town.



Aerial view of the Star Container Corporation complex

Star Corporation, Leominster | Source: MA Smart Growth Toolkit

How does District Improvement Financing and Tax Increment Financing work?

A city or town wishing to utilize DIF must first designate a development district and a corresponding development program. The district and program must then be certified by the State Economic Assistance Coordinating Council (EACC). A development district may be as small as one parcel or may comprise up to 25% of a town or city's land. A district can be in effect for a maximum of 30 years. Each district must have a unique development program which spells out the goals of the district and the means to achieve them.

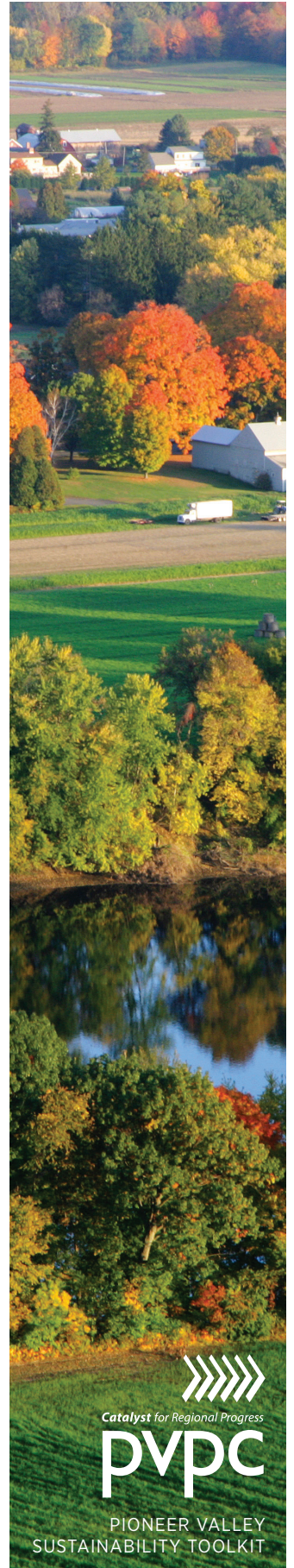
Under TIF state enabling legislation, landowners may be granted property tax exemptions of up to 100% of the tax increment. A municipality may enter into a TIF Agreement with a landowner for a maximum term of 20 years. The legislation also authorizes TIFs for housing in urban centers. A city or town must initiate a TIF by a vote of its governing body approving the TIF Plan.

At this time, there are no examples of DIF or TIF in the Pioneer Valley region. However, outside the region the Massachusetts Office of Energy and Environmental Affairs highlighted three DIF/TIF case studies in their Massachusetts Smart Growth Toolkit. This toolkit was prepared by the Horsley Witten Group under contract to the Massachusetts Executive Office of Energy and the Environmental Affairs (EOEEA).

EXAMPLES FROM OUTSIDE THE PIONEER VALLEY

Leominster, MA - Star Container Corporation (TIF District)

The City of Leominster entered into a Tax Increment Financing Agreement with Star Container Corporation to encourage Star Container's expansion plans for its packaging facility. The expansion consisted of an additional 54,000 square feet of floor area and the



purchase of additional corrugated box manufacturing equipment. The TIF Agreement had an eight year term, and provided for a front loaded sliding scale of exemptions from taxation of the tax increment as follows:

- » Year 1 100% of the increment
- » Year 2 90% of the increment
- » Year 3 75% of the increment
- » Year 4 60% of the increment
- » Year 5 45% of the increment
- » Year 6 30% of the increment
- » Year 7 15% of the increment
- » Year 8 0% of the increment

Star Container invested approximately 6.2 million dollars into the facility and equipment. The Agreement provided for the creation of 25 new full time manufacturing and managerial jobs. 150 existing jobs were retained by ensuring the facility stayed at the existing site. At the end of the TIF period, the City will gain approximately \$23,000 annually in additional property taxes.

Leominster uses TIF agreements only for manufacturing businesses. This is compatible with the needs of the city, which historically has had a manufacturing base in the plastics industry. Star Container distributes its packaging to many local and regional firms. The focus on manufacturing has the effect of creating jobs, which pay higher than the minimum wage, bringing a greater economic benefit to the area. The shorter term TIF is also geared towards manufacturing, and is tied to the equipment life.

For additional case studies on DIF/TIF, please see the [Massachusetts Smart Growth Toolkit](#) developed by the Executive Office of Energy and Environmental Affairs

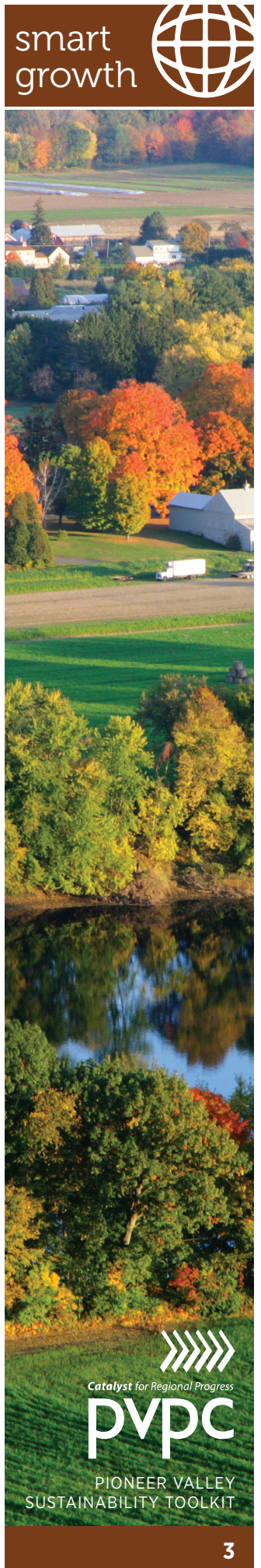
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Environmental Impact Statements



An Underground Storage Tank (UST) site on Maple Street in Holyoke, Massachusetts – prior to construction of the Multimodal Transportation Center. Photo courtesy of flickr user Massachusetts Dept. Of Environmental Protection

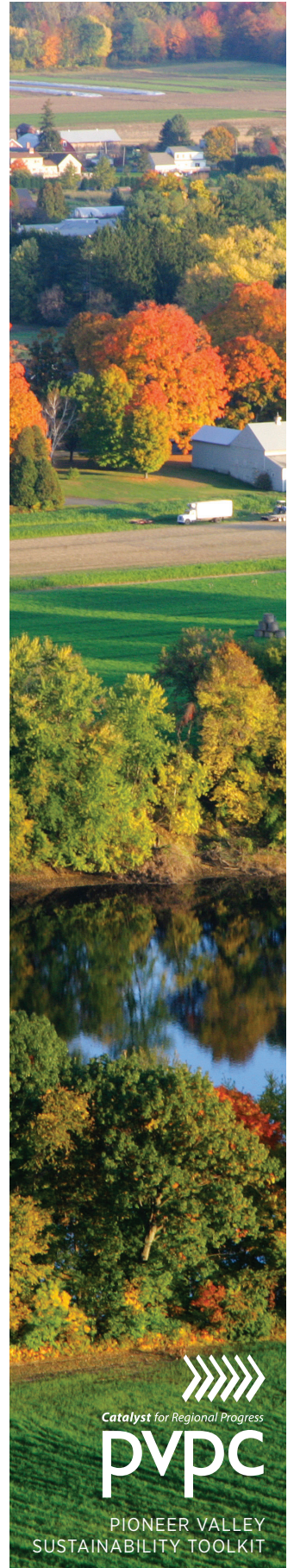
What are the objectives of environmental impact statements?

Environmental impact statements (EIS) are a procedural requirement of the National Environmental Policy Act (NEPA). An environmental impact statement is intended to detail the impacts of any proposed action by a federal agency on the environment. Environmental impact statements detail any detrimental impacts that could not be avoided in the event that the proposal is implemented, as well as any reasonable alternatives to the proposal. Additionally, an EIS demonstrates the relationship between the local short-term uses of a proposal and any long-term effects or irreversible commitments of resources involved in a proposal.

Massachusetts passed the Massachusetts Environmental Policy Act (MEPA) as a supplement to NEPA in 1972. The MEPA review is a state version of the NEPA review process. This process is designed to evaluate the impacts of proposed developments upon the environment. However, the term “environment” is a broad term that includes things beyond air, water and wildlife habitats to include things like historic preservation, traffic generation, and quality-of-life issues.

Why do we need to encourage environmental impact statements in our communities?

While environmental impact statements in the state of Massachusetts do not result in whether a project may go forward or not, the issuance of a certificate is instrumental for other agencies in determining whether funding or permits should be issued for the proposal. Unique to Massachusetts and Minnesota, citizens can petition the government for an environmental assessment - the stepping stone to an EIS - and thereby have a greater say in the development process. Environmental impact statements provide a

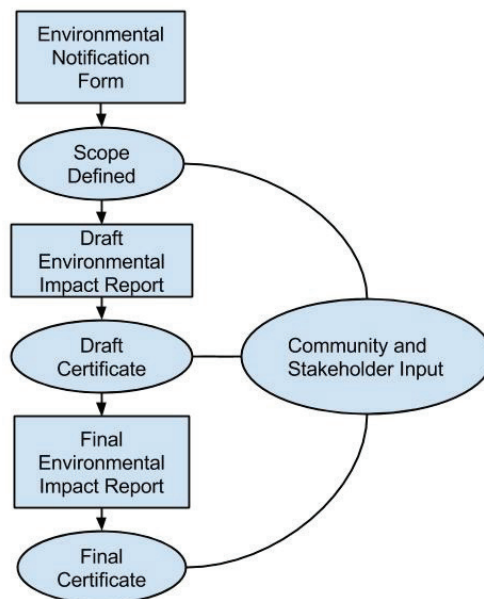


range of possible alternatives to any one proposal and are therefore a valuable tool in assessing the outcomes of any proposed development.

How do environmental impact statements work?

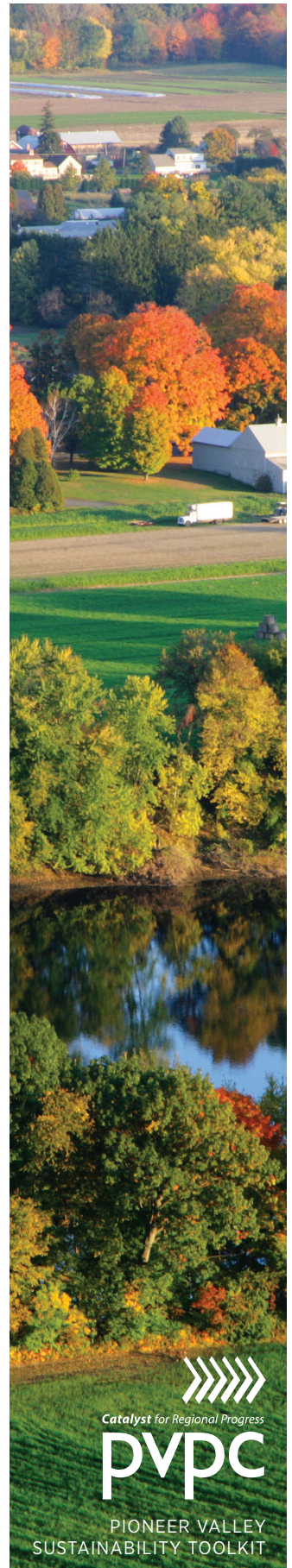
The NEPA and MEPA processes are not a strict regulatory process and do not result in an issuance of a permit or a final sign-off. Instead, MEPA and NEPA issue a “certificate” instead of a permit, and that certificate is used to guide other permitting processes. The certificate can condition an approval based upon what sorts of mitigation measures are taken to minimize the impact on the environment, however it is up to the agency that actually issues a permit to enforce those conditions. The NEPA, MEPA, and other state processes are all generally similar, however only Massachusetts, Montana, South Dakota, and Wisconsin limit this review to state permitting actions only.

When a project is initiated, the proponent – which is usually a public agency – submits an initial report referred to as an Environmental Assessment or an Environmental Notification Form to the appropriate national or state Environmental Protection Agency office. Those forms serve as a formal notification that the proponent aims to implement the proposal, and allows the proponent to seek a waiver from the full EIS process if it believes it to be unnecessary. Comments are taken on that form, and NEPA or the state EPA then determines whether a waiver should be granted, and if not the specific environmental impacts that the proposal needs to address in a more detailed stage of review. This decision is referred to as the ‘scope’, which is based upon a previous ‘scoping session’ held by NEPA, the state EPA, or other state equivalents which may include site visits open to the public, presentations of the proposal, and a community dialogue to elicit feedback on the proposal.



MEPA Planning Process¹

Following the scope, a Draft Environmental Impact Statement or Report is created by the proponent to address the issues outlined in the scope. Following public comments



regarding the draft report, NEPA or the state EPA evaluates those comments and then tells the proponent what additional steps need to be taken in order to create a final draft.

The final draft produced is referred to as the Final Environmental Impact Statement, or Final Environmental Impact Report. After public comments are taken on this version, and if the EPA deems this report satisfactory, it will issue a final 'certificate' stating that the EIS is complete and that the proponent has agreed to make changes to the project to minimize environmental impacts. The certificate is then used by other agencies in determining whether any funding or permits that the proponent is considering for the proposal should be issued.

MEPA establishes three tiers of jurisdiction over projects: complete, broad, and limited. MEPA has full jurisdiction over any project that is undertaken by an Agency, those aspects of a project within the subject matter of any required permit, projects involving financial assistance, and any aspects of a project which are within the area of any land transfer. MEPA has broad jurisdiction over any project undertaken by an Agency or any project that involves financial assistance. Broad jurisdiction in this case means that the scope, if an EIR is required, shall extend to all aspects of a project that are likely, either directly or indirectly, to cause damage to the environment. MEPA jurisdiction is limited when a project is undertaken by a person and requires land transfers or permits but does not involve financial assistance.²

The MEPA law (301 CMR 11:00) includes mandatory thresholds for conducting EAs and EISs with the provision of agency discretion regarding the significance of determinations. Massachusetts is unique with MEPA compared with other SEPA states in that the threshold for preparing an EIS is not a finding of significant environmental impact, but rather a finding that the proposal may "damage" the environment. Also unique to Massachusetts and Minnesota is the fact that citizens can petition the government to require the preparation of an EA for a project.

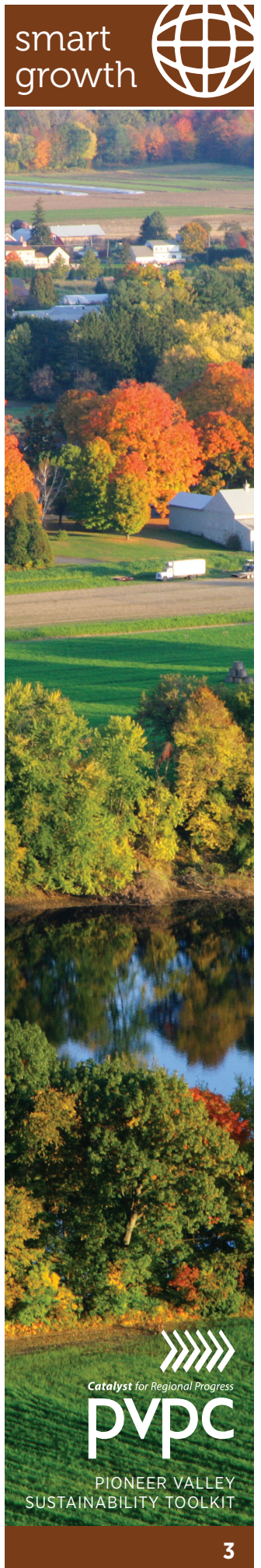
At the local level cities and towns may require proposals to undertake an EIS within their subdivision regulations or site plan review process. Should the planning board deem it necessary, a proposed development may be required to submit an EIS or a development impact statement in order to obtain a permit for a proposal.

DID YOU KNOW...

That since 1970 dozens of other nations have established their own versions of EISs? The 17th principle of the Rio Declaration on Environment and Development (1992) is devoted to the creation of environmental impact statements by countries around the world.

1 Adapted from: Hamin, Elisabeth M., Linda Silka, and Priscilla Geigis. Preserving and Enhancing Communities: A Guide for Citizens, Planners, and Policymakers. Amherst: University of Massachusetts. 2007

2 For more information see: 301 CMR 11.00: MEPA REGULATIONS. <http://www.env.state.ma.us/mepa/regs/11-01.aspx>



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Green Communities



Governor Deval Patrick at the commemoration of the 100th Green Community.
Photo courtesy of flickr user Deval Patrick

What are the objectives of the Green Communities Program?

The Green Communities Designation and Grant Program is the result of S. 2768, The Green Communities Act, which was passed in 2008. The Green Communities Division is part of the Office of Energy and Environmental Affairs and is tasked with enhancing energy efficiency within the 351 cities and towns of Massachusetts. The Green Communities Division’s role is to help communities in the Commonwealth to find clean and renewable energy solutions to reduce their long-term energy costs and strengthen local economies. This is accomplished by providing technical assistance and financial support for municipal initiatives that improve energy efficiency and increase the use of renewable energy in public buildings, facilities and schools.

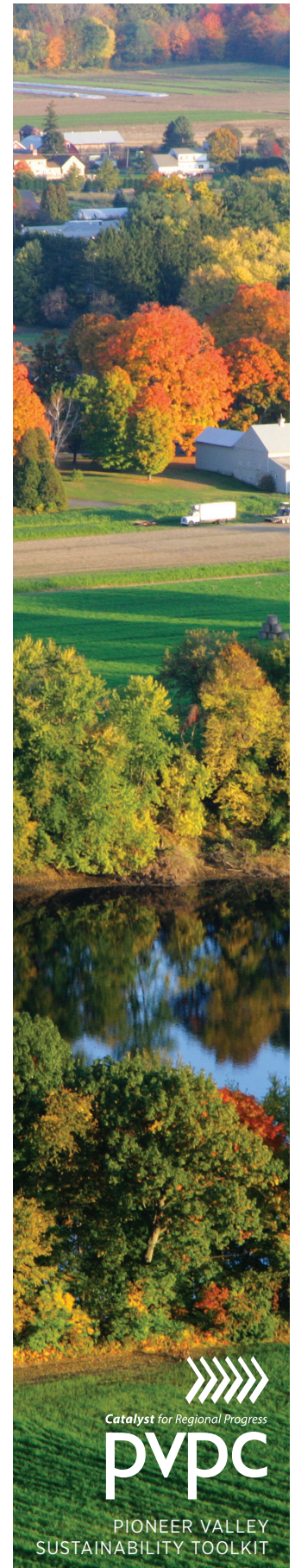
Why do we need to encourage Green Communities?

Cities and towns across the Commonwealth face both economic and climate-change related challenges in the coming years. The Green Communities Designation and Grant Program provides municipalities with the necessary financial and technical assistance to implement changes in the way that energy is consumed. By adopting clean and renewable energy in public buildings, facilities, and schools, municipalities can start moving forward in addressing climate change and save money in the process.

How does the Green Communities Act work?

The Green Communities Act increases energy efficiency in Massachusetts by expanding investments in energy efficient measures in order to reduce electricity demand. This is accomplished by the following measures:

- » **Efficiency First:** Requires that electric and gas utilities secure energy efficiency resources that are cost-effective or less expensive than supply as a first recourse, before more expensive generation resources can be purchased. This



also mandates that an efficiency plan is produced every three years and be approved and that a Energy Efficiency Advisory Council be created to review plans. Plans are approved by the Department of Public Utilities.

- » **Efficient Buildings:** Requires the adoption of the International Energy Conservation Code (IECC) and updates within a year of any revision. This provision also provides for related training, implementation and compliance and requires the disclosure of information regarding the benefits of home energy audits to buyers of single-family dwellings or small multi-family dwellings at the time of closing.
- » **Regional Greenhouse Gas Initiative Implementation:** The act maximizes the benefits of Massachusetts' adoption of the regional power plant CO2 cap and trade program known as "RGGI". This requires the auction of all permits to emit pollution under the program rather than giving them away for free. Eighty percent or more of the auction proceeds go towards energy efficiency programs and the remainder goes to municipalities where power plants are situated, funding for community clean energy programs and voluntary green power development
- » **Renewable Energy:** The Act promotes renewable energy by strengthening the Massachusetts Renewable Energy Portfolio Standard (RPS) by increasing requirements for new renewable every year with a target of 15% of electricity for Massachusetts consumers supplied by renewables by 2020. The act also promotes net-metering, long term contracts, and municipal/utility ownership of utilities.
- » **Renewable Energy Trust Fund:** The Act establishes a new governing board and requires the development of 5-year strategic plans for the existing Renewable Energy Trust Fund (RETF)
- » **Cleaner Vehicles:** The Act promotes hybrid or alternative fuel vehicles by calling for state government vehicles to be comprised of 50% of such vehicles by 2018.

How does the Green Communities Designation and Grant Program work?

The Green Communities Grant Program provides up to \$10 million per year statewide in technical and financial help to municipalities to promote energy efficiency and the financing, siting and construction of renewable and alternative energy facilities. In order for a community to qualify for technical and financial assistance and be designated a Green Community, they must adopt the following:

- » As-of-right siting for renewable or alternative energy generating, manufacturing or R&D facilities in designated locations
- » An expedited permitting process for approving such facilities within one year of the filing of an application
- » Energy use baseline and a program to reduce energy use by 20% within 5 years
- » Policy to purchase only fuel efficient vehicles; and

» A policy to minimize lifecycle energy and water costs for all new commercial, industrial and large-residential construction.

Funding is provided to communities through Cap and Trade programs (including RGGI), compliance payments pursuant to the Massachusetts Renewable Portfolio Standard, and the Renewable Energy Trust Fund.

DID YOU KNOW...

The Green Communities Designation and Grant Program is currently working with 123 cities and towns throughout the commonwealth that have earned Green Communities designation. There is currently more than \$28 million dollars from Green Community grants at work in these cities and towns.

EXAMPLES FROM THE PIONEER VALLEY

The Pioneer Valley is well represented thus far with Green Community designations in comparison to the rest of the State. However there are still a number of communities which have not been designated as Green Communities. Holyoke received \$321,221 for the conversion of exterior parking lot lighting to LEDs at all twelve schools, and to purchase BigBelly Solar Compactors for public parks and high traffic areas. Northampton received \$198,500 for a 51 kW solar power project on the Smith Vocational and Agricultural High School (SVAHS), and to purchase an energy auditor/building performance education kit for the SVAHS Home Building Program. Springfield received \$988,102 to replace inefficient boilers at the Deberry, Mary Lynch, and Freedman Elementary Schools and the Fire Repair Building; installation of vending machine misers at the Freedman and Brunton Elementary Schools and the Fire Repair Building; and for five energy management systems at the Deberry, Mary Lynch, Brunton, and Zanetti schools, the Fire Repair Building and the Sixteen Acres Branch Library.

For more information contact Jim Barry, the Western Region Green Communities Coordinator at jim.barry@state.ma.us

Phone(413)755-2232 | Mobile (617) 823-4588

OR GO ONLINE TO:

<http://www.mass.gov/eea/energy-utilities-clean-tech/green-communities/>

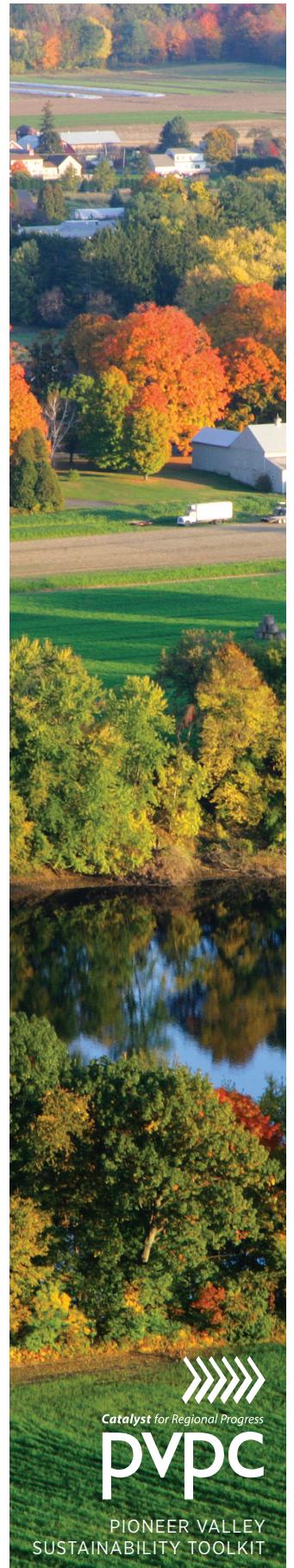
A model bylaw or strategy is included in the Pioneer Valley Sustainability Toolkit.

FOR MORE INFORMATION, PLEASE CONTACT

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60 Congress Street, Floor 1
Springfield, MA 01104-3419

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Municipally Owned Clean Energy



Brockton Mass, "Brightfields" www.brockton.ma.us

The 535 Megawatt hours of clean electricity generated from the Brightfield will result in a reduction of 589,570 lbs. of carbon dioxide (a greenhouse gas), 1,086 pounds of sulfur dioxide and 289 pounds of nitrogen oxide emitted into the atmosphere each year.

Converts a blighted industrial brownfield into a clean energy showcase

Enhances local property values and encourages reinvestment

What are the objectives of municipally owned clean energy?

To manage risk, stabilize municipal budgets, and combat climate change.

Why do we need municipally owned clean energy?

All levels of government around the world have recognized the need to invest in clean and safe renewable energy sources. Climate change must be addressed to ensure a safe and healthy future for our children and grandchildren. The United States is dependent on foreign sources of non-renewable dirty energy. We have reached peak oil production and we need to transition to safe, sustainable, clean sources of energy. In 1998 the Commonwealth of Massachusetts joined a select number of states being one of the first to pass a renewable energy portfolio standard. This legislative act committed the Commonwealth to secure an ever increasing percentage of its electricity needs from clean and safe renewable sources and created a very competitive market for clean energy. Municipalities can save money and manage risk by investing in municipally owned clean energy.

How does municipally owned renewable energy work?

We recommend reviewing the [Massachusetts Clean Energy Center \(CEC\)](#) website for detailed resources on municipally owned clean energy. Municipally owned clean energy is



just like any other municipal asset. You make the decision to invest your limited resources in clean energy. You use local staff and community resources, including PVPC and Department of Energy Resources, and hire consultants as necessary and possible; to help you determine what source(s) of clean energy is/are available and make the most sense for your community. You allocate the resources necessary (some funding is available from CEC—on a reimbursement basis) and you install the facilities. Massachusetts law prohibits municipalities from generating their own power for sale to the grid—unless you have a municipal utility. Therefore we recommend that you design your municipal clean energy facilities to generate only enough power to use on site. If you want to be an electricity generator, you can create a municipal utility or you can petition Congress for permission.

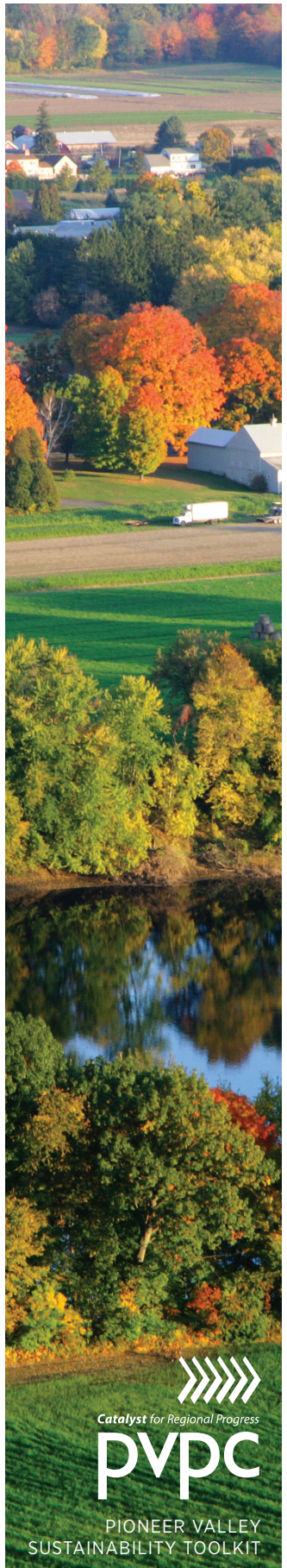
DID YOU KNOW...

That the city of Northampton has received more than one hundred thousand dollars from MTC for clean energy installations because 3% of residents agreed to pay more to buy clean energy?

EXAMPLES FROM THE PIONEER VALLEY

Easthampton Solar Project

Easthampton is interested in capitalizing on current state and federal government policy initiatives by enlisting a private developer to construct and operate a solar array on its closed landfill. Private sector partners can utilize the tax advantages while the city provides the location and consumption necessary to make the project financially feasible. Such a partnership can be beneficial to both parties by saving money for the city and providing a profit incentive for the developer, while at the same time fostering a conservation ethic by reducing our greenhouse gas emissions and dependence on fossil fuel.



EXAMPLES FROM OUTSIDE THE PIONEER VALLEY

Town of Hull, MA

The state's first recent, commercial-scale turbine began generating green energy in the coastal town of Hull. A 660-kW turbine, Hull Wind 1, was installed on the harbor in 2001. In spring 2006, the Hull Municipal Light Plant dedicated a second turbine. Hull Wind 2 is a 1.8 MW Vestas V80, installed on a closed landfill. The two wind turbines supply more than 10 percent of the community's energy needs. For more information on this project, please visit the [Hull Wind](#) webpage.

For more information on Smart Energy, please visit the state's [Smart Growth / Smart Energy](#) toolkit, developed by Executive Office of Energy and Environmental Affairs

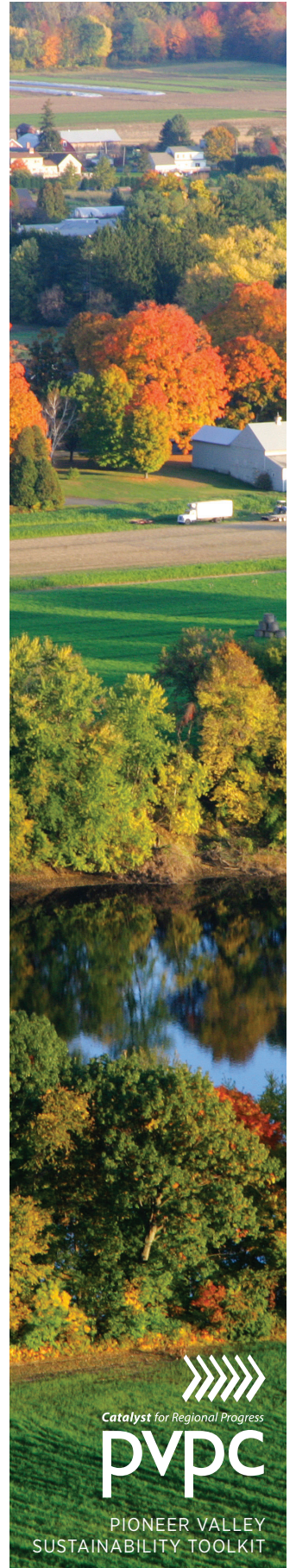
A model bylaw or strategy is included in the Pioneer Valley Sustainability Toolkit.

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PVPC's Planning Board Assistance Program

What are the objectives of the Planning Board Assistance (PBA) program?

PVPC's Planning Board Assistance (PBA) program provides municipal planning boards with professional, high quality planning services on a part-time, cost-effective basis.

Why do we need the PBA Program?

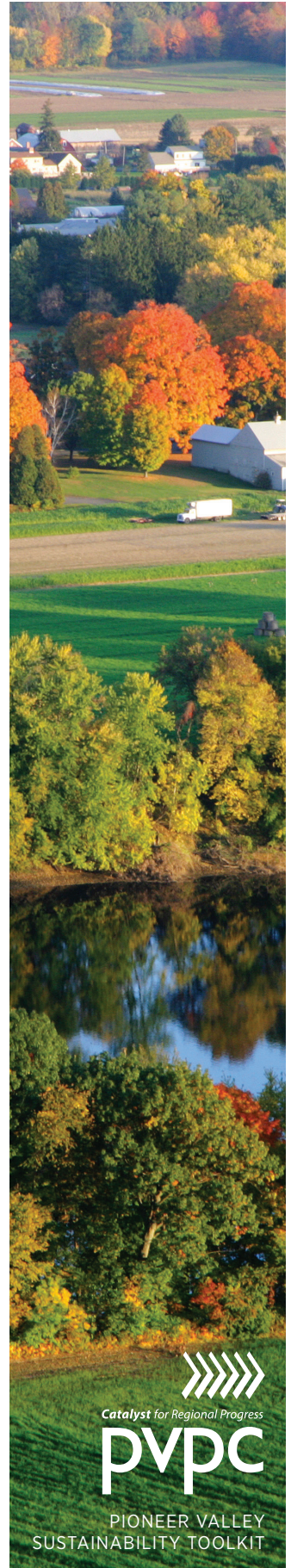
As new laws are passed and the state of municipal planning becomes more sophisticated the responsibilities of local planning and zoning boards becomes more complicated and time consuming to administer. These citizen boards often find themselves lacking the in-house capacity to sufficiently and expeditiously carry-out these responsibilities and budget constraints limit their ability to hire full-time professional planning staff.

Under the PBA program PVPC will provide a planner on a fee-for-services basis. This planner will provide a higher level of technical assistance and attention beyond the free services available through our Local Technical Assistance (LTA) program. The PBA program is not a substitute for a town planner or community development professional, but is an extremely cost-effective alternative.

How does the PBA Program work?

If your community is interested in formalizing participation under the PBA program, the first step is to establish an agreement for services. This agreement will include a detailed scope of work describing the Planning Board's work priorities and the number of hours of professional planning services available to the community. Typically, the PBA year starts on July 1st and extends through the following June 30th, but shorter-term agreements for a specific project or task are also possible.

Through the PBA program, the Planning Commission will assign a professional land use planner with expertise in zoning and master planning services as the municipal's key contact. This planner will provide technical assistance to the Planning Board on a part-time basis, and will be available for Planning Board members to contact whenever questions arise. The planner will become familiar with local planning issues and problems.



DID YOU KNOW...

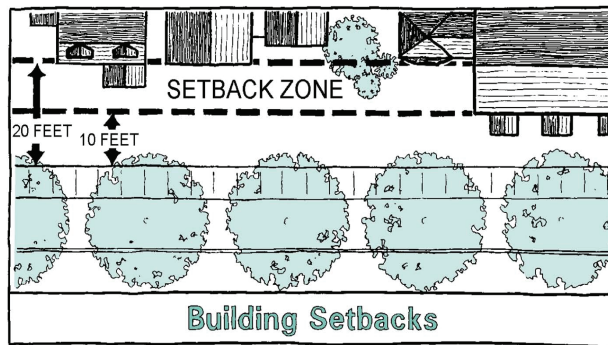
The town of Hadley has been participating in the PBA program continuously for over a decade

The local communities of Cummington, Granby, Longmeadow, Middlefield, Southampton and Westfield have also been recent participants

... The PBA program provides a cost effective alternative for small towns to afford professional planning services, as well as to assist current municipal planning staff.

Levels of Assistance

Under the PBA Program, communities can request a level of assistance that fits the community's budget and individual needs. PVPC staff will assist communities in determining the appropriate level of assistance.



Types of Planning Board Assistance

Planning Boards can create their own unique scope of services tailored to local needs through the PBA program. The following is a menu of planning services which could be included:

- » Assistance with the review of development proposals (subdivision and site plan review applications)
- » Review and comment on adequacy of existing zoning ordinances and bylaws or subdivision regulations
- » Review zoning ordinances and bylaws for consistency with state law
- » Creating development review intake and tracking systems
- » Assistance in re-drafting and updating zoning ordinances and bylaws or subdivision regulations
- » Updates on planning board requirements and responsibilities
- » Assistance in implementing smart growth tools and strategies
- » Urban Design

- » Visualization
- » Access to the key contact via telephone, e-mail and scheduled meetings for guidance and advice
- » Attendance at Planning Board meetings
- » Assistance in reviewing meeting agendas and meeting minutes
- » Planning Board training
- » Guidance concerning planning principles and planning law
- » Interpretation of local ordinances, bylaws and regulations
- » General municipal planning functions

A model bylaw or strategy is included in the Pioneer Valley Sustainability Toolkit.

FOR MORE INFORMATION, PLEASE CONTACT

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Stormwater Management Bylaws



Congamond Lakes Restoration Project, Southwick

What are the objectives of Stormwater Management?

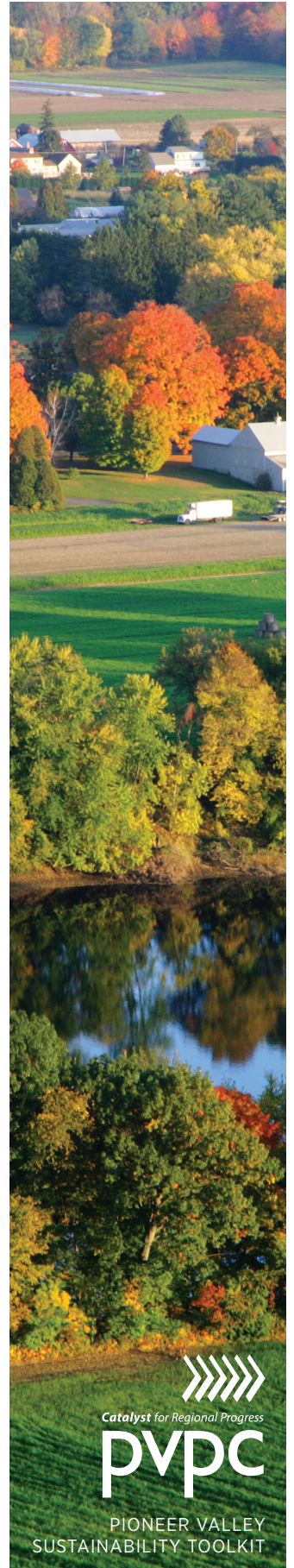
To regulate land activities which generate runoff by requiring on-site management of stormwater runoff, to protect public health and water quality by reducing pollution, flooding, siltation and drainage problems, and to help prevent increases in stormwater runoff, protect groundwater recharge, control erosion and sedimentation, reduce pollutants in runoff, and protect waterways.

Why do we need Stormwater Management?

As urbanization occurs, large areas of impervious surfaces are created by roads, buildings and parking lots. In turn these paved areas generate higher volumes of stormwater runoff at greater velocities and pollutant loads. Without controls, each new development incrementally increases the pollution of waterways. Pollution from urban runoff is now recognized as a significant source of water quality degradation that is virtually impossible to deal with without adequate stormwater controls.

How does a Stormwater Management bylaw work?

A stormwater management bylaw/ordinance can require all new development to provide a Stormwater Pollution Prevention Plan (SWPPP) and design that incorporates Best Management Practices (BMPs) to reduce runoff impacts. The plan's overall goal is to prevent post-development increases or decreases in the total volume or rate of stormwater discharges from the site, as compared with pre-development conditions. This goal could be achieved using stormwater controls or BMPs, such as vegetated swales, retention or detention basins, oil and grease separators, infiltration basins, constructed



wetlands or other measures. The stormwater plan includes a description of existing site characteristics including topography, soils, hydrology and floodplains. Calculations for pre- and post-development stormwater volume and rates of runoff are needed to size appropriate BMPs. The bylaw/ordinance contains specific design criteria for handling post development peak discharge for a particular storm event. For example, the bylaw/ordinance might require that the plan contain adequate control measures for a 24-hour storm event that occurs every 2, 10 or 25 years. The bylaw/ordinance also includes requirements for inspection and maintenance of BMPs during and after construction, with a performance bond to ensure maintenance.

DID YOU KNOW...

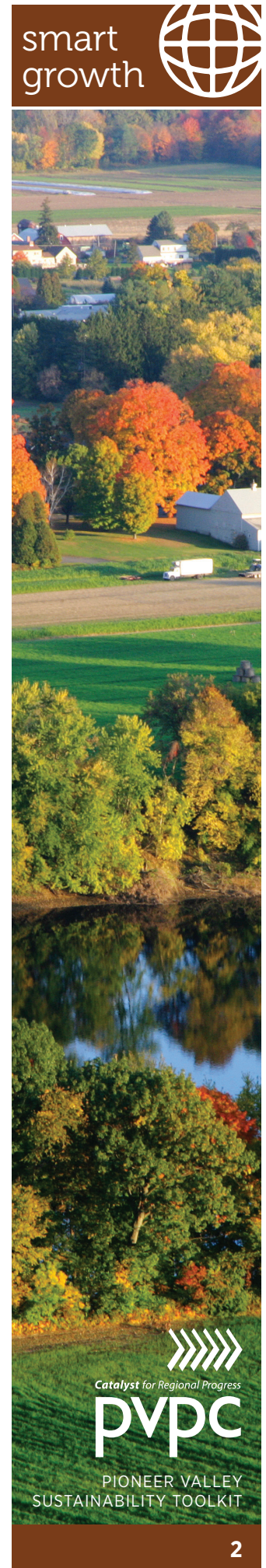
Stormwater runoff is our most common cause of water pollution. Rainwater and snowmelt run off streets, lawns, farms, and construction and industrial sites and pick up fertilizers, dirt, pesticides, oil and grease, and many other pollutants on the way to our rivers, lakes, and coastal waters. (US EPA)

EXAMPLES FROM THE PIONEER VALLEY

Stormwater Bylaws

In 1999, the U.S. Environmental Protection Agency promulgated the Storm Water Phase II Final Rule of the National Pollutant Discharge Elimination System (NPDES). The program is intended to preserve, protect, and improve the Nation's water resources from polluted storm water runoff. Three of the NPDES Phase II "Six Minimum Control Measures" required regulated municipalities to adopt and enforce regulatory mechanisms for controlling illicit discharges, construction site runoff, and post-construction runoff.

PVPC researched model bylaws from around the country and crafted a two model bylaws that addressed all of the NPDES Phase II review and control requirements for construction and post-construction runoff. These bylaws are known respectively as Illicit Connections and Discharges to the Municipal Storm Drain System and, Erosion and Sediment Control. Since development of the two bylaws, PVPC has worked with the communities of Chicopee, Northampton, Southampton, Westfield, and Southwick in tailoring the bylaw to address their specific needs. To date, the cities of Chicopee, Northampton and Westfield and the Town of Southampton have fully adopted both bylaws.



CASE STUDIES FROM OUTSIDE THE PIONEER VALLEY REGION

Additional case studies on Stormwater Management, can be found at the US Environmental Protection website on stormwater protection.

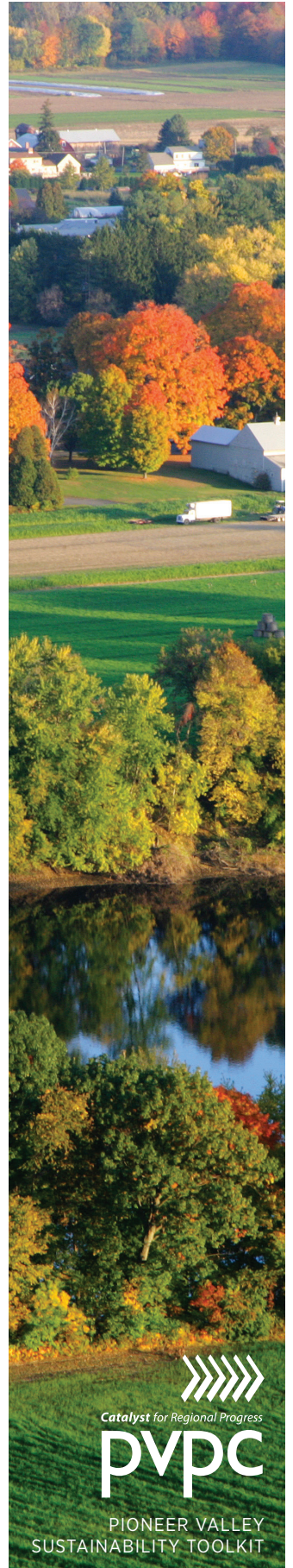
A model bylaw or strategy is included in the Pioneer Valley Sustainability Toolkit.

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Stormwater Utilities



Pequot Pond restoration project, Southampton

What is a stormwater utility?

Stormwater utilities are proven effective mechanisms for generating revenue to manage stormwater. Just like electric or water utilities, stormwater utilities collect fees from residents to pay for a ‘product’. Stormwater utilities are different from the other more established utilities as the ‘product’ being paid for is not something concrete and measurable like water or electricity. The product being paid for is stormwater management, and design to control or eliminate water pollution, erosion and flooding.

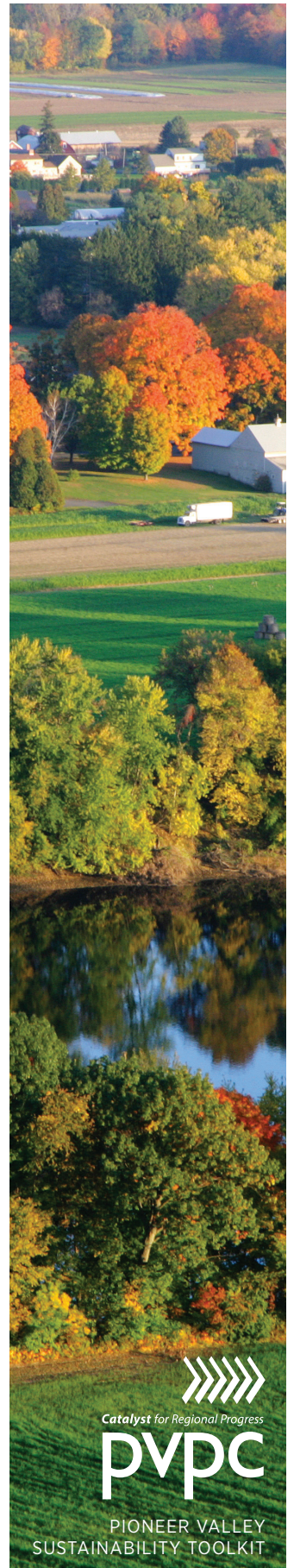
Why do we need stormwater utilities?

For hundreds of communities in Massachusetts, the National Pollutant Discharge Elimination System (NPDES) Phase II program prompted a shift in the way many cities and towns view stormwater programs. Unable or unwilling to fund stormwater management improvements out of general funds, a municipal stormwater utility offers a proven successful way for municipalities to generate the funds required to finance stormwater management programs and upgrade of existing stormwater facilities.

How do stormwater utilities work?

As a rule, municipal stormwater utilities are established by ordinance (or bylaw in the case of a town). The vast majority of these ordinances/bylaws are enacted by local government. Public referendum is also an option. Stormwater Utilities are, in a sense, a form of user fee in which the fee is based on the amount of stormwater run-off created by the development of a property. A fee is assessed to each developed property, and is calculated on the amount of the property’s impervious cover.

For more information on stormwater utilities and a thorough overview of legal issues, sample ordinances, and other technical information, please refer to the PVPC document “How to Create a Stormwater Utility” toolkit.



DID YOU KNOW...

that there are more than 360 stormwater utilities established across the country in 31 states?

EXAMPLES FROM THE PIONEER VALLEY

City of Chicopee Stormwater Pilot Program

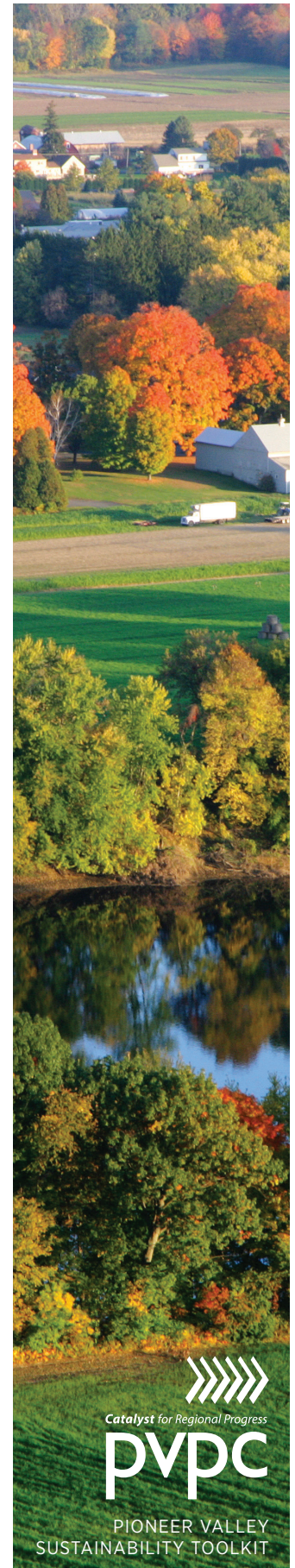
In 1998, the City of Chicopee implemented a pilot storm water utility or fee-based management program. Although the City of Chicopee did not establish a storm water utility per se, the city opted to incorporate storm water management into the existing Wastewater Department to save on administrative costs and take advantage of the expertise of the Wastewater Department's staff. Chicopee also passed an ordinance to collect fees from residents specifically for the purpose of managing storm water. The city conducted extensive research before instituting the storm water ordinance. Residents said that they would be willing to pay a new fee for storm water management if they were sure that the money would be used to address the problems directly affecting them, such as sewer back-ups during wet weather. The ordinance was therefore designed to address such concerns.

Instituting a specific storm water fee rather than increasing sewer fees to cover the costs of storm water management had two advantages. First, it meant that Chicopee could assess fees based on the amount of storm water generated by each property tied into the sewer system. Second, the city expects that over time, large storm water generators will begin to invest in best management practices and remediation measures to treat their storm water in order to reduce their storm water management fee, thus reducing the amount of storm water pollution being generated.

Chicopee's storm water management fee has been in place since December 1998. In the first year, the city raised some \$400,000 for storm water management; by the third year, revenues had increased to \$550,000. To date, the money has been used for activities such as stepping up cleaning of catch basins, purchasing a catch basin cleaning truck, grouting joints in the sewer system to stop leakage and inflow, stenciling storm drains, and cleaning sewer lines. Chicopee has also used the funds to leverage additional state loan funding for a \$5 million sewer separation project.

City of Westfield Stormwater Utility

In 2010 the City of Westfield adopted a formal Stormwater Utility Ordinance. The process took two years and involved numerous revisions to tailor it to the specific needs of the community. While similar to Chicopee's in many ways, it is important to note that each community needs to mold such ordinances to meet their own unique circumstances. While the City Council establishes the rate, the program is administered by the Department of Public Works as they are responsible for the city's stormwater



management system. Residential properties are assessed a flat fee while non-residential property fees are based on the amount of impervious surface on the property. The fees raise in excess of \$450,000 per year which are deposited into a special dedicated account that can only be used to defray the cost of administering and implementing the city's stormwater management program.

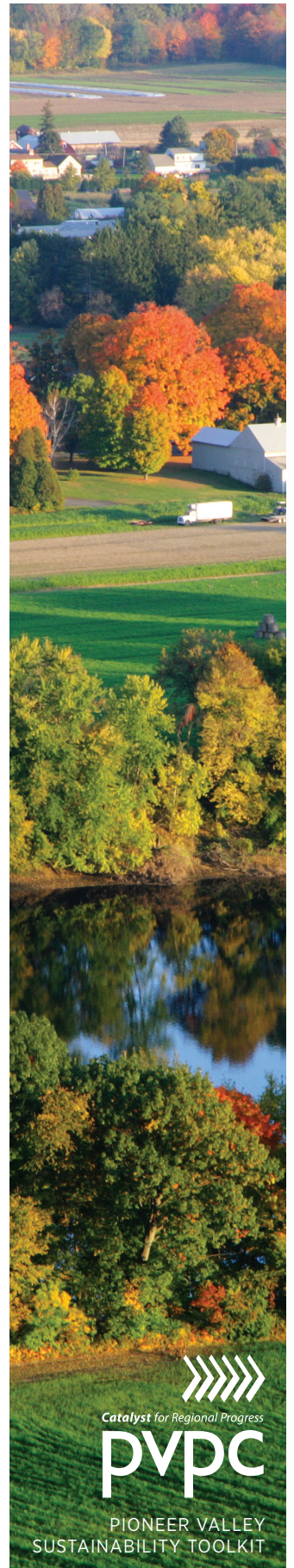
A model bylaw or strategy is included in the Pioneer Valley Sustainability Toolkit.

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Traffic Calming Measures



Raised pedestrian walkways (Speed Tables) near Amherst College

What are the objectives of traffic calming?

To improve neighborhood livability and pedestrian safety through the reduction of average travel speeds on residential roads.

Why are traffic calming measures needed?

Traffic calming relies on the installation of physical features to slow vehicle speed and enhances safety on local streets. Already used effectively in Europe for decades, traffic calming techniques are now being instituted in communities throughout North America. Reconfiguring the physical design a roadway is the most effective way to reduce speeding on residential streets, avoid traffic accidents and prevent fatalities. Cities with successful traffic calming programs have neighborhoods that are safer, more livable, and more enjoyable. Small, inexpensive retrofits of a roadway can result in speed and traffic volume levels that promote more livable communities.

How do traffic calming measures work?

Rather than relying on stop signs, speed limits and legal penalties (the regulatory approach) to reducing average vehicle speeds and promote safe neighborhoods, traffic calming has been introduced to change the driving conditions on roadways in such a way that traffic speeds and driver behavior are self-enforced. This is accomplished through incorporating design elements into the roadway--such as raised crosswalks, traffic roundabouts and traffic circles—that lead a driver to choose to travel at a reduced speed. This reduces the possibility of severe collisions between motorists, increases safety for



bicyclists and pedestrians, reduces erratic or aggressive driving behavior, and enhances the livability of neighborhoods and business districts through attractive street design.

DID YOU KNOW...

That there are three general types of traffic calming measures:

1. **Narrowing the Real or Apparent Width of a Street:** through pavement cross-section features, placement of street treatments and pavement edge treatments
2. **Deflecting the vehicle path:** such as chicanes, lane offsets, crossing islands and site-specific traffic circles; Introducing roundabouts, traffic circles, curb extensions
3. **Altering the vertical profile of the vehicle path:** such as speed humps and speed tables, raised crosswalks, and textured pavement

(Massachusetts Highway Department Project Development and Design Guide)

EXAMPLES FROM THE PIONEER VALLEY

Amherst College and the Town of Amherst

In 2002, Amherst College identified pedestrian safety as a major point of concern for its student population; this was due, in large part, to the presence of Route 9 and Route 116 on the college's main pedestrian access points. To reduce the risk of pedestrian and automobile collisions, Amherst College began working with the Town of Amherst in 2003 to finance and design the first test Speed Table on Seelye Street (a minor collector off of Route 9). The successful application of a Speed Table at Seelye Street led to the installation of four major Speed Tables along College Street (Route 9) in 2004. Raised Speed Tables were installed at the crossings of Boltwood Avenue, Webster Circle, and Dickinson Street, and a pedestrian-activated system of flashing lights was also embedded within the Speed Tables to enhance night time visibility.

Amherst College performed an assessment of the section of College Street that the crosswalks were installed on to determine the effectiveness of this project. The findings from the assessment indicated that the average travel speed that existed before the installation of the Speed Tables, 47 miles an hour, was reduced to the posted speed limit of 35 miles per hour. This project relied on the third approach to achieving traffic calming (see inset), and successfully altered the vertical profile of the vehicle path.

This project has been a success with both residents and college students, and the Town of Amherst and Amherst College are proceeding with the installation of four crosswalks along South Pleasant Street (Route 116) to replicate the success of the College Street project. In addition to Speed Tables, the South Pleasant Street crosswalk project will install new curbing and add vegetated traffic islands to the roadway. These design features will accomplish the goals of redesigning the roadway to reduce travel speeds, enhancing pedestrian safety, and improving street design and neighborhood quality.

EXAMPLES FROM OUTSIDE THE PIONEER VALLEY

City of Cambridge, Massachusetts

The City of Cambridge has been extremely active in implementing traffic calming designs into their existing roads system. Please visit the city's Office of Community Development [traffic calming webpage](#) for more information on funded projects and resources on traffic calming.

Seattle, Washington: Neighborhood Traffic Circle Program

Please visit the [Neighborhood Traffic Circle Program](#) webpage for more details on this nationally recognized traffic calming program.

ADDITIONAL RESOURCES

Chapter 16: Traffic Calming and Traffic Management, Massachusetts Highway Department, Project Development and Design Guide, January 2006.

A model bylaw or strategy is included in the Pioneer Valley Sustainability Toolkit.

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Trip Reduction



Rideshare Program in Washington State

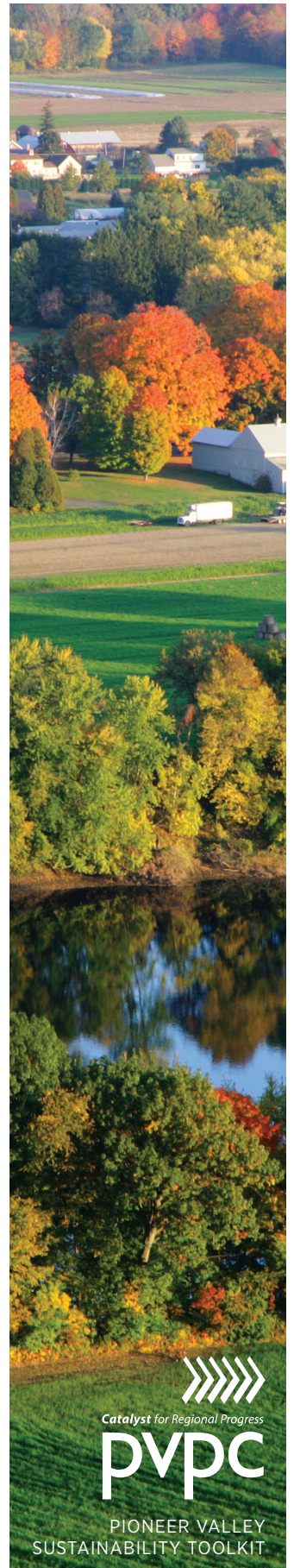
What is the objective of trip reduction?

Trip reduction programs give commuters alternative options to reduce single occupancy automobile trips by offering resources, incentives, or disincentives. Trip reduction strategies work to reduce the impacts of traffic on air pollution, greenhouse gas emissions, and congestion by requiring major employers and schools to develop, implement, and maintain a trip reduction program.

Why do we need to encourage trip reduction strategies in our community?

Excessive traffic can have many negative impacts on communities and individuals. By reducing the number of vehicle trips in our communities, we can minimize unhealthy air pollution, curb greenhouse gas emissions, limit noise, ease congestion, and increase health and convenience for individuals. Federal policy, as set forth in 49 CFR 614 requires Massachusetts to develop, adopt, and annually update a congestion management program to reduce emissions. The Clean Air Act Amendments of 1990 call for the adoption, implementation and enforcement of transportation control measures sufficient to assure the attainment of Federal ambient air quality standards in Massachusetts no later than 1999. Massachusetts' Department of Environmental Protection has an air pollution control regulation, 310 CMR 7.16, which requires the reduction of single-occupant commuter vehicle use. This regulation requires employers of 250 or more to provide incentives for public transit facilities and carpooling and requires employers of 1,000 or more to make vanpool amenities available to any interested group of at least ten employees.

Communities can set more ambitious trip reduction strategies by enacting trip reduction measures through local ordinances and bylaws. A municipality could enact an ordinance which goes even further than State regulation such as the City of Cambridge did with a Parking and Transportation Demand Ordinance (PTDM). This ordinance formalizes parking and transportation demand management planning, programs and coordination for all commercial and non-residential parking facilities over a certain size and requires that a PTDM management plan be approved by a PTDM Planning Officer for any development

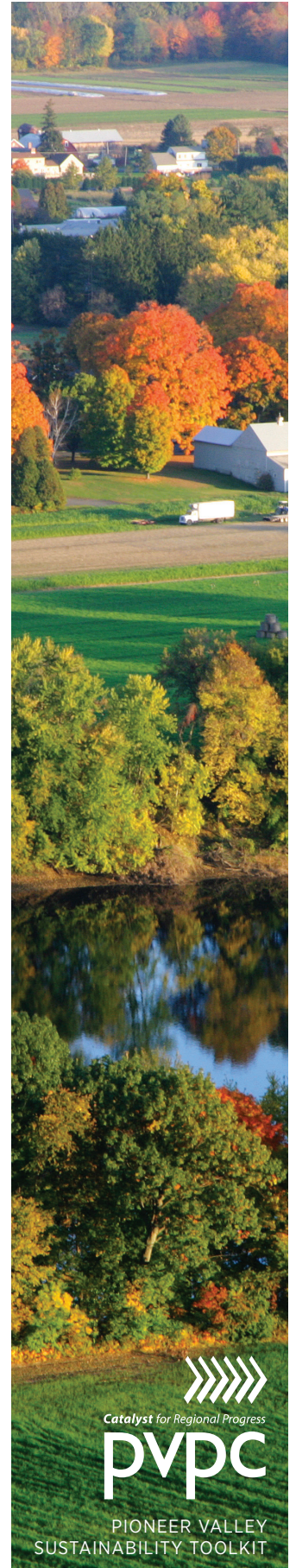


prior to receiving a permit or variance from the Planning Board. Cambridge's PTDM plan has been wildly successful in decreasing traffic congestion and increasing the use of bicycling and public transit. By reducing traffic impacts with trip reduction strategies, communities in the Pioneer Valley will remain and become more desirable places to live, work, visit, and do business.

How do trip reduction strategies work?

Communities can adopt a Trip Reduction Ordinance/Bylaw that establishes programs and requirements for new and existing employers and owners of employment complexes that will contribute to reductions in traffic and improvements in air quality from levels that would otherwise exist. Trip reduction measures consist of incentives or disincentives to reduce single-occupancy trips, or the rate of single occupancy vehicle miles traveled, such as:

- » A commuter matching service to facilitate ridesharing for commute trips
- » Providing of vans for vanpooling
- » Subsidies for carpooling or vanpooling including payment for fuel, insurance, or parking
- » Use of company vehicles for carpooling
- » Provision for preferential parking for carpool or vanpool users which may include close-in parking or covered parking facilities
- » Cooperation with other transportation providers to provide additional regular or express service buses to the work or school site
- » Subsidized bus fares
- » Construction of special loading and unloading facilities for transit, carpool, or vanpool users
- » Cooperation with a subdivision to construct walkways, or bicycle routes to the work site or school site
- » Provision of bicycle racks, lockers, and showers for employees who walk or bicycle to work or students who walk or bicycle to school
- » Establishment of a telecommuting program for employees
- » Establishment of a program of adjusted work hours which may include compressed work weeks or staggered work hours
- » Establishment of a program of parking incentives such as a rebate for employees or students who do not use the parking facility
- » Incentives to encourage employees to live closer to work or students to live closer to school
- » Provision of day care facilities
- » Emergency transportation services
- » Joining a Transportation Management Association



- » Incentives to encourage the use of certified vehicles for commute trips or, work-related trips
- » Establishment of a trip reduction committee to define new strategies and assist with the implementation of measures
- » Replace gasoline powered motor vehicles with electric golf-type carts or bicycles for traveling at the work site
- » Modify procedures to enable employees who normally commute for the sole purpose of picking up a company vehicle, to bring those vehicles home at the end of the work day to eliminate the commute trip.¹

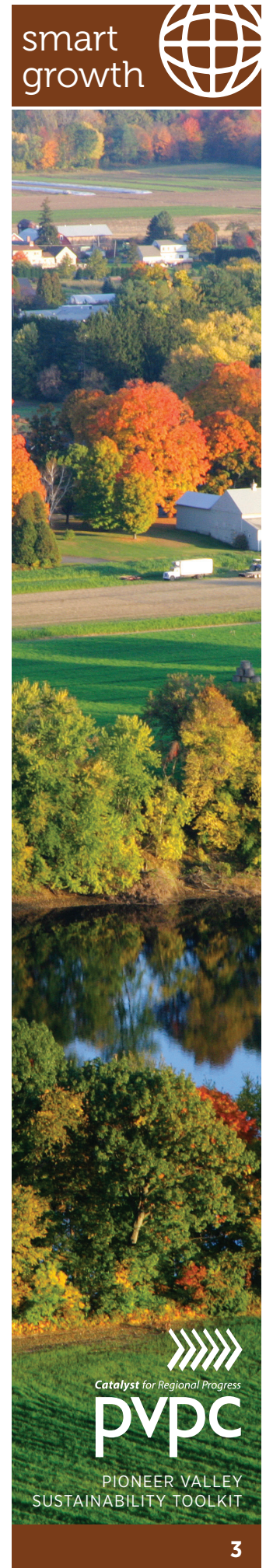
Alternatively, trip reduction measures may be incorporated into zoning bylaws as opposed to the creation of a separate Trip Reduction Ordinance. The Town of Hadley inserted trip reduction measures into their zoning bylaw for Commercial Site Plan Approval. The bylaw requires that any new building or new use of a building in excess of 10,000 square feet must submit a Trip Reduction Plan which clearly identifies a combination of transportation system management strategies designed to reduce anticipated vehicle trips by 35%. The Trip Reduction Plan includes measures such as vanpool/carpool incentive programs, on-site bicycle storage and locker facilities, and encouraging employee and customer use of transit services, amongst others. Additionally, the Planning Board may reduce minimum parking standards by a percentage for developments that make a long-term commitment to promoting employee and public use of transit, ridesharing, and other means of reducing single occupant vehicle trips.

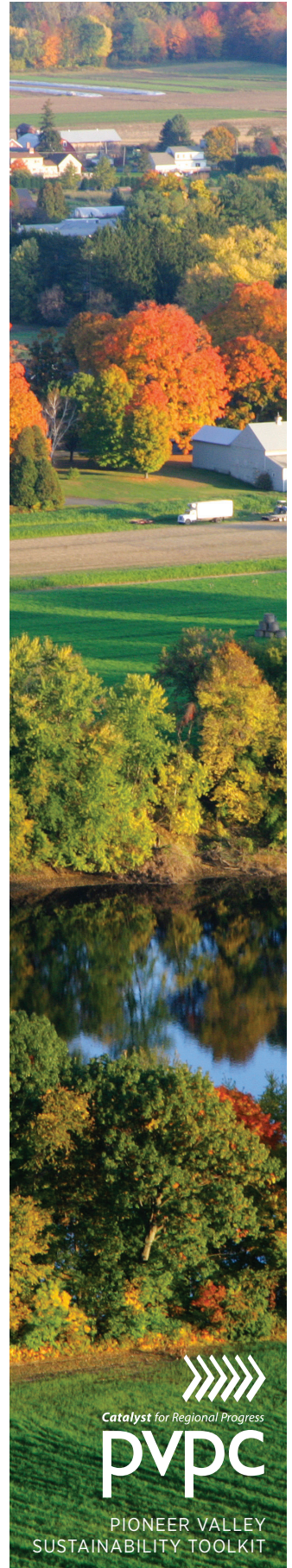
DID YOU KNOW...

That as of the year 2000, 79.3% of commuters in the Pioneer Valley drove alone to work. Only 9.1% carpool to work, 2.5% use public transportation, 0.3% bike to work, 5% walk to work, and 3.1% work from home (US Census, 2000)

EXAMPLES FROM THE PIONEER VALLEY

The Pioneer Valley has a number of facilities, organizations and programs to help people share rides, either on public transportation or by private autos. These include ride sharing and park and ride lots. Ride sharing is increasingly popular as more facilities and programs for it become available and the price of auto fuel fluctuates. There are several opportunities for ride sharing in the Pioneer Valley, one of the most notable is MassRides. MassRides is a private non-profit organization working with MassDOT. The MassRides Employer Partner Program helps businesses and their employees cut commuting costs, shorten travel times, and improve the quality of commutes. MassRides holds commuter events at a participating business's worksites to provide information to employees. Also, MassRides can help set up carpooling, vanpooling, preferential parking, transit, teleworking, flexible work hour programs, or other cost saving programs, such as pre-tax payroll deductions of transit costs. MassRides Partner Program participants currently include Westfield State College, Solutia, Mass Mutual, Holyoke Community College and PVPC.





Additional Examples

<http://www.cambridgema.gov/CDD/Transportation/fordevelopers/ptdm.aspx>

Northampton allows parking requirement reduction up to 20% for employee parking on major projects (350-8.6) through site plan review. Also requires a trip-reduction plan through Site Plan Review for “new commercial, office and industrial buildings or uses over 10,000 square feet.” (see details at 350-11.5(3)b Ayers MA has similar incentives, though the criteria are different, and the method of requiring the trip-reduction plan is different and the criteria for writing trip-reduction plan is even more vague than Northampton’s. (Ayers zoning 6.4.2c and 9.4b)

http://www.ayer.ma.us/pages/AyerMA_About/zoningbylaws/zbylaws

Easthampton also has similar, and again fits it into the bylaw in a slightly different way. Their mdescription of the trip-reduction plan is the best of the three. (zoning 10.511 and 10.524)

A model bylaw or strategy is included in the Pioneer Valley Sustainability Toolkit.

FOR MORE INFORMATION, PLEASE CONTACT

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SUSTAINABILITY TOOLKIT

Intergovernmental Compacts



The Chesterfield Gorge is located on the East Branch of the Westfield River. The Westfield River has been designated a National Wild and Scenic River thanks in part to the signing of the Westfield River Protection Memorandum of Agreement

What are the objectives of an intergovernmental compact?

An intergovernmental compact is a cooperative effort between local, state, and/or federal government entities that binds the parties involved through joint exercises of power to actively participate in carrying out an agreed upon activity. The problems addressed by compacts were initially used primarily to settle boundary disputes. Compacts are now being used in an ever-expanding number and variety of fields that are relevant to planning such as: energy conservation, mass transit, education, pollution control, law enforcement and corrections, natural hazards mitigation, land use and water resources, and a myriad of other applications.

Why do we need to encourage intergovernmental compacts in our community?

Intergovernmental cooperation allows for economies of scale, the provision of specialized services that would not otherwise be available to small governments, maximum utilization of certain types of capital-intensive facilities, and specialization among governments. Such cooperative efforts also avoid the unnecessary duplication of governmental services, inefficient distribution of resources or expertise, and the need to change basic governmental structure.

A variety of challenges that face the Pioneer Valley are regional in scope and thus require the collaboration of multiple actors and stakeholders in order to be effectively addressed. Intergovernmental compacts are legally binding agreements that ensure that



the services, activities or undertakings detailed in the compact will be attended to by all parties involved for the duration of the compact. By entering into an intergovernmental compact, the parties involved can be assured that each member will be held accountable by other members for upholding their respective roles.

How do intergovernmental compacts work?

Communities may decide that it is mutually beneficial to work together and develop an intergovernmental compact on any issue of significance to more than one community. Examples of compact topics can range from protecting regional natural resources, to managing growth and development, to shared municipal services such as health agents or emergency call services. Chapter 40, Section 4A of the Massachusetts General Laws provides authorization for intergovernmental compacts and establishes that intergovernmental compacts may be entered into by the chief executive officer of a city or town, or a board, committee or officer authorized by law to execute a contract in the name of a government unit with other governmental units. Typically, an intergovernmental compact is managed through membership by involved parties on a commission, board, or other entity formed to oversee the cooperative efforts. A ‘governmental unit’ consists of a city, town or a regional school district, a regional planning commission, a regional transit authority, a water and sewer commission, a county, or a state agency as defined under Massachusetts General Laws. A governmental unit in turn may raise money by any lawful means, including the incurring of debt for purposes which it may legally incur debt, to meet its obligations under the compact agreement. No governmental unit is exempt from liability for its obligations under an agreement lawfully entered into.

Intergovernmental compacts detail the responsibilities and duties of participating governmental units through a ‘memorandum of agreement’. Participating cities and towns, for instance, may agree to pursue strategies such as the adoption and enforcement of new zoning bylaws, or the use of community funds to acquire lands of conservation interest. A regional planning agency such as PVPC may be required to assist municipalities in meeting their responsibilities and to monitor their compliance. State and Federal agencies may in turn be required to enforce all applicable laws and regulations as it applies to the aims of the intergovernmental compact.

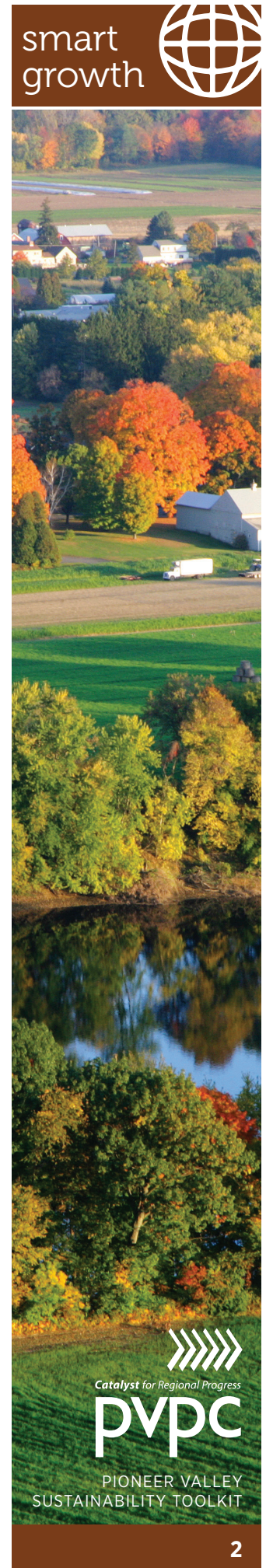
DID YOU KNOW...

That in 1990 six towns along the East Branch of the Westfield River, PVPC and the Westfield River Watershed Association signed a “Memorandum of Agreement” that was the first step leading to the Wild and Scenic River designation by the State.

EXAMPLES FROM THE PIONEER VALLEY

The Connecticut River Clean-up Committee (CRCC)

The Connecticut River Clean-up Committee (CRCC) is composed of representatives from four Massachusetts communities (Springfield, Chicopee, Holyoke, and Ludlow) and the Pioneer Valley Planning Commission (PVPC). Each of the municipal members are under EPA Administrative Orders to address the negative water quality impacts to the





The Connecticut River from atop Mt. Sugarloaf in South Deerfield. In 1993 the Connecticut River Clean-up Committee (CRCC) was formed by the signing of an intergovernmental compact

Connecticut River from combined sewer overflows (CSOs). CRCC was formed in 1993, with the signing of an intergovernmental compact between the communities and PVPC. The Committee is an action-oriented entity that explores funding sources and opportunities for intermunicipal cooperation on river cleanup. CRCC has been instrumental in leading efforts to secure federal funding for CSO control.

Over the past 20 years, the Connecticut River Clean-up Committee has made great strides in cleaning up the Connecticut River, with the support of our Massachusetts Congressional delegation. In fiscal years 1999 through 2010, CRCC worked to secure \$17.6 million in funding for clean-up of our rivers, including \$9.6 million in federal funds and \$8 million in matching local funds. CRCC has Using the CRCC as a vehicle, the members a high degree of inter-municipal collaboration has been achieved despite the absence of a metropolitan district commission. Key achievements of the regional collaboration as a whole include over one billion gallons/year in CSO discharges reduced, 18 miles of the Chicopee River and its tributaries have no CSOs, and the two largest CSOs on Connecticut River have been reduced by 415 million gallons per year.

Other intergovernmental compacts that have achieved success in the Pioneer Valley include the Barnes Aquifer Protection, Westfield River Protection, and Valley Vision Memorandums of Agreement.

A model bylaw or strategy is included in the Pioneer Valley Sustainability Toolkit.

FOR MORE INFORMATION, PLEASE CONTACT

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Accessory Apartments



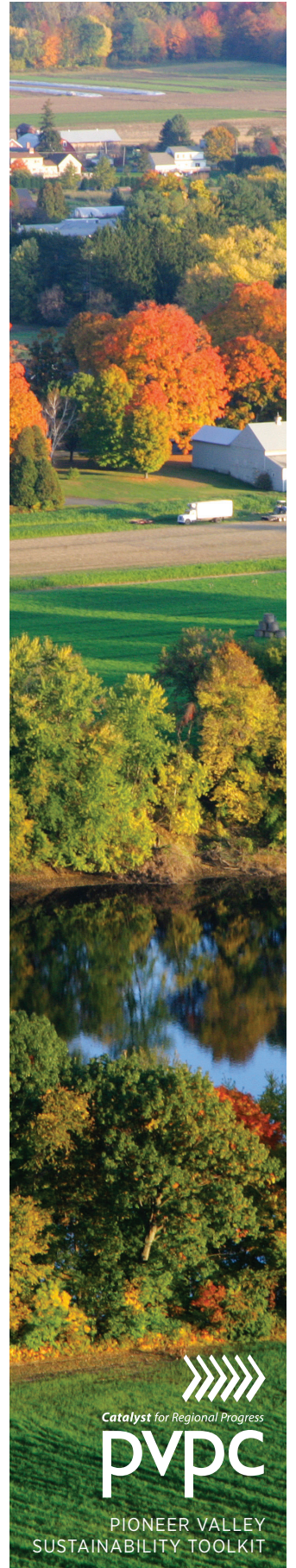
An accessory apartment over the garage in a single family house

What are the objectives of Accessory Dwelling Units?

To add rental units to the housing stock of a community, while protecting the residential character of a neighborhood or community. Accessory apartments can improve the affordability of housing for both homeowners and renters at all stages in their lives.

Why do we need Accessory Dwelling Units?

Rising housing costs in Massachusetts have made finding and staying in affordable housing difficult. For some homeowners, with limited incomes and rising real estate taxes, the income from an accessory apartment could mean the difference between being able to afford to stay in the community and having to move away. These apartments can also allow families to provide support to another family member such as a young adult or grandmother who can live independently close to the family home. Accessory units help to maximize use of existing public infrastructure and services since they are created on already developed sites. They can help reduce development pressure on “greenfield” sites like farmland and wooded sites..



How do Accessory Dwelling Units work?

Accessory dwelling units (also known as accessory apartments, granny flats, guest apartments, in-law apartments, family apartments or secondary units) provide supplementary housing that can be integrated into existing single family neighborhoods to provide a typically lower priced housing alternative with little or no negative impact on the character of the neighborhood. Because the units are usually small, they are more affordable than full-size rentals. Accessory dwelling units can be permitted and regulated through the adoption of zoning provisions.



Example of a detached accessory dwelling unit in Northampton, MA. Source: Dillon Sussman

EXAMPLES FROM THE PIONEER VALLEY

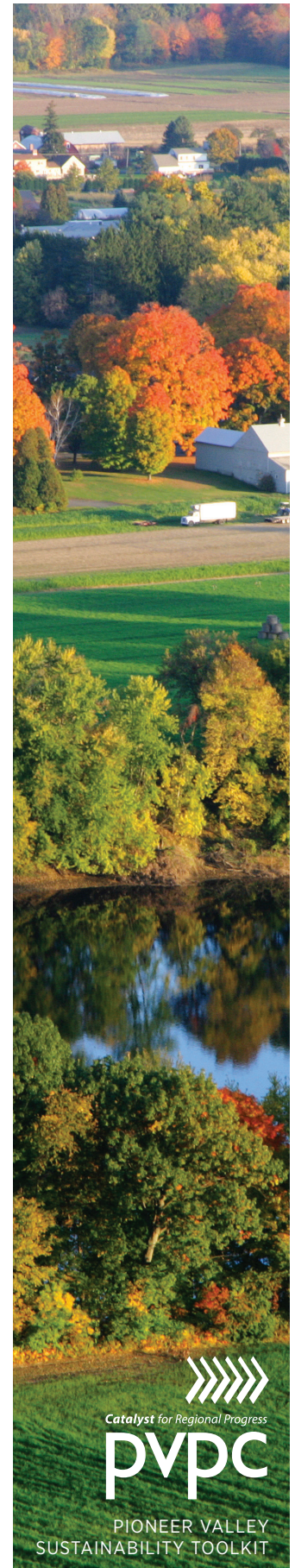
As of August 2007, there are 18 communities in the Pioneer Valley that have adopted Accessory Apartment Bylaws. Most of the communities in the region permit accessory apartments to be built within a single family home. These units are typically called “attached” accessory apartments, in that the new dwelling is incorporated within a single family dwelling, and therefore attached to the primary residence. Communities often encourage accessory apartments to be developed in this manner to ensure these new units blend within the existing neighborhood.

DID YOU KNOW...

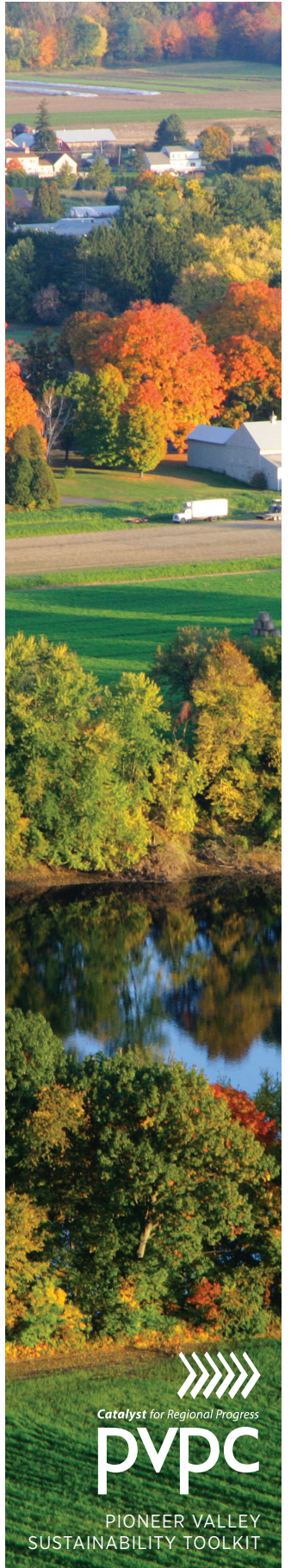
There are three different types of Accessory Dwelling Units...

1. Interior – using an interior part of a dwelling.
2. Interior with modifications – the outside of the dwelling is modified to accommodate a separate unit. Also called “attached” accessory apartments.
3. Detached – a structure on a residential lot that is a separate from the main dwelling, yet by definition still “accessory” to the main unit.

The Town of Plainfield, however, recently amended its Accessory Apartment bylaw to allow accessory apartments to also be built within detached accessory buildings, such as a barn or detached garage. In Plainfield, the development standards for accessory



apartments are the same for both attached and detached apartments. The accessory apartments must be clearly subordinate to the primary structure, with the new unit being no larger than 1/3 of the existing primary, residential structure. By allowing residents the opportunity to build accessory apartments in these existing detached structures, the town has increased the possibility of the creation of affordable rental units to the existing housing stock, without significantly changing the character of the community.



Communities that have adopted an Accessory Apartment Bylaw

Amherst / Chester / Chesterfield / Easthampton / Granville / Huntington / Ludlow / Monson / Montgomery / Northampton / Palmer / Pelham / Plainfield / Ware / Westfield / Wilbraham / Williamsburg / Worthington

For more information on examples of Accessory Units from across Massachusetts, please refer to the state's **Smart Growth / Smart Energy Toolkit** developed by the Executive Office of Energy and Environmental Affairs.

A model bylaw or strategy is included in the **Pioneer Valley Sustainability Toolkit**.

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Agricultural Commissions

What are the objectives of an Agricultural Commission?

To create programs to protect prime farmlands, and incentives to encourage the growth and development of farm-related businesses.

Why do we need an Agricultural Commission?

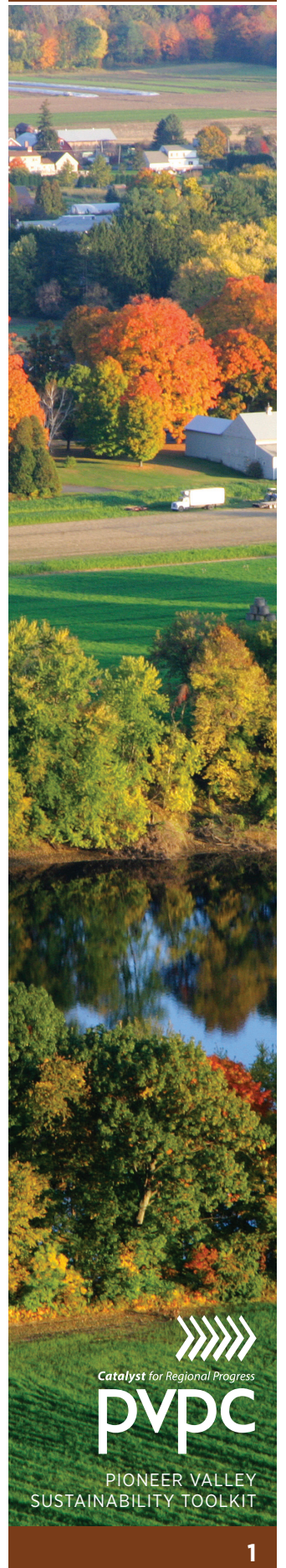
The incremental loss of farmlands and agricultural heritage is one of the major issues facing the Pioneer Valley region. Suburban sprawl is consuming acres of farmland and open space. The American Farmland Trust listed the Connecticut River Valley as one of the twenty “most endangered agricultural regions in the United States”. The protection and maintenance of farmlands in agricultural use is important in maintaining the region’s ties to its farming history, preserving open space and promoting smart growth.

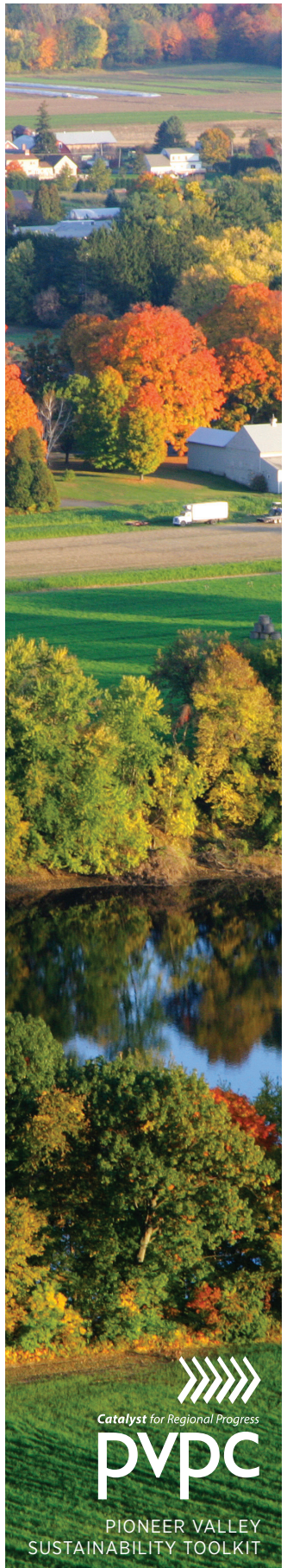


Tobacco Fields in Hadley

What does an Agricultural Commission do?

An Agricultural Commission is an appointed town standing committee, usually comprised of farmers, that provides a voice for the agricultural community and improves the visibility of farming in the community. Agricultural commission can tackle a whole variety of tasks, depending on the community. Here in the Pioneer Valley, Ag Commissions have sponsored Right-to-Farm bylaws, inventoried and identified agricultural properties in the community, created guides and brochures for community farms, researched information and educational resources for farmer, and have hosted community agricultural events. Ag Commissions can also advocate at the local and state level for zoning and regulatory changes that benefit existing and future farming, and work with other town boards and committees, such as the Planning Board, to ensure that the community actively retains agricultural and forest land and agricultural businesses.





DID YOU KNOW...

The Pioneer Valley Planning Commission can assist your local Agricultural Commission in developing an inventory of existing farms in your community as well as develop a map with Chapter 61A lands, agricultural lands, prime agricultural soils, and parcel data (if available).

EXAMPLES FROM THE PIONEER VALLEY

Town of Hatfield Agricultural Commission

The Town of Hatfield adopted their Agricultural Advisory Committee (ACC) in 2001 and has been extremely active in promoting agricultural activities in their community. In its first year, the ACC sponsored two educational seminars on farm support and farmland protection efforts, one for town officials and another for farm and forest land owners. The ACC also researched and assisted in the implementation of agricultural water rates for farm operations in town.

Other notable activities include a brochure developed by the ACC entitled “Hatfield Farms,” which highlights farms and farm stands throughout town with product and sales information for each, including a map locating each establishment. Over 2,500 copies of the brochure were distributed at Town Meeting in 2004, with an update brochure distributed in 2005.

Communities that have established Agricultural Commissions

Amherst / Belchertown / Blandford / Chester / Chesterfield / Cummington / Granby / Granville / Hadley / Hatfield / Ludlow / Middlefield / Monson / Montgomery / Northampton / Plainfield / Southampton / Southwick / Westhampton / Wilbraham / Williamsburg

Finally, in 2005, with seed money from the Massachusetts Cultural Council, the Hatfield ACC commissioned a mural with the town’s high school art program depicting farm scenes, activities and farmers in town. The mural was then displayed on a barn in a prominent location in town, then moved to the town’s farm museum for the winter. Due to the large success of the first mural, a second mural was recently completed and third mural will be completed next year. The town plans to display the three murals each spring.

For more information on Agricultural Commissions, and to access a copy of the “Agricultural Commission Handbook,” please visit the [Massachusetts Department of Agricultural Resources website](#).

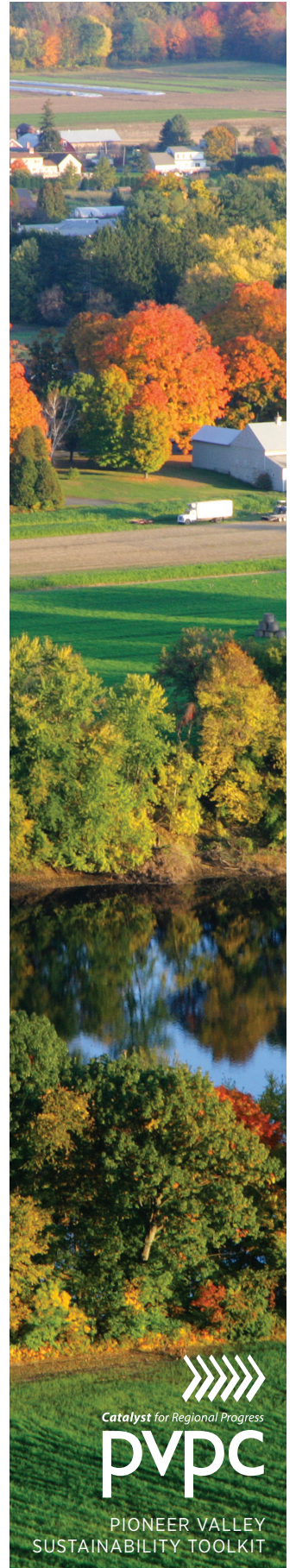
A model bylaw or strategy is included in the Pioneer Valley Sustainability Toolkit.

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Chapter 40R – Smart Growth Districts



Former Holyoke Catholic High School

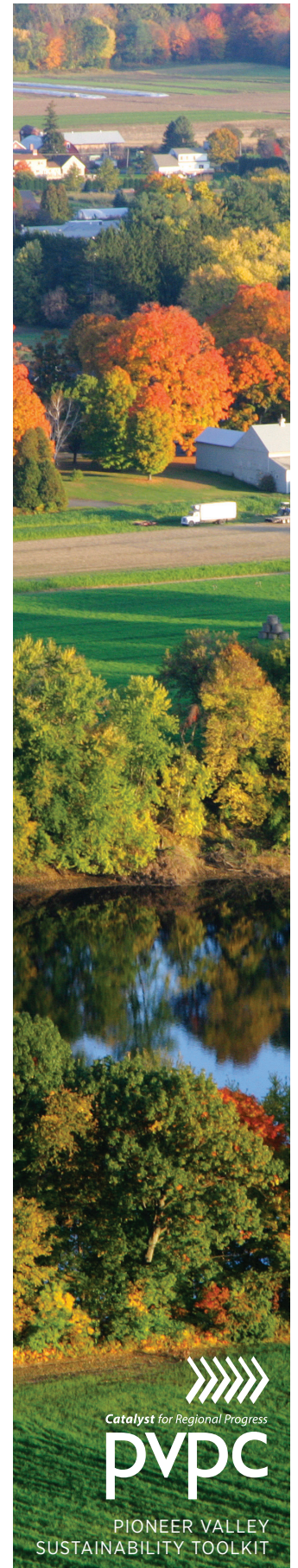
What is a Smart Growth District?

This is a district in which the community has decided it would like to encourage housing and mixed use (residential and office or retail uses together in one area). Usually these districts are located in or near town centers and help to maintain the character of the community's 'downtown'. At least 20% of the housing units created in this district will have to be affordable to families who make approximately \$50,000 per household annually.

Why do we need Smart Growth Districts?

Well-designed residential, commercial and mixed use development can be a valuable addition to a community's tax base, a source of jobs, and an attractive component of the character of the community center(s). Adopting a Smart Growth Zoning District can:

- » Create a range of housing and transportation options for residents;
- » Foster a sense of place by encouraging distinctive and attractive neighborhoods & centers;
- » Take advantage of the quality of life improvements that can be gained by mixing housing, commercial activities, access to open space, and transportation options;
- » Preserve farmland and critical environmental areas by directing growth to areas with existing infrastructure; and
- » Earn the community priority for state funding programs that are part of the state's Commonwealth Capital program.



Also, the municipality will be eligible for an incentive payment of between \$10,000 and \$600,000 depending on the number of new units that this district allows. These funds are unrestricted and may be used to meet the community's needs.

How does this strategy work?

In its zoning ordinance or bylaw, a municipality may adopt a smart growth zoning overlay district in an eligible location, as defined by the Chapter 40R enabling legislation. Within this district, a city or town shall zone for primary residential use as of right and may also permit business, commercial or other uses by right or by limited site plan review. The minimum density requirements within a Smart Growth District are 8 units/acre for single family homes, 12 units/acre for two and three family homes, and 20 units/acre for multifamily units. The community also develops design standards for this district to assure that the required density is achieved in a way that preserves and reflects the existing character in the town's district.

DID YOU KNOW...

Chapter 40S is additional state funding that is directed to cities and towns that establish a 40R district, to cover the costs of educating any school-age children who move into such districts. This legislation was in response to the common concern that new housing was costly in terms of municipal finances, given the imbalance of tax revenues and service costs. Qualifying communities will be reimbursed for the net cost of educating students living in new housing in smart growth districts.

EXAMPLES FROM THE PIONEER VALLEY

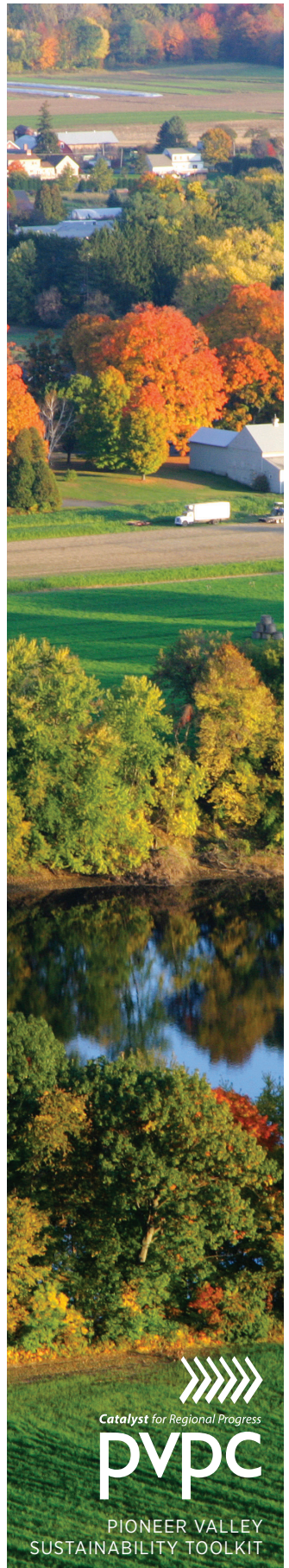
Sub-regional Smart Growth Zoning Districts Approach

Easthampton, Holyoke and Westfield applied together and were awarded Priority Development Funds to create Smart Growth Zoning Districts and are working with Pioneer Valley Planning Commission staff to achieve this.

Communities in Massachusetts that have adopted a Smart Growth District

Amesbury / Chelsea / Dartmouth / Haverhill / Lakeville / Lunenburg / North Reading / Norwood

In the first stage of the process, areas that could be eligible for smart growth districts were mapped based on the 40R eligibility criteria and draft smart growth overlay ordinances and design standards are being developed. In the next stage of the process an advisory committee from each community will review the potential smart growth district maps and draft bylaw for their city. There will be a public outreach effort in all three communities prior to the adoption of a 40R Smart Growth District or the submission of a 40R application to the Department of Housing and Community Development.



As part of the 40R application to DHCD, housing needs assessments are being completed and/or updated and community housing goals and strategies are being developed.



8 Units Per Acre



12 Units Per Acre



20 Units Per Acre



Source: Massachusetts Smart Growth Toolkit

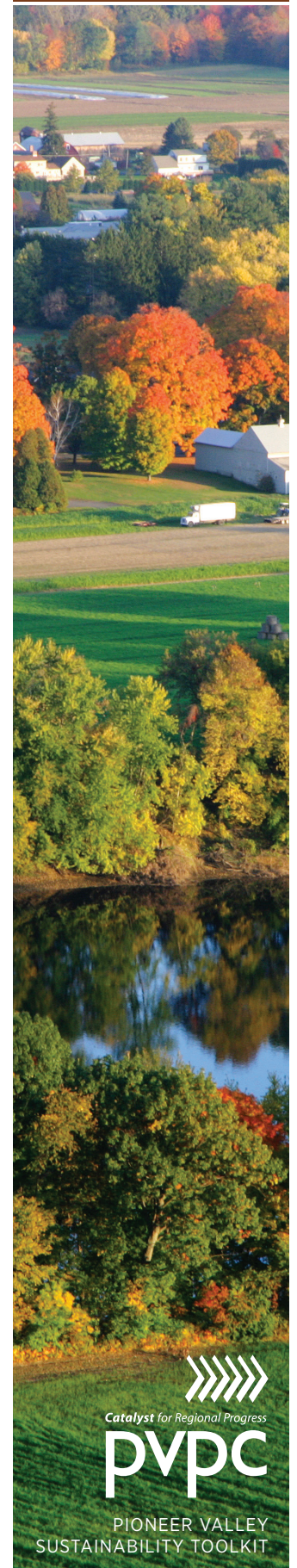
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Commercial/ Industrial Development Performance Standards

What are the objectives of commercial/industrial performance standards?

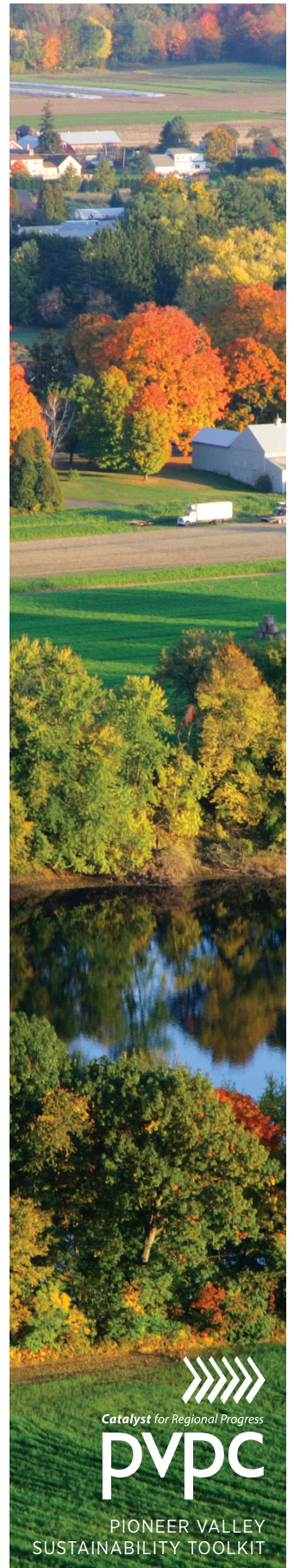
To control potential adverse impacts of new commercial or industrial development on traffic safety, existing residential neighborhoods, community character and the environment.

Why do we need commercial / industrial performance standards?

Uncontrolled commercial or industrial development can create traffic congestion problems on local roads and traffic safety hazards due to poor access layout or inadequate parking. Community character and adjacent property values can be degraded by poor design, lack of landscaping, uncontrolled signage or lighting. Environmental degradation, such as water pollution by toxic chemicals, soil erosion and flooding due to uncontrolled stormwater runoff can also occur without proper controls.



Downtown Palmer



Commercial and industrial performance standards establish specific standards in several categories. These are essentially “good neighbor” standards because they minimize adverse impacts on surrounding properties and the community. Standards for “access and traffic impacts” are designed to minimize traffic and safety impacts on highways and roads by minimizing curb cuts, encouraging shared access, requiring all driveways to have safe sight distances for exiting motorists, and providing sidewalks and safe internal circulation plans. Parking standards encourage parking areas located to the rear or side of buildings, and shared parking areas between businesses. Landscaping standards require a landscaped buffer strip along all public road frontage, landscaped islands in large parking lots, and screening of storage, machinery or service areas. Appearance and architectural design standards require that commercial and industrial building designs be compatible with the rural and historic character and scale of existing buildings in the neighborhood and the community. Stormwater runoff and erosion control standards ensure that runoff from commercial and industrial properties will not result in water pollution or flooding. Water quality standards are established for outdoor storage of hazardous materials. Lighting standards limit the height of light poles and require shielding of outdoor light fixtures to reduce light pollution.

DID YOU KNOW...

With conventional suburban parking ratios of five spaces per 1,000 square feet of building space, at least 50% more square footage will be devoted to parking that to space under roof. (Making Smart Growth Work, Urban Land Institute, 2002)

A model bylaw or strategy is included in the Pioneer Valley Sustainability Toolkit.

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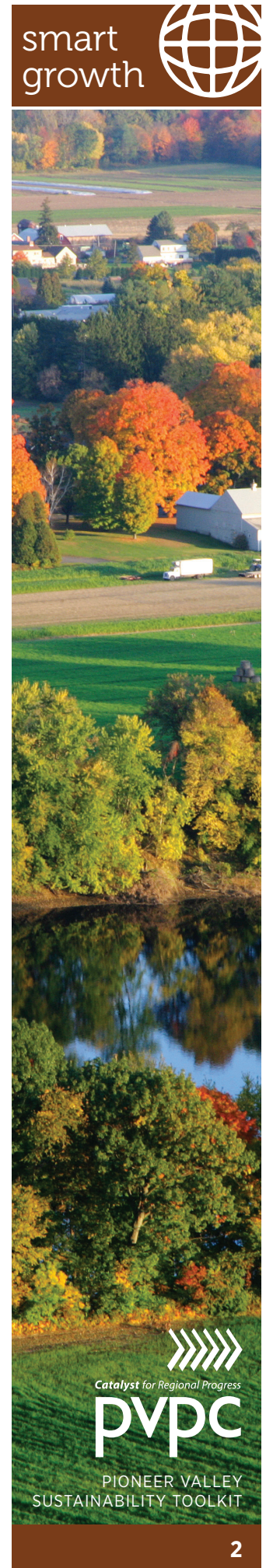
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The Community Preservation Act



CPA funds were used for the protection of Echodale Farm in Easthampton. Photo courtesy of the Easthampton Master Plan Committee

What are the objectives of the Community Preservation Act?

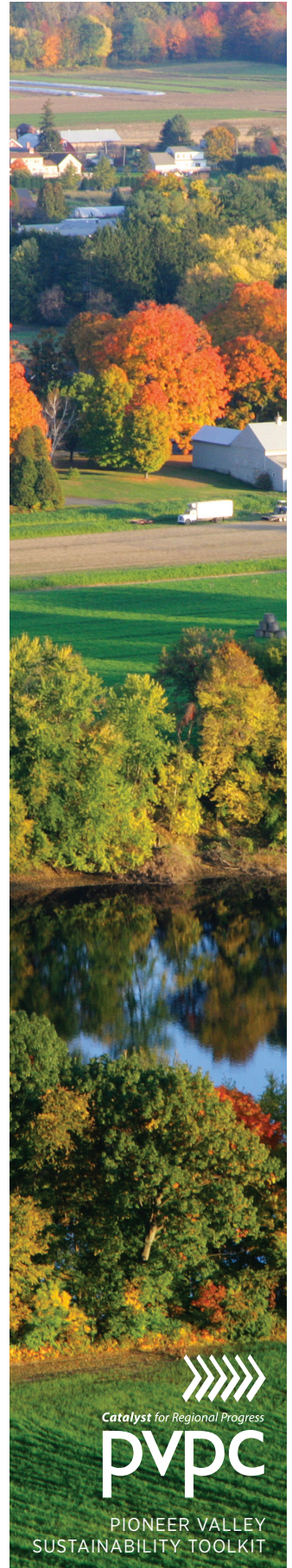
To help communities preserve open space and historic sites, and create affordable housing and recreational facilities through a reliable funding source.

Why should we adopt the Community Preservation Act?

Adopted in 2000, the Massachusetts Community Preservation Act (CPA) is a critical tool to enable communities to protect open space, protect historic resources, and provide affordable housing for low and moderate income individuals and families, including low or moderate income senior housing. The CPA has been heralded by the Trust for Public Land and other organizations, as one of the most important environmental protection tools in the country.

How does the Community Preservation Act work?

The Community Preservation Act (CPA) enables communities to establish, through a ballot referendum, a local Community Preservation Fund dedicated to historic preservation, low and moderate income housing, and open space including active and passive recreational uses. Revenue for the fund is generated through a surcharge of 0.1 to 3% of the local property tax. While local adoption of the Act is optional, the Commonwealth is providing, as an adoption incentive, state matching funds totaling approximately \$26 million annually. This funding incentive will match up to 100% of the money raised annually by a community through its surcharge.



Passage of the Act on the community level is a two step process. First, a community must place the CPA on the ballot by obtaining approval of Town Meeting or City Council. Alternatively, a petition of 5% of registered voters can place the CPA on the ballot. Second, once on the ballot, a majority of voters is required to make the CPA law. The CPA is designed to maximize spending flexibility to enable each community to meet its unique needs. A minimum of 10% of annual funds must be spent for each category of historic preservation, affordable housing, and open space. The remaining 70% of funds may be spent in any category. A community may reserve funds to be spent in later years. Additionally, funds may not be used to supplant existing operating funds already dedicated to similar purposes.

DID YOU KNOW...

In 2006, the state distributed \$58.6 million to 102 communities in matching funds. Since 2002, the state has distributed a total of \$180.6 million.

EXAMPLES FROM THE PIONEER VALLEY

City of Easthampton

The City of Easthampton adopted the CPA in 2001, at a 3% surcharge and an exemption for the first \$100,000 of the assessed value of a residential home. Since 2001, the city has spent a total of \$1.5 million dollars on fourteen (14) projects using local and state match CPA funds, on historic preservation projects, affordable housing, open space protection, and recreation.

Communities that have adopted the Community Preservation Act

Agawam / Amherst / Belchertown / East Longmeadow / Easthampton / Goshen / Hadley / Hampden / Hatfield / Longmeadow / Monson / Northampton / Southampton / Southwick / Westfield / Wilbraham

The greatest percentage of funds (66%) have been used for open space protection, particularly the acquisition of Echodale Farm, a 164 acres of pristine farmland and open space within the Park Hill region of the city. The Echodale Farm acquisition utilized \$650,000 in CPA funds to match APR and private donations. The CPA also provided \$300,000 in funds for dredging of Nashawannuck Pond, a mill pond located within the center of the city. The city is making great efforts to revitalize this water body and restore environmental quality to the pond.

The CPA has also funded in Easthampton:

- » Five historic preservation projects, including the repairs and improvements to many historic structures throughout the city. (\$244,000)
- » Three recreation projects, including restoration of ball fields and the creation of Lower Mill Pond Park. (\$152,130)
- » Three affordable housing projects. (\$120,000)

Project recommendations are made by the Community Preservation Committee to City Council. The committee is nine members as established by local ordinance. The six core committees represented are the Planning Board, Conservation Commission, Parks and Recreation Commission, Housing Authority, City Council Finance Committee, and Historic Commission. The remaining members are appointed by the City Council President, and Mayor. Final appropriations are made by the City Council.

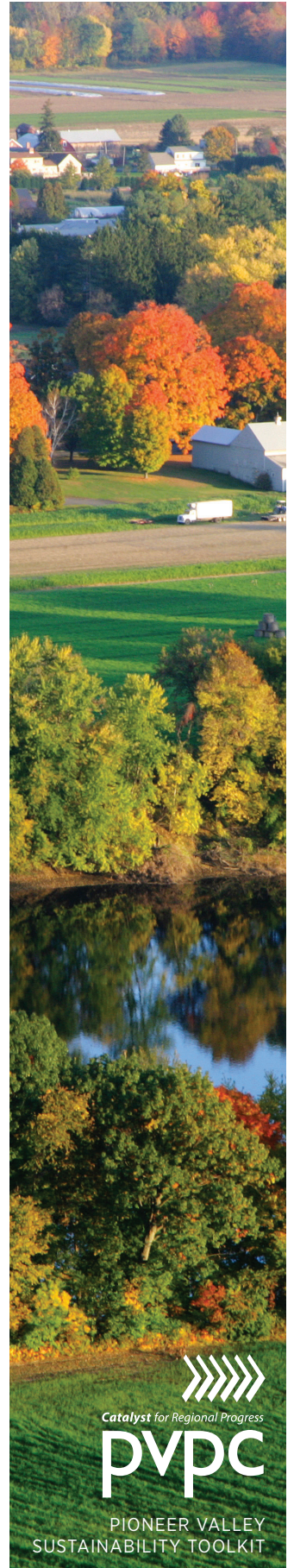
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EXAMPLES FROM THE PIONEER VALLEY

City of Easthampton

The City of Easthampton adopted the CPA in 2001, at a 3% surcharge and an exemption for the first \$100,000 of the assessed value of a residential home. Since 2001, the city has spent a total of \$1.5 million dollars on fourteen (14) projects using local and state match CPA funds, on historic preservation projects, affordable housing, open space protection, and recreation.

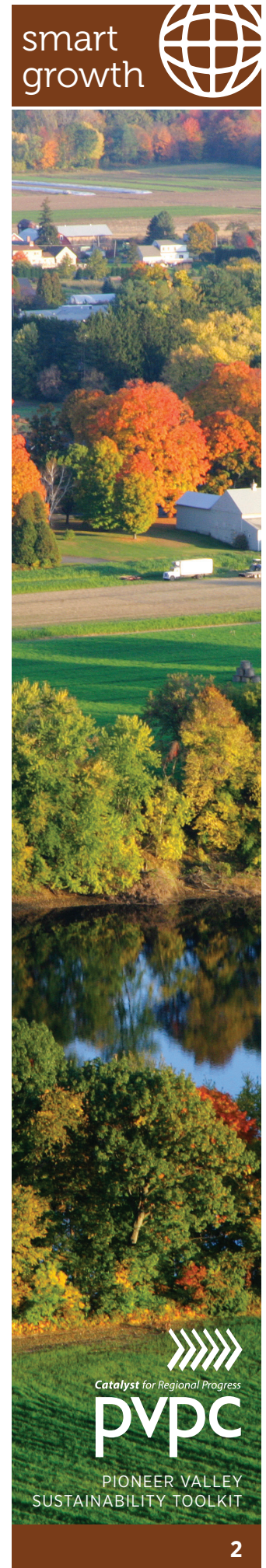
Communities that have adopted the Community Preservation Act

Agawam / Amherst / Belchertown / East Longmeadow / Easthampton / Goshen / Hadley / Hampden / Hatfield / Longmeadow / Monson / Northampton / Southampton / Southwick / Westfield / Wilbraham

The greatest percentage of funds (66%) have been used for open space protection, particularly the acquisition of Echodale Farm, a 164 acres of pristine farmland and open space within the Park Hill region of the city. The Echodale Farm acquisition utilized \$650,000 in CPA funds to match APR and private donations. The CPA also provided \$300,000 in funds for dredging of Nashawannuck Pond, a mill pond located within the center of the city. The city is making great efforts to revitalize this water body and restore environmental quality to the pond.

The CPA has also funded in Easthampton:

- » Five historic preservation projects, including the repairs and improvements to many historic structures throughout the city. (\$244,000)
- » Three recreation projects, including restoration of ball fields and the creation of Lower Mill Pond Park. (\$152,130)
- » Three affordable housing projects. (\$120,000)



Project recommendations are made by the Community Preservation Committee to City Council. The committee is nine members as established by local ordinance. The six core committees represented are the Planning Board, Conservation Commission, Parks and Recreation Commission, Housing Authority, City Council Finance Committee, and Historic Commission. The remaining members are appointed by the City Council President, and Mayor. Final appropriations are made by the City Council.

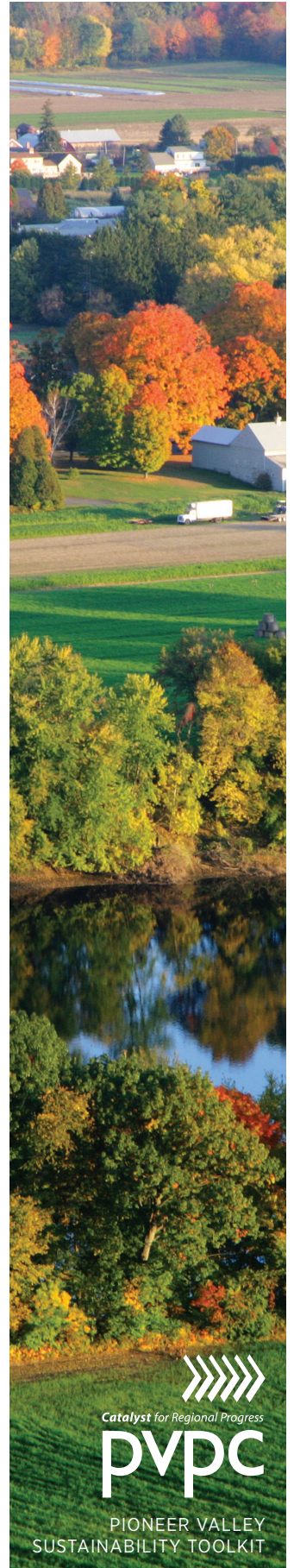
A model bylaw or strategy is included in the Pioneer Valley Sustainability Toolkit.

FOR MORE INFORMATION, PLEASE CONTACT

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Commercial Site Plan Review



King Street, Northampton

What are the objectives of site plan review?

To promote standards for new business development and advance the appearance, traffic conditions, shopping atmosphere and opportunities in pertinent zoning districts.

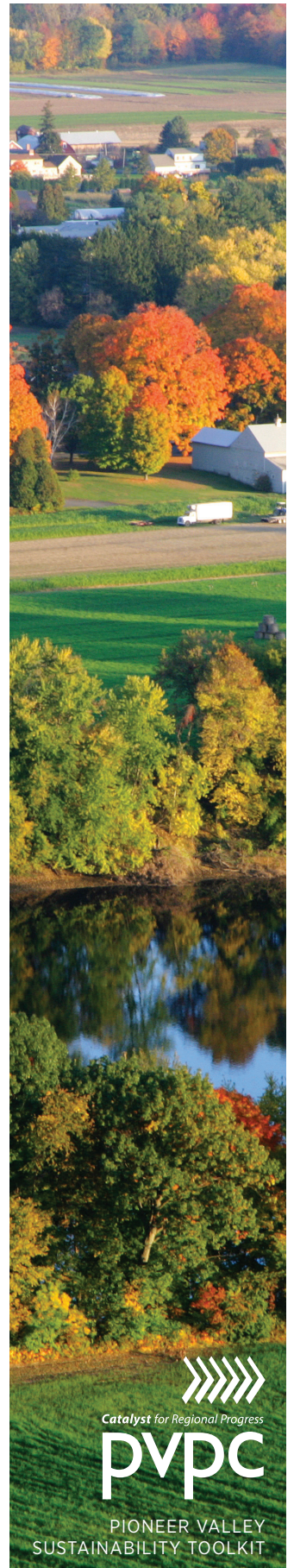
Why do we need commercial site plan review?

Commercial and industrial growth is important for any community's tax base and can benefit the community by providing needed jobs and services. However, without proper local review, large-scale projects such as shopping centers or industrial parks can have significant impacts on traffic, neighboring properties and community character. To prepare for the new forms of development anticipated today and beyond, communities need a site plan approval process for commercial and industrial uses.

How does commercial site plan review work?

To streamline the process, Site Plan Approval is usually undertaken simultaneously with the Special Permit review process. In general, the types of projects which require site plan approval include retail services, wholesale, transportation and industrial uses, community facilities, commercial earth removal operations, and multi-family residential uses. Other more simple projects usually require only administrative site plan review. Depending on the use, the Special Permit Granting Authority may be the Planning Board, Zoning Board of Appeals, or Board of Selectmen.

A site plan approval bylaw/ordinance sets forth specific procedures for application, review and approval of both Special Permits and Special Permits with Site Plan Approval. Such regulations include a description of the necessary application contents for basic Special



Permits and for Special Permits with Site Plan Approval. The procedures are described for review by municipal boards and for joint public hearings on both the Special Permit and Site Plan Approval, where necessary. Detailed criteria are established for evaluating site plans and special permits in order to ensure a fair and objective review process. The Special Permit Granting Authority's final action on a site plan may be to either approve, approve with modifications, or deny the application. After approval of the site plan, the Special Permit Granting Authority then takes action on the Special Permit.

DID YOU KNOW...

Special Permit with Site Plan Review: This is a clearly designated Special Permit Process that follows all requirements for public hearing and application review timeframes

Site Plan Review: This is an administrative review process only, not a Special Permit process, and applies to certain uses permitted as a matter of right.

EXAMPLES FROM THE PIONEER VALLEY



Hadley Commercial Strip Standards

In the mid-1980s, commercial development along the Route 9 corridor in Hadley began to accelerate at an alarming rate. The Town of Hadley recognized that unmanaged growth along the corridor would have detrimental results on the scenic, rural, and historic character of the town. In 1989, the town adopted the Commercial Site Plan Approval Standards that would help Hadley control development along this commercial corridor. The purpose of these standards is to discourage unlimited commercial strip development by promoting compatible architectural design and safe traffic guidelines in order to protect the rural character of Hadley. These standards require site plan review for any new or expansion of commercial developments with the Business, Limited Business and Industrial zoning districts. In order to receive site plan approval, all commercial projects within these zones must comply with a series of performance standards developed by the planning board. The Hadley bylaws also include trip reduction requirements and traffic impact statement requirements for large developments.

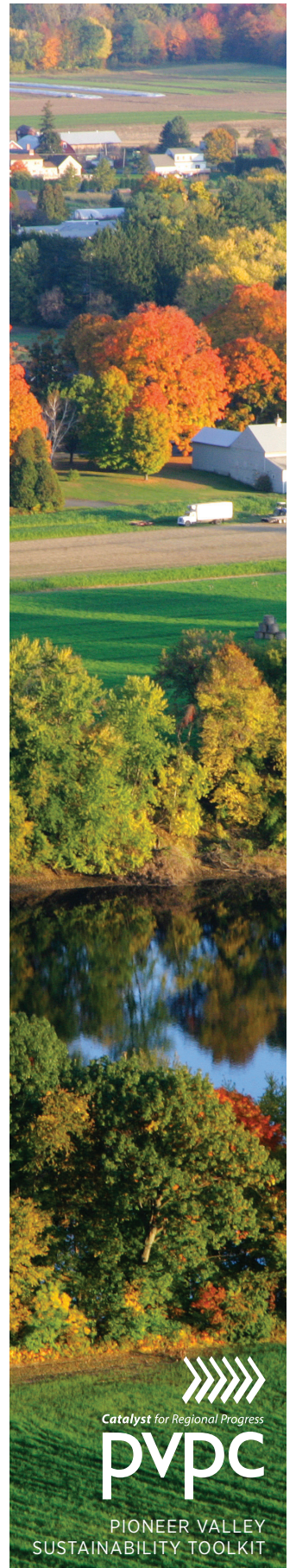
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Catalyst for Regional Progress

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PIONEER VALLEY
SUSTAINABILITY TOOLKIT

Comprehensive Zoning Overhaul



ANR development in the Valley

What are the objectives of a comprehensive zoning overhaul?

To encourage and support reform at the local level of outdated and inefficient zoning regulations that promote sprawl to more efficient growth patterns.

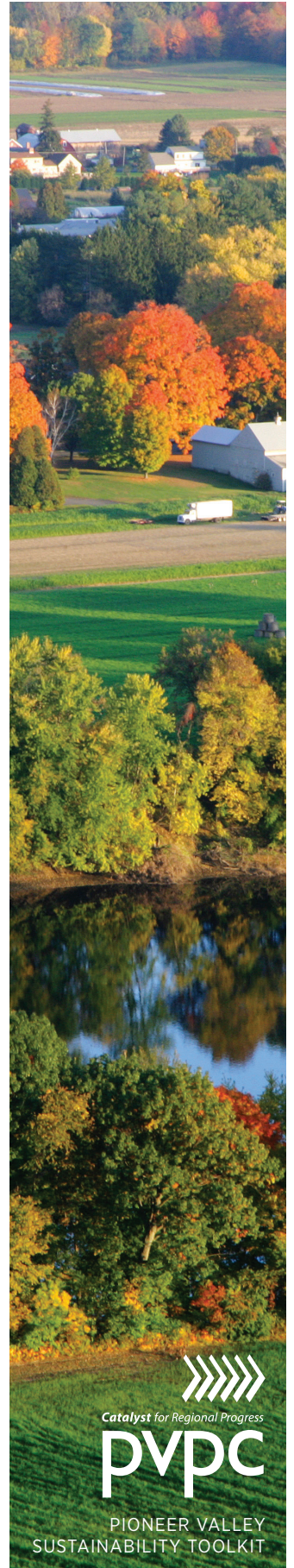
Why do we need comprehensive zoning overhaul?

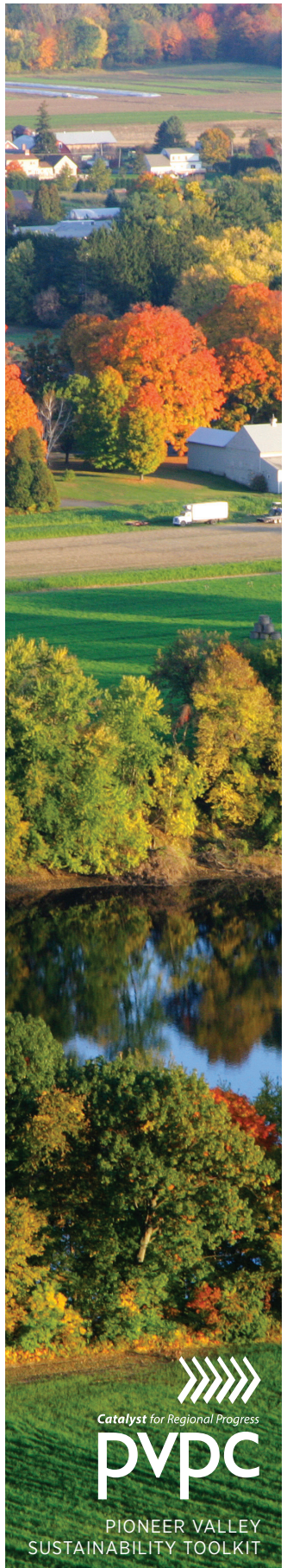
Antiquated local zoning laws that prescribe sprawl as the preferred development pattern should be updated to promote more efficient growth patterns. While the responsibility for land use planning and regulation rests with each of Massachusetts' 351 cities and towns, the authority to do so effectively is often undermined by the state's out-dated and unduly limiting Zoning Act.

What steps can communities take to complete a comprehensive zoning overhaul and update?

One tool that communities can use to ensure that their zoning regulations are consistent with current state law and to encourage or require Smart Growth strategies is called a Comprehensive Zoning Overhaul and Update. A Comprehensive Zoning Overhaul and Update is a critical review of a community's existing land use regulations relative to internal consistency, consistency with state law, and Smart Growth. Such reviews provide recommendations to help the community achieve three important objectives with its zoning bylaw/ordinance:

1. Bring the zoning bylaw/ordinance into compliance with current state law, Chapter 40A of the Massachusetts General Laws.





2. Identify and correct errors, omissions and unclear language in the zoning bylaw/ordinance.
3. Develop and refine regulations that allow for locally-appropriate development within the community while preventing adverse impacts to natural areas, neighborhoods and to citizen safety.

DID YOU KNOW...

New development in the Pioneer Valley is primarily residential, despite the fact that the population has remained stable over the past 30 years. Between 1971 and 1999, over 30,000 acres were converted to residential development, mostly in the form of “ANRs” or Approval Not Required development.

EXAMPLES FROM THE PIONEER VALLEY

Smart Growth Technical Assistance Grant Program

The Commonwealth of Massachusetts provided the Pioneer Valley Planning Commission with grant funds to review the zoning bylaws and zoning ordinances for several communities in Hampshire and Hampden Counties. Land Use staff at PVPC used their expertise in deciphering land use regulations and applied it to the review of these zoning documents with the intent of finding any inconsistencies within the documents, reformatting tables of use regulations to promote sustainable land use, and flagging those sections that were not consistent with Massachusetts General Law 40A, also known as the Zoning Act. This process involved drafting a brief history of a given community’s zoning efforts, identifying areas of concern in either the table of uses or the zoning regulations, recommending policies for improving a given community’s zoning regulations, and flagging any portions of a given community’s zoning regulations that might be inconsistent with the Zoning Act.

The staff at PVPC endeavored to make sure that common concerns, such as floodplain regulations and water supply district protection areas, were addressed adequately within a community’s zoning regulations. Staff also took the opportunity to include recommendations on how to promote smart growth within Hampshire and Hampden Counties. Many of these recommendations resulted in communities allowing open space residential developments by right, adopting mixed-use district regulations, adopting infill development guidelines, and decreasing lot sizes in appropriate areas.

A model bylaw or strategy is included in the Pioneer Valley Sustainability Toolkit.

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Conservation Development



What are the objectives of Conservation Development?

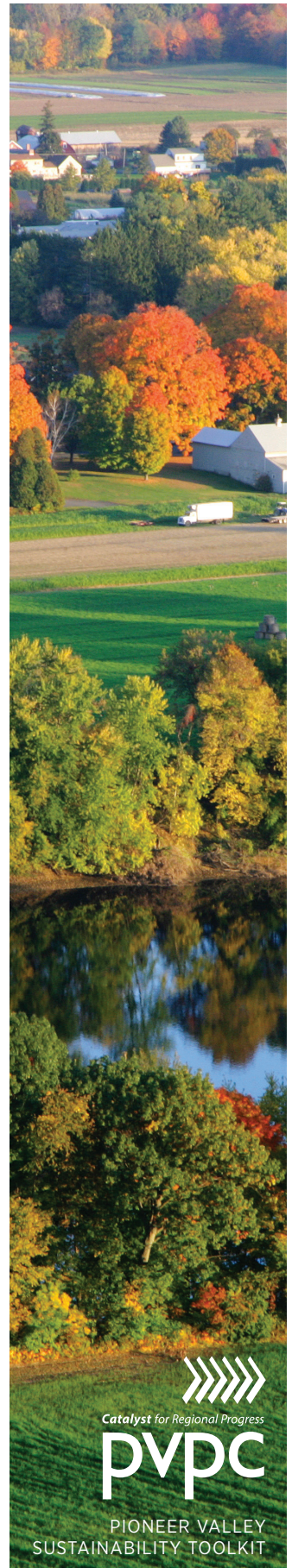
Conservation Developments are compact residential developments that use flexible dimensional standards in order to preserve and enhance rural town character, protect open space, natural resources, and scenic areas, as well as promote the use of sustainable and energy efficient development standards .

Why do we need Conservation Developments?

Growth in many of our small cities and towns is a result of residential development, primarily Approval Not Required (ANR) developments. ANR developments need only an endorsement from a town's planning board that the proposed residential parcel meets the town's frontage requirements along a public way. This type of development has changed the rural character in many of our communities and is the greatest contributor to sprawl development in the region. Conservation Developments are a flexible way for ANRs to consider the rural character of the community and promote green energy sources in residential development

How does Conservation Development bylaw work?

Conservation Development bylaws allow applicants to use common driveways and flexible area and frontage requirements to create permanent open space and avoid standard Approval Not Required and subdivision development. Conservation Developments are allowed by-right with a Site Plan Approval process. Through this approval process, towns work with the applicant to consider development standards such as Stormwater Management, Low Impact Development, Green Energy and Open Space Connectivity. A portion of the development must also be set aside as permanently protected open space.



Conservation Developments allow applicants flexibility in designing the layout of the lots. The bylaw does not require a minimum lot size or minimum frontage requirement, but allows the applicant to consider the designing the development around the unique characteristics of the land. The number of buildable lots is determined by setting an average size lot size for the entire development as a whole, which number is determined by the community. Design flexibility is also enhanced by permitting the use of common driveways rather than a formal subdivision road.

DID YOU KNOW...

In a national random sample survey of 1,130 adults age 18 and older, about 55 percent of Americans prefer a smart growth community and 45 percent prefer a sprawl community, after hearing detailed description of the two community types. (2004 National Community Preference Survey, conducted for Smart Growth America and National Association of Realtors).

EXAMPLES FROM THE PIONEER VALLEY

Highland Communities Initiative Green Development project

PVPC and the Highlands Communities Initiative have partnered with the towns of Chesterfield, Conway, Montgomery, and Worthington to develop and adopt the Conservation Development bylaw by Annual Town Meeting in 2011. PVPC and HCI will be providing technical support to these communities as they develop a campaign for adoption of this bylaw in their communities.

A model bylaw or strategy is included in the Pioneer Valley Sustainability Toolkit.

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Green Building Codes & Standards



Green affordable housing project developed by Rural Development Inc, Franklin County

What are the objectives of green building codes and standards?

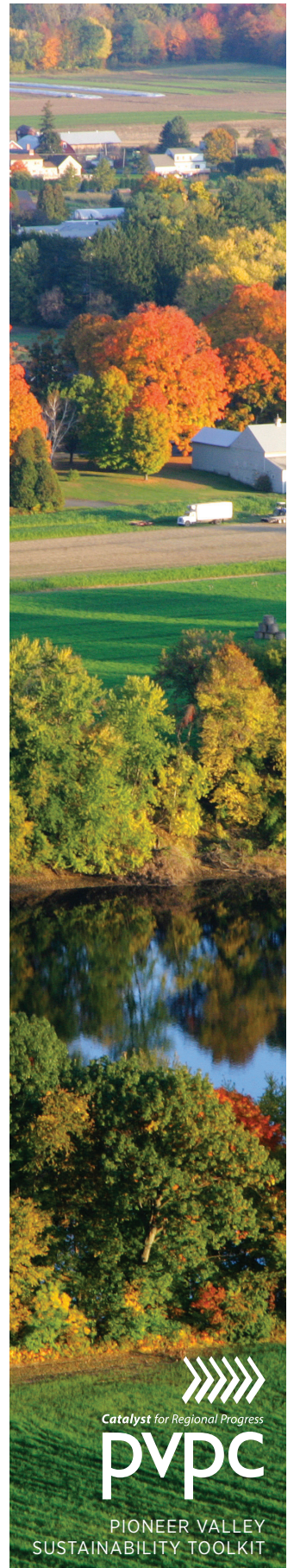
To increase the efficiency of buildings and their use of energy, water, and materials, and reduce building impacts on human health and the environment, through better siting, design, construction, operation, maintenance, and removal.

Why do we need green building codes and standards?

Massachusetts is a leader in the rapidly growing green building movement. Buildings consume 70% of the nation's electricity and a large part of the materials, water and waste used and generated in our economy. Buildings have traditionally been viewed as a relatively static sector of the economy experiencing relatively little change in technology or resource consumption patterns, but that is not the case. According to Ed Mazrin, founder of Architecture 2030, and international movement to transition to zero energy buildings by 2030, greening the building sector is a key to combating global climate change. Codes and standards are increasingly being used to encourage the development of renewable energy, energy-efficient technologies, and high-performance buildings in Massachusetts. In addition to state requirements, codes and standards for specific building types and individual municipalities are in development to encourage a breadth of clean and green features in building projects.

How do green building codes and standards work?

“Green” or “sustainable” buildings use key resources like energy, water, materials, and land more efficiently than buildings that are just built to code. With more natural light and better air quality, green buildings typically contribute to improved employee and student health, comfort, and productivity. In addition, they use less energy and other





essential resources, therefore saving more money. Through zoning and other regulatory measures, communities can require that new and rehabilitated buildings are built to meet green building standards. The green building standard most used is the Leadership in Energy and Environmental Design (LEED) System, developed by the United States Green Building Council. LEED is the nationally accepted benchmark for the design, construction, and operation of high performance green buildings. LEED promotes a whole-building approach to sustainability by recognizing performance in five key areas of human and environmental health: sustainable site development, water savings, energy efficiency, materials selection, and indoor environmental quality.

DID YOU KNOW...

Although the US is home to only 4.5 percent of the global population, it is responsible for over 15 percent of the world's consumption of wood.

(Source: www.GreenBuilding.com)

EXAMPLES FROM THE PIONEER VALLEY

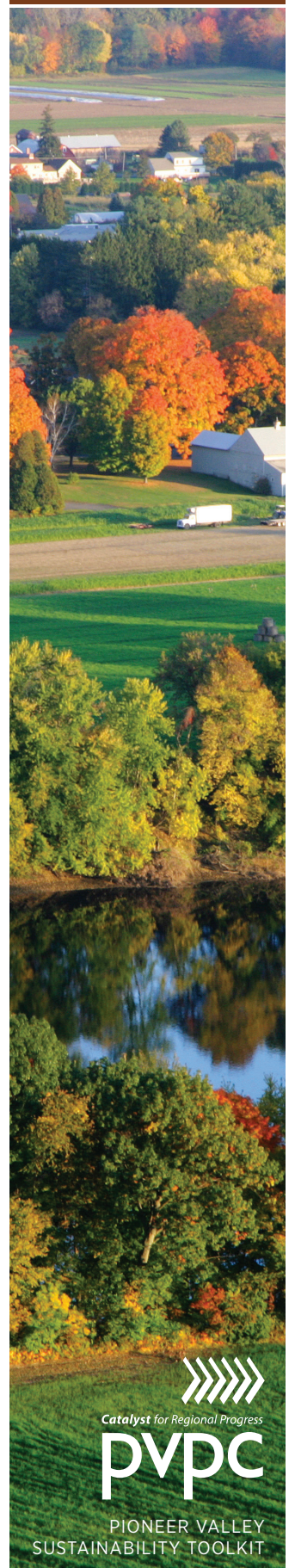
Kittredge Business and Technology Center at Holyoke Community College

Holyoke Community College's Kittredge Center is a 54,000 square foot building on the current HCC campus providing educational opportunities, workforce training, and business development services. The new Kittredge Center for Business and Workforce Development is the first state-owned building with a green roof. Green roofs are part of an important design trend to produce buildings that are more sustainable in that they reduce storm water impacts to nearby rivers and streams, provide better insulation to buildings, and reduce the amount of energy needed for heating and cooling. The 2,500 square foot roof—with 6 inches of soil planted up with drought-tolerant sedums—intercepts and soaks up rainfall. As a result, the amount of storm water running off the built surfaces is greatly reduced.

EXAMPLES FROM OUTSIDE THE PIONEER VALLEY

The City of Boston

The City of Boston recently amended their Zoning Code to require all projects over 50,000 square feet to be designed and planned to meet the "certified" level using the US Green Building Council's and Leadership in Energy and Environmental Design (LEED)



building rating systems. The Article also provides incentives by allowing up to four of the required LEED points to be obtained from the Boston Green Building Credits. One point can be obtained if the proposed project includes and on-site combine electrical and heat generation; one point for the historic renovation of an existing structure; one point for on-site groundwater re-charge; and one point for sustainable transportation options for residents, such as public transit passes and car-sharing options. The City of Cambridge is also developing Green Building standards for buildings over 25,000 square feet.

Maine State Housing Authority

The Maine State Housing Authority (MSHA) has developed a set of green building standards for designers, developers, and constructors who apply for MSHA funding. These standards are a requirement for all projects that apply for funding, including rehab and renovation projects. A copy of the standard can be found [here](#).

ADDITIONAL LINKS:

“Leading by Example: An Action Plan for Green Building in Massachusetts State Construction Projects”, Massachusetts Sustainable Design Roundtable.

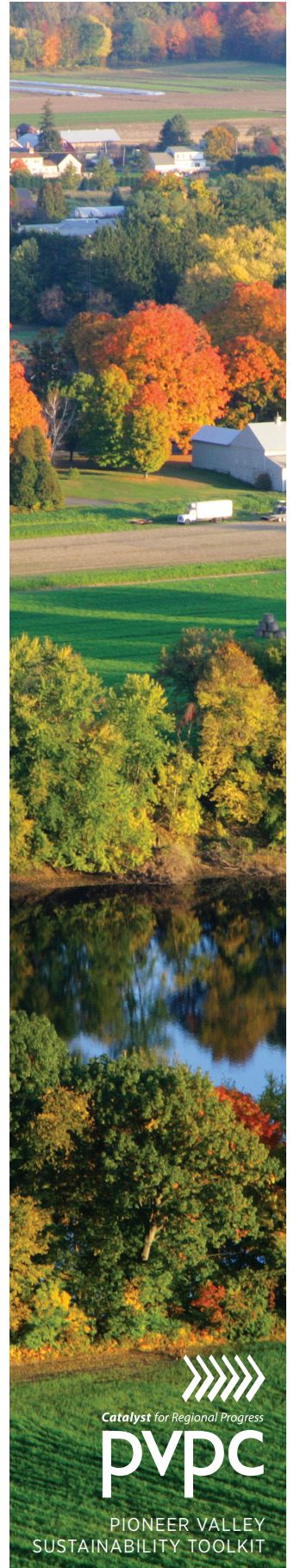
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Green Building and the Stretch Code



Habitat for Humanity Housing-Amherst

Brightly daylight, south-facing rooms, super-insulated envelope, energy-efficient, economical point-source heating units, energy-star appliances, super-insulated envelope and point source heating provide an economical alternative for affordable housing.

What are the objectives of green building codes, such as “the stretch code”?

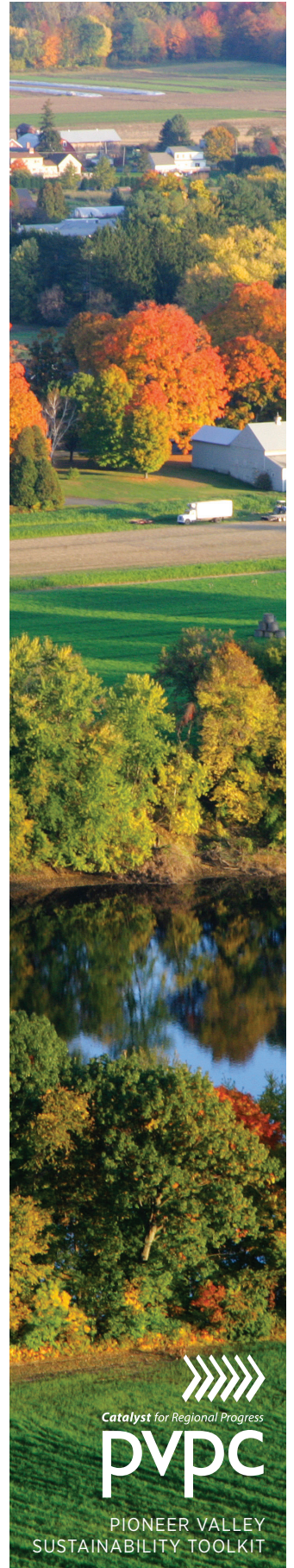
To save money and improve the environment by reducing waste of energy, water, and land in building siting, design, construction, de-construction, and operation. Some codes also seek to improve occupant health by proscribing types of equipment and materials allowed in construction and operation of buildings. The “stretch code” is a more energy efficient building code that can be adopted voluntarily by Massachusetts communities.

Why do we need green building codes and standards?

Because buildings unnecessarily use 70% of electricity consumed in the U.S., 39% of energy, 40% of raw materials, and 12% of all potable water, wasting building owners billions of dollars each year. Buildings unnecessarily produce 39% of all carbon dioxide (CO₂) emissions and 30% of all waste (136 million tons annually) because they are poorly sited, designed, built and even torn down. In the past planners, architects, designers and builders did not always factor use of resources into building design and construction. As a result, most existing buildings waste a lot of energy which translates into wasting a lot of money. We need green building codes and standards to save money and limited natural resources and to achieve our vision of a sustainable region.

How do green building codes, including the stretch code, work?

Green building codes and standards work by requiring building siting, design, construction and de-construction to achieve whatever level of resource efficiency a community wants.



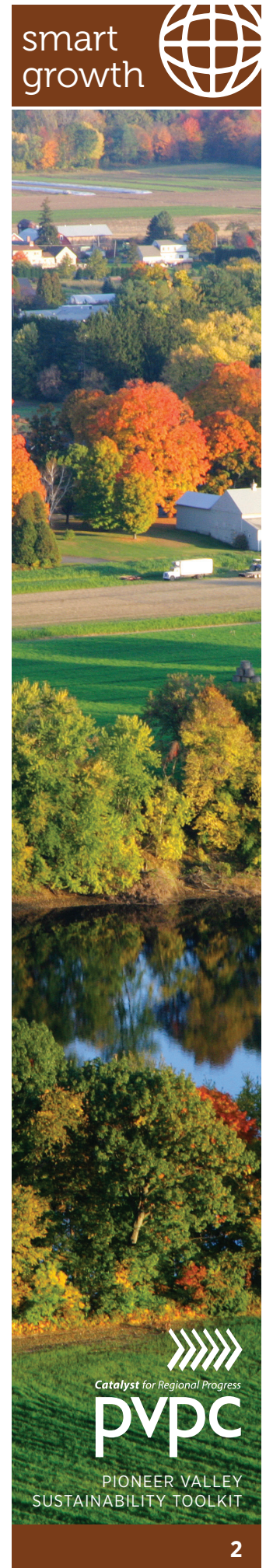
In Massachusetts, all new construction must conform to the state building code. In 2008 when Massachusetts adopted the Green Communities Act, the Commonwealth committed itself to updating the state building code in accordance with the International Energy Conservation Code (IECC) which is usually updated every three years. This commitment will ensure a much greater level of new building efficiency throughout Massachusetts. At the same time, the Massachusetts Legislature enabled cities and towns to adopt an even more energy efficient building code, called “the stretch code”. Adopting the stretch code is optional, but it is one of the five requirements of Green Communities designation. The stretch code is called the stretch code because it is a “stretch” with respect to building efficiency. A building built to the stretch code will be 15% more energy efficient than one built to the base code. Building codes and standards are just like any other local government regulation. They represent a community’s values and they tell builders how to build. “Green” or “sustainable” buildings use key resources like energy, water, materials, and land more efficiently. With more natural light and better air quality, green buildings typically contribute to improved employee and student health, comfort, and productivity. And as stated, they use less energy and other essential resources, thereby reducing wasteful spending. Towns are advised to seek adoption of the Stretch Code as a general bylaw through a vote of Town Meeting. Cities may adopt the stretch code through a vote of city council.

DID YOU KNOW...

Springfield was the first city in Massachusetts to adopt the Stretch Code.

(Source: www.mass.gov/eoeea)

In addition to the stretch code in Massachusetts the other green building standard most used is the Leadership in Energy and Environmental Design (LEED) System, developed by the United States Green Building Council. LEED promotes a whole-building approach to sustainability by recognizing performance in five key areas of human and environmental health: sustainable site development, water savings, energy efficiency, materials selection, and indoor environmental quality. To adopt a requirement of LEED certification for all new buildings, Towns are advised to seek adoption of LEED certification as a general bylaw through a vote of Town Meeting and Cities are advised to seek adoption of through a vote of the city council.



EXAMPLES OF GREEN BUILDING IN THE PIONEER VALLEY

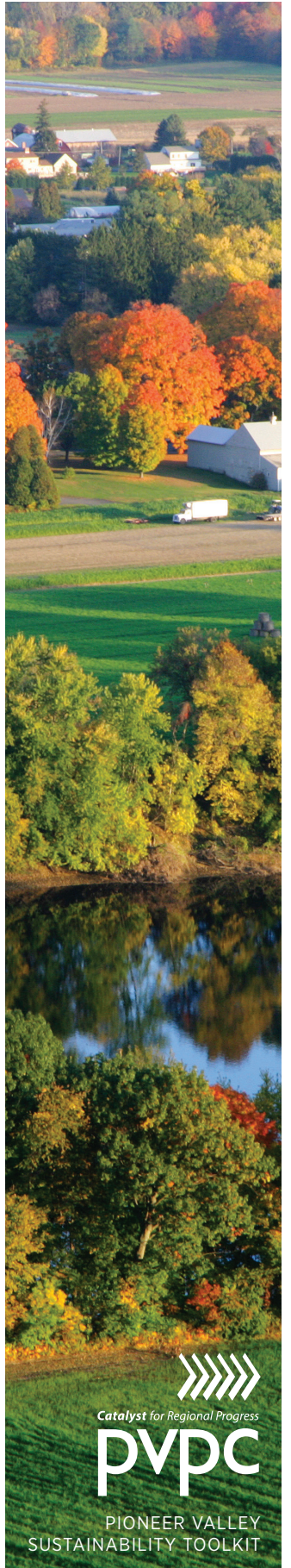
Hampshire College – The Ken Burns Wing, LEED certified



New 6,700 square foot addition to the Jerome Liebling Center for Film, Photography and Video, a part of the Arts Complex at Hampshire College.



Interior Design for the Ken Burns Wing of the Jerome Liebling Center included selection of interior finishes, furnishings, and lighting. Since it is a LEED registered project, special care was taken in making these selections to ensure that products were low in VOC's and that lighting was as efficient as possible. Post-construction graphic design services were also provided.



EXAMPLES OF GREEN BUILDING CODE IN THE PIONEER VALLEY

As of the end of 2010, six communities in the Pioneer Valley had adopted the stretch code and 12 are working on adoption (42%).

ADDITIONAL LINKS:

www.mass.gov/energy/greencommunities detailed resources on adopting the stretch code, cash flow analysis, commercial case studies and detailed FAQ

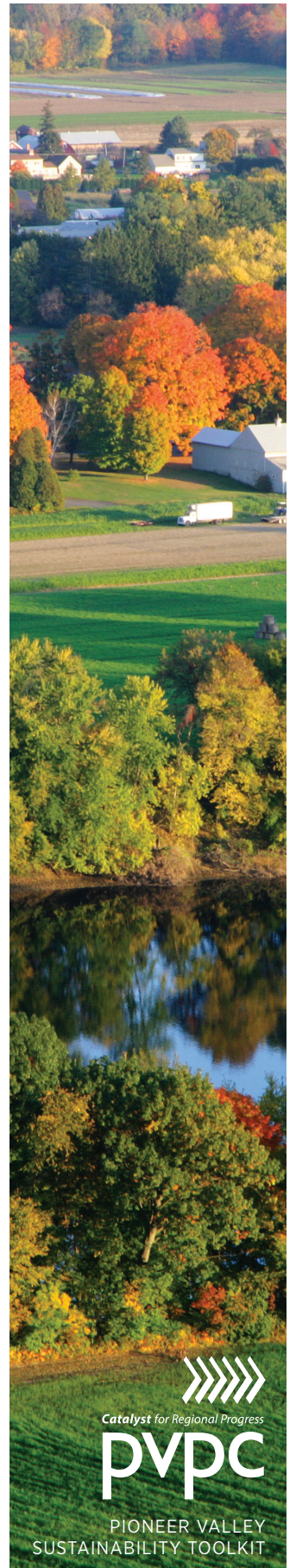
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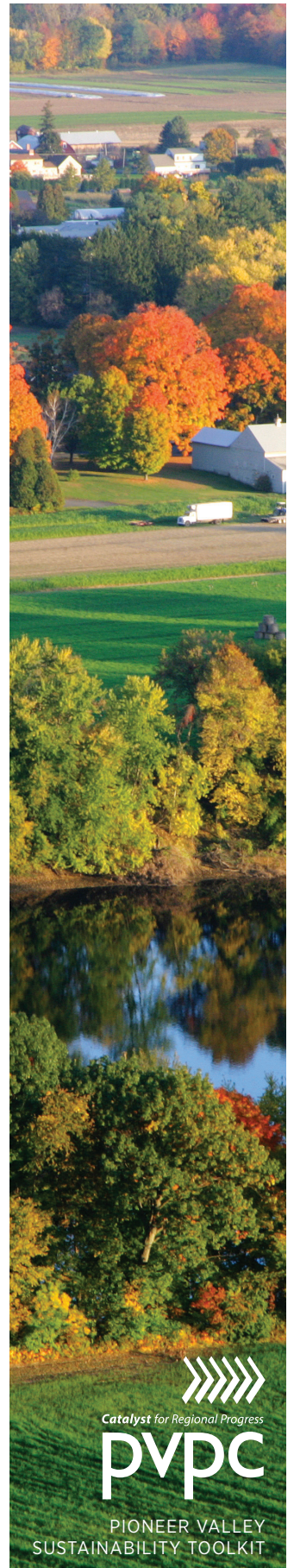
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Green Development Performance Standards



What is the objective of Green Development Performance Standards?

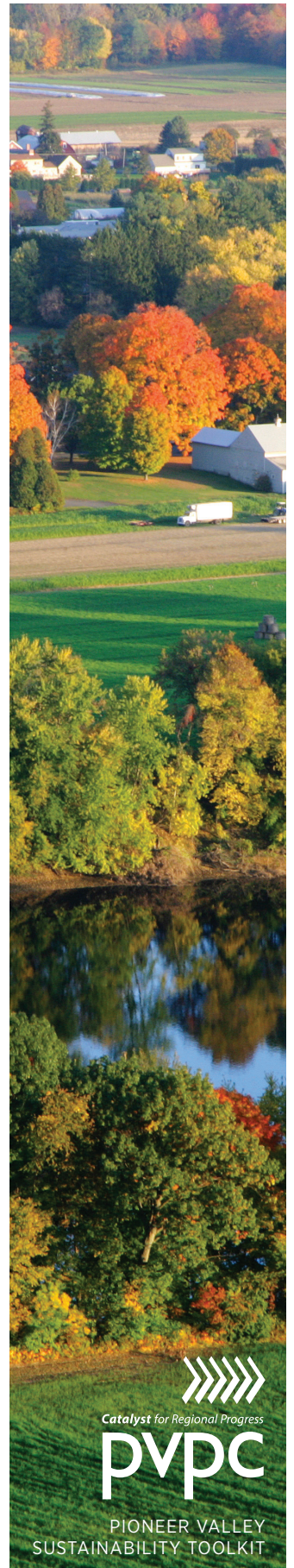
The purpose of these standards is to promote high quality and greener developments that also preserve and enhance natural resources and the environment. Green development techniques also protect the quantity and quality of drinking water supplies.

Why are Green Development Performance Standards needed?

Unregulated new development can have severe impacts on the landscape and environment, including the destruction of trees, wildlife habitat, landscape features, open space and scenic views, the generation of water pollution, heat and light pollution, traffic and excessive waste, and the use of excessive energy and water resources. Green Development Performance Standards can address all of these issues, and promote greener, better quality development with less environmental and energy impacts.

How do Green Development Performance Standards work?

Green development standards are established in the Zoning Bylaw and are implemented by the Planning Board and Building Inspector through the Site Plan Review or Subdivision review processes. Single family and two-family residential uses must receive Planning Board approval under Limited Site Plan Review and comply with applicable Green Development Performance Standards. Commercial, industrial and civic projects must undergo full Site Plan Review. Review and approval of subdivisions also includes Green Development Standards.



The Green Development Performance Standards address the following issues:

- » limits to site disturbance; tree preservation;
- » passive solar siting;
- » site and context assessment; energy efficiency;
- » landscaping and water reduction;
- » farmland preservation;
- » parking and trip reduction;
- » hazardous materials;
- » heat island reduction;
- » light pollution reduction;
- » recycling;
- » construction waste management; and
- » pedestrian and bicycle access.

Incentives are offered for green development projects that include permeable pavement, a green roof or additional projected open space. Incentives can include additional lot coverage, reduction of parking requirements, and reduction of stormwater detention requirements.

EXAMPLES FROM THE PIONEER VALLEY

PVPC has developed a model set of Green Development Performance Standards, which are the first of their kind. The towns of Palmer, Easthampton and Hatfield, MA are currently considering adopting Green Development Performance Standards. To date, these standards have not yet been adopted.

A model bylaw or strategy is included in the Pioneer Valley Sustainability Toolkit.

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Home Based Business Bylaws



Home based business in Hadley

What are the objectives of a home based business bylaw?

To promote economic development by allowing town residents a broad choice in the use of their homes as places of livelihood in residential areas, while protecting the character and quality of life in the neighborhood.

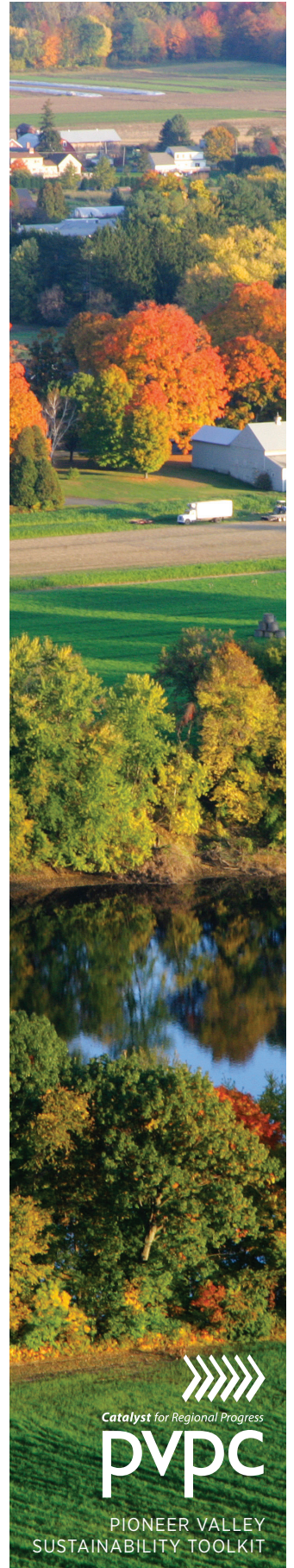
Why do we need a home based business bylaw?

A home based business bylaw is a useful economic development tool for rural communities or communities that want to promote and permit neighborhood businesses. It encourages local economic development opportunities by allowing entrepreneurs and small business owners the ability to run a small business out of the home. In addition, these bylaws provide standards to ensure that these small businesses protect neighborhoods and residential areas from adverse impacts, such as noise, lighting and traffic.

How do home based bylaws work?

A Home Based Business bylaw establishes three types of Home Business that would be allowed in a community, and establishes minimum standards for parking, screening, lighting, traffic, signage, and hours of operation. The three levels of homes based business are:

- » Home Occupation, which has no more than two (2) non-resident employees and occupies no more than 33% of the gross floor area of the home



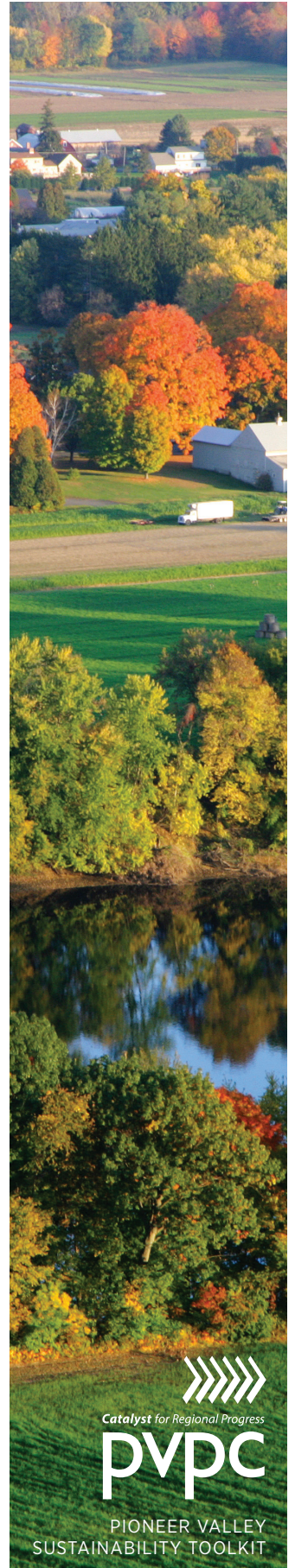
- » Minor Cottage Industry, which has no more than five (5) non-resident employees and occupies no more than 49% of the gross floor area of the building for business purposes.
- » Major Cottage Industry has no more than ten (10) non-resident employees and may not use less than 33% of the gross floor area for business purposes.

The bylaw provides minimum performance standards for each type of home-based business. Home Occupations are allowed by right subject to these minimum standards while Minor and Major Cottage Industries require Site Plan Approval from the Planning Board. The minimum performance standards address such things as residency requirements, minimum dimensional requirements, parking standards, screening, lighting, traffic, signage, and hours of operation. The Planning Board may grant a waiver or amendment from one or more requirements of the bylaw if it finds that the waiver or amendment is in the public interest and meets the intent of the Bylaw.

A model bylaw or strategy is included in the Pioneer Valley Sustainability Toolkit.

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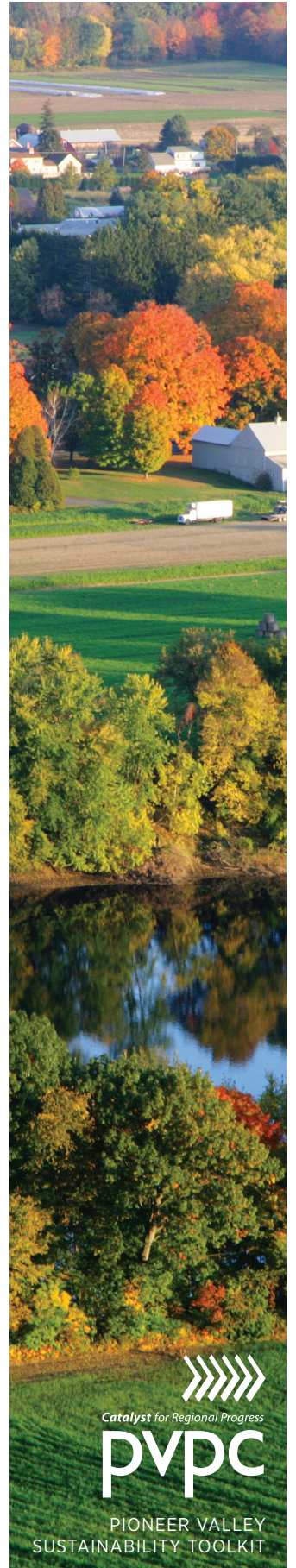
Housing For Older Adults

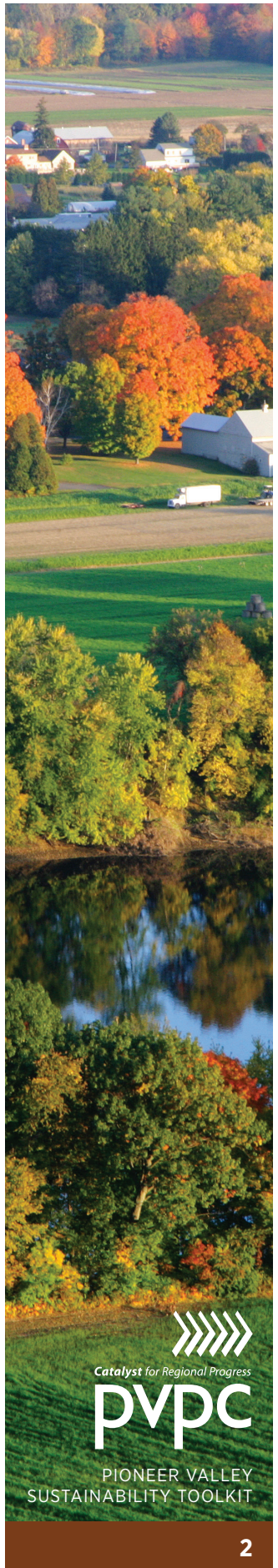


Photo courtesy of flickr user Luvida Care

What are the objectives of pursuing multiple housing options for older adults within the community?

As the baby boomer generation continues to age, the number of older adults will rise to record levels. This will bring strong demand for housing suitable for older adults. Older adults have expressed a strong desire to ‘age in place’. Close to 90% of adults aged 45 and over that were surveyed by AARP indicated that they wished to stay within their homes for as long as possible as they aged.¹ The housing and care services available for older adults need to be both cost effective and attuned to seniors’ desires to age in place. The current approach to housing for older adults is dominated by institutional nursing homes and assisted living facilities. These facilities are expensive for residents who may often not require the level assistance provided by such facilities. Furthermore, large-scale senior housing developments typically require large tracts of land on ‘greenfield’ sites that are often located away from the neighborhoods and communities that older adults would like to stay connected with. By considering alternative forms of housing for older adults, communities can help to create housing that is reflective of the wishes of older adults to age in place with dignity and independence.





DID YOU KNOW...

By 2050, the number of adults aged 65 and older will double to over 88 million with more than 19 million over the age of 85.

(Source: Lipman, Barbara, Jeffrey Lubell, and Emily Salomon. Housing an Aging Population: Are We Prepared? [Washington, D.C.]: Center for Housing Policy, 2012.)

In 2012, the average annual cost of a semi-private room in a nursing home was \$81,030. A private room or apartment in an assisted living facility costs an average of \$42,600 annually.

(Source: Metlife Mature Market Institute. Market Survey of Long-Term Care Costs. (2012) Retrieved from: <https://www.metlife.com/assets/cao/mmi/publications/studies/2012/studies/mmi-2012-market-survey-long-term-care-costs.pdf>

What types of housing for older adults are possible in our communities and how do they work?

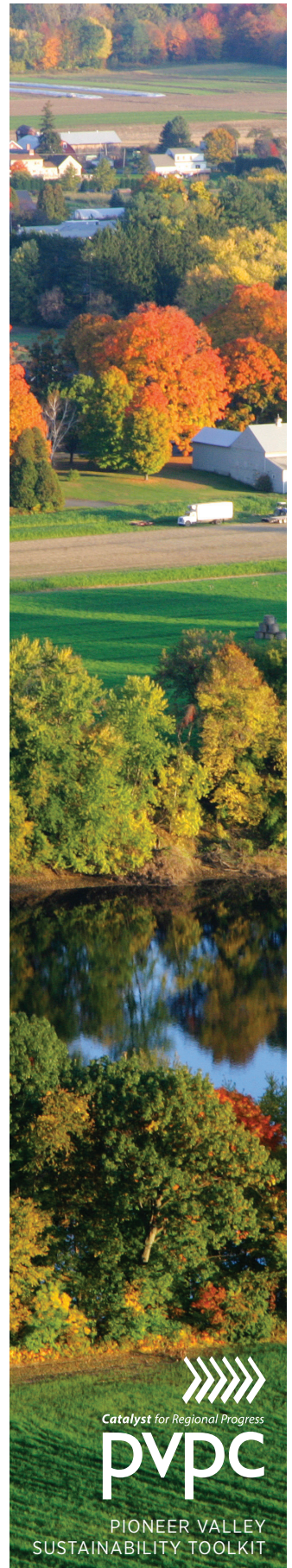
The chart below lays out various options for communities to pursue in order to create a greater amount of housing options for older adults.

Housing Types for Older Adults			
Housing Type	Purpose	Physical Form	Recommended Regulatory and Policy Reforms
House-Sharing	As adults age they may want to share housing with unrelated adults. This may include renting rooms within their own home in exchange of housing for help with daily chores, or moving into a shared-home with others. House-sharing allows older adults to remain in their own homes and share daily activities with others while defraying the costs associated with house upkeep.	House-sharing relies upon the existing housing stock within a community, reducing the need for new developments.	Some zoning codes restrict house-sharing by limiting housing units to one family per unit. The definition of “family” unit is often defined as a limited number of unrelated adults. Changes to the definition of family can facilitate house-sharing by older adults. Similarly house-sharing can be added as an allowed use in appropriate districts
Multi-Family Housing	Single-family homes are typically the most expensive form of housing. They typically require the highest utilities bills, and can be isolating for older adults. Allowing more than one dwelling unit in a building provides more diverse choices for older adults and can make it easier for older adults to remain in their home community without the expense of a single-family home.	Multi-family housing consists of multiple housing units within a single building. Units may be leased from a building owner or owned as a condominium or co-op unit. Multi-family housing units may consist of flats, duplexes, townhouses, apartment buildings, mixed use buildings, and apartment communities.	Older adults looking to downsize into an apartment may find limited multi-family housing options available in their community. This may be the result of market forces, but it is often also the result of local zoning. Many zoning codes, particularly in rural areas, significantly limit or even outlaw housing other than single-family houses. Zoning codes may limit multi-family housing to undesirable or economically unfeasible locations which may force older adults to sacrifice their social connections and life patterns for housing that meets their size or cost needs. A community can review its zoning code to make the most efficient and effective changes to accommodate older adults who desire multi-family housing.

Housing Types for Older Adults			
Housing Type	Purpose	Physical Form	Recommended Regulatory and Policy Reforms
Naturally Occurring Retirement Communities (NORCs)	Naturally occurring retirement communities is a term that describes buildings or neighborhoods which have developed a concentration of older adult residents over time. NORCs do not have an official designation as a retirement or assisted living community, though recently NORCs in conjunction with supportive services programs have emerged as an alternative to assisted care facilities. The NORC supportive services model works through partnerships with property managers, health care and social service agencies, and other organizations.	Naturally occurring retirement communities take advantage of existing housing stock and may be located within denser, single-family neighborhoods, or within multi-family housing complexes. As the name suggests, NORCs are guided by the preferences of older adults who choose to live in a certain neighborhood amongst people their own age.	<p>Naturally occurring retirement communities vary depending upon the community. Communities can help encourage NORC's by allowing house sharing, multi-family housing, and accessory dwelling units in the zoning code. When NORC's are identified, communities can revise the zoning code for that location to allow goods and services that are frequently used by older adults.</p> <p>When a NORC is identified, a community can prioritize infrastructure changes to meet the needs of older adults in the vicinity of NORCs. For example, extending pedestrian crossing times, improving sidewalk maintenance, and ensuring adequate non-glare street lighting.</p>

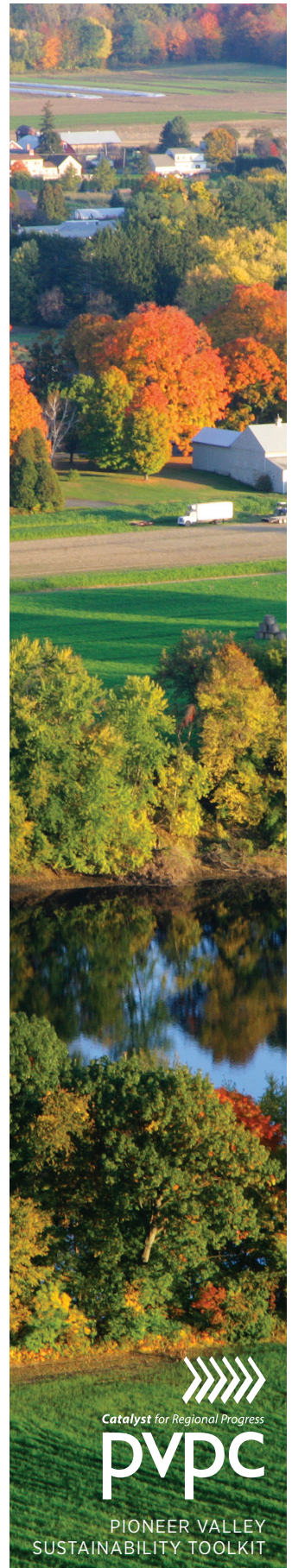
Housing Types for Older Adults			
Housing Type	Purpose	Physical Form	Recommended Regulatory and Policy Reforms
Accessory Dwelling Units, i.e. "Granny-Flats"	Accessory dwelling units (ADUs) are an additional housing unit that is added on to an existing house. ADUs can be used by relatives of older adults to house and care for them while still providing the individual independence. Alternatively, older adults may construct an ADU for themselves to live in while renting their home for supplemental income, or they may choose to rent the unit itself.	Accessory dwelling units may be attached to an existing house such as above an attached garage or they may be detached, stand-alone structures such as a cottage or guesthouse on the property. ADUs typically have their own separate entrance, kitchen, and bathroom but often share certain amenities with the adjoining housing unit like laundry facilities.	Many communities do not allow ADUs within their zoning code or restrict where they can be built by requiring excessively large lot sizes or setbacks, or by restricting the conversion of non-conforming structures into ADUs. By allowing ADUs or revising requirements for them communities can increase housing flexibility for older adults—sometimes enabling an older adult to age-in-place when they would otherwise have to move.

Housing Types for Older Adults			
Housing Type	Purpose	Physical Form	Recommended Regulatory and Policy Reforms
Continuing Care Facilities	Continuing care facilities (CCFs), also known as life care facilities or residential care facilities are retirement communities that consist of assisted living facilities and personal care homes. These facilities provide housing and supportive services to persons who may be unable to live independently, but generally do not require the skilled level of care provided by nursing homes. There are a variety of life care facilities which range in size and services provided. Continuing care facilities are a multi-tiered approach to aging that accommodates residents' changing needs in one place.	Individuals entering a continuing care facility may live an independent lifestyle in a single family home, apartment or condominium, while having services nearby if needed. As residents age and everyday activities become more difficult, they may move into assisted living or nursing care facilities on site. Because they provide a variety of unit types, continuing care facilities are often large developments and are generally built on greenfield sites on the outskirts of a community. This can present challenges for older adults who wish to remain active within a community.	Zoning for senior housing like continuing care facilities is often achieved through establishing specialized use categories within the zoning code. This allows communities to regulate where senior housing can be located, as well as its characteristics. Since life care facilities are often built upon greenfield sites at the edge of a community, residents may be forced into a car-dependent lifestyle. Communities can review site plan and subdivision regulations in order to ensure that a proposed senior housing development will provide safe access and internal circulation for pedestrians and automobiles. Communities can proactively identify appropriate parcels for senior housing and work to steer development towards them. It is especially helpful if communities can advocate for planned development that includes not only senior housing, but housing for other age groups as well as commercial development.



Housing Types for Older Adults			
Housing Type	Purpose	Physical Form	Recommended Regulatory and Policy Reforms
Cohousing	Cohousing is a method of housing development where a group of people get together to act as the developer for a housing community. By building as a group, per unit costs can be reduced (by achieving an economy of scale, eliminating redundant infrastructure, and eliminating the profit margins that a developer would usually make). Cohousing developments typically further reduce costs by building small units in a dense cluster.	Cohousing is typified by shared common spaces (outdoor spaces and common buildings), smaller units, shared parking located at the periphery of the development, and pedestrian-only paths within the development (pedestrian paths often double as emergency access). Because of these design features, cohousing developments have been noted for the safe and sociable environment they create which residents say enriches their lives.	Communities can promote cohousing by allowing “flexible development”, sometimes referred to as cluster development, open space residential development, or natural resource protection zoning. ² Additionally, communities can add cohousing as an allowed use in their zoning regulations, including explicitly allowing common buildings for residential use including shared home office and workshop space. Lastly, communities can review their subdivision regulations to make sure that there are no obstacles preventing compact development patterns associated with cohousing.

Housing Types for Older Adults			
Housing Type	Purpose	Physical Form	Recommended Regulatory and Policy Reforms
Cottage Housing	Cottage housing is similar to cohousing and is another innovative form of housing that is well suited to older adults. Cottage housing is usually composed of a number small housing units clustered around a common space with parking to the outside of the development. Like cohousing, cottage housing is appealing to older adults for the safe and sociable environments they create. Because cottage units are smaller than typical single-family houses, they are usually more affordable than single family houses in the same area.	Sometimes referred to as a “pocket neighborhood”, cottage housing typically takes an in-town lot that would have otherwise been developed for large single-family homes, or a commercial use, and instead develops a number of small cottage units (under 1000 sq ft) around a cottage green. The size of housing units and the total developed parcel of cottage housing units is generally smaller than a cohousing development, and is usually not initiated and developed by future occupants. Parking is typically located around the periphery of the development. It may or may not be shared. Internal paths are typically for pedestrians-only.	Communities can encourage cottage housing by allowing zoning for “multiple units per lot” in certain districts thereby allowing the applicant to avoid a costly subdivision permitting process. If a community wants to promote cottage housing while prohibiting other similar forms of development, they can establish a use category in zoning for cottage housing with an associated definition that distinguishes cottage housing from other forms of development. Criteria likely would include benchmarks for parcel size, unit size, minimum and maximum densities, and provision of shared outdoor space. Cottage housing can be allowed by-right, but communities may want to require a site plan review in order to make sure a proposed development “fits in” to a neighborhood. Alternatively, a community could require a special permit for cottage housing. Finally, zoning dimensional requirements, and subdivision regulations standards can be modified to facilitate cottage housing.



² Natural resource protection zoning is a relatively recent zoning technique that has been developed for rural and suburban edge locations. It was created to improve conservation outcomes for high priority land, while allowing for predictable development of housing at appropriate neighborhood densities.

Housing Types for Older Adults			
Housing Type	Purpose	Physical Form	Recommended Regulatory and Policy Reforms
Assisted Living	Assisted living communities are licensed and regulated by the state and intended for older adults who require assistance with certain daily activities like dressing, bathing and eating, but are not completely disabled. As with continuing care facilities, residents of assisted living facilities typically rent or buy their own rooms or apartments.	Like continuing care facilities, assisted living facilities and nursing home facilities are generally large developments which are typically located on greenfield sites away from the community and amenities. Many older nursing home facilities are set up like and resemble a hospital, though lately some newer developments have a greater degree of privacy and amenities like shared kitchens and living spaces.	Zoning for senior housing for assisted living facilities and nursing home facilities is often achieved through establishing specialized use categories within the zoning code. This allows communities to regulate where senior housing can be located, as well as its characteristics. Since life care facilities are often built upon greenfield sites at the edge of a community, residents may be forced into a car dependent lifestyle. Communities can review site plan and subdivision regulations in order to ensure that a proposed senior housing development will provide safe access and internal circulation for pedestrians and automobiles. Communities can proactively identify appropriate parcels for senior housing and work to steer development towards them. It is especially helpful if communities can advocate for planned development that includes not only senior housing, but housing for other age groups as well as commercial development.
Nursing Homes	Nursing homes focus on caring for older adults that are disabled, severely ill or need help with a majority of daily tasks. Nursing home costs are covered by a combination of savings, relatives, private health insurance or government programs like Medicaid or Medicare.		

EXAMPLES FROM THE PIONEER VALLEY

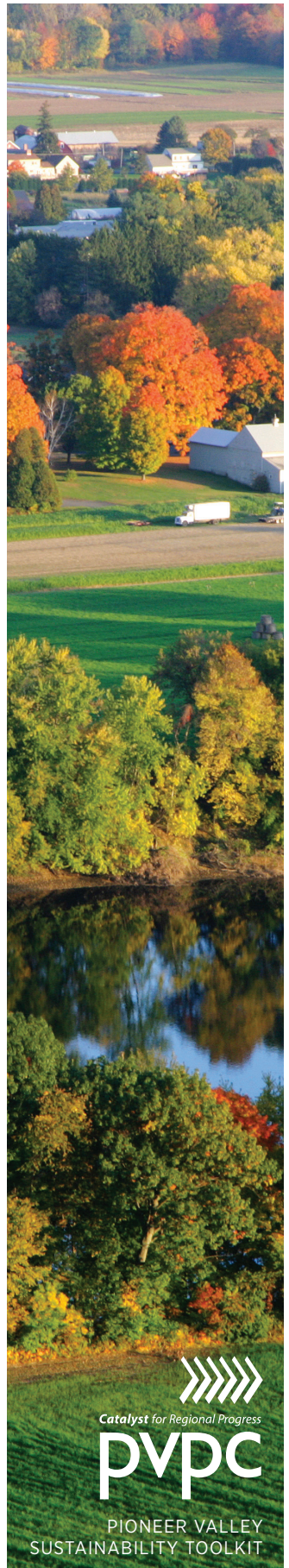
American Inn, Southwick

The American Inn in Southwick is a 50 acre life care facility that provides residents with a variety of housing choices and recreational opportunities. Residents may live in one or two bedroom cottage units, or spacious independent living apartments. For those that need greater assistance with daily activities there are assisted living apartments available as well. There is a host of amenities on the premises including a wellness center, fitness center, a café, library, beauty parlor and barber shop, social, recreational and educational programs, a billiard and card room, and local transportation. The American Inn provides residents with an active lifestyle which includes evening strolls, neighborhood socializing, dining, and numerous activities which bring residents together for socializing.



Photo courtesy of flickr user Luvida Care

One to two bedroom independent living apartments at American Inn are priced from \$145,900 to \$249,900 dollars and include thirty meals per month. The independent living cottages are priced from \$164,900 to \$269,000 and include a fully appliance kitchen and access to the Crane Building facilities. Assisted living apartments include three meals a day, as well as a wide variety of services and is priced at a base level of \$3,364 per month.



Links to More Information

SENIOR COHOUSING:
<http://www.seniorcohousing.com/>

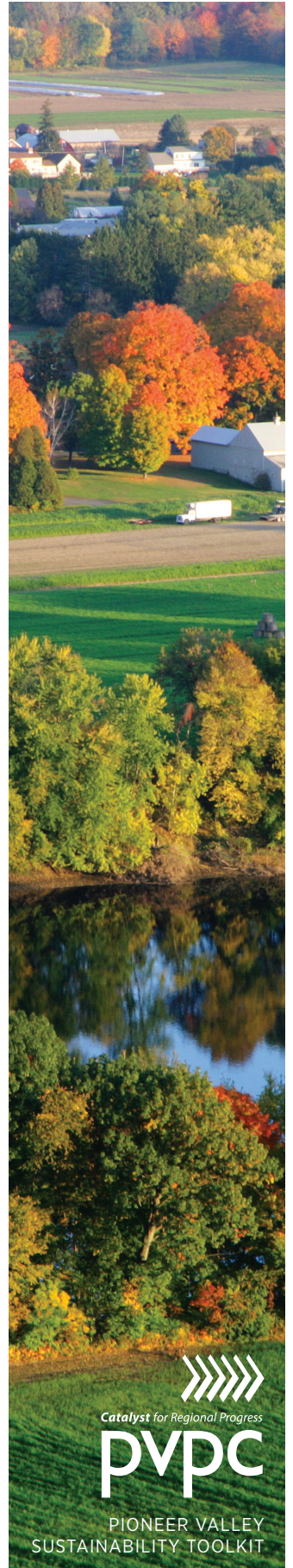
A model bylaw or strategy is included in the Pioneer Valley Sustainability Toolkit.

FOR MORE INFORMATION, PLEASE CONTACT

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Catalyst for Regional Progress

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PIONEER VALLEY
SUSTAINABILITY TOOLKIT

Inclusionary Zoning



Affordable Units in Amherst

What are the objectives of inclusionary zoning?

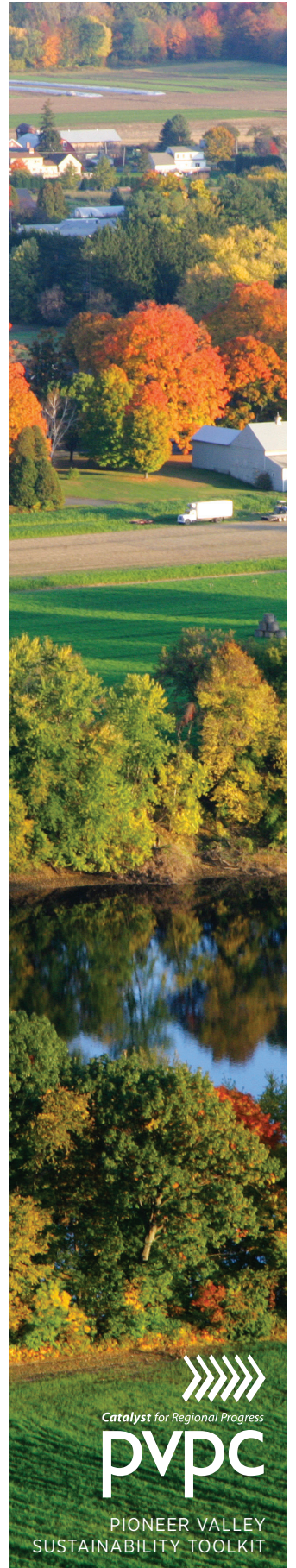
To increase the affordable housing inventory in a community, and to help provide a range of housing options to include homebuyers or renters whose income is below the regional median household income of \$62,900.

Why do we need inclusionary zoning?

Rising housing costs and lack of housing diversity can make housing choices difficult for young adults seeking to live in the town they grew up in, for people to live in the same community where they work to avoid long commutes, or for the elderly to continue living in the same community as their housing needs change. Communities need to make a concerted effort to ensure that homes are available for modest-income households. The task is complicated for several reasons. First, increasing construction and land costs have driven up the cost of development projects, especially after Hurricane Katrina. Developers also profit more by building luxury homes, which has spurred the construction of “McMansion” subdivisions throughout the state. At the same time, many cities and towns do not have zoning that allows more affordable multi-family dwellings or homes to be built on smaller lots.

How does inclusionary zoning work?

Cities and towns can pass a zoning bylaw or ordinance that requires private developers to make a fixed percentage of their housing affordable to low- or moderate-income households. Amherst, for example requires that in all new developments of over 21 housing units, at least 12% of the units have to be affordable. The affordability of the units



is maintained through a deed restriction, typically for 20 or 30 years and in some cases in perpetuity. Most programs contain “cost offsets” (e.g., density bonuses, expedited permitting processes, or fee waivers) that help developers meet the cost of producing affordable homes. Chapter 40R Smart Growth Zoning districts, which are also included in this toolkit, could also be considered a kind of inclusionary zoning. It requires that in any development in the Smart Growth District over 13 units, 20% of the units have to be affordable. In exchange the developers may build at a higher density within the district designated by the community. Over 100 Massachusetts communities have adopted inclusionary zoning regulations.

DID YOU KNOW...

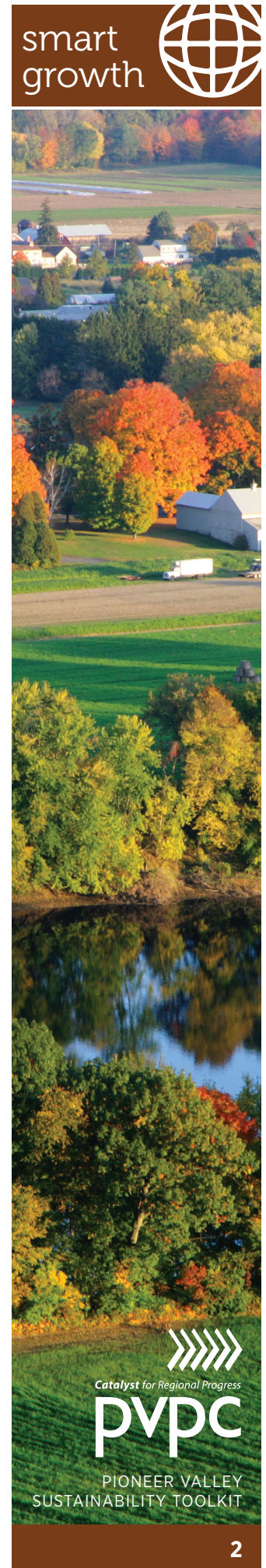
Households whose income falls at or below 80% of the median income for the area qualify for affordable housing programs. For 2007, in Hampshire and Hampden Counties, this is \$57,350 for a family of four and \$61,950 for a family of five. For example, a five person “household” could be a couple, one working full-time and the other part-time, with two children and an elder parent living with them.

(Source: US Department of Housing and Urban Development)

EXAMPLES FROM THE PIONEER VALLEY

Town of Hadley

The Town of Hadley was awarded a Smart Growth Technical Assistance Grant to prepare an Inclusionary Zoning bylaw as a result of the Pioneer Valley Planning Commission’s regional application to the Executive Office of Environmental Affairs. A model Inclusionary Zoning bylaw developed by PVPC and tailored to Hadley’s needs was prepared and given to the Planning Board for their review and consideration. PVPC worked with the Planning Board over the summer of 2006 to finalize the language of the proposed inclusionary zoning bylaw. PVPC also prepared a fact sheet on affordable housing and inclusionary zoning regulations to be used as an educational tool during the public hearing process. The Inclusionary Zoning Bylaw was adopted at a Special Town Meeting held in the fall. The bylaw requires that all new residential developments of six (6) or more dwelling units must provide a minimum of fifteen percent (15%) of the units to be affordable as defined in M.G.L. Chapter 40B.



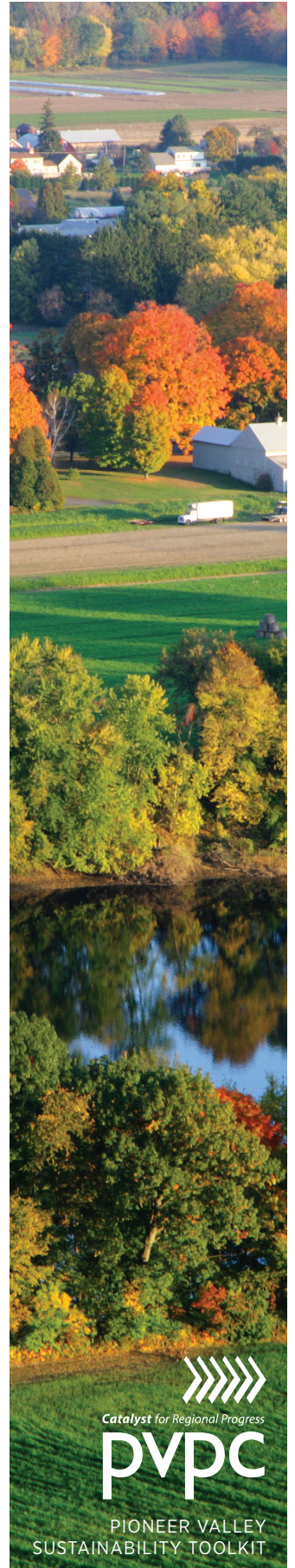
Town of Amherst

Amherst has also adopted an inclusionary zoning bylaw. Following is an excerpt from their bylaw:

SECTION 15.1 REGULATIONS

To ensure the purposes of this section, the following regulations shall apply to residential development in Amherst:

- » 15.10 All residential development requiring a Special Permit and resulting in additional new dwelling units shall provide affordable housing units at the following minimum rates:
 - » Total Development Required Affordable
 - » Unit Count Unit Provision
 - » 1-9 units None*
 - » 10-14 units Minimum one (1) dwelling unit
 - » 15-20 units Minimum two (2) dwelling units
 - » 21 units Minimum 12% of total unit count
- » * While provision of affordable units is not required for developments containing 1-9 units under this section, the Bylaw encourages affordability and provides for incentives. See Sections 4.33 and 4.55. For developments of 21 or more total units, calculation of the number of affordable units shall, if the required percent of the total results in a fraction, be rounded up to the next whole number where the fractional portion is equal to 0.5 or greater, and shall be rounded down to the next whole number where the fractional portion is less than 0.5.
- » 15.11 Affordable dwelling units provided under Section 15.10 shall be counted as meeting the requirements for affordability density bonuses under the provisions of Section 4.550.0 (Open Space Community Developments).
- » 15.12 The applicant shall establish such housing restrictions, conditions, and/or limitations as are necessary to ensure that the affordable housing units provided under this section will be permanently available for purchase by eligible low-and moderate-income buyers, and available for a minimum of twenty years in the case of rental housing.



OTHER RESOURCES:

“Inclusionary zoning: Guidelines for cities and towns” prepared for the Massachusetts Housing Partnership Fund by Edith M. Netter, Esq.

http://www.mhp.net/uploads/resources/inclusionary_zoning__guidelines__netter.pdf

A model bylaw or strategy is included in the Pioneer Valley Sustainability Toolkit.

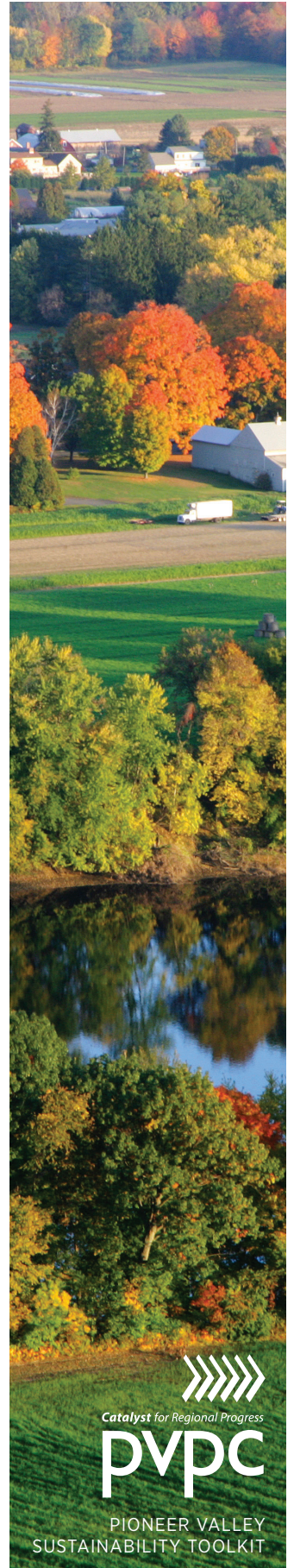
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Low Impact Development



Streets designed without curbs allow water to drain into natural systems, such as gardens

What are the objectives of Low Impact Development?

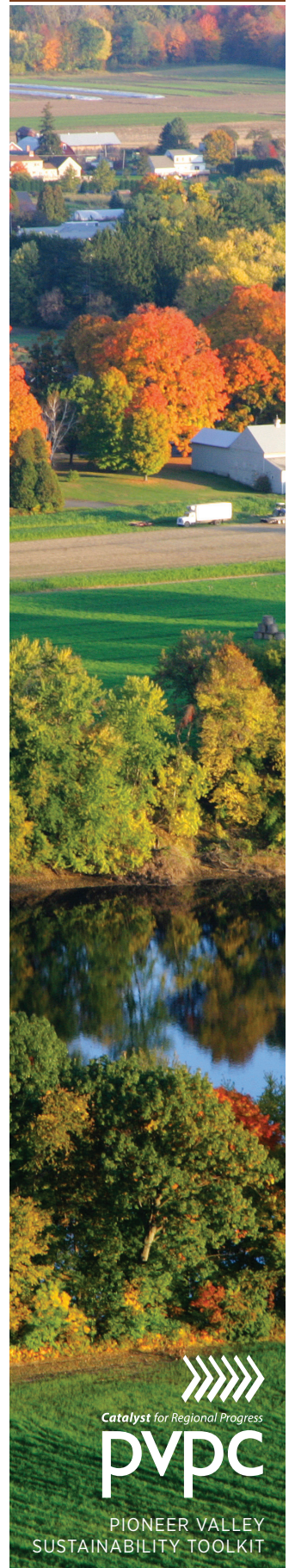
To create a more sustainable land development pattern that results from a site planning process that first identifies critical natural resources, then determines appropriate building envelopes. To incorporate a range of best management practices (BMPs) that preserves the natural hydrology of the land.

Why do we need Low Impact Development?

Development patterns based on conventional zoning codes in Massachusetts often result in “sprawl” with its associated large impervious areas, loss of natural areas, and alteration of hydrologic systems. Too often, the development process begins with the clearing and leveling of an entire parcel. Conventional developments that follow commonly contain wide roads and large parking lots. These large impervious areas prevent water from infiltrating into the ground (which normally replenishes groundwater supplies and supports nearby wetlands and streams with baseflow) and convey polluted runoff into waterbodies. To deal with water that runs off of these sites, structural stormwater controls such as catch basins, pipes, and detention ponds are used. Conventional landscaping of these developments brings additional concerns including the introduction of non-native plants, use of herbicides, pesticides and fast-releasing fertilizers, and excessive water consumption.

How does Low Impact Development work?

The LID approach provides opportunities to build the homes and businesses that are needed, while conserving natural areas and drainage patterns. LID is accomplished as a two-step process: 1) thoughtful site planning, and 2) incorporation of best management



practices (BMPs). Thoughtful site planning begins with an approach that identifies critical site features such as wetlands, poor soils, or drinking water protection areas that should be set aside as protected open space. Natural features, such as vegetated buffers and view sheds, will also play an integral role in any LID planning exercise. After the critical open space areas are identified and set aside, sustainable development areas are then identified as “building envelopes.” Within the delineated building envelopes, a broad range of design techniques or BMPs, such as shared driveways, permeable pavers, and bioretention are used to reduce the level of impervious cover and improve the quantity and quality of stormwater drainage. Other LID design techniques include green roofs, rain barrels, rain gardens, grassed swales, stormwater infiltration systems, and alternative landscaping. Through these techniques, natural drainage pathways are conserved, open space is preserved, and the overall impact from development is significantly reduced.

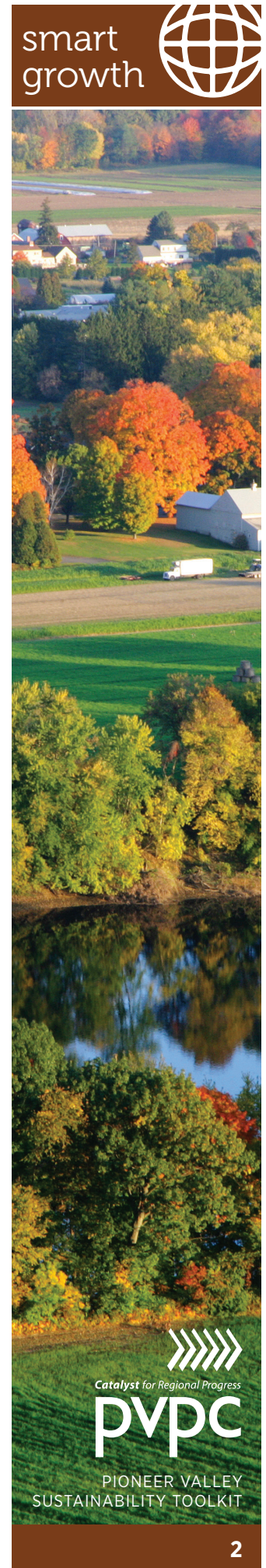
DID YOU KNOW...

Vegetated rooftops have been used extensively in Germany for more than 25 years and results show up to 50% reduction in annual runoff in temperate climates. (US EPA)

EXAMPLES FROM THE PIONEER VALLEY

Town of Pelham

With a Smart Growth Technical Assistance Grant from EOE, PVPC worked with the Pelham Growth Study Committee to draft a Low Impact Development (LID) zoning bylaw utilizing the LID Bylaw from EOE’s Smart Growth Tool Kit as a model template. Given the largely rural and residential nature of Pelham, the committee felt that the State’s model was more complicated than they would be able to administer and was more appropriate for new commercial and industrial developments, the likes of which were not happening in Pelham. Therefore, PVPC significantly streamlined the model, making the bylaw applicable to two types of land uses: 1) all non-residential land disturbances requiring a Special Permit and/or Site Plan Approval, and 2) all residential uses, including single-family detached dwellings, creating land disturbances that require a Special Permit, Site Plan Approval, or Building Permit. The Committee opted to call the new zoning bylaw a Stormwater Management bylaw rather than an LID bylaw due to the fact that they believe stormwater management is a term more easily understood by the general public rather than low impact development.



EXAMPLES FROM OUTSIDE THE PIONEER VALLEY

Please visit the [Massachusetts Smart Growth Toolkit](#), developed by the Executive Office of Energy and Environmental Affairs, for more examples of LID in Massachusetts.

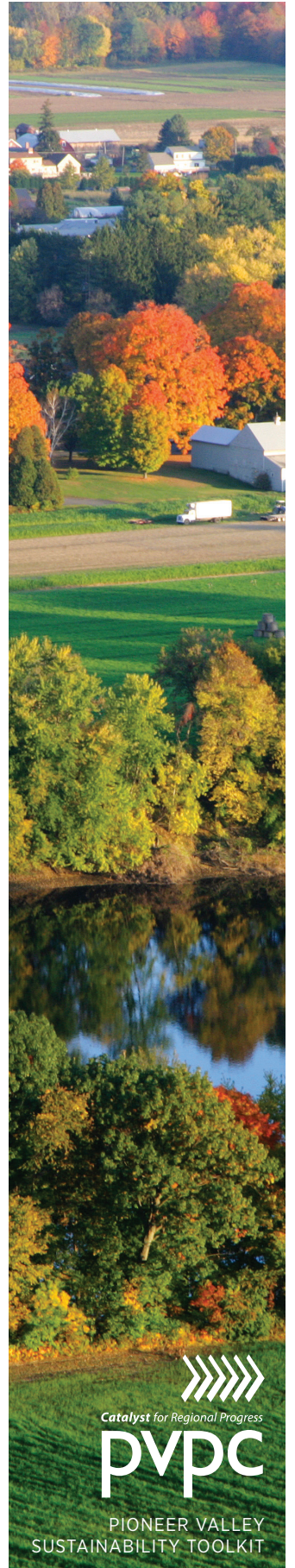
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Mixed Use Development Districts



What is the objective of Mixed Use Development Districts?

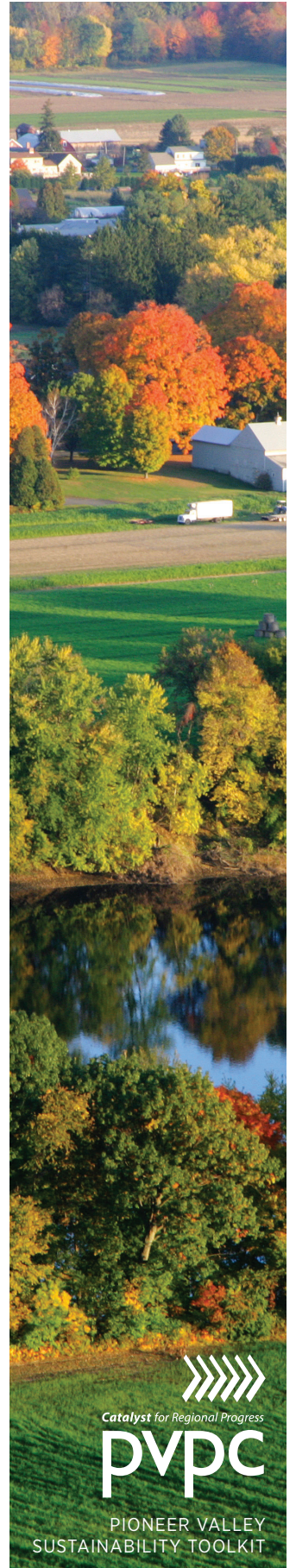
Mixed use districts foster well planned, mixed use, compact developments within downtown and village areas, in keeping with the character of traditional New England villages. They can create places with unique and positive local identities, and provide development opportunities for expanding a community’s economic diversity and vitality.

Why are Mixed Use Development Districts needed?

Low density urban sprawl has become the Pioneer Valley’s dominant form of growth, consuming open land at an accelerated pace. Smart growth principles promote the mixing of commercial and residential uses to help create more interesting, functional, and environmentally sensitive built environments. Mixed use developments integrate housing, shops, offices, schools, parks, and civic facilities into compact areas to make biking, walking, and using transit easier. They can help limit sprawl and lessen air pollution.

How do Mixed Use Development Districts work?

Communities can adopt mixed use village center zoning to provide for pedestrian-friendly “Main Street” shopping districts with attractive facades, parking on the street or behind buildings, tree-lined streets and human scale buildings with offices/apartments above first-floor shops. Mixed-use projects can combine residential, retail, office, and public institutional uses in compact villages or clusters to provide opportunities for people to live close to work and services.



A Mixed Use Development District can be adopted as either a stand-alone zoning district, or as an overlay district which can be superimposed over several underlying zoning districts. This bylaw/ordinance does not create any new zoning restrictions, but rather allows new opportunities for economic development.

The Bylaw/Ordinance will allow mixed use developments to be constructed with the approval of a Special Permit with Site Plan Approval granted by the Planning Board. The following uses may be included within a mixed use development: retail uses; quality restaurants; multi-family residential uses; home occupations; professional service offices; personal service establishments; municipal uses; banks or financial institutions; health club; small hotel or motel; bed-and-breakfast establishments; townhouses; theatre; park; artist studio/residence; assisted living residential uses; parks and recreation; artisan manufacturing; civic uses; live/work units; multiple uses in the same structure.

The Bylaw/Ordinance prohibits certain uses in Mixed Use developments, such as industrial uses, gas stations, dry cleaning, auto sales, adult uses, bars, and animal hospitals.

To protect the community and neighborhoods, the Bylaw/Ordinance contains detailed performance standards for such issues as: access and traffic impacts; noise; vibration; odors; lighting; storage; waste disposal; loading; vehicular access; parking; architectural design; signs; and landscaping.

Finally, the Bylaw/Ordinance provides a density bonus for Mixed Use developments that include affordable housing.

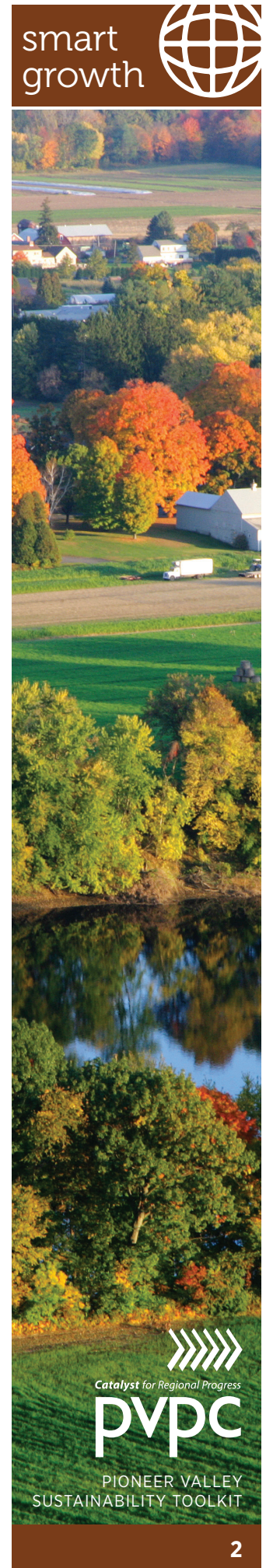
DID YOU KNOW...

In a Seattle study, authors found that by mixing land uses and enhancing the relative convenience on non-auto travel, 12.2% of all trips were non-motorized, compared to 3.9% in single-use residential neighborhoods.

MIXED USE DEVELOPMENT EXAMPLES FROM THE PIONEER VALLEY

South Hadley Village Commons

The Village Commons is an outstanding example of a mixed use development in South Hadley center, which includes retail shops and restaurants, a movie theater, as well as a residential component. It is designed to fit compactly on a small site on the town common, with a well defined street line, pedestrian friendly features and parking in the rear.



Pomeroy Commons, Amherst

Pomeroy Commons is a mixed-use development in Pomeroy Village Center of Amherst. Five townhouse style residential units occupy the top two floors, with commercial space on the street level. The site is located in the center of south Amherst, within walking distance of many amenities. The building features a front porch and balcony in the style of a grand old Berkshires hotel, parking in the rear, and secure bicycle storage in a shed at the end of the building.

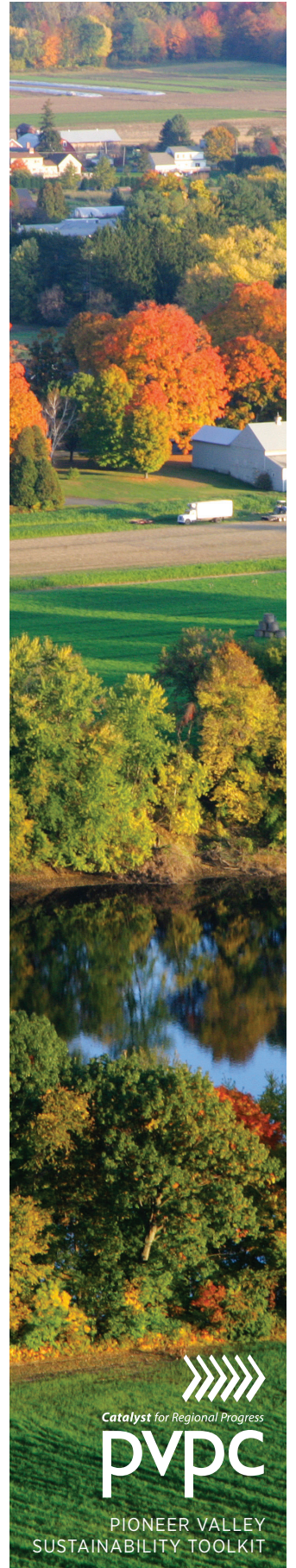
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Open Space Residential Development, Creative Development, & Conservation Development Bylaws

What are the objectives of Open Space Residential and Conservation Developments?

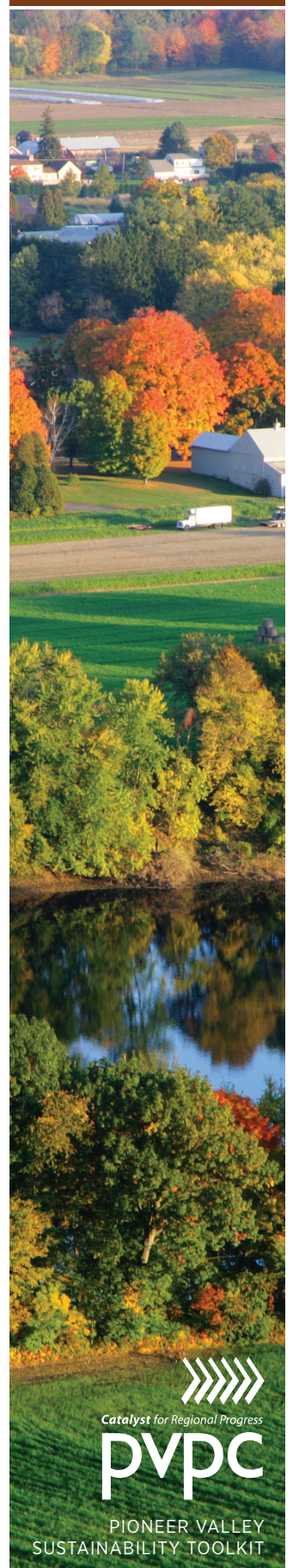
Cluster, Open Space, Conservation or natural Resource Developments, they are called many names as they've evolved over the decades but they are all essentially a variation on a theme, developments utilizing smaller lots in order to create more common open spaces. By promoting compact residential developments utilizing more flexible dimensional standards communities can preserve and enhance their rural town character by protecting open space, natural resources, and scenic areas, as well as promote the use of sustainable and energy efficient development standards .

Why do we need Open Space Residential & Conservation Developments?

Growth in many of our small cities and towns has been primarily comprised of ANR residential development along existing town roads and large lot single family home subdivisions. This has resulted in sprawling residential strips and the clearing of large swaths of woodlands and the conversion of farmland for individual single family homes. This has not only resulted in the loss of natural resources but has also contributed to the loss of a community's rural character and small town identity. Open Space Residential and Conservation Developments provide an alternate way for towns to accommodate growth, but in a more flexible manner which preserves open space and reduces the visual impact of residential development.

DID YOU KNOW...

In a national random sample survey of 1,130 adults age 18 and older, about 55 percent of Americans prefer a smart growth community and 45 percent prefer a sprawl community, after hearing detailed description of the two community types. (2004 National Community Preference Survey, conducted for Smart Growth America and National Association of Realtors).

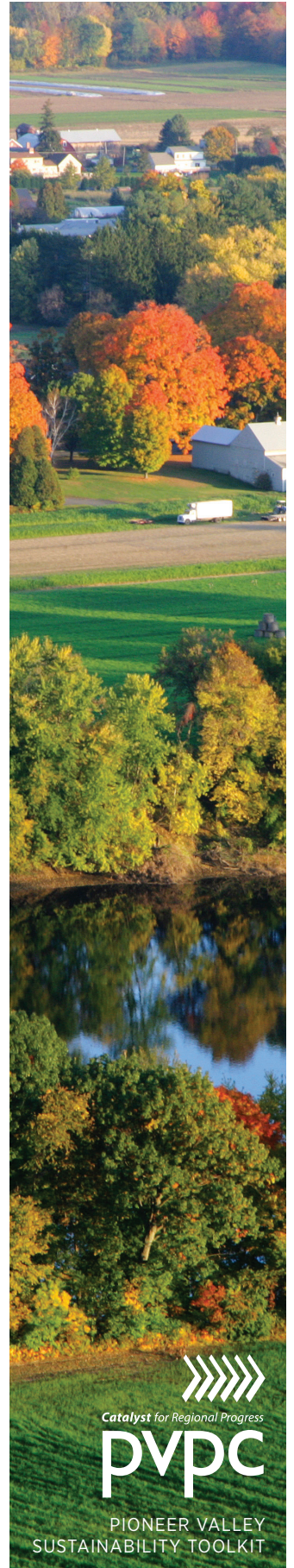




How do Open Space Residential and Conservation Development bylaws work?

These types of bylaws promote development using common driveways and flexible area and frontage requirements to create permanent open space and avoid standard Approval Not Required and conventional subdivision developments. While some versions are permitted by Special Permit recent variations are allowed by-right with a Site Plan Approval process. Through this process, towns work with the applicant to consider development standards such as Stormwater Management, Low Impact Development, Green Energy and Open Space Connectivity in designing the layout of lots and designing the development around the unique characteristics of the land. A portion of the development must also be set aside as permanently protected open space.

Over 65% of the communities in the Pioneer Valley Region have adopted Open Space Residential or Conservation Development Bylaws in one form or another.



PVPC OFFERS THREE MODEL VARIATIONS OF THESE BYLAWS:

Open Space Residential Development bylaw

This model is based on the more traditional cluster concept adopted by most communities in the region over the last 30 years. It often requires a Special Permit, Open Space Residential Developments permit greater density on smaller lots but includes specific minimum dimensional requirements for the reduced lot sizes and frontages. This bylaw typically requires a minimum 50% open space requirement. Only a limited percentage of the open space can be composed of wetlands, floodplains and areas of steep slopes to ensure adequate open space for active outdoor recreational activities.

Creative Development Bylaw

Expanding on the original version, Creative Development Bylaws utilize the same principles as Open Space Developments but allow more flexibility by utilizing common driveways and permitting reduced minimum lot sizes with no minimum frontage requirements. The purpose of this approach is to preserve open space and encourage structures to be situated on the site in a manner that minimizes their visual impact. Creative Developments are permitted by Special Permit and offer Farmland Preservation Standards as well as an Affordable Housing alternative.

Conservation Development Bylaw

Representing a more recent evolution of the concept, and building on the Creative Development Bylaw, Conservation Development Bylaws provide extremely flexible dimensional standards with no dictated minimum lot size or frontage requirements. The purpose of this is to encourage the design of the development that best fits the parcel's unique landscape--conserving the most unique features and blending roads and structures into the site's existing topography, vegetation, and context. The type of conserved open space has been expanded to also include farmland, historic/cultural and significant natural features, endangered species habitat and scenic views. The intent is that through the imaginative layout of the road, buildings and open space these parcels can appear to be undeveloped from the town roads giving the appearance of open space. To encourage developers to take advantage of this alternative Conservation Developments are often permitted By-Right with Site Plan approval and apply to both "ANR" lots and subdivisions.

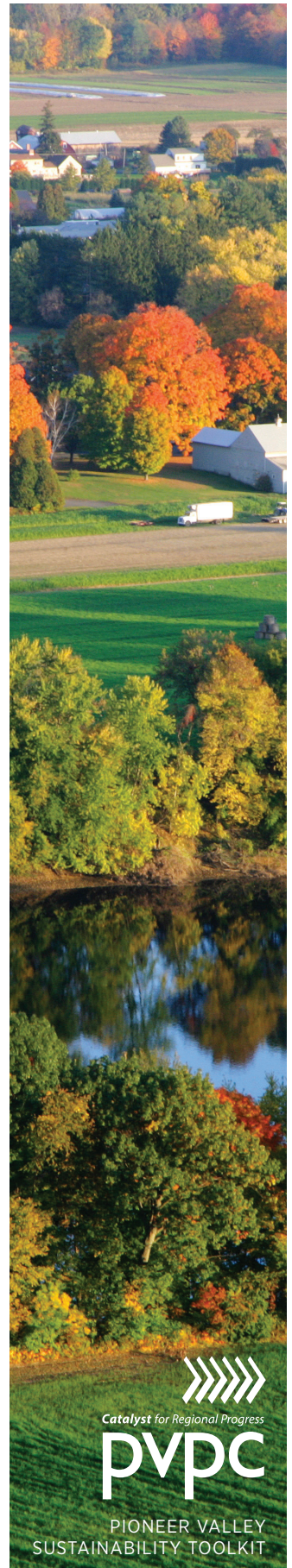
A model bylaw or strategy is included in the Pioneer Valley Sustainability Toolkit.

FOR MORE INFORMATION, PLEASE CONTACT

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Parking Bylaws



Northampton Parking Garage

What are the objectives of a parking bylaw?

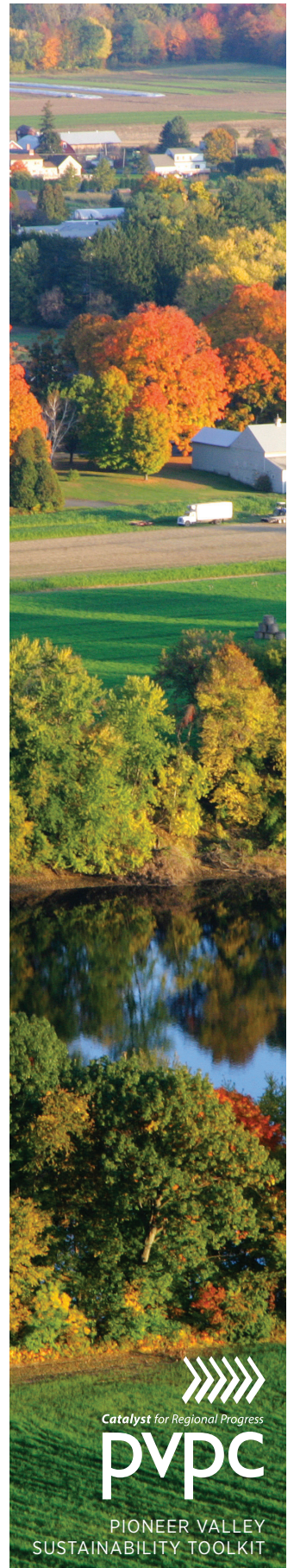
To ensure that all uses provide sufficient off-street parking space to meet the needs of employees, patrons and deliveries; to reduce congestion on streets; to improve pedestrian and vehicular circulation and safety in a cost effective and environmentally sound manner.

Why do we need a parking bylaw?

Parking is an essential component of any land use as well as the overall transportation system. Parking must be accommodated at every destination whether at a residence, convenience store, commercial strip or urban center. The vast majority of a vehicle's life is spent parking and utilizes several parking spaces over the course of the day. From a consumer's point of view there is a perceived parking problem if they can't park near the front door of where they want to shop, and from a developers point of view they are required to provide too much parking. Parking problems are less often a matter of supply and more often a matter of inefficient management of existing resources. Parking regulations promote better designed, more efficient and cost effective off-street parking creating more functional and attractive communities with reduced environmental impacts.

How do parking bylaws work?

Parking requirements are typically based on general land use categories and calculated on either the amount of square footage of a facility or the number of cars/trucks expected to be generated. Often times these numbers are based on a worst case scenario (i.e. holiday season shopping) leaving a majority of the parking lot unused for large portions of the year (resulting in increased construction costs, excessive stormwater run-off and heat island effects). In many urban centers parking requirements are being reduced



(and in some cases even eliminated) in place of instituting better parking management practices (off hour/dual usage of spaces, combined facilities, shared off-site facilities, parking garages, peak demand plans, pricing, improved signage, encouraging other modes of transportation, etc.). Bylaws can also, through a Special Permit, allow for a reduction in the number of parking spaces where it can be demonstrated as being warranted (employer car/van pooling, flexible/alternative work hours, telecommuting programs).

Some communities also allow for a payment into a municipal parking fund in lieu of physically providing the spaces on the ground. This enables communities to raise funds to develop new shared municipal parking facilities.

DID YOU KNOW...

Cost-effective parking management programs can usually reduce parking requirements by 20-40%

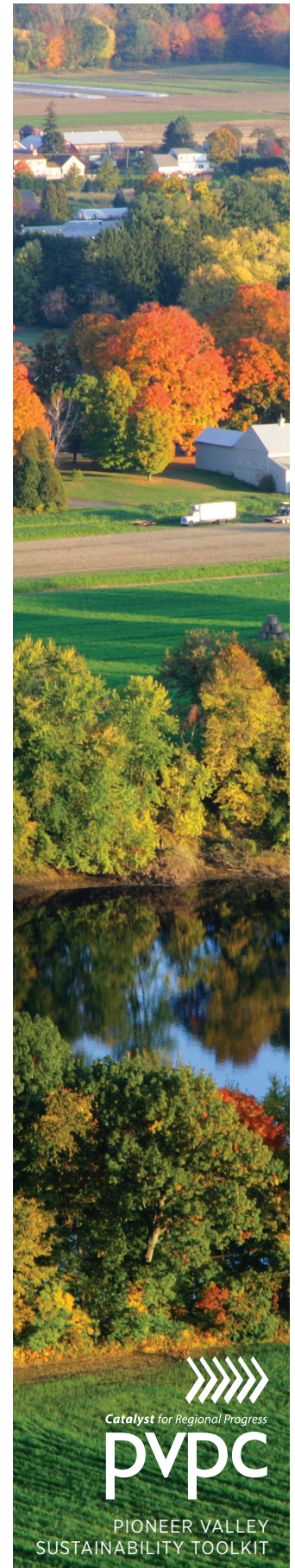
EXAMPLES FROM THE PIONEER VALLEY

Northampton MA

Northampton recently eliminated most of the parking requirements for its Central Business District. The downtown is well served by a municipal parking garage as well as a number of strategically located municipal parking lots. In addition the Planning Board can issue a Special Permit allowing multiple buildings, uses and parcels to share a combined facility. In all districts except the Central Business District the Planning Board can permit (through Site Plan Approval) a reduction of up to 20% of the required number of spaces with an acceptable trip reduction plan and even greater percentages (through a Special Permit) where dual usage of spaces are utilized based in different peak demand periods. The Planning Board can also issue a Special Permit for off-site parking in available non-municipal lots within 500-1000 feet of the use. The Central Business District also allows a by-right option to pay into a Downtown Parking Reserve Account to be used solely for expenses related to increasing parking availability, improving the management and utilization of existing parking spaces, or reducing the need for new parking.

Westfield, MA

Recognizing that strict on-site parking requirements sometimes discouraged otherwise viable and desired downtown revitalization projects, the city of Westfield recently revised its parking ordinance to provide more flexible standards and options. While downtown Westfield does not have a parking garage, it does have a number of well utilized and maintained municipal lots behind its main street stores. The ordinance allows for shared off-site facilities within 300 feet of the uses. The Planning Board can also issue a Special Permit for the multiple use of individual spaces in accordance with an approved Parking Management Plan. The Plan must demonstrate that the peak parking demand generated by the uses occur at different times, and that there will be adequate parking for the combined uses at all times. Westfield also offers a “payment in lieu of” option by Special



Permit in the downtown. These other new parking options are not just limited to the downtown but are also available in all business and industrial districts.

For more information on examples of Smart Parking from across Massachusetts, please refer to the state's *Smart Growth / Smart Energy Toolkit* developed by the Executive Office of Energy and Environmental Affairs.

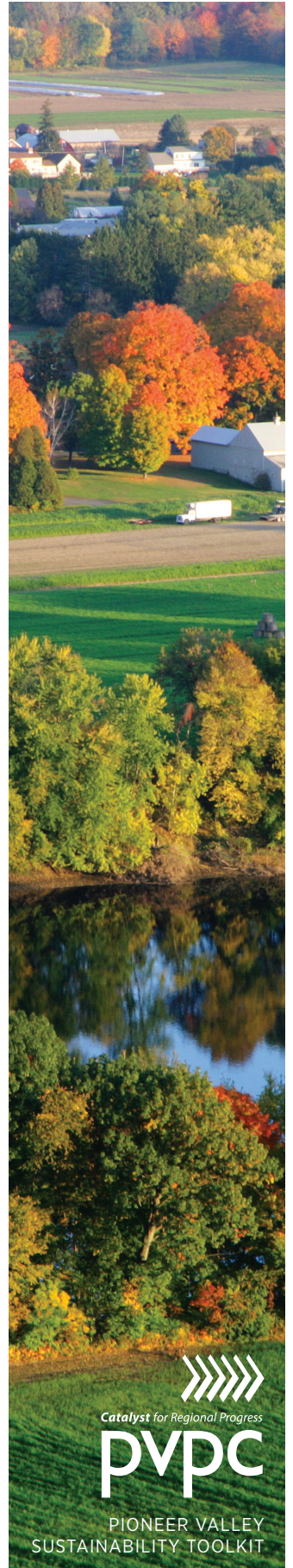
A model bylaw or strategy is included in the Pioneer Valley Sustainability Toolkit.

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Catalyst for Regional Progress

PVPC

PIONEER VALLEY
SUSTAINABILITY TOOLKIT

Planned Business Development



Village Commons, South Hadley

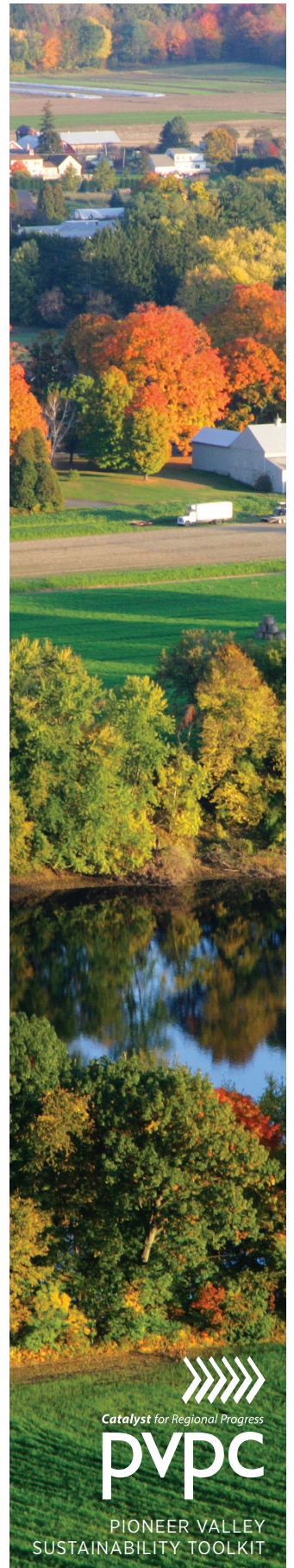
What are the objectives of Planned Business Development?

A Planned Business Development offers an alternate development tool allowing for a more creative and innovative approach to developing business and industrial uses. Projects are undertaken in a comprehensive coordinated manner with clustered buildings often utilizing shared parking, signage and utilities such as storm water drainage systems.

Planned Business Developments result in a lessening of traffic congestion, reduction in vehicle trips, and an increase in public safety through the coordination of land development and traffic patterns. They also promote more attractive development through grouping in clusters and nodes instead of typical highway strips. The resulting projects can be more compatible with existing development on adjacent sites, create a more pedestrian-friendly environment in both design and scale, and utilize a development review and approval process that meets these purposes without causing undue delays.

Why are Planned Business Developments needed?

By promoting Planned Business Developments, communities can capitalize on their limited availability of business and industrially zoned properties by maximizing their development potential with more efficient land usage resulting in an expanded tax base and increased job opportunities. Planned Business Developments provide greater opportunity for the construction of quality, attractive developments on large (or even limited) tracts of land by providing flexible guidelines which allow the integration of shared utilities and on-site improvements and increased densities in one development, sometimes issued under a single Special Permit/Site Plan Approval permit.



How does the zoning for Planned Business Developments work?

Communities adopt zoning provisions permitting Planned Business Developments through the issuance of a Special Permit and/or Site Plan Approval. These provisions also establish incentives to promote Planned Business Developments and performance standards to ensure that such projects have a positive effect on a community’s environment, character and quality of life. The incentives could allow for reduced lot sizes, increased densities, increases in the allowed percentage of building coverage, shared parking and reduced parking requirements.

DID YOU KNOW...

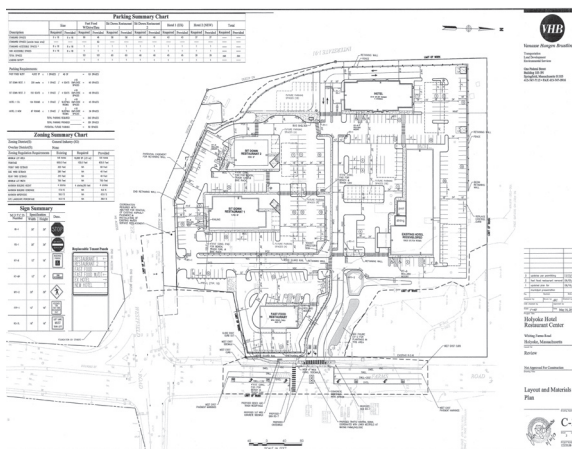
Planned Business Developments can be permitted through the issuance of a single Special Permit/Site Plan Approval that covers the entire parcel(s)/project. This single approval has the advantage of making the subsequent development of the individual units more marketable as being “shovel ready” and pre-permitted.

EXAMPLES FROM THE PIONEER VALLEY



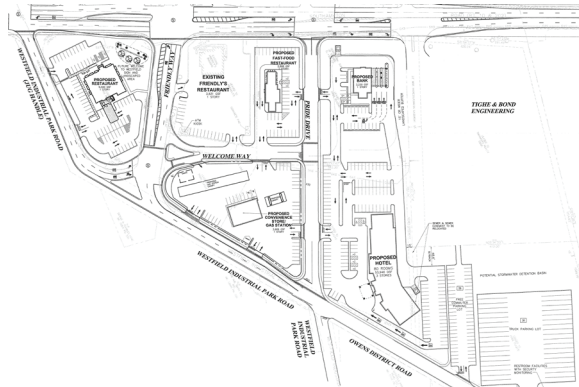
Village Commons, S. Hadley

Following a major fire, this site was redeveloped as a comprehensive mixed use project including retail shops, professional offices, restaurants, coffee shops, theaters personal services and apartments.



Holyoke Hotel & Restaurant Center, Holyoke

Proposed at the corner of Lower Westfield Road and Whiting Farms Road, this proposed redevelopment of a former Holiday Inn site will encompass a new hotel along with an array of restaurant types. Submitted as a single comprehensive project including all on-site traffic circulation, storm water drainage, lease areas, building envelopes, etc. The Planning Board approved the overall development's master plan and uses with unknown specific tenants. As each site is leased, tenants will meet with the Planning Board to review their lease area's landscaping and building materials.



Westpark, Westfield

Developed on Southampton Road across from the Mass Turnpike interchange, this development was also approved as a master plan addressing all traffic circulation, storm water drainage, and lease areas for the site. Like the example from Holyoke, the initial submission included only one identified tenant (Holiday Inn Express) and as each site is leased tenants will meet with the Planning Board to review their lease area's landscaping and building materials.

A model bylaw or strategy is included in the Pioneer Valley Sustainability Toolkit.

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Planned Unit Development



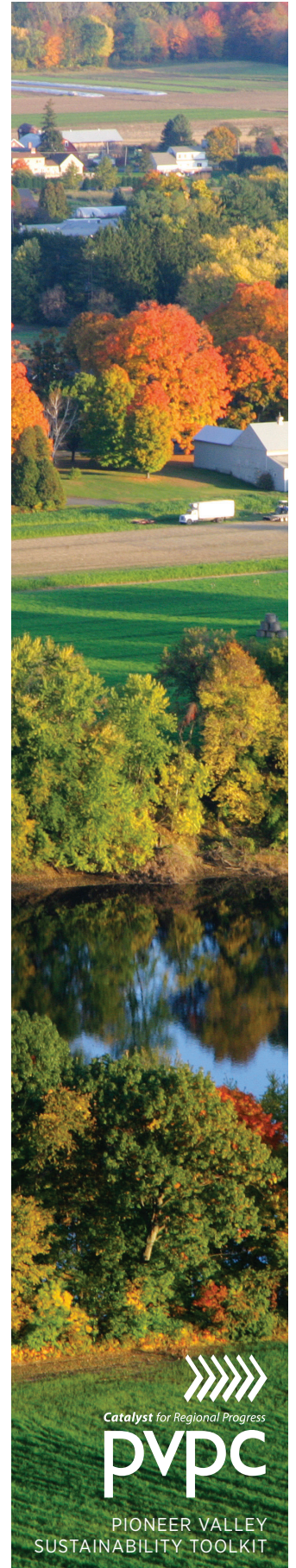
Echo Hill, Amherst

What are the objectives of Planned Unit Development?

The Planned Unit Development (PUD) is a form of development that usually includes a mix of housing units and nonresidential uses in one unified site or subdivision. Communities can minimize sprawling growth by replacing it with alternative development patterns such as Planned Unit Development projects which combine residential, retail, office, and public institutional uses in compact, pedestrian-friendly villages or clusters. PUDs create opportunities to live and work close to shopping, and services; and placing housing and jobs in close proximity reduces the number of vehicle trips to work, home, or shopping, limiting air pollution.

Why are Planned Unit Developments needed?

The adoption of a Planned Unit Development bylaw promotes development projects to develop a tract of land (relatively large scale, but not always) in a unified manner. Through PUDs, a municipality can achieve greater design flexibility in the development of particular land areas, and guide commercial and mixed-use projects to reflect the needs and character identified by the community. PUDs also provide the opportunity to achieve flexibility in architectural design, a mix of compatible land uses as well as the preservation of key natural or historic features, that are otherwise difficult to achieve using traditional, lot-by-lot zoning.



How does the zoning for Planned Unit Developments work?

Communities can adopt zoning provisions that establish incentives to promote Planned Unit Developments and performance standards to ensure that such projects have a positive effect on a community’s environment and quality of life. The incentives could allow for reduced lot sizes, increases in the allowed percentage of a lot that can be built upon, and reduced parking space requirements provided that the development is clustered and planned as an integral unit.

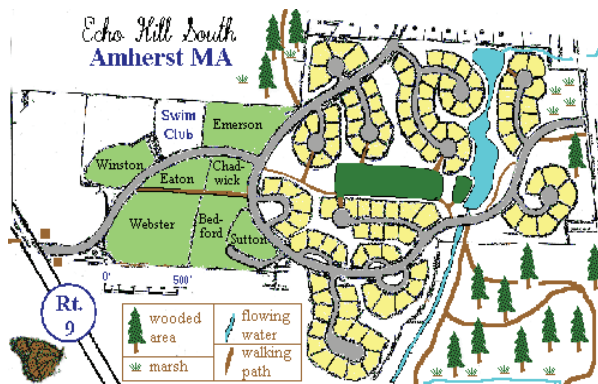
DID YOU KNOW...

In a 1990 study comparing market appreciation of homes in a cluster development versus a conventional subdivision, the cluster/open space Echo Hill development exceeded its conventional counterpart, Orchard Valley, in open-market, sale-price appreciation during the period of 1968 to 1989. (“An Examination of Market Appreciation for Clustered Housing With Permanent Open Space”, Jeff Lacy, Center for Rural Massachusetts)

EXAMPLES FROM THE PIONEER VALLEY

Echo Hill, Amherst

Located off of Route 9 in Amherst, Echo Hill South was conceived and built in the 1960s, becoming the first “open-space” development built under zoning in Massachusetts. Utilizing the flexible provisions of the planned unit development zoning bylaw, the developer and landscape architect designed and built the subdivision while preserving over 36 acres of commonly-held, open-space – nearly half the total area of the original tract.



Source: Echo Hill South (EHS) Community webpage

Echo Hill South houses six sets of condominiums, 102 single family homes, protected open space, marsh, walking trails, a health club and small commercial center. To accomplish this without affecting the overall housing density, individual house lots were reduced from the required one-half acre lots in the underlying zoning, to one-quarter acre. The remaining lands are now held in common ownership, with each individual homeowner possessing an undivided, but equal, interest in the property.



One major collector street serves the development. This roadway was built “over-standard,” having a paved width of 31 to 32 feet, 3 feet of which, on either side, is marked for pedestrian travel. It is a through-street, linking Echo Hill South to three entries and exits onto major roads. None of the 102 house lots have their road frontage on this collector street. Rather, 13 cul-de sacs and “eyebrow” streets form the core of distinct neighborhoods where the houses are grouped. These roads, designed for local-access traffic only, were built “under-standard,” with paved widths ranging from 21 to 28 feet. Each of the 13 access streets serves from 3 to 14 units, creating distinct groupings of houses.

The removal of trees and low-growing vegetation from the house lots was kept to a minimum. Open space, in the form of woods and fields, threads between adjoining neighborhoods, providing privacy while creating a rural atmosphere. Most of the open land remains in its natural, wooded state with an inter-connecting network of trails, providing every resident to direct access to the open space. A large, open field has been maintained as a “town green” which provides space for ball sports and community events. Nearby, a pond with park benches is available to residents for fishing, birdwatching and skating.

A model bylaw or strategy is included in the Pioneer Valley Sustainability Toolkit.

FOR MORE INFORMATION, PLEASE CONTACT

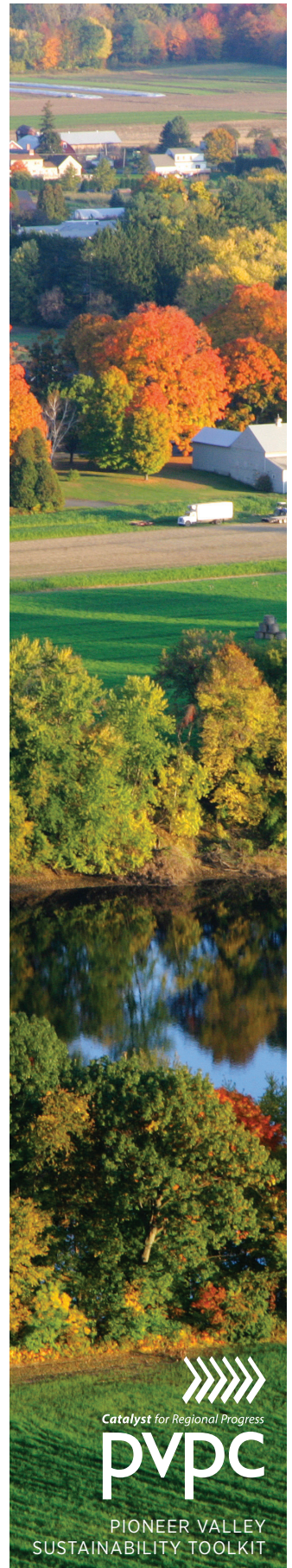
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Ridgeline & Hillside Development Bylaws



View of the Holyoke Range from Interstate-91

What are the objectives of Ridgeline and Hillside Protection Bylaws?

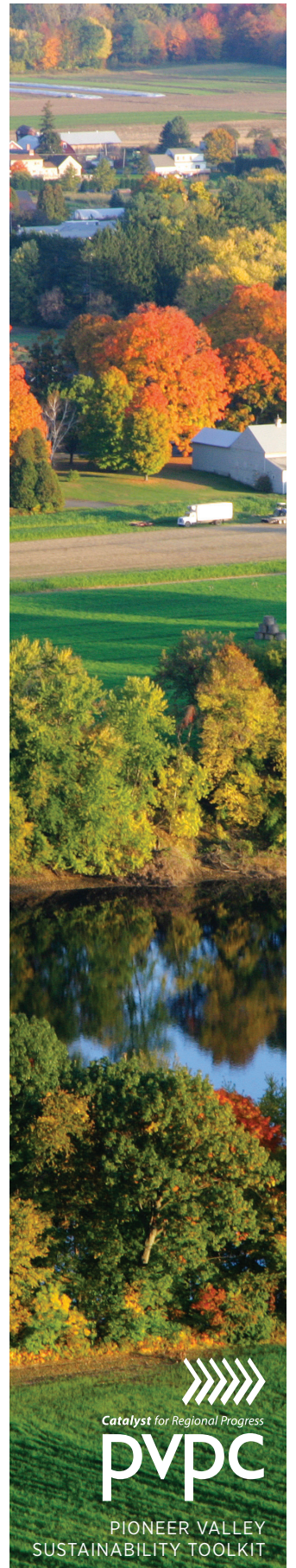
To protect scenic areas, such as prominent ridge lines, or exceptional vistas, as important resources which contribute to the character and quality of life in a community. These bylaws encourage carefully designed low-impact development which minimizes the removal of native vegetation and limits the excavation and alteration of land in order to reduce environmental impacts. Such bylaws also preserve and enhance biodiversity, wildlife habitat, corridors and open space linkages.

Why do we need Ridgeline and Hillside Protection Bylaws?

Most member communities of the Pioneer Valley Planning Commission are fortunate to have large areas of undeveloped hillsides, valleys and ridgeline areas which not only contribute considerable scenic and aesthetic value to the community's historic character, but also have special environmental and public health and safety concerns associated with their development. Inappropriate development of these fragile areas can result in excessive cuts and fills, unattractive slope scars, and erosion and drainage problems which can further result in septic tank failures, sedimentation, flooding, water pollution and the destruction of scenic qualities or natural resources.

How does a Ridgeline and Hillside Protection Bylaw work?

Adopted as an Overlay District, these regulations are designed to ensure that the development of such areas is done in an environmentally sensitive manner which protects the public health, safety, and welfare. Ridgeline and Hillside Protection Bylaws



are designed to be flexible, allowing for development to be tailored to the unique individual characteristics of each site and encouraging innovative approaches to ensure minimal environmental impacts. Bylaws include guidelines for appropriate site planning, buildings, utilities, grading, landscaping and erosion and sedimentation control. Development projects are reviewed by an advisory board that makes recommendations to the permitting authority ensuring that they comply with the purpose of the bylaw by balancing the development of the site with minimizing site alterations and impacts on the natural setting.

DID YOU KNOW...

Ridgeline and Hillside Protection Bylaws have two major objectives: the protection of views and the protection of natural features associated with hillside ecosystems.

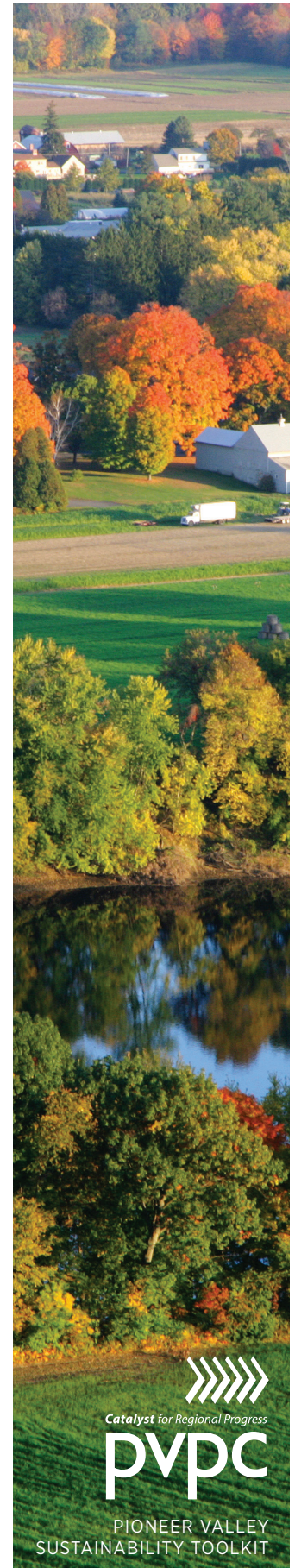
(“Aesthetics, Community Character, and the Law”, American Planning Association)



EXAMPLES FROM THE PIONEER VALLEY

Mount Tom and Mount Holyoke Ranges

In addition to ridgeline and hillside protection zoning bylaws, an intergovernmental compact is another way to protect these resources. The Mount Tom and Mount Holyoke Ranges’ unique attributes and vital natural resources are key components in defining the region’s character and quality of life especially in the Towns of Amherst, Belchertown, Granby, Hadley, and South Hadley, and the Cities of Easthampton and Holyoke. On April 21, 2001, the “Summit on the Range” was held and included participants from throughout the Pioneer Valley. Participants agreed to work cooperatively toward the protection of the Mount Tom and Mount Holyoke Ranges. Through a Memorandum of Agreement (MOA), the Towns of Amherst, Granby, Hadley, and South Hadley, the cities of Easthampton and Holyoke, the Pioneer Valley Planning Commission, the Executive Office of Environmental Affairs, as well as other signatories to the agreement agreed to work cooperatively to seek protection of the Mount Tom and Mount Holyoke Ranges and their scenic, natural, recreational and historic attributes.



The following PVPC communities of have adopted Ridgeline and Hillside Protection Bylaws:

- » Hampden
- » Monson
- » Wilbraham

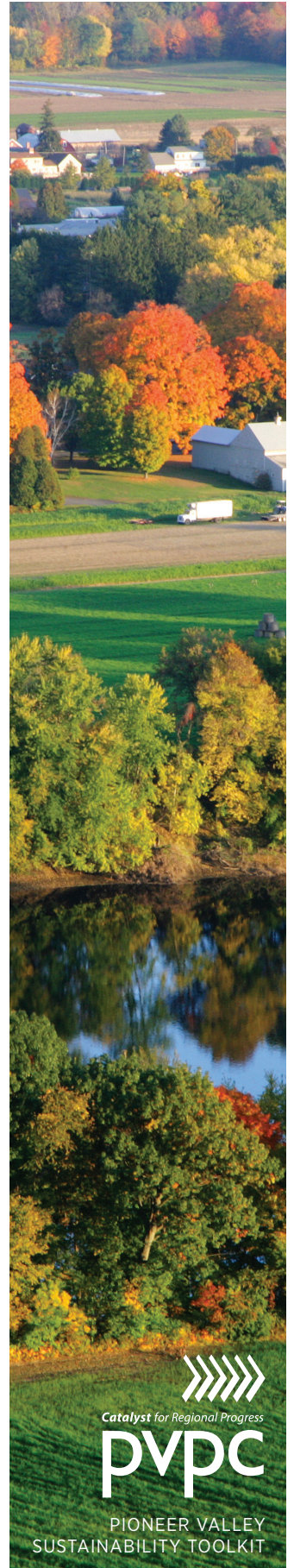
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Right to Farm Bylaws



What are the objectives of a Right to Farm Bylaw?

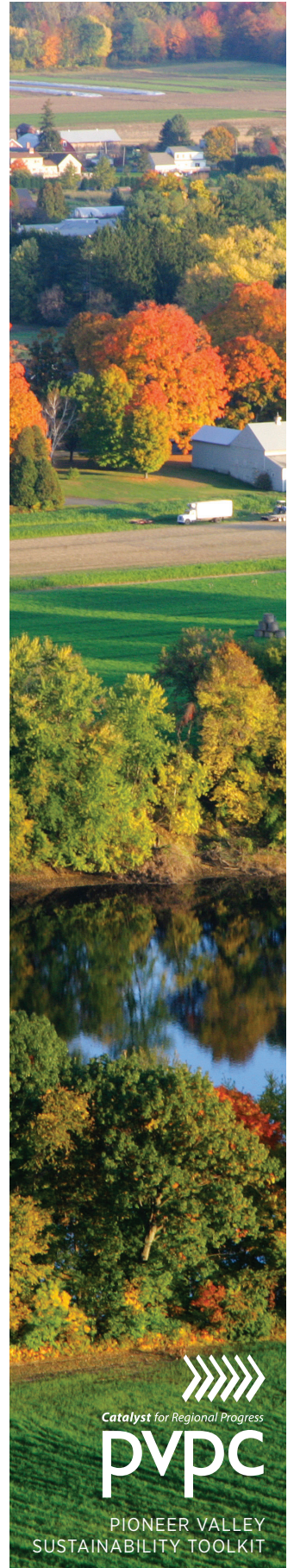
To protect and encourage the growth and development of farm-related businesses by protecting farmers and farm operators against nuisance lawsuits.

Why do we need a Right to Farm Bylaw?

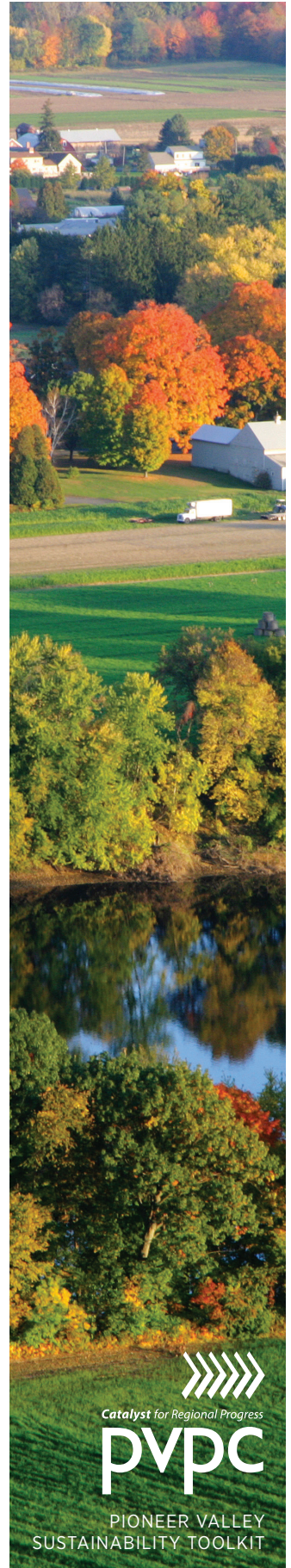
Over the past 30 years, as productive farmland has been converted to residential development, persons not involved in farming were beginning to move into traditional agricultural areas and with them they were bringing new complaints concerning odor, flies, dust, noise from field work, spraying of farm chemicals, slow moving farm machinery, and other necessary byproducts of farming operations. Many states, including Massachusetts, adopted Right to Farm language in the state statutes to protect active farmers from nuisance lawsuits from neighbors. Local communities in Massachusetts can also adopt a local Right to Farm bylaw to create public awareness relative to the needs of local farms and farmers.

How does a Right to Farm bylaw work?

A right-to-farm bylaw is a general bylaw that encourages the pursuit of agriculture, promotes agriculture-based economic opportunities, and protects farmlands within the community by allowing agricultural uses and related activities to function with minimal conflict with abutters and town agencies. Language is based on the all state statutes and regulations protecting agricultural activities, such as MGL Chapter 40A, Section 3; Chapter 90, Section 9; Chapter 111, Section 125A and Chapter 128 Section 1A.



Such a bylaw or ordinance restates and republishes these rights pursuant to a town's authority conferred by Article 89, or the "Home Rule Amendment" of the Massachusetts Constitution.



DID YOU KNOW...

In 1997, farm product sales in Massachusetts reached an all-time high of \$454 million. Net farm income —returns to the farm operator after paying expenses—climbed to a record high of \$143 million in 1997.

(“Agriculture’s Hold on the Commonwealth”, University of Massachusetts Amherst, 2000)

EXAMPLES FROM THE PIONEER VALLEY

Smart Growth Technical Assistance Grant Program

Several communities in the Pioneer Valley region were funded under Rounds 1 and 2 of the Smart Growth Technical Assistance Grant Program to prepare and adopt right-to-farm bylaws/ordinances. The Towns of Middlefield and Plainfield were funded under Round 1, both of which have adopted right-to-farm bylaws at their annual town meetings. The communities of Agawam, Granville, Hampden, Montgomery, and Westhampton were funded under Round 2 of this grant program. The Towns of Montgomery and Westhampton have adopted right-to-farm bylaws at Town Meeting. The Town of Hampden will vote on this bylaw at their spring town meeting and the Town of Agawam will vote on their right-to-farm ordinance during the summer of 2007. The Town of Granville has not yet adopted their right-to-farm bylaw but will consider it at a future town meeting.

Communities that have adopted Right to Farm Bylaw

Cummington / Hadley / Hatfield / Middlefield / Montgomery / Northampton / Plainfield / Southwick / Westhampton

A model bylaw or strategy is included in the Pioneer Valley Sustainability Toolkit.

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Rivers Protection Bylaws



East Branch of the Westfield River

What are the objectives of a local Rivers Protection Bylaw?

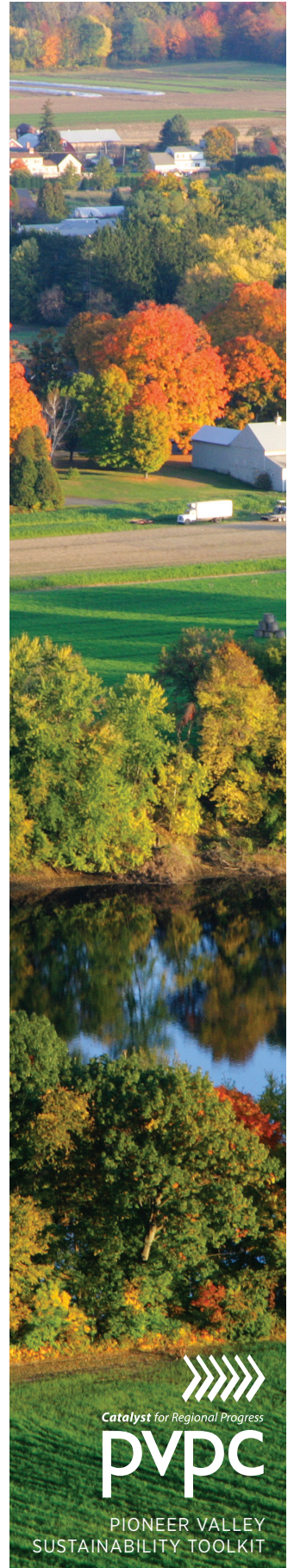
To increase community control over activities on riverfront areas not regulated by the Massachusetts Rivers Protection Act. Although the Rivers Protection Act does offer communities an opportunity to protect river areas, it is too broad-based to address specific community concerns generated by development activities.

Why do we need a local Rivers Protection Bylaw?

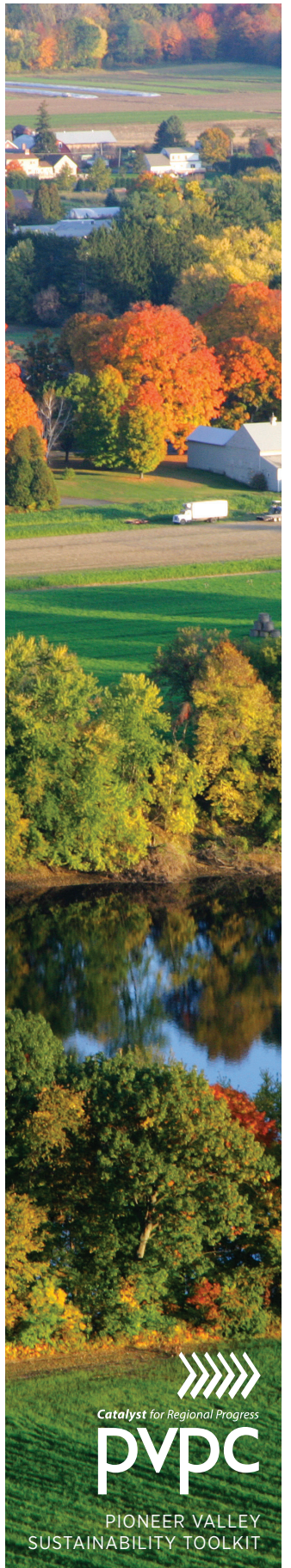
River channels, riverbank areas, and floodplains are rich ecological areas, providing habitat for a diverse array of birds, fish, plants, and animals. Linear river channels function as wildlife corridors for migrating birds, anadromous fish, and many animals. Rivers also attract people, being ideal places to hike, fish, boat, and enjoy nature. Floodplains are important natural flood storage areas that if left undeveloped, can help prevent flood damages and save lives in the event of a major flood. However, rivers are under considerable development pressure for a variety of uses, including housing developments, dams and hydroelectric facilities, and recreational activities.

How does a Rivers Protection Bylaw work?

A River Protection Overlay District can be designated for a portion of the riverbank from the shoreline landward up to an established distance from each bank. Uses permitted as a matter of right should be limited to those consistent with the scenic qualities of the river, such as agricultural production, recreational uses, reasonable emergency procedures,



conservation measures, and residential development on lots with frontage on an existing way (Approval Not Required Development). Residential subdivision in the district can be required to include mandatory clustering, and be located away from the shoreline to the maximum practical extent. River protection districts can also be designed to incorporate floodplain regulations. These regulations prevent development within the floodplain that might increase flood levels and velocities, or cause flood damages due to unanchored materials.



DID YOU KNOW...

Stormwater runoff is our most common cause of water pollution. Rainwater and snowmelt run off streets, lawns, farms, and construction and industrial sites and pick up fertilizers, dirt, pesticides, oil and grease, and many other pollutants on the way to our rivers, lakes, and coastal waters. (US EPA)

EXAMPLES FROM THE PIONEER VALLEY

Westfield River, National Wild and Scenic River

The Westfield River has been designated as a National Wild and Scenic River along a 78-mile section of the East Branch, Middle Branch and West Branch of the Westfield River. The National Park Service identified outstandingly remarkable values on the Westfield River, including cold water fisheries, recreational amenities, historic resources, historic villages, unique geologic features, rare and endangered species and biodiversity habitat, as well as one of the largest roadless wilderness areas remaining in Massachusetts.



In 1993, after years of study, adding protective bylaws, and working with an advisory committee composed of landowners and residents of Becket, Chester, Middlefield, Chesterfield, Worthington and Cummington, Pioneer Valley Planning Commission and Westfield River Watershed Association, 43 miles of the Westfield River were initially designated as a National Wild and Scenic River. In October 2004, the reach of the Wild and Scenic designation was expanded so that it now encompasses over 78 miles of river corridor, and ten communities.

PVPC drafted an intergovernmental compact for managing the river, which led to the creation of a Westfield River Wild and Scenic Advisory Committee. The MOA and Westfield River Greenway Plan outline other river protection strategies including: river protection bylaws; voluntary conservation restrictions; increasing the maintenance at river access points; grants for selected land acquisitions or improvements; riverbank beautification; and salmon restoration.

Each of the Westfield River Wild and Scenic communities has adopted a River Protection Zoning Overlay District which:

- » Restricts development within 100 feet of the river;
- » Limits cutting of trees and vegetation along the riverbank; and,
- » Prohibits uses which could degrade water quality to the river.

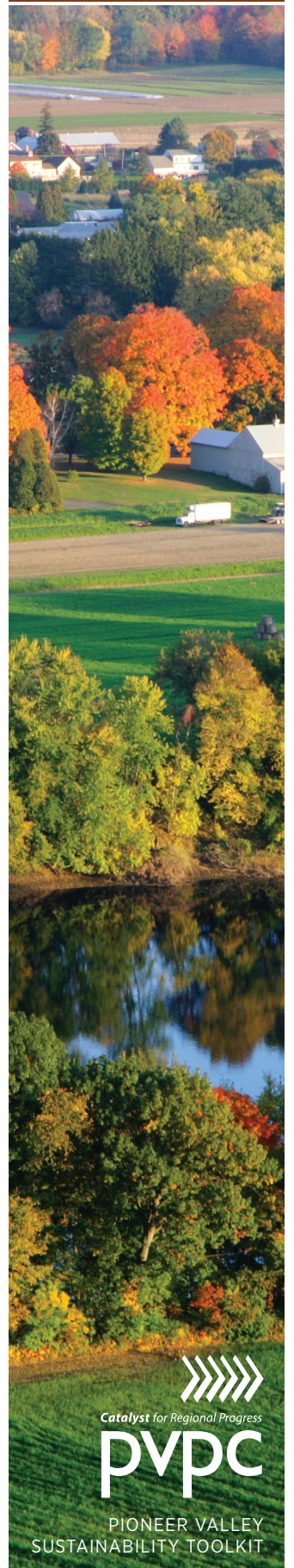
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Scenic Upland Protection



View of the Holyoke Range from Interstate-91

What are the objectives of Scenic Upland Protection?

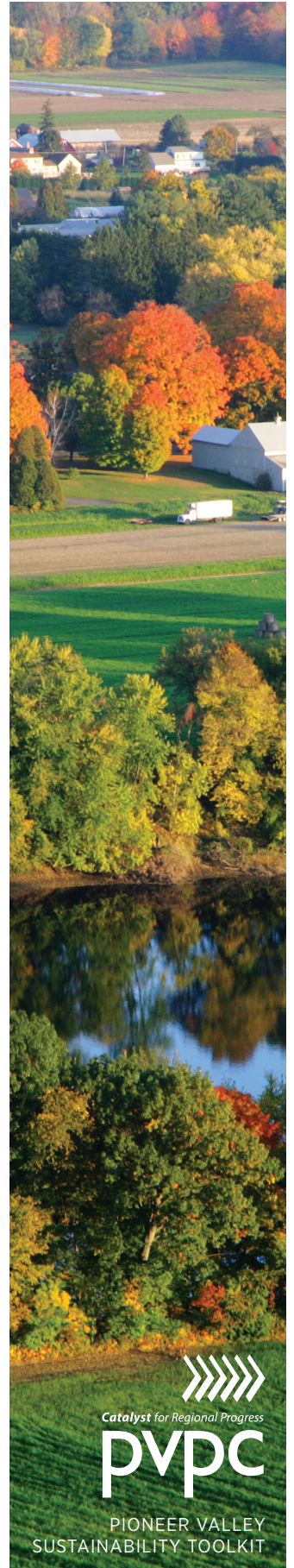
To protect scenic areas, such as prominent ridge lines, or exceptional vistas, as important resources which contribute to the character and quality of life in a community. To avoid problems of erosion, sedimentation, septic tank failures, flooding, water pollution, and the destruction of scenic qualities or natural resources.

Why do we need Scenic Upland Protection?

The Pioneer Valley is home to the Mount Tom and Mount Holyoke Ranges, the Berkshire Hills, and many other upland areas which contribute significantly to the unique character of the region. These upland areas have outstanding scenic qualities, outdoor recreational opportunities, wildlife resources, unique geologic features, forest resources, biodiversity, historic features, and unique natural and cultural characteristics. These same areas are also commonly the most fragile areas with the least carrying capacity for development due to steep slopes, unstable or poor soils, and inadequate public infrastructure. To avoid problems of erosion, sedimentation, septic tank failures, flooding, water pollution, and the destruction of scenic qualities or natural resources, development must be done with a particular sensitivity to the land in scenic upland areas.

How does Scenic Upland Protection work?

Scenic upland protection zoning bylaws can protect these important resources by regulating alterations to the land which may have significant effects on these natural resources. Scenic district regulations function in a similar manner to site plan review or design review bylaws. All proposed development is scrutinized for potential negative



effects on the environment, and on the scenic amenities of the district. The following issues can be addressed in scenic area regulations: 1) alterations to the environment, 2) new residential or commercial development, and 3) incentives for land uses which maintain scenic qualities.



DID YOU KNOW...

Scenic Upland Protection Bylaws have two major objectives: the protection of views and the protection of natural features associated with hillside ecosystems.

(“Aesthetics, Community Character, and the Law”, American Planning Association)

EXAMPLES FROM THE PIONEER VALLEY

Mount Tom and Mount Holyoke Ranges



In addition to scenic upland protection zoning bylaws, an intergovernmental compact is another way to protect these resources. The Mount Tom and Mount Holyoke Ranges’ unique attributes and vital natural resources are key components in defining the region’s character and quality of life especially in the Towns of Amherst, Belchertown, Granby, Hadley, and South Hadley, and the Cities of Easthampton and Holyoke. On April 21, 2001, the “Summit on the Range” was held and included participants from throughout the Pioneer Valley. Participants agreed to work cooperatively toward the protection of the Mount Tom and Mount Holyoke Ranges. Through a Memorandum of Agreement (MOA), the Towns of Amherst, Granby, Hadley, and South Hadley, the cities of Easthampton and Holyoke, the Pioneer Valley Planning Commission, the Executive Office of Environmental Affairs, as well as other signatories to the agreement agreed to work cooperatively to seek protection of the Mount Tom and Mount Holyoke Ranges and their scenic, natural, recreational and historic attributes.

A model bylaw or strategy is included in the Pioneer Valley Sustainability Toolkit.

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Sidewalk Requirements



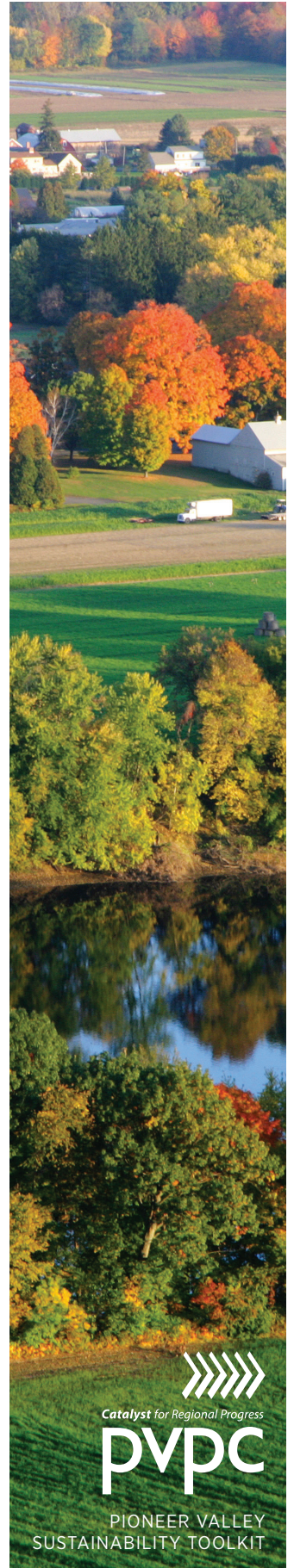
Photo courtesy of flickr user Complete Streets

What are the objectives of sidewalk requirements?

Sidewalk requirements ensure that a community builds and maintains adequate facilities for pedestrians. Pedestrians of all physical abilities and ages need functional sidewalks to safely access goods and services, move freely, and get exercise while carrying out day-to-day activities. Furthermore, sidewalk requirements can promote an attractive streetscape--one that is in harmony with a community's natural, historic, and aesthetic features.

Why do we need to encourage sidewalk requirements in our communities?

In 2012, there were 4,743 pedestrian fatalities and an estimated 76,000 pedestrian injuries in traffic crashes in the United States which equates to a pedestrian killed every 2 hours and injured every 7 minutes¹. High quality sidewalks can improve the safety of pedestrians and reduce the number of pedestrian deaths and injuries. In addition, improving sidewalks encourages more pedestrian traffic which has numerous personal and community benefits. A recent study has noted that by increasing pedestrian traffic, pedestrians in turn become safer². This is known as the safety in numbers hypothesis. As pedestrian traffic increases, deaths and injuries decline as motorists are more aware of pedestrians in the area. Pedestrians also contribute to eyes on the street which can reduce crime.



Sidewalks bring foot traffic to businesses, which can increase the value of real estate and improve a community's tax base. And finally, walking has numerous health benefits. Sidewalks are created in several ways. They may be created by a governmental body as part of road construction. They may be built by a private entity as part of a development project or subdivision. With the passage of the Americans with Disabilities Act in 1990, public entities are prohibited from designing new facilities or altering existing facilities--including sidewalks--without making them accessible to people with disabilities. However, communities can enact policies and regulations to speed implementation and fill gaps.

How do sidewalk requirements work?

Sidewalk requirements may be incorporated into a municipality's zoning code and/or subdivision regulations, and/or design guidelines, and/or as an administrative policy. Sidewalk requirements include regulations on where sidewalks shall be constructed within the community. This should include a) Areas where there are not sidewalks in existence and where pedestrian traffic is not adequately accommodated by existing sidewalks; b) Areas where there is an opportunity to make connections between existing or proposed sidewalks; c) All new developments and redevelopment, construction or reconstruction; and, d) Areas where the health, welfare, and safety of the public require that adequate sidewalks be provided for public convenience, including safe routes for school children to and from educational facilities.

Sidewalk regulations include standards that specify the dimensions and layout of sidewalks. These standards include minimum width requirements in compliance with the Americans with Disabilities Act, as well as slope and grade requirements, and standards that detail curb ramps, how to deal with intersections, driveway crossing, curb extension, crosswalk design, pedestrian signals, etc.

A pedestrian circulation plan may be required for all proposed subdivisions, site plan reviews and special permits. A pedestrian circulation plan includes a) The locations of streets and roads adjacent to the site and proposed roads within a site; b) The location of walkways, road, transit, parking infrastructure and all destination facilities; c) The links between sidewalks and pathways within the development to neighborhood destinations and existing sidewalks in the surrounding area; d) A description of estimated daily and peak-hour pedestrian trips to be generated by the site as well as the flow patterns for pedestrians showing adequate access to and from the site as well as circulation within the site; and, e) An interior traffic and pedestrian circulation plan designed to minimize conflicts and safety problems.

Within the subdivision rules and regulations a paragraph may be inserted in the Design Standards section to provide a direct way for the community to benefit. Requirements may include sidewalks on both sides of all public ways wherever topographically feasible, the inclusion of buffer strips and shade trees, and pedestrian and bicycle connections in cul-de-sac or oddly shaped blocks to enhance circulation. In areas where a sidewalk is limited to one side of the street, provisions may be made for the developer to install or repair an equal number of feet of sidewalk in another area of the community.

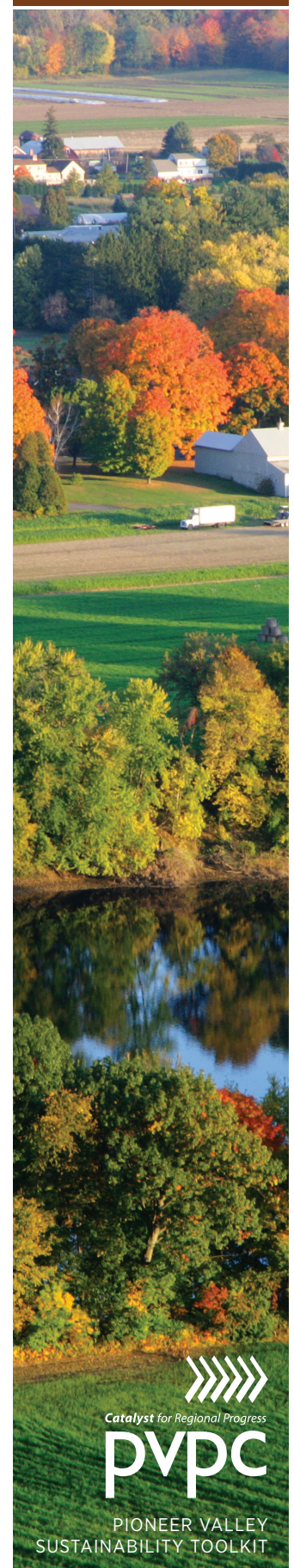
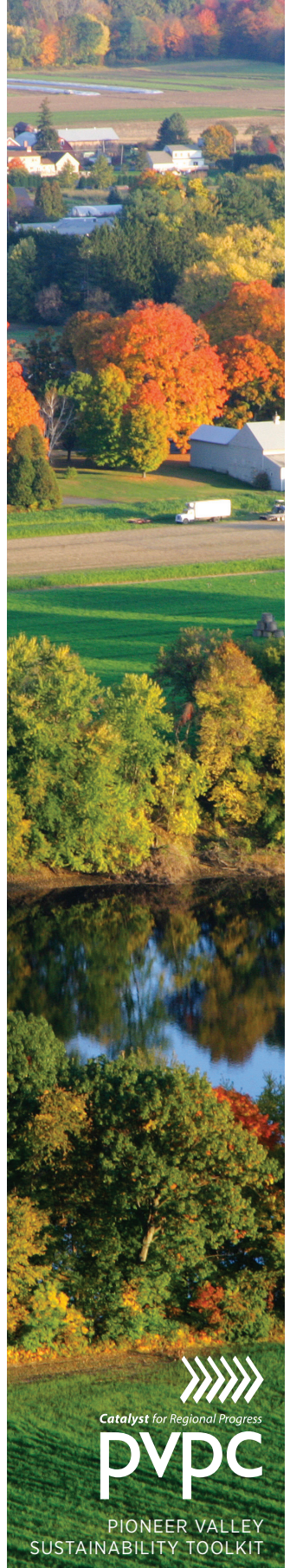




Photo courtesy of flickr user Complete Streets



DID YOU KNOW...

That there were 62 pedestrian fatalities in Hampden County and 11 pedestrian fatalities in Hampshire County between 2003 and 2012. The vast majority of these fatalities occurred on roadways of 40 miles per hour and over. (Source: Smart Growth America, *Dangerous by Design* 2014)

EXAMPLES FROM THE PIONEER VALLEY

Many communities in the Pioneer Valley have realized the benefit of encouraging walking through infrastructure improvements. The Town of Ludlow constructed sidewalks within a mile of every elementary school. With children walking to school the town revamped its crossing guard program and saved money on busing. With local funding sources in short supply, many communities have had to “get smart” when it comes to pedestrian improvements. To lower costs, East Longmeadow developed a prioritized sidewalk infrastructure improvement plan and began incorporating the cost of sidewalk improvements into larger roadway reconstruction projects. In the Forest Park neighborhood of Springfield, public works officials replaced painted crosswalks with new long wearing thermoplastic designs. While more expensive initially, the new crosswalks will last 5 times as long as painted crosswalks.

1 National Highway Traffic Safety Administration. (2014). Traffic Safety Facts: 2012 Data. Retrieved from: <http://www-nrd.nhtsa.dot.gov/Cats/listpublications.aspx?Id=A&ShowBy=DocType>

2 Jacobsen, P. (2003). “Safety in Numbers: More Walkers and Bicyclists, Safer Walking and Biking.” *Injury Prevention* (2003): 205-209.

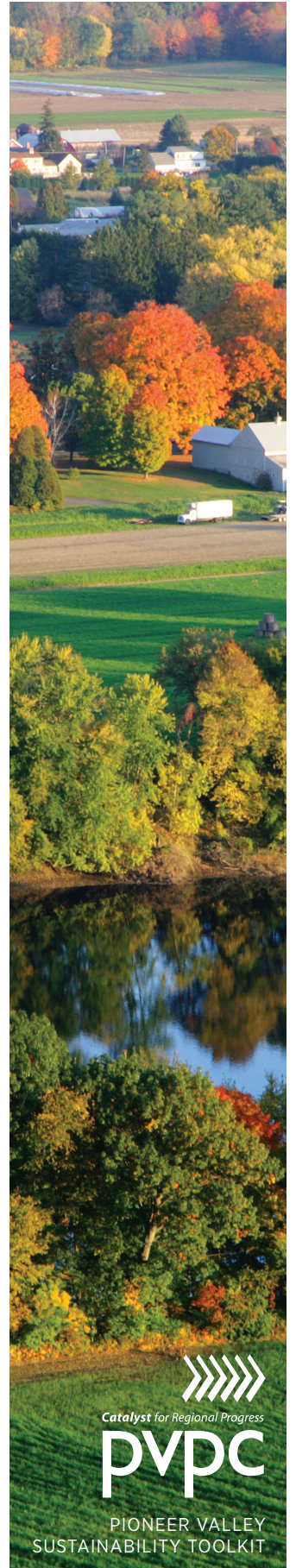
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Sign Bylaws



Route 20 in Westfield

What are the objectives of a sign bylaw?

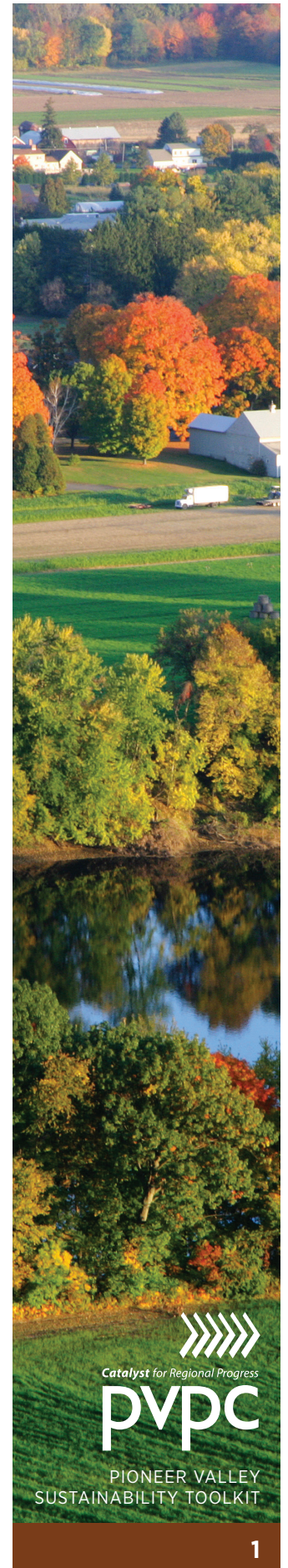
Sign bylaws establish guidelines and procedures designed to enhance the health, safety and visual environment of the community while still permitting businesses adequate visual exposure to patrons through the use of signage. Sign regulations, which at times may seem excessive, serve to curb unsightly clutter and provide a sense of uniformity to our communities making them more attractive and desirable.

Why do we need a sign bylaw?

Signage is an essential component of most land uses as well as way finding. Sign bylaws encourage the proper development and regulation of signs and signage systems to prevent them from becoming a distraction or obstruction to the safe flow of pedestrian and vehicular traffic. Sign regulations also prevent signage from becoming a nuisance to adjacent properties or uses while protecting and encouraging a healthful economic business environment and protecting the general health, safety, and welfare of the community. Effective sign regulations can promote economic development, create civic identity, identify community activities and events, and create vibrancy and excitement.

How do sign bylaws work?

Sign bylaws should be based on valid public purposes and further community goals. Well written sign bylaws provide comprehensive regulations that are clear, understandable and are easy to both comply with and enforce. They regulate size, quantity, type placement, location and illumination and permit signs which are appropriate for the districts in which they are located. Because there is such a wide variety of sign types, defining what constitutes a sign is critical. At what point does a mural become a sign? Does a canopy or awning sign constitute a wall sign? Signs are typically by-right upon the issuance of a



sign permit by the Building Inspector. However some communities require design review to encourage signage that is consistent and complementary with a district's particular existing character. Some communities require a Special Permit for certain types of signs (large signs, interior illuminated, scrolling message signs, etc.) so they can exercise a level of control. Sign bylaws should be flexible to facilitate creativity and need to be updated to keep pace with emerging technologies such as automatic changeable copy signs. While political signs cannot be prohibited, they can be reasonably regulated in terms of size, longevity and placement. Some communities provide flexibility to their sign regulations by permitting waivers to strict compliance through a Special Permit process.



DID YOU KNOW...

That the most effective sign bylaws are reached through consensus by balancing the needs of the local business community with the needs and interests of local residents and elected officials?

Cottage Street in Easthampton

A model Sign Bylaw is included in the Pioneer Valley Sustainability Toolkit. The model sign bylaw is intended to show what is typically included. Because each community is different, sign bylaws should be developed to reflect the unique challenges and opportunities of each individual community. The model can be used as a menu which can be tailored to address the needs and character of each individual business district.

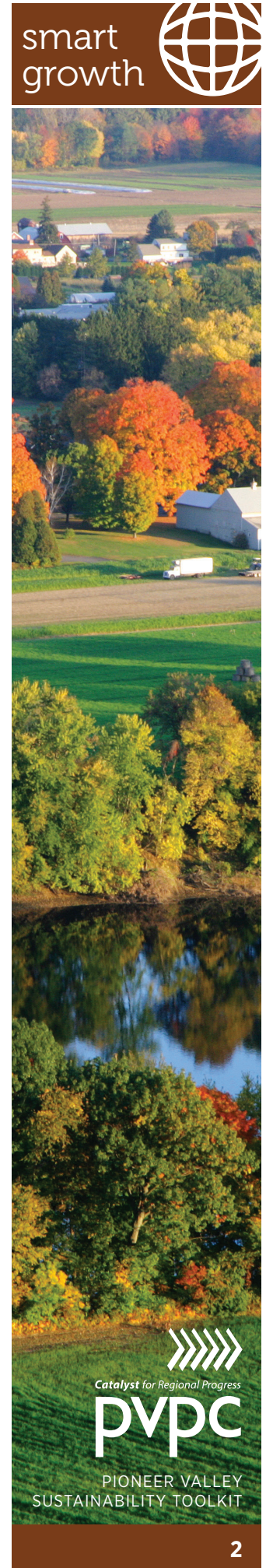
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Transfer Of Development Rights



What is the objective of a Transfer of Development Rights (TDR) bylaw?

The goals for a Transfer of Development (TDR) bylaw are to:

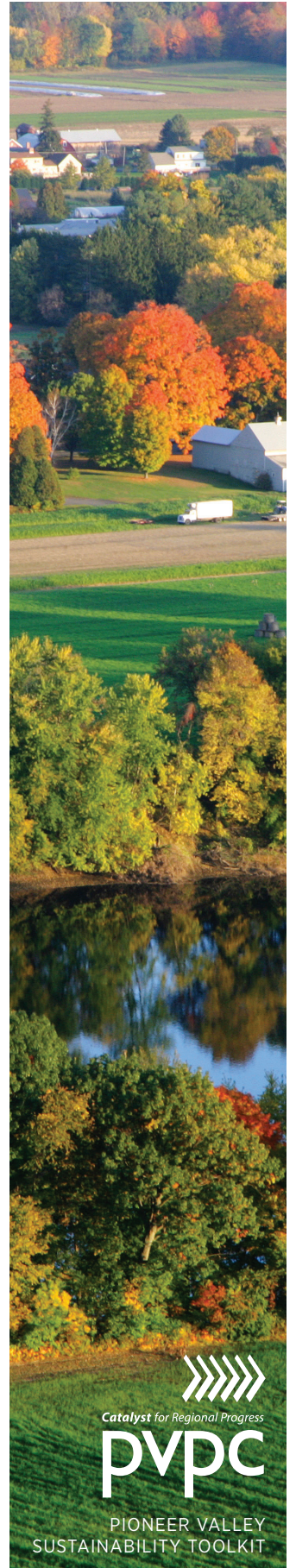
- » preserve farmlands, aquifer recharge areas and rural character;
- » protect river corridors, scenic uplands and mountains;
- » foster compact, mixed use development in town centers and village centers;
- » promote traditional neighborhood development;

TDR provides options to direct growth away from lands that should be preserved, to areas well suited for higher density development, such as village centers and areas with adequate infrastructure.

Why do we need a Transfer of Development rights bylaw?

Conventional low-density residential zoning allows for wide tracts of land to be developed as sprawl. Conversely, in areas that have emerged as potential community centers, existing zoning may not allow for density levels appropriate to a vibrant commercial or mixed-use district.

TDR provides another option for preserving farmland and open space, which benefits the community, farmers, landowners and businesses. It preserves farmland without needing public funds. TDR allows more options for businesses to expand in current business zones. TDR promotes creation of compact neighborhood-style residential developments to reduce sprawl. It is completely voluntary, and landowners only participate if they choose to do so.



How does a Transfer of Development Rights bylaw work?

The community identifies specific preservation areas as "Sending Areas" and specific development districts as "Receiving Areas". "Sending Areas" may include prime agricultural lands, water supply or aquifer protection areas, river corridors, uplands and mountains, and unique natural areas or scenic landscapes identified for protection in the Open Space and Recreation Plan. "Receiving Areas" may include town and village centers areas where compact mixed use growth is desired and served by infrastructure. This may include districts such as a General Business District or Village Center Business District.

The TDR bylaw allows development rights to be purchased in the Sending Area and transferred to the Receiving Area for use in more compact residential or business development projects, with the approval of a Special Permit. Project proponents can either purchase development rights directly from farmers or landowners, or can make a cash contribution to the community for purchasing agricultural or open space preservation restrictions.

The amount of money required to purchase these development rights is generally negotiated between the landowners, based on market values. In exchange for the purchase price, landowners in the sending area place a deed restriction on their property.

Developers who buy development rights are acquiring the capacity to build higher density on existing lots in a receiving area. For example, in exchange for each residential building lot for which development rights are purchased in the Sending Area, developers could have several options for property in the Receiving Area, including:

- » receiving a 5% increase in maximum building coverage for a single commercial or industrial lot;
- » receiving 1.2 residential building units and an increase in residential building coverage;
- » receiving a reduction in required parking by 20 spaces.

DID YOU KNOW...

The Town of Hadley has completed a total of ten TDR projects, generating a total of \$338,772 in TDR funds. This money has been used to offset the match requirements for APR purchases in the community, and has leveraged \$3.8 million in state APR dollars. As a result, Hadley has been able to protect over 356 acres of prime farmland using TDR.





Econolodge in Hadley used the TDR bylaw to reduce the required amount of parking in exchange for a farmland preservation payment.

EXAMPLES FROM THE PIONEER VALLEY

Transfer of Development Rights Bylaws in Easthampton, Hadley, Hatfield, and Westfield
Transfer of Development Rights (TDR) bylaw is used to protect valuable working agricultural lands and promote compact development in identified growth centers. TDR bylaws have been adopted in Hadley, Easthampton, Hatfield, and Westfield. The bylaw works by creating two new zoning districts: a Farmland Preservation District and a Receiving District. Development rights can be purchased from the Farmland Preservation District and transferred to the Receiving District to be used for residential, commercial, or industrial development projects. This bylaw essentially moves green space from the Receiving District to the Farmland Preservation District. Adoption of this bylaw can provide a community with another option for farmland protection, and give developers more options for development in already existing growth centers.

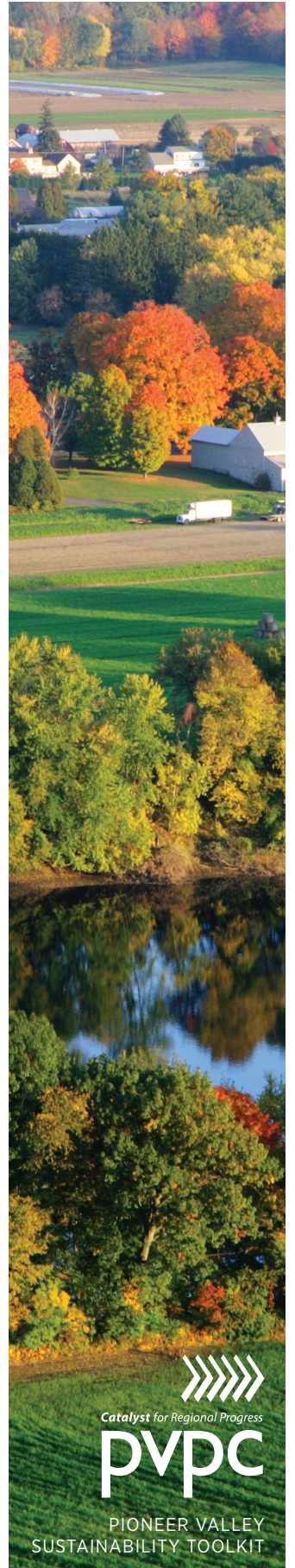
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Traditional Neighborhood Development



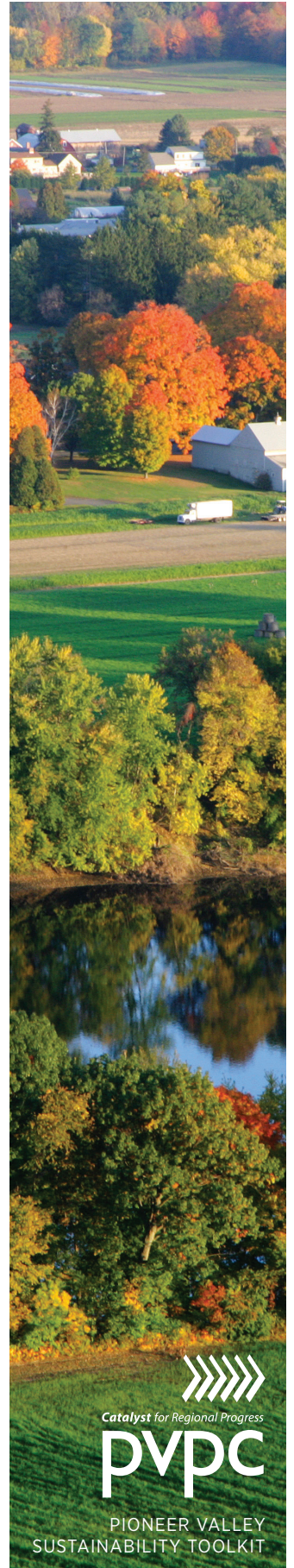
Village Commons, South Hadley

What is the objective of Traditional Neighborhood Development (TND)?

Traditional Neighborhood Development (TND) provides an alternative to traditional suburban sprawl by creating vibrant mixed use, pedestrian oriented neighborhoods revitalizing existing town centers, and creating new ones. By providing a balance of housing, shops, and public and civic spaces declining urban and village centers are stabilized and energized with new development that is in character with the traditional neighborhood.

Why is Traditional Neighborhood Development needed?

Higher density mixed-use developments with a variety of housing types in close proximity to shopping, jobs, parks, schools address many of the issues of both suburban sprawl and declining urban centers. TNDs preserve and replicate the characteristics of traditional New England town centers providing compact pedestrian friendly neighborhoods establishing a sense of place and identity. TNDs result in a reduction of car trips, protect environmental quality and open space, and increase the pedestrian/bicycling network. The community's tax base is strengthened, and declining neighborhoods are stabilized and revitalized.



How does Traditional Neighborhood Development work?

TND is unique in that it is flexible and can be used for small-scale rural villages as well as large-scale urban neighborhoods. It can be used for new developments or as infill in existing developed areas. This type of development is usually oriented around a public space with civic and commercial activities within easy walking/biking distance of the residents. Based on a ¼ mile maximum walking distance, a typical TND neighborhood scale is 10-15 acres. Higher residential densities are necessary to provide a population base sufficient to support the commercial and public functions of the TND. To ensure that projects incorporate the design and aesthetic elements which complement and strengthen the character of the neighborhood, TND incorporates form based and other standard zoning practices, as well as utilizing comprehensive design standards. Local history, character and architecture should be strongly considered and incorporated into the context, massing and scale of the development.

DID YOU KNOW...

TNDs are particularly well suited for preserving the rich character and sense of place of New England village centers, easily modified to fit each community's unique characteristics.

EXAMPLES FROM THE PIONEER VALLEY

Village Commons, South Hadley

Located in the center of South Hadley, proximate to Mount Holyoke College, this commercial center was constructed with a massing, scale and character integrating it into an old New England village center. The project replaced a number of historic buildings on the site which burned down and were raised in 1985. Comprised of eleven buildings the development presents a high density, 80,000 square foot commercial facility featuring eight restaurants, two luxury theaters, ten retail/service shops and over 30 professional offices creating more than 200 full and part-time jobs. It also includes 19 apartments.

Village at Hospital Hill, Northampton MA

This project represents a large scale comprehensive redevelopment of the former Northampton State Hospital. At build-out the proposed development will offer a full mix of residential (with varied housing types), assisted living, daycare, commercial, office, live/work artist studios and light industrial uses in a pedestrian/bike oriented campus.



EXAMPLES FROM OUTSIDE THE PIONEER VALLEY

For more information on examples of Transit Oriented Development from across Massachusetts, please refer to the state's Smart Growth / Smart Energy Toolkit developed by the Executive Office of Energy and Environmental Affairs.

A model bylaw or strategy is included in the Pioneer Valley Sustainability Toolkit.

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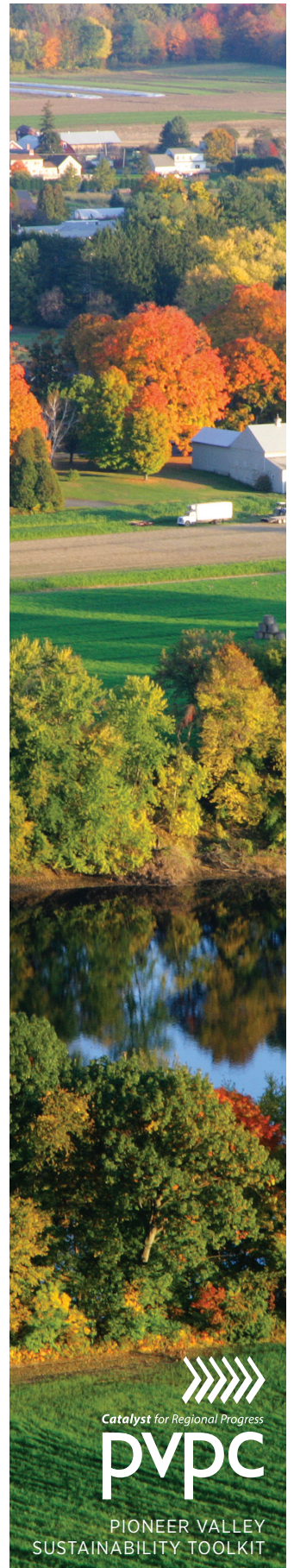
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Transit Oriented Development



Roundhouse Parking Lot project, Northampton

What is the objective of Transit Oriented Development? (TOD)

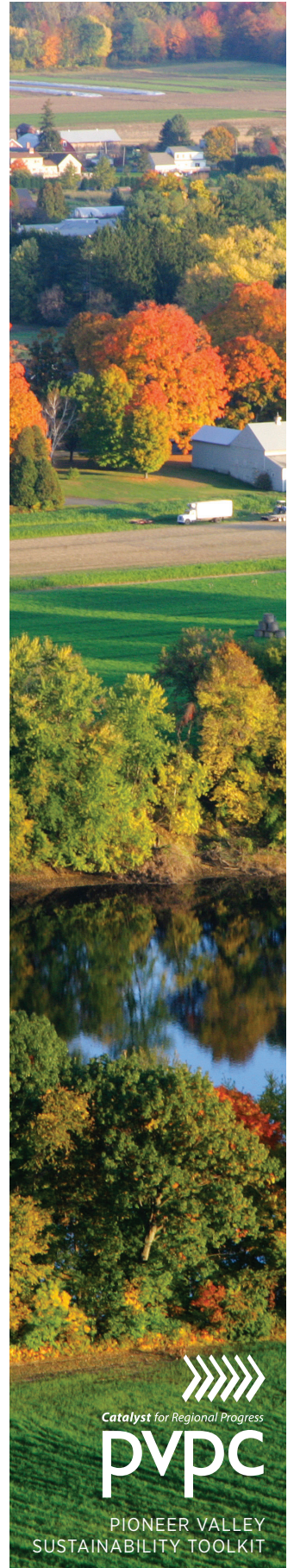
Transit Oriented Development (TOD) promotes a balance of jobs and housing, encourages the use of bus and other transit opportunities, while reducing single occupant vehicle trips and discouraging suburban sprawl. To begin to limit sprawl, improve air quality and provide access to goods, services and jobs in close proximity to residential areas, TODs offer opportunities for mixed-use development served by transit in higher density developments.

Why is Transit Oriented Development needed?

Concentrated mixed-use development and transit availability address the issues of sprawl, air quality, declining urban centers and variety in housing. TOD regulations can help limit sprawl by enabling mixed-uses and higher densities near transit stops with a good pedestrian access system. TODs reduce car trips, protect environmental quality and increase the pedestrian access network. The tax base is strengthened and new jobs infuse the local economy with increased activity.

How does Transit Oriented Development work?

Communities can create TOD zones within walking distance of major transit lines in urbanized areas, which allow for higher density and mixed-use. TODs typically consist of a mixed-use core commercial area adjacent to the transit stop. Surrounding the core commercial area is a mix of housing types, including small-lot single family, townhouses, condominiums, and apartments. TODs also include public uses, such as parks, plazas, greens, public buildings, and public services. Other transit and pedestrian-friendly strategies include: 1) Reducing parking requirements for developments in TOD zones



in anticipation of decreased automobile use, 2) Creating a comfortable pedestrian environment with tree-lined streets and sidewalks and well-defined transit stops to promote transit use, and 3) Providing incentives to developers for installing transit amenities such as bus shelters or benches.

DID YOU KNOW...

TODs are generally located within one-quarter to one-half mile from a transit stop.

EXAMPLES FROM THE PIONEER VALLEY

City of Northampton

The roundhouse parking lot project in the city of Northampton is an example of infill, brownfields re-development, and transit oriented development. The project is located in close proximity to the existing Peter Pan bus station and immediately adjacent to the primary PVTA transit pulse point for northern Hampshire County. The 146 PVTA/FRTA buses arrive and depart at this transit pulse point per work day. The project consists of a hotel, restaurant and conference space with a parking garage. In addition to transit access via the Peter Pan bus company and the PVTA/FRTA, the hotel will be running a bus shuttle service to the 5 colleges and Bradley International airport in Windsor Locks, CT. In addition to being serviced by the three sources of transit, the site is also located on a key route for bicyclists and pedestrians and is served by a local taxi company. The project is the hub of a city-identified TOD district that includes tax-credit affordable housing as well as high-end market housing.

EXAMPLES FROM OUTSIDE THE PIONEER VALLEY

For more information on examples of Transit Oriented Development from across Massachusetts, please refer to the state's *Smart Growth / Smart Energy Toolkit* developed by the Executive Office of Energy and Environmental Affairs.

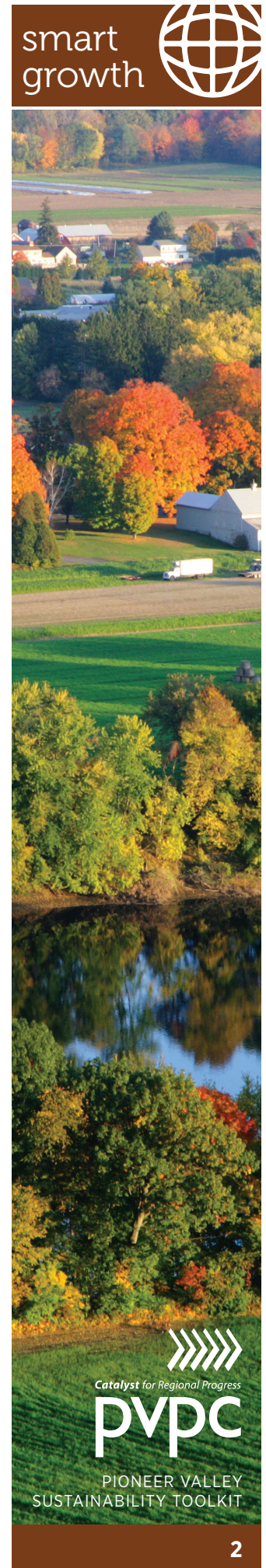
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Wetlands Protection Bylaws

What are the Objectives of a Local Wetlands Protection Bylaw?

To increase community control over activities that impact wetland areas not regulated by the Massachusetts Wetlands Protection Act. Although the Wetlands Protection Act does offer communities an opportunity to protect wetland areas, it is too broad-based to address specific community concerns generated by development activities.

Why do we need Local Wetlands Protection Bylaws?

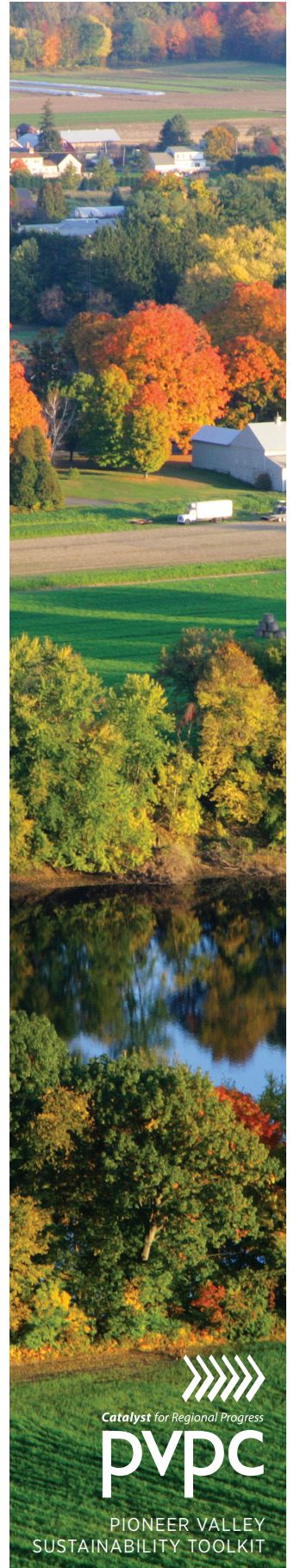
The 1968 Inland Wetlands Protection Act regulates dredging, filling, removing, and altering of wetlands. The Wetlands Act Amendments increased the scope of wetlands protected by the Act, including the addition of wildlife habitat as an interest of the Act. However, communities may desire additional control to address specific community concerns dealing with wetland areas.

Did you know that wetlands serve the following physical/hydrological functions?

- a) Flood Control
- b) Coastal Protection
- c) Ground Water Recharge
- d) Sediment Traps
- e) Atmospheric Equilibrium

Did you know that wetlands serve the following Chemical functions?

- a) Waste Treatment/Pollution Interception
- b) Biogeochemical Cycling



How do Local Wetlands Protection Bylaws Work?

A local wetlands protection bylaw could provide local regulation and greater protection of wetlands in the following areas:

- » Provide Conservation Commission jurisdiction over all isolated wetlands (i.e., vernal or seasonal ponds with amphibian habitat), some of which are currently unregulated by the Massachusetts Wetlands Protection Act;
- » Establish a one-hundred foot buffer zone (afforded by the Act to many wetland resource areas) for land subject to flooding;
- » Provide greater protection for wetland values such as recreation, aesthetics, erosion control, and wildlife which are not regulated by the Act;
- » Increase coordination between town boards on wetlands protection;
- » Define the required contents of a Notice of Intent;
- » Establish a system of fees based upon the complexity of a project, and difficulty of review.



Wetland area in Goshen; Source: PVPC

HOW AND WHERE ARE WETLANDS PROTECTION BYLAWS WORKING IN MASSACHUSETTS?

Case Study from the Pioneer Valley

Town of Belchertown

The Town of Belchertown in Hampshire County adopted a wetlands protection bylaw in 1989. The Wetland Protection District in Belchertown is an overlay protection district that applies to all lands within 100 feet of a wetland resource area as defined under MGL Ch. 131, Section 40, the Wetlands Protection Act, and Chapter 139, Wetlands Protection, of the Code of the Town of Belchertown. The purpose of the bylaw is to: (a) protect citizens from flooding, poor drainage, reduced property values, impaired water supplies and threats

to health and safety in wetlands and along streams and other watercourses; and (b) to complement the provisions of the Massachusetts Wetlands Protection Act, MGL Ch. 131, Section 40. Essentially, all uses in the underlying zoning districts whether by right or by special permit are still allowed. However, applicants have to submit to the Building Inspector the original or a certified copy, in addition to other requirements for a building permit, of: (a) a negative determination of applicability of the Massachusetts Wetlands Protection Act, MGL Ch. 131, Section 40, issued by the Conservation Commission, as described in that Act; or (b) an order of conditions, as defined in the Wetlands Protection Act, issued by either the Belchertown Conservation Commission or the Massachusetts Department of Environmental Protection, covering the proposed structures and related improvements.

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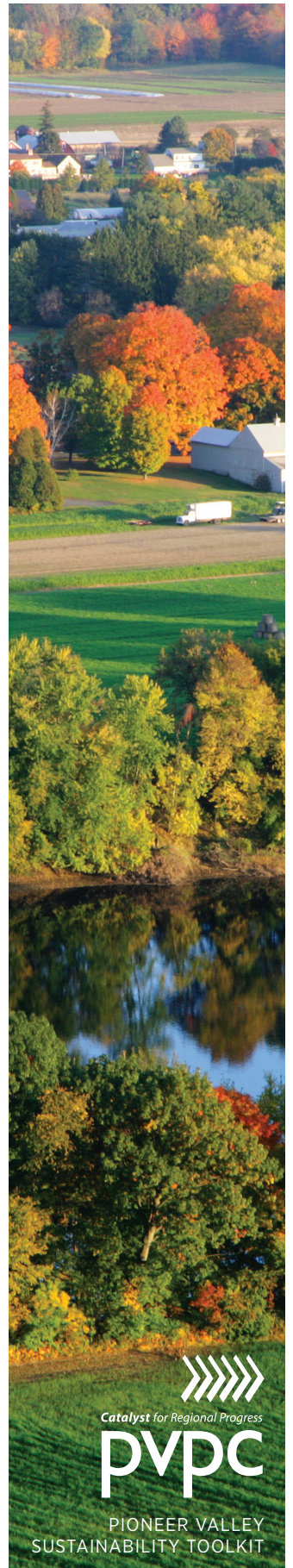
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MODEL SMART GROWTH BYLAWS

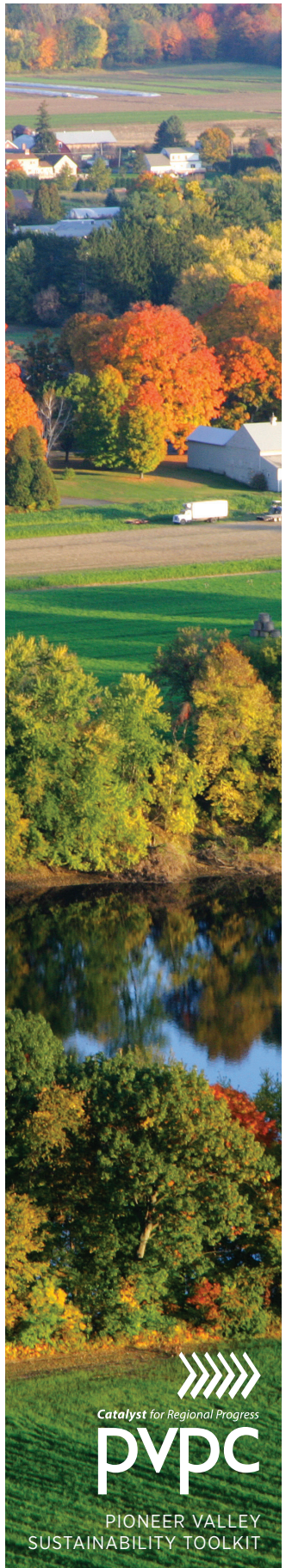


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Signs Model
Bylaw 

Stormwater Erosion
and Sediment Model
Ordinance 

Stormwater Illicit
Connections Model
Bylaw 

Stormwater LID Model
Bylaw Template 

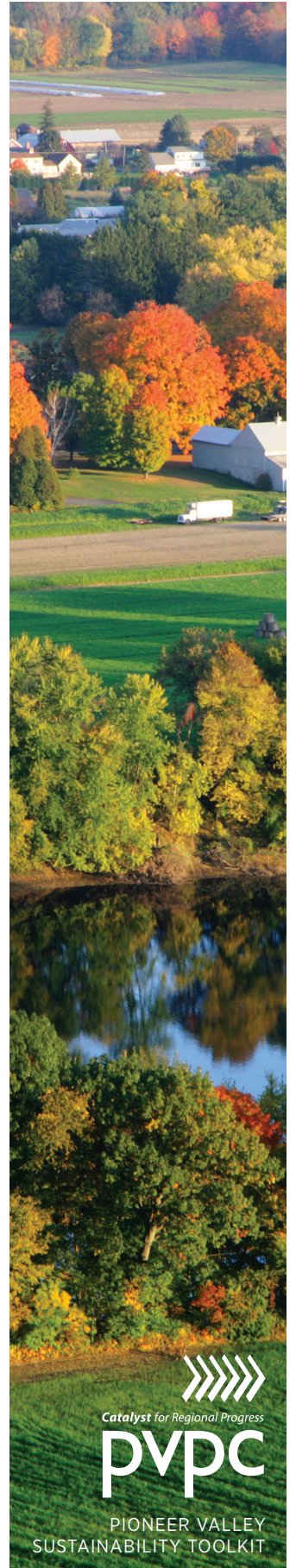
Stormwater
LID-Residential
Model Bylaw 

Stormwater Utility
Model Bylaw 

Traditional
Neighborhood
Development
Model Bylaw 

Transfer of
Development Rights
Model Bylaw 

Water Supply
Protection
Model Bylaw 



Catalyst for Regional Progress

PVPC

PIONEER VALLEY
SUSTAINABILITY TOOLKIT

MODEL ACCESSORY APARTMENT BYLAW

Prepared by the Pioneer Valley Planning Commission

1.0 ACCESSORY APARTMENTS

1.1 **Purpose**

The purpose of the accessory apartment bylaw is to:

- a. Provide older homeowners with a means of obtaining, through tenants in accessory apartments, rental income, companionship, security, and services, and thereby to enable them to stay more comfortably in homes and neighborhoods they might otherwise be forced to leave;
- b. Add inexpensive rental units to the housing stock to meet the needs of smaller households, both young and old;
- c. Make housing units available to low and moderate-income households who might otherwise have difficulty finding homes within the town;
- d. Protect stability, property values, and the residential character of a neighborhood by ensuring that accessory apartments are installed only in owner-occupied houses and under such additional conditions as may be appropriate to further the purposes of this bylaw; and
- e. Legalize conversions to encourage compliance with the State Building Code.

1.2 **Definitions**

Accessory Apartment: A self-contained housing unit incorporated within or accessory to a single family dwelling complete with its own sleeping, cooking, and sanitary facilities and a separate means of egress.

Building, Attached: A building having any portion of one or more walls in common or within five feet of an adjacent building.

Building, Detached: A building having a five feet or more of open space on all sides.

Dwelling, Single-Family: A building designed or used exclusively as a residence and including only one dwelling unit.

Primary Residence: A building in which is conducted the principal use of the lot on which it is located. For residentially zoned lots, such a building would be a dwelling.

1.3 Accessory Apartment Standards

Accessory Apartments shall be allowed Special Permits in all districts. The Special Permit Granting Authority (SPGA) may authorize a Special Permit for a use known as Accessory Apartment in owner-occupied, single-family dwelling, or in a detached accessory structure appurtenant to the single-family dwelling, provided that the following standards and criteria are met:

- a. The apartment will be a complete, separate housekeeping unit that functions as a separate unit from the original unit.
- b. Only one apartment will be created on a single-family lot.
- c. The lot in which the single-family house is located must meet the minimum lot size requirement and must comply with other applicable zoning requirements for its district.
- d. The owner(s) of the residence in which the accessory apartment is located shall occupy at least one of the dwelling units on the premises.
- e. The accessory apartment shall be designed so that the appearance of the building remains that of a one-family residence as much as feasibly possible. In general, any new entrances shall be located on the side or rear of the building. Any exterior changes made must conform with the single-family character of the neighborhood.
- f. An addition to the original building is permitted provided that the addition does not increase the floor area or volume of the original building by more than one-third (33%) of the existing total residential space (excluding unfinished attic and basement, garage, porch, and patio). These same dimensional criteria shall apply to an Accessory Apartment constructed in a existing detached dwelling (such as a garage, barn, or carriage house), or to an Accessory Apartment constructed as part of a new detached dwelling.
- g. The accessory apartment shall be clearly a subordinate part of the single-family dwelling. It shall be no greater than one-third (33%) of the existing total residential space or eight hundred (800) square feet, which ever is less.
- h. At least two off-street parking spaces per dwelling unit are available for use by the owner-occupant(s) and tenant(s). Parking spaces shall be located to the side or the rear of the structure, to the extent feasible.
- i. For dwellings to be served by on-site septic system, the owner must obtain a Disposal Works Construction Permit from the Board of Health before a special permit

can be obtained. This is to ensure that the existing sewage disposal system is adequate for the proposed accessory apartment.

j. The construction of any accessory apartment must be in conformity with the State Building Code requirements.

1.4 Application Procedure

a. The procedure for the submission and approval of a Special Permit for an Accessory Apartment shall be the same as prescribed in the (Special Permit Section of the Zoning Bylaw) except it shall include a notarized letter of application from the owner(s) stating that he/she will occupy one of the dwelling units on the premises. A non-refundable fee shall be included with the application for an accessory apartment to cover the cost of processing the application and code inspections. The applicant shall also be responsible for the cost of legal notices. As part of the public hearing process, parties of interest, as defined in M.G.L. Chapter 40A, Sec. 11 must be notified.

b. Upon receiving a special permit, the owner(s) must file on subject property a Declaration of Covenants at the County Registry of Deeds. The Declaration shall state that the right to rent a temporary accessory apartment ceases upon transfer of title. A time-stamped copy of the recorded Declaration shall be provided to the Zoning Board of Appeals.

c. In order to provide for the development of housing units for disabled and handicapped individuals, the Planning Board will allow reasonable deviation from the stated conditions where necessary to install features that facilitate access and mobility for disabled persons.

1.5 Transfer of Ownership of a Dwelling with an Accessory Apartment

a. The temporary Special Permit for an Accessory Apartment shall terminate upon the sale of property or transfer of title of the dwelling, unless the Planning Board has approved a transfer of the Special Permit to the new owner.

b. The new owner(s) must apply for transfer of a Special Permit for an Accessory Apartment and shall submit a notarized letter of application stating that he/they will occupy one of the dwelling units on the premises and a written request to the Planning Board stating that conditions at the time of the original application remain unchanged. Minor changes may be approved without a hearing.

c. Upon receiving the transferred special permit, the new owner(s) must file on subject property a Declaration of Covenants at the County Registry of Deeds. The Declaration shall state that the right to rent a temporary accessory apartment ceases

upon transfer of title. A time-stamped copy of the recorded Declaration shall be provided to the Planning Board.

1.6 Accessory Apartments in Existence Before the Adoption of an Accessory Apartment Bylaw

a. Statement of Intent

To ensure that accessory apartments or conversions in existence before the adoption of this Accessory Apartment Bylaw are in compliance with the State Building Code Regulations.

b. Application Procedure

The Planning Board may authorize, under a Special Permit and in junction with the Building Inspector, use known as an Accessory Apartment. The board will review each existing use on a case-by-case basis to determine if the dwelling conforms to State Building Code Regulations.

The applicant must follow the same procedure described in this Section including the submission of a notarized letter declaring owner occupancy and a Declaration of Covenants.

1.7 Conflict with Other Laws

The provisions of this bylaw shall be considered supplemental of existing zoning bylaws. To the extent that a conflict exists between this bylaw and others, the more restrictive bylaw, or provisions therein, shall apply.

1.8 Severability

If any provision of this bylaw is held invalid by a court of competent jurisdiction, the remainder of the bylaw shall not be affected thereby. The invalidity of any section or parts of any section or sections of this bylaw shall not affect the validity of the remainder of the town's zoning bylaw.

MODEL AGRICULTURAL COMMISSION WARRANT ARTICLE

Prepared by the Pioneer Valley Planning Commission

1.0: Agricultural Commission

To see if the Town will vote to establish an Agricultural Commission to address and represent agricultural issues and interests in the Town of [NAME].

The purpose of the Commission is to preserve, revitalize and sustain the Town's agricultural industry and to promote agricultural based-economic activities. Said Commission once appointed shall develop a work plan to guide its activities as charged by the Board of Selectman. Such activities include, but are not limited to:

- Encourage the continued pursuit of agriculture in Town;
- Promote agricultural-based economic opportunities in Town;
- Work with Town Boards and other local organizations on projects and activities involving agricultural lands in Town;
- Mediate, advocate, educate, and negotiate on farming issues;
- Work for preservation of prime agricultural lands; and
- Pursue all initiatives appropriate to creating a sustainable agricultural community.

The Board of Selectman shall appoint a five-member commission, at least four of whom shall be town residents. The Commission shall consist of a minimum of two members whose primary or secondary source of income is derived from farming of agricultural-based enterprises in Town and another three who are interested in farming. Two members shall serve a term of three years, two members for a term of two years, and three years thereafter, and one member for a term of one year, and three years after. The Board of Selectman shall fill a vacancy based on the un-expired term of the vacancy in order to maintain the cycle of appointments, based on the recommendations of the Commission.

MODEL BICYCLE PARKING BYLAW

Prepared by Pioneer Valley Planning Commission

Bicycle Parking Bylaw

1.0 Purpose

The purpose of this bylaw is to provide adequate and safe facilities for the storage of bicycles.

2.0 Applicability

Bicycle parking facilities shall be provided for any new building, addition or enlargement of an existing building, or for any change in the occupancy of any new building that results in the need for additional auto parking facilities.

3.0 Exemptions

No bicycle parking spaces shall be required for single-family residences and two-family residences.

4.0 Bicycle Parking Spaces Required

Bicycle parking shall be provided as follows:

- a. For multi-family residences, a minimum of one bicycle parking space or locker for each two (2) dwelling units or portion thereof shall be provided.
- b. For college dormitories, a minimum of 1 bicycle parking space per 10 students shall be provided.
- c. For all other uses, except those uses exempted under Section 3.0, one bicycle parking space shall be provided for every 10 parking spaces required under the bylaw.
- d. In all cases where bicycle parking is required, a minimum of two (2) and a maximum of fifty (50) bicycle parking spaces shall be provided.
- e. The Special Permit Granting Authority may reduce the required number of bicycle parking spaces based on information provided by the applicant confirming that fewer bicycle parking spaces are required.
- f. A maximum of two (2) required vehicle parking spaces may be used for bicycle parking spaces.

5.0 Suggested Design Criteria for Bicycle Parking Facilities

- a. Accessory off-street parking for bicycles shall include provision for secure storage of bicycles. Such facilities shall provide lockable enclosed lockers or racks or equivalent structures in or upon which the user may lock a bicycle.
- b. Structures that require a user supplied locking device shall be designed to accommodate both chain and U-shaped locking devices and shall support the bicycle frame at two locations (not just the wheel).
- c. All lockers and racks must be securely anchored to the ground or the building structure to prevent the racks and lockers from being removed from the location.
- d. The surfacing of such facilities shall be designed and maintained to be mud and dust free. The use of rock or gravel areas for bicycle parking is permitting provided that edging materials, such as landscape timbers are used so that the bicycle parking area is clearly demarcated and the rock material is contained.
- e. Bicycle parking facilities shall be sufficiently separated from motor vehicle parking areas to protect parked bicycles from damage by motor vehicles. The separation may be accomplished through grade separation, distance or physical barrier, such as curbs, wheel stops, poles, vegetation, or other similar features.
- f. Required bicycle parking spaces shall be at least two (2) feet by six (6) feet per bicycle.
- g. An aisle, measuring a minimum of five (5) feet wide, shall be provided behind bicycle parking facilities to allow for maneuvering.
- h. Sufficient space, to be a minimum of 30 inches, shall be provided beside each parked bicycle to allow access. This access area may be shared by adjacent bicycles. Racks shall be installed a minimum of 24 inches from a parallel wall or other obstruction and 30 inches from a perpendicular wall.
- i. Bicycle parking facilities shall be located in a clearly designated safe and convenient location. Whenever possible, the bicycle parking shall be placed within 50 feet of building entrances and in well-lit areas.

j. When automobile parking spaces are provided in a structure, the same percentage of required bicycle parking spaces shall be located inside the structure or shall be located in other areas protected from the weather.

MODEL BROWNFIELDS TAX AGREEMENT

Based upon the Town of Andover's Brownfield's Tax Agreement

BROWNFIELDS TAX AGREEMENT

ARTICLE 27. To see if the City/Town of [City/Town Name] will vote to accept the provisions of Mass. G.L., Chapter 59, Section 59A, and to adopt a General Ordinance/Bylaw as follows:

MASSACHUSETTS BROWNFIELDS ACT - TAX AGREEMENTS

The City/Town of [City/Town Name] is authorized, pursuant to Massachusetts General Laws, Chapter 59, Section 59A, as amended, to enter into agreements regarding payment or abatements of real estate taxes, and/or interest, and/or penalties relative to sites or portions of sites within the City/Town of [City/Town Name], from or at which there has been a release of oil or hazardous materials. The following are necessary conditions and components of any such agreement:

- (a) The site or a portion thereof must be one from, or at which, there has been a contaminated release of oil or hazardous material;
- (b) The site or a portion thereof is zoned for commercial or industrial uses;
- (c) The agreement must be for the purpose of environmental cleanup and redevelopment of such site, and shall require submission of any plans to address such;
- (d) The agreement must provide:
 - (i) the principal amount due of outstanding taxes, interest and penalties, before abatement of any amount thereof;
 - (ii) the amount of taxes, interest and penalties to be abated, if any;

- (iii) the net amount of taxes, interest and penalties due after abatement;
 - (iv) the percent of interest to accrue, if determined applicable;
 - (v) the inception date of payment;
 - (vi) the date of final payment; and
 - (vii) late penalties and other terms of repayment.
- (e) Agreements can only be made with an eligible owner as defined under M.G.L. Chapter 21E, Section 2. Eligible owners are new, "innocent" purchasers who did not own the site at the time the oil or hazardous material was released and did not cause or contribute to its release;
- (f) Such agreements shall be negotiated by the Town Manager/Board of Selectmen (with the assistance of the various departmental staff members), the City/Town Treasurer and the Board of Assessors;
- (g) Such agreements shall be subject to the approval vote of the City Council/Board of Selectmen;
- (h) Such agreements, as required by said M.G.L. Chapter 59, Section 59A, shall be signed by the eligible property owner and the Chair of the City Council/Board of Selectmen;
- (i) Such agreements shall be notarized and attested to by the City/Town Clerk;
- (j) Such agreements shall contain any other provisions as may be required by law, ordinance or regulation of the Department of Revenue;
- (k) In the event any such agreement reduces the tax to be paid, abatements must be processed and charged to the overlays for the fiscal years of the taxes abated;
- (1) Copies of the executive agreement shall be provided to the eligible property owner, the City Council/Board of Selectmen, and the following state and federal agencies; Massachusetts Department of Revenue (Property Tax Bureau),

Massachusetts Department of Environmental Protection and
United States Environmental Protection Agency.

MODEL SMART GROWTH ZONING BYLAW

Developed by the Department of Housing and Community Development

COMMENTS: The Regulations state that the Smart Growth Zoning must be all-inclusive. This means that the development of a Project within the District shall be governed solely by the Smart Growth Zoning, without reference to any standards or procedures contained elsewhere in the Zoning Bylaw.

SECTION [x]: _____ SMART GROWTH OVERLAY DISTRICT (SGOD)

1.0 Purpose

The purpose of this Section [x] is to establish a _____ Smart Growth Overlay District, to encourage smart growth in accordance with the purposes of G. L. Chapter 40R.

[add other objectives as applicable]

COMMENTS: Since the Smart Growth Zoning must be all-inclusive – that is, no other provisions of the Zoning Bylaw are applicable to a Project being developed pursuant to the Smart Growth Zoning within a District -- the Department recommends that the Smart Growth Zoning should contain a purpose section. The purpose section should state that the Smart Growth Zoning will encourage smart growth in accordance with the purposes of G.L. Chapter 40R.

2.0 Definitions

For purposes of this Section [x], the following definitions shall apply. All capitalized terms shall be defined in accordance with the definitions established under the Enabling Laws or Section 2.0, or as set forth in the PAA Regulations. To the extent that there is any conflict between the definitions set forth in Section 2.0 or the PAA Regulations and the Enabling Laws, the terms of the Enabling Laws shall govern.

Administering Agency – the local housing authority or other qualified housing entity designated by [the PAA, chief executive, or other designated municipal official], pursuant to Section 6.2, to review and implement the Affordability requirements affecting Projects under Section 6.0.

Affordable Homeownership Unit - an Affordable Housing unit required to be sold to an Eligible Household.

Affordable Housing - housing that is affordable to and occupied by Eligible Households.

Affordable Housing Restriction - a deed restriction of Affordable Housing meeting statutory requirements in G.L. Chapter 184, Section 31 and the requirements of Section 6.5 of this Bylaw.

Affordable Rental Unit - an Affordable Housing unit required to be rented to an Eligible Household.

Applicant – the individual or entity that submits a Project for Plan Approval.

As-of-right - a use allowed under Section 5.0 without recourse to a special permit, variance, zoning amendment, or other form of zoning relief. A Project that requires Plan Approval by the PAA pursuant to Sections 9.0 through 13.0 shall be considered an as-of-right Project.

Department or DHCD - the Massachusetts Department of Housing and Community Development.

Design Standards – means provisions of Section 13.0 or design standard provisions of the PAA Regulations, made applicable to Projects within the SGOD that are subject to the Plan Approval process.

Eligible Household - an individual or household whose annual income is less than 80 percent of the area-wide median income as determined by the United States Department of Housing and Urban Development (HUD), adjusted for household size, with income computed using HUD's rules for attribution of income to assets.

Comments: The Smart Growth Zoning may further decrease the maximum income limits of eligible households (below 80 percent of the area-wide median income as determined by HUD). The Municipality shall be required to prove to the Department in its submission that any such decrease will not “unduly restrict” opportunities for development within the proposed District under the Smart Growth Zoning: that means that the decrease may not add unreasonable costs or unreasonably impair the economic feasibility of proposed Projects.

Enabling Laws - G.L. Chapter 40R and 760 CMR 59.00.

Mixed-Use Development Project – a Project containing a mix of residential uses and non-residential uses, as allowed in Section 5.2, and subject to all applicable provisions of this Section [x].

PAA Regulations – the rules and regulations of the PAA adopted pursuant to Section 9.3.

Plan Approval - standards and procedures which [certain categories of] Projects in the SGOD must meet pursuant to Sections 9.0 through 13.0 and the Enabling Laws.

COMMENTS: A Municipality has the option, in Section 9.1, either to subject all Projects within the SGOD to the Plan Approval process, or to limit the review process to certain categories of Projects.

Plan Approval Authority (PAA) - The local approval authority authorized under Section 9.2 to conduct the Plan Approval process for purposes of reviewing Project applications and issuing Plan Approval decisions within the SGOD.

Project - a Residential Project or Mixed-use Development Project undertaken within the SGOD in accordance with the requirements of this Section [x].

Residential Project - a Project that consists solely of residential, parking, and accessory uses, as further defined in Section 5.1.

SGOD – the Smart Growth Overlay District established in accordance with this Section [x].

Zoning Bylaw - the Zoning Bylaw of the [name of community].

[add other definitions as required, either here or in the PAA Regulations]

COMMENTS: Because of the requirement in the Regulations that the local Smart Growth Zoning must be all-inclusive, it must contain a definitions Section with all defined terms, rather than referring the reader to other sections of the local zoning code. In particular, to satisfy the requirements of Chapter 40R and the 40R Regulations regarding Affordable Housing, the following definitions are required by the Department:

- Administering Agency*
- Affordable Homeownership Unit*
- Affordable Housing*
- Affordable Housing Restriction*
- Affordable Rental Unit*
- Eligible Household*

The sample bylaw includes certain definitions required by the text. Other definitions are likely to be required (for example, terms used in relation to the use and dimensional provisions of Sections 5.0 and 7.0) The drafter may choose to locate certain text elements, including Design Standard (see Section 13.0) and certain definitions, in the PAA Regulations, rather than in the Smart Growth Zoning, Note, however, that under the 40R Regulations any change in the PAA Regulations must be reviewed and approved by the Department.

3.0 Overlay District

3.1 Establishment. The [District Name] Smart Growth Overlay District, hereinafter referred to as the “SGOD,” is an overlay district having a land area of approximately __ acres in size that is superimposed over the underlying zoning district (s) and is shown on the Zoning Map as set forth on the map entitled “[Name of District] Smart Growth Overlay District, dated __, prepared by __.” This map is hereby made a part of the Zoning By-law and is on file in the Office of the [Town/City] Clerk.

COMMENTS: The Smart Growth Zoning must specify that the District is an overlay district. The Department will further require that the Smart Growth Zoning sufficiently identify the smart growth district overlay map. The Smart Growth Zoning must state that the map is part of the local zoning bylaw and is on file in the office of the municipal clerk.

3.2 Subdistricts. The SGOD contains the following subdistricts: [Single-family Subdistrict / Multi-family Subdistrict / Mixed-use Subdistrict / Non-residential Subdistrict / Substantially Developed Subdistrict].

COMMENTS: A District may contain one or more sub-districts. The Smart Growth Zoning may limit a sub-district to certain type(s) of residential use(s), or the minimum allowable density may vary for the permitted residential use(s) so long as each residential sub-district meets the minimum allowable as-of-right density requirements (see COMMENTS under Section 7.0).

Chapter 40R authorizes municipalities to permit business, commercial or other uses that are consistent with primary residential use. Therefore, a District may also contain one or more sub-districts in which Mixed-use Development Projects are allowed, or in which only non-residential uses are allowed.

If a District includes “Substantially Developed Land,” as defined under the 40R Regulations, it may contain a separate Substantially Developed Sub-district. See COMMENTS under Section 5.0 for permitted uses within a Substantially Developed Sub-district, and under Section 7.0 below for dimensional requirements applying within a Substantially Developed Sub-district.

4.0 Applicability of SGOD

4.1 Applicability of SGOD. An applicant may seek development of a Project located within the SGOD in accordance with the provisions of the Enabling Laws and this Section [x], including a request for Plan Approval by the PAA, if necessary. In such case, notwithstanding anything to the contrary in the Zoning Bylaw, such application shall not be subject to any other provisions of the Zoning Bylaw, including limitations upon the issuance of building permits for residential uses related to a rate of development or phased growth limitation or to a local moratorium on the issuance of such permits, or to other building permit or dwelling unit limitations.

COMMENTS: The 40R Regulations state that Projects within a District shall not be subject to limitation of the issuance of building permits for residential uses or a local moratorium on the issuance of such permits. Therefore, the Smart Growth Zoning must specify that Projects in the SGOD are not subject to any such provisions within the Zoning Bylaw. It is also recommended that the Smart Growth Zoning state that a local rate of development provision (if any) does not apply to Projects in the SGOD.

4.2 Underlying Zoning. The SGOD is an overlay district superimposed on all underlying zoning districts. The regulations for use, dimension, and all other provisions of the Zoning Bylaw governing the underlying zoning district(s) shall remain in full force, except for those Projects undergoing development pursuant to this Section [x]. Within the boundaries of the

SGOD, a developer may elect either to develop a Project in accordance with the requirements of the Smart Growth Zoning, or to develop a project in accordance with requirements of the regulations for use, dimension, and all other provisions of the Zoning Bylaw governing the underlying zoning district(s).

COMMENTS: Chapter 40R and the 40R Regulations state that within the boundaries of a District, a developer may elect either to develop a Project in accordance with the requirements of the Smart Growth Zoning, or to develop a project in accordance with the requirements of the Underlying Zoning. Therefore, for the sake of clarity the Smart Growth Zoning must acknowledge that the underlying zoning remains in effect, except for Projects specifically being developed under the Smart Growth Zoning.

4.3 Administration, Enforcement, and Appeals. The provisions of this Section [x] shall be administered by the Building Commissioner, except as otherwise provided herein. Any legal appeal arising out of a Plan Approval decision by the PAA under Sections 9 through 13 shall be governed by the applicable provisions of G. L. Chapter 40R. Any other request for enforcement or appeal arising under this Section [x] shall be governed by the applicable provisions of G. L. Chapter 40A..

5.0 Permitted Uses

The following uses are permitted as-of-right for Projects within the SGOD.

5.1 Residential Projects. A Residential Project within the SGOD may include:

- a) [Single-family, 2 and 3 family, and/or Multi-family] Residential Use(s);
- b) Parking accessory to any of the above permitted uses, including surface, garage-under, and structured parking (e.g., parking garages); and
- c) Accessory uses customarily incidental to any of the above permitted uses.

[Insert additional text if there are sub-districts within the District, and the permitted residential uses vary among the sub-districts.]

COMMENTS: Chapter 40R and the 40R Regulations state that Residential Projects must be permitted as of right, although they may be subject to Plan Approval by the PAA (see definition of “as-of-right” in Section 2 above). If there are sub-districts within the District, the Smart Growth Zoning must specify which types of residential uses are allowed within each sub-district.

Note that Chapter 40R and the 40R Regulations state that within a Substantially Developed Sub-district, the Smart Growth Zoning must permit the as-of-right construction of additional housing units in existing residential buildings or additions thereto or replacements thereof. Drafters should consult with DHCD on this and other issues if the Smart Growth Zoning will include provisions for a Substantially Developed Sub-district. See also Section 7.2.

5.2 Mixed-use Development Projects. A Mixed-use Development Project within the SGOD may include:

- a) [Single-family, 2 and 3 family, and/or Multi-family] Residential Use(s), provided that the minimum allowable as-of-right density requirements for residential use specified in Section 7.1 shall apply to the residential portion of any Mixed-use Development Project;
- b) Any of the following Non-residential uses: [specify permitted commercial, institutional, industrial, or other non-residential uses]
- c) Parking accessory to any of the above permitted uses, including surface, garage-under, and structured parking (e.g., parking garages); and
- d) Accessory uses customarily incidental to any of the above permitted uses.

[Insert additional text if there are sub-districts within the District, and Mixed-use Development Projects are allowed in some but not all of the sub-districts.]

COMMENTS: Chapter 40R and the 40R Regulations state that if the Smart Growth Zoning allows Mixed-use Development Projects, such projects must also be allowed as-of-right. The minimum allowable as-of-right density requirements for residential use apply to the residential portion of a mixed-use development project. The Smart Growth Zoning may limit Mixed-use Development Projects to certain sub-districts of a District.

Under Chapter 40R and the 40R Regulations, provisions of the Smart Growth Zoning and/or the Design Standards may require that the non-residential elements of any Mixed-Use Development Project are planned and designed “in an integral manner to complement the residential uses, and help foster vibrant, workable, livable, and attractive neighborhoods” consistent with the smart growth goals of the Act. For further discussion of this issue, see the Design Standards guidance document.

The total gross floor area devoted to Non-residential uses within a Mixed-use Development Project shall not exceed [___%] of the total gross floor area of the Project.

COMMENTS: The 40R Regulations state that the Smart Growth Zoning must specify the minimum portion of a mixed-use development project that must be devoted to residential use.

5.3 Other Uses. Any of the following non-residential uses may be permitted as-of-right, by Plan Approval, [or by special permit]

- a) [specify business, commercial, or other uses]

COMMENTS: Chapter 40R allows a municipality to permit business, commercial, or other uses that are consistent with the permitted primary residential use in a District. Such uses may be permitted as-of-

right, through the Plan Approval process, or (in the case of projects consisting solely of non-residential uses) by special permit review.

6.0 Housing and Housing Affordability

6.1 Number of Affordable Housing Units. For all Projects [containing at least 13 residential units], not less than twenty percent (20%) of housing units constructed shall be Affordable Housing. For purposes of calculating the number of units of Affordable Housing required within a Project, any fractional unit of 0.5 or greater shall be deemed to constitute a whole unit. [A Project shall not be segmented to evade the Affordability threshold set forth above.]

COMMENTS: Chapter 40R and the 40R Regulations require that under the Smart Growth Zoning, not less than 20 percent of all units constructed within Projects containing at least 13 units shall be Affordable. The 20% affordability standard and the 13-unit threshold apply to all units in a Project that is developed under the Smart Growth Zoning and is subject to this Section 6. Therefore, the Smart Growth Zoning must contain the above language.

The 40R Regulations state that the Smart Growth zoning must require that Projects are not segmented to evade the size threshold for the Affordability requirements. As discussed below, the Municipality also has the option to apply the Affordability requirements to smaller Projects, or to all Projects within the District. In the latter case, the bracketed sentence on segmentation would not be required.

The Smart Growth Zoning and/or the Community Housing Plan shall contain mechanisms to ensure that the total number of Affordable units constructed in the District equals not less than twenty percent (20%) of the total number of all units constructed within Projects in the District. Such mechanisms might include some or all of the following:

- Applying the 20% affordability standard to some or all Projects with fewer than 13 units;*
- Increasing the affordability standard beyond 20% for certain categories of Projects; and*
- Identifying specific Projects within the District that are projected to have significantly greater than 20% of their units Affordable (for example, Projects undertaken by a local housing authority or community development corporation).*

The Municipality shall be required to prove to the Department in its submission that its use of such mechanisms will not “unduly restrict” opportunities for development within the proposed District under the Smart Growth Zoning: that means that the mechanisms may not add unreasonable costs or unreasonably impair the economic feasibility of proposed Projects. Note that for the purposes of satisfying the twenty percent (20%) overall Affordability requirement, any project located within the geographic boundaries of the District, and which receives a comprehensive permit under M.G.L. c.40B after the date upon which the application was submitted to the Department, shall be treated as if it were a Project developed under the Smart Growth Zoning.

6.2 Administering Agency. An administering agency which may be the local housing authority or other qualified housing entity (the “Administering Agency”) shall be designated by the [PAA, chief executive, or other designated municipal official] (the “designating official”). In a case where the Administering Agency cannot adequately carry out its administrative duties, upon certification of this fact by the designating official or by DHCD such duties shall devolve to and thereafter be administered by a qualified housing entity designated by the designating official or, in the absence of such timely designation, by an entity designated by the DHCD. In any event, such Administering Agency shall ensure the following, both prior to issuance of a Building Permit for a Project within the SGOD, and on a continuing basis thereafter, as the case may be:

1. prices of Affordable Homeownership Units are properly computed; rental amounts of Affordable Rental Units are properly computed;
2. income eligibility of households applying for Affordable Housing is properly and reliably determined;
3. the housing marketing and resident selection plan conform to all requirements and are properly administered;
4. sales and rentals are made to Eligible Households chosen in accordance with the housing marketing and resident selection plan with appropriate unit size for each household being properly determined and proper preference being given; and
5. Affordable Housing Restrictions meeting the requirements of this section are recorded with the proper registry of deeds.

COMMENTS: Chapter 40R and the 40R Regulations state that the Smart Growth Zoning shall contain provisions to ensure that there shall be effective monitoring and enforcement of the affordable housing restriction during the term of Affordability. Therefore, the Smart Growth Zoning must contain this provision, or language of substantially equal effect.

6.3 Submission Requirements. As part of any application for Plan Approval for a Project within the SGOD submitted under Sections 9.0 through 13.0 (or, for Projects not requiring Plan Approval, prior to submission of any application for a Building Permit), the Applicant must submit the following documents to the PAA and the Administering Agency:

- 1) evidence that the Project complies with the cost and eligibility requirements of Section 6.4;
- 2) Project plans that demonstrate compliance with the requirements of this Section 6.3 and Section 6.5; and
- 3) a form of Affordable Housing Restriction that satisfies the requirements of Section 6.6.

These documents in combination, to be submitted with an application for Plan Approval (or, for Projects not requiring Plan Approval, prior to submission of any application for a Building Permit), shall include details about construction related to the provision, within the development, of units that are accessible to the disabled.

COMMENTS: Chapter 40R and the 40R Regulations require within a District the development of housing which is appropriate for a diverse population, including households with children, other households, individuals, households including individuals with disabilities, and the elderly. Therefore, the Smart Growth Zoning must contain this provision, or language of substantially equal effect.

6.4 Cost and Eligibility Requirements. Affordable Housing shall comply with the following requirements:

1. Affordable Housing required to be offered for rent or sale shall be rented or sold to and occupied only by Eligible Households.
2. For an Affordable Rental Unit, the monthly rent payment, including utilities and parking, shall not exceed 30 percent of the maximum monthly income permissible for an Eligible Household, assuming a family size equal to the number of bedrooms in the unit plus one, unless other affordable program rent limits approved by the DHCD shall apply.
3. For an Affordable Homeownership Unit the monthly housing payment, including mortgage principal and interest, private mortgage insurance, property taxes, condominium and/or homeowner's association fees, insurance, and parking, shall not exceed 30 percent of the maximum monthly income permissible for an Eligible Household, assuming a family size equal to the number of bedrooms in the unit plus one.

Prior to the granting of any Building Permit or Plan Approval for a Project, the Applicant must demonstrate, to the satisfaction of the Administering Agency, that the method by which such affordable rents or affordable purchase prices are computed shall be consistent with state or federal guidelines for affordability applicable to [name of community].

COMMENTS: The Smart Growth Zoning must contain this provision, or language of substantially equal effect. Chapter 40R and the 40R Regulations require assurances in the Smart Growth Zoning that under the affordable housing restriction on an Affordable unit, it shall be occupied by an eligible household paying an affordable rent or affordable purchase price during the term of the restriction. The Smart Growth Zoning shall contain provisions specifying the method by which such affordable rents or affordable purchase prices shall be computed.

6.5 Design and Construction. Units of Affordable Housing shall be finished housing units. Units of Affordable Housing shall be dispersed throughout the Project of which they are part and be comparable in initial construction quality and exterior design to the other housing units in the Project. The total number of bedrooms in the Affordable Housing shall, insofar as

practicable, be proportionate to the total number of bedrooms in all units in the Project of which the Affordable Housing is part.

COMMENTS: The Smart Growth Zoning must contain this provision, or language of substantially equal effect.

6.6 Affordable Housing Restriction. Each Project shall be subject to an Affordable Housing Restriction which is recorded with the appropriate registry of deeds or district registry of the Land Court and which contains the following:

1. specification of the term of the affordable housing restriction which shall be no less than thirty years;
2. the name and address of the Administering Agency with a designation of its power to monitor and enforce the affordable housing restriction;
3. a description of the Affordable Homeownership Unit, if any, by address and number of bedrooms; and a description of the overall quantity and number of bedrooms and number of bedroom types of Affordable Rental Units in a Project or portion of a Project which are rental. Such restriction shall apply individually to the specifically identified Affordable Homeownership Unit and shall apply to a percentage of rental units of a rental Project or the rental portion of a Project without specific unit identification.
4. reference to a housing marketing and resident selection plan, to which the Affordable Housing is subject, and which includes an affirmative fair housing marketing program, including public notice and a fair resident selection process. The housing marketing and selection plan may provide for preferences in resident selection to the extent consistent with applicable law; the plan shall designate the household size appropriate for a unit with respect to bedroom size and provide that the preference for such Unit shall be given to a household of the appropriate size;
5. a requirement that buyers or tenants will be selected at the initial sale or initial rental and upon all subsequent sales and rentals from a list of Eligible Households compiled in accordance with the housing marketing and selection plan;
6. reference to the formula pursuant to which rent of a rental unit or the maximum resale price of a homeownership will be set;
7. designation of the priority of the Affordable Housing Restriction over other mortgages and restrictions, provided that a first mortgage of a Homeownership Housing Unit to a commercial lender in an amount less than maximum resale price may have priority over the Affordable Housing Restriction if required by then current practice of commercial mortgage lenders;
8. a requirement that only an Eligible Household may reside in Affordable Housing and that notice of any lease of any Affordable Rental Unit shall be given to the Administering Agency;

9. provision for effective monitoring and enforcement of the terms and provisions of the affordable housing restriction by the Administering Agency;
10. provision that the restriction on an Affordable Homeownership Unit shall run in favor of the Administering Agency and/or the municipality, in a form approved by municipal counsel, and shall limit initial sale and re-sale to and occupancy by an Eligible Household;
11. provision that the restriction on Affordable Rental Units in a rental Project or rental portion of a Project shall run with the rental Project or rental portion of a Project and shall run in favor of the Administering Agency and/or the municipality, in a form approved by municipal counsel, and shall limit rental and occupancy to an Eligible Household;
12. provision that the owner[s] or manager[s] of Affordable Rental Unit[s] shall file an annual report to the Administering Agency, in a form specified by that agency certifying compliance with the Affordability provisions of this Bylaw and containing such other information as may be reasonably requested in order to ensure affordability; and
13. a requirement that residents in Affordable Housing provide such information as the Administering Agency may reasonably request in order to ensure affordability.

COMMENTS: Chapter 40R and the 40R Regulations state that the Smart Growth Zoning shall contain provisions to ensure that there shall be effective monitoring and enforcement of the affordable housing restriction during the term of Affordability. Therefore, the Smart Growth Zoning must contain this provision, or language of substantially equal effect.

6.7 Costs of Housing Marketing and Selection Plan. The housing marketing and selection plan may make provision for payment by the Project applicant of reasonable costs to the Administering Agency to develop, advertise, and maintain the list of Eligible Households and to monitor and enforce compliance with affordability requirements. Such payment shall not exceed one-half (1/2%) percent of the amount of rents of Affordable Rental Units (payable annually) or one (1%) percent of the sale or resale prices of Affordable Homeownership Units (payable upon each such sale or resale), as applicable.

COMMENTS: To ensure that the costs of the marketing and enforcement measures are not unduly burdensome, the Smart Growth Zoning must contain this provision, or language of substantially equal effect.

6.8 Age Restrictions. Nothing in this Section [x] shall permit the imposition of restrictions on age upon all Projects throughout the entire SGOD. However, the Administering Agency may, in its review of a submission under Section 6.3, allow a specific Project within the SGOD designated exclusively for the elderly, persons with disabilities, or for assisted living, provided that any such Project shall be in compliance with all applicable fair housing laws and not less

than twenty-five percent (25%) of the housing units in such a restricted Project shall be restricted as Affordable units. Any Project which includes age-restricted residential units shall comply with applicable federal, state and local fair housing laws and regulations.

COMMENTS: Chapter 40R and the 40R Regulations state that the Smart Growth Zoning for the proposed District shall not impose restrictions on age or any other forms of occupancy restrictions upon the District as a whole. This provision does not preclude the development of specific Projects within the District that may be exclusively for the elderly, persons with disabilities, or for assisted living, provided that any such Project shall be in compliance with all applicable fair housing laws. Not less than twenty-five percent (25%) of the housing units in such a Project shall be Affordable. Therefore, the Smart Growth Zoning must contain this provision, or language of substantially equal effect.

6.9 Phasing. For any Project that is approved and developed in phases in accordance with Section 9.4, the proportion of Affordable Housing Units (and the proportion of Existing Zoned Units to Bonus Units as defined in 760 CMR 59.04 1(h)) shall be consistent across all phases.

COMMENTS: To address the proportionality requirements of the 40R Regulations, the Smart Growth Zoning must contain this provision, or language of substantially equal effect.

6.10 No Waiver. Notwithstanding anything to the contrary herein, the Affordability provisions in this Section 6.0 shall not be waived.

COMMENTS: The 40R Regulations state that the Affordability requirements may not be waived as part of the Plan Approval process for a Project. Therefore, the Smart Growth Zoning must contain this provision.

7.0 Dimensional and Density Requirements

7.1 Table of Requirements. Notwithstanding anything to the contrary in this Zoning Bylaw, the dimensional requirements applicable in the SGOD are as follows:

[Insert applicable dimensional requirements. Insert additional provisions if there are sub-districts within the District, and the dimensional requirements vary among the sub-districts.]

COMMENTS: Without limitation, the Smart Growth Zoning shall set out the dimensional, use, parking, and other standards applicable to Projects within the District (including within any Substantially Developed sub-district) including but not limited to height limits, setbacks, lot areas, lot dimensions, unit to lot ratios, floor area ratios, lot coverage ratios, and open space ratios. (For discussion of parking ratios, parking locations, and roadway design standards, see Sections 8.0 and 13.0.)

For large Projects containing multiple buildings and uses, it may preserve greater flexibility for minimum lot size, setback, and yard standards to apply to the Project site as a whole, and not to internal dimensions.

The Smart Growth Zoning must provide for any one or more of the following minimum allowable as-of-right density requirements unless the Department has previously approved a density reduction:

- 1. a density of at least 8 units per acre for Developable Land zoned for single-family residential use;*
- 2. a density of at least 12 units per acre for Developable Land zoned for 2- and/or 3-family residential use; or*
- 3. a density of at least 20 units per acre for Developable Land zoned for multi-family residential use.*

If the SGOD is anticipated to contain only a single Project, then restricting the total number of residential units developable within the SGOD is permissible, provided that the maximum number will permit the SGOD to achieve the minimum applicable as-of right density required by chapter 40R.

A District may contain one or more sub-districts. The allowable residential density and other dimensional requirements may vary within different sub-districts (even for the same permitted residential use), so long as each residential sub-district meets the minimum allowable as-of-right density requirements. For Substantially Developed Sub-districts, see COMMENTS on Section 7.2 below.

Under Chapter 40R and the 40R Regulations, a Municipality may adopt Design Standards to ensure that the physical character of Projects within the District will be “complementary to nearby buildings and structures,” and will provide for “high-density quality development consistent with the character of building types, streetscapes, and other community features traditionally found in densely settled areas of the Municipality or in the region of the Municipality.” On the possible inclusion of the Design Standards within the Smart Growth Zoning, see COMMENTS on Section 13. For discussion of the relationship between dimensional requirements and Design Standards in meeting these goals, see the Design Standards guidance document.

7.2 Dimensional Waivers in Substantially Developed Sub-district. The PAA may, in order to encourage the development of infill housing units on undeveloped lots within a Substantially Developed Sub-district, grant a waiver to the dimensional standards of Section 7.1, in accordance with Section 11.3.

COMMENTS: The Chapter 40R Regulations allow that for some or all of the “substantially developed land” (as defined in the Regulations) within a District, the Smart Growth Zoning need not satisfy the minimum As-of-right residential densities, so long as the allowable residential densities in the Substantially Developed sub-district are no less than those in the Underlying Zoning. Within the sub-district, the Smart Growth Zoning shall modify the dimensional and other applicable standards of the Underlying Zoning when the Smart Growth Zoning provides for a greater residential density than the Underlying Zoning, in order to permit the As-of-right construction of infill housing on existing vacant lots. The Smart Growth Zoning may impose reasonable lot area, frontage, setback and other dimensional requirements within such Substantially Developed sub-districts, consistent with neighborhood building and use patterns, and building, fire, and safety codes.

8.0 Parking Requirements

The parking requirements applicable for Projects within the SGOD are as follows.

8.1 Number of parking spaces. Unless otherwise approved by the PAA, the following minimum [and maximum] numbers of off-street parking spaces shall be provided by use, either in surface parking, within garages or other structures, [or on-street:]:

[Insert applicable parking requirements]

The PAA may allow for additional visitor parking spaces beyond the ___ maximum spaces per unit if deemed appropriate given the design, layout and density of the proposed residential or other development. The PAA may allow for a decrease in the required parking as provided in Sections 8.2 and 8.3 below.

COMMENTS: To support the smart growth goals of Chapter 40R and encourage alternatives to automobile travel, the Department encourages communities to consider provisions allowing the reduction of minimum parking requirements beyond what is commonly required. Particularly for locations near transit stations, defining maximum as well as minimum parking requirements can further support the smart growth goals of Chapter 40R. For further discussion of this issue, see the Design Standards guidance document.

8.2 Shared Parking. Notwithstanding anything to the contrary herein, the use of shared parking to fulfill parking demands noted above that occur at different times of day is strongly encouraged. Minimum parking requirements above may be reduced by the PAA through the Plan Approval process (or, for Projects not requiring Plan Approval, prior to submission of any application for a Building Permit), if the applicant can demonstrate that shared spaces will meet parking demands by using accepted methodologies (e.g. the Urban Land Institute Shared Parking Report, ITE Shared Parking Guidelines, or other approved studies).

COMMENTS: The Department encourages communities to consider provisions allowing the reduction of minimum parking requirements if parking is shared by different uses, within Mixed-use Development Projects or otherwise.

8.3 Reduction in parking requirements. Notwithstanding anything to the contrary herein, any minimum required amount of parking may be reduced by the PAA through the Plan Approval process (or, for Projects not requiring Plan Approval, prior to submission of any application for a Building Permit), if the applicant can demonstrate that the lesser amount of parking will not cause excessive congestion, endanger public safety, or that lesser amount of parking will provide positive environmental or other benefits, taking into consideration:

- a) the availability of surplus off street parking in the vicinity of the use being served and/or the proximity of a bus stop or transit station;
- b) the availability of public or commercial parking facilities in the vicinity of the use being served;

- c) shared use of off street parking spaces serving other uses having peak user demands at different times;
- d) age or other occupancy restrictions which are likely to result in a lower level of auto usage;
- e) impact of the parking requirement on the physical environment of the affected lot or the adjacent lots including reduction in green space, destruction of significant existing trees and other vegetation, destruction of existing dwelling units, or loss of pedestrian amenities along public ways; and
- f) such other factors as may be considered by the PAA.

COMMENTS: The Department encourages communities to consider provisions allowing the reduction of minimum parking requirements.

8.4 Location of Parking. Any surface parking lot shall, to the maximum extent feasible, be located at the rear or side of a building, relative to any principal street, public open space, or pedestrian way.

COMMENTS: For further discussion of issues relating to the location and design of parking, in order to achieve Chapter 40R's goal of creating "high-density quality development consistent with the character of building types, streetscapes, and other community features traditionally found in densely settled areas of the Municipality or in the region of the Municipality," see the Design Standards guidance document.

9.0 Plan APPROVAL of projects: general provisions

The 40R Regulations state that the Plan Approval provisions of the Smart Growth Zoning and/or any separate Design Standards must be clearly written, fairly and consistently applied, and allow for flexibility and creativity, consistent with the goals of the Act. The contents of the following Sections 9.0 through 13.0 are intended to satisfy these regulatory requirements. For any community that subjects Projects to Plan Approval, the Smart Growth Zoning must contain these provisions, or language of substantially equivalent effect.

9.1 Plan Approval. An Application for Plan Approval shall be reviewed by the PAA for consistency with the purpose and intent of Sections 9.0 through 13.0. Such Plan Approval process shall be construed as an as-of-right review and approval process as required by and in accordance with the Enabling Laws. The following categories of Projects shall be subject to the Plan Approval process:

- a) Any Residential Project containing at least [13] residential units;
- b) Any Mixed-use Development Project;
- [c) any project consisting solely of non-residential uses; and

- d) Any Project seeking a waiver].

COMMENTS: The 40R Regulations state that if the Smart Growth Zoning provides for Plan Approval of Projects within the District, it shall specify the categories of Projects that will be subject to Plan Approval (defined by size, type, or otherwise). The sample bylaw suggests that a reasonable threshold of review for Residential Projects would be the size of Project that would be subject to the Affordability requirements of Section 6 – see COMMENTS on that section. The sample bylaw also suggests that all Mixed-use Development Projects and all projects consisting solely of non-residential uses should be subject to Plan Approval, to ensure that the non-residential elements are planned and designed in an integral manner to complement the residential uses – see Sections 5.2 and 13.4.

9.2 Plan Approval Authority (PAA). The [name of local approval authority], consistent with G.L. Chapter 40R and 760 CMR 59.00, shall be the Plan Approval Authority (the “PAA”), and it is authorized to conduct the Plan Approval process for purposes of reviewing Project applications and issuing Plan Approval decisions within the SGOD.

COMMENTS: The 40R Regulations state that if the Smart Growth Zoning provides for Plan Approval of Projects within the District, it shall specify the Approving Authority. Therefore, the Department will require the Smart Growth Zoning to contain this provision if Projects are subject to Plan Approval.

9.3 PAA Regulations. The Plan Approval Authority may adopt administrative rules and regulations relative to Plan Approval. Such rules and regulations must be approved by the Department of Housing and Community Development

COMMENTS: If the Smart Growth Zoning empowers the PAA to adopt rules and regulations for the Plan Approval of Projects, such regulations must be dated and approved by DHCD.

9.4 Project Phasing. An Applicant may propose, in a Plan Approval submission, that a Project be developed in phases, provided that the submission shows the full buildout of the Project and all associated impacts as of the completion of the final phase, and subject to the approval of the PAA. Any phased project shall comply with the provisions of Section 6.9.

COMMENTS: The 40R Regulations permit Projects to be phased; see also Section 11.4 below. Therefore, the Department will require the Smart Growth Zoning to contain this provision. (However, the 40R Regulations also state that the Smart Growth Zoning must require that Projects are not segmented to evade the size threshold for the Affordability requirements. See Section 6.1.)

10.0 PLAN APPROVAL PROCEDURES

10.1 Preapplication. Prior to the submittal of a Plan Approval submission, a “Concept Plan” may be submitted to help guide the development of the definitive submission for Project buildout and individual elements thereof. Such Concept Plan should reflect the following:

1. Overall building envelope areas;

2. Open space and natural resource areas; and
3. General site improvements, groupings of buildings, and proposed land uses.

The Concept Plan is intended to be used as a tool for both the applicant and the PAA to ensure that the proposed Project design will be consistent with the Design Standards and other requirements of the SGOD.

COMMENTS: Voluntary pre-application provisions are recommended, although Chapter 40R does not permit a municipality to require a mandatory pre-application process.

10.2 Required Submittals. An application for Plan Approval shall be submitted to the PAA on the form provided by the PAA, [along with application fee(s)] which shall be as set forth in the PAA Regulations. The application shall be accompanied by such plans and documents as may be required and set forth in the PAA Regulations. For any Project that is subject to the Affordability requirements of Section 6.0, the application shall be accompanied by all materials required under Section 6.3. All site plans shall be prepared by a certified architect, landscape architect, and/or a civil engineer registered in the Commonwealth of Massachusetts. All landscape plans shall be prepared by a certified landscape architect registered in the Commonwealth of Massachusetts. All building elevations shall be prepared by a certified architect registered in the Commonwealth of Massachusetts. All plans shall be signed and stamped, and drawings prepared at a scale of [one inch equals forty feet (1"=40') or larger], or at a scale as approved in advance by the PAA.

COMMENTS: The 40R Regulations state that if the Smart Growth Zoning provides for Plan Approval of Projects within the District, it shall specify the procedures for such review, including the contents of an application for approval of a Project. The Department recommends that the form of application, and rules governing the content of the application to be filed with the PAA, be included in the PAA Regulations, rather than including such requirements in the Smart Growth Zoning. Note that the PAA Regulations will be subject to review and approval by the Department. Where filing fees are required, documentation must be submitted justifying the required fee(s).

10.3 Filing. An applicant for Plan Approval shall file the required number of copies of the application form and the other required submittals as set forth in the PAA Regulations with the [City/Town] Clerk and a copy of the application including the date of filing certified by the [City/Town] Clerk shall be filed forthwith with the PAA.

COMMENTS: The Department will require the Smart Growth Zoning to contain this provision if Projects are subject to Plan Approval.

10.4 Circulation to Other Boards. Upon receipt of the Application, the PAA shall immediately provide a copy of the application materials to the [Select Board / City Council], Board of Appeals, Board of Health, Conservation Commission, Fire Department, Police Department, Building Commissioner, Department of Public Works, the Administering Agency (for any Project subject to the Affordability requirements of Section 6.0), and other municipal officers,

agencies or boards for comment, and any such board, agency or officer shall provide any written comments within 60 days of its receipt of a copy of the plan and application for approval.

COMMENTS: If an application is to be referred to any municipal officer, agency or board, including but not limited to the Administering Agency referenced in Section 6.0, the Department will require the Smart Growth Zoning to contain this provision.

10.5 Hearing. The PAA shall hold a public hearing for which notice has been given as provided in Section 11 of G.L. Chapter 40A. The decision of the PAA shall be made, and a written notice of the decision filed with the [City/ Town] Clerk, within 120 days of the receipt of the application by the [City/ Town] Clerk. The required time limits for such action may be extended by written agreement between the applicant and the PAA, with a copy of such agreement being filed in the office of the [City / Town] Clerk. Failure of the PAA to take action within said 120 days or extended time, if applicable, shall be deemed to be an approval of the Plan Approval application.

COMMENTS: The Department will require the Smart Growth Zoning to contain this provision if Projects are subject to Plan Approval.

10.6 Peer Review. The applicant shall be required to pay for reasonable consulting fees to provide peer review of the Plan Approval application, pursuant to G.L. Chapter 40R, Section 11(a). Such fees shall be held by the [City / Town] in a separate account and used only for expenses associated with the review of the application by outside consultants, including, but not limited to, attorneys, engineers, urban designers, housing consultants, planners, and others. Any surplus remaining after the completion of such review, including any interest accrued, shall be returned to the applicant forthwith.

COMMENTS: If an application is to be reviewed by outside consultants, the Department will require the Smart Growth Zoning to contain this provision.

11.0 PLAN APPROVAL DecisionS

11.1 Plan Approval. Plan Approval shall be granted where the PAA finds that:

1. the applicant has submitted the required fees and information as set forth in the PAA Regulations; and
2. the Project as described in the application meets all of the requirements and standards set forth in this Section [x] and the PAA Regulations, or a waiver has been granted therefrom; and
3. any extraordinary adverse potential impacts of the Project on nearby properties have been adequately mitigated.

For a Project subject to the Affordability requirements of Section 6.0, compliance with condition (2) above shall include written confirmation by the Administering Agency that all requirements of that Section have been satisfied. The PAA may attach conditions to the Plan Approval decision that are necessary to ensure substantial compliance with this Section [x], or to mitigate any extraordinary adverse potential impacts of the Project on nearby properties.

COMMENTS: The 40R Regulations state that if the Smart Growth Zoning provides for Plan Approval of Projects within the District, it shall specify the criteria upon which the Approving Authority may condition its approval. The Department will require the Smart Growth Zoning to contain this provision if Projects are subject to Plan Approval.

11.2 Plan Disapproval. A Plan Approval application may be disapproved only where the PAA finds that:

1. the applicant has not submitted the required fees and information as set forth in the Regulations; or
2. the Project as described in the application does not meet all of the requirements and standards set forth in this Section [x] and the PAA Regulations, or that a requested waiver therefrom has not been granted; or
3. it is not possible to adequately mitigate significant adverse project impacts on nearby properties by means of suitable conditions.

COMMENTS: The 40R Regulations state that if the Smart Growth Zoning provides for Plan Approval of Projects within the District, it shall specify the criteria upon which the Approving Authority may disapprove a proposed Project, or condition its approval. Chapter 40R states that a proposed Project may be denied Plan Approval only on the grounds that:

- 1) *the Project does not meet the conditions and requirements set forth in the Smart Growth Zoning;*
- 2) *the applicant failed to submit information and fees required by the Smart Growth Zoning and necessary for an adequate and timely review of the design of the Project or potential Project impacts; or*
- 3) *it is not possible to adequately mitigate significant adverse Project impacts on nearby properties by means of suitable conditions.*

To implement this provision, the Department will require the Smart Growth Zoning to contain this provision if Projects are subject to Plan Approval.

11.3 Waivers. Upon the request of the Applicant, the Plan Approval Authority may waive dimensional and other requirements of Section [x], including the Design Standards, in the interests of design flexibility and overall project quality, and upon a finding of consistency of such variation with the overall purpose and objectives of the SGOD, or if it finds that such

waiver will allow the Project to achieve the density, Affordability, mix of uses, and/or physical character allowable under this Section [x].

COMMENTS: Chapter 40R states that the Smart Growth Zoning may allow the Approving Authority, through the Plan Approval process, to waive specific dimensional and other standards (other than Affordability requirements) otherwise applicable to a Project, if it finds that the waiver will allow the Project to achieve the density, Affordability, mix of uses, and/or physical character allowable under the Smart Growth Zoning, and that the Project is consistent with the Design Standards. The 40R Regulations state that the waiver criteria must be defined in the Smart Growth Zoning. Therefore, if the community intends to grant waivers through the Plan Approval process, the Smart Growth Zoning must contain this provision.

11.4 Project Phasing. The PAA, as a condition of any Plan Approval, may allow a Project to be phased at the request of the Applicant, or it may require a Project to be phased for the purpose of coordinating its development with the construction of Planned Infrastructure Improvements (as that term is defined under 760 CMR 59.00), or to mitigate any extraordinary adverse Project impacts on nearby properties. For Projects that are approved and developed in phases, the proportion of Affordable to market rate units shall be consistent across all phases, and the proportion of Existing Zoned Units to Bonus Units (as those terms are defined under 760 CMR 59.00) shall be consistent across all phases.

COMMENTS: The Chapter 40R Regulations state that the Smart Growth Zoning may permit the Plan Approval approvals of proposed Projects to be phased for the purpose of coordinating development with the construction of Planned Infrastructure Upgrades or that are required to mitigate any extraordinary adverse Project impacts on neighboring properties. For Projects that are approved and developed in phases, the proportion of Affordable units and the proportion of Existing Zoned Units to Bonus Units shall be consistent across all phases. Therefore, the Department will require the Smart Growth Zoning to contain this provision if Projects are subject to Plan Approval.

11.5 Form of Decision. The PAA shall issue to the applicant a copy of its decision containing the name and address of the owner, identifying the land affected, and the plans that were the subject of the decision, and certifying that a copy of the decision has been filed with the [City / Town] Clerk and that all plans referred to in the decision are on file with the PAA. If twenty (20) days have elapsed after the decision has been filed in the office of the [City / Town] Clerk without an appeal having been filed or if such appeal, having been filed, is dismissed or denied, the [City/Town] Clerk shall so certify on a copy of the decision. If a plan is approved by reason of the failure of the PAA to timely act, the [City/ Town] Clerk shall make such certification on a copy of the application. A copy of the decision or application bearing such certification shall be recorded in the registry of deeds for the county and district in which the land is located and indexed in the grantor index under the name of the owner of record or recorded and noted on the owner's certificate of title. The fee for recording or registering shall be paid by the applicant.

COMMENTS: The Department will require the Smart Growth Zoning to contain this provision if Projects are subject to Plan Approval.

11.6 Validity of Decision. A Plan Approval shall remain valid and shall run with the land indefinitely, provided that construction has commenced within two years after the decision is issued, which time shall be extended by the time required to adjudicate any appeal from such approval and which time shall also be extended if the Project proponent is actively pursuing other required permits for the Project or there is other good cause for the failure to commence construction, or as may be provided in a Plan Approval for a multi-phase Project.

COMMENTS: The Department recommends that the Smart Growth Zoning contain this provision if Projects are subject to Plan Approval.

12.0 Change in Plans after Approval by PAA

12.1 Minor Change. After Plan Approval, an applicant may apply to make minor changes in a Project involving minor utility or building orientation adjustments, or minor adjustments to parking or other site details that do not affect the overall buildout or building envelope of the site, or provision of open space, number of housing units, or housing need or affordability features. Such minor changes must be submitted to the PAA on redlined prints of the approved plan, reflecting the proposed change, and on application forms provided by the PAA. The PAA may authorize such changes at any regularly scheduled meeting, without the need to hold a public hearing. The PAA shall set forth any decision to approve or deny such minor change by motion and written decision, and provide a copy to the applicant for filing with the [City/Town] Clerk.

COMMENTS: The Department recommends that the Smart Growth Zoning contain this provision if Projects are subject to Plan Approval.

12.2 Major Change. Those changes deemed by the PAA to constitute a major change in a Project because of the nature of the change in relation to the prior approved plan, or because such change cannot be appropriately characterized as a minor change as described above, shall be processed by the PAA as a new application for Plan Approval pursuant to Sections 9.0 - through 13.0.

COMMENTS: The Department recommends that the Smart Growth Zoning contain this provision if Projects are subject to Plan Approval

13.0 Design Standards

13.1 Adoption of Design Standards. Any Project undergoing the Plan Approval process shall be subject to design standards [as set forth below in this Section 13.0 (“Design Standards”)] [or] [referenced in the ordinance or bylaw but contained in a separate document].

13.2 Purpose. The Design Standards are adopted to ensure that the physical character of Projects within the SGOD:

- 1) will be complementary to nearby buildings and structures;
- 2) will be consistent with the Comprehensive Housing Plan, an applicable master plan, an area specific plan, or any other plan document adopted by the [City / Town]; and
- 3) will provide for high-density quality development consistent with the character of building types, streetscapes, and other community features traditionally found in densely settled areas of the [City / Town] or in the region of the [City / Town].

COMMENTS: The Design Standards may address some or all of the following factors:

- a) the scale, proportions, and exterior appearance of buildings;*
- b) the placement, alignment, width, and grade of streets and sidewalks;*
- c) the type and location of infrastructure;*
- d) the location of building and garage entrances;*
- e) off-street parking;*
- f) the protection of significant natural site features;*
- g) the location and design of on-site open spaces;*
- h) landscaping;*
- i) exterior signs; and*
- j) buffering in relation to adjacent properties.*

13.4 Mixed-use Development Projects. The Design Standards may require that the non-residential elements of any Mixed-Use Development Project are planned and designed in an integral manner to complement the residential uses, and help foster vibrant, workable, livable, and attractive neighborhoods consistent with the smart growth goals of the Enabling Act and this Section [x].

COMMENTS: Under the Chapter 40R Regulations, the Municipality has the option either to include the Design Standards within the Smart Growth Zoning, or to make them a part of the PAA Regulations. In either case, they must be reviewed and approved by the Department before they can take effect. If the Design Standards are contained within the PAA Regulations, the Department recommends that the Smart Growth Zoning include Sections 13.2 through 13.4, setting forth the statutory standards of Chapter 40R that must guide the PAA in adopting Design Standards.

The Municipality must demonstrate to the satisfaction of the Department that its Design Standards will not “unduly restrict” the development of Projects in the District: that means that the Design Standards may not add unreasonable costs or unreasonably impair the economic feasibility of proposed Projects. The Department may disapprove a proposed District if the Design Standards fail to meet this test.

14.0 SEVERABILITY.

If any provision of this Section [x] is found to be invalid by a court of competent jurisdiction, the remainder of Section [x] shall not be affected but shall remain in full force. The invalidity of any provision of this Section [x] shall not affect the validity of the remainder of the [Town's/City's Zoning Bylaw/Ordinance].

COMMENTS: The Department recommends that the Smart Growth Zoning should contain this section.

MODEL BYLAW FOR COMMERCIAL AND INDUSTRIAL DEVELOPMENT AND PERFORMANCE STANDARDS

Prepared by Pioneer Valley Planning Commission

1.0 COMMERCIAL AND INDUSTRIAL DEVELOPMENT AND PERFORMANCE STANDARDS

1.1 Commercial and Industrial Development and Performance Standards

1.11 Purpose

The purpose of these Commercial and Industrial Development and Performance Standards is to promote well-designed commercial and industrial developments and to minimize the adverse impacts of such development on community character, traffic safety, environmental quality and neighboring properties.

1.12 General Application

All projects or uses requiring Special Permit, Special Permit with Site Plan Approval, or Site Plan Review - Administrative Review must demonstrate compliance with the commercial performance standards herein.

a. Access and Traffic Impacts

Applicants must demonstrate that the project will minimize traffic and safety impacts on roadways.

- i. The number of curb cuts on town roads shall be minimized. To the extent feasible access to businesses shall be provided via one of the following:
 - 1) Access via existing side street.
 - 2) Access via a cul-de-sac or loop road shared by adjacent lots or premises.
- ii. One driveway per business shall be permitted as a matter of right. Where deemed necessary by the special permit granting authority, two driveways may be permitted as part of the Site Plan Approval process, which shall be clearly marked "entrance" and "exit".
- iii. Curb cuts shall be limited to the minimum width for safe entering and exiting, and shall in no case exceed 24 feet in width.
- iv. No new curb cut shall be allowed that is closer to any existing curb cut than 200 linear feet. In addition, new curb cuts on state and local roads shall be discouraged and developers shall be encouraged to seek access via a common driveway serving an adjacent lot or premises.
- v. Driveways and Circulation

- 1) Driveways shall be no greater than sixteen (16) feet in width.
- 2) Aisles shall be not less than twenty (20) feet in width.
- 3) No portion of an entrance or exit driveway shall be closer than fifty (50) feet to the curb line of any intersecting street, nor closer than fifty (50) feet to any portion of an existing driveway on the same or adjacent lot.
- 4) Pedestrian walkways shall be integrated into the design of the lot. Where a walkway crosses a vehicular path, the walkway shall be defined through the use of a different paving material or painted lines.
- 5) All driveways shall be designed to afford motorist exiting to roadways with a safe sight distance.

vi. The proposed development shall provide safe interior circulation within its site by separating pedestrian and vehicular traffic.

vii. In each case where a new building(s) or a new use of more than 3,000 square feet total floor area is proposed, or where any proposed enlargement of a building would result in a building having more than 3,000 square feet total floor area, a traffic impact statement shall be prepared. The traffic impact statement shall contain:

- 1) A detailed assessment of the traffic safety impacts of the proposed project or use on the carrying capacity of any adjacent roads, including the projected number of motor vehicle trips to enter or depart from the site estimated for daily hour and peak hour traffic levels, road capacities and impacts on intersections.
- 2) Existing and proposed traffic flow patterns at the site including entrances and egresses, loading and unloading areas, and curb cuts on site and within one hundred (100) feet of the site.
- 3) An interior traffic and pedestrian circulation plan designed to minimize conflicts and safety problems.

viii. Adequate pedestrian and bicycle access shall be provided as follows:

- 1) Sidewalks shall be provided to provide access to adjacent properties and between individual businesses within a development
- 2) If the property directly abuts a bikeway right-of-way, a paved access route to the bikeway shall be provided.
- 3) Adequate parking for bicycles.

ix. The Planning Board may require the following additional information for projects proposing over ten thousand (10,000) square feet of buildings and structures:

- 1) A plan to minimize traffic and safety impacts through such means as physical design and layout concepts, staggered employee work schedules, promoting use of public transit or carpooling, the preparation of a trip reduction plan, or other appropriate means.
- 2) An interior traffic and pedestrian circulation plan designed to minimize conflicts and safety problems.

b. Parking

Proposed projects or uses must comply with Parking and Off-street Loading requirements and the following standards:

- i. To the extent feasible, parking areas shall be located to the side or rear of the structure, and be shared with adjacent businesses.
- ii. Parking areas shall be located to the side or rear of the structure. No parking shall be permitted within the required front setback of the structure.
- iii. All off-street spaces shall have bumper and wheel guards where needed to protect abutting structures, properties or plantings. Parking areas shall be designed so that parked vehicles do not extend over pedestrian walkways or sidewalks.
- iv. Whenever feasible, pedestrian walkways shall be integrated into the design of the lot. Where a walkway crosses a vehicular path, the walkway shall be defined through the use of a different paving material or painted lines.
- v. Parking and Loading Area Screening and Buffering
 - 1) Vegetative or structural screens shall be established on the perimeter of all parking and loading areas to prevent direct views of parked vehicles from streets and sidewalks, avoid spill-over light, glare, noise, or exhaust fumes onto adjacent properties and to provide the parking area with a reasonable measure of shade when trees reach maturity.
 - 2) Vegetative or structural screens shall be no less than five (5) feet high and shall be visually impervious throughout the year. Screens may be a hedge, wall, fence, or combination of these choices. A land berm may be used to provide up to fifty (50) percent of the required height. The height of any screen shall decrease where driveways approach sidewalks, walking paths, and streets in order to provide adequate visibility of pedestrians from motor vehicles and to maintain a clear line of sight for vehicles entering the roadway.
- vi. Parking Area Landscaping

- 1) No less than fifteen (15) percent of the area of a parking lot, not including the perimeter area, shall be permanently landscaped using planting strips, planting diamonds, hedges, bushes, groundcovers, trees, and other vegetation. Buffer and screen plantings shall only count toward the required landscaping when they occur in areas other than the perimeter of the parking lot.
- 2) The applicant shall plant and maintain a minimum of one (1) deciduous tree per eight (8) parking spaces constructed. Trees shall have a minimum size of three (3) inch caliper at the time of planting.
- 3) Plant materials used to meet the requirements of this Bylaw shall be of specimen quality and conform to the American Standard For Nursery Stock, American Standards Institute, Inc., 230 Southern Building, Washington, DC 20005 and shall be planted according to accepted horticultural standards.
- 4) Planting strips shall be at least six (6) feet in width and shall respond to the needs of storing snow, locating light poles, and providing safe pedestrian access.
- 5) Evergreen trees shall be a minimum of four (4) feet tall at the time of planting.
- 6) Every effort shall be made to integrate existing mature trees on the site into the proposed landscape plan. Existing trees which are used to meet the requirements of this section shall be protected during construction using the following standards:
 - (a) Fencing or other protective barrier shall be used around trees on construction sites.
 - (b) Changes in the normal drainage patterns shall be avoided and appropriate protection shall be provided for trees if a grade change is necessary in the surrounding area.
 - (c) Vehicular (including construction machinery) and pedestrian traffic shall be kept away from trees to prevent soil compaction and destruction of the root system.
 - (d) If a tree is damaged during construction the applicant shall file a revised landscape plan with the Planning Board detailing an alternative planting schedule which shall meet the standards for landscaping set forth in this Bylaw.

c. Landscaping

- i. A landscaped buffer strip at least 20 ft. wide, continuous except for approved driveways, shall be established adjacent to any public road to visually separate parking and other uses from the road. The buffer strip shall be planted with grass, medium height shrubs, and shade trees (minimum 3-inch caliper, planted at least every 50 feet along the road frontage). At all street or driveway intersections, trees or shrubs shall be

set back a sufficient distance from such intersection so that they do not present a traffic visibility hazard.

- ii. Exposed storage areas, machinery, service areas, truck loading areas, utility buildings and structures and other unsightly uses shall be screened from view from neighboring properties and streets using dense, hardy evergreen plantings, or earthen berms or wall or tight fence complemented by evergreen plantings.
- iii. All landscaped areas shall be properly maintained. Shrubs or trees which die shall be replaced within one growing season.
- iv. Landscaping shall be in conformance with existing town bylaws.
- v. Completion of the landscaping requirements may be postponed due to seasonal weather conditions for a period not to exceed six (6) months from the time of project completion.

d. Appearance/Architectural Design

Architectural design shall be compatible with the rural/historic character and scale of building in the neighborhood and the Town of __through the use of appropriate building materials, screening, breaks in roof and wall lines and other architectural techniques. Variation in detail, form and siting shall be used to provide visual interest and avoid monotony. Proposed buildings shall relate harmoniously to each other with adequate light, air circulation, and separation between buildings. In making its decision, the Planning Board may consider whether the building design is compatible with the following design guidelines: 1) exterior facades are faced with wood, metal or vinyl clapboards, or stone, or brick; 2) exterior façade treatment is compatible on all four sides; 3) rooflines are peaked.

e. Storm Water Management

- i. The rate of surface run-off from a site shall not be increased after construction. If needed to meet this requirement and to maximize groundwater recharge, increased run-off from impervious surfaces shall be recharged on site by being diverted to vegetated swales, infiltration areas, or detention basins. Dry wells shall be used only where other methods are infeasible and shall require oil, grease, and sediment traps to facilitate removal of contaminants.
- ii. Neighboring properties shall not be adversely affected by flooding from excessive run-off. Run-off shall not result in pollution of streams, water bodies or groundwater.
- iii. The use of proven, alternative paving systems, such as porous paving, is highly encouraged to reduce the amount of impervious surface on developed sites.
- iv. The use of shared stormwater management structures and facilities is highly encouraged.

f. Erosion Control

Erosion of soil and sedimentation of streams and water bodies shall be minimized by using the following erosion control practices:

- i. Exposed or disturbed areas due to stripping of vegetation, soil removal, and regrading shall be permanently stabilized within six months of occupancy of a structure.
- ii. During construction, temporary vegetation and/or mulching shall be used to protect exposed areas from erosion. Until a disturbed area is permanently stabilized, sediment in run-off water shall be trapped by using siltation fencing, staked hay bales, stone check dams or sedimentation traps.
- iii. Permanent erosion control and vegetative measures shall be in accordance with the erosion/sedimentation/vegetative practices recommended by the Natural Resources Conservation Service (NRCS).
- iv. All slopes exceeding 15% resulting from site grading shall be covered with four (4) inches of topsoil and planted with a vegetative cover sufficient to prevent erosion, or stabilized by a retaining wall.
- v. Dust control shall be used during grading operations if the grading is to occur within 200 feet of an occupied residence or place or business. Dust control methods may consist of grading fine soils on calm days only or damping the ground with water.

g. Water Quality

All outside storage facilities for fuel, hazardous materials or waste, and potentially harmful raw materials shall be located within an impervious, diked containment area adequate to hold one hundred ten (110 %) percent of the total volume of liquid kept within the storage area.

h. Explosive Materials

- i. No highly flammable or explosive liquids, solids or gases shall be stored in bulk above ground, unless prior written approval of the Fire Chief has been obtained by the applicant. The project shall also meet any relevant federal and state regulations.
- ii. Propane gas tanks in 250 pound cylinders (or smaller) shall be exempt from these safety regulations.

i. Lighting

- i. Any outdoor lighting fixture newly installed or replaced shall be shielded so that it does not produce a strong, direct light beyond the property boundaries.

ii. No light post shall be taller than sixteen (16) feet, except that the Planning Board may waive this requirement upon finding that the use of taller light standards – up to twenty-five (25) feet in height – results in a more functional site figuration.

j. Noise

i. No person owning, leasing or controlling the operation of any source of sound shall willfully, negligently or through failure to provide necessary equipment or to take necessary precautions, cause unnecessary emissions from said source of sound that may cause noise pollution, in accordance with Massachusetts Department of Environmental Protection regulations 310 CMR 7.10.

ii. Noise pollution shall be defined as any sound which exceeds the ambient noise level designated for the receiving land use category, when measured at or within the property boundary for the receiving land use, plus any sound which:

- (a) Endangers the safety of, or could cause injury to the health of humans or animals;
- (b) Annoys or disturbs a reasonable person of normal sensitivities;
- (c) Endangers or injures personal or real property.

iii. Sound Level Limits by Receiving Land Use

(a) Except as provided in (c) below, no person shall operate or cause to be operated any source of sound in a manner that creates a sound level which exceeds the ambient noise level set forth for the receiving land use category in the following table when measured at or within the property boundary of the receiving land use.

Table 1-1. Sound Level Limits

Receiving Land Use Category	
Item	
Sound Level Limit (DBA)	
Residential A, B and C	
Daytime	60
Open Space	
All Other Times	50
Business	
At All Times	65
Commercial	
At All Times	70

Notes for Table One:

DAYTIME – The time between the hours of seven ante meridian (7:00 A.M.) and six post meridian (6:00 P.M.) each week excepting Sunday in accordance with the time system locally in effect.

DECIBEL (DB) – The unit by which the sound level is measured.

SOUND LEVEL – The weighted sound level obtained by the use of a sound level meter and frequency weighting network such as A, B, or C as specified in the American National Standards Institute specifications for sound level meters. (ANSI.)

iv. Restrictions on Noise Emitted from Construction Sites

(a) No person shall engage in or cause very loud construction activities on a site abutting residential use between the hours of 9 P.M. of one and 7 A.M. of the following day.

(b) It shall be unlawful of any person to operate any construction device on any construction site if the operation of that device emits noise measured at the lot line of the affected property in excess of the following values:

Table Two. Construction Site Noise Limits

Use of Affected Property
L 10 Level
Maximum Noise Level
Residential A, B and C
75 DBA
86 DBA
Business
80 DBA
-
Commercial
85 DBA
-
Public Way
85 DBA
-

Notes for Table Two:

A-WEIGHTED SOUND LEVEL – The sound pressure measured on a sound level meter using the A-weighting network. The level read is designated DB(A) or DBA.

L-10 - The A-weighted sound level exceeded 10% of the time.

(c) The L 10 level shall be determined by making 100 observations on the A-weighted network with the sound level meter at slow response at ten (10) second intervals. During any of these observations if a measurement is substantially affected by a source outside of the construction site, these measurements will not be

considered. Observations will be continued until 100 valid observations have been recorded. The L 10 level will be equivalent to the tenth highest level recorded.

(d) If the person taking measurements estimates that outside noise sources contribute greatly to the noise of the construction site, the aforementioned procedure shall be repeated when construction is inactive in order to correctly determine the L 10 level. The L 10 level during construction must be greater than the background L 10 level by at least 5 DBA to be considered in violation of the provisions of this regulation.

k. Utilities

Electric, telecommunications, and other such utilities shall be underground where physically and environmentally feasible.

l. Dust and Odors

No person having control of any dust or odor generating operators or construction or demolition shall permit emissions of dust or odor which cause or contribute to a condition of air pollution, in accordance with Massachusetts Department of Environmental Protection regulations 310 CMR 7.09.

m. Heat, glare, vibration and radiation

No heat, glare, or vibration shall be discernible from the outside of any structure, and all radiation shall be contained within a structure.

n. Storage

All materials, supplies and equipment shall be stored in accordance with Fire Prevention Standards of the National Board of Fire Underwriters and shall be screened from view from public ways or abutting properties.

MODEL COMMERCIAL CORRIDOR SITE PLAN APPROVAL BYLAW

Prepared by Pioneer Valley Planning Commission

10-9-07

1.0 COMMERCIAL SITE PLAN APPROVAL

1.1 Purposes

- (1) To promote the safety of vehicular and pedestrian movement with the site and in relation to the adjacent areas, highway traffic safety and protect the capability of state and local roads to conduct traffic smoothly;
- (2) To promote an attractive and viable commercial district and expand the commercial tax base of the Town/City;
- (3) To protect the rural character, aesthetic visual qualities, natural environmental features, historical features and property values of the Town/City and neighboring properties; and
- (4) To discourage unlimited commercial "strip development" and curb cuts along highways, and encourage commercial growth in nodes and clusters.

1.2 Projects Requiring Site Plan Approval

Within the Business, Limited Business or Industrial Districts, no special permit or building permit shall be issued and no application for such permits shall be accepted for any of the following uses:

- (1) The construction or exterior alteration of a business structure;
- (2) The construction or exterior alteration of an industrial structure;
- (3) Any expansion or change in use of a business or industrial structure;

Unless a site plan has been endorsed by the Planning Board, after consultation with other boards, including but not limited to the following: Building Inspector, Board of Health, Board of Selectmen, Historical Commission, Conservation Commission, Highway Department, Fire Department and Police Department. The Planning Board may waive any or all requirements of site plan review for external enlargements of less than 10% of the existing floor area.

1.3 Exemption From Site Plan Approval

Site plan approval shall not be required for:

- (1) The construction or enlargement of any single family or two family dwelling or building accessory to such dwelling; or

- (2) Any building used exclusively for agriculture, horticulture or floriculture.

1.4 Applications for Site Plan Approval

- (1) Each application for Site Plan Approval shall be submitted to the Planning Board by the current owner of record, accompanied by nine (9) copies of the site plan.
- (2) The Planning Board shall obtain with each submission, a deposit sufficient to cover any expenses connected with a public hearing and review of plans, including the costs of any engineering or planning consultant services necessary for review purposes.

1.5 Required Site Plan Contents

All site plans shall be prepared by a registered architect, landscape architect, or professional engineer unless this requirement is waived by the Planning Board because of unusually simple circumstances. All site plans shall be on standard 24" x 36" sheets at a scale of 1 inch equals 20 feet, and contain the following additional information:

- (1) Name of the project, locus, date and scale plan;
- (2) Name and address of the owner of record, developer, and seal of the engineer, landscape architect or architect;
- (3) The location and boundaries of the lot, adjacent streets or ways, and the location and owner's names of all adjacent properties and those within 300 feet of the property line, and all zoning district boundaries;
- (4) Existing and proposed topography at the two foot contour interval the location of wetlands, streams, water bodies, drainage swales, areas subject to flooding and base flood elevations and unique natural land features;
- (5) Existing and proposed structures, including dimensions and elevations; and all exterior entrances and exits;
- (6) The location of parking and loading areas, public and private ways, driveways, walkways, access and egress points;
- (7) The location and description of all proposed septic systems, percolation test when necessary, water supply, storm drainage systems including existing and proposed drainlines, culverts, drainage swales, catchbasins, drainage calculations, and subdrainage along with soil logs, utilities, hydrants, manholes, lighting fixtures, and refuse and other waste disposal methods;
- (8) Proposed landscape features including the location and a description of buffers, screening, fencing, and plantings, including the size and type of plant material;

- (9) The location, dimensions, height, color, illumination and characteristics of existing and proposed signs;
- (10) The location and a description of proposed open space or recreation areas;
- (11) The plan shall describe estimated daily and peak-hour vehicle trips to be generated by the site and traffic flow patterns for vehicles and pedestrians showing adequate access to and from the site and adequate circulation within the site. A detailed traffic impact statement is required for use as specified in Section H-(1)-(f);
- (12) A plan for the control of erosion, dust, and silt, both during and after construction sequencing, temporary and permanent erosion control, and protection of water bodies;
- (13) For alterations to any existing or new business/commercial/industrial uses a table containing the following information:
 - A. Maximum area of building to be used for selling, offices, business, industrial or other uses.
 - B. Maximum number of employees where applicable.
 - C. Maximum seating capacity where applicable.
 - D. Number of parking spaces existing or required for the intended use.
- (14) Elevation plans at a scale of 1/4" – 1'0" for all exterior facades of the proposed structure(s) and/or existing facades plus addition(s) showing design features and indicating the type and color of material to be used.

The Planning Board may waive any information requirements it judges to be unnecessary to the review of a particular plan.

1.6 Procedures for Site Plan Review

(1) Referral to Municipal Boards and Departments

The Planning Board shall transmit one copy each to the Building Inspector, Board of Health, Conservation Commission, Highway Department, Historical Committee, Fire Department, and Police Department, who shall review the application and submit their recommendations and comments to the Planning Board concerning:

- A. The adequacy of the data and methodology used by the applicant to determine the impacts of the proposed development;
- B. The effects of the projected impacts of the proposed development; and
- C. Recommended conditions or remedial measures to accommodate or mitigate the expected impacts of the proposed development.

Failure of Boards to make recommendations within 35 days of the referral of the Application shall be deemed to be lack of opposition.

(2) Public Hearing

The Planning Board shall hold a public hearing within sixty-five (65) days of the receipt of an application and after due consideration of the recommendations received, the Board shall take final action within 90 days from the time of hearing.

(3) The period of review for a special permit requiring site plan approval shall be the same as any other special permit and shall conform to the requirements of Chapter 40A, Sec.9, "Special Permits". Specifically, a joint public hearing to address the Special Permit application and Site Plan Approval application shall be held within sixty-five (65) days of the filing of a special permit application with the Planning Board or Board of Appeals. The Planning Board shall then have 90 days following the public hearing in which to act.

1.7 Site Plan Review Criteria

In reviewing and evaluating the site plan, and in making a final determination regarding site plan approval, the Planning Board shall consider the following criteria:

- (1) The site plan complies with the Commercial Development and Performance Standards contained in Section 1.10;
- (2) The site plan minimizes traffic and safety impacts of the proposed development on adjacent highways or roads, and maximizes the convenience and safety of vehicular and pedestrian movement within the site;
- (3) The proposed development, to the extent feasible: a) is integrated into the existing landscape and protects abutting properties; b) minimizes adverse environmental impacts on such features as wetlands, floodplains, and aquifer recharge areas; c) minimizes obstruction of scenic views from publicly accessible locations; d) preserves unique natural or historical features; e) minimizes tree, vegetation, and soil removal and grade changes, f) maximizes open space retention; and g) screens objectionable features from neighboring properties and roadways.
- (4) The architectural design, layout and landscaping of the proposed development is in harmony with the historic, rural character of the neighborhood and the Town/City of [Town/City Name].
- (5) The proposed development is served with adequate water supply and waste disposal systems and will not place excessive demands on Town/City services and infrastructure.
- (6) The site plan shows adequate measures to prevent pollution of surface or groundwater, to minimize erosion and sedimentation, and to prevent changes in groundwater levels, increased run-off and potential for flooding.

1.8 Modifications to the Site Plan

Before approval of the site plan, the Planning Board may request that the applicant make modifications in the proposed design of the project or provide additional information to ensure that the above criteria are met.

1.9 Decision on Site Plan Approval

The Planning Board's final action in writing shall consist of either:

- A. Approval of the site plan based on a determination that the proposed project will constitute a suitable development and is in compliance with the standards set forth in this bylaw;
- B. Disapproval of the site plan based on a determination that the proposed project does not meet the standards for review set forth in this bylaw; or
- C. Approval of the project subject to any conditions, modifications and restrictions which will ensure that the project meets the standards and criteria in this bylaw/ordinance.

1.10 Commercial Development and Performance Standards

In order to receive site plan approval, all projects or uses must demonstrate compliance with the commercial development standards herein.

(1) Access Standards

- A. Applicants must demonstrate that the project will minimize traffic and safety impacts on highways. The number of curb cuts on state and local roads shall be minimized. To the extent feasible, access to businesses shall be provided via one of the following:
 - i. Access via a common driveway serving adjacent lots or premises;
 - ii. Access via an existing side street;
 - iii. Access via cul-de-sac or loop road shared by adjacent lots or premises.
- B. One driveway per business shall be permitted as a matter of right. Where deemed necessary by the Special Permit Granting Authority, two driveways may be permitted as part of the Site Plan Approval process which shall be clearly marketed "entrance" and "exit".
- C. Curb cuts shall be limited to the minimum width for safe entering and exiting, and shall in no case exceed 24 feet in width.
- D. All driveways shall be designed to afford motorists exiting to highways with safe sight distance.
- E. The proposed development shall assure safe interior circulation within its site by separating pedestrian, bicycle and vehicular traffic.

(2) Traffic Impact Statement

A traffic impact statement shall be prepared, which shall contain:

- A. Traffic flow patterns at the site including entrances and egresses, loading and unloading areas, and curb cuts on site and within one hundred feet of the site.
- B. A detailed assessment of the traffic safety impacts of the proposed project or use on the carrying capacity of any adjacent highway or road, including the projected number of motor vehicle trips to enter or depart from the site estimated for daily hour and peak hour traffic levels, road capacities, and impacts on intersections.
- C. A plan to minimize traffic and safety impacts through such means as physical design and layout concepts, staggered employee work schedules, promoting use of public transit or carpooling, or other appropriate means.
- D. An interior traffic and pedestrian circulation plan designed to minimize conflicts and safety problems.
- E. Adequate pedestrian and bicycle access shall be provided. Sidewalks shall be provided to provide access to adjacent properties and between individual businesses within a development.

(3) Trip Reduction Plan

In each case where a new building(s) or new use of more than 10,000 square feet shall prepare and submit a "Trip Reduction Plan" which clearly identifies a combination of transportation systems management strategies which are designed to reduce anticipated vehicle trips by 35%. These strategies should include, but are not limited to:

- A. Vanpool/Carpool incentive programs, such as employer subsidies for vanpools/carpools, preferred vanpool/carpool parking, ride matching services, and providing parking at the vanpool/carpool pick-up site.
- B. Allowing and encouraging flexible work hours and flexible work weeks.
- C. Encouraging pedestrian and bicycle commute modes by providing on-site bicycle parking storage, locker room facilities, bike and walking paths, and similar features.
- D. Site designs which are conducive to transit or vanpool use, such as convenient, weather protected transit shelters.
- E. Encouraging employee and customer use of transit services, including providing transit subsidies for improved transit service and accessibility.
- F. Provision of on-site services, retail opportunities, and housing if allowed in the zone.
- G. Naming a full-time or part-time transportation systems management coordinator to oversee implementing all strategies identified in the "Trip Reduction Plan."

(4) Parking Standards

Proposed projects or uses must comply with Parking and Off-street Loading requirements in Section V-D and the following standards:

- A. Parking areas shall be located to the side or rear of the structure. No parking shall be permitted within the required front yard of a structure.
- B. To the extent feasible, parking areas shall be shared with adjacent businesses.
- C. For developments which make a long-term commitment to actively promote employee and public use of transit, ridesharing, and other means to reduce single occupant vehicle (SOV) trips, minimum parking standards may be reduced by a percentage to be determined by the Planning Board based upon the adequacy of trip reduction plans submitted in accordance with Section H-1.

(5) Landscaping

- a. A landscaped buffer strip at least fifteen (15) feet wide, continuous except for approved driveways, shall be established adjacent to any public road to visually separate parking and other uses from the road. The buffer strip shall be planted with grass, medium height shrubs, and shade trees (minimum 2-inch caliper, planted at least every 50 feet along the road frontage). At all street or driveway intersections, trees or shrubs shall be set back a sufficient distance from such intersections so that they do not present a traffic visibility hazard. The sidewalk required above shall be incorporated into the buffer strip.
- b. Large parking areas shall be subdivided with landscaped islands so that no paved parking surface shall extend more than 80 feet in width. At least one tree (minimum 2: caliper) per 35 parking spaces shall be provided.
- c. Exposed storage areas, machinery, service areas, truck loading areas, utility buildings and structures and other unsightly uses shall be screened from view from neighboring properties and streets using dense, hardy evergreen planting, or earthen beams, or wall or tight fence complemented by evergreen plantings.
- d. All landscaped areas shall be properly maintained. Shrubs or trees which die shall be replaced within one growing season.

(6) Appearance/Architectural Design

- a. Architectural design shall be compatible with the rural/historic character and scale of buildings in the neighborhood and the Town/City through the use of appropriate building materials, screening, breaks in roof and wall lines and other architectural techniques. Variation in detail, form and siting should be used to provide visual interest and avoid monotony. Proposed buildings should relate harmoniously to each other with adequate light, air, circulation, and separation between buildings. In making its decision, the Planning Board may consider whether the building design is compatible with the following design guidelines: 1) exterior facades are faced with wood, metal or vinyl clapboards, or stone

or brick; 2) exterior façade treatment is compatible on all four sides; 3) rooflines are peaked.

b. The Planning Board may adopt such regulations as may be necessary to further specify design standards.

(7) Storm Water Runoff

a. The rate of surface water run-off from a site shall not be increased after construction. If needed to meet this requirement and to maximize groundwater recharge, increased runoff from impervious surfaces shall be recharged on site by being diverted to vegetated surfaces for infiltration or through the use of detention ponds. Dry wells shall be used only where other methods are infeasible and shall require oil, grease, and sediment traps to facilitate removal of contaminants.

b. Neighboring properties shall not be adversely affected by flooding from excessive run-off.

(8) Erosion Control

Erosion of soil and sedimentation of streams and waterbodies shall be minimized by using the following erosion control practices:

a. Exposed or disturbed areas due to stripping of vegetation, soil removal, and grading shall be permanently stabilized within six months of occupancy of a structure.

b. During construction, temporary vegetation and/or mulching shall be used to protect exposed areas from erosion. Until a disturbed area is permanently stabilized, sediment in runoff water shall be trapped by using staked haybales or sedimentation traps.

c. Permanent erosion control and vegetative measures shall be in accordance with the erosion/sedimentation/vegetative practices recommended by the Soil Conservation Service.

d. All slopes exceeding 15% resulting from site grading shall be either covered with 4 inches of topsoil and planted with a vegetative cover sufficient to prevent erosion or be stabilized by a retaining wall.

e. Dust control shall be used during grading operations if the grading is to occur within 200 feet of an occupied residence or place of business. Dust control methods may consist of grading fine soils on calm days only or dampening the ground with water.

(9) Water Quality

All outdoor storage facilities for fuel, hazardous materials or wastes, and potentially harmful raw materials shall be located within an impervious, diked

containment area adequate to hold the total volume of liquid kept within the storage area.

(10) Explosive Materials

a. No highly flammable or explosive liquids, solids, or gases shall be stored in bulk above ground, unless they are located in anchored tanks at least seventy-five (75) feet from any lot line, Town/City way, or interior roadway plus all relevant federal and state regulations shall also be met. Underground storage tanks are prohibited.

b. Propane gas tanks in 100-lb. cylinders (or smaller) shall be exempt from these safety regulations.

(11) Lighting

a. Any outdoor lighting fixture newly installed or replaced shall be shielded so that it does not produce a strong, direct light beyond the property boundaries;

b. No light standard shall be taller than fifteen (15) feet.

(12) Vibration

a. No vibration shall be transmitted outside the property where it originates.

1.9 Enforcement

(1) The Planning Board may require the posting of a bond or other adequate security to assure compliance with the plan and conditions and may suspend any permit or license when work is not performed as required.

(2) Any special permit issued under this section shall lapse within one (1) year if a substantial use thereof has not commenced sooner except for good cause. The time required to pursue and await determination of a judicial appeal pursuant to Chapter 40a of the General Laws shall be included within the one (1) year time limit.

(3) The Planning Board may periodically amend or add rules and regulations relating to the procedures and administration of this section.

Model Complete Streets Bylaw / Ordinance

Pioneer Valley Planning Commission, September 2014

Adapted from Complete Streets Policies for the City of Birmingham, AL and City of Somerville, MA

WHEREAS, "Complete Streets" are defined as streets that are designed to accommodate all users, including, but not limited to, motorists, pedestrians, bicyclists, and transit riders; and

WHEREAS, "Complete Streets" can include a range of elements to accommodate all users, including, but not limited to, sidewalks, signage, paved shoulders, bicycle lanes, cycle tracks, traffic lanes shared with motorist including sharrows and other bicycle pavement marking, crosswalks and other pavement marking for pedestrians, pedestrian control signalization, bicycle actuated traffic signals, bus pull outs, curb cuts, raised crosswalks, roundabouts, traffic islands and other traffic calming measures; and

WHEREAS, The Massachusetts Project Development & Design Guide (2006) states that traffic calming measures are physical elements intended to reduce vehicle speeds and improve driver attentiveness and are most often applied to existing streets where vehicle operating speeds are in conflict with or incompatible with pedestrian and bicycle activity; and

WHEREAS, Complete Streets support economic growth and community stability by providing accessible and efficient connections between home, school, work, recreation and retail destinations by improving the pedestrian and vehicular environments throughout communities; and

WHEREAS, Complete Streets enhance safe walking and bicycling options for school-age children, in recognition of the objectives of the national Safe Routes to School program and the U.S. Centers for Disease Control and Prevention's "Physical Activity Guidelines"; and

WHEREAS, Complete Streets will help the **[city/town]** to reduce greenhouse gas emissions as more residents choose an alternative to the single occupant vehicle, thereby improving air quality, alleviating public health concerns such as asthma, and making possible more green space and flood control by decreasing demand for parking lots; and

WHEREAS, Complete Streets can play a role by reducing pedestrian and bicyclist injuries and deaths, reducing traffic congestion, improving air quality both by promoting alternative forms of transportation and by helping to improve traffic flow; and

WHEREAS, the people of the **[city/town]** have expressed a strong desire for increased transportation options, including walking, cycling, and transit; and

WHEREAS, A Complete Streets **[ordinance/bylaw]** for **[city/town]** will integrate Complete Streets planning into all types of projects, including new construction, reconstruction, rehabilitation, repair, and maintenance during the construction, reconstruction or other changes of transportation facilities on streets and redevelopment projects;

NOW, THEREFORE, be it ordained by the **[adopting body]**, in session assembled, that the **[name of municipal codes]** is hereby amended as follows:

The addition of **[code citation]** as follows:

1. **[city/town]** shall enhance the safety, access, convenience and comfort of all users of all ages and abilities, providing for equality in use between pedestrians (including people requiring mobility aids), bicyclists, transit users, motorists and freight drivers, through the design, operation and maintenance of the transportation network so as to create a connected network of facilities accommodating each mode of travel that is consistent with and supportive of the local community, recognizing that all streets are different and that the needs of various users will need to be balanced in a flexible manner to achieve Complete Streets.
2. **[city/town]** will incorporate Complete Street elements into public transportation projects in order to provide appropriate accommodation for bicyclists, pedestrians, transit users and persons of all abilities, while promoting safe operation for all users, in comprehensive and connected networks in a manner consistent with, and supportive of, the surrounding community.
3. As feasible, **[city/town]** shall incorporate Complete Streets Infrastructure into existing streets to improve the safety and convenience of users, construct and enhance the transportation network for each category of users, and foster economic development and new employment.
4. **[city/town]** recognizes that Complete Streets may be achieved through single elements incorporated into a particular project or incrementally through a series of smaller improvements or maintenance activities over time.
5. **[city/town]** shall approach every transportation project and program as an opportunity to improve streets and the transportation network for all users, including conducting, once per year, a “rules of the road” education campaign to better inform pedestrians, cyclists and motorists of **[city/town]**/state traffic regulations and best practices for safely walking, bicycling and driving on complete streets. This work shall be done by **[applicable municipal boards, appointed officials, and departments]** and in cooperation with other departments, agencies, jurisdictions and associations.
6. **[city/town]** shall follow the following adopted design standards:
 - Massachusetts Project Development & Design Guide (2006)
 - National Association of City Transportation Officials Urban Bikeway Design Guide
 - ITE Designing Walkable Urban Thoroughfares: A Context Sensitive Approach
 - An ITE Recommended Practice report guidelines
 - American Association of State Highway and Transportation Officials (AASHTO) Green Book

At a minimum, requirements will be the following:

- a. In developed areas, continuous sidewalks should be provided on both sides of a roadway, minimizing the number of pedestrian crossings required. [If sidewalks are only on one side],

- the sidewalk should be provided on the side that minimizes the number of pedestrian crossings.
- b. Pedestrian requirements must be fully considered in the design of intersections [including taking into consideration the following concerns: crossings and pedestrian curb cut ramp locations; minimizing curb radius at corners; walking speed, pedestrian flow capacity, traffic control, yielding and delays].
 - c. All new and reconstructed sidewalks must be accessible to and usable by person with disabilities in accordance with the Americans with Disabilities Act and the Massachusetts Architectural Access Board.
 - d. Dedicated bicycle facilities, including conventional and physically separated bike lanes or cycle tracks, must be fully considered and implemented in the design of streets and intersections, wherever possible.
 - e. Along roadway segments, separation of motor vehicle and non-motorized users should be provided by implementing cycle tracks, buffered or conventional bicycle lanes, bicycle boxes, shoulders, or buffered sidewalks.
 - f. Where motorized and non-motorized users cannot be separated, traffic calming should be prioritized to implement a low-speed shared street [not to exceed 30 mph prima facie or posted speed] compatible with bicycle and pedestrian speeds on non-federal aid eligible roads.
7. Bicycle, pedestrian, and transit facilities shall be incorporated, when applicable and practical, in all street projects, re-construction, re-paving, and re-habilitation projects, with only the following exceptions:
- If bicycles or pedestrians are prohibited by law from using the facility.
 - If the cost of establishing bikeways or walkways as part of the project would be disproportionate in cost or to anticipated future use (not the current use).
 - If the existing right of way is constrained in a manner that inhibits simple addition of transit, bicycle, or pedestrian improvements. In this case, the **[city/town]** shall consider alternatives such as lane reduction, lane narrowing, on-street parking relocation or reduction, shoulders, signage, traffic calming, or enforcement.
 - If such facilities would constitute a threat to public safety or health in the determination of the **[city/town]** Traffic Engineer in consultation with the **[applicable department]**.
8. All initial planning and design studies, health impact assessments, environmental reviews, and other project reviews for projects requiring funding or approval by **[city/town]** shall make effort to (1) evaluate the effect of the proposed project on safe travel by all users, and (2) identify measures to mitigate any adverse impacts on such travel that are identified.

9. In design guidelines, **[city/town]** shall coordinate templates with street classifications and revise them to include Complete Streets Infrastructure, such as bicycle lanes and cycle tracks, sidewalks, street crossings, curb geometries, and planting strips. The design of new or reconstructed facilities should anticipate and support likely future demand for bicycling, walking and transit facilities.

ADOPTED AND SIGNED this _____, _____

ATTEST

DRAFT

Model Complete Streets Resolution

Pioneer Valley Planning Commission, September 2014

Adapted from Complete Streets Policies for the City of Birmingham, AL and City of Somerville, MA

WHEREAS, "Complete Streets" are defined as streets that are designed to accommodate all users, including, but not limited to, motorists, pedestrians, bicyclists, and transit riders; and

WHEREAS, "Complete Streets" can include a range of elements to accommodate all users, including, but not limited to, sidewalks, signage, paved shoulders, bicycle lanes, cycle tracks, traffic lanes shared with motorist including sharrows and other bicycle pavement marking, crosswalks and other pavement marking for pedestrians, pedestrian control signalization, bicycle actuated traffic signals, bus pull outs, curb cuts, raised crosswalks, roundabouts, traffic islands and other traffic calming measures; and

WHEREAS, The Massachusetts Project Development & Design Guide (2006) states that traffic calming measures are physical elements intended to reduce vehicle speeds and improve driver attentiveness and are most often applied to existing streets where vehicle operating speeds are in conflict with or incompatible with pedestrian and bicycle activity; and

WHEREAS, Complete Streets support economic growth and community stability by providing accessible and efficient connections between home, school, work, recreation and retail destinations by improving the pedestrian and vehicular environments throughout communities; and

WHEREAS, Complete Streets enhance safe walking and bicycling options for school-age children, in recognition of the objectives of the national Safe Routes to School program and the U.S. Centers for Disease Control and Prevention's "Physical Activity Guidelines"; and

WHEREAS, Complete Streets will help the [city/town] to reduce greenhouse gas emissions as more residents choose an alternative to the single occupant vehicle, thereby improving air quality, alleviating public health concerns such as asthma, and making possible more green space and flood control by decreasing demand for parking lots; and

WHEREAS, Complete Streets can play a role by reducing pedestrian and bicyclist injuries and deaths, reducing traffic congestion, improving air quality both by promoting alternative forms of transportation and by helping to improve traffic flow; and

WHEREAS, the people of the [city/town] have expressed a strong desire for increased transportation options, including walking, cycling, and transit; and

WHEREAS, implementation of Complete Streets will vary depending on the surrounding land uses, densities, and general context, but street and transportation plans should always be guided by the principle that streets should promote multiple transportation options for all people;

NOW, THEREFORE BE IT RESOLVED that the [adopting body] strongly endorses a Complete Streets approach for the [city/town] to enhance transportation options and to improve quality of life for the residents of [city/town] as follows:

1. **[city/town]** shall, to the maximum extent practical, scope, plan, design, construct, operate, and maintain all **[city/town]** streets to provide a comprehensive and integrated network of facilities for people of all ages and abilities traveling by foot, bicycle, automobile, public transportation, and commercial vehicle.
2. Such improvements shall be consistent with and supportive of the local community, and early consideration shall be given to any project's land use and transportation context.
3. Bicycle, pedestrian, and transit facilities shall be incorporated, when applicable and practical, in all street projects, re-construction, re-paving, and re-habilitation projects, with only the following exceptions:
 - If bicycles or pedestrians are prohibited by law from using the facility.
 - If the cost of establishing bikeways or walkways as part of the project would be disproportionate in cost or to anticipated future use (not the current use).
 - If the existing right of way is constrained in a manner that inhibits simple addition of transit, bicycle, or pedestrian improvements. In this case, the **[city/town]** shall consider alternatives such as lane reduction, lane narrowing, on-street parking relocation or reduction, shoulders, signage, traffic calming, or enforcement.
 - If such facilities would constitute a threat to public safety or health in the determination of the **[city/town]** Traffic Engineer in consultation with the **[applicable municipal department]**.
4. **[city/town]** shall, to the maximum extent practical, follow the latest adopted design standards when implementing this policy, including but not limited to:
 - a. Guidance issued by the:
 - Massachusetts Project Development & Design Guide (2006)
 - National Association of City Transportation Officials Urban Bikeway Design Guide
 - ITE Designing Walkable Urban Thoroughfares: A Context Sensitive Approach
 - An ITE Recommended Practice report guidelines
 - American Association of State Highway and Transportation Officials (AASHTO) Green Book
 - b. Application of design standards shall be flexible, recognizing that all streets are not alike and that user needs should be balanced, and innovative or non-traditional design options shall be considered.
5. The **[city/town]** Engineer shall develop implementation strategies that include revising and updating processes, procedures, design and construction manuals, recommended traffic control devices, standard construction specifications and other guidance to assist in this resolution's implementation.

BE IT FURTHER RESOLVED that the **[city/town]** will work with the Massachusetts Department of Transportation and community organizations to achieve the goals set forth in this Complete Streets policy.

ADOPTED AND SIGNED this _____, _____

ATTEST

DRAFT

Model Complete Streets Resolution

Pioneer Valley Planning Commission, September 2014

Adapted from Complete Streets Policies for the City of Birmingham, AL and City of Somerville, MA

WHEREAS, "Complete Streets" are defined as streets that are designed to accommodate all users, including, but not limited to, motorists, pedestrians, bicyclists, and transit riders; and

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WHEREAS, Complete Streets can play a role by reducing pedestrian and bicyclist injuries and deaths, reducing traffic congestion, improving air quality both by promoting alternative forms of transportation and by helping to improve traffic flow; and

WHEREAS, the people of the **[city/town]** have expressed a strong desire for increased transportation options, including walking, cycling, and transit; and

WHEREAS, implementation of Complete Streets will vary depending on the surrounding land uses, densities, and general context, but street and transportation plans should always be guided by the principle that streets should promote multiple transportation options for all people;

NOW, THEREFORE BE IT RESOLVED that the **[adopting body]** strongly endorses a Complete Streets approach for the **[city/town]** to enhance transportation options and to improve quality of life for the residents of **[city/town]** as follows:

1. **[city/town]** shall, to the maximum extent practical, scope, plan, design, construct, operate, and maintain all **[city/town]** streets to provide a comprehensive and integrated network of facilities for people of all ages and abilities traveling by foot, bicycle, automobile, public transportation, and commercial vehicle.
2. Such improvements shall be consistent with and supportive of the local community, and early consideration shall be given to any project's land use and transportation context.
3. Bicycle, pedestrian, and transit facilities shall be incorporated, when applicable and practical, in all street projects, re-construction, re-paving, and re-habilitation projects, with only the following exceptions:
 - If bicycles or pedestrians are prohibited by law from using the facility.
 - If the cost of establishing bikeways or walkways as part of the project would be disproportionate in cost or to anticipated future use (not the current use).
 - If the existing right of way is constrained in a manner that inhibits simple addition of transit, bicycle, or pedestrian improvements. In this case, the **[city/town]** shall consider alternatives such as lane reduction, lane narrowing, on-street parking relocation or reduction, shoulders, signage, traffic calming, or enforcement.
 - If such facilities would constitute a threat to public safety or health in the determination of the **[city/town]** Traffic Engineer in consultation with the **[applicable municipal department]**.
4. **[city/town]** shall, to the maximum extent practical, follow the latest adopted design standards when implementing this policy, including but not limited to:
 - a. Guidance issued by the:
 - Massachusetts Project Development & Design Guide (2006)
 - National Association of City Transportation Officials Urban Bikeway Design Guide
 - ITE Designing Walkable Urban Thoroughfares: A Context Sensitive Approach
 - An ITE Recommended Practice report guidelines
 - American Association of State Highway and Transportation Officials (AASHTO) Green Book
 - b. Application of design standards shall be flexible, recognizing that all streets are not alike and that user needs should be balanced, and innovative or non-traditional design options shall be considered.
5. The **[city/town]** Engineer shall develop implementation strategies that include revising and updating processes, procedures, design and construction manuals, recommended traffic control devices, standard construction specifications and other guidance to assist in this resolution's implementation.

BE IT FURTHER RESOLVED that the **[city/town]** will work with the Massachusetts Department of Transportation and community organizations to achieve the goals set forth in this Complete Streets policy.

ADOPTED AND SIGNED this _____, _____

ATTEST

DRAFT

MODEL CONSERVATION DEVELOPMENT ZONING BYLAW

*Prepared by the Pioneer Valley Planning Commission, with funding provided by the
Highland Communities Initiative
April 2010*

1.0 Conservation Development

1.01 Purposes

The purposes of this bylaw are to:

- (1) Promote compact development using flexible development standards;
- (2) Protect open space for use as farmland, forestry, recreation, or wildlife habitat;
- (3) Protect the town's rural character, natural resources, environmentally sensitive areas, or scenic views;
- (4) Increase use of sustainable or green energy sources in residential development; and
- (5) Preserve or enhance rural town character, including scenic roads and town centers.

1.02 Definitions

Conservation Development: A form of residential development allowed in all districts by right with Site Plan Review, whereby the options of common driveways and flexible area and frontage requirements are utilized to create permanent open space and avoid standard Approval Not Required and subdivision development.

Common Driveway: A vehicular access from a road to more than one (1) {but no more than six (6)} residential units, built in accordance with the common driveway standards stated in Section 1.08 of this bylaw.

Existing Resources / Site Analysis Map: A map which identifies, locates, and describes noteworthy features to be designed around through sensitive subdivision layouts, such as vegetation, wetlands, steep slopes, farmland soils, historic or cultural features, threatened or endangered species, unusual geological formations, and scenic views or viewsheds.

Low Impact Development (LID): A land-planning and engineering design approach to managing stormwater runoff which emphasizes use of on-site natural features to protect water quality. Low Impact Developments are designed to reflect natural hydrology, minimize impervious surfaces, treat stormwater in small decentralized structures, preserve portions of the site in natural conditions, and use natural topography for drainageways and storage.

Site Context Map: A map that illustrates the proposed development in connection to its surrounding neighborhood and shows major natural resource areas or features that cross parcel lines.

1.03 Conservation Development Allowed By Right with Site Plan Review

Conservation Development in accordance with this bylaw shall be allowed by right with Site Plan Review in all zoning districts. Any person creating {two} or more lots available for residential use, whether or not by subdivision, may apply for Conservation Development under this section. Conservation Development shall be encouraged within the town and shall be the preferred method of development wherever the purposes in Section 1.01 would be served.

1.04 Criteria for Site Plan Review

In reviewing applications for Conservation Development, the Planning Board may consider whether the application complies substantially with the following Site Plan Review criteria. The Planning Board may impose reasonable conditions at the expense of the applicant, including performance guarantees, to promote these criteria.

1.041 All dwellings shall, to the greatest extent possible, be located out of view from any road, unless valuable natural resources or farmland located to the rear of the property render building in view of the road more desirable.

1.042 Conservation Development shall create permanently protected conservation land. All land within a Conservation Development not in use for building lots shall be placed in permanent conservation.

1.043 The portion of a parcel placed in conservation shall, to the greatest extent possible, be that which is most valuable or productive as a natural resource, wildlife habitat, farmland, or forestry land.

1.044 Conservation Development shall result in the creation of fewer curb cuts and vehicular access points to a public way than would occur under standard Approval Not Required or Subdivision Development.

1.045 Conservation Development may result in a net increase in density of dwellings on the parcel, up to {ten percent (10%) or one (1) lot} over the density which could reasonably be expected to occur under standard Approval Not Required or Subdivision Development.

1.046 Stormwater runoff generated from land development and land use conversion activities shall not be discharged directly to a wetland, local water body, municipal drainage system, or abutting property, without adequate treatment.

1.047 Conservation Development shall employ Low Impact Development techniques and Renewable Energy techniques to the maximum extent practicable, as described in Sections 1.072 and 1.113 herein.

1.048 In Conservation Development, each structure shall be integrated into the existing landscape on the property, to the extent feasible, so as to minimize its visual impact through use of vegetative and structural screening, landscaping, grading, and placement on or into the surface of the lot.

1.05 Application Procedure

1.051 Any application for Conservation Development shall include all contents and follow all procedures in the Site Plan Review section, Section ____ of the {TOWN NAME} zoning bylaw.

1.052 Any application for Conservation Development shall clearly state the terms by which the development shall meet the criteria listed in Section 1.04 of this zoning bylaw.

1.053 In addition to the Site Plan Review requirements listed in Section ____ of the {TOWN} zoning bylaw, a Site Context Map and Existing Resources / Site Analysis Map shall be submitted to the Planning Board. These maps shall be used by the applicant in the preparation of a preliminary design plan.

1.054 The applicant is very strongly encouraged to request a concept meeting at a regular business meeting of the Planning Board. If one is requested, the Planning Board may invite the Conservation Commission, Board of Health, Historical Commission, and {INSERT THE NAMES OF ANY OTHER APPROPRIATE BOARDS}. The purpose of a concept meeting is to minimize the applicant's costs of engineering and other technical experts, and to commence discussions with the Planning Board at the earliest possible stage in the development. At the meeting, the applicant may outline the proposed development, seek preliminary feedback from the Planning Board and/or its technical experts, and set a timetable for submittal of a formal application.

1.06 Flexible Dimensional Standards

Conservation Developments shall utilize the flexible area and frontage provisions of this bylaw for the purpose of minimizing the destruction of natural resources while maximizing availability of open space, farmland, and rural character.

1.061 Flexible Frontage in Conservation Developments

(1) The frontage of the total parcel from which the lots of Conservation Development are created shall equal or exceed one half the total frontage length otherwise required for the sum of all lots created under standard Subdivision Regulations. (For example, to create a six-lot Conservation Development in a zone where there is a 200 foot frontage requirement, the parcel must have a minimum of 600 foot contiguous frontage along one road.)

(2) Provided that all other requirements of this bylaw are met, there shall be no frontage required for individual lots within Conservation Development, with the exception described in Section 1.061(3) below.

(3) Any building lot which fronts on an existing public road shall have {200} foot frontage. This provision shall not apply to permanent conservation land.

1.062 Flexible Area in Conservation Developments

(1) There is no minimum lot size for individual lots, provided the lot meets Title V standards. The average lot size for all lots created shall be at least {two (2) acres}.

(2) The total number of building lots which can be created from any parcel shall be determined by subtracting the area of all wetlands (as defined by the {TOWN NAME} Conservation Commission) and slopes of greater than fifteen percent (15%) from the total parcel area, and dividing the resulting area by the required average lot size of {two acres}.

(3) All land not used for building lots shall be placed in permanent conservation in accordance with Section 1.10 of this bylaw, but not less than {40%} of the total land area.

(4) To the extent feasible and practical, building lots shall be located out of view of town roads, while all protected open space shall be located along, or in view of, town roads.

1.063 Flexible Setback Requirements

(1) Maximum front setback requirements are {25} feet from a common driveway and {150} feet from a public way.

(2) There are no minimum setback requirements for rear or side yard setbacks.

1.07 **Additional Development Standards**

1.071 Stormwater Management

The design and development of Conservation Development shall minimize off-site stormwater runoff, promote on-site infiltration, and minimize the discharge of pollutants to ground and surface water. Natural topography and existing land cover should be maintained and protected to the maximum extent practicable. Conservation Development shall meet the following requirements:

(1) Untreated, direct stormwater discharges to wetlands and surface waters are not allowed;

- (2) Post-development peak discharge rates should not exceed pre-development peak rates;
- (3) Erosion and sediment controls must be implemented to remove eighty percent (80%) of the average annual load of total suspended solids;
- (4) All stormwater treatment systems or Best Management Practices must have operation and maintenance plans to ensure that systems function as designed.

1.072 Low Impact Development

All Conservation Developments shall employ the following Low Impact Development techniques to the maximum extent practicable:

- (1) Vegetated Swales - shallow drainage channels with thick grasses or vegetation that slow runoff, filter it, trap pollutants and promote infiltration into the ground;
- (2) Cisterns and Rain Barrels – water tanks that store rainwater for landscaping and gardens;
- (3) Bioretention Areas or Rain Gardens – bioretention “cells” are shallow depressions filled with sandy soil, topped with mulch and planted with dense vegetation, that collect, treat and infiltrate rainwater;
- (4) Low Impact Roadways – narrow roadways to reduce impervious cover, which employ open-section layouts without curbs and gutters, flanked by grass filter strips and swales for stormwater infiltration;
- (5) Permeable Paving – paving surfaces used for driveways, parking, walkways and patios that allow rainwater to percolate into the ground, including porous asphalt or concrete, paving stones and manufactured “grass pavers” made of concrete or plastic ;
- (6) Green Roofs – vegetated roof systems that capture and store rainfall in a lightweight engineered soil medium, where water is taken up by plants and returned to the atmosphere.

1.08 Common Driveways

1.081 Common Driveways shall be allowed with Site Plan Review in accordance with the provisions of this section. Where applicable, under the Subdivision Regulations, Common Driveways may be allowed in place of a subdivision road.

1.082 No more than {six (6) lots} shall be served by a Common Driveway. The driveway shall lie entirely within the lots being served.

1.083 Frontage along the length of any Common Driveway shall in no way be used to satisfy frontage requirements as specified in the Zoning Bylaw; furthermore, no Common Driveway shall be accepted as a public road; nor shall the town under any circumstances be held liable for construction, reconstruction, maintenance, or snow removal on any Common Driveway, unless by contract duly entered into by the town and all landowners served by the Common Driveway.

1.084 The landowners of all residences served by a Common Driveway shall be granted a Right-of-Way for the use of the Common Driveway. Such Right-of-Way shall be recorded in the {COUNTY NAME} County Registry of Deeds prior to the recording and the deeding out of any of the lots within the Conservation Development, together with a statement of covenants as follows:

- (1) The Common Driveway shall at no time be used to satisfy frontage requirements under the zoning bylaw;
- (2) The Common Driveway shall at no time become the responsibility or liability of the town;
- (3) Each landowner served by the Common Driveway shall be liable and responsible for the repair and maintenance of any portion of the Common Driveway to which they have the exclusive Right-of-Way (such as a spur serving solely one parcel); and
- (4) Each landowner served by the Common Driveway shall be responsible and liable for the repair and maintenance of all portions of the Common Driveway to which more than one landowner holds a Right-of-Way.

1.085 The applicant shall prepare a Maintenance and Repair Agreement that will provide provisions for services, maintenance, and enforcement for the common driveway and shall be entered into by the affected property owners. Such Agreement shall be recorded in the {COUNTY NAME} County Registry of Deeds prior to the recording and the deeding out of any of the lots within the Conservation

Development

1.086 Common Driveway Standards

- (1) A common driveway shall have a minimum roadway width of {sixteen (16) feet and a maximum of twenty (20) feet}, in addition to an easement of sufficient width to assure proper drainage and maintenance.
- (2) A common driveway shall not be longer than {six hundred (600) feet} in length.
- (3) The slope or grade of a Common Driveway shall in no place exceed {eight percent (8%)} if unpaved or {twelve percent (12%)} if paved.
- (4) The common drive shall intersect a public way at an angle of not less than eighty (80) degrees.
- (5) The minimum curvature of a common driveway shall be sufficient for a fire engine to negotiate, generally no less than a radius of fifty (50) feet.
- (6) There shall be a turnaround area at the end of the Common Driveway; such turnaround shall accommodate safe and convenient turning by fire trucks and other emergency vehicles. Design of the turnaround area shall also be approved by the town's Fire Department.
- (7) Other standards may be set based on site configurations, including requirements for drainage.
- (8) The common driveway shall be constructed of a minimum 15" gravel base, with a surface layer consisting of three successive layers of ¾"-size crushed traprock stone, ½"-size crushed traprock stone, and ¼"-size crushed traprock stone, with a crown sufficient for drainage.
- (9) Drainage shall be adequate to dispose of surface runoff. Low Impact Development standards for stormwater management are preferred, but culverts shall be installed if deemed necessary by the Planning Board.
- (8) These standards may be waived when, in the opinion of the Planning Board, such action is in the public interest and not inconsistent with the purpose and intent of the {TOWN} Zoning Bylaw.

1.09 Utility Requirements

1.091 On-site Sewage Disposal

The following standards shall apply to developments requiring on-site sewage disposal:

(1) The applicant shall submit a septic system design prepared by a certified engineer and approved by the Board of Health and a plan illustrating the location of water supply wells with the application.

(2) All Conservation Developments must meet the minimum state Environmental Code (Title V) requirements for minimum setbacks between private water supply wells and septic tanks or soil absorption systems (310 CMR 15.211).

(3) All Conservation Developments must meet the minimum state Environmental Code (Title V) requirements for nitrogen loading limitations (310 CMR 15.214-15.217). For Conservation Developments with individual lot sizes less than 40,000 square feet, applicants must meet the following standards:

(a) Applicants must designate, on a plan, specific areas of common open space as "nitrogen credit land", based on the following equation:

$$(40,000 \text{ square feet} \times \text{number of Conservation Development lots}) - (\text{total square feet in proposed Conservation Development lots}) = \text{square feet of required nitrogen credit land in common conservation lands}$$

(b) Nitrogen credit land must meet DEP qualifications contained in "Guidelines for Title 5 Aggregation of Flows and Nitrogen Loading 310CMR15.216"

(c) All designated nitrogen credit land must be permanently restricted from further development under a "Grant of Title 5 Nitrogen Loading Restriction and Easement on Nitrogen Credit Land".

After approval of the Conservation Development Plan, applicants must apply to the Board of Health and the Mass. Department of Environmental Protection (DEP) for an aggregate determination of nitrogen loading under 310 CMR 15.216.

(d) Septic tanks must be installed on individually-owned lots. Nitrogen Credit Land must be at least 100 feet from all private wells.

1.092 Water Supply

In order to meet state Title V requirements for separation distances between drinking water wells and septic systems, private drinking water supply wells may be located in the common open space for a Conservation Development, provided that the provisions of Section 1.12 for a homeowners' association are met.

1.10 Conservation Land

1.101 Conservation Land Requirements

- 1) A minimum of {forty percent (40%) } of the total development parcel must be permanently protected as conservation land. At least seventy percent (70%) of the conservation land shall be retained in contiguous areas, unless approved by the Planning Board.
- 2) Watercourses, lakes, ponds, wetlands, floodplains, and steep slopes over twenty-five percent (25%) may be included in conservation land calculations not to exceed twenty-five percent (25%) of the total protected conservation lands.
- 3) The Planning Board may permit up to three percent (3%) of the conservation land to be paved or built upon for structures accessory to the dedicated use of open space (i.e. pedestrian walks, bicycle paths, playgrounds, farm-related structures).
- 4) All recreational facilities, common areas, and conservation land shall be reasonably accessible to all residents of the development.

1.102 Land Protection Methods for Conservation Land

- 1) All land not devoted to buildings, lots, roads and other development shall be permanently protected as conservation land for recreation, open space, forestry or agricultural uses which preserve the land in its natural condition.
- 2) The final owner of the conservation land and the conservation restriction are strongly recommended to develop a conservation management plan that will address proper management and future maintenance of this natural resource.
- 3) Further subdivision of conservation land, except for easements for underground utilities or drinking water supply wells, shall be prohibited.
- 4) If the land is not donated to the Town or conservation organization duly recognized as such pursuant to M.G.L. c. 180 and IRC Section 170(h) for conservation purposes, then a permanent conservation restriction is required in accordance with the provisions of M.G.L. c.184 §§ 31-33, as amended. The conservation restriction must be held by the Town or a non-profit organization dedicated to conserving open space.

1.103 Maintenance of Conservation Land

1) Prior to final approval of the Conservation Development, all required covenants, grants of easements, or conveyance for the conservation land must be submitted to the Planning Board and Town Counsel for review and approval prior to the recording and the deeding out of any of the lots within the Conservation Development.

2) Where applicable, if any portion of the conservation land is conveyed to a non-profit homeowners association or trust of the homeowners of the dwelling units in the Conservation Development, then the following shall be required. In order to ensure that the grantee will properly maintain the land deeded to it under this section, the applicant shall cause to be recorded in the appropriate Registry of Deeds, a Declaration of Covenants and Restrictions which shall, at a minimum, provide for:

a) Mandatory membership in an established homeowners association or trust, as a requirement of ownership of any residential unit or lot in the Conservation Development;

b) Provisions for maintenance assessments of all owners of residential units or lots in order to ensure that the conservation land is maintained in a condition suitable for the approved uses; failure to pay such assessment shall create an automatic lien upon written notice to any property owner failing to pay the assessment on the property assessed, enforceable by the association or trust;

c) Provision which, so far as possible under the existing law, will ensure that the restrictions placed on the use of the conservation land will not terminate by operation of law. The developer of the Conservation Development shall be responsible for the maintenance of the common land and any other facilities to be held in common until such time as the grantee is capable of assuming said responsibility.

3) Prior to the issuance of a building permit for an approved Conservation Development, proposed conservation land shall be clearly marked, and all efforts shall be taken by the developer to prohibit any disturbance of the delineated conservation lands during the construction process.

1.11 **Additional Considerations**

1.111 Trails. Where there is an existing local or regional trail network on land adjacent to a proposed Conservation Development, the applicant may be required to preserve or enhance the existing trail network with trail corridors through the site.

1.112 Enhancing Conservation Land Connectivity

Where there is existing conservation land adjacent to a proposed Conservation Development, the applicant may be required to locate the development's conservation land so that it expands or enhances the connectivity of such lands, where feasible.

1.113 Renewable Energy

Conservation Developments may employ the following Renewable Energy techniques to the maximum extent practicable:

- (1) Streets, roads and common driveways shall be laid out primarily on an east-west axis to maximize solar gain;
- (2) Homes and buildings shall be oriented to maximize passive solar gain, by having the longest side of the structure facing south, while maximizing windows facing south;
- (3) Solar access should be maintained for all buildings. New structures shall not cast shadows that reduce solar access for other structures;
- (4) Homes and buildings should use renewable energy sources as feasible.

1.12 Homeowners' Association

1.121 A qualified homeowners' association shall be created prior to the conveyance of any lot in Conservation Development for which such an association is required.

1.122 The association shall be responsible for the permanent maintenance of all commonly-owned amenities, (e.g. common conservation lands, stormwater facilities, recreational facilities, utility easements), except where such responsibility is assumed by another owner of the amenities.

1.123 A homeowners association agreement or covenant shall be submitted with the Conservation Development application guaranteeing continuing maintenance of and the development of a capital expense fund for such commonly-owned amenities, and assessing each lot a share of maintenance expenses. The articles of formation of the qualified homeowners' association shall be prepared by a licensed attorney. Such agreement shall be subject to the review and approval of Town Counsel and the Planning Board, and shall be recorded in the {COUNTY NAME} County Registry of Deeds. The Planning Board may commission further legal review of any documents submitted, the cost of which shall be borne by the applicant.

1.124 Such agreements or covenants shall provide that in the event that the homeowners association fails to maintain the commonly-owned amenities

reasonable order and condition, in accordance with the agreements or covenants, the Town of {TOWN NAME} may, after notice to the homeowners association enter upon such land and maintain it in order to preserve the taxable values of the properties within the development and to prevent the commonly-owned amenities from becoming a public nuisance. The costs of such maintenance by the Town of {TOWN NAME} shall be assessing each lot a share of maintenance expenses within the Conservation Development.

1.124 Additional details regarding the creation and formation of the homeowners association can be found in the {TOWN NAME} Planning Board Rules and Regulations.

1.13 Conflict with Other Laws

The provisions of this bylaw shall be considered supplemental of existing zoning bylaws. To the extent that a conflict exists between this bylaw and others, the more restrictive bylaw or provision thereof shall apply.

1.14 Severability

If any provision of this bylaw is held invalid by a court of competent jurisdiction, the remainder of the bylaw shall not be affected thereby. The invalidity in whole or in part of any section or sections of this bylaw shall not affect the validity of the remainder of the town's bylaws.

MODEL CREATIVE DEVELOPMENT BYLAW

Prepared by Pioneer Valley Planning Commission 01/10/06

1.0 Creative Development Allowed

Creative Development in accordance with this bylaw shall be allowed by Special Permit in any Residential zoning district, except not in the Floodplain District. Any person creating two or more lots available for residential use, whether or not by subdivision may apply for a special permit under this section. Creative Development shall be encouraged within the town, and shall be the preferred method of development wherever the following purposes would be served.

1.1 Purpose

The purpose of this bylaw is to encourage creative and innovative development patterns which promote the following:

- A. Preservation or enhancement of rural town character, including scenic roads and town centers;
- B. Provision for alternative to strip residential development lining roadsides in the town, and encouragement of development out of view from the road;
- C. Protection of natural resources, historic or archeological structures or sites, or scenic views;
- D. Protection of open space for use as farmland, woodlot or forestry, recreation, or wildlife habitat;
- E. Provision of affordable housing, or housing for the elderly, handicapped, or others with special needs.

1.2 Criteria for Evaluation

No special permit for Creative Development shall be issued unless the application therefore complies substantially with the following criteria:

- A. All dwellings shall, to the greatest extent possible, be located out of view from any road unless valuable natural resources or farmland located to the rear of the property render building in view of the road more desirable.
- B. The Creative Development shall create permanent open space. All land within the Creative Development not in use for building lots shall be placed in permanent open space.
- C. The portion of a parcel placed in open space shall, to the greatest extent possible, be that which is most valuable or productive as a natural resource, wildlife habitat, farmland, or forestry land.
- D. The Creative Development shall result in the creation of less curb cuts or vehicular access points to a public way than would reasonably be expected to occur under Standard ANR or Subdivision Development.

- E. The Creative Development shall result in no net increase in density of dwellings on the parcel over the density which could reasonably be expected to occur on the parcel under Standard ANR or Subdivision Development.

1.3 Terms of Special Permit

Any Special Permit for Creative Development shall state clearly the terms by which the development shall meet the above-listed criteria. The Special Permit granted shall state the acreage and location of open space provided under Section 1.22; shall identify the natural resources or farmland to be protected under Section 1.23 and any specific measures to be taken for their protection; shall specify the number and location of dwellings under Section 1.21 and curb cuts under Section 1.24; and shall state the number of units, if any, to be constructed under Section 1.26, including their location and the method by which their creation shall be assured, such as by covenant or easement.

1.4 Definitions

Creative Development: shall mean a form of residential development allowed in all districts by special permit, whereby the options of common driveways and flexible area and frontage requirements are utilized to create permanent open space and avoid standard ANR and subdivision development.

Common Driveway: shall mean a vehicular access from a road to more than one but no more than six residential units, built in accordance with the common driveway standards stated below, where allowed by special permit.

Affordable Housing Units: are those dwelling units which may be purchased by individuals or families with incomes between 80% and 120% of the median income for the Standard Metropolitan Statistical Area, provided that expenditure for housing costs does not exceed 30% of the gross annual income of the purchaser.

Housing Costs: for affordable housing units shall mean the annual payments necessary based on current available mortgage interest rates, a 30-year mortgage term, and a 10% down payment.

Median Income: shall mean the median income figure established for the applicable Standard Metropolitan Statistical Area, as established by annually updated U.S. Department of Housing and Urban Development median gross family income data.

1.5 Common Driveways

- A. Common Driveways Allowed - Common Driveways shall be allowed by Special Permit in accordance with the provisions of this section. Where applicable, under the Subdivision Regulations, common driveways may be allowed in place of a subdivision road.
- B. Up to Six Lots Served - No more than six lots shall be served by a common driveway. The driveway shall lie entirely within the lots being served.
- C. Driveway Not to be Used as Frontage - Frontage along the length of any common driveway shall in no way be used to satisfy frontage requirements as specified in the Zoning Bylaw; furthermore, no common driveway shall be accepted as a public road; nor shall the town

under any circumstances be held liable for construction, reconstruction, maintenance, or snow removal on any common driveway, unless by contract duly entered into by the town and all landowners served by the common driveway.

D. Driveway Right-of-Way - The landowners of all residences served by a common driveway shall be granted a Right-of-Way for the use of the common driveway. Such Right-of-Way shall be recorded in the Hampshire County Registry of Deeds, together with a statement of covenants as follows:

- (1) The common driveway shall at no time be used to satisfy frontage requirements under the zoning bylaw;
- (2) The common driveway shall at no time become the responsibility or liability of the town;
- (3) Each landowner served by the common driveway shall be liable and responsible in whole for the repair and maintenance of any portion of the common driveway to which they have the exclusive Right-of-Way (such as a spur serving solely one parcel); and
- (4) Each landowner served by the common driveway shall be jointly and severally responsible and liable for the repair and maintenance of all portions of the common driveway to which more than one landowner holds a Right-of-Way.

E. Common Driveway Standards

(1) Alignment and Dimensions

- a. The width of the right of way shall be 40 ft.
- b. The minimum width of the common driveway surface shall be 18 ft.
- c. The common drive shall have 3 ft. gravel shoulders on each side.
- d. The slope or grade of a common drive shall in no place exceed 8% if unpaved; or 12% if paved.
- e. The common drive shall intersect a public way at an angle of not less than 80 degrees.
- f. The minimum curvature of a common driveway shall be sufficient for a fire engine to negotiate, generally no less than a radius of 50 ft.
- g. There shall be a turnaround area at the resident end of the driveway such turnaround shall accommodate safe and convenient turning by fire trucks and other emergency vehicles.
- h. The maximum length of a common driveway shall be 500 feet.
- i. Other standards may be set based on site configurations, including requirements for drainage.
- j. These standards may be waived when, in the opinion of the Planning Board, such

action is in the public interest and not inconsistent with the purpose and intent of the Zoning Bylaw.

(2) Construction

- a. The common driveway shall be constructed of a minimum 15" gravel base with an oil and stone top layer of 1/2" consisting of three successive layers of 3/4" crushed traprock stone, 1/2" crushed traprock stone and 1/4" crushed traprock stone, with a crown sufficient for drainage.
- b. Drainage shall be adequate to dispose of surface runoff. Culverts shall be installed if deemed necessary by the Planning Board.
- c. These construction standards may be waived if, in the opinion of the Planning Board, such action is in the public interest and not inconsistent with the purpose and intent of the Zoning Bylaw.

(3) Alignment and Dimensions

- a. The common driveway, at its intersection with the street, must provide a leveling-off area with a slope no greater than 1% for the first 20 feet and a slope no greater than 5% for the next 30 feet.
- b. Minimum safe sight distance must be provided at the intersection of a common driveway with a street.

- F. Street Numbers and Identification - Each common driveway shall be assigned one street number; each residence served by the common driveway shall be assigned a letter to use together with the common driveway number for purposes of address and identification. All common driveways shall be clearly marked at the intersection of the driveway and the frontage road by a sign stating the driveway number, house letters, and names of house residents, sufficiently readable from the road to serve the purpose of emergency identification. The fire chief and/or highway department may make more specific requirements for driveway marking.
- G. Home offices, home occupations, bed and breakfasts, and other home business uses may be permitted in any dwelling served by a common driveway where the dwelling containing such home business has at least 200 foot frontage on an approved road, and is otherwise shown not to cause nuisance to adjoining landowners and other landowners sharing the common driveway.
- H. There shall be a minimum of 400 feet between the entrances of any two common driveways onto any road.
- I. Common driveway design shall to the greatest extent possible minimize adverse impact to wetlands, farmland, or other natural resources; allow reasonable, safe, and less environmentally damaging access to lots characterized by slopes or ledges; and result in the preservation of rural character through reduction of number of access ways; and retention of existing vegetation and topography.

1.6 Creative Development Using Flexible Area and Frontage Standards

A. Creative Developments shall utilize the flexible area and frontage provisions of this bylaw, in coordination with Section 1.5 regarding Common Driveways, for the purpose of minimizing the destruction of natural resources while maximizing availability of open space, farmland, and rural character.

B. Flexible Frontage in Creative Developments

- (1) The frontage of the parcel from which the lots of a creative development are created (whether or not by subdivision) shall equal or exceed one half the total frontage length otherwise required for the sum of all lots created as shown in the Table of Creative Development Dimensional Requirements (Table 1). For example, to create a six-lot creative development in a Residential Zone where there is a 175 foot frontage requirement, the parcel must have a minimum of 525 foot contiguous frontage along one road.
- (2) Provided that all other requirements of this bylaw are met, there shall be no frontage required for individual lots within a Creative Development, with the exception described in Section 1.6(B)(3) below.
- (3) Any building lot which fronts on an existing public road shall have the frontage required in the Table of Dimensional Regulations. This provision shall not apply to protected open space.

C. Flexible Area in Creative Developments

- (1) Individual lot areas may be as small as the minimum lot sizes shown in Table 1, provided that the average size for all lots created, including any land reserved as open space, shall be no smaller than the required average lot size, shown in Table 1.
- (2) The total number of building lots which can be created from any parcel shall be determined by dividing the total parcel area by the required average lot size shown in Table 1.
- (3) All land not used for building lots shall be placed in permanent open space in accordance with Section 1.9 of this bylaw, but not less than 25% of the total land area.
- (4) Estate or Flag Lots shall not be permitted in a Creative Development.

D. Other Dimensional Requirements

All lots within a Creative Development shall meet the front, rear and side yard requirements specified in Table 1.

E. Site Design Standards

Each structure shall be integrated into the existing landscape on the property so as to minimize its visual impact through use of vegetative and structural screening, landscaping, grading, and placement on or into the surface of the lot.

1.7 Creative Development Using Farmland Preservation Standards

Where a parcel for which a special permit under this bylaw is sought is presently used for agriculture, the preferred method of residential development shall be as follows:

- A. All lots to be used for residential development shall be of the minimum area permitted under this bylaw as shown in Table 5. All land not used for residential building lots shall be permanently preserved as open space in accordance with Section 1.9. At least one-half of the total parcel shall be so preserved.
- B. The total parcel frontage required shall be determined in accordance with the flexible frontage standards described in Section 1.6(B) and Table 1.
- C. All buildings, roads and driveways shall be located away from soils which are most suitable for agriculture (based on U.S. Soil Conservation Service classifications for prime farmland soils and soils of state and local importance) to the maximum practical extent. This provision does not apply to the location of on-site septic disposal facilities which must be placed in soils meeting the Massachusetts Environmental Code.
- D. All roads, driveways, drainage systems and utilities shall be laid out in a manner so as to have the least possible impact on agricultural lands and uses.
- E. All buildings, homes, and structures shall be located a minimum of 100 feet from agricultural land and shall be separated from agricultural uses by a 75-foot wide buffer strip of trees and fencing sufficient to minimize conflicts between farming operations and residences.
- F. All Creative Developments under this section shall comply with the dimensional standards in Section 1.6(D) and site design standards in Section 1.6(E).

1.8 On-Site Sewage Disposal

The following standards shall apply to developments requiring on-site sewage disposal:

- A. The applicant shall submit a septic system design prepared by a certified engineer and approved by the Board of Health and a plan illustrating the location of water supply wells with the special permit application. Septic systems shall be placed in the development to maximize the distance between systems.
- B. No Creative Development shall be approved unless the applicant can demonstrate to the satisfaction of the Planning Board that the potential for groundwater pollution is no greater from the proposed creative development than would be expected from a conventional subdivision with single-family houses on lots meeting the normal size requirements located on the same parcel.

1.9 Protection of Open Land

The following standards shall apply to open land to be protected as part of a Creative Development:

- A. All remaining open land shall be permanently protected by one of the following methods:

- (1) A permanent conservation easement or deed restriction conveyed to the town with town approval or to a non-profit trust or conservation organization whose principal purpose is to conserve farmland or open space. At a minimum, such an easement or restriction shall entail the use of management practices that ensure existing fields or pastures, if any, will be plowed or mowed at least once every year.
- (2) Ownership in fee simple conveyed to the Town with Town approval or to a non-profit farm trust, open space or conservation organization as a gift or for consideration.
- (3) If the protected open space is farmland, farmland owners are not required to sell the part of their property which is to become permanent agricultural open space, provided that they do convey the development rights of that open space in a conservation easement prohibiting future development of this property to Town with Town approval or to a non-profit trust or conservation restriction.

B. A non-profit, homeowner's association shall be established, requiring membership of each lot owner in the Creative Development. The association shall be responsible for the permanent maintenance of all community water and wastewater systems, common open space, recreational and thoroughfare facilities. A homeowner's association agreement or covenant shall be submitted with the special permit application guaranteeing continuing maintenance of such common utilities, land and facilities, and assessing each lot a share of maintenance expenses. Such agreement shall be subject to the review and approval of Town Counsel and the Planning Board.

C. Creative Development With Affordable Housing

- (1) A Creative Development with Affordable Housing shall be defined as any creative development which includes 25% or more of its units for low and/or moderate income people and which is subsidized by federal, state or local programs, or proposed by the Housing Authority, or by a non-profit or limited dividend partnership, or any development which includes non-subsidized housing units priced to be affordable to people whose income is equal to or less than 120% of the median income for the Standard Metropolitan Statistical Area and which provides that the mix of affordable and market rate housing built in any one year is equivalent to the overall mix for the entire development, and which further provides that resale restrictions are established by the developer which ensure that the affordable units remain affordable for a period of forty years.
- (2) For a Creative Development with Affordable Housing, the Special Permit Granting Authority may reduce the requirement in Table 1 for the protection of permanent open space to 10% of the total parcel, and may reduce the total parcel frontage required to 75% of the frontage requirements in Table 1.
- (3) The provisions of Section 1.2(E) shall remain in effect for Creative Developments with Affordable Housing.

TABLE 1 - TABLE OF CREATIVE DEVELOPMENT DIMENSIONAL REQUIREMENTS

DEVELOPMENT TYPE	LOT SIZE**	REQUIRED OPEN SPACE	TOTAL PARCEL FRONTAGE REQUIRED	FRONT YARD	SIDE YARD
Standard Subdivision or ANR Development	60,000 in R-R District	None	175 ft per lot in R-R District	50 ft. in R-R District	30 ft. in R-R District
	40,000 in R-N District	None	140 ft per lot in R-N District	35 ft in R-N District	20 ft. in R-N District
	30,000 in R-V District	None	130 ft per lot in R-V District	30 ft in R-V District	15 ft in R-V District
Creative Development - Using Flexible Area	30,000 sq. ft. minimum* and 60,000 sq. ft. average in R-R District	All land not used for building lots; minimum 25% of the parcel	87.5 ft. per lot in R-R District	25 ft. from a common driveway, 150 ft. from a public way	30 ft. in R-R
	30,000 sq. ft. minimum and 40,000 sq. ft. average in R-N District. *	All land not used for building lots; minimum 25% of the parcel	70 ft. per lot in R-N District	25 ft. from a common driveway 150 ft. from a public way	20 ft in R-N
Creative Development - Using Farmland Preservation Standards	30,000 sq. ft. in R-R District.	Minimum 50% of the parcel	87.5 ft. per lot in R-R District	25 ft. from a common driveway 150 ft. from a public way	30 ft. in R-R
	30,000 sq. ft. in R-N District.	Minimum 50% of the parcel	70 ft. per lot in R-N District	25 ft. from a common driveway 150 ft. from a public way	20 ft. in R-N
	30,000 sq. ft in R-V District	Minimum 50% of the parcel	65 ft. per lot in R-V District	25 ft. from a common driveway, 150 ft. from a public way	15 ft. in R-V
* provided that average lot size requirements for creative development are met after wetlands and slopes greater than 15% have been excluded, provided that open space requirements are met.					
** per dwelling unit					

MODEL GREEN DEVELOPMENT PERFORMANCE STANDARDS

Prepared by the Pioneer Valley Planning Commission Draft - Updated 9-4-14

10.8 GREEN DEVELOPMENT PERFORMANCE STANDARDS

10.81 Purpose

- A. The purpose of these Green Development Performance Standards is to encourage high quality developments that preserve and enhance natural resources and the environment. The standards seek to:
1. preserve or restore wildlife habitat, farmland and natural site features;
 2. encourage orientation of buildings to make use of solar energy and natural light;
 3. protect and recharge water resources, including water supply aquifers and reservoir watersheds;
 4. encourage reuse and recycling;
 5. promote use of alternative transportation, including walking, biking and mass transit;
 6. minimize energy consumption, reduce fossil fuel use, and promote use of clean energy sources;
 7. reduce greenhouse gas emissions, air pollution and urban heat island effects;
 8. encourage conservation of potable water;
 9. minimize light pollution;
 10. prevent degradation of natural and landscape features as part of the development process, and;
 11. implement the goals of the Master Plan.

10.82 Applicability

10.821 Site Plan Approval with Green Development Standards

All commercial, industrial, multi-family residential, mixed use and civic projects or uses shall demonstrate compliance to the Planning Board with the Green Site Design Standards and the Green Development Performance Standards for Site Plan Approval herein, before a Building Permit may be issued. Applicants shall, to the maximum extent practicable, meet the standards for:

- (a) Limits to Site Disturbance (see Section 10.861)
- (b) Tree Preservation (see Section 10.862)
- (c) Building Siting for Solar Access (see Section 10.863)
- (d) Site and Context Assessment (see Section 10.871)

- (e) Landscaping and Water Reduction (see Section 10.872)
- (f) Farmland Protection (see Section 10.873)
- (g) Parking and Trip Reduction (see Section 10.874)
- (h) Pedestrian and Bicycle Access (see Section 10.875)
- (i) Hazardous Materials (see Section 10.876)
- (j) Light Pollution (see Section 10.877)
- (k) Collection and Storage of Recyclables (see Section 10.878)
- (l) Construction Waste Management and Topsoil Recovery (see Section 10.879)
- (m) Heat Island Reduction (see Section 10.8795)

10.822 Standards for Subdivisions

All residential subdivisions shall, to the maximum extent practicable, comply with the Subdivision Regulations, and the applicable zoning regulations herein, which include:

- (a) Limits to Site Disturbance (see Section 10.861)
- (b) Tree Preservation (see Section 10.862)
- (c) Solar Access (see Section 10.863)
- (d) Site and Context Assessment (see Section 10.871)
- (e) Landscaping and Water Reduction (see Section 10.872)
- (f) Farmland Protection (see Section 10.873)
- (g) Pedestrian and Bicycle Access (see Section 10.875)
- (h) Construction Waste Management and Topsoil Recovery (see Section 10.879)

10.823 Incentivized Standards for Density Bonuses

In addition to applicable standards noted in Section 10.82 above, applicants seeking a density bonus under this bylaw shall apply for a Special Permit from the Planning Board, and demonstrate compliance with the Incentivized Green Development Standards in Section 10.88.

10.824 Applicability to Uses Protected by M.G.L. c. 40A, Section 3

The application of performance standards set forth herein shall be applied subject to the limitations imposed by M.G.L. c. 40A, Section 3.

10.83 Definitions

Best Management Practices (BMPs): Practices that have been determined to be the most effective and practicable means of preventing or reducing undesirable environmental impacts.

Conditioned Square Footage: A building's room area that is heated in the winter and/or air conditioned in the summer.

Critical Root Zone (CRZ): The critical root zone (also known as essential root zone) is the portion of a tree's root system that is the minimum necessary to maintain the stability and vitality of the tree. It can be calculated by using the following formula: tree trunk diameter at breast height X 2, then convert to feet. For example, for a tree with a trunk diameter of 10 inches, the critical root zone would have a diameter of 20 feet.

Drip Line: The circle that could be drawn on the soil around a tree directly under the tips of its outermost branches. Rainwater tends to drip from the tree at this point.

Floor Area Ratio: The ratio of the total floor area of buildings on a certain location to the size of the land of that location.

Heat Island Effect: The increase in ambient temperatures that occurs in developed areas because paved areas and buildings absorb more heat from the sun than natural landscape.

Infiltration: The downward movement of water from the surface to the subsoil.

Land in Agricultural Use: Land used in producing or raising one or more of the following agricultural commodities for commercial purposes: 1) animals including but not limited to livestock, poultry and bees; 2) fruits, vegetables, berries, nuts, maple syrup and other foods for human consumption; 3) feed, seed, forage, tobacco, flowers, sod, nursery and greenhouse products, ornamental plants or shrubs.

Low Impact Development (LID): A set of approaches that seeks to mimic a site's pre-development hydrology by using design techniques that infiltrate, filter, store, evaporate and detain runoff close to its source. Instead of conveying, managing and/or treating stormwater in large, end-of-pipe facilities, LID utilizes small-scale, decentralized practices that infiltrate, treat, evaporate, and transpire rain water and snow melt. These practices include bioretention areas, grassed swales, reduced impervious areas, preservation of open space, increased development density, smaller lot sizes, reconfiguration of lots, green street and parking designs, and alternative structural stormwater treatment methods.

Passive Solar Heat Gain: The increase in temperature in a space, object or structure that results from solar radiation. The amount of solar gain is affected by the strength of the sun, and by the ability of any intervening material to transmit or resist the radiation.

Pre-development: The state of a site prior to development. The pre-development state shall be interpreted as the state of a site at the time of property purchase for the permitted development project.

Recharge: The process by which groundwater is replenished by precipitation through the percolation of runoff and surface water through the soil.

Specimen Trees: Trees that are of large diameter in excess of 24 inches measured at a height of 4.5 feet, have historic significance or are part of an historic site, are designated as a champion tree by

town, state or federal government, are a rare, threatened or endangered species, or have exceptional beauty in canopy or shape.

10.84 Submission Requirements

10.841 Submission Requirements for Site Plan Approval with Green Development Standards

- (a) Applicants for all commercial, industrial, multi-family residential, mixed use and civic projects shall comply with all submission requirements in the Site Plan Approval section of the Zoning Bylaw, as well as the following additional requirements:
 - (1) Plans shall be prepared by, and contain the original seal of, a registered architect, landscape architect, or professional engineer unless this requirement is waived by the Planning Board because they deem this requirement unnecessary due to the simplicity of the project, and
 - (2) All site plans shall be at a scale of 1 inch equals 40 feet, with additional narrative as necessary. All plans shall be submitted on standard 24" x 36" sheets, as well as in digital (PDF) format.
 - (3) Plans shall include a Tree Inventory that identifies significant groups of trees or individual specimen trees (including species, size and health), prepared by an Arborist, Landscape Architect, Ecologist, or other qualified professional. The Tree Inventory shall:
 - a. Note any wooded environmentally sensitive areas, such as floodplains, stream corridors, steep slopes, rare species habitat or wetland buffer zones.
 - b. Indicate whether each tree or grouping of trees are recommended for preservation, transplant, or removal.
 - c. Describe provisions for the protection, maintenance and management of trees to be preserved, including the location of protective fencing, and replacement of any trees moved or lost during construction. Show that project grading changes, structures, construction work zones, and areas for storing construction materials and debris will not occur within the drip line or essential root zone of any trees or groupings of trees designated for protection.
 - d. Identify the location, condition, and species for all larger individual trees with a circumference at breast height (4.5 feet above ground) of 25 inches or greater.
 - (4) Plans shall include drainage calculations and subdrainage along with soil logs;
 - (5) Provide the location, dimensions, height, color, illumination and characteristics of existing and proposed signs;
 - (6) Include a table containing the following information:

- a. Maximum area of building to be used for sales offices, business, industrial or other uses;
 - b. Maximum number of employees, where applicable;
 - c. Maximum seating capacity, where applicable; Number of parking spaces existing or required for the intended uses.
- (7) The plan shall describe estimated daily and peak-hour vehicle trips to be generated by the site and traffic flow patterns for vehicles and pedestrians showing adequate access to and from the site and adequate circulation within the site.
- (8) A detailed Traffic Impact Statement is required in each case where a proposed new building, use or project will contain more than 10,000 square feet, or will include one of the following uses which generates high volumes of trips: automobile service station, fast-food or drive-in restaurant, convenience store, or bank. The Traffic Impact Statement shall contain:
- a. Traffic flow patterns at the site including entrances and egresses, loading and unloading areas, and curb cuts on site and within one hundred feet of the site;
- (9) A detailed assessment of the traffic safety impacts of the proposed project or use on the carrying capacity of any adjacent highway or road, including the projected number of motor vehicle trips to enter or depart from the site estimated for daily hour and peak hour traffic levels, road capacities, and impacts on intersections;
- a. A plan to minimize traffic and safety impacts through such means as physical design and layout concepts, staggered employee work schedules, promoting use of public transit or carpooling, or other appropriate means;
 - b. An interior traffic and pedestrian circulation plan designed to minimize conflicts with safety problems.
- (10) The plan shall illustrate the location and contain a description of proposed open space or recreation areas.
- (11) A plan for the control of erosion, dust and silt, both during and after construction, temporary and permanent erosion control, and protection of water bodies is required.
- (b) The Planning Board may waive any information requirements it judges to be unnecessary to the review of a particular plan.

10.85 Procedural Requirements

The Planning Board shall be the Site Plan Approval Authority on applications for Site Plan Approval, and may adopt and revise reasonable regulations for the administration of this Section.

10.851 Filing and Referral to Town Boards and Departments, Plan Review

- (a) The applicant shall file five copies of the application for Site Plan Approval with the Planning Board.
- (b) The Planning Board shall follow procedures in the Site Plan Approval section of the Zoning Bylaw for referral and review of a Site Plan Approval application, and for a public hearing on an application.

10.852 Decision on Site Plan Approval

- (a) The Planning Board shall review an application for Site Plan Approval for completeness, and then make a determination as to whether the application is in compliance with the standards in this bylaw.
- (b) The Planning Board shall make decision on applications for Site Plan Approval within 90 days following the public hearing.
- (c) Failure to take final action upon an application within these time limits shall be deemed to be a grant of the permit applied for.
- (d) The approval authority shall not approve an application for Site Plan Approval, unless they find the Site Development Plan maximizes consistency with the Green Site Design Standards and Green Development Standards which are applicable to the project.
- (e) Before approval of a Site Plan, the approval authority may request that the applicant make modifications in the proposed design of the project or provide additional information to ensure that the above criteria are met.
- (f) Final action on applications for Site Plan Approval shall consist of either:
 - (1) A determination that the proposed project will constitute a suitable development and is in compliance with the criteria and standards set forth in this bylaw; or,
 - (2) Approval subject to any conditions, modifications and restrictions, which will ensure that the project meets the standards and criteria in this bylaw.

10.86 Green Site Design Standards

For all multi-family residential, commercial, industrial and civic projects, the Planning Board shall review and evaluate whether the Site Development Plan maximizes consistency with the following Green Site Design Standards. The Planning Board shall have the discretion to waive standards that it deems not applicable to a given project.

10.861 Limits to Site Disturbance

- (a) No clearing or site disturbance may occur on a parcel before a Building Permit is issued, except for normal agricultural activities and commercial logging in accordance with a state Forest Cutting Practices Act permit.
- (b) Applicants shall demonstrate that they will, to the extent feasible, minimize land clearing, alteration of natural topography and features, destruction of vegetation, soil compaction, destruction of wildlife habitat, prevent pollution of water resources,

damage to root systems and associated environmental impacts, in order to preserve open space and undisturbed land.

- (c) The site design shall preserve natural topography outside of the development footprint to reduce unnecessary land disturbance and to preserve natural drainage channels on the site.
- (d) The site design shall attempt to minimize and balance cut and fill, to reduce total land disturbance and minimize the importing or exporting of earth materials from the site.
- (e) The site design shall protect hilltops and scenic views. Placement of buildings, structures, or parking facilities shall not detract from the site's scenic qualities and shall blend with the natural landscape. Building sites shall be directed away from the crest of hills, and foundations shall be constructed to reflect the natural terrain.
- (f) Sites shall be designed to avoid impacts to rare and endangered species and wildlife habitat on a site, including Biomap Core Habitat and Priority Habitat areas, and to maintain contiguous forested areas.
- (g) Sites shall be designed to prevent impacts to aquifer recharge areas and water supply reservoir watershed areas for public drinking water supplies;
- (h) Limit-of-work controls (also known as perimeter controls or development envelopes) for structures, driveways, parking, wastewater disposal, lawn areas, utility work, and any grading associated with the development shall be installed and maintained to establish the disturbance limits of clearing and grading activities.
- (i) Efforts to minimize the clearing and grading on a site associated with construction activities shall be employed, such as parking of construction vehicles, offices/trailers, and stockpiling of equipment/materials in areas already planned for permanent structures, and not in areas of protected trees, wetlands, and/or their vegetated buffers.
- (j) The extent of a site exposed at any one time shall be limited through phasing of construction operations. Timely re-vegetation of disturbed areas shall occur immediately after grading is complete. In no case shall land be left unstabilized over the winter season.
- (k) Except on urban and infill sites where higher density development has been determined to be desirable, clearing of vegetation and alteration of topography shall be limited to 35% of the site for residential uses, or 40% of the site for commercial, industrial or institutional uses. Native vegetation shall be planted in disturbed areas as needed to enhance or restore wildlife habitat.

10.862 Tree Preservation

- (a) The Planning Board shall review and evaluate whether the Site Development Plan maximizes:
 - (1) Preservation of open space and trees on the site

- (2) Retention of existing stands of trees, trees at the site perimeter, contiguous vegetation with adjacent sites, and specimen trees
- (b) Forested areas shall be preserved if they located in areas also including:
 - (1) Wetlands, waterbodies and their buffers
 - (2) Critical wildlife habitat areas
 - (3) Slopes over 25 percent
 - (4) Trees with a circumference of 60 inches at breast height (4.5 feet above ground), or a diameter of 19 inches, shall be preserved. The entire area within the dripline and critical root zone of preserved trees, including understory vegetation, shall be retained in an undisturbed state.
 - (5) Any trees recommended for preservation or trees on adjacent properties that are moved or lost during construction shall be replaced.
 - (6) Transplanting methods that maximize plant survival shall be used.
 - (7) Prior to clearing, excavation, grading or other construction activities, all vegetation to be retained shall be surrounded by temporary protective fencing (i.e. orange construction fencing) or other measures. All trees on adjacent properties whose drip lines extend into the project site shall also be protected. Barriers shall be constructed outside the dripline and critical root zone of all vegetation to be protected.
 - (8) Materials shall not be stored within the drip line of trees to be protected.
 - (9) Additional Best Management Practices shall be used to protect trees during construction (i.e. pruning, soil aeration, trunk wrapping, root pruning, watering, etc.).
 - (10) All protective measures shall be maintained until all construction work is completed, the site is cleaned up, and final approval is given by the Building Inspector.

10.863 Orientation of Buildings for Solar Access

- (a) The Planning Board shall review and evaluate whether the Site Development Plan is compatible with the following design guidelines, to the extent feasible based on lot configuration and size:
 - (1) Building orientation takes advantage of passive solar heat gain in the winter by orienting buildings with the longest axis running east-west. The long axis of a building should face within 10 degrees of due south if possible, and not more than 30 degrees off of due south.
 - (2) Building orientation accommodates future solar electric installations on the development project or on neighboring buildings by preserving solar access to south facing roofs of existing neighboring structures. Trees, objects, or structures

shall not be sited in locations that shade (or will shade) neighboring south facing roofs.

10.87 Green Development Standards

For all commercial, industrial and civic projects, the Planning Board shall review and evaluate whether the Site Development Plan maximizes consistency with the following Green Development Standards. The Planning Board shall have the discretion to waive standards that it deems not applicable to a given project.

10.871 Site & Context Assessment

- (a) The Planning Board shall review and evaluate whether the Site Development Plan thoroughly considers the site's context and interrelationships with surrounding features and the community, including:
 - (1) Significant on-site and nearby natural features that may affect the site design, including soils, landforms and rock outcroppings, trees, natural features, slopes, views, water bodies, hydrology and drainage conditions, wetlands, the location of the site within the watershed, floodplains, evidence of erosion or unstable slopes, habitats, endangered species, air quality, and noise.
 - (2) Significant on-site and nearby man-made features that may affect the site design, including existing structures, walkways, roads, driveways, parking lots, fences, and signs.
 - (3) Existing municipal facilities, services and infrastructure, including sewage, water supply, other utilities, schools, easements, utility poles, overhead power lines, lighting, and fire hydrants.
 - (4) Whether the site has existing historical or archaeological structures or features, and has provisions for preserving these features.
 - (5) Access to transit, pedestrian, bicycle and alternative transportation connections, including existing or possible pedestrian and bicycle connections from the site to bus stops, high density residential areas, commercial districts, open space and recreational areas, and regional trails.
 - (6) The Planning Board shall review and evaluate whether the development will "fit" within and connect to the site's larger context.

10.872 Landscaping and Water Reduction

- (a) The Planning Board shall review and evaluate whether the Site Development Plan has environmentally sensitive landscaping features, including:
 - (1) Maximum use of plants and landscaping in a natural state with low maintenance requirements, and that require little or no irrigation.
 - (2) Minimized use of potable water for landscape irrigation, including installing high-efficiency irrigation systems, using mulch to prevent water evaporation,

irrigating with captured rainwater, and reusing building grey water, where feasible.

- (3) Incorporation of Low Impact Development practices for stormwater management, including use of rain barrels and rain gardens.

10.873 Protection and Buffering of Land in Agricultural Use

Applicants shall, to the extent feasible, avoid development of land in agricultural use.

- (a) To prevent destruction of land in agricultural use, applicants shall either:
 - (1) To the extent feasible, select development sites to reduce impacts to land in active agricultural use; or
 - (2) If the development will take place on land in agricultural use, minimize impacts through cluster design or other open space preservation techniques.
 - (3) .
 - (4) If the development site is adjacent to land in agricultural use, the site plan shall:
 - Provide screening by installing landscaped buffers at property lines that abut land in agricultural use;
 - Prevent stormwater runoff from impermeable surfaces from entering adjacent land in agricultural use.

10.874 Parking and Trip Reduction

- (a) The Planning Board shall review and evaluate whether the Site Development Plan meets the following standards to reduce parking and personal vehicle trips, and to support walking, cycling, and use of alternative transportation:
 - (1) Parking:
 - a. The site design shall reserve some parking spaces for compact cars, low emission vehicles, and/or carpools and vanpools. To the extent feasible, set aside 10% of all parking spaces for carpools and fuel efficient vehicles (with a combined city and highway efficiency of 29 miles per gallon). Locate these spaces in preferred locations nearest to site buildings.
 - b. The site design shall not exceed the maximum applicable parking requirements in Section 10.1 of the Zoning Bylaw. Through the Site Plan Approval process, the Planning Board may reduce parking requirements, based on information that demonstrates the proposed use will have reduced parking demand. Applicants may estimate parking demand based on the type of use involved, its location, and other relevant considerations.
 - (2) Trip Reduction:
 - a. Designate and clearly mark areas for carpool and vanpool drop off/pick up and parking.

- b. Include ride boards where building users can post notices offering rides or to make carpooling arrangements, and/or develop other ride sharing measures.
- c. Encourage use of mass transit, where available, by designating areas for shuttle services to mass transit, and/or through other measures (see Community Connectivity below).
- d. Reduce on-site driving through efficient design of roads and parking areas.

10.875 Pedestrian and Bicycle Access

- (a) Applicants shall demonstrate that the development will, to the extent feasible, provide accessibility for pedestrians and bicycle use within the development and from the development to adjacent properties.
- (b) Sidewalks are required in all residential subdivisions, and for all commercial, industrial and civic uses.
- (c) Bicycle racks and other bicycle amenities are encouraged in all developments.
- (d) Linkages to town-wide or regional bicycle/pedestrian pathways are encouraged in all developments.
- (e) Bicycle and pedestrian pathways are encouraged for improved internal circulation within large developments, and should be linked to adjacent properties, pathways, sidewalks and transit stops wherever feasible.
- (f) Within commercial, civic and office developments larger than 50,000 square feet, provide secure bicycle racks or other bicycle storage, shower and changing rooms. For multifamily residential buildings, provide covered bicycle storage facilities for 15% or more of all building occupants.
- (g) When developing new roads, provide safe and convenient routes for bicyclists, pedestrians and vehicles. Refer to “complete streets” principles when designing new roads. Provide a Site Circulation Map that shows vehicle, pedestrian and bicycle routes within the site.

10.876 Handling and Storage of Hazardous Materials

- (a) All hazardous materials shall be protected from exposure to stormwater. All outdoor storage facilities for fuel, hazardous materials or wastes, and potentially harmful raw materials shall be located within an impervious, diked containment area adequate to hold the total volume of the liquid kept within the storage area.
- (b) Applicants shall describe and locate all hazardous materials that will be stored on site.
- (c) Use “Best Management Practices” for spill prevention and response, and for handling and storing hazardous materials so that infiltration systems, water bodies, and storm drains do not receive contaminated runoff.

10.877 Light Pollution Reduction

- (a) Applicants shall demonstrate that the development will, to the extent feasible, minimize light pollution, including glare and light trespass, while maintaining safety, visibility and security of individuals and property. The Planning Board shall review and evaluate whether the Site Development Plan meets the following standards to reduce light pollution:
- (1) All outdoor lighting shall have full cutoff fixtures. Cutoffs shall shield bulbs from visibility.
 - (2) General site lighting shall focus light downwards in order to prevent light from going upwards or reaching off-site areas. The horizontal plane of the bottom of lamp fixtures shall not exceed 90 degrees. No up lighting is allowed: parking, security and aesthetic lighting shall shine downward.
 - (3) Spotlights used to illuminate buildings, signs or specific site features shall be targeted on such objects so as to prevent direct up lighting. Cutoffs shall limit lighting to a 45 degree angle above the horizontal plane.
 - (4) Upward search or spotlighting of the sky for entertainment or advertising purposes is prohibited.
 - (5) Lighting shall be shielded to prevent direct glare and light trespass and shall be contained to the target area to the extent feasible. Light trespass beyond the property line and above a 90 degree horizontal plane is prohibited.
 - (6) All nonessential lighting, including display, parking and sign lighting, shall be automatically turned off after business hours, leaving only the lighting necessary for site security.
 - (7) For each interior light, the design should prevent strong intensity light from exiting through windows. Alternatively, employ automatic controls to ensure that interior lights are shut off after dark when there are no building occupants.
 - (8) The Site Development Plan shall specify the lowest lighting power densities necessary to meet the minimum requirements of each lighting task.
 - (9) No light standard shall be taller than fourteen (14) feet in height.
 - (10) Signs should be illuminated from the top. Internal illumination is not permitted.
 - a. The use of energy-efficient lamps is encouraged for all outdoor applications. In order of preference, the following are recommended lamp types: compact fluorescent white light and low pressure sodium; metal halide and fluorescent; high-pressure sodium.

10.878 Collection and Storage of Recyclables

Applicants shall demonstrate that the development will, to the extent feasible, facilitate reduction of waste by building occupants by providing an easily accessible area(s) that serves the entire building(s) that is dedicated to collection and storage of paper, cardboard, glass, plastics, metals and organics for recycling.

For commercial and office buildings, to calculate the storage area needed for recycling facilities, use the guidelines below:

Required Storage Area for Recyclable Materials – Commercial Uses

Building Size	Minimum Storage Space	Required Type of Container
0 - 5,000 sq. ft.	82 sq. ft.	Rear loading
5,001 - 15,000 sq. ft.	125 sq. ft.	Rear loading
15,001 - 50,000 sq. ft.	175 sq. ft.	Front loading
50,001 - 100,000 sq. ft.	225 sq. ft.	Front loading
100,001 - 200,000 sq. ft.	275 sq. ft.	Front loading
200,001 plus sq. ft.	500 sq. ft.	Front loading

For residential developments, include a refuse and recycling room, or an outdoor enclosure. Outdoor enclosures should be screened from public view.

The minimum recycling storage area guidelines for residential uses are listed below:

Required Storage Area for Recyclable Materials – Multi-family Residential Uses

Number of Residential Units	Minimum Storage Space
2-4 units	4 ft. wide x 6 ft. long x 6 ft. high
5-10 units	5 ft. wide x 9 ft. long x 8 ft. high; 6 ft. high if outdoors
11-20 units	129 sq. ft. with 8 ft. high walls or 6 ft. high if outdoors
20+ units	sq. ft. per unit

10.879 Construction Waste Management and Topsoil Recovery

Applicants shall demonstrate that the development will, to the extent feasible, minimize construction waste and loss of topsoil resulting from demolition, construction and land disturbance activities.

- a. To the greatest extent feasible, recycle or salvage at least 50% of non-hazardous construction and demolition debris, including waste cardboard, metal, brick, acoustical tile, concrete, plastic, clean wood, glass, gypsum wall-board, carpet and insulation.
- b. Provide details on construction waste management and topsoil recovery, including identification of all materials that will be diverted from final disposal for reuse on site, charitable donation, and recycling.
- c. Preserve and re-apply at least 6” of the site’s topsoil and at least 12” of the site’s subsoil.

10.8710 Heat Island Reduction

Applicants shall demonstrate that the development will, to the extent feasible, reduce urban heat island effects (heat pollution).

- a. Select light colored pavements and reflective roofing materials. “Cool pavements” include reflective, and light-colored paving products. “Cool roofs” include light-colored metal roofs and roof coatings.

- b. Cover at least 50% of the site hardscape with shade and/or “cool” paving materials that have a Solar Reflectance Index (SRI) of at least 29 (see table below for SRI of standard paving materials). In addition to vegetation, shade can be provided by architectural elements (i.e. awnings) or covered parking spaces with reflective roofing material.
- c. Develop a green roof. See Incentivized Green Performance *Standards* (Section 1.8).

Typical Solar Reflectance Index (SRI) for Paving Materials

Type of Paving Material	Solar Reflectance Index (SRI)
Typical New Gray Concrete*	35
Typical New White Concrete	86
New Asphalt	0

*Reflectance of surfaces can be maintained with cleaning. However, light colored surfaces will become less reflective as they weather (i.e. typical weathered gray concrete has an SRI number of 19).

10.88 Incentivized Green Performance Standards

An applicant may submit an application for a Special Permit to the Planning Board, demonstrating that the development plan incorporates any of the green development practices listed in 10.88(a) below, or other enhanced green development practices as approved by the Planning Board, in exchange for the incentives described in 10.88(b) below.

- a. Eligible green development practices include:
 - (1) Installation of a green roof;
 - (2) Installation of permeable pavement in parking areas or driveways;
 - (3) Permanent protection of additional open space, farmland and wildlife habitat area beyond applicable minimum zoning requirements;
 - (4) Restoration and permanent protection of previously destroyed or disturbed wildlife habitat;
 - (5) Creation public park and/or community garden space on lands which are permanently dedicated to the town;
- b. The applicant may select the best incentive option(s) for their project:
 - (1) Additional lot coverage or Floor Area;
 - (2) Partial waiver of parking space requirements.
 - (3) Increase in building height limits.
 - (4) Reduction in frontage requirements.

10.881 Dimensional and Density Regulations

- a. Each Green Performance Standard is equivalent to one of the incentives shown in the Table of Exchange Standards for Green Performance Standards, found below in this section.

- b. The maximum limits on density, lot coverage, and parking reductions permitted to be developed by Special Permit in the Receiving District shall be determined by reference to the Table of Exchange Standards for Green Performance Standards found below in this section.

Table of Exchange Standards for Green Performance Standards

Green Performance Standard	Incentive	Notes
One acre of protected land, beyond applicable zoning requirements; or	2000 s.f. of additional floor area; or	1) The Planning Board may allow an increase in lot coverage from the 30% maximum lot coverage required in Table 6-2 of the Zoning Bylaw, up to a maximum 70% lot coverage.
One acre of permeable pavement; or	reduction of 20 parking spaces; or	2) The Planning Board may reduce the minimum parking requirements in Section 10.1 of the Zoning Bylaw/ordinance for off-street parking area. The Planning Board may reduce this requirement for off-street parking area to a minimum of 75% of the required parking. To obtain this waiver, the applicant shall demonstrate that sufficient parking will be available to the development (i.e. through shared parking, use of on-street parking, reduced vehicle use, timing, etc.).
2000 s.f. of installed green roof; or	an increase of 5 feet in building height; or	3) The maximum increase in building height shall be ten feet.
One acre restored and protected wildlife habitat area; Or	a reduction of 20 feet in frontage requirements subject to the following (see notes):	4) The maximum reduction in frontage requirements shall be 40 feet.
One acre of public park and/or community garden space on lands which are permanently dedicated to the town equals:		

10.882 Special Permit Process for Green Performance Incentives

- a. The applicant proposing a green performance incentive exchange shall make application to the Planning Board for a Special Permit. The application shall clearly illustrate, on the Site Development Plan, the proposed green development practice to be employed in the proposed project, and shall describe the proposed incentive requested in exchange for the green development practice.
- b. Prior to final approval of a Special Permit, applicants proposing to protect additional open space shall tender to the Planning Board a valid instrument granting to the Town/City a permanent Conservation Restriction or Agricultural Preservation Restriction for the proposed protected land.
- c. Upon advice of the Town/City Counsel that the Conservation Restriction or Agricultural Preservation Restriction document is valid and sufficient, there shall be a vote by the Board of Selectmen authorizing Conservation Commission acceptance of the Conservation Restriction or Agricultural Preservation Restriction. If the Special Permit application is valid and sufficient, the Conservation Commission, acting on behalf of the Town/City, shall accept the Conservation Restriction or Agricultural Preservation Restriction for approval by the appropriate state agency, and for recording in the County Registry of Deeds.

10.883 Special Permit Criteria

- a. The Planning Board shall not grant any special permit for Green Performance Incentives unless it finds the following criteria are met:
 - (1) The proposed use is in harmony with the purposes of this bylaw/ordinance.
 - (2) The proposed use meets all of the procedural, dimensional and density requirements of this bylaw/ordinance.

MODEL HOME-BASED BUSINESS BYLAW

Prepared by Pioneer Valley Planning Commission

HOME-BASED BUSINESSES

1.1 Purposes

The purposes of this section are to:

- a. Permit the residents of the Town of _____ a broad choice in the use of their homes as places of livelihood and the production or supplementing of personal and family income;
- b. Protect residential property values;
- c. Protect residential areas from any adverse impacts associated with home-based businesses;
- d. Ensure that the rights of neighbors and other townspeople are not compromised by intrusive, hazardous, or environmentally degrading business activities;
- e. Establish performance criteria and standards for home-based businesses that will provide fair and equitable administration and enforcement of this section.

1.2 Definitions

Home-based Business: Any activity conducted by a resident within a dwelling or accessory structures for financial gain. A home-based business is an accessory use to the primary use of the parcel. Home-based businesses include home occupations and cottage industries.

Home Occupation: A home-based business which is incidental to and clearly subordinate to, the residential use of the property. A home occupation has no more than two employees who are not resident on the premises, does not use accessory structures (except for unheated storage), has no retail sales (except for goods and services produced on the premises), and occupies no more than 33% of the gross floor area of the dwelling.

Cottage Industry: A cottage industry is a more intensive form of home-based business, having more employees, more floor area used for the business, or other signs of greater use of a residential parcel for business purposes. A cottage industry, like a home occupation, remains clearly subordinate to the use of the parcel and dwelling for residential purpose

Minor cottage industry: A cottage industry with no more than five non-resident employees working on the premises at anyone time and which does not use any accessory structures for any aspect of the business aside from unheated storage.

Major cottage industry: A cottage industry with no more than ten non-resident employees working on the premises at any one time or one which uses an accessory structure for business purposes other than unheated storage.

Non-resident employees: Employees who do not live on the parcel being used for a home-based business.

1.3 Applicability

Home Occupations shall be allowed by right in the _____ District(s) subject to the following applicable regulations.

Major and Minor Cottage Industries shall be allowed in the _____ District(s) only upon issuance of a Special Permit from the Special Permit Granting Authority subject to the following regulations and, in addition, to the applicable regulations of this bylaw found at Section _____ Administration.

1.4 Standards for All Home-based Businesses

The following standards shall be used as requirements for all Home-based Businesses, whether they are Home Occupations or Cottage Industries.

a. Residency Requirements

The principal residence of the owner/operator of every home-based business shall be the dwelling unit on the premises in which the business operates.

b. Minimum Dimensional Requirements

The site must meet the density and dimensional requirements in Table _____ (Intensity Regulation) for the district in which it is located.

c. Parking Standards

Off-street parking for any home-based business must be provided on the premises and must be located at the side or rear of the principal building. While adequate off-street parking must be provided for all regular employees, visitors, and clients, the property owner is urged to minimize providing excessive parking areas.

Landscaping is required to screen parking areas from the road and from adjacent landowners. See the definition of screening materials below.

d. Storage of Heavy Equipment and Commercial Vehicles

All heavy equipment such as tractor trailers, semi-trailers, or construction equipment must be either garaged or screened with plantings or fencing to at least the height of the equipment. See the definition of screening materials below.

One commercial vehicle which is not heavy equipment and which is not more than two tons in rated capacity may be parked outdoors on the property. Additional commercial vehicles must be garaged or screened as for heavy equipment.

e. Screening Materials

Screening materials, such as plants or fencing, must provide at least 90% opacity to a height of at least six feet in all seasons. If such screening is not provided by existing or proposed vegetation, it shall be supplemented by additional plantings or fencing. All screening materials shall be aesthetically appropriate and in keeping with the character of the district.

f. Signs

See Section - (Existing Sign Bylaw) for sign standards

g. Lighting standards

Any outdoor lighting fixture newly installed or replaced shall be shielded so that it does not produce a strong, direct light beyond the property boundaries.

Lighting must be compatible with the character of the district. No light shall be taller than fifteen feet.

h. Hours of Operation

In no case shall a home-based business be open to the public, including non-resident employees, clients, visitors, and deliveries, earlier than 7:00 a.m. nor later than 10:00 p.m.

i. General Nuisances

Any activity that might result in excessive noise, electrical interference, smoke, dust, odors, heat, or glare beyond that which is common to the residential character of the district is prohibited. The Zoning Enforcement Officer may require an application to provide tests demonstrating such conformance.

j. Hazardous Materials

No highly toxic, explosive, flammable, combustible, corrosive, radioactive or similar hazardous materials shall be used, stored, or manufactured on the premises in amounts exceeding those which are typically found in normal residential use.

k. Retail Sales

There shall be no sales of services or products on the premises which are not produced on the premises, except those sales which are incidental to the business.

For example, a music teacher may sell sheet music. In addition, there shall be no designated area intended specifically for retail sales.

l. Traffic

Traffic associated with a home-based business, such as deliveries or visits by clients, shall not place an unreasonable burden on the town, the roads, or the neighborhood of the home-based business because of safety concerns, excessive noise, or aesthetics. Home-based business owners are reminded that traffic concerns will be reviewed as part of the permitting and renewal process for all cottage industries.

m. Compliance with Standards

All home-based businesses must comply with all applicable federal, state, and local regulations.

1.5. Additional Standards for Home Occupations

a. Employees

No more than two (2) employees who do not live on the premises shall be permitted to work on the premises at anyone time for a home occupation.

b. Use of Accessory Structures

A home occupation use must be conducted wholly within the residential dwelling on the parcel except that accessory structures such as sheds, detached garages, and barns, may be used for unheated storage of materials for the business.

c. Floor Area

A home occupation may not use more than 33% of the gross floor area of the dwelling for business purposes. The gross floor area is defined for this purpose as the total floor area of all heated and ventilated and, therefore, habitable rooms in the dwelling. This includes spaces such as basements and attics, if they are heated and ventilated.

1.6. Additional Standards for Minor Cottage Industries

a. Employees

No more than five (5) employees who do not live on the premises shall be permitted to work on the premises at any one time for a Minor Cottage Industry use.

b. Increased Setback Requirements

Required zoning setbacks may be increased for a minor cottage industry subject to the review of the SPGA for any activity that could potentially detract from the

agricultural-residence area but that is not deemed incompatible with the neighborhood. Potentially detracting activities include, but are not limited to: employee parking areas, loading zones, and storage sheds. Additional screening may also be required by the SPGA to shield these accessory uses from abutting residential lots.

c. Use of Accessory Structures

A minor cottage industry must be conducted wholly within the residential dwelling on the parcel except that accessory structures such as sheds, detached garages, and barns may be used for unheated storage of materials for the business.

d. Floor Area

A minor cottage industry may not use more than 49% of the gross floor area of the dwelling for business purposes. The gross floor area is defined for this purpose as the total floor area of all heated and ventilated, and, therefore, habitable rooms in the dwelling. This includes spaces such as basements and attics if they are heated and ventilated.

1.7. Additional Standards for Major Cottage Industries

a. Employees

No more than ten (10) employees who do not live on the premises shall be permitted to work on the premises at anyone time for a Major Cottage Industry use.

b. Increased Setback Requirements

Required zoning setbacks may be increased for a major cottage industry subject to the review of the SPGA for any activity that could potentially detract from the agricultural-residence area but that is not deemed incompatible with the neighborhood. Potentially detracting activities include but are not limited to: employee parking areas, loading zones, and storage sheds. Additional screening may also be required by the SPGA to shield these accessory uses from abutting residential lots.

c. Use of Accessory Structures

A major cottage industry must be conducted wholly within the primary dwelling and accessory structures on the parcel. At least 33% of the total floor area used by the cottage industry must be in the primary dwelling. For all major cottage industries the home-based business owner must ensure that the use of the parcel remains primarily residential with the business as an incidental accessory use.

d. Floor Area

A major cottage industry may not use more than 49% of the gross floor area of the dwelling and accessory structures for business purposes. The gross floor area is

defined for this purpose, as the total floor area of all heated and ventilated and therefore habitable rooms and spaces in the dwelling and any accessory structures which are used for business purposes. This includes spaces such as basements and attics, if they are heated and ventilated. If an accessory structure is not used at all for the cottage industry, its floor area should not be counted towards the gross floor area total.

1.8. Special Permit Requirements

The procedures and criteria described in Section (Special Permit section) of this bylaw shall govern the granting of Special Permits for cottage industries except that the following shall be used as additional requirements in the Special Permit process for all cottage industries. An applicant for a Cottage Industry Special Permit should read Section (Special Permits) before applying for the Permit, as that section includes requirements with direct bearing upon the legal operation of a cottage industry.

- a. The Special Permit Granting Authority for home-based business uses shall be the Planning Board.
- b. A Special Permit is required for all cottage industries and for all changes and expansions of such uses.
- c. All Special Permits from the SPGA for a cottage industry use are non-transferable and issued to a specific applicant for a specific cottage industry on a specific parcel.
- d. Special Permits for Cottage Industries must be renewed immediately following the first year of operation and then every five years after that. The renewal process shall follow the same procedures as an original Special Permit submission.
- e. Special Permits for Cottage Industries may be revoked by the SPGA for cause after reasonable notice to the holder of the permit and following a public hearing held in accordance with Section (Special Permits) of this bylaw.

Changes Needed Elsewhere in the Bylaw

If a municipality adopts a new home-based business bylaw, it should adopt at the same time changes elsewhere in its zoning bylaw so as to ensure coordination with the new bylaw. While every zoning bylaw will be different and require individual attention to effect this coordination, the following are some of the common changes which will often need to be made in a zoning bylaw.

Definitions

The definitions of home-based business, home occupation, and major and minor cottage industry which are in the model bylaw should be added to the definition section of the zoning bylaw. Any existing or conflicting definitions should be deleted. Besides older definitions for these three phrases, some possible conflicting words or phrases might be, home office, artisan/craftsman, professional office, or home professional office. Check to make sure that the

definition of Special Permit Granting Authority includes the board specified to evaluate home-based businesses.

General Use Regulations

Home-based businesses should be added to the Table of Uses for the appropriate districts. If a new SPGA is specified for home-based businesses, note in the table which town board is responsible for Special Permits for each use.

Administration - Special Permits

It is important to include in this section a clause allowing the chosen town board, whether Zoning Board of Appeals or Planning Board, to be a Special Permit Granting Authority (SPGA). Often only one such board is specified as a SPGA in an existing zoning bylaw; if that board is not the one chosen to evaluate permits for home-based businesses, the chosen board must be added. This is an example of an appropriate clause:

The Zoning Board of Appeals and the Planning Board shall have the special permit granting authority specified in Section ____ Schedule of Use Regulations.

Check the rest of the Special Permit section of the Administration component to make sure that the chosen SPGA for home-based businesses is included everywhere appropriate. For example, if the existing zoning bylaw specifies that an applicant can find Special Permit applications at the Town Hall and the Zoning Board of Appeals, and the SPGA for home-based businesses is to be the Planning Board, add the Planning Board to the clause specifying availability of application forms.

It is appropriate for a municipality to review the adequacy of its Special Permit regulations and criteria at the same time it is contemplating adding a home-based business bylaw. Compare the existing Special Permit section of the bylaw to those of other similar towns and to models available from your regional planning agency. Ask the opinion of members of the existing SPGA regarding any changes they may wish to see in the regulations. Proposing changes to the Special Permit rules at the same time as a new home-based business bylaw may prove politically inconvenient; it is probably best to unlink the two sets of changes in voters' minds and on warrants, so as to allow independent evaluation of each proposed change.

MODEL Infill Development Overlay District Bylaw

Prepared by the Pioneer Valley Planning Commission

6.2 Infill Development Overlay District

6.20 Purpose

The Infill Development Overlay District has been established to encourage infill and redevelopment in the downtown area to include parcels of land that do not meet the minimum dimensional requirements of the Zoning Bylaw as well as those that do meet the minimum requirements. It has been established to encourage development that maintains the character of existing neighborhood buildings and structures; to permit a flexible approach to providing affordable housing; to provide incentives for new and existing businesses in the downtown area; to increase property values in residential neighborhoods in the downtown area; and to foster well-planned, mixed-use, compact developments in the downtown area in keeping with the character of traditional New England villages by:

- a. Allowing a mix of uses in close proximity in the district within a limited area, including residential, retail, office, and light industrial;
- b. Preserving and restoring the overall character of the downtown area;
- c. Promoting a balance of land uses;
- d. Promoting the opportunity for people to work, meet, shop, and utilize services in the vicinity of their residences;
- e. Providing opportunities for the development of affordable housing;
- f. Providing opportunities for a mixture of uses in the same building;
- g. Promoting a positive pedestrian environment in the district;
- h. Facilitating integrated physical design;
- i. Promoting a high level of design quality;
- j. Encouraging the development of flexible space for small and emerging businesses;
- k. Facilitating development proposals responsive to current and future market conditions; and

- l. Encouraging the development of open spaces and parks within the district to accommodate workers, residents, pedestrians, and shoppers.

6.21 District Boundaries

The location and boundaries of the Infill Development Overlay District is hereby established as shown on a map entitled, "Infill Development Overlay District of the Town/City of _____, Massachusetts", dated _____, which accompanies and is hereby declared to be part of this bylaw.

6.22 Residential Infill Development

Within the boundaries of the Infill Development Overlay District, a lot with at least 5,000 square feet of area and fifty (50) feet of frontage may serve as the location for a single-family residential dwelling or two-family residential dwelling. A proposed Residential Infill Development shall demonstrate that the home shall be served by town water and sewer service upon completion of the proposed development and meet the following Performance Standards:

- a. The proposed dwelling is consistent in architectural style, scale, setbacks, and frontage with abutting structures, and those in the immediate neighborhood.
- b. Each lot will have access and utility service comparable to that serving nearby properties.
- c. No traffic congestion, health or safety limitations would be created by the development.

6.23 Infill Development/Mixed Use Infill Development

In the Districts within the boundaries of the Infill Development Overlay District, by Special Permit with Site Plan Approval from the Planning Board, a lot with at least 5,000 square feet of area and fifty (50) feet of frontage may serve as the location for an Infill Development or Mixed Use Infill Development. Any of the dimensional requirements of the Zoning Bylaw, such as lot frontage, width, building setbacks, etc. may also be reduced or eliminated by the Special Permit, provided that the Planning Board determines that the following Performance Standards have been met:

- a. The proposed building is consistent in architectural style, scale, setbacks, and frontage with abutting structures, and those in the immediate neighborhood.
- b. Each lot will have access and utility service comparable to that serving nearby properties.

- c. No traffic congestion, health or safety limitations would be created by the development.
- d. Access shall be provided to the extent feasible through an existing side street or a shared driveway; curb cuts shall be minimized.
- e. Pedestrian and vehicular traffic shall be separated; walkways shall be provided for access to adjacent properties and between businesses where feasible.

A Mixed Use Infill Development that proposes to have retail and residential uses within the same building on lots that meet the minimum dimensional requirements of the underlying zoning district shall be allowed by right if the following criteria are met:

- a. The retail use does not exceed 2,500 square feet of Gross Floor Area.
- b. No more than one residential dwelling unit is proposed.

Retail/residential Mixed Use Infill Development proposals within the same building on lots that meet the minimum dimensional requirements that exceed the above criteria shall be required to obtain a Special Permit with Site Plan Approval (see Section _____ of the Zoning Bylaw) from the Planning Board.

A proposed Infill Development/Mixed Use Infill Development shall demonstrate that the project shall be served by town water and sewer service upon completion of the proposed development.

6.24 Use Regulations

- a. All uses listed as “Y” in the underlying zoning district as shown in the Schedule of Use Regulations shall require Site Plan Approval from the Planning Board if the lot does not meet the minimum dimensional requirements of the underlying zoning district of the Zoning Bylaw.
- b. Proposed uses within the Infill Development Overlay District which require a Special Permit or Special Permit with Site Plan Approval shall continue to require all such approvals as are designated in the Schedule of Use Regulations. However, where such approval or review is also required as part of an application for a Mixed Use Infill Development, the applicant shall only be required to submit a single Special Permit or Special Permit with Site Plan Approval application for the purposes of gaining approval for all uses in such an application. See Section ____ of the Zoning Bylaw on the procedures and criteria required for the issuance of a Special Permit, and Section _____ on the procedures and criteria required for Site Plan Approval.

- c. Within a Mixed Use Infill Development, there shall be no restriction on combining different categories of use within the same building other than those restrictions imposed by the State Building Code or other federal, state, or local regulations.

6.25 Additional Standards

In Addition to the minimum standards of the underlying zoning district, the following standards shall apply to all uses allowed within the Infill Development Overlay District except single family and two-family residential development and any building used exclusively for agriculture, horticulture or floriculture. The Planning Board may waive these standards if deemed appropriate by the Board.

6.251 Landscape Standards

- a. Street trees shall be planted within the right-of-ways parallel to the street along all streets. Trees shall have a minimum height of six (6) feet and a minimum caliper of 2.5 inches at the time of planting. Where possible, a minimum of six (6) feet wide landscaped belt will be created to plant the street trees.
- b. Tree spacing shall be determined by species type. Large maturing trees shall be planted a minimum of 40 feet and a maximum of 50 feet on center. Small and medium maturing trees shall be planted a minimum of 10 feet and a maximum of 30 feet on center.
- c. Utilities shall be located in the street and not in the tree belt, wherever possible.

6.252 Parking Standards

The minimum off-street parking standards as specified in Section _____ of the Zoning Bylaw may be waived by the Planning Board where it can be demonstrated by the applicant that the proposed use will not have a negative traffic impact within the neighborhood. In addition to the requirements of Section _____, the following standards shall be met:

- a. Parking lots shall be located at the rear of or at the side of buildings wherever feasible.
- b. When two adjacent lots contain parking areas, it is encouraged to develop them as one parking area.
- c. Parking lot layout, landscaping, buffering, and screening shall prevent direct views of parked vehicles from streets and sidewalks, avoid

spill-over light, glare, noise, or exhaust fumes onto adjacent properties wherever feasible.

d. Parking lot layout shall take into consideration pedestrian circulation. Pedestrian crosswalks shall be provided, where necessary and appropriate, shall be distinguished by textured paving, and shall be integrated into the wider network of pedestrian walkways. Walkways must conform to requirements of the American with Disabilities Act (ADA) and the Massachusetts Architectural Access Board (MAAB).

6.26 Commonly Held Lots

Any lot that is commonly held in ownership with an adjacent lot in this district may be treated as a single lot in accordance with this bylaw, provided that the total area of such lots is at least 5,000 square feet in area, the lots have a combined contiguous frontage of at least fifty (50) feet, and vacant of structures, parking facilities, or accessory uses.

6.27 Fires and Natural Disasters

In cases of fire or natural disaster, a structure in the Infill Development Overlay District that was destroyed may be rebuilt upon the same lot in accordance with this bylaw, provided that the new structure conforms to the use regulations of this bylaw and the reconstruction is completed and the structure is occupied within two years of such damage or destruction.

6.28 Conflict with Other Laws

All development activities within the Infill Development Overlay District shall comply with applicable laws, regulations, and standards of the town, except that in the event of a conflict between this bylaw and any such laws and regulations, the provisions of this Bylaw shall control, provided that they are consistent with state and federal law.

6.29 Severability

If any section or provision of this bylaw is found by a court of competent jurisdiction to be invalid, such invalidity shall not affect the validity of any other section or provision of this Bylaw.

Zoning Bylaw Amendments also Required:

Amend Definitions to include the following new definitions:

GROSS FLOOR AREA - The sum of the horizontal areas of the several stories of a building, measured from the exterior faces of exterior walls, or in the case of a common wall separating two buildings, from the centerline of such common wall. Gross floor area shall exclude basements and attics. The surface area of tennis courts, swimming pools, driveways, parking spaces, decks, and porches is not included in the total floor area.

Infill Development - The development of new housing or other uses on scattered vacant sites in a built up area within the Infill Development Overlay District.

Mixed Use Infill Development - The development of a tract of land, building, or structure with two (2) or more different uses such as, but not limited to, residential, office, retail, institutional, entertainment, or light industrial, on scattered vacant sites in a built up area within the Infill Development Overlay District.

Residential Infill Development - The development of new single family or two-family housing on scattered vacant sites in a built up area within the Infill Development Overlay District.

SAMPLE INTERGOVERNMENTAL COMPACT or MOA

MEMORANDUM OF AGREEMENT FOR CONNECTICUT RIVER CLEAN-UP

by and among the Municipalities of Agawam, Chicopee, Holyoke, Ludlow, South Hadley, Springfield and West Springfield, the Pioneer Valley Planning Commission, and other municipalities or organizations which may approve this agreement.

WITNESSETH:

This memorandum is agreed to by and among the municipalities of Agawam, Chicopee, Holyoke, Ludlow, South Hadley, Springfield and West Springfield, the Pioneer Valley Planning Commission and other municipalities or organizations which may approve this agreement for the purpose of working cooperatively to seek federal and state financial assistance and other alternative funding sources, methods and controls for mitigating the impacts of combined sewer overflows to the Connecticut River.

WHEREAS, the Connecticut River is a natural and environmental resource of great regional and interstate importance, and is a key element in the region's quality of life and economic prosperity;

WHEREAS, water quality in the lower Connecticut River in Massachusetts is not currently meeting fishable and swimmable standards due to water pollution discharges which include combined sewer overflows and urban stormwater runoff;

WHEREAS, the significant costs of infrastructure necessary to eliminate combined sewer overflows and improve water quality in the Connecticut River exceed the current fiscal capabilities of the Connecticut River communities, unless federal and state grants or financial assistance are made available;

WHEREAS, an innovative, regional and intergovernmental approach to improving water quality on the Connecticut River is desirable and will benefit riverfront communities and the region through enhanced recreational and economic development opportunities;

NOW, THEREFORE IT IS RESOLVED that the municipalities of Agawam, Chicopee, Holyoke, Ludlow, South Hadley, Springfield, and West Springfield, the Pioneer Valley Planning Commission and other municipalities or organizations which may approve this agreement hereby agree to cooperate to seek federal and state financial assistance and other alternative funding sources, methods and controls for mitigating the impacts of combined sewer overflows to the Connecticut River as follows:

Section 1. Creation of Connecticut River Clean-Up Committee

The participants shall form a permanent organization to be known as the Connecticut River Clean-up Committee consisting of one representative from each member municipality and one representative from the Pioneer Valley Planning Commission (PVPC). The municipal representative shall be appointed by the chief elected official in each community. The PVPC

representative shall be appointed by the Executive Director of PVPC. The Committee may invite any other person or organization concerned with Connecticut River water quality issues to become an associate member, and to participate in committee deliberations, but not to vote. The purpose of the Committee shall be to increase intergovernmental cooperation to coordinate efforts for Connecticut River water quality improvement. The Committee's function shall be to help carry out the responsibilities described in Section 2-3.

The Committee may seek, receive and expend funds from municipal or other sources in order to hire a part-time or full-time coordinator to assist it in performing its functions. The Committee shall clearly identify the responsibilities of the coordinator, which shall include grantsmanship and lobbying for state and/or federal water quality funds, and the proposed sources of funding for such a position. Any proposal for municipal funding of such a position will be subject to approval by Town Meeting or City Council. An annual contribution, not to exceed two thousand dollars, will be made by each member municipality and PVPC, toward the coordinator position.

The Committee shall elect officers and shall adopt rules governing its decision-making process, quorum for meetings, frequency and location of meetings, address for purpose of correspondence, and general operations. Adoption of these rules shall require an affirmative majority vote.

Section 2. Role of the Municipalities, Agencies or Organizations Signatory to this Agreement

The municipalities of Agawam, Chicopee, Holyoke, Ludlow, South Hadley, Springfield, and West Springfield shall have the following responsibilities:

- a. To work cooperatively with other riverfront municipalities, agencies, organizations and legislators, including Hartford, Connecticut area officials, to create a partnership to lobby for state and federal wastewater grant or loan funds for Connecticut River water quality improvement;
- b. To prepare joint, intermunicipal or regional applications for wastewater grant or loan funds, working feasible and appropriate;
- c. To adopt municipal policies to correct combined sewer overflows as a standard part of road improvement projects, community development block grants or other industrial development projects;
- d. To work cooperatively on educational efforts to build public consensus for Connecticut River clean-up and revitalization efforts;
- e. To establish and agree upon a proposed priority list of combined sewer overflow mitigation projects to be addressed in each community and a schedule for implementation;
- f. To seek innovative or alternative controls to prevent or mitigate combined sewer overflow (CSO) pollution, and reduce costs and needs for expensive infrastructure construction;

- g. To investigate alternative regional funding mechanisms to assist municipalities in financing CSO controls;
- h. To establish a Municipal Waterways Improvement and Maintenance Fund, in accordance with Mass. General Laws Chapter 40, section 5g, to be used for cleaning and improvement of waterways;
- i. To research the feasibility of a proposal for a ballot referendum question to establish a regional clean water fund or bond to match state and federal water pollution control funds;
- j. To designate a voting representative to participate in the Connecticut River Clean-up Committee.

Section 3. Role of Pioneer Valley Planning Commission

The Pioneer Valley Planning Commission (PVPC) shall have the following responsibilities:

- a. To assist the municipalities in meeting their responsibilities under this memorandum;
- b. To seek from grants or other sources funding to assist municipalities in meeting the cost of hiring a part-time or full-time coordinator for the Connecticut River Clean-up Committee;
- c. To designate a voting representative to participate in the Connecticut River Clean up Committee.

Section 4. Amendments

This Memorandum of Agreement may be amended at any time by a two-thirds affirmative vote of the Committee.

Section 5. Additional Members of the Committee

The Committee may invite any other person or organization to participate in the Committee as an associate, non-voting member.

The Committee may be expanded by admitting to full membership any abutting city, municipality or organization by a two-thirds affirmative vote of the Committee; provided, however, that such expansion shall only occur at the request and initiation of such abutting city, municipality or organization, and that such city, municipality or organization shall ascribe to this Memorandum of Agreement

Section 6. Withdrawal from Membership

Any member municipality may withdraw from participation in the Committee upon two months written notice signed by the Board of Selectmen or Mayor, such notice to be given only after approval of such withdrawals as given by majority vote of the Board of Selectmen or approval of the Mayor of the withdrawing municipality.

Section 7. Authorization/Effective Date

This agreement has been authorized by approval of the Board of Selectmen or Mayor in each municipality, in accordance with Massachusetts General laws Chapter 40, Section 4a, and by vote of the Pioneer Valley Planning Commission. This Memorandum will become effective when it is signed by all participating parties.

_____ Mayor, Town of Agawam	_____ Date
_____ Mayor, City of Chicopee	_____ Date
_____ Chairman, Board of Selectmen Town of Ludlow	_____ Date
_____ Mayor, City of Holyoke	_____ Date
_____ Chairman, Board of Selectmen Town of South Hadley	_____ Date
_____ Mayor, City of Springfield	_____ Date
_____ Chairman, Board of Selectmen Town of West Springfield	_____ Date
_____ Executive Director, Pioneer Valley Planning Commission	_____ Date

Section 8. Endorsement of this Agreement by Other Non-member Municipalities, Agencies or Organizations

Any other municipalities, agencies or organizations may endorse this agreement and shall have the following responsibilities:

- a. To work cooperatively with other municipalities, agencies, organizations and legislators to create a partnership to lobby for state and federal wastewater grant or loan funds for Connecticut River water quality improvements;
- b. To work cooperatively on educational efforts to build public consensus for Connecticut River Clean-up and revitalization efforts;
- c. Optionally, to designate a non-voting advisory representative to participate in the Connecticut River Clean-up Committee.

Non-voting Advisory Endorsements

Secretary, Mass. Executive Office of Environmental Affairs	Date
Administrator, U.S. Environmental Protection Agency, Region One	Date
Chairman, Board of Selectmen Town of Longmeadow	Date
Chairman, Hartford Metropolitan District Commission	Date
Executive Director, Capitol Region Council of Governments	Date

LEED CERTIFICATION BUILDING STANDARD

Developed by the Pioneer Valley Planning Commission

SECTION 1.0 LEED CERTIFICATION BUILDING STANDARD

1.1 Purpose

The purpose of this bylaw is:

- a. To encourage the construction of environmentally sustainable municipal and privately-owned buildings;
- b. To ensure that large scale new and rehabilitated building projects are planned, designed, constructed, and operated to minimize adverse environmental impacts;
- c. To encourage the conservation of natural resources and reduction of toxins through environmentally appropriate building materials and methods;
- d. To encourage the reduction of greenhouse gas (GHG) emissions in the Building Sector to lessen the effects of climate change;
- e. To encourage a reduction in the use of energy in both the initial construction of a project, as well as its daily operation;
- f. To enhance the quality of life in the [Town/City] of _____.

1.2 Definitions

Green Building: The practice of increasing the efficiency of buildings and their use of energy, water, and materials, and reducing building impacts on human health and the environment, through better siting, design, construction, operation, maintenance, and removal.

Gross Floor Area: The sum of the gross horizontal areas of the several floors of a building measured from the exterior face of exterior walls, or from the centerline of a wall separating two buildings, but not including interior parking spaces, loading space for motor vehicles, or any space where the floor-to-ceiling height is less than six feet.

Leadership in Energy and Environmental Design (LEED) Standards: A voluntary, third-party rating system where credits are earned for satisfying specified green building criteria. Developed by the United States Green Building Council (USGBC), LEED is the nationally accepted benchmark for the design, construction, and operation of high performance green buildings. LEED, as defined in this bylaw, will refer to the most current standards as revised by the USGBC.

1.3 Applicability

Any new construction or substantial rehabilitation of privately-owned and municipally-owned, non-residential structures over 25,000 square feet in Gross Floor Area which require a Special Permit or Site Plan Review shall comply with the requirements listed in Section 1.4 of this Bylaw.

1.4 Requirements

In addition to the application requirements for a Special Permit or Site Plan Review, the applicant will submit a completed and most current LEED Registered Project Checklist reflecting the intended design details of the building(s) to the Special Permit Granting Authority. The applicant will select the most appropriate LEED rating system, based on the proposed project.

a. For construction of non-residential structures over 25,000 square feet but less than 50,000 square feet Gross Floor Area, proposed projects shall be required to meet the Basic LEED Certification.

b. For the construction of non-residential structures over 50,000 square feet Gross Floor Area, proposed projects shall be required to meet the Silver LEED Certification. Proposed projects are encouraged to consider meeting LEED Gold or Platinum standard.

1.5 Procedures

a. For a Special Permit and Site Plan Application, in addition to the requirements set forth in Special Permits, Section ____ of the [TOWN/CITY] Zoning Bylaw, and Site Plan Approval, Section ____ of the [TOWN/CITY] Zoning Bylaw, the applicant will also submit to the appropriate permitting board:

- i. The appropriate LEED Registered Project Checklist, reflecting intended design details of the proposed project;
- ii. Identify the designated LEED Accredited Professional for the project;
- iii. Documentation to demonstrate the anticipated methods by which compliance with the LEED standards will be achieved at the time of construction.

b. Building Permit

- i. Prior to the issuance of the first Building Permit for each authorized building, the applicant will submit a draft LEED certification package, prepared by a LEED Accredited Professional, to the Planning Board and Building Inspector.
- ii. Approval shall be granted upon determination by the Planning Board that the certification package is in compliance with LEED certification level as required in Section 1.4 of this bylaw.

iii. The Planning Board shall certify to the Building Inspector that all conditions under Section 1.4 of this bylaw have been met before issuance of a Building Permit.

c. Certificate of Occupancy

i. Prior to the issuance of the first Certificate of Occupancy for each authorized building, the applicant will submit the final LEED certification package, prepared by a LEED Accredited Professional, to the Planning Board and Building Inspector.

ii. Approval shall be granted upon determination by the Planning Board that the certification package is in compliance with LEED certification level as required in Section 1.4 of this bylaw.

iii. The Planning Board shall certify to the Building Inspector that all conditions under Section 1.4 of this bylaw have been met before issuance of a Certificate of Occupancy.

iv. Within eighteen (18) months of the issuance of the final Certificate of Occupancy for each building, the applicant shall submit a report to the Planning Board which shall outline the results of the measurement and verification procedures to date for that building.

1.5 Project Review

In addition to any Administrative Fees, the Planning Board may impose a Project Review Fee on those applications which require, in the judgment of the Planning Board, review by outside consultants due to the size, scale or complexity of a proposed project, the project's potential impacts, or because the Town lacks the necessary expertise to perform the review work related to the permit or approval. In hiring outside consultants, the Board may engage engineers, planners, lawyers, designers, or other appropriate professionals able to assist the Board and to ensure compliance with this Section 1.0. Such assistance may include, but shall not be limited to, analyzing the LEED application, monitoring or inspecting a project or site for compliance with the Board's decisions or regulations, or inspecting a project during construction or implementation.

Project Review Fees shall be submitted at the time of the submittal of the application for deposit in an account established pursuant to G.L. c. 44, s. 53G (53G Account). Any application filed without this fee shall be deemed incomplete and no review work shall commence until the fee has been paid in full.

1.6 Performance Bond

The permit granting authority shall require an irrevocable performance bond or other security to insure large scale new and rehabilitated building projects are functioning at the required LEED certification level, unless, in a particular case it specifically finds that such security is not warranted and so states its decision giving the reasons for its finding. The bond shall not be released until the applicant has certified in writing and the permit granting authority has determined that the building projects have been completed in compliance with the permit and LEED certification.

1.7 Conflict with Other Laws

The provisions of this bylaw shall be considered supplemental of existing zoning bylaws. To the extent that a conflict exists between this bylaw and others, the more restrictive bylaw, or provisions therein, shall apply.

1.8 Severability

If any provision of this bylaw is held invalid by a court of competent jurisdiction, the remainder of the bylaw shall not be affected thereby. The invalidity of any section or parts of any section or sections of this bylaw shall not affect the validity of the remainder of the town's zoning bylaw.

Model Mixed Use Development Bylaw/Ordinance

Prepared by PVPC, updated 9-2-14

6.6 MIXED USE DEVELOPMENT

6.61 Scope

To regulate Mixed Use Development in appropriate areas of the Town and to protect the public health, safety, and general welfare in the Town of _____ by establishing controls that will facilitate flexible development while protecting the public interest.

6.62 Purposes

- A.** The purpose of this bylaw/ordinance is to foster a greater opportunity for creative development by providing guidelines which encourage a mix of uses compatible with existing and neighboring properties; to provide housing and business uses in locations where a variety of town services are available; to promote utilization of existing buildings and property, and to encourage the provision of open areas. The intent, furthermore, is to encourage interaction among activities located within a Mixed Use Development, to enhance business vitality, reduce vehicular traffic, provide employment opportunities for residents close to home, ensure the compatibility with each other of the commercial, and residential uses, ensure that the appearance and effects of buildings and uses are harmonious with the character of the area in which they are located by:
1. Allowing a diversity of uses in close proximity in the district within a limited area, including residential, retail, and office;
 2. Accommodating mixed-use buildings with neighborhood-serving retail, service and other uses on the ground floor and residential units above;
 3. Encouraging development that exhibits the physical design characteristics of pedestrian-oriented storefront-style shopping streets;
 4. Promoting the opportunity for people to work, meet, shop and utilize services in the vicinity of their residences,
 5. Providing opportunities for the development of affordable housing,
 6. Providing opportunities for a mixture of uses in the same building,
 7. Promoting a positive pedestrian environment in the district,
 8. Facilitating integrated physical design,
 9. Promoting a high level of design quality,
 10. Encouraging the development of flexible space for small and emerging businesses,
 11. Facilitating development proposals responsive to current and future market conditions, and
 12. Encouraging the development of open spaces and parks within the district to accommodate workers, residents, pedestrians, and shoppers.

6.63 Establishment and Administration

- A. The Mixed Use Overlay District is an overlay district that is superimposed over the underlying zoning districts and is shown on the Zoning Map as set forth on the map entitled "Mixed Use Overlay District", dated _____ 2014, prepared by Pioneer Valley Planning Commission. This map is hereby made a part of the Zoning Bylaw/Ordinance and is on file in the Office of the Town/City Clerk.
- B. The regulations for use, dimension, and all other provisions of the Zoning Bylaw/Ordinance governing the underlying zoning district(s) shall remain in full force, except for those Mixed Use projects undergoing development pursuant to this Section 6.6. Within the boundaries of the Mixed Use Overlay District, a developer may elect either to develop a Project in accordance with the requirements of the Mixed Use Zoning, or to develop a project in accordance with requirements of the regulations for use, dimension, and all other provisions of the Zoning Bylaw/Ordinance governing the underlying zoning district(s).
- C. An applicant may seek development of a Project located within the Mixed Use Overlay District in accordance with the provisions of this Section 6.6, including a request for a Special Permit with Site Plan Approval.
- D. The provisions of this Section 6.6 shall be administered by the Planning Board, except as otherwise provided herein.
- E. The Planning Board may waive any information requirements it judges to be unnecessary to the review of a particular plan. Such waiver decisions must be documented in writing by the Planning Board.

6.64 Definitions

- A. The following definitions shall apply to all mixed use applications under these zoning Bylaws/Ordinances:
 - 1. **Assisted Living:** Housing for adults, with services provided, such as meals, laundry, and housekeeping.
 - 2. **Business Services:** Services used in the conducting of business and commerce, including only:
 - a. Consumer and mercantile credit reporting;
 - b. News services;
 - c. Research, development and testing;
 - d. Business management and consulting;
 - e. Insurance company service offices;
 - f. Real estate offices.
 - 3. **Café:** A coffee house or small restaurant, often with an enclosed or outdoor section extending onto the sidewalk.
 - 4. **Cocktail Lounge:** Is the use of a site for retail sale of alcoholic beverages for consumption on the premises, including taverns, bars, and similar uses, other than a restaurant use as that term is described in this section.

5. **Driveway:** A space, located on a lot, built for access to a garage or off-street parking or loading space.
6. **Fast Food Restaurant:** An establishment whose principal business is the sale of prepared or rapidly prepared food directly to the customer in a ready-to-consume state for consumption either within the restaurant building or off the premises. Orders are not generally taken at the customers table, and food is generally served in disposable wrapping or containers.
7. **Live-work Units:** A live/work unit is defined as a single unit (e.g., studio, loft, or one bedroom) consisting of both a commercial/office and a residential component that is occupied by the same resident. The live/work unit shall be the primary dwelling of the occupant.
8. **Lot Coverage:** The area of a lot covered by the footprint of all structures, as well as decks, balconies, porches, and similar architectural features, driveway areas, expressed as a percentage of the total lot area.
9. **Mixed Use Development:** The development of a tract of land, building, or structure with two (2) or more different uses such as, but not limited to, residential, office, retail, institutional, or entertainment, in a compact village form, with vehicular access to an accepted public way. A proposed Mixed Use Development shall demonstrate that the project shall be served by town water and sewer service upon completion of the proposed development.
10. **Municipal Facilities:** Facilities utilized in the provision of services normally provided by municipalities such as schools, parks, playgrounds, municipal office buildings, and maintenance buildings.
11. **Odor:** A strong and unpleasant smell, for example, a garbage or chemical smell.
12. **Personal Services:** Establishments primarily engaged in providing services involving the care of a person or his/her apparel, including but not limited to:
 - a. Laundering, dry cleaning and garments services not exceeding 5,000 square feet of floor area per establishment;
 - b. Coin operated laundries;
 - c. Shoe repair;
 - d. Photographic services;
 - e. Beauty and barber shops;
 - f. Apparel repair and alteration;
 - g. Funeral services;
 - h. Steam baths;
 - i. Reducing salons and health clubs;
 - j. Clothing rental.
13. **Professional Services:** Services performed by professional persons for business and personal use, including, but not limited to:
 - a. Medical and health offices and clinics not exceeding 5,000 feet of floor area per office or group of offices;
 - b. Planning;
 - c. Engineering and architectural;
 - d. Accounting;
 - e. Auditing and bookkeeping;
 - f. Educational and scientific.

14. **Senior and/or Handicapped Housing or Senior Apartments:** Age-restricted multi-unit housing for 55 and older adults, or handicapped persons, with self-contained living units for older adults who are able to care for themselves. Usually no additional services such as meals or transportation are provided.
15. **Sit Down Restaurant:** An eating establishment of high quality and with turnover rates generally of at least one hour or longer, serving food and beverages for retail sale, intended for consumption on the premises, and may include the sale and on-premises consumption of alcoholic beverages as an accessory use provided all necessary licenses are secured.
16. **Treebelt:** Can consist of tree planters, brick pavers, and benches with a minimum width of five feet.

6.65 Use Regulations

A. Special Permit Uses in a Mixed Use Development

1. Mixed use developments may be constructed in the Mixed Use Development Overlay District with the approval of a Special Permit with Site Plan Approval granted by the Planning Board. The following uses may be included within a mixed use development:
 - a. Retail Uses;
 - b. Sit Down Restaurants;
 - c. Cafes and outdoor dining areas;
 - d. Multi-family Residential uses;
 - e. Home Occupations;
 - f. Professional Service Offices;
 - g. Personal Service Establishments;
 - h. Municipal Uses;
 - i. Banks or financial institutions;
 - j. Health club;
 - k. Hotel/Motel not exceeding 10 guest rooms per establishment;
 - l. Bed-and-breakfast establishments;
 - m. Townhouses (single family dwellings connected by one or more walls);
 - n. Cinema, theatre, or auditorium;
 - o. Park, recreation or playground;
 - p. Artist studio/residence;
 - q. Assisted living residential uses, senior apartments and senior housing;
 - r. Artisan manufacturing or production (hand tools only, e.g. jewelry or ceramics);
 - s. Civic uses;
 - t. Live/work units;
 - u. Multiple Uses in the same structure.
2. Within a mixed use development, the following uses shall not be allowed as free standing buildings, and shall not provide drive through service windows:
 - a. Fast food restaurants;
 - b. High turnover sit-down restaurants;
 - c. Banks.

B. Prohibited Uses in a Mixed Use Development

1. The following uses shall not be included within a Mixed Use Development:
 - a. Industrial uses;
 - b. Motor vehicle sales, maintenance and repair facilities;
 - c. Gasoline filling stations;

- d. Dry cleaning, linen cleaning, or diaper services which clean clothing articles on site.
- e. Adult entertainment uses;
- f. Animal hospitals, animal sales;
- g. Automobile or truck sales;
- h. Bars and cocktail lounges;
- i. Drive-up services associated with any commercial use;
- j. Junkyards.

C. Same-structure/On-site Mixed Use

Within an approved Mixed Use Development or Mixed Use Infill development, there shall be no restriction on combining different categories of use within the same building except any imposed by the State Building Code or other federal, state, or local regulations.

D. Special Permit Criteria for All Mixed Use Developments

- 1. All Mixed Use Developments must meet the Special Permit with Site Plan Approval requirements in Section 5.4.
- 2. All Mixed Use Developments must meet the following additional Special Permit criteria:
 - a. The project complies with the additional performance standards specific to Mixed Use Developments in Section 6.66 below.
 - b. The project is consistent with the purposes of this Bylaws/Ordinance, as stated in Section 6.62.

E. Dimensional Requirements

The dimensional requirements applicable to the Mixed Use Overlay District are shown in the Table of Dimensional and Density Regulations in Section 4.3.

6.66 Performance Standards for Mixed Use Developments

To the extent feasible, all Mixed Use Developments must meet the Performance Standards in noted below.

No use shall be permitted that causes or results in dissemination of dust, smoke, gas or fumes odor, noise, vibration or excessive light under standards set forth in the performance criteria in this chapter.

Any other performance standards of the town shall also apply to uses conducted under this Section 6.6 of the Zoning Bylaws/Ordinances.

A. Access and Traffic Impacts:

- 1. Traffic and safety impacts to the existing and proposed roads shall be minimized.
- 2. Access shall be provided to the extent feasible through an existing side street or a shared driveway. Curb cuts shall be limited, and shall be as narrow as is feasible without resulting in traffic safety issues.
- 3. Pedestrian and vehicular traffic shall be separated; walkways shall be provided for access to adjacent properties and between businesses.

4. Plans must illustrate provisions for automobile, pedestrian and bicycle circulation. Provisions must be made for motor vehicle, bicycle, and pedestrian circulation connections to adjacent lots.
5. The Planning Board shall require a detailed traffic study for high volume traffic generating uses with a trip generation rate over 700 vehicles/day (based on Institute of Transportation Engineers rates found in Trip Generation); for the construction of new Mixed Use Development structure of more than 25,000 square feet in gross floor area; and for any external enlargement that brings the Mixed Use Development total to 25,000 square feet gross floor area for all structures. The Planning Board may waive any or all requirements for a traffic study for external enlargements of less than 2,000 square feet of gross floor area in excess of the 25,000 gross floor area threshold. The traffic impact statement shall contain:
 - a. The projected number of motor vehicle trips to enter or leave the site, estimated for daily and peak hour traffic levels;
 - b. The proposed traffic flow pattern for both vehicles and pedestrian access shall be described and related to the site plan, including vehicular movements at all major intersections likely to be affected by the proposed use of the site;
 - c. Traffic flow patterns at the site including entrances and egresses, loading and unloading areas, and curb cuts on site and within one hundred (100) feet of the site;
 - d. A detailed assessment of the traffic safety impacts of the proposed project or use on the carrying capacity of any adjacent highway or road, including the projected number of motor vehicle trips to enter or depart from the site estimated for daily hour and peak hour traffic levels, road capacities and impacts on intersection. Existing daily and peak hour traffic levels and road capacities shall also be given;
 - e. A parking lot vehicle traffic and pedestrian circulation plan shall be designed to minimize conflicts and safety problems.

B. Noise:

1. In order to protect, preserve, and promote the health, safety, welfare, peace, and quiet of the inhabitants of the town/city through the reduction, control, and prevention of such loud or raucous noise that unreasonably disturbs, injures, or endangers the comfort, privacy, repose, health, peace or safety of reasonable persons, all noise levels, measured at a height of four feet (4') above the ground surface at all property lines, using a sound meter which meets the most current American National Standards Institute's Specification for Type II Sound Level Meters, must not exceed the following standards:

Time of Day	Max. Sound Level (dBA)
7:00 a.m. to 7:00 p.m.	65*
7:00 p.m. to 11:00 p.m.	50
11:00 p.m. to 7:00 a.m.	45

*Note: 65 dba = normal conversation; 50 dba = noise level of a normal working refrigerator; 45dba = a quiet library

2. These standards shall not apply to power tools and equipment (i.e. lawn mowers, leaf blowers, sweepers, snowblowers or snow removal, etc.) used in the normal maintenance of the site's outdoor areas (i.e. lawn, garden, parking, etc.). Such outdoor maintenance shall be limited to between the hours of 8:00 am 7:00 pm.

C. Emissions and Odors:

1. Emissions and odors shall be completely and effectively confined within the building, or so regulated as to prevent any nuisance, hazard, or other disturbance from being perceptible (without the use of instruments) at any lot line of the premises on which the use is located. No emissions are permitted which can:
 - cause any damage to health of humans, animals or vegetation
 - cause excessive soiling
 - result in odorous gases or odoriferous matter in such quantities as to be offensive
2. The determination of what emissions are in violation of this provision shall be made by the Zoning Enforcement Officer or his/her designee taking into consideration all of the following:
 - the level of the odor;
 - the nature of the odor is usual or unusual;
 - the origin of the odor is natural or unnatural;
 - the level of the ambient odor;
 - the proximity of the odor to living/sleeping facilities;
 - the nature and zoning of the area from which the odor emanates and the area where it is received;
 - the duration of the odor; and whether the odor is recurrent, intermittent, or constant.

D. Lighting:

1. Lighting systems should be designed, constructed, and installed in a manner that controls glare and light trespass, minimizes obtrusive light, conserves energy and resources while maintaining safety, visibility, security of individuals and property and curtailing the degradation of the nighttime visual environment. Evenly distributed lighting throughout a site will minimize impacts on surrounding neighborhoods and increase efficiency. By directing light where it is needed and only the intensity necessary to serve the intended purpose, these standards will prevent glare and its harsh shadows and blind spots. All lighting shall comply with the following:
 - Except for approved exterior lighting, operations producing glare shall be conducted entirely within an enclosed building. No direct or sky-reflected glare, whether from floodlights or from high temperature processes such as welding shall be permitted beyond its lot lines onto neighboring properties, or onto any street.
 - Exterior lighting, including but not necessarily limited to lighting of exterior walls of buildings from an external light source, lighting of parking areas, and lighting of walks and drives shall be done in such a manner to direct light away from adjacent lots and public ways.
 - All outdoor light fixtures and illuminated signs shall be designed, located, installed and directed in such a manner as to prevent light trespass beyond the property line, and light above a ninety-degree horizontal plane. If necessary, an applicant may need to provide photometric plans and/or manufacturing specification sheets to show conformance with these standards
 - All nonessential lighting, including display, parking, and sign lighting, shall be turned off after business hours, leaving only the lighting necessary for site and pedestrian security, crime prevention and streetlighting.
 - All lighting shall be recessed and shielded to prevent off-site glare.

- Site lighting shall conform to the following output standards:

Maximum (footcandle)	Site Average (footcandle)	Footcandle at Property Line
5	2.5	0

E. Storage:

1. All materials, supplies and equipment shall be stored in accordance with Fire Prevention Standards of the National Board of Fire underwriters and shall be screened from view from public ways and abutting properties.

F. Waste Disposal:

1. Waste disposal shall follow State and Town Board of Health regulations.
2. Storage of waste and waste facilities shall be screened from view from public ways and neighboring properties.
3. Appropriate provisions shall be made for the disposal of trash, which may include, but shall not be limited to, the provision of trash compactors within the building or on site, as well as a signed annual contract for rubbish removal.

G. Loading/Unloading:

1. The Planning Board, when acting upon an application under Section 6.6 of these Zoning Bylaws/Ordinances, may require that operations, including loading and unloading shall be limited to weekdays between the hours of 8AM and 7PM only.
2. Loading and unloading platforms and doorways specially designed for loading/unloading are prohibited on the front side of any building.

H. Walkways

1. For public convenience a pedestrian and/or bicycle way shall connect all uses on the site and otherwise provide appropriate circulation or continuity to an existing pedestrian or bicycle circulation system. These uses include, but are not limited to residential, parking, transit, bicycling, industrial, recreation, and commercial.
2. Walkways must conform to requirements of the American with Disabilities Act (ADA) and the Massachusetts Architectural Access Board (MAAB).
3. Sidewalks are required along all town streets. A treebelt is required adjacent to sidewalk areas. The Planning Board can waive treebelt requirements in situations where they determine that local conditions warrant.
4. The development should provide internal and/or public pedestrian connections that are direct, convenient and pleasant with appropriate amenities (e.g. attractive sidewalks and benches).

I. Vehicular Access, Parking and Loading, and Shared Parking Requirements

1. The project shall meet all parking requirements of Section 5.7 of the Zoning Bylaws/Ordinance.
2. Parking shall be located to the side or rear of buildings. In no case shall parking be allowed in the planting strip adjacent to the sidewalk or within the front setback of any lot.
3. Parking spaces may be located either on or off the lot. Applicant must show proof of space, its location relative to the dwelling unit, and must indicate if the space is owned or leased.
4. Buildings that do not have frontage on a street must provide access for emergency and service vehicles through the layout and design of driveways, interior service roads, or pedestrian and bicycle circulation corridors.
5. Where there is more than one category of use, then the number of spaces required shall be 70% of the sum of required spaces for each category of use.
6. The Planning Board may reduce the number of required parking spaces for the commercial portion of the building by 50%.
7. Off-street loading requirements are: Multi-Family Residential, Office, Retail, Consumer Service, and Public Assembly uses require one bay per every 50,000 square feet of floor area.
8. The Planning Board may allow shared parking in a mixed use development as part of the Special Permit approval. The minimum number of parking spaces for a mixed use development or where shared parking strategies are proposed shall be determined by a study prepared by the applicant following the procedures of the Urban Land Institute Shared Parking Report, ITE Shared Parking Guidelines, or other approved procedures. A formal parking study may be waived for small developments where there is established experience with the land use mix and its impact is expected to be minimal. The actual number of parking spaces required shall be based well-recognized sources of parking data such as the ULI or ITE reports. If standard rates are not available or limited, the applicant may collect data at similar sites to establish local parking demand rates.

J. Development Standards

1. Existing buildings shall be re-used for mixed use developments, where feasible, as a priority over new construction.
2. New construction design shall be in harmony with the existing neighborhood or district.
3. Buildings or structures that are listed or eligible for inclusion on the National Register of Historic Places and/or the Massachusetts Register of Historic Places or within a local historic district as established by M.G.L. Chapter 40C, shall be converted, constructed, reconstructed, restored or altered to maintain or promote the status of the building or structure on, or eligibility for inclusion on the State or National Register of Historic Places.
4. Applicants shall consult the _____ Design Guidelines Handbook for guidance regarding design issues for mixed used development. Applicants shall indicate how the proposed development addresses the design issues referenced in the _____ Design Guidelines Handbook.

K. Signs:

1. Signs shall conform to the existing Bylaws/Ordinances of the Town/City of _____ (Section 5.9), except that the following additional standards apply to all mixed uses:
 - a. Permitted signs include: signs located within the sign band on building facades; awning signs; hanging signs projecting from building facades; window signs and un-moveable free-standing signs.
 - b. Temporary signs permitted include: political signs; special events signs; and for sale or for lease signs.
 - c. Prohibited signs include: flashing signs; roof signs; moveable signs; internally lit plastic signs.
 - d. Each business may display not more than two permanent signs.
 - e. Sign materials should be durable and easy to maintain. Signs may be constructed of wood, metal, stone, gold leaf, glass, canvas, stained glass or encased in a wooden frame.
 - f. Sign illumination may include external white light illumination, provided it is shaded from view off the premises, and neon.
 - g. Sign size: Signs may not exceed sixteen square feet in area.
 - h. Sign height: Free-standing pole signs shall have a maximum height of ten feet; other free-standing signs shall have a maximum height of four feet.

L. Landscaping Requirements:

1. Screening of mechanical equipment, trash, and loading areas shall be provided through the use of walls, fences, and/or dense, evergreen plant materials.
2. Parking areas shall be screened from adjacent residential uses, streets, and walkways using trees and shrubs adapted to the region, of specimen quality conforming to the American Standard for Nursery Stock, (American Standards Institute, Inc.), and shall be planted according to accepted horticultural standards. Berms may be used for screening along the street in conjunction with plant materials.
3. The landscaped perimeter area shall be at least five feet wide, and can consist of trees, tree planters, brick pavers and benches.
4. Landscaping shall be provided for driveways and other interior vehicular use areas to provide visual and climatic relief from broad expanses of pavement and to channelize and define logical areas for pedestrian and vehicular traffic.
5. The interior parking area shall be landscaped with sufficient shade trees to provide 50% shade within fifteen (15) years of installation.
6. The use of porous pavement and/or perforated brick or block shall be used to the extent feasible to increase on-site water retention for plant material, groundwater supplies, and to reduce problems associated with runoff.
7. Completion of the landscaping requirements may be postponed due to seasonal weather conditions for a period not to exceed six (6) months from the time of project completion.
8. Applicants shall reference the landscaping recommendations of the _____ Design Guidelines Handbook when preparing a proposed landscape plan.

M. Maintenance of Landscaping and Screening:

1. All landscaping and screening shall be maintained by the property owner.
2. Landscaping and screening plant materials shall not encroach on the public walkways or roadways in a way that impedes pedestrian or vehicular traffic.
3. Shrubs or trees that die shall be replaced within one growing season.
4. If the property owner fails to do so, the town reserves the right to maintain the landscaping and screening after notifying the owners, agents, renters, or lessees by certified mail at their last known address or at the subject property address, that it shall be removed or trimmed within seven days of the notice by the Director of Public Works.
5. The town shall assess the owners, agents, renters, or lessees for the cost of trimming or removal plus an additional amount of up to 20% of the charges for administrative costs, to the owner and to the lessee, agent, occupant, or other person in possession and control of the property.
6. If any property owner fails or refuses to pay when due any charge imposed under this section, the Director of Public Works may, in addition to taking other collection remedies, certify due and unpaid charges, including interest, to the Town Treasurer to be levied against the person's property for collection by the county in the same manner as delinquent general taxes upon such property are collected as provided by the Town/City of _____.

N. Appearance/Architectural Design

1. Architectural design shall be compatible with the historic character and scale of building in the neighborhood and the Town/City of _____ through the use of appropriate building materials, screening, breaks in roof and wall lines and other architectural techniques. Applicants should consult the _____ Design Guidelines Handbook for specific guidance on design issues.
2. Variations in architectural detail, form and siting shall be used to provide visual interest and avoid monotony.
3. Existing buildings subject to reconstruction or rehabilitation and proposed buildings shall be compatible with the historic character and scale of contiguous buildings within the immediate neighborhood vicinity.
4. Proposed buildings should relate harmoniously to each other with adequate light, air, circulation, and separation between buildings.
5. Buildings shall be designed so that only retail, restaurant, and personal service establishments shall be located on the ground or below grade building levels.
6. The entire building façade must be oriented to front and side street property lines and must be located within ten feet of such property lines, with sidewalks in front of buildings.
7. Public open spaces, such as plazas and pocket parks, are encouraged within the development;
8. In making its decision, the Planning Board may consider whether the building design is compatible with the following design guidelines:
 - 1) exterior facades are faced with wood, metal, or vinyl clapboards, or stone or brick;
 - 2) exterior facade treatment is compatible on all four sides;
 - 3) rooflines are peaked;

4) facades facing town streets have windows facing the street.

O. Multi-family Housing Limits

9. Within a mixed use development, multi-family housing units may only be constructed on the second floor of a mixed use structure which has a business, personal or professional services use on the first floor. Senior and/or Handicapped Housing or Senior Apartments are allowed on the first floor to meet accessibility needs.

P. Green Infrastructure and Stormwater Runoff

- i. To the extent feasible, Mixed Use Development projects shall recharge all stormwater on site. The use of green infrastructure strategies for stormwater recharge, such as permeable pavements, tree box filters, green streets, rain gardens, stormwater infiltration basins and green roofs, are strongly encouraged. Applicants' site plans shall indicate how the proposed development addresses green infrastructure and stormwater recharge.

Q. Outdoor Dining

- i. Outdoor dining shall be permitted by right, as an accessory use for any restaurant use, and must comply with the following standards:
1. Alcohol may be served to and consumed by patrons in outdoor dining areas, provided that all necessary licenses are acquired. These licenses are to be gathered through the Board of Selectmen, the Building Department and the Board of Health.
 2. The hours of operation of outdoor dining areas may be equal to or less than the hours of operation of the main restaurant. Dining areas which abut residential areas must end outdoor dining and seating by 11pm.
 3. Litter must be cleaned up regularly.

6.67 Optional Affordable Housing Bonus

- A. At least ten (10%) percent of the total dwelling units in a mixed use development may be designated as affordable housing. Affordable housing will be defined as those residential units affordable to a household earning up to eighty percent (80%) of the median income in the town/city of _____ statistical area.
- B. The affordable housing units shall include resale, lease or rental controls that will ensure continued affordability by future low and moderate income households. Deed restrictions or similar devices shall be used to limit future sale or rental prices for these purposes.
- C. The affordable units may be located in an existing structure if their construction constitutes a net increase in the number of dwelling units in the development.
- D. A bonus of twenty-five percent (25%) additional dwelling units – over and above the allowable density - may be awarded if the above criteria are met.
- E. Mixed Use Infill developments shall not qualify for this Affordable Housing Bonus.

ADDITIONAL AMENDMENTS NEEDED

Amendment to Table of Dimensional and Density Regulations in Section 4.3:

Zoning District	Minimum Lot Area	Minimum Frontage	Minimum Front Yard	Minimum Side Yard	Minimum Rear Yard	Maximum Height	Maximum Lot Coverage
Mixed Use Overlay (with Town Water and Sewer)	45,000 s.f.	200 feet	10 feet	20 feet	20 feet	35 feet/ 2.5 stories	60%

MODEL MIXED USE VILLAGE CENTER BYLAW
Prepared by Pioneer Valley Planning Commission 2-05

MIXED USE VILLAGE CENTER DISTRICT (MUV)

A. INTENT

The intent of the Mixed Use Village Center District is to foster well-planned, mixed-use, compact developments in the village center in _____, in keeping with the character of traditional New England villages, in order to create a place with a unique and positive local identity, and provide opportunities for development to expand the town's economic diversity and vitality.

B. GOALS

Development within this district should provide commercial, civic, residential uses and public open space within easy, safe walking distance of each other. Vehicular circulation should be safe and well organized, with the use and visual impact of cars minimized. There should be tree lined streets, sidewalks, well-designed architecture, and common interconnected open public spaces. Property developers are encouraged to provide amenities such as protected open space, increased landscaping, street furniture, public spaces, and greater integration of mixed uses.

C. PURPOSES

The purposes of this bylaw are to encourage vital, innovative, development projects and uses in the village center that:

- (1) Provide a compact and diverse mix of housing, office, retail, service and civic uses, including a mixture of uses in the same building;
- (2) Exhibit the design features of traditional villages and small towns in New England;
- (3) Facilitate more efficient provision and maintenance of public services and infrastructure;
- (4) Blend well with the existing landscape and help preserve sensitive environmental features;
- (5) Provide the opportunity for people to work, shop and utilize services in the vicinity of their residences;
- (6) Preserve and restore the overall character of the village center;
- (7) Promote a pedestrian-friendly environment in the village center,
- (8) Encourage the growth of the local economy and jobs, including development of flexible space for small and emerging businesses,
- (9) Encourage the development of open spaces and parks within the village center to accommodate workers, residents, pedestrians and shoppers.

D. use regulations

(1) Permitted Uses

- a) Single family residential dwellings are permitted by right in the Mixed Use Village Center District.
- b) The uses noted in Table One are permitted with Site Plan Review from the Planning Board in the Mixed Use Village Center District:

Table One. Uses Permitted with Site Plan Review in Mixed Use Village Center District

- a) RESIDENTIAL USES
- b) COMMERCIAL USES
- c) CIVIC USES

- 1) Townhouses;
- 2) Elderly congregate housing;
- 3) Accessory apartments, within single family residences;
- 4) Apartments on the second floor of commercial uses;
- 5) Semi detached dwellings;
- 1) Professional offices, including law or medical offices;
- 2) Business offices and support services;
- 3) Banks or financial services;
- 4) General retail sales;
- 5) Personal services (laundry, dry cleaning or similar);
- 6) Health club, indoor sports and recreation;
- 7) Grocery or convenience store;
- 8) Restaurant or delicatessen (but not including drive-in service);
- 9) Consumer repair services;
- 10) Theater or indoor entertainment;
- 11) Agriculture, horticulture, floriculture and viticulture;
- 12) Farmstands;
- 13) Mixed uses, wherein a combination of permitted uses are permitted in the same building;
- 14) Bed and breakfast inn;
- 15) Artist studio or gallery;
- 1) Municipal or governmental facilities, such as post office or administrative offices;
- 2) School or educational institution;
- 3) Church or religious uses;
- 4) Library or museum;
- 5) Utility services;
- 6) Community park or recreation facilities;
- 7) Public transit facilities;
- 8) Pedestrian or bicycle facilities;
- 9) Day care services for children or elderly;
- 10) Lodge or club;

(2) Prohibited Uses

The following uses are prohibited within the Mixed Use Village Center District:

- a) Drive-in or drive-through restaurant;
- b) Establishment selling or repairing new or used motor vehicles;
- c) Lodging house;
- d) Communications or television tower;
- e) Self-service storage facility;
- f) Commercial fuel oil storage;
- g) Commercial earth removal operation;
- h) Industrial or manufacturing use;
- i) Freight or trucking terminal;
- j) Warehousing;
- k) Residential apartment building;
- l) Commercial kennel;
- m) Lumber mill;
- n) Miniature golf courses;
- o) Adult entertainment uses;
- p) Junkyards;
- p) Other uses not specifically permitted in Table One above.

F. Dimensional Requirements

(1) Dimensional Requirements

(a) The following dimensional and density requirements shall apply to developments in the Mixed Use Village Center District (MUV), except as otherwise noted:

Table Two. Dimensional Requirements in the Mixed Use Village Center District

<u>Requirement</u>	
<u>Minimum Lot Size</u>	
<u>Minimum Lot Frontage/ Width</u>	
<u>Minimum Lot Depth</u>	
<u>Minimum Front & Side Yard Setback</u>	
<u>Maximum Front Yard Setback</u>	
<u>Minimum Rear Yard Setback</u>	
Single family detached residential dwelling	
15,000 square feet	
50 feet	
100 feet	
10 feet, except 25 feet from collector streets and from the edge of the MUV zone	
35 feet	
20 feet, except 25 feet from collector streets and from the edge of the MUV zone	
Semi detached dwelling	
10,000 square feet	
35 feet	
100 feet	
10 feet, except 25 feet from collector streets and from the edge of the MUV zone	
35 feet	
20 feet, except 25 feet from collector streets and from the edge of the MUV zone	
Townhouse	
10,000 square feet per structure, plus 2,000 square feet per unit in structure	
20 feet	
100 feet	
10 feet, except 25 feet from collector streets and from the edge of the MUV zone	
35 feet	
20 feet, except 25 feet from collector streets and from the edge of the MUV zone	
Commercial or civic or mixed use building	
30,000 square feet	
60 feet	
140 feet	
10 feet, except 25 feet from collector streets and from the edge of the MUV zone	
25 feet	
20 feet, except 25 feet from collector streets and from the edge of the MUV zone	

Table Three. Additional Dimensional Regulations for All Uses in the Mixed Use Village Center District

Requirement	Maximum or Minimum Standard
Building Height	48 feet maximum
Impervious Coverage, including buildings, parking lots, roads	50% maximum
Open Space Percentage	25% minimum

(b) The Planning Board may, as part of Site Plan Review, allow frontage requirements to be met on private internal access roadways if they find that adequate and permanent access is provided to the lot and that the access roadways are designed to serve as many parcels as possible, to function efficiently to link other internal and external roadways or future roadways, and to minimize curb cuts onto town and state streets to the minimum required for safe access.

E. SITE PLAN REVIEW

(1) Site Plan Review Process

(a) Procedures

An applicant proposing to develop a property under the requirements of this bylaw shall submit a Site Plan Review application to the Planning Board, and shall comply with all applicable provisions of the _____ Zoning Bylaw.

(b) Applicability

No building permit for construction within the Mixed Use Village Center District shall be granted until the provisions of this section have been fulfilled, and Site Plan Review has been completed for the specific use proposed.

(c) Approval Process

All applicants must submit 8 copies of a Site Plan to the Planning Board for review. The Planning Board shall undertake comprehensive review of these plans in accordance with the Site Plan Review regulations in Section ____ of the _____ Zoning Bylaw, including timetables and public hearing requirements therein. Within 7 days after the submission of a final plan, the Planning Board shall refer copies of the Site Plan to the Board of Health, Conservation Commission, Building Inspector, Public Works Department, Historical Commission, Police Department and Fire Department, who shall review the application and submit their recommendations and comments to the Planning Board within 30 days. Before a decision on a Site Plan is given, the Planning Board shall hold a public hearing on the plan, in accordance with Site Plan Review regulations. The Planning Board shall take final action within 90 days after submission of a Site Plan.

(2) Site Plan Contents and Fees

(a) Each Site Plan must contain the following information:

- [1] locations, layouts and sizes of all proposed uses;
- [2] layout of the transportation network for vehicles, transit, pedestrians and bicyclists;
- [3] location, layout and size of private and public open space and open space improvements;
- [4] location of major utility facilities;
- [5] landscaping plans for streetscapes, parks and recreation areas;
- [6] all information required for Special Permit applications in Section _____ of the _____ Zoning Bylaw;
- [7] locations and types of environmentally sensitive areas, including floodplains, wetlands, water supply protection areas, steep slopes, river protection areas, and agricultural lands, and plans to protect or mitigate impacts to these areas;
- [8] Building designs for all commercial or civic buildings prepared by a licensed architect, and landscaping plans prepared by a licensed landscape designer;
- [9] Locations and types of drainage and water quality controls.

(b) Site plans should be prepared at a scale sufficient for the Board to make its decision, but a minimum of 1"=40 feet, and should include topography at two foot contour intervals. A page size reduction is also required. The required fee for submittal of Site Plans is \$____.

(c) The exact form and contents of the application, fees, plans and information shall be as required by the Rules and Regulations of the Planning Board. The Board shall adopt, and may periodically amend, after a public hearing, such Rules and Regulations relating to the procedures and administration of this section and such Rules and Regulations shall be on file at the Planning Department and Town Clerk's office.

(4) Design Standards

In order to receive Planning Board approval, the Planning Board must find that the Site Plan meets the following design criteria:

- (a) commercial uses should be pedestrian-friendly, either clustered together or laid out as small-scale "Main Street" style shops, with buildings brought up to the street and sidewalk, and common, shared parking in the rear;
- (b) all uses should be linked by a network of sidewalks or bicycle paths, which should also connect to the townwide paths or walkways where feasible;
- (c) streets and roads should be lined with street trees, sidewalks and decorative, pedestrian scale lighting;
- (d) commercial and civic uses should be architect-designed, consistent with the _____ Design Guidelines Handbook, recreating the character of a traditional New England village;
- (e) utilities should be underground.

(5) Development Standards

In order to receive Planning Board approval, the Planning Board must find that the Site Plan meets the following Development Standards:

(a) General Standards

Public water and sewer service is required for all development. All utility lines such as telephone, cable television, and electric are to be located underground.

(b) Pedestrian Circulation and Amenities

Provision for safe and convenient pedestrian access shall be incorporated into all Plans. Concrete or brick walkways shall be provided throughout the site. Pedestrian amenities are encouraged, such as: public art; fountain; tables, chairs, or benches; bike racks or lockers;

(c) Parking

(i) Off-street parking for commercial uses shall be sufficient to provide parking for the employees of all proposed uses as well as long-term customer parking. Parking lots shall be discouraged from front yard setback areas, and instead shall be located at the rear of buildings on the interior of lots, whenever possible, and shall be accessed by means of common driveways, preferably from side streets or lanes. Such lots shall be small in size (less than 25 parking spaces), where possible, and interconnected with commercial parking lots on adjacent properties. Shared parking facilities are encouraged.

(ii) In addition to the off-street parking requirements specified above, on-street parking shall be provided to serve customers of commercial uses. The minimum requirement for on-street parking shall be one curbside space for each 500 square feet of gross floor area of commercial uses. Where the minimum on-street parking requirement cannot be completely complied with, the deficient number of spaces shall be provided in off-street parking lots.

(d) Service, Loading, and Refuse Areas

Each commercial, civic or mixed use building shall be provided with an adequate service and/or loading area and:

- (i) shall be designed so that they may be used without blocking or otherwise interfering with the use of through streets, parking facilities, or pedestrian circulation;
- (ii) shall not be located on the sides of buildings that face external streets or internal collector streets;
- (iii) shall be screened from streets, parking areas, and residential lot lines by architectural elements or landscaped buffers.

(e) Landscaping

- (i) Street trees shall be planted within the right-of-ways parallel to the street along all streets. Trees shall have a minimum caliper of 2.5" at the time of planting.
- (ii) Tree spacing shall be determined by species type. Large maturing trees shall be planted a minimum of 40 feet and a maximum of 50 feet on center. Small and medium maturing trees shall be planted a minimum of 10 feet and a maximum of 30 feet on center.
- (iii) All parking areas with 5 or more spaces shall provide effective screening of the parking area from adjacent streets or properties.
- (iv) Parking areas of 10 or more spaces shall provide a minimum of 10 percent of the total parking area as landscaped open space.
- (v) Parking areas of 25 or more spaces shall provide landscaped islands of a minimum width of four feet for the purposes of :

- [1] defining parking lot entrances,
- [2] defining the ends of a portion of the parking aisles,
- [3] defining the location and pattern of primary internal access drives,
- [4] separating parking spaces within long rows of spaces, and
- [5] separating some of the rows of parking spaces from other rows.

(f) Lighting

- (i) Any outdoor lighting fixture newly installed or replaced shall be designed so that it does not produce a strong, direct light beyond the property boundaries
- (ii) All lighting shall follow a uniform lighting system.
- (iii) Lighting fixtures shall be decorative, pedestrian-scaled fixtures.

(g) Appearance/Architectural Design

(i) Architectural design shall be compatible with the character and scale of buildings in the neighborhood and the Town through the use of appropriate building materials, screening, breaks in roof and wall lines and other architectural techniques. Variation in detail, form and siting shall be used to provide visual interest and avoid monotony. Proposed buildings shall relate harmoniously to each other with adequate light, air circulation, and separation between buildings where appropriate. Development shall comply with the standards set forth in the _____ Design Guidelines Manual.

(ii) In making its decision, the Planning Board may consider whether the building design is compatible with the following design guidelines: 1) exterior facades are faced with wood, metal or vinyl clapboards, or stone, or brick; 2) exterior façade treatment is compatible on all four sides; 3) rooflines are peaked.

(h) Stormwater Management

- (i) To the extent practicable, the site shall be designed to manage stormwater on-site through the use of natural and structural methods which conform with MA DEP Stormwater Policy.
- (ii) An erosion control plan which is designed to prevent erosion and sedimentation of waterbodies during construction shall be developed and submitted to the Planning Board.
- (iii) The development shall, at a minimum, be designed to meet the Stormwater Management Policy of the Massachusetts Department of Environmental Protection.

(i) Other Applicable Standards

(i) The proposed use shall meet all standards for noise, dust, off-street loading, vehicular access, signage, parking and other applicable zoning standards in the Town of _____ Zoning Bylaw.

F. DEFINITIONS

ACCESSORY APARTMENT - An independent self-contained dwelling unit consisting of one or more rooms, with private bath and kitchen facilities on a lot containing a single-family dwelling. Only one accessory apartment may be created within a single-family house, and it shall be clearly subordinate to the main unit. In no case shall it be more than twenty-five percent (25%) of the building's total floor area, nor greater than eight hundred (800) square feet, nor have more than one bedroom. The accessory apartment shall be designed so that, to the degree reasonably feasible, the exterior appearance of the entire home remains that of a one-family residence. If a second external entrance is provided for the accessory unit, it cannot be located on the side of the building facing the street, but rather must be located to the side or rear of the structure. Either the principal residence or the apartment must be owner-occupied.

APARTMENT ON SECOND FLOOR OF COMMERCIAL USE - One or more rooms with private bath and kitchen facilities comprising an independent self-contained dwelling on the second floor of a building with commercial use or uses on the ground level.

ELDERLY CONGREGATE HOUSING - A dwelling providing shelter and services for the elderly which may include meals, housekeeping and personal care assistance.

LODGE OR CLUB - A facility to house a group of people organized for a common purpose to pursue common goals, interests or activities and usually characterized by certain membership qualifications, payment of dues and fees, regular meetings, and a constitution and bylaws.

LODGING HOUSE - A facility in which temporary rental sleeping accommodations are provided to transient individuals or families, and in which meals also may be provided as part of the fee.

PERSONAL SERVICES - Establishments engaged in providing services involving the care of a person or their apparel. Personal services includes the following: laundries and dry cleaning, beauty shops, barber shops, shoe repair, funeral services, health clubs, clothing rental, and similar services.

SEMI DETACHED DWELLING - A one-family dwelling attached to one other one-family dwelling by a common vertical wall, each dwelling located on a separate lot, with front facades offset.

TOWNHOUSE - A one-family dwelling in a row of at least three such units in which each unit has its own front and rear access to the outside, no unit is located over another unit, and each unit is separated from any other unit by one or more common fire resistant walls.

UTILITY SERVICES - Establishments engaged in the transmission or distribution of electricity, gas, or steam, or as part of water, sewer and sanitary systems.

G. Miscellaneous Provisions

(1) Conflict with other laws.

All development activities within the Mixed Use Village Center District shall comply with applicable laws, regulations, and standards of the town, except that in the event of a conflict between this bylaw and any such laws and regulations, the provisions of this Bylaw shall control, provided that they are consistent with state and federal law.

(2) Severability.

If any section or provision of this bylaw is found by a court of competent jurisdiction to be invalid, such invalidity shall not affect the validity of any other section or provision of this Bylaw.

MODEL OPEN SPACE RESIDENTIAL DEVELOPMENT (OSRD) BYLAW WITH MAJOR RESIDENTIAL DEVELOPMENT CONTROLS

Prepared by Pioneer Valley Planning Commission

1.0 OPEN SPACE RESIDENTIAL DEVELOPMENT

1.1 Intent

Open Space Residential Development (OSRD) in accordance with this bylaw shall be required for all Major Residential Developments in the [*input town specific zoning districts here*], except not in the Floodplain District. Open Space Residential Development shall mean a residential development in which a variety of housing types are clustered together, adjacent to permanently preserved open space. Open Space Residential Development shall be encouraged within the town, and shall be the preferred method of subdivision development wherever the following purposes would be served.

1.2 Purposes

The purposes of Open Space Residential Development are:

1.21 To allow for greater flexibility and creativity in the design of residential developments, provided that the overall density of the development is no greater than what is normally allowed in the district;

1.22 To encourage the permanent preservation of open space, agricultural lands, forest lands and other natural resources including aquifers, water bodies and wetlands, and historical and archaeological resources;

1.23 To encourage a less sprawling and more efficient form of development that consumes less open land and conforms to existing topography and natural features;

1.24 To maintain the traditional New England rural character and land use pattern in which small villages contrast with open space and farmlands;

1.25 To facilitate the construction of streets, utilities and public services in a more economical and efficient manner;

1.26 To ensure that residential developments are designed to minimize impacts to the natural features of the land, including wetlands, watercourses, forests, prime agricultural land, steep slopes, plants, wildlife, historic sites, scenic views, and rural character;

1.27 To encourage development out of view from the road, and promote alternatives to strip residential development lining roadsides in the town;

1.28 To provide wildlife corridors connecting open spaces, needed by wildlife to ensure their survival.

1.3 Definitions

Basic Maximum Number: The number of units that would be allowed on a site using the standard Zoning Bylaw Provisions and/or Subdivision Rules and Regulations as determined by a Yield Plan.

Common Area: Any land area, other than Open Space, set aside for common ownership as a result of an OSRD, including areas for Common Facilities.

Common Driveway: Vehicular access, which is not a street, but extending from a street, serving as a common vehicular access to more than one (1) but not more than six (6) residential lots built in accordance with the standards set forth in this bylaw. The driveway will lie entirely within the lots being served.

Common Facilities: Built facilities which are commonly owned by the property owners within an OSRD. Common Facilities may be proposed but are not required. They may include streets, rights of way, common buildings, wells, water and waste treatment systems, and recreation facilities.

Conventional Lot: A lot in a standard subdivision based upon the minimum dimensional requirements of the underlying zoning district in which the subject property lies, and the minimum requirements of the Subdivision Regulations.

Conventional Plan: A plan showing the division of property into lots based upon the minimum requirements of the underlying zoning district in which the subject property lies, and the minimum requirements of the Subdivision Regulations.

Existing Resources / Site Analysis Map: A map which identifies, locates, and describes noteworthy features to be designed around through sensitive subdivision layouts, such as vegetation, wetlands, steep slopes, farmland soils, historic or cultural features, threatened or endangered species, unusual geological formations, and scenic views or viewsheds.

Homeowners' Association: A private non-profit organization (corporation, association, or other legal entity) established by the developer to manage, maintain, support, and finance the common facilities and common open space of an OSRD, and to enforce certain covenants and restrictions.

Minor Residential Development: A subdivision which requires approval under M.G.L., Ch. 41 creating 3 or fewer lots or a residential development creating 3 or fewer dwelling units.

Major Residential Development: A subdivision which requires approval under M.G.L., Ch. 41 creating 4 or more lots or a residential development creating 4 or more dwelling units.

[The scale of a Major Residential Development can be changed depending on the typical scale of subdivision design in a given community.]

Open Space: Undeveloped land set aside for common or individual ownership as a result of an OSRD, with conservation easements and other deeded restrictions to ensure that the land will

remain permanently open and undeveloped. A condition of OSRD approval is that open space may not be further subdivided.

Open Space Residential Development (OSRD): A form of residential development where the density of the dwelling units is no greater than would be permitted in the district in where the OSRD is located, but where the lot size and other dimensional standards may be reduced in exchange for the preservation of permanently protected open space, recreational land, forests, or other farmland.

Prime Agricultural Soils: Agricultural land with soils designated as prime or of statewide significance by the U.S. Natural Resources Soil Service soil surveys.

Title V Regulations: 310 CMR 15.000

Wetlands: Areas characterized by vegetation described in Massachusetts General Laws, Chapter 131, Section 40.

Yield Plan: A conceptual plan showing how the parcel could be subdivided in a conventional manner. Determination of the possible number of conventional lots shall be determined by Title V regulations, 310 CMR 15.000, as well as the [Insert Town Name] Board of Health regulations. For purposes of determining the number of OSRD dwelling units, each conceptual conventional lot must meet the requirements of a buildable lot for a single family dwelling unit as defined in the zoning district in which the OSRD is located and meet all other applicable requirements of the Zoning Bylaw and Subdivision Regulations. In no case shall the number of OSRD dwelling units exceed the number of units that would be allowed under a conventional subdivision.

1.4 Applicability

1.41 Any applicant applying for a Major Residential Development in the Town of [Insert Town Name] shall apply for an OSRD under this bylaw. Applicants applying for a Minor Residential Development may apply for an OSRD under this bylaw.

[This model bylaw mandates the use of OSRD for all Major Residential Developments. Each community should assess whether to make this type of development mandatory, encourage its use through incentives, or allow it by right on an equal footing to conventional subdivision. If a community determines that this type of development should be encouraged, incentive language should be added to encourage its use.]

1.42 Segmentation: In determining whether a project is a major residential development, the developer and the Planning Board shall consider the entirety of the development, including (a) any likely future expansion of the project on the subject property or on any property which is contiguous to the subject property or under related ownership or (b) any past, related development on any property which is contiguous to the subject property or any property that was under related ownership with the subject property at the time that this bylaw was adopted. A developer may not phase or segment a project or transfer ownership of contiguous properties to evade, defer or curtail the requirements set forth in this bylaw.

1.43 Uses Permitted in the Developed Area of an OSRD.

- 1) Single Family Detached Dwelling Units;
- 2) Duplex or Two-Family Dwelling Units;
- 3) Multi-Family Dwelling Units provided that no building shall contain greater than four (4) dwelling units, and the percentage of multi-family dwelling units shall not exceed twenty (20) percent of the total number of units in the development;

[This model bylaw allows for a variety of housing types within the OSRD. Each community should assess its housing needs and amend this section based on those needs]

1.44 Uses Permitted in the Open Space of an OSRD.

- 1) Agricultural uses including horticultural, raising of crops, livestock, poultry, nurseries, orchards, hay, and building related to the same;
- 2) Public park or recreation area;
- 3) Woodlots, arboreta, and other similar silvicultural uses;
- 4) Woodland preserve, game preserve, wildlife sanctuary, or other similar conservation use;
- 5) Accessory uses customarily incidental to any permitted use.

1.45 Special Land Features. The Planning Board may request an applicant to use an OSRD subdivision design if the property possesses one or more of the following special features:

- 1) Unfragmented open land as identified as a priority for protection in the town's Open Space and Recreation Plan, Master Plan or the Community Development Plan;
- 2) Agricultural land with soils designated as prime or of statewide significance by the U.S. Natural Resource Conservation Service soil surveys;
- 3) Rare, threatened, or endangered species or exemplary natural communities according to the Massachusetts BioMap Project developed by the Massachusetts Natural Heritage & Endangered Species Program;
- 4) Unique natural, cultural, and/or historical features as identified in the Master Plan or Community Development Plan.

[The language under Section 1.45 above should only be added to the bylaw if the community is not going to mandate OSRD for all Major Residential Developments, but allow the Planning board to decide which form of development to use when the subject property possesses one or more of the specials features highlighted above.]

1.5 Application Requirements

1.51 Pre-application Review

The applicant is very strongly encouraged to request a pre-application review at a regular business meeting of the Planning Board. If one is requested, the Planning Board shall invite the Conservation Commission, Board of Health, Historical Commission, and [INSERT THE NAMES OF ANY OTHER APPROPRIATE BOARDS]. The purpose of a pre-application review is to minimize the applicant's costs of engineering and other technical experts, and to commence discussions with the Planning

Board at the earliest possible stage in the development. At the pre-application review, the applicant may outline the proposed development including both conventional and OSRD models, seek preliminary feedback from the Planning Board and/or its technical experts, and set a timetable for submittal of a formal application.

1.52 Site Visit

Applicants are encouraged to request a site visit by the Planning Board and/or its agents in order to facilitate pre-application review of the proposed development. If one is requested, the Planning Board shall invite the Conservation Commission, Board of Health, Historical Commission, and [INSERT THE NAMES OF ANY OTHER APPROPRIATE BOARDS]

1.53 Site Context Map

A Site Context Map shall be submitted / presented to the Planning board during the pre-application review. This map shall illustrate the parcel in connection to its surrounding neighborhood. Based upon existing data sources and field inspections, it shall show various kinds of major natural resource areas or features that cross parcel lines or that are located on adjoining lands. This map enables the Planning Board to understand the site in relation to what is occurring on adjacent properties.

1.54 Existing Resources / Site Analysis Map

The following shall be submitted / presented to the Planning Board during the pre-application review at a regularly scheduled meeting for the purpose of assessing the impact or implications of the development and shall be used in the preparation of a preliminary design plan.

- 1) Boundaries of wetlands defined by Massachusetts Wetlands Law CMR-140 and certified by a licensed wetlands professional engineer;
- 2) Location and limits of soils types, particularly Prime Agricultural Soils, consistent with the soils classification maps prepared by the US Department of Agriculture Natural Resource Conservation Service;
- 3) Areas where the depth of natural soil to bedrock is four (4) feet or less;
- 4) The extent of any Interim Wellhead Protection Areas and Recharge Areas;
- 5) Topographic contours at intervals of ten (10) feet or less;
- 6) Delineation of slopes of twenty-five percent (25%) or greater;
- 7) The location of cultural and historic features including, but not limited to, stone walls, archaeological and historic sites and structures, and significant and rare vegetation;
- 9) Areas delineated as "BioMap Core Habitat" or "Supporting Natural Landscape" on the Massachusetts BioMap Project developed by the Massachusetts Natural Heritage & Endangered Species Program;

1.55 Preliminary Subdivision Plan Submission

- 1) A Preliminary Subdivision Plan shall be submitted in conformance with the Town of [Insert Town Name] Subdivision Regulations. Applicants shall submit the preliminary design to the Planning Board for review prior to development of a

Definitive Plan. Approval of the Preliminary Plan by the Planning Board will be based on the review criteria standards set forth in Section 1.55(2).

[For those communities that want to encourage this form of development and give the Planning Board the discretion to choose between OSRD and conventional development, applicants should submit both a conventional plan and an OSRD plan in order for the Planning Board to make a determination on a case by case basis on the type of development to be used.]

2) Review of Preliminary Plan. The Planning Board shall review the Preliminary Subdivision Plan in accordance with the criteria contained in this Bylaw and with other applicable regulations of the Town of [Insert Town Name]. The review shall informally advise the applicant to the extent to which the proposed subdivision or land development conforms to the relevant standards of this Bylaw and may suggest possible plan modifications that would increase its degree of conformance. The review shall include, but is not limited to:

- (a) The location of all areas proposed for land disturbance (streets, foundations, yards, septic disposal systems, storm water management areas, etc.) with respect to notable features of natural or culturally significance as identified on the applicants Existing Resources / Site Analysis Map;
- (b) The potential for street connections with existing streets, other proposed streets, or potential developments of adjoining parcels;
- (c) The location of proposed access points along existing road networks;
- (d) The proposed building density and areas of impervious surface.

1.56 Definitive Subdivision Plan Submission

A final Definitive Development Plan shall be submitted in conformance with this section and the Town of [Insert Town Name] Subdivision Regulations as applicable. Such Plans shall adequately address standards delineated in this bylaw. In addition, the Definitive Development Plan shall address issues that have been previously discussed in the Existing Resources / Site Analysis Map.

1.6 **Subdivision Approval Procedures**

1.61 Applicants for Open Space development projects shall follow all procedures specified in the Town of [Insert Town Name] Subdivision Regulations.

1.62 The Planning Board shall submit copies of the preliminary and final subdivision plans to the Board of Health, Conservation Commission, Highway Department, Chief of Police, Fire Chief [INSERT THE NAMES OF ANY OTHER APPROPRIATE BOARDS] who shall review the application and submit their recommendations and comments to the Planning Board concerning :

- 1) The completeness and adequacy of the data and methodology used by the applicant to determine the impacts of the proposed development;
- 2) The effects of the projected impacts of the proposed development; and
- 3) Recommended conditions or remedial measures to accommodate or mitigate the expected impacts of the proposed development.

Failure of Boards to make recommendations within 30 days of the referral of the application shall be deemed to be lack of opposition.

1.7 Criteria for Evaluation

No approval for an OSRD shall be given unless the application complies with the following criteria:

1.71 The proposed development shall be compatible with respect to the objectives and policy recommendations of the Open Space and Recreation Plan and Community Development Plan or Master Plan;

1.72 The proposed development shall be consistent with the intent and purposes of this bylaw;

1.73 All dwellings shall, to the greatest extent possible, be located out of view from any road unless valuable natural resources or farmland located to the rear of the property render building in view of the road more desirable;

1.74 The portion of a parcel placed in open space shall, to the greatest extent possible, be that which is most valuable or productive as a natural resource, wildlife habitat, farmland, or forestry land;

1.75 The OSRD shall result in the creation of less curb cuts or vehicular access points to a public way than would reasonably be expected to occur under Standard ANR or Subdivision Development.

1.76 Streets shall be designed and located in such a manner as to maintain and preserve natural topography, significant landmarks, and trees; to minimize cut and fill; and to preserve and enhance views and vistas on or off the subject parcel.

1.77 The preferred location for the required protected open space in an OSRD shall be, to the extent feasible, in view of town roads and linked to any existing protected lands on adjacent parcels.

1.8 Dimensional Standards

1.81 Allowed Density

1) The maximum number of dwelling units for an OSRD shall be determined by use of a yield plan, which is a conceptual plan showing how the parcel could be subdivided in a conventional manner. Determination of the possible number of conventional lots shall be determined by Title V regulations, 310 CMR 15.000, as well as the [Insert Town Name] Board of Health regulations. For purposes of determining the number of OSRD dwelling units, each conceptual conventional lot must meet the requirements of a buildable lot for a single family dwelling unit as

defined in the zoning district in which the OSRD is located and meet all other applicable requirements of the Zoning Bylaw and Subdivision Regulations. In no case shall the number of OSRD dwelling units exceed the number of units that would be allowed under a conventional subdivision.

2) There shall be no further subdivision of an approved OSRD.

1.82 Flexible Dimensional Controls

1) Frontage

(a) The minimum frontage for a tract on which an OSRD is proposed (whether or not by subdivision) shall equal or exceed 60 feet for each lot created in the OSRD, as shown in the Table of OSRD Dimensional Requirements (Table 1). [For example, to create a six-lot OSRD in a typical Residential District, the original parcel must have a minimum of 360 foot contiguous frontage along a public way.]

(b) In the interest of flexibility and creative site designs, there shall be no minimum frontage requirement for individual lots on new subdivision streets within an OSRD, with the exception described in Section 1.9.2(c) below.

(c) For each lot developed along a public street existing at the time of the application, the minimum frontage, minimum lot size and all other dimensional controls shall be those which are required in the underlying zoning district in which the OSRD is located.

2) Lot Size

(a) The minimum lot size for individual lots without town water and sewer within an OSRD shall be 25,000 square feet.

(b) The minimum lot size for individual lots with town water and sewer within an OSRD shall be 10,000 square feet.

[Minimum lot sizes for individual lots within an OSRD without public water and sewer should be based on whether the community will allow community systems to be built within the Open Space of an OSRD. Minimum lot sizes for individual lots within an OSRD with public water and sewer should be based upon existing lots sizes in the underlying zoning districts in which OSRD is mandated or allowed.]

3) Setbacks

(a) There shall be a minimum setback of fifty (50) feet along all property boundaries of the overall tract for all structures, including accessory structures, parking areas, driveways and internal streets. Entrance streets connecting the OSRD to the external street system may cross the setback area.

(b) There shall be no minimum front yard, side yard, or rear yard setback requirements for individual lots within an OSRD.

(c) There shall be a minimum of twenty (20) feet between buildings in an OSRD.

4) Required Open Space

The minimum open space requirement for an OSRD shall be fifty (50) percent of the total tract area of which no more than twenty-five (25) percent may consist of wetlands, surface waters, flood plains, or areas with unaltered slopes greater than twenty-five (25) percent provided, however, that the applicant may include a greater percentage of wetlands in such open space upon a demonstration that such inclusion promotes the purposes of this bylaw.

[The minimum percentage of open space required by the Planning Board may vary from one town to another but should be based on a careful assessment of developable lands. The minimum requirement could be elevated beyond the suggested fifty percent (50%) if the town identifies that few if any of its developable lands are significantly restrained by existing wetland resources. Likewise, if there are many significant parcels with the majority of their land in resource areas, it would be prudent to reduce the minimum open space set-aside to allow for a more flexible and equitable approach.]

TABLE 1 - TABLE OF OSRD DIMENSIONAL REQUIREMENTS

Development Type
Zoning District
Minimum Lot Size in Sq. Ft. (per Dwelling Unit)
Average Lot Size in sq. ft. (per Dwelling Unit)¹
Minimum Required Open Space
(% of total parcel)
Minimum Designated Nitrogen Credit Land
Minimum Lot Frontage (continuous in ft.)
Minimum Frontage for Total Devel. Parcel (ft.)²
Minimum Front Yard (ft.)
Minimum Side Yard (ft.)
Minimum Rear Yard (ft.)
Maximum % Building Coverage of Land including Accessory Buildings
Maximum Building Height (ft.)

Standard Subdivision or ANR Development

Rural-Residential

60,000

N/A

None

None

[Input town specific data]

[Input town specific data]

[Input town specific data]

[Input town specific data]

[Input town specific data]

[Input town specific data]

[Input town specific data]

Residential-Neighborhood

40,000

N/A

None

None

[Input town specific data]

[Input town specific data]

[Input town specific data]

[Input town specific data]

[Input town specific data]

[Input town specific data]

[Input town specific data]

Residential-Village

30,000

N/A

None

None

[Input town specific data]

[Input town specific data]

[Input town specific data]

[Input town specific data]

[Input town specific data]

[Input town specific data]

[Input town specific data]

OSRD Development

Rural-Residential

- Town Water/Sewer
- Individual Systems

15,000

25,000

20,000

30,000

50%

None

40,000 sf per lot, including lot

None

60 per lot

None

None

None

25%

35

Residential-Neighborhood

- Town Water/Sewer
- Individual Systems

10,000

15,000

15,000

20,000

50%

None

40,000 sf per lot, including lot

None

60 per lot

None

None

None

25%

35

Residential-Village
- Town Water/Sewer
Individual Systems

8,000

10,000

10,000

15,000

50%

None

40,000 sf per lot, including lot

None

60 per lot

None

None

None

25%

35

¹ Calculations for average lot areas shall be computed by adding the lot sizes for all lots in the OSRD, plus common open space, as described in Section 1.12, and dividing by the total number of lots.

² The frontage of the total tract from which an OSRD is created shall equal or exceed at least 60 feet per developable lot created.

1.83 Landscaped Buffers

- 1) A landscaped buffer no less than fifty (50) feet deep shall be provided where appropriate to screen the development from public streets and adjacent properties. Entrance streets connecting the OSRD to the external street system may cross the buffer area. The natural vegetation shall be retained whenever possible. If the natural vegetation is not sufficient to serve as an effective visual screen, landscaping shall be required to provide such a screen. Landscaping may include berms and/or decorative fencing of an appropriate height.
- 2) This buffer area shall be part of the common area, and shall be subject to the same restrictions that apply to that area.
- 3) Frontage lands on streets existing at the time of application shall be preserved as buffers to the maximum extent possible in addition to all required setbacks

1.84 Common Driveways

The Planning Board may authorize the use of common driveways to provide access to no more than six (6) individual lots of land provided that the following conditions are met:

- 1) A common driveway shall have a minimum roadway width of sixteen (16) feet to a maximum of twenty (20) feet, in addition to an easement of sufficient width to assure proper drainage and maintenance.
- 2) A common driveway shall not exceed 400 feet in length.
- 3) The slope or grade of a common drive shall in no place exceed 10% if unpaved or 12% if paved.
- 4) The common drive shall intersect a public way at an angle of not less than 80 degrees.
- 5) Alignment and sight distances should be sufficient to support a design speed of 15 mph.
- 6) The common driveway shall be capable of providing access for emergency vehicles with either a "hammer head", "T" or "Y" configuration in lieu of a cul-de-sac for reverse direction in a single movement.
- 7) The common driveway shall lie entirely within the lots being served.

- 8) The common driveway, at its intersection with the street, must provide a leveling-off area with a slope no greater than 1% for the first 20 feet and a slope no greater than 5% for the next 30 feet.
- 9) There shall be a minimum of 500 feet between the entrances of any two common driveways onto any road.
- 10) The common driveway shall be constructed of a minimum 15" gravel base, with an oil and stone top layer of 1½" consisting of three successive layers of ¾" crushed traprock stone, ½" crushed traprock stone and ¼" crushed traprock stone, with a crown sufficient for drainage. Drainage shall be by sheet runoff to drainage swales adequate to dispose of surface runoff. Culverts will be installed if deemed necessary by the Planning Board.
- 11) A common driveway shall have adequate sight distance at its intersection with a public or private road, and shall not create traffic safety hazards to its users or the public.
- 12) The common driveway shall access the property over the frontage of at least one of the lots being served by the driveway.
- 13) The common driveway shall provide the only vehicular egress/access to the lots being serviced by it, and this shall be so stated in the deeds to the subject lots.
- 14) Permanent signs, sufficiently readable from the road to serve the purpose of emergency identification, indicating the street number address assigned to each lot served by the common driveway shall be installed within ten (10) feet of the intersection of the common driveway with the street, as well as within ten (10) feet of the intersection of an individual lot driveway with the common driveway. This requirement is in addition to those for individual homes.
- 15) Common driveway design shall to the greatest extent possible minimize adverse impact to wetlands, farmland, or other natural resources; allow reasonable, safe, and less environmentally damaging access to lots characterized by slopes or ledges; and result in the preservation of rural character through reduction of number of access ways; and retention of existing vegetation and topography.
- 16) Frontage along the length of a common driveway shall in no way be used to satisfy frontage requirements as specified in the Zoning Bylaw.
- 17) No common driveway, approved under this bylaw, shall be accepted by the town as a public road, nor shall the town under any circumstances be held liable for construction, reconstruction, maintenance or snow removal on any common driveway.

These standards may be waived when, in the opinion of the Planning Board, such action is in the public interest and not inconsistent with the purpose and intent of the Zoning Bylaw.

[This model bylaw encourages the use of common driveways to allow greater flexibility in the design of an OSRD. Communities that have existing common driveway regulations should reference the appropriate bylaw in place of these specific provisions. Communities should consider whether to allow common driveways for all developments as opposed to only OSRD, in which case such regulations should be put forth as a zoning amendment to apply to all development in the community.]

1.9 Utility Requirements

1.91 On-site Sewage Disposal

The following standards shall apply to developments requiring on-site sewage disposal:

- 1) The applicant shall submit a septic system design prepared by a certified engineer and approved by the Board of Health and a plan illustrating the location of water supply wells with the application.
- 2) All Open Space Residential Developments must meet the minimum state Environmental Code (Title V) requirements for minimum setbacks between private water supply wells and septic tanks or soil absorption systems (310 CMR 15.211).
- 3) All Open Space Residential Developments must meet the minimum state Environmental Code (Title V) requirements for nitrogen loading limitations (310 CMR 15.214-15.217). For OSRDs with individual lot sizes less than 40,000 square feet, applicants must meet the following standards:

- (a) Applicants must designate, on a plan, specific areas of common open space as "nitrogen credit land", based on the following equation:

$(40,000 \text{ square feet} \times \text{number of OSRD lots}) - (\text{total square feet in proposed OSRD lots}) = \text{square feet of required nitrogen credit land in common open space}$

- (b) Nitrogen credit land must meet DEP qualifications contained in "Guidelines for Title 5 Aggregation of Flows and Nitrogen Loading 310CMR15.216" including, but not limited, to the following qualifications:

- Must be restricted to prohibit man-made sources of nitrogen, including sewage discharge, nitrogen-based fertilizer or raising and grazing of livestock;
- Must be restricted to prohibit artificially rendered imperviousness (i.e. paved streets, paved parking lots, buildings, structures, etc.);
- Not within a Velocity Zone or Regulatory Floodway identified by FEMA;
- Not under surface water;
- Not already being used as nitrogen credit land.

- (c) All designated nitrogen credit land must be permanently restricted from further development under a "Grant of Title 5 Nitrogen Loading Restriction and Easement on Nitrogen Credit Land".

After approval of the Flexible Residential Open Space Final Subdivision Plan, applicants must apply to the Board of Health and the Mass. Department of Environmental Protection (DEP) for an aggregate determination of nitrogen loading under 310 CMR 15.216.

- 4) It is required that septic tanks be installed on individually-owned lots. Nitrogen Credit Land must be at least 100 feet from all private wells.

1.92 Water Supply

In order to meet state Title V requirements for separation distances between drinking water wells and septic systems, private drinking water supply wells may be located in

the common open space for an Open Space Residential Development, provided that the provisions of Section 1.13 for a homeowners' association are met.

1.93 Stormwater Management

The Planning Board shall encourage the use of non-structural stormwater management techniques and other drainage systems that reduce impervious surfaces and enable infiltration where appropriate.

Stormwater management systems serving the OSRD subdivision may be located within the required common open space. Surface systems, such as retention and detention ponds, shall not qualify towards the minimum open space requirement.

1.10 Common Open Space

1.101 Common Open Space Requirements

- 1) A minimum of 50% of the total development parcel must be permanently protected as common open space. At least 70% of the common open space shall be retained in contiguous areas, unless approved by the Planning Board.
- 2) Watercourses, lakes, ponds, wetlands, floodplains, and steep slopes over 25% may be included in common open space calculations not to exceed twenty-five (25) percent.
- 3) The Planning Board may permit up to three (3) percent of the open space area to be paved or built upon for structures accessory to the dedicated use of open space (i.e. pedestrian walks, bicycle paths, playgrounds, farm-related structures).
- 4) All recreational facilities, common areas, and common open space shall be reasonably accessible to all residents of the development.

1.102 Land Protection Methods for Common Open Space

- 1) All land not devoted to buildings, lots, roads and other development shall be permanently protected as common open space for recreation, conservation, forestry or agricultural uses which preserve the land in its natural condition.
- 2) The land shall be owned by a non-profit land trust or conservation organization, homeowners' association, or individual, and a permanent conservation easement or deed restriction must be conveyed to the Town, with Town approval, or to a non-profit trust or conservation organization whose principal purpose is to conserve farmland or open space.
- 3) Further subdivision of common open land or its use other than recreation, conservation, forest or agriculture, except for easements for underground utilities or drinking water supply wells, shall be prohibited.

1.11 **Additional Requirements**

1.111 Trails. Where there is an existing local or regional trail network on land adjacent to a proposed OSRD, the developer of the OSRD may be required to connect to the existing trail network with trail corridors through the site, and shall grant the general public access to these trails in perpetuity. The minimum nature of public access required is pedestrian traffic. The instrument granting access, acceptable to the planning board, shall restrict the use of motorized vehicles where appropriate.

1.112 Open Space. Where there is an existing network of open space or large tracts of unfragmented open space on land adjacent to a proposed OSRD, the developer of the OSRD may be required to connect to the existing open space where feasible with the required open space set-aside, and shall grant the general public access to this open space in perpetuity. The minimum nature of public access required is pedestrian traffic. The instrument granting access, acceptable to the planning board, shall restrict the use of motorized vehicles where appropriate.

1.113 Forest Management. On sites where the open space to be preserved is mostly mature forest (70% or greater), the developer of a OSRD may be required to submit a Forest Management Plan developed by a MA Licensed Forester and approved by the Planning Board.

1.114 View Shed and Viewpoints. The Planning Board may require the development to protect in perpetuity view sheds and associated viewpoints, which are lands or corridors of land that contribute to the visual landscape of the Town, including items such as open fields containing stone walls. View sheds and viewpoints include, but are not limited to, those identified in the most current version of the [Insert Town Name] Community Development Plan. The Planning Board may make use of a site visit to determine potential view sheds and viewpoints to be preserved.

1.12 Homeowners' Association

1.121 In the event that ownership of the land will remain with the homeowners in the Open Space Residential Development, a non-profit, homeowners' association shall be established, requiring membership of each lot owner in the Open Space Residential Development.

1.122 The association shall be responsible for the permanent maintenance of all common lands, common open space, recreational and thoroughfare facilities (not including drinking water wells), except where such responsibility is assumed by another owner of the common land (land trust or conservation organization). If any drinking water well is located on common open space, the homeowner/s shall own the well and be responsible for any maintenance or related costs associated with their well.

1.123 A homeowners' association agreement or covenant will guarantee continuing maintenance of such common utilities, land and facilities, and assessing each lot a share of maintenance expenses shall be submitted with the final subdivision application. Where no homeowners' association is proposed, an alternative plan shall be submitted with the final subdivision application.

1.124 Such agreement shall be subject to the review and approval of Town Counsel and the Planning Board, and shall be recorded in the Hampden County Registry of Deeds. Such agreements or covenants shall provide that in the event that the association fails to maintain the common open land in reasonable order and condition in accordance with the agreement, the town may, after notice to the association and public hearing, enter upon such land and maintain it in order to preserve taxable values of the properties within the development and to prevent the common land from becoming a public nuisance. The covenants shall also provide that the cost of such maintenance by the town shall be assessed equally against each of the properties within the development.

1.13 Conflict with Other Laws

The provisions of this bylaw shall be considered supplemental of existing zoning bylaws. To the extent that a conflict exists between this bylaw and others, the more restrictive bylaw, or provisions therein, shall apply.

1.14 Severability

If any provision of this bylaw is held invalid by a court of competent jurisdiction, the remainder of the bylaw shall not be affected thereby. The invalidity of any section or sections or parts of any section or sections of this bylaw shall not affect the validity of the remainder of the Town's Zoning Bylaw.

Optional Sections of an OSRD Bylaw

1.X Increases in Permissible Density.

The Planning Board may award a density bonus to increase the number of dwelling units beyond the Basic Maximum Number for an OSRD Plan. The density bonus for the OSRD shall not, in the aggregate, exceed twenty percent (20%) of the Basic Maximum Number. Computations shall be rounded down to the next whole number. A density bonus may be awarded in the following circumstances:

- A. For each additional ten percent (10%) of the site (over and above the required 50%) set aside as open space, a bonus of five percent (5%) of the Basic Maximum Number may be awarded. Calculations shall be rounded down to the nearest integer when determining this bonus.
- B. For every two (2) dwelling units restricted in perpetuity to occupancy by Moderate-Income Households, or for every one (1) dwelling unit restricted in perpetuity to occupancy by Low-Income Households, one (1) market rate dwelling unit may be added to the Basic Maximum Number. Affordable housing units may be used toward density bonuses only if they can be counted toward the Town's affordable housing inventory as determined by the Massachusetts Department of Housing and Community Development. The applicant shall provide documentation demonstrating that the unit(s) shall count toward the community's affordable housing inventory to the satisfaction of the Planning Board.
- C. For every historic structure preserved and subject to a historic preservation restriction, one (1) dwelling unit may be added to the Basic Maximum Number.

1.X Affordable Housing

1.X1 Definitions

Affordable Housing Unit: A dwelling unit with an Affordability Deed Restriction available at a cost of no more than 30% of gross household income of households at or below 80% of the Area Median Income as reported by the U.S. Department of Housing and Urban Development, including units listed under M.G.L. Chapter 40B Sections 20-24.

Affordable Deed Restriction: A covenant agreement, deed restriction, or other legal instrument, acceptable in form and substance to the Town of [Insert Town Name], that effectively restricts occupancy of an affordable housing unit to a qualified purchaser or qualified renter, and which provides for administration, monitoring and enforcement of the restriction during the term of affordability. An affordable housing restriction shall run with the land in perpetuity or for the maximum period of time allowed by law, so as to be binding on and enforceable against any person claiming an interest in the property. An affordable housing restriction shall be enforceable under the provisions of M.G.L. Chapter 184, Section 32, and be approved by the Department of Housing and Community Development.

Low- or Moderate-Income Household: A household with income at or below 80% of area median income, adjusted for household size, for the metropolitan or non-metropolitan area that includes the Town of [Insert Town Name] as determined annually by the United States Department of Housing and Urban Development (HUD).

Maximum Affordable Purchase Price or Rent: A selling price or monthly rent, exclusive of utilities, that meets the maximum purchase price or rent guidelines of the Massachusetts Department of Housing and Community Development for inclusion on the Subsidized Housing Inventory.

Median Income: The household income determined annually by the US Department of Housing and Urban Development for [Insert town name] or the region that includes [Insert town name].

Qualified Purchaser - A low- or moderate-income household that purchases and occupies an affordable housing unit as its principal residence.

Qualified Renter: A low or moderate-income household that rents and occupies an affordable housing unit as its principal residence.

Subsidized Housing Inventory: The Department of Housing and Community Development Chapter 40B Subsidized Housing Inventory as provided in 760 CMR 31.04.

1.X2 Number of Units to be Provided - All developments of 10 units or more which are subject to this Bylaw shall be required to set aside a minimum of ten percent (10%) of the total number of dwelling units provided as affordable housing.

1.X3 The affordable units to be provided shall be equivalent in size, quality, and characteristics to the other units in the development. The units shall not be grouped together; they shall be distributed among all units.

1.X4 Preservation of Affordability; Restrictions on Resale

(1) An affordable housing unit created in accordance with this Bylaw shall be subject to an affordable housing restriction or regulatory agreement that contains limitations on use, resale and rents. The affordable housing restriction or regulatory agreement shall meet the requirements of the Town and the Local Initiative Program or other programs qualifying dwelling units for inclusion on the Subsidized Housing Inventory, and shall be in force for the maximum period allowed by law.

(2) The affordable housing restriction or regulatory agreement shall be enforceable under the provisions of M.G.L. c.184.

(3) The Planning Board shall require that the applicant comply with the mandatory provision of affordable housing units and accompanying restrictions on affordability, including the execution of the affordable housing restriction or regulatory agreement.

All documents necessary to ensure compliance with this Bylaw shall be subject to the review and approval of the Planning Board and review as to form by Town Counsel. Such documents shall be executed and recorded prior to and as a condition of the issuance of any Certificate of Occupancy unless later recording is permitted by the Planning Board for good reason.

Proposed Addition to the Subdivision Regulations

Fire Suppression

The Fire Chief shall determine on a case by case basis whether the developer of a proposed subdivision shall be required to install:

- A. Fire Suppression Cistern(s) for fire suppression within the proposed subdivision. The appropriate size and location of the fire cistern(s) shall be determined by the Fire Chief; or
- B. Residential Fire Suppression Systems for all residential units within the proposed subdivision; or
- C. Both Fire Suppression Cistern(s) for fire suppression within the proposed subdivision and Residential Fire Suppression Systems for all residential units within the proposed subdivision.

The final determination on the type of fire suppression system(s) to be utilized within a proposed subdivision shall be determined by the Fire Chief.

MODEL SHARED PARKING BYLAW

Section ____: Location of Parking

All required parking shall be provided on the same lot with the principal use it is to serve or, in Commercial, Business and Industrial Districts, on a lot that is in the same ownership as, and located within, three hundred (300) feet of the principal use, except as provided in ____ and ____ of this Section.

Parking required for two or more buildings or uses may be provided on the same lot as the principal use or, in Business and Industrial Districts, on a lot under the same ownership in combined facilities where it is evident that such facilities will continue to be available for the several buildings or uses, except as provided in ____ and ____ of this Section.

Section ____: Shared Parking

In Commercial, Business and Industrial Districts; and in Residential Districts except for residential and multi-family uses, Home Occupations and Home Based Businesses; the Planning Board may issue a Special Permit permitting the use of parking spaces for more than one use when they find that the applicant has submitted an adequate Parking Management Plan (including supportive documentation) showing that:

- a. the peak parking demand generated by the uses occur at different times, and
- b. there will be adequate parking for the combined uses at all times

Section ____: Off-Site Parking.

In Commercial, Business and Industrial Districts; and in Residential Districts except for residential and multi-family uses, Home Occupations and Home Based Businesses; The Planning Board may issue a Special Permit permitting the providing of required parking for a use on a lot that is not under the same ownership when they find that the applicant has submitted an adequate Parking Management Plan (including supportive documentation) showing that:

- a. for uses in a Commercial, Business and Industrial District that the parking spaces are also located in a Commercial, Business and Industrial District, and for uses in a Residential District that the parking spaces are also located in a Residential District, unless the parking involves a municipal facility or property.
- b. the parking is suitably located in the neighborhood in which it is proposed
- c. the parking has adequate paving, landscaping, screening, lighting, curbing or wheel stops, and provides for safe vehicular and pedestrian circulation on the site and at all curb-cuts with abutting streets

- d. the applicant has submitted sufficient legal documentation ensuring the provision of the parking on the parcel.

It should be noted that said Special Permit is contingent upon the continued ability to legally use the off-site facility and that said Special Permit, and any uses dependent on it, shall terminate upon the termination of any legal agreements permitting the use of said off-site parking. The use for which the parking was being provided at the off-site facility shall cease upon the termination of said Special permit until such time as adequate parking is provided in accordance with the requirements of the Zoning Ordinance.

Section ____: Downtown Parking Fund

The Planning Board may issue a Special Permit requiring a payment of \$_____ per required parking space into a municipal fund dedicated to addressing the parking demand in the _____ District where they find that:

1. the parking required cannot be physically provided to serve the use, and;
2. the payment into the fund would ultimately lead towards addressing the parking demand generated by the use.

These funds are to be used solely for expenses (land acquisition, design engineering services and construction costs, but not maintenance costs) related to adding parking spaces, improving the utilization of existing parking spaces, or reducing the need for new parking to serve the _____ District.

In an effort to encourage the restoration of building heights in the downtown district which are more uniform and consistent with the scale of development which has historically existed, the addition of a second story to a single story building existing on the date of adoption of this bylaw shall not require the provision of additional parking or a payment into the dedicated municipal parking fund as required by this section.

Model Planned BUSINESS AND INDUSTRIAL DEVELOPMENT Bylaw

Prepared by the Pioneer Valley Planning Commission

1.0 Purposes

1.1 The purposes of the Planned Industrial Development regulations in this Section shall include the following:

- a. To attract environmentally acceptable light industries;
- b. To encourage diversity in the community tax base through appropriate industrial development;
- c. To minimize potential adverse environmental conditions, such as pollution and noise, associated with industrial development.

1.2 The purposes of the Planned Business Development regulations in this Section shall include the following:

- a. To encourage business development which is clustered to reduce adverse traffic, aesthetic, and environmental impacts on the community;
- b. to encourage diversity in the community tax base and clustered commercial development which is consistent with (town's/city's) character.

2.0 Applicability

2.1 Planned Industrial Developments shall be permitted in the Industrial District only upon issuance of a Special Permit with Site Plan Approval from the Planning Board.

2.2 Planned Business Development shall be permitted in the Commercial or Industrial Districts only upon issuance of a Special Permit with Site Plan Approval from the Planning Board.

3.0 Definitions

Planned Industrial Development shall mean a development constructed on a lot or lots under single ownership at the time of application, planned and developed as an integral unit, and consisting primarily of light industrial uses.

Planned Business Development shall mean a development constructed on a lot or lots under single ownership at the time of application, planned and developed as an integral unit, consisting primarily of retail or service uses.

4.0 Uses Permitted by Special Permit With Site Plan Approval

4.1 A Planned Industrial Development shall encourage a wide range of manufacturing, research and other uses which can be built and operated with a minimum of noise, smoke, odor and other nuisances and which do not create adverse impacts upon adjacent uses.

4.2 Uses permitted by Special Permit with Site Plan Approval in a Planned Industrial Development shall be limited only to the following:

a. Industry, Utility, and Communication:

- i. Telegraph, telephone, and express offices, radio, television, and film broadcasting firms.
- ii. Warehouse for storage, production, assembly and marketing of wholesale goods.
- iii. Wholesale trade and distribution.
- iv. Open storage of raw materials, finished goods or construction equipment and structures for storing such equipment, provided outside storage areas shall be screened from outside view. Not to include junkyards or open storage of abandoned automobiles or other vehicles.
- v. Enclosed manufacturing, processing, fabrication, packaging, assembly storage.
- vi. Construction industry and suppliers.
- vii. Research offices or establishments for research and development activities.
- viii. Distributorships dealing with commercial and industrial supplies.
- ix. The processing of grain, vegetables, or dairy products for human consumption.
- x. Repair service establishments.
- xi. Accessory structures and uses customarily incidental to the above permitted uses.

b. Offices and Services to Serve the Convenience Needs of Persons Working in the District:

- i. Miscellaneous professional and business offices and services including medical, legal, finance, and other professional services.
- ii. Restaurants or other places servicing food or beverages, except those having the character of a drive-in eating establishment. A drive-in eating establishment is a

business establishment where food is usually served to or consumed by patrons while they are seated in parked cars.

iii. Automobile service stations.

c. Other Permitted Uses:

i. Agricultural uses including but not limited to nurseries, greenhouses, woodlots, truck gardens and similar uses.

ii. Recreational uses, parks, marinas, picnic areas, and similar uses.

iii. Emergency services, including but not limited to, police stations, fire stations, rescue squad, and ambulance service.

iv. Public and private non-profit educational institutions.

v. Structures used for religious purposes.

vi. Town equipment garage.

vii. Medical center including accessory medical research and associated facilities.

viii. Trade or industrial schools.

4.3 Permitted uses within a Planned Business Development may include any retail or service uses which are allowed by Special Permit with Site Plan Approval as noted in Table of Use Regulations.

5.0 Dimensional Regulations

5.1 All uses shall be in conformity with the dimensional and density regulations set forth in Table of Area Regulations.

5.2 Additional Planned Industrial Development Dimensional Regulations: 75-foot buffer is required along side and rear lots abutting any residential or commercial property.

6.0 General Regulations

6.1 The tract shall be in single or consolidated ownership at the time of application.

6.2 A site plan shall be presented for the entire tract, consistent with the requirements in this section, and Section _____ Special Permits. In addition, subdivision approval by the Planning Board shall be required where a development constitutes a subdivision as per the Subdivision Control Law.

6.3 Uses shall be contained in one continuous building except that groupings of buildings may be allowed by the Board where such groupings are consistent with the safety of the users of the development and are further consistent with the overall intent of this section.

6.4 The development shall be adequately served by a water system adequate in terms of fire protection and domestic use and the designated leaching area for on-lot septic systems meets with the minimum requirements of the State Sanitary Code Article XI and an additional area can be served for expansion which can also meet the same requirements.

6.5 All industrial uses must be completely contained within buildings.

7.0 Incentives for Planned Business or Industrial Development

7.1 Business uses may be clustered or grouped together. If this option is selected the following standards are required:

- a. Individual lot sizes shall not be reduced more than ten (10) percent below lot sizes normally required in Table 2, Area Regulations in the Industrial District.
- b. The total number of establishments in the development shall not exceed the number of establishments which could be developed under normal application requirements of the Planned Industrial District.

7.2 The maximum building coverage may be increased above the maximum permitted in the Table of Height and Bulk Regulations, but shall not exceed 40%.

7.3 Parking requirements may be reduced below the requirements contained in the Table of Off-Street Parking Standards, however, any reduction in parking space requirements shall not exceed more than 10% of those required under normal application of requirements for the particular uses proposed. The development shall be served by one common parking area and by common exit and entrance areas.

8.0 Performance Standards

8.1 All planned industrial or business developments must demonstrate compliance with the following performance standards:

All uses must comply with the Commercial Development Performance Standards in Section 9.0.

8.2 In addition, all planned industrial developments must demonstrate compliance with the following additional performance standards:

a. Noise

- i. Excessive noise at unreasonable hours shall be muffled so as not to be objectionable due to volume, frequency, shrillness, or intermittence.
- ii. The maximum permissible sound pressure level of any continuous, regular, or frequent source of sound produced by any use or activity shall not exceed the following limits at the property line of the sound source:

Table 3 - Sound Pressure Level Limits Measured in dB (A's)

<i>District</i>	<i>7 A.M. - 10 P.M.</i>	<i>10 P.M. - 7 A.M.</i>
General Business	65	60
Industrial	70	65
Residential	55	45

Sound pressure level shall be measured at all major lot lines, at a height of at least four (4) feet above the ground surface. Noise shall be measured with a sound level meter meeting the standards of the American Standards Institute, ANSI S1.4-1961 "American Standard Meter for the Physical Measurements of Sound."

- iii. Sound levels specified shall not exceed for more than 15 minutes in any one day, except for temporary construction or maintenance work, agricultural activity, timber harvesting, traffic, church bells, emergency warning devices, parades, or other similar special circumstances.
- iv. No person shall engage in or cause very loud construction activities on a site abutting residential use between the hours of 9 P.M. of one day and 7 A.M. of the following day.

b. Vibration

- i. No vibration shall be produced which is transmitted through the ground and is discernible without the aid of instruments at or at any point beyond the lot line.

c. Air pollution

- i. Atmospheric emissions of gaseous or particulate matter generated by land use shall conform to the then current regulations of the Massachusetts Division of Environmental Protection DEP. If the proposed land use shall be of a nature to arouse the concern of the Building Inspector and/or Special Permit Granting Authority, the applicant may be required to produce plans and specifications of detail sufficient for

review by DEP. Determination by DEP that potential exists for emissions in excess of allowable limits shall be grounds for permit refusal.

d. Nuisance Odors

i. There shall be no emissions of toxic or noxious matter or objectionable odors of any kind in such quantity as to be readily detectable at the property line of the lot on which the use emitting the toxic or noxious material or odor is located. For the purposes of this Section, toxic or noxious matter is any solid, liquid, or gaseous matter including, but not limited to, gases, vapors, dusts, fumes, and mists, containing properties which by chemical or other means are inherently harmful to destroy life or impair health, or capable of causing injury to the well being of persons or damage to property.

e. Explosive Materials

i. All activities and storage of flammable and explosive materials shall be provided with adequate fire-fighting and fire-suppression devices and equipment.

f. Radioactivity

i. There shall be no activities that emit dangerous levels of radioactivity.

g. Water Pollution

i. No discharge, at any point, into a private sewer system, stream, or the ground of any material in such a way, or of nature or temperature as can contaminate any running stream, water supply or otherwise cause the emission of dangerous or objectionable elements and accumulation of wastes conducive to the breeding of rodents or insects shall be permitted.

ii. The use and discharge of substances into lakes, streams, or similar waterbodies shall not violate the rules and regulations of the (Town) Conservation Commission or the standards of the Massachusetts Division of Quality Engineering.

h. Wastes and Refuse

i. No waste material or refuse shall be dumped upon, or permitted to remain upon, any part of the lot or tract outside of buildings constructed thereon. Waste material or refuse stored outside buildings shall be placed in completely enclosed containers.

9.0 Application for Planned Industrial Development

In addition to the requirements of M.G.L. Chapter 40A, Section 9 and the requirements, contained in (the Special Permit and Site Plan Approval sections) of this bylaw/ordinance, applicants for planned industrial development shall comply with the following:

9.1 Applicants for planned industrial development shall submit a development plan on standard twenty-four (24) inch by thirty-six (36) inch sheets, for the entire tract at a scale of one inch equals one hundred (100) feet. The plan shall be submitted to the Planning Board and shall show at least the following:

- a. Two (2) foot finished contours on the tract.
- b. The location and acreage of areas to be devoted to specific uses.
- c. Existing and proposed streets, parking areas, drainage and utility systems, including water and sewer, street lighting, landscaping, easements, and natural features.
- d. The proposed location of parks, open spaces and other recreational uses.
- e. Such other information as may be required by the Planning Board.

9.2 The Planning Board shall obtain with each submission, a deposit sufficient to cover any expenses connected with a public hearing and review of plans.

MODEL PLANNED UNIT RESIDENTIAL DEVELOPMENT (PURD)

Developed by the Pioneer Valley Planning Commission

Section 1.0: Planned Unit Residential Development

1.1 General Description

A “Planned Unit Residential Development” shall mean a development on a plot of land, containing a mixture of uses and building types, including single family and multi-family dwellings, business uses and open space. A Planned Unit Residential Development (PURD) may be permitted by Special Permit to exceed the normal density requirements for the district, to the extent authorized by this bylaw, provided that the standards specified herein are met.

1.2 Purpose

The purpose of this Planned Unit Residential Development are to:

1. Allow for greater variety and flexibility in development forms;
2. Encourage more compact and efficient developments;
3. Facilitate the construction and maintenance of streets, utilities, and public services in a more economical and efficient manner;
4. Promote the permanent protection of open space
5. Maintain and replicate the traditional New England rural character and land use pattern in which small villages are adjacent to common open space.

1.3 Applicability

Planned Unit Residential Developments shall be permitted in the _____ Districts only by issuance of a Special Permit, as specified by Section ___ of the {TOWN} Zoning Bylaw.

1.4 Uses allowed

In a PURD, the following uses shall be permitted:

1. Single family dwellings
2. Two-family or semi-detached dwellings

3. Town houses
4. Multi-family units
5. Recreational uses and open space, including a Community Building
6. Business uses that are allowed in the underlying district

1.5 Density and Dimensional Requirements

In a PURD, the following requirements relating to density and intensity of land shall be met:

1.5.1 The minimum lot size for all dwelling units may be reduced by no less than 20% below the lot size required for the applicable zoning district.

1.5.2 There shall be no frontage requirements within the PURD

1.5.3 Minimum setback, rear, and side yard requirements specified in the Table of Dimensional Requirements in the {Town Name} Zoning Bylaw shall pertain only to the periphery of the PURD.

1.5.4 The maximum height of structures shall be the same as the standards for the applicable zoning district.

1.5.5 The maximum number of dwelling units per structure shall be six (6) units.

1.6 Additional Requirements

1.6.1 Parking and Circulation

1.6.1.1 There shall be an adequate, safe, and convenient arrangement of pedestrian circulation, facilities, roadways, driveways, and parking.

1.6.1.2 Vehicular access to the PURD shall be provided from an existing public way, which in the opinion of the Special Permit Granting Authority, is adequate to service the proposed development.

1.6.1.3 Roads within the PURD shall be privately owned and maintained and shall be designed with sufficient width, suitable grade, and adequate construction to safely provide for the needs of

pedestrian and vehicular traffic generated by the development. Access roads shall be designed and constructed according to the requirements of the {TOWN NAME} Subdivision Regulations.

1.6.1.4 Garages or off street parking spaces, or a combination thereof, shall be provided for all occupants, employees, and visitors, and shall follow the parking standards set forth in Section ____ of this Bylaw.

1.6.2 Landscape and Vegetative Buffers

1.6.2.1 A coordinated landscape design for the entire project area, including landscaping of structures, parking areas, driveways, and walkways, shall be submitted for approval by the Special Permit Granting Authority.

1.6.2.2 Whenever possible, existing trees and vegetative cover shall be conserved and integrated into the landscape design.

1.6.2.3 All residential structures and accessory uses within the PURD shall be set back from the boundaries of adjacent lots by a buffer strip of at least fifty (50') feet in width, which shall include trees and shrubbery.

1.6.2.4 Proper maintenance of the landscaping, including the buffer strip, shall be the responsibility of the owner.

1.6.3 Utility Requirements

1.6.3.1 Each dwelling in a PURD shall be provided with access, drainage, and utilities that are functionally equivalent to the requirements set under the {TOWN NAME} Subdivision Regulations.

1.6.3.2 All structures which require plumbing shall be connected to a private well or public water supply, if available, and where units are to be served with an on site sewerage disposal facility, shall meet the requirements of Title V and the Subdivision Regulations, and have Board of Health approval.

1.6.4 Common Open Space

1.6.4.1 All land not devoted dwellings, accessory uses, roads, or other development shall be set aside as common land for recreation, conservation, or agricultural uses

1.6.4.2 Within the open space area provided in the PURD, at least 2,000 square feet per dwelling unit must be usable open space for active a passive recreation. Such space shall not include parking space, laundry drying area, required yards, or land within the Floodplain District or Wetlands, as determined by the Conservation Commission. Usable open space shall be defined to include such facilities as contiguous open space available for play, tot lots, gardens, hiking/jogging trails, tennis courts, or similar facilities.

1.6.4.3 Further subdivision of common open land or its use for other than recreation, conservation, or agricultural, except for easements for underground utilities, shall be prohibited.

1.6.4.4 Structures or buildings accessory to recreation, conservation, or agricultural use may be erected but shall not exceed 10% coverage of such common land.

1.6.5 Community Association

1.6.5.1 An owners association shall be established, requiring membership of each lot or unit owner in the planned unit development. The association shall be responsible for the permanent maintenance of all communal water and sewerage systems, common open space, recreational, and thoroughfare facilities.

1.6.5.2 An association agreement or covenant shall be submitted with the Special Permit application guaranteeing continued maintenance of such common utilities, land, and facilities and assessing each unit a share of maintenance expenses. Such agreement shall be subject to the review and approval of Town Counsel and the Permit Granting Authority.

1.6.5.3 Such agreements or covenants shall provide that in the event that the association fails to maintain the common facilities in a reasonable order

1.7 Procedures and Application Review

In addition to the requirements specified in Section _____, Special Permit, of this Bylaw and MGL Chapter 40A Section 9, the following procedures shall be required for the presentation of a PURD

1.7.1 The proposed development shall be in harmony with the Master Plan, if any, as prepared and amended by the Town.

1.7.2 The development plans shall specify reasonable periods within which development of each section of the PURD may be started. Deviation from the required amount of usable open space per housing unit may be allowed, provided such deviation shall be adjusted for in other sections of the PURD.

1.7.3 Subsequent approval by the Special Permit Granting Authority of such portions of the development as constitute a subdivision will be required as set forth in the Subdivision Control Law, including approval of the street and utility systems. A favorable recommendation by the Special Permit Granting Authority that the Special Permit be issued shall not, therefore, be deemed to either constitute subdivision approval under the Subdivision Control Law or the Subdivision rules and Regulations of the Planning Board, nor imply that such approval will be given.

1.7 Conflict with Other Laws

The provisions of this bylaw shall be considered supplemental of existing zoning bylaws. To the extent that a conflict exists between this bylaw and others, the more restrictive bylaw, or provisions therein, shall apply.

1.8 Severability

If any provision of this bylaw is held invalid by a court of competent jurisdiction, the remainder of the bylaw shall not be affected thereby. The invalidity of any section or parts of any section or sections of this bylaw shall not affect the validity of the remainder of the town's zoning bylaw.

MODEL RIDGELINE AND HILLSIDE PROTECTION DISTRICT BYLAW

Prepared by the Pioneer Valley Planning Commission

1.0 RIDGELINE AND HILLSIDE PROTECTION OVERLAY DISTRICT

1.1 Purpose

The purpose of this bylaw is to promote the health, safety and general welfare of the Town of _____ by:

1. Insuring that any development that takes place within the Ridgeline and Hillside Protection Overlay District preserves and protects critical natural resource areas, minimizes visual impact of man-made features and enhances the economic values of the properties located therein;
2. Minimizing the removal of native vegetation, especially large timber, and regulating the excavation and alteration of land in order to minimize any danger of erosion, flooding or pollution of the ground or surface water supply (public or private) within the district or any adjacent low lying areas;
3. Insuring that all proposed development activities do not reduce property values within the district or adjacent to by unnecessarily detracting from the visual setting or obstructing significant views; and
4. Protecting existing historical physical features and the preservation and development of linkages from one open space area to another.

1.2 Scope of Authority

The Ridgeline and Hillside Protection District is an overlay district and shall be superimposed on the other districts established by this Bylaw. All regulations of the (Town) Zoning Bylaw applicable to such underlying districts shall remain in effect, except that where the Scenic District imposes additional regulations, such regulations shall prevail.

1. Designated Area: The Scenic Upland District Bylaw shall include all areas designated on the overlay map entitled Ridgeline and Hillside Protection District District, Town/City of _____, on file with the Town Clerk.
2. The Ridgeline and Hillside Protection District is intended to include those mountain or upland areas which have one or more of the following characteristics:
 - a. Steep slopes averaging 15% or greater for 200 feet.

- b. Unique landforms, including bedrock outcrops, till-covered hills, geological rarities, cliffs, or other unusual topographic features.
- c. Any land at an elevation of 600 or more feet above sea level.

1.3 Definitions

Clear Cutting: The cutting of all trees on a site.

Hillside: Land having an average grade of 15% or greater for 200 feet.

Ridgeline: The long, narrow crest or horizontal line of hills or mountains, usually at the highest elevation.

Selective Cutting: No more than 50% of the mature trees on a site cut under a selective cutting plan.

Significant Alteration: Any alteration which increases the assessed value by 15%, or which adds to the height of a structure, or which substantially alters the visual profile of the property or structures thereon

1.4 Uses

1. Permitted Uses

- a. Agricultural production, including but not limited to the raising of crops, livestock, poultry, nurseries, orchards, and hay;
- b. Recreational uses, provided there is minimal disruption of wildlife habitat;
- c. Maintenance and repair usual and necessary for continuance of an existing use;
- d. Conservation of water, plants, and wildlife, including the raising and management of wildlife;
- e. Non-commercial cutting of trees for fuel (refer to the MA Forest Stewardship Program);
- f. Uses permitted under M.G.L. Chapter 40a, Section 3 (agricultural, religious, or educational purposes; child care facilities; etc.); and

g. Selective timber cutting shall be permitted within the area of a designated building envelope wherein principal and accessory structures have been approved. Timber cutting for the purpose of clearing land for legitimate agricultural purposes shall be permitted subject to satisfactory evidence of such intended use. Selective commercial timber cutting may be permitted, in accordance with the Massachusetts Forest Cutting Practices Act, M.G.L. Chapter 132.

2. Prohibited Uses

a. All uses not permitted in Section 1.4.1 (Permitted Uses) or Section 1.4.3 (Uses Permitted with Ridgeline and Hillside District Review) shall be deemed prohibited.

b. Clear cutting of trees and vegetation shall be prohibited.

3. Uses Permitted with Ridgeline and Hillside District Review

The following uses shall be permitted, subject to Ridgeline and Hillside Protection District Review of project site plans prior to the issuance of a building permit or Special Permit or approval of a definitive plan under the [Town] Subdivision Regulations:

a. The construction of a new dwelling or principal structure;

b. Any construction or significant alteration of any dwelling or other structure, if any such action affects the exterior appearance. A significant alteration is defined as any alteration which increases the assessed value by 15%, or which adds to the height of a structure, or which substantially alters the visual profile of the property or structures thereon;

c. Any commercial or industrial use allowed by Special Permit in the underlying district;

d. Any subdivision which requires approval under the [Town] Subdivision Regulations;

e. The Board may waive any or all requirements of the Ridgeline and Hillside Protection District Review for dwelling additions, and or accessory buildings of 400 square feet or less.

4. Exempt Uses

a. Agricultural activities;

b. Work incidental to construction on the premises under a currently valid Building Permit;

c. Selective cutting of trees or vegetation for normal maintenance purposes on less than one half acre of land, provided that no additional cutting shall be done on the parcel, or on adjoining parcels in common ownership, for a period of two years, except for selective cutting specified in a Forest Cutting Plan approved in accordance with the Mass. Forest Cutting Practices Act (M.G.L. Chapter 132, sections 40-46);

d. Any addition, enlargement, extension, restoration of single family residences or construction of accessory buildings to any single family residences which have been actually and completely constructed prior to the adoption of this By-law.

1.5 Ridgeline and Hillside Development Standards

Buildings and landscaping are to be designed and located on the site to blend with the natural terrain and vegetation, and to preserve the scenic character of the site, conforming to the following standards:

1. Building Characteristics

a. Building height shall not exceed thirty-five (35) feet.

b. Exposed foundation walls shall not exceed two (2) feet above the proposed finished grade.

c. Building, alterations, additions, or structures should be placed downgrade of the ridgeline where possible.

d. Building materials shall blend with the natural landscape.

2. Landscaping

a. Removal of native vegetation, especially large timber, shall be minimized and the replacement of vegetation and landscaping shall be generally compatible with the vegetation of the designated area.

b. Trees may only be removed for location and construction of streets, driveways or structures. Selective clearing for views is permitted where the viewshed is obstructed by dense vegetation.

c. Retaining walls, of natural materials only, may be used to create usable yard space in the side and rear yard.

d. Landscaping and plantings shall be utilized to screen major buildings in open or prominent areas from significant views, both when installed and when mature.

3. Grading

Any grading or earth moving operation is to be planned and executed in such a manner that final contours appear to be consistent with the existing terrain, both on and adjacent to the site.

4. Prevention of Water Pollution and Flooding

a. Storage and/or transmission of petroleum or other refined petroleum products is prohibited except within buildings which will be heated or in quantities of 50 gallons or less. Petroleum products stored within a building shall be placed on a diked or impermeable surface to prevent spills or leaks from reaching groundwater.

b. All run-off from impervious surfaces shall be recharged on the site by being diverted to storm water infiltration basins covered with natural vegetation. Storm water infiltration basins must be designed to handle a 25-year storm. Dry wells shall be used only where other methods are infeasible, and shall be preceded by oil, grease, and sediment traps to facilitate removal of contamination. Any and all recharge areas shall be permanently maintained in full working order by the owner.

5. Prevention of Erosion and Sedimentation

a. No area or areas totaling two (2) acres or more on any parcel or contiguous parcels in the same ownership shall have existing vegetation clear-stripped or be filled six (6) inches or more so as to destroy existing vegetation unless in conjunction with agricultural activity or unless necessarily incidental to construction on the premises under a currently valid building permit or unless within streets which are either public or designated on an approved subdivision plan or unless a special permit is approved by the Zoning Board of Appeals on the condition that run-off will be controlled, erosion avoided and either a constructed surface or cover vegetation will be provided not later than the first full spring season immediately following completion of the stripping operation. No stripped area or areas which are allowed by special permit shall remain through the winter without a temporary cover or winter rye or similar plant materials being provided for soil control, except in the case of agricultural activity where such temporary cover would be infeasible.

b. Sediment and erosion control measures shall be employed to minimize such impacts during and after construction, in accordance with guidelines established by the U.S. Natural Resources Conservation Service "Guidelines for Soil and Water Conservation in Urbanizing Areas of Massachusetts."

6. Utilities

a. Utilities shall be constructed and routed underground except in those situations where natural features prevent the underground siting or where safety considerations necessitate above ground construction and routing. The Review Board may waive this requirement.

b. Above ground utilities shall be constructed and routed to minimize detrimental effects on the visual setting.

7. Site Planning

In the building of more than one structure, variable setbacks, multiple orientations, and other site planning techniques shall be incorporated in order to avoid the appearance of a solid line of development.

8. Accessory Structures

Construction of a tower, satellite dish, windmill, any type of antenna, or other installation shall not obstruct the view of a public way, or from a public way, or from an abutter's dwelling.

1.6. Ridgeline and Hillside Protection District Review Board

The Ridgeline and Hillside Protection District Review Board shall be a sub-committee of the Planning Board, appointed by the Planning Board, and shall consist of no more than five (5) members. In the absence of such a board, the Planning Board shall administer this Bylaw.

1.7 Procedures for Review

1. Prior to undertaking any work in the Ridgeline and Hillside Protection District, including clearing and removal of vegetation, grading or construction, and prior to applying for a Building Permit, landowners must submit an application for Ridgeline and Hillside Protection Review to the Ridgeline and Hillside Protection Review Board. The Building Inspector shall not accept an application for a Building Permit without an attached Ridgeline and Hillside Protection Review application, which has been reviewed by the Ridgeline and Hillside Protection Review Board.
2. The Ridgeline and Hillside Protection District Review Board shall review the application and return its recommendations in writing to the Building Inspector within thirty-five (35) days of the receipt of the application. If the application for Ridgeline and Hillside District Protection Review is associated with an application for a variance, special permit, or subdivision review, the Ridgeline and Hillside Protection District Review Board shall immediately transmit their recommendations to the Planning Board or Zoning Board of Appeals as appropriate.
3. If the Ridgeline and Hillside Protection District Review Board does not submit its recommendations to the Building Inspector within thirty-five (35) days, such failure to act shall constitute approval of the application.
4. The Ridgeline and Hillside District Review Board's action shall be advisory to the Planning Board and shall consist of either:
 - a. A determination that the proposed project will constitute a suitable development and is in compliance with the criteria set forth in the Bylaw;
 - b. Approval subject to conditions, modifications, and restrictions as the Ridgeline and Hillside Protection District Review Board may deem necessary.
5. The Building Inspector, Planning Board, and Zoning Board of Appeals shall, in making their permit granting decision, give due consideration to the Ridgeline and Hillside Protection District Review Board's recommendations, and shall communicate all subsequent decisions to said Board.

1.8 Ridgeline and Hillside District Review Applications

To facilitate siting and design of building sensitively related to the natural setting, applications for the Ridgeline and Hillside Protection District Review of proposed development in the district must be accompanied by the following:

1. Plot Plan;
2. View Points - Photographs of the development site taken from points along the street, together with a map indicating the distance between these points and the site;
3. Placement, height and physical characteristics of all existing and proposed buildings and structures located on the development site.

1.9 Conflict with Other Laws

The provisions of this bylaw shall be considered supplemental of existing zoning bylaws. To the extent that a conflict exists between this bylaw and others, the more restrictive bylaw, or provisions therein, shall apply.

1.10 Severability

If any provision of this bylaw is held invalid by a court of competent jurisdiction, the remainder of the bylaw shall not be affected thereby. The invalidity of any section or parts of any section or sections of this bylaw shall not affect the validity of the remainder of the town's zoning bylaw.

MODEL RIGHT TO FARM BY-LAW

*Developed by the Department of Agricultural Resources,
Notes prepared by the Pioneer Valley Planning Commission*

1.0 Legislative Purpose and Intent

The purpose and intent of this By-law is to state with emphasis the Right to Farm accorded to all citizens of the Commonwealth under Article 97, of the Constitution, and all state statutes and regulations there under including but not limited to Massachusetts General Laws Chapter 40A, Section 3, Paragraph 1; Chapter 90, Section 9, Chapter III, Section 125A and Chapter 128 Section IA. We the citizens of [Farm-Town] restate and republish these rights pursuant to the Town's authority conferred by Article 89 of the Articles of Amendment of the Massachusetts Constitution, ("Home Rule Amendment").

This General By-law encourages the pursuit of agriculture, promotes agriculture- based economic opportunities, and protects farmlands within the Town of [Farm- Town] by allowing agricultural uses and related activities to function with minimal conflict with abutters and Town agencies. This By-law shall apply to all jurisdictional areas within the Town.

2.0 Definitions

The word "farm" shall include any parcel or contiguous parcels of land, or water bodies used for the primary purpose of commercial agriculture, or accessory thereto.

The words "farming" or "agriculture" or their derivatives shall include, but not be limited to the following:

- farming in all its branches and the cultivation and tillage of the soil;
- dairying;
- production, cultivation, growing, and harvesting of any agricultural, aquacultural, floricultural, viticultural, or horticultural commodities;
- growing and harvesting of forest products upon forest land, and any other forestry or lumbering operations;
- raising of livestock including horses;
- keeping of horses as a commercial enterprise; and
- keeping and raising of poultry, swine, cattle, ratites (such as emus, ostriches and rheas) and camelids (such as llamas and camels), and other domesticated animals for food and other agricultural purposes, including bees and fur-bearing animals.

"Farming" shall encompass activities including, but not limited to, the following:

- operation and transportation of slow-moving farm equipment over roads within the Town;

- control of pests, including, but not limited to, insects, weeds, predators and disease organism of plants and animals;
- application of manure, fertilizers and pesticides;
- conducting agriculture-related educational and farm-based recreational activities, including agri-tourism, provided that the activities are related to marketing the agricultural output or services of the farm;
- processing and packaging of the agricultural output of the farm and the operation of a farmer's market or farm stand including signage thereto;
- maintenance, repair, or storage of seasonal equipment, or apparatus owned or leased by the farm owner or manager used expressly for the purpose of propagation, processing, management, or sale of the agricultural products; and
- on-farm relocation of earth and the clearing of ground for farming operations.

3.0 Right To Farm Declaration

The Right to Farm is hereby recognized to exist within the Town of [Farm-Town]. The above-described agricultural activities may occur on holidays, weekdays, and weekends by night or day and shall include the attendant incidental noise, odors, dust, and fumes associated with normally accepted agricultural practices. It is hereby determined that whatever impact may be caused to others through the normal practice of agriculture is more than offset by the benefits of farming to the neighborhood, community, and society in general. The benefits and protections of this By-law are intended to apply exclusively to those commercial agricultural and farming operations and activities conducted in accordance with generally accepted agricultural practices. Moreover, nothing in this Right To Farm By-law shall be deemed as acquiring any interest in land, or as imposing any land use regulation, which is properly the subject of state statute, regulation, or local zoning law.

4.0 Disclosure Notification

Not later than 21 days after the purchase and sale contract is entered into, or prior to the sale or exchange of real property if no purchase and sale agreement exists, for the purchase or exchange of real property, or prior to the acquisition of a leasehold interest or other possessory interest in real property, located in the Town of [Farm-Town], the landowner shall present the buyer or occupant with a disclosure notification which states the following:

"It is the policy of this community to conserve, protect and encourage the maintenance and improvement of agricultural land for the production of food, and other agricultural products, and also for its natural and ecological value. This disclosure notification is to inform buyers or occupants that the property they are about to acquire or occupy lies within a town where farming activities occur. Such farming activities may

include, but are not limited to, activities that cause noise, dust and odors. Buyers or occupants are also informed that the location of property within the Town may be impacted by commercial agricultural operations including the ability to access water services for such property under certain circumstances.”

A copy of the disclosure notification shall be given on a form prepared by the Town and shall be signed by the landowner prior to the sale, purchase, exchange or occupancy of such real property. A copy of the disclosure notification must be filed with the Board of Selectmen or its designee prior to the sale, purchase, exchange or occupancy of such real property. In addition to the above, a copy of this disclosure notification shall be provided by the Town to landowners each fiscal year by mail.

A violation of Section 4 shall be subject to a fine of \$300 and shall be enforced by the Board of Selectmen or its designee. The Town is authorized to enforce Section 4 under the non-criminal disposition provision of G.L. c. 40, § 21D.

5.0 Resolution of Disputes

[Applicable only in communities that have Agricultural Commissions]

Any person who seeks to complain about the operation of a farm may, notwithstanding pursuing any other available remedy, file a grievance with the Select Board, the Zoning Enforcement Officer, or the Board of Health, depending upon the nature of the grievance. The filing of the grievance does not suspend the time within which to pursue any other available remedies that the aggrieved may have. The Zoning Enforcement Officer or Select Board may forward a copy of the grievance to the Agricultural Commission or its agent, which shall review and facilitate the resolution of the grievance, and report its recommendations to the referring Town authority within an agreed upon time frame.

The Board of Health, except in cases of imminent danger or public health risk, may forward a copy of the grievance to the Agricultural Commission or its agent, which shall review and facilitate the resolution of the grievance, and report its recommendations to the Board of Health within an agreed upon time frame.

6.0 Severability Clause

If any part of this By-law is for any reason held to be unconstitutional or invalid, such decision shall not affect the remainder of this By-law. The Town of [Farm- Town] hereby declares the provisions of this By-law to be severable.

Model Bylaw/Ordinance For RIVER PROTECTION AND FLOODPLAIN ZONING

Prepared by Pioneer Valley Planning Commission, Revised 10-9-07

1. River Protection and Floodplain District

A. Purposes.

The purposes of the River Protection and Floodplain District are to:

1. Protect life, public safety and property from flooding hazards;
2. Preserve the natural flood control and flood storage characteristics of the floodplain;
3. Promote the preservation of agricultural lands along the _____ River;
4. Prevent any alterations to the natural flow of the river;
5. Protect fisheries and wildlife habitat within and along the _____ River;
6. Control erosion and siltation;
7. Enhance and preserve existing scenic or environmentally sensitive areas along the shoreline;
8. Conserve shore cover and encourage well-designed developments;
9. Prevent water pollution caused by erosion, sedimentation, nutrient or pesticide run-off, and poorly sited waste disposal facilities.
10. Preserve and maintain the groundwater table and water recharge areas within the floodplain.
11. Maintain the wild and scenic qualities of the _____ River and its tributaries,.

B. District Delineation

1. The River Protection and Floodplain District is herein established as an overlay district and includes:

- a) All special flood hazard areas designated as Zone A or Zones A1-30 on the _____ Flood Insurance Rate Maps (FIRM) for the _____ River, dated _____, on file with the Town/City Clerk, and hereby made a part of this By-Law;
- b) The riverfront area, as defined in MGL Chapter 131, section 40 and this bylaw/ordinance, including all land situated between a river's mean annual high water line and a parallel line located two hundred (200) feet away, measured horizontally, along the entire length of the _____ River within the Town/City of _____, and along the entire length of the following _____ River tributaries, _____.

2. The boundaries of the River Protection and Floodplain District shall be determined by scaling distances on the Flood Insurance Rate Map. When interpretation is needed as to the exact location of the boundaries of a District, the Building Inspector shall make the necessary interpretation.

C. Definitions

1. Animal Feedlots: A confined, fenced area designed for intensive feeding of livestock;

2. Buffer: A strip of land, measured landward from the riverbank, which must be left in its natural, vegetated condition.
3. Erosion and Sediment Control BMPs: Practices for controlling construction-related soil erosion and sediment including, but not limited to, staked hay bales, filter fences, hydro-seeding and phased development.
4. Mean Annual High-Water Line: With respect to a river, the line that is apparent from visible markings or changes in the character of soils or vegetation due to the prolonged presence of water and which distinguishes between predominantly aquatic and predominantly terrestrial land.
5. Natural Riverbank Best Management Practices: Practices for riverbank maintenance which promote habitat creation and restoration and treatment and infiltration of stormwater runoff including, but not limited to, native vegetation, soil stabilization matting and geotextiles, and dormant live woody brush layers, fascines and stakes, but not including rock riprap.
6. River: A natural flowing body of water that empties to any ocean, lake, or other river and which flows throughout the year.
7. Riverfront Area: That area of land situated between a river's mean annual high-water line and a parallel line located two hundred feet away, measured outward horizontally from the river's mean annual high-water line.

D. Use Regulations

All development within the River Protection and Floodplain District, including structural and non-structural activities, whether permitted as a right or by Special Permit must be in compliance with the Massachusetts River Protection Act and the Massachusetts Wetlands Protection Act, (MGL Ch131 s40), and with the requirements of the Massachusetts State Building Code pertaining to construction in the Flood Plain (currently Section 744).

1. Permitted Uses

The following uses in the River Protection and Floodplain District of low flood damage potential and causing no obstruction to flood flows shall be permitted provided they do not require structures, fill, or storage of material or equipment:

- a. Agricultural uses such as farming, grazing, and horticulture, including barns or farm-related structures.
 - b. Forestry uses.
 - c. Outdoor recreational uses, including fishing, boating, play areas and foot, bicycle or horse paths.
 - d. Conservation of water, plants, and wildlife.
 - e. Wildlife management areas.
 - f. Buildings lawfully existing prior to the adoption of these provisions.
- ##### **2. Prohibited Uses**
- a. No altering, dumping, filling, or removal of riverine materials or dredging is permitted. Maintenance of the riverbank may be done under requirements of MGL Ch 131s 40, and any other applicable laws, by-laws, and regulations, and must be done using natural riverbank best management practices.

- b. No impoundments, dams, or other water obstructions may be located within the District.
 - c. Commercial or industrial uses are prohibited in the district.
 - d. Parking or storage of vehicles or equipment within 200 feet of the riverbank is prohibited. The Special Permit Granting Authority may consider whether a variance from this prohibition is warranted, where a hardship exists due to lot size or configuration.
 - e. Dumping of trash, garbage or other materials on or near the riverbank is prohibited.
 - f. Construction of any kind on slopes of greater than 25% within the district is prohibited.
 - g. All other uses not specifically permitted or allowed by site plan approval within the overlay zone are prohibited.
3. Restricted Uses
- a. All forest cutting shall require the filing of a Forest Cutting Plan in accordance with the Massachusetts Forest Cutting Practices Act (MGL Ch 132s 40-46).
 - b. No cutting of forest or vegetation shall occur within fifty (50) feet of the river bank. In the area between fifty (50) and one hundred (100) feet from the river bank, no more than 50% of existing forest shall be cut. Exempted from the requirements in this section are: the cutting or management of state-listed invasive species; removal of woody or flood debris; or riverbank restoration activities permitted by the Conservation Commission.
 - c. Fenced animal grazing areas must be located at least fifty feet from the riverbank, with a naturally vegetated fifty-foot buffer strip along the river to reduce runoff to the river, and a fence to prevent animals from encroaching on the buffer strip.
4. Uses by Special Permit
- a. No structure or building in the River Protection and Floodplain District shall be erected, constructed, substantially improved, reconstructed, or otherwise created or moved; no earth or other materials dumped, filled, excavated, or transferred, unless a Special Permit is granted by the Planning Board.
 - b. The following uses may be allowed by Special Permit in accordance with the Special Permit regulations of this zoning bylaw/ordinance, and additional restriction and criteria contained herein:
 - i. Single family residences.
 - ii. Residential accessory uses including garages, driveways, private roads, utility rights-of-way and on-site waste-water disposal systems.
 - iii. Animal feedlots, in conformance with Best Management Practices established by the Natural Resource Conservation Service (NRCS).
5. Special Permit Procedures
- a. The following Special Permit requirements apply in the River Protection and Floodplain District:
 - i. With Zone A 1-30, where base flood elevation is not provided on the FIRM, the applicant shall obtain any existing base flood elevation

data. These data will be reviewed by the Building Inspector for their reasonable utilization toward meeting the elevation or flood proofing requirements, as appropriate, of the State Building Code.

- ii. No encroachments (including fill, new construction, substantial improvements to existing structures, or other development shall be allowed unless it is demonstrated by the applicant that the proposed development, as a result of compensating actions, will not result in any increase in flood levels during the occurrence of a 100-year flood in accordance with the Federal Emergency Management Agency's regulation for the National Flood Insurance Program.
 - iii. Construction on slopes of 10-25% within the district, shall require the preparation and submittal of an erosion and sediment control plan, describing best management practices which will be employed to prevent construction-related impacts to river water quality.
 - iv. The proposed use shall comply in all respects to the provisions of the underlying District in which the land is located.
 - v. The Board may specify such additional requirements and conditions as it finds necessary to protect the health, safety and welfare of the public and the occupants of the proposed use.
 - vi. Within 10 days of the receipt of the application the Board shall transmit one copy of the development plan to the Conservation Commission, Board of Health and Building Inspector. Final action shall not be taken until reports have been received from the above Boards or until thirty-five (35) days have elapsed.
- b. The following Special Permit requirements apply in the River Protection and Floodplain District, in addition to those requirements specified in Sections 3d.:
- i. A buffer strip extending at least two hundred (200) feet in depth, to be measured landward from each bank of the _____ River shall be required for all lots within the River Protection and Floodplain District. If any lot, existing at the time of adoption of this By-Law, does not contain sufficient depth, measured landward from the river bank, to provide a two hundred (200) foot buffer strip, the buffer strip, may be reduced to 50% of the available lot depth, measured landward from the river bank. For purposes of this By-Law, the river bank shall be defined as the river's seasonal high water mark. The buffer strip shall include trees and shall be kept in a natural or scenic condition.
 - ii. No buildings or structures shall be erected, enlarged, or altered or moved within the buffer strip.
 - iii. On-site wastewater disposal systems shall be located as far from the _____ River as is feasible.
- c. In addition to the provisions of Section 3c, in order to issue a Special Permit, the Planning Board must find that the proposed use is compliant with the following provisions:
- i. In the River Protection and Floodplain District, proposed uses must:

- a) Not create increased flood hazards which are detrimental to the public health, safety and welfare.
- b) Comply in all respects to the provisions of the underlying District or Districts within which the land is located.
- c) Comply with all applicable State and Federal laws, including the Massachusetts Wetlands Protection Act (MGL Ch 131 s40).
- d) Be situated in a portion of the site that will most likely conserve shoreland vegetation and the integrity of the buffer strip.
- e) Be integrated into the existing landscape through features such as vegetative buffers and through retention of the natural shorelines.
- f) Not result in erosion or sedimentation.
- g) Not result in water pollution.

6. Nonconforming Uses

- a. Any lawful use, building, structures, premises, land or parts thereof existing at the effective date of this Bylaw/Ordinance or amendments thereof and not in conformance with the provisions of this bylaw/ordinance shall be considered to be a nonconforming use.
- b. Any existing use or structure may continue and may be maintained, repaired, and improved, but in no event made larger.
- c. Any nonconforming structure which is destroyed may be rebuilt on the same location but no larger than its overall original square footage.

7. Enforcement and Penalties

a. Violations

Any development activity that has commenced or is conducted contrary to this bylaw/ordinance may be restrained by injunction or otherwise abated in a manner provided by law.

b. Notice of Violation

When the Planning Board determines that an activity is not being carried out in accordance with the requirements of this bylaw/ordinance, it shall issue a written notice of violation to the owner of the property. The notice of violation shall contain:

- i. the name and address of the owner applicant;
- ii. the address when available or the description of the building, structure, or land upon which the violation is occurring;
- iii. a statement specifying the nature of the violation;
- iv. a description of the remedial measures necessary to bring the development activity into compliance with this bylaw/ordinance and a time schedule for the completion of such remedial action;
- v. a statement of the penalty or penalties that shall or may be assessed against the person to whom the notice of violation is directed;
- vi. a statement that the determination of violation may be appealed to the municipality by filing a written notice of appeal within fifteen (15) days of service of notice of violation.

c. Stop Work Orders

Persons receiving a notice of violations will be required to halt all construction activities. This “stop work order” will be in effect until the _____

confirms that the development activity is in compliance and the violation has been satisfactorily addressed. Failure to address a notice of violation in a timely manner can result in civil, criminal, or monetary penalties in accordance with the enforcement measures authorized in this bylaw/ordinance.

d. Criminal and Civil Penalties

Any person who violates any provision of this ordinance, valid regulation, or the terms or conditions in any permit or order prescribed or issued thereunder, shall be subject to a fine not to exceed \$300.00 for each day such violation occurs or continues or subject to a civil penalty, which may be assessed in an action brought on behalf of the Town/City in any court of competent jurisdiction.

e. Non-Criminal Disposition

As an alternative to criminal prosecution or civil action, the Town/City of _____ may elect to utilize the non-criminal disposition procedure set forth in the town/city bylaw/ordinances. The _____ shall be the enforcing entity. The penalty for the 1st violation shall be up to \$100. The penalty for the 2nd violation shall be up to \$200. The penalty for the 3rd and subsequent violations shall be \$ 300.00. Each day or part thereof that such violation occurs or continues shall constitute a separate offense.

f. Restoration of Lands

Any violator may be required to restore land to its undisturbed condition. In the event that restoration is not undertaken within a reasonable time after notice, the _____ may take necessary corrective action.

8. Severability

The invalidity of any section or provision of this bylaw/ordinance shall not invalidate any other section or provision thereof.

ORDINANCE NO. _____

CITY OF WESTFIELD

IN CITY COUNCIL

AN ORDINANCE AMENDING THE CODE OF ORDINANCES, CITY OF WESTFIELD, MASSACHUSETTS, ADOPTED JUNE 17, 1993.

BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF WESTFIELD, AS FOLLOWS:

That Chapter 18 of the Code of Ordinances be and is hereby amended by adding Division 3, Sewer Expansion, Sections 18-225 through 18-229 as follows:

Division 3. SEWER EXTENSION PLAN

Sec. 18-225 Permitted Extension Areas

The Plan entitled Sewer Extension Plan, City of Westfield, dated February 3, 2005 is hereby adopted by the City and incorporated by reference in this ordinance. Sanitary sewer system extensions shall only be permitted within the areas so designated on this plan. All uses and properties located within the area so designated for extension on the above referenced plan are eligible to connect into the city's sanitary sewer system without an Infiltration & Inflow Waiver (as stated below) provided:

- a) for multi-family and commercial/industrial uses, that the cumulative total (beginning on the date of adoption of this Ordinance) of waste flows generated from such uses does not exceed .23 mgd, (as determined by the state Department of Environmental Protection, or such entity as shall succeed, replace or supercede the state Department of Environmental Protection).
- b) for residential uses, that:
 1. the street that they are fronting on was constructed and in existence prior to the adoption date of this ordinance, and
 2. the cumulative total (beginning on the date of adoption of this Ordinance) of waste flows generated from such uses does not exceed .53 mgd (as determined by the state Department of Environmental Protection, or such entity as shall succeed, replace or supercede the state Department of Environmental Protection)

c) all extensions must be approved by a 2/3 majority vote of the entire membership the City Council at a Public Meeting (no Public Hearing is required) when, in their opinion, they find all of the following:

1) for residential extensions:

- i. that such extension will not promote additional development in the area of a nature or at a density which the City Council feels is unsuitable or undesirable, and;
- ii. that once the extension is completed, there will be available capacity at the Water Pollution Control Plant to accommodate the sewerage generated by the anticipated uses serviced by said extension, and;
- iii. that the granting of such extension is in the best interests of the health safety and welfare of the city and its residents in that the resulting loss of treatment capacity at the wastewater treatment plant (due to the amount of wastewater being generated by the anticipated uses to be serviced by said extension) will be compensated by providing needed services to an area deemed by the City Council as a high priority.

2) for multi-family and non-residential extensions:

- i. that such extension will not promote additional development in the area of a nature or at a density which the City Council feels is unsuitable or undesirable, and;
- ii. that once the extension is completed, there will be available capacity at the Water Pollution Control Plant to accommodate the sewerage generated by the anticipated uses serviced by said extension, and;
- iii. that the granting of such extension is in the best interests of the health safety and welfare of the city and its residents in that the resulting loss of treatment capacity at the wastewater treatment plant (due to the amount of wastewater being generated by the anticipated uses to be serviced by said extension) will be compensated by a suitably sufficient increase in the job and tax base of the community generated by those same anticipated uses.

Once the city's wastewater treatment facility's design flow capacity has been reached (as determined by the state Department of Environmental Protection, or such entity as shall succeed, replace or supercede the state Department of Environmental Protection) for these uses, additional projects of such uses within the extension area must apply for and receive an Infiltration & Inflow Waiver.

Sec. 18-226 INFILTRATION & INFLOW WAIVER OPTION

a) PURPOSE - In adopting the Westfield Sewer System Expansion Plan, the city recognizes that some projects which benefit the over-riding public interest may warrant a waiver from strict compliance with the requirements set forth in Section 18-225. The Infiltration & Inflow (I&I) Waiver Option has been adopted to guide and direct the City Council, on a case

by case basis, in the process and criteria for evaluating and rendering a decision on any applications for a waiver.

- b) CRITERIA -An I&I Waiver may be granted to eligible projects as are set forth in Section 18-227 when treatment capacity at the Water Pollution Control Plant is capable of being created through the elimination of points of infiltration and inflows of groundwater and stormwater in the city's sanitary sewer system.
- c) FEE- In the event of the approval of a waiver request, the applicant shall be required to pay a fee, to be determined by the City Engineer, equal to the city's expense to eliminate 5 gallons of groundwater/stormwater infiltration/inflows for every 1 gallon of sewerage projected to be generated (based on average flows) by the project. Said fee shall be paid to the city prior to the beginning of construction for work authorized in approving the application. All such fees shall be kept in a separate dedicated account to be used specifically for the purpose of eliminating infiltration and inflows of groundwater and stormwater in the city's sanitary sewer system.

All I&I Option applications and approvals are reviewed independently and shall not set a precedent for future applications and approvals, with each petition is evaluated on its own merits.

Sec. 18-227 ELIGIBLE PROJECTS – Only the following are eligible to apply for an Infiltration & Inflow Waiver:

- a) all properties shown on the above referenced Sewer Extension Plan as being within the extension area (at such time as the city's wastewater treatment facility's design flow capacity has been reached)
- b) all properties not shown on the above referenced Sewer Extension Plan as being within the extension area, for the following specific uses:
 - i. for Residential uses which cannot be serviced by an on-site sanitary sewage system and which comply with at least one of the following criteria:
 - such use provides affordable housing (must be Chapter 40B qualified/eligible)
 - such use is located on the Water Resource Protection Area as identified in the Westfield Zoning Ordinance and Zoning Map (such use must still have the required 2 acre minimum lot sizes),
 - such use is to serve an area of multiple septic systems failures and certified by the Board of Health as requiring public sanitary sewerage as the only viable alternative.
 - ii. for Industrial/Commercial uses which comply with both of the following:
 - such uses increases the job and tax base of the community, and
 - such extension does not create residential access

Sec. 18-228 APPLICATION PROCEDURE - Applications for the Infiltration & Inflow Waiver shall:

- a) be made in writing to the City Council and filed with the City Clerk
- b) include:
 - i. detailed engineering plans and cost estimates of all required improvements, prepared and stamped by an insured professional engineer licensed by the state of Massachusetts,
 - ii. detailed calculations determining the amount of sewerage anticipated to be generated by the proposed use prepared and stamped by an insured professional engineer licensed by the state of Massachusetts,
 - iii. a study, prepared by a qualified professional, of the anticipated impacts of such extension on the future growth and development patterns of land in the area,
- c) be referred by the City Council to the City Engineer, Board of Public Works, Board of Health, Waste Water Treatment Plant and Planning Board for their review, comment and recommendation.

SEC. 18-229 APPROVAL - The City Council, by a 2/3 majority vote of its entire membership, may, at a Public Meeting (no Public Hearing is required), approve a petition for an extension, not in accordance and/or compliance with the approved Extension Plan when, in their opinion, they find all of the following:

- a) that such petition complies with the requirements of Section 18-227 and 18-228, and;
- b) that such petition will not promote additional development in the area of a nature or at a density which the City Council feels is unsuitable or undesirable, and;
- c) that, once the I&I improvements are completed, there will be available capacity at the Water Pollution Control Plant to accommodate the sewerage generated by the proposed use (the commencement of the proposed use may begin prior to the actual I&I improvements being made), and;
- d) that the cumulative total of all I&I options approved does not exceed the total treatment capacity (i.e. that capacity associated with I&I in excess of that required to be removed under the permit) of the Water Pollution Control Plant, and;
- e) that the granting of such petition is in the best interests of the health safety and welfare of the city and its residents.

Presented to the Mayor

For approval _____, 2006

Karen M. Fanion, City Clerk
Mayor

Approved by the Mayor

_____, 2006

Richard K. Sullivan, Jr.,

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 ensure an interconnected pedestrian system;
5. Ensuring that all development—including new construction, reconstruction or rehabilitation—provides adequate sidewalks.

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. Sidewalks typically include three parts: the street transition zone (sometimes called the planter/furniture zone), the pedestrian clearway (called the sidewalk in common usage), and the building transition zone. The **street transition zone** lies between the curb and the pedestrian clearway. It provides buffering for pedestrians from the street and may include street trees, planted areas, benches, lighting, signs, public art, etc. The **pedestrian clearway** is typically paved. It is intended for pedestrian movement and should remain clear of obstacles. The **building transition zone** provides a transition from the pedestrian clearway to buildings. It provides space for planting, street furniture including café tables, art, door swings and movement in and out of buildings, etc. The term sidewalk may also include 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 anticipated 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 for Pedestrian Clearways

- a. Pedestrian clearways shall be at least 3 feet in width and shall meet the requirements set forth in the Americans with Disabilities Act of 1990.
- b. Whenever possible, cross slope on pedestrian clearways shall not exceed 1:50
- c. 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.
- d. Gratings. If gratings are located within the pedestrian clearway, 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. Plans shall include, either within the corner or within the curb area immediately adjacent thereto, ramps allowing access to sidewalks and streets by variously-abled persons.
- b. The ramps referred to in Subsection 1.34 (a) shall be designed and constructed in a good and substantial manner in accordance with plans and/or specifications provided in an appropriate professional design standards manual. The particular plan to be used at a given intersection corner shall be appropriate to the location as determined in a review 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 of the 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 clearway. The pedestrian clearway shall maintain a cross slope of 1:50 across the entire driveway. The driveway apron should be located in the street transition zone between the pedestrian clearway and the roadway.
- c. Where the street transition zone does not provide adequate space to transition from the grade of the pedestrian clearway to the grade of the roadway, a “dropped driveway” may be used. In a “dropped driveway,” the pedestrian clearway on either side of the driveway is sloped downward to the driveway which is at street grade. Whenever possible, the slope from the pedestrian clearway to the dropped driveway shall not exceed ADA guidelines.

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.

1.39 Connectivity

- a. 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 exceptions, the developer shall 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.

This model sign bylaw is intended to show what is typically included in a sign bylaw. Because each community is different, sign bylaws should be developed to reflect the unique challenges and opportunities of each individual community. The model can be used as a menu which can be tailored to address the needs and character of each individual community and district.

MODEL SIGN BYLAW

SECTION ____ . SIGNS

Any exterior sign or advertising device, or any permanent interior sign or advertising device situated, designed or intended to be viewed from the out of doors, which is hereafter erected or maintained shall, except as expressly provided, conform to the following requirements.

1. SIGN PERMIT

- a. No sign or advertising display shall be erected, altered or enlarged until a Sign Permit has been issued by the Building Inspector. Such permit shall only be issued if the sign complies or will comply with all applicable provisions of these bylaws. The permit and/or permit number shall be affixed to the sign in the manner prescribed by the Building Inspector.
- b. Exemptions - The following signs shall be permitted without a sign permit:
 - i. Signs posted by governmental agencies or pursuant to governmental statute, order or regulation.
 - ii. Temporary and permanent traffic signs and signals installed by the town, county or state for the purpose of directing and regulating the flow of traffic.
 - iii. Temporary traffic signs installed by a utility for the purpose of directing and regulating the flow of traffic while performing work in the right of way.
 - iv. Signs indicating public transportation stops when installed by the township or a public transportation utility.
 - v. Historical tablets, cornerstones, memorial plaques which are installed by government agencies or civil or religious organizations.
 - vi. Flags or emblems of religious, educational, civic or governmental organizations.
 - vii. Directional signs necessary for the safety and direction of residents, employees, customers, and visitors (whether in a vehicle or on foot) identifying parking areas, loading zones, entrances, exits and similar locations.
 - viii. Warning and no-trespassing signs.
 - ix. The name and number plates identifying residents and affixed to a house, apartment or mailbox and lawn signs identifying residents.
 - x. Signs which are an integral part of vending machines, including gasoline pumps, soda machines and ATM machines.
 - xi. Real estate signs, announcing the sale, rental or lease of the premises on which the sign is located.
 - xii. Temporary sale signs attached to a window.
 - xiii. Temporary signs for advertising public functions or fundraising events for charitable or religious organizations.
 - xiv. Temporary signs pertaining to campaigns, sales, promotions, drives or events of political, civic, philanthropic, educational or religious organizations.

xv. Signs of builders, electrical contractors, painters and other artisans erected at project sites.

2. PROHIBITED SIGNS

- a. Signs which intend to imitate or otherwise cause confusion with existing signs erected by any governmental board, body or agency.
- b. Sign, or its illumination, of any type which by reason of its location, shape, size, text or color interferes with traffic or presents a hazard as determined by the Zoning Enforcement Officer, after consultation with the town Engineer and Chief of Police.
- c. Roof signs.
- d. Off-premised advertising signs (signs advertising a business, service or product not regularly produced or available on the parcel upon which the sign is located), fixed or portable, unless otherwise specifically permitted in this bylaw.
- e. Signs causing interference with television or radio reception.
- f. Any commercial sign or banner spanning a public street, except for banners spanning a public street publicizing town sponsored or supported events.
- g. Signs placed or attached or supported on awnings, trees, fences, utility poles or light poles, or signs attached to other signs. Nothing herein contained is intended to prohibit the placement of signs directing traffic or identifying various locations within a lot or parcel on light poles and utility poles erected therein.
- h. Signs placed upon motor vehicles which are continuously or repeatedly parked in conspicuous location to serve as a sign. Specifically exempted from this section are those signs, nameplates or letters affixed to or printed on commercial vehicles regularly used in the course of business for regular deliveries, pickups or other such purposes and/or in compliance with the provisions of the Massachusetts Commercial Drivers License Laws. Specifically included are signs on vehicles, trailers and the like which have as their prime purpose the advertising of goods, wares and services of a business which are maintained in a stationary manner at one (1) or more locations for extended periods of time.
- i. Any series of two (2) or more signs placed along a street or highway carrying an advertising message, part of which is contained on each sign except for where publicizing a town sponsored or supported event.
- j. Banners, except for commercial and institutional activities supported or sponsored by the township, located on corner buildings two (2) or more stories in height. Banners may be twice the size of projecting signs and may project three (3) feet from a wall which includes a space of one (1) foot between the wall and the banner.

3. GENERAL REQUIREMENTS THAT APPLY TO ALL DISTRICTS (unless otherwise specified)

- a. Any signs not specifically permitted are hereby prohibited.
- b. Pre-existing Nonconforming Signs may not be changed, extended or altered unless:
 - i. the change brings the sign into conformity with the provisions of this chapter, or
 - ii. said change is limited to changing the sign letters or symbols and/or changing panels and does not alter the structure of the sign itself.
- c. No signs, except special events signs, shall be placed on private or public property except for the purpose of identifying the use or uses actually conducted upon the premises upon which such sign are erected and for no other purpose.
- d. No permitted signs may be placed on town property without the approval of the Select Board/city Council and Department of Public Works.
- e. No sign shall be located in such a manner as to materially impede the view of any street or intersection.

Model Stormwater Management Ordinance

Prepared by Pioneer Valley Planning Commission

1.0 Erosion and Sediment Control For Stormwater Management

1.1 PURPOSE AND AUTHORITY

1.11 Purpose

a. The purpose of this ordinance is to better manage land development in order to protect, maintain, and enhance the public health, safety, and general welfare of the citizens of [Name of Town] by establishing minimum requirements and procedures to control the adverse impacts associated with stormwater runoff.

b. The proper management of stormwater runoff will meet the following objectives:

Reduce the adverse water quality impacts of stormwater discharges to rivers, lakes, reservoirs and streams in order to attain federal water quality standards;

Prevent the discharge of pollutants, including hazardous chemicals, into stormwater runoff;

Minimize the volume and rate of stormwater which is discharged, to rivers, streams, reservoirs, lakes and combined sewers that flows from any site during and following development;

Prevent erosion and sedimentation from land development, and reduce stream channel erosion caused by increased runoff;

Provide for the recharge of groundwater aquifers and maintain the base flow of streams;

Provide stormwater facilities that are attractive, maintain the natural integrity of the environment, and are designed to protect public safety;

Maintain or reduce pre-development runoff characteristics after development to the extent feasible;

Minimize damage to public and private property from flooding;

Ensure that these management controls are properly maintained.

1.12 Authority

The [Name of Town] Department of Public Works [or other entity to be determined] shall administer, implement and enforce this ordinance. Any powers granted to or duties imposed upon the Department of Public Works may be delegated in writing by the Board of Public Works to employees or agents of the Department of Public Works.

1.2 DEFINITIONS

The following definitions describe the meaning of the terms used in this Ordinance:

Authorized Enforcement Agency: The Department of Public Works [or other entity to be determined], its employees or agents designated to enforce this ordinance.

"Adverse impact" means any deleterious effect on waters or wetlands, including their quality, quantity, surface area, species composition, aesthetics or usefulness for human or natural uses which are or may potentially be harmful or injurious to human health, welfare, safety or property, to biological productivity, diversity, or stability or which unreasonably interfere with the enjoyment of life or property, including outdoor recreation.

"Best management practices (BMP)" are structural or biological devices that temporarily store or treat urban stormwater runoff to reduce flooding, remove pollutants, and provide other amenities. They can also be non-structural practices that reduce pollutants at their source. BMPs are described in a stormwater design manual, Stormwater Management, Volume Two: Stormwater Technical Handbook (March, 1997, Mass. Department of Environmental Protection, as updated or amended).

"Construction activity" is disturbance of the ground by removal of vegetative surface cover or topsoil, grading, excavation, clearing or filling.

"Design storm" is a rainfall event of specified size and return frequency that is used to calculate the runoff volume and peak discharge rate to a BMP.

"Detention" is the temporary storage of storm runoff in a BMP, which is used to control the peak discharge rates, and which provides gravity settling of pollutants.
extended detention

"Disturbance" is any land clearing, grading, bulldozing, digging or similar activities.

"Drainage area" means that area contributing runoff to a single point measured in a horizontal plane, which is enclosed by a ridgeline.

"Drywell" is similar to an infiltration trench but smaller with inflow from a pipe; commonly covered with soil and used for drainage areas of less than 1 acre such as roadside inlets and rooftops runoff.

"Easement" means a grant or reservation by the owner of land for the use of such land by others for a specific purpose or purposes, and which must be included in the conveyance of land affected by such easement.

"Flow attenuation" means prolonging the flow time of runoff to reduce the peak discharge.

"Hydrology model" may include one of the following:

TR-20, a watershed hydrology model developed by the Natural Resources Conservation Service act that is used to route a design storm hydrograph through a pond;

TR 55, or Technical Release 55, "Urban Hydrology for Small Watersheds" is a publication developed by the Natural Resources Conservation Service to calculate stormwater runoff and an aid in designing detention basins;

Hydrocad.

"Impervious surfaces" are areas, such as pavement or rooftops, which prevent the infiltration of water into the soil.

"Infiltration" is the downward movement of water from the surface to the subsoil.

"Infiltration trench" is a stormwater management excavation filled with aggregate which removes both soluble and particulate pollutants. Trenches are not intended to trap coarse sediments.

"Outfall" is the terminus of a storm drain or other stormwater structure where the contents are released.

"Peak discharge" is the maximum instantaneous rate of flow during a storm, usually in reference to a specific design storm event

"Permeable soils" are soil materials with a sufficiently rapid infiltration rate so as to greatly reduce or eliminate surface and stormwater runoff. These soils are generally classified as NRCS hydrologic soil types A and B.

"Person" is any individual, group of individuals, association, partnership, corporation, company, business, organization, trust, estate, administrative agency, public or quasi-public corporation or body, the Commonwealth or political subdivision thereof.

"Retention" is the holding of runoff in a basin without release except by means of evaporation, infiltration, or emergency bypass.

"Start of construction" is the first land-disturbing activity associated with a development, including land preparation such as: clearing, grading and filling; installation of streets and walkways; excavation for basements; footings, piers or foundations; erection of temporary forms; and installation of accessory buildings such as garages.

"Swale" is a natural depression or wide shallow ditch used to temporarily store, route, or filter runoff.

1.3 APPLICABILITY

1.31 Applicability

Prior to the issuance of any site plan approval or development permit for any proposed development listed below, a stormwater management permit, or a waiver of the requirement for a stormwater management permit, must be approved by the applicable Special Permit Granting Authority. No person shall, on or after the effective date of the ordinance, initiate any land clearing, land grading, earth moving or development activities without first complying with this ordinance. The following uses and activities shall be required to submit drainage reports, plans, construction drawings, specifications and as-constructed information in conformance with the requirements of this ordinance:

- a. Subdivisions and construction activities of any kind disturbing greater than one (1) acre.
- b. Multi-family residential developments involving four or more units;
- c. Any new commercial, industrial, and institutional structures under the same ownership, with at least 5,000 square feet of gross floor area, 10,000 square feet of impervious surface, or that require 10 or more parking spaces.

- d. Redevelopment or additions to existing commercial, industrial, and institutional uses which result in an additional impervious surface area or gross floor area of greater than 5,000 square feet, or which results in an increase of 10 or more parking spaces.
- e. Development or redevelopment involving multiple separate activities in discontinuous locations or on different schedules if the activities are part of a larger common plan of development that all together disturbs one or more acres.

[NOTE: B-E above are recommended but not required under NPDES Phase II]

1.32 Exemptions

To prevent the adverse impacts of stormwater runoff, the stormwater performance standards in this bylaw must be met at new development sites. These standards apply to construction activities as described under Applicability above. The following activities are exempt from the requirements for submittal and approval of a stormwater management plan under this bylaw, but must comply with the stormwater performance standards in this bylaw:

- a. Any agricultural activity which is consistent with an approved soil conservation plan prepared or approved by the Natural Resource Conservation Service;
- b. Any logging which is consistent with a timber management plan approved under the Forest Cutting Practices Act by Massachusetts Department of Environmental Management;
- c. Additions or modifications to existing single family structures;
- d. Developments that do not disturb one (1) acre or more of land, provided that they are not part of a larger common development plan;
- e. Repairs to any stormwater treatment system deemed necessary by the [town/city] Department of Public Works;
- f. Any emergency activity that is immediately necessary for the protection of life, property or the environment, as determined by the Department of Public Works; and
- g. Single family residential uses disturbing less than one (1) acre.

1.33 Stormwater Design Manual

A stormwater design manual, Stormwater Management, Volume Two: Stormwater Technical Handbook (March, 1997, Mass. Department of Environmental Protection, as updated or amended) is hereby incorporated by reference as part of this ordinance, and shall furnish additional policy, criteria and information including specifications and standards, for the proper implementation of the requirements of this ordinance.

This manual includes a list of acceptable stormwater treatment practices, including the specific design criteria for each stormwater practice. The manual may be updated and expanded from time to time, based on improvements in engineering, science, monitoring and local maintenance experience, at the discretion of the [Name of Town] Department of Public Works or Massachusetts Department of Environmental Protection. Stormwater treatment practices that are designed and constructed in accordance with these design and sizing criteria will be presumed to meet the minimum water quality performance standards.

1.4 Permit Procedures and Requirements

1.41 Permit Required

No land owner or land operator shall receive any of the building, grading, or other land development permits required for land disturbance activities, and no land owner shall commence land disturbance activities, without approval of a Stormwater Management Permit from the *[Administrative Entity]* and meeting the requirements of this ordinance.

1.42 Application Requirements

Application for approval of a Stormwater Management Permit shall include the following:

- a. A stormwater management plan or an application for waiver shall be submitted to the *[Name of Town Administrative Entity]* for review and approval for any proposed development specified in Section 3.1. Three copies of the stormwater management plan shall be submitted, and clearly labeled, along with other documents required in this zoning ordinance for site plan review. The plan shall contain supporting computations, drawings, and sufficient information describing the manner, location, and type of measures in which stormwater runoff will be managed from the entire development. The plan shall serve as the basis for all subsequent construction.
- b. An erosion and sediment control plan, which shall contain sufficient information to describe the nature and purpose of the proposed development.
- c. ongoing maintenance agreement
- d. non-refundable permit review fee

The applicant may request, and the *[Name of Town Administrative Entity]* may grant, a waiver from any information requirements it judges to be unnecessary to the review of a particular plan.

1.43 Procedures for Review and Approval of Stormwater Permits

- a. The procedures for review and approval of stormwater management permits shall be consistent with *(review procedures of Administrative Entity)*, as appropriate to the use.
- b. The *[Name of Town Administrative Entity]* shall refer copies to the stormwater management permits to the City Engineer for review, and shall consider any comments submitted by the City Engineer during the review period.
- c. The *[Name of Town Administrative Entity]* shall hold a public hearing within twenty-one (21) days of the receipt of a complete application and shall take final action within twenty-one (21) days from the close of the hearing unless such time is extended by agreement between the applicant and *[insert appropriate board or department]*. Notice of the public hearing shall be given by publication in a local paper of general circulation, by posting and by first-class mailings to abutters at least seven (7) days prior to the hearing.

1.44 Criteria for Review of Stormwater Permits

In addition to other criteria used by the [Name of Town Administrative Entity] in making permit decisions, for the uses specified in this ordinance, the [Name of Town Administrative Entity] must also find that the Stormwater Management Plan submitted with the permit application meets the following criteria:

- a. the Stormwater Management Plan and the Erosion and Sediment Control Plan are consistent with the Purposes and Objectives of this Bylaw;
- b. the Stormwater Management Plan meets the Performance Standards described in this bylaw;
- c. the Erosion and Sediment Control plan must meet the Design Requirements in this bylaw.

1.45 [Name of Town Administrative Entity] Action

The [Name of Town Administrative Entity] action, rendered in writing, shall consist of either:

- a. Approval of the Stormwater Management Permit Application based upon determination that the proposed plan meets the purposes in this bylaw and the standards in this bylaw and will adequately protect the water resources of the community and is in compliance with the requirements set forth in this bylaw;
- b. Approval of the Stormwater Management Permit Application subject to any conditions, modifications or restrictions required by the Board which will ensure that the project meets the purposes in this bylaw and the standards in this bylaw and adequately protects water resources, set forth in this bylaw;
- c. Disapproval of the Stormwater Management Permit Application based upon a determination that the proposed plan, as submitted, does not meet the purposes in this bylaw and the standards in this bylaw or adequately protect water resources, as set forth in this bylaw.

Failure of the Board to take final action upon an Application within the time specified above shall be deemed to be approval of said Application. Upon certification by the City Clerk that the allowed time has passed without Board action, the Board must issue a Stormwater Management Permit.

1.46 Inspections

No Plan will be approved without adequate provision for inspection of the property before development activity commences. The applicant shall arrange with the [Name of Town Administrative Entity] for scheduling the following inspections:

- a. Initial inspection: prior to approval of any plan
- b. Erosion Control Inspections: after site clearing, rough grading and final grading to ensure erosion control practices are in accord with the plan.
- c. Bury inspection: prior to backfilling of any underground drainage or stormwater conveyance structures;

- d. Final Inspection: when all work, including construction of stormwater management facilities and landscaping have been completed. Final inspection shall include a full, dated TV inspection of all stormwater pipes installed.

The *[Name of Town Administrative Entity]* or its agent shall inspect the work and either approve it or notify the applicant in writing in what respects there has been a failure to comply with the requirements of the approved plan. Any portion of the work which does not comply shall be promptly corrected by the applicant or the applicant will be subject to the bonding provisions of this bylaw or the penalty provisions of this bylaw. The *[city/town]* may conduct random inspections to ensure effective control of erosion and sedimentation during all phases of construction.

1.47 Right-of-Entry for Inspection

When any new drainage control facility is installed on private property, or when any new connection is made between private property and a public drainage control system or sanitary sewer, the filing of an application shall be deemed as the property owner's permission to the *[Name of Town Administrative Entity]* for the right to enter the property at reasonable times and in a reasonable manner for the purpose of the inspection. This includes the right to enter a property when it has a reasonable basis to believe that a violation of this ordinance is occurring or has occurred, and to enter when necessary for abatement of a public nuisance or correction of a violation of this ordinance.

1.48 Application Review Fees

The fee for review of any land development application shall be based on the amount of land to be disturbed at the site and the fee structure established by the *[Name of Town Administrative Entity]*. All of the monetary contributions shall be credited to the utility enterprise fund, and shall be made prior to issuance of any building permit for development.

1.5 The Stormwater Management and Erosion Control Plan

1.51 Contents of the Stormwater Management and Erosion Control Plan

The application for a stormwater management permit shall consist of submittal of a stormwater management and erosion control plan, prepared by a professional engineer licensed by the Commonwealth of Massachusetts, which meets the design requirements provided by this Ordinance. The plan shall include sufficient information to evaluate the environmental characteristics of the affected areas, the potential impacts of the proposed development on water resources; and the effectiveness and acceptability of measures proposed for managing stormwater runoff. The Plan must be designed to meet the Massachusetts Stormwater Management Standards as set forth in this ordinance and the DEP Stormwater Management Handbook Volumes I and II. The applicant shall certify on the drawings that all clearing, grading, drainage, construction, and development shall be conducted in strict accordance with the plan. The minimum information submitted for support of a stormwater management plan shall be as follows:

- a. A locus map,
- b. The existing zoning, and land use at the site,

- c. The proposed land use,
- d. The location(s) of existing and proposed easements,
- e. The location of existing and proposed utilities,
- f. The site's existing & proposed topography with contours at 2 foot intervals,
- g. The existing site hydrology,
- h. A description & delineation of existing stormwater conveyances, impoundments, and wetlands on or adjacent to the site or into which storm water flows.
- i. A delineation of 100-year flood plains, if applicable
- j. Estimated seasonal high groundwater elevation (November to April) in areas to be used for storm water retention, detention, or infiltration.
- k. The existing and proposed vegetation and ground surfaces with runoff coefficient for each,
- l. A drainage area map showing pre and post construction watershed boundaries, drainage area and storm water flow paths,
- m. A description and drawings of all components of the proposed drainage system including:
 - i. locations, cross sections, and profiles of all brooks, streams, drainage swales and their method of stabilization,
 - ii. all measures for the detention, retention or infiltration of water,
 - iii. all measures for the protection of water quality,
 - iv. the structural details for all components of the proposed drainage systems and storm water management facilities,
 - v. notes on drawings specifying materials to be used, construction specifications, and typicals, and
 - vi. expected hydrology with supporting calculations.
 - vii. Proposed improvements including location of buildings or other structures, impervious surfaces, and drainage facilities, if applicable,
 - viii. A description of construction and waste materials expected to be stored on-site, and a description of controls to reduce pollutants from these materials including storage practices to minimize exposure of the materials to storm water, and spill prevention and response.
 - ix. Timing, schedules, and sequence of development including clearing, stripping, rough grading, construction, final grading, and vegetative stabilization, and
 - x. A maintenance schedule for the period of construction

1.52 Stormwater Management Performance Standards

1.521 Minimum Control Requirements

Projects must meet the Standards of the Massachusetts Stormwater Management Policy. These Standards are:

- a. No new stormwater conveyances (e.g. outfalls) may discharge untreated stormwater directly to or cause erosion in wetlands or water of the Commonwealth.
- b. Stormwater management systems must be designed so that post-development peak discharge rates do not exceed pre-development peak discharge rates.
- c. Loss of annual recharge to groundwater should be minimized through the use of infiltration measures to the maximum extent practicable. The annual recharge from the post-development site should approximate the annual recharge rate from the pre-development or existing site conditions, based on soil types.
- d. For new development, stormwater management systems must be designed to remove 80% of the average annual load (post development conditions) of Total Suspended Solids (TSS). It is presumed that this standard is met when:
 - i. Suitable nonstructural practices for source control and pollution prevention and implemented;
 - ii. Stormwater management best management practices (BMPs) are sized to capture the prescribed runoff volume; and
 - iii. Stormwater management BMPs are maintained as designed.
- e. E. Stormwater discharges from areas with higher potential pollutant loads require the use of specific stormwater management BMPs (see Stormwater Management Volume I: Stormwater Policy Handbook). The use of infiltration practices without pretreatment is prohibited.
- f. F. Stormwater discharges to critical areas must utilize certain stormwater management BMPs approved for critical areas (see Stormwater Management Volume I: Stormwater Policy Handbook). Critical areas are Outstanding Resource Waters (ORWs), shellfish beds, swimming beaches, cold water fisheries and recharge areas for public water supplies.
- g. G. Redevelopment of previously developed sites must meet the Stormwater Management Standards to the maximum extent practicable. However, if it is not practicable to meet all the Standards, new (retrofitted or expanded) stormwater management systems must be designed to improve existing conditions.
- h. H. Erosion and sediment controls must be implemented to prevent impacts during disturbance and construction activities.

- i. All stormwater management systems must have an operation and maintenance plan to ensure that systems function as designed.

When the proposed discharge may have an impact upon a sensitive receptor, including streams, storm sewers, and/or combined sewers, the [Name of Town Administrative Entity] may require an increase in these minimum requirements, based on existing stormwater system capacity.

1.53 Stormwater Management Measures

- a. Stormwater management measures shall be required to satisfy the minimum control requirements and shall be implemented in the following order of preference:

Infiltration, flow attenuation, and pollutant removal of runoff on-site to existing areas with grass, trees, and similar vegetation and through the use of open vegetated swales and natural depressions;

Use of stormwater on-site to replace water used in industrial processes or for irrigation; Stormwater detention structures for the temporary storage of runoff which is designed so as not to create a permanent pool of water; and

Stormwater retention structures for the permanent storage of runoff by means of a permanent pool of water.

Retention and evaporation of stormwater on rooftops or in parking lots;

- b. Infiltration practices shall be utilized to reduce runoff volume increases. A combination of successive practices may be used to achieve the applicable minimum control requirements. Justification shall be provided by the applicant for rejecting each practice based on site conditions.

- c. Best Management Practices shall be employed to minimize pollutants in stormwater runoff prior to discharge into a separate storm drainage system or water body.

- d. All stormwater management facilities shall be designed to provide an emergency overflow system, and incorporate measures to provide a non-erosive velocity of flow along its length and at any outfall.

- e. The designed release rate of any stormwater structure shall be modified if any increase in flooding or stream channel erosion would result at a downstream dam, highway, structure, or normal point of restricted stream flow.

1.54 Specific Design Criteria

Additional policy, criteria, and information including specifications and design standards may be found in the Stormwater Design Manual.

- a. Infiltration systems

Infiltration systems shall be equipped with clean stone and or filter fabric adjacent to the soil or other sediment removal mechanisms;

Infiltration systems greater than 3 feet deep shall be located at least 10 feet from basement walls;

Due to the potential for groundwater contamination from dry wells, they shall not be an acceptable method for management runoff containing pollutants;

Infiltration systems designed to handle runoff from commercial or industrial impervious parking areas shall be a minimum of 100 feet from any drinking water supply well;

Infiltration systems shall not be used as sediment control basins during construction unless specific plans are included to restore or improve the basin surface;

Infiltration basins shall be constructed with a three foot minimum separation between the bottom of the structure and the seasonal high groundwater elevation, as determined by a certified soil evaluator; and

Provisions shall be made for safe overflow passage, in the event of a storm which exceeds the capacity of an infiltration system.

b. Retention and detention ponds shall be designed and constructed in accordance with the criteria of the Stormwater Management, Volume Two: Stormwater Technical Handbook (March, 1997, Mass. Department of Environmental Protection, as updated or amended).

c. The applicant shall give consideration in any plan to incorporating the use of natural topography and land cover such as natural swales, and depressions as they exist prior to development to the degree that they can accommodate the additional flow of water.

d. The [Name of Town Administrative Entity] shall give preference to the use of swales in place of the traditional use of curbs and gutters based on a case by case review of stormwater management plans by the City Engineer and Department of Public Works.

e. The applicant shall consider public safety in the design of any stormwater facilities. The banks of detention, retention, and infiltration basins shall be sloped at a gentle grade into the water as a safeguard against personal injury, to encourage the growth of vegetation and to allow the alternate flooding and exposure of areas along the shore. Basins shall have a 4:1 slope to a depth two feet below the control elevation. Side slopes must be stabilized and planted with vegetation to prevent erosion and provide pollutant removal. The banks of detention and retention areas shall be designed with sinuous rather than straight shorelines so that the length of the shoreline is maximized, thus offering more space for the growth of vegetation;

f. Where a stormwater management plan involves direction of some or all runoff off of the site, it shall be the responsibility of the applicant to obtain from adjacent property owners any easements or other necessary property interests concerning flowage of water. Approval of a stormwater management plan does not create or affect any such rights.

g. All applicants for projects which involve the storage or use of hazardous chemicals shall incorporate handling and storage "best management practices" that prevent such chemicals from contaminating runoff discharged from a site into infiltration systems, receiving water bodies or storm drains, and shall include a list of such chemicals in the application.

h. Runoff from parking lots shall be treated by oil and water separators or other controls to remove oil and sediment;

i. The basic design criteria methodologies, and construction specifications, subject to the approval of the Department of Public Works and City Engineer, shall be those generally found in the most current edition of the Stormwater Management, Volume Two: Stormwater Technical Handbook (March, 1997, Mass. Department of Environmental Protection, as updated or amended).

1.55 Design Requirements for Erosion and Sediment Control Plan

1.551 The design requirements of the Erosion and Sediment Control Plan are:

- a. Minimize total area of disturbance
- b. Sequence activities to minimize simultaneous areas of disturbance.
- c. Minimize peak rate of runoff in accordance with the MA DEP Stormwater Policy.
- d. Minimize soil erosion and control sedimentation during construction. Prevention of erosion is preferred over sedimentation control.
- e. Divert uncontaminated water around disturbed areas
- f. Maximize groundwater recharge.
- g. Install, and maintain all Erosion and Sediment Control measures in accordance with the manufacturers specifications and good engineering practices
- h. Prevent off-site transport of sediment.
- i. Protect and manage on and off-site material storage areas (overburden and stockpiles of dirt, borrow areas, or other areas used solely by the permitted project are considered a part of the project).
- j. Comply with applicable Federal, State and local laws and regulations including waste disposal, sanitary sewer or septic system regulations, and air quality requirements, including dust control
- k. Prevent adverse impact from the proposed activities to habitats mapped by the Massachusetts Natural Heritage & Endangered Species Program as Endangered, Threatened or of Special concern, Estimated Habitats of Rare Wildlife and Certified Vernal Pools, and Priority Habitats of Rare Species.
- l. Institute interim and permanent stabilization measures. The measures shall be instituted on a disturbed area as soon as practicable but no more than 14 days after construction activity has temporarily or permanently ceased on that portion of the site.
- m. Properly manage on-site construction and waste materials.

- n. Prevent off-site vehicle tracking of sediments.

1.56 Maintenance

1.561 Operation, Maintenance and Inspection Agreement

a. Prior to issuance of any building permit for which stormwater management is required, the *[Name of Town Administrative Entity]* shall require the applicant or owner to execute an operation, maintenance and inspection agreement binding on all subsequent owners of land served by the private stormwater management facility. The agreement shall be designed to ensure that water quality standards are met in all seasons and throughout the life of the system. Such agreement shall provide for access to the facility at reasonable times for regular inspections by the city or its authorized representative and for regular or special assessments of property owners to ensure that the facility is maintained in proper working condition to meet design standards and any provision established. The agreement shall include:

The name(s) of the owner(s) for all components of the system.

Maintenance agreements that specify:

- (a) The names and addresses of the person(s) responsible for operation and maintenance.
- (b) The person(s) responsible for financing maintenance and emergency repairs.
- (c) A Maintenance Schedule for all drainage structures, including swales and ponds.
- (d) A list of easements with the purpose and location of each.
- (e) The signature(s) of the owner(s).

Stormwater management easements as necessary for:

- (a) Access for facility inspections and maintenance.
- (b) Preservation of stormwater runoff conveyance, infiltration, and detention areas and facilities, including flood routes for the 100-year storm event.
- (c) Direct maintenance access by heavy equipment to structures requiring regular cleanout.

iv. Stormwater management easement requirements:

The purpose of each easement shall be specified in the maintenance agreement signed by the property owner.

Stormwater management easements are required for all areas used for off-site stormwater control, unless a waiver is granted by the City.

Easements shall be recorded with the Registry of Deeds prior to issuance of a Certificate of Completion.

v. Changes to Operation and Maintenance Plans

The owner(s) of the stormwater management system must notify the *[Name of Town Administrative Entity]* of changes in ownership or assignment of financial responsibility. The maintenance schedule in the Maintenance Agreement may be amended to achieve the purposes of this by-law by mutual agreement of the *[Name of Town Administrative Entity]* and the Responsible Parties. Amendments must be in writing and signed by all Responsible Parties. Responsible Parties must include owner(s), persons with financial responsibility, and persons with operational responsibility.

b. The agreement shall be recorded by the applicant and/or owner in the land records of the Registry of Deeds.

c. The agreement shall also provide that, if after notice by the City Engineer to correct a violation requiring maintenance work, satisfactory corrections are not made by the owner(s) within thirty days, the *[Name of Town Administrative Entity]* may perform all necessary work to place the facility in proper working condition. The owner(s) of the facility shall be assessed the cost of the work and any penalties.

1.562 Maintenance Responsibility

a. The owner of the property on which work has been done pursuant to this Ordinance for private stormwater management facilities, or any other person or agent in control of such property, shall maintain in good condition and promptly repair and restore all grade surfaces, walls, drains, dams and structures, vegetation, erosion and sediment control measures and other protective devices. Such repairs or restoration and maintenance shall be in accordance with approved plans.

b. A maintenance schedule shall be developed for the life of any stormwater management facility and shall state the maintenance to be completed, the time period for completion, and who shall be legally responsible to perform the maintenance. This maintenance schedule shall be printed on the stormwater management plan.

c. Records of installation and maintenance

d. Failure to maintain practices

1.57 Performance Bond

The *[Name of Town Administrative Entity]* shall require from the developer a surety or cash bond, irrevocable letter of credit, or other means of security acceptable to the *[Name of Town Administrative Entity]* prior to the issuance of any building permit for the construction of a development requiring a stormwater management facility. The amount of the security shall not be less than the total estimated construction cost of the stormwater management facility. The bond so required in this section shall include provisions relative to forfeiture for failure to complete work specified in the approved stormwater management plan, compliance with all of the provisions of this Ordinance and other applicable laws and regulations, and any time limitations. The bond shall not be fully released without a final inspection of the completed work by the City Engineer, submission of "As-built" plans, and certification of completion by the *[Name of Town Administrative Entity]* of the stormwater management facilities being in compliance with the approved plan and the provisions of this Ordinance.

1.58 Enforcement and Penalties

1.581 Violations

Any development activity that has commenced or is conducted contrary to this Ordinance may be restrained by injunction or otherwise abated in a manner provided by law.

1.582 Notice of Violation

When the [Name of Town Administrative Entity] determines that an activity is not being carried out in accordance with the requirements of this Ordinance, it shall issue a written notice of violation to the owner of the property. The notice of violation shall contain:

- a. the name and address of the owner applicant;
- b. the address when available or the description of the building, structure, or land upon which the violation is occurring;
- c. a statement specifying the nature of the violation;
- d. a description of the remedial measures necessary to bring the development activity into compliance with this Ordinance and a time schedule for the completion of such remedial action;
- e. a statement of the penalty or penalties that shall or may be assessed against the person to whom the notice of violation is directed;
- f. a statement that the determination of violation may be appealed to the municipality by filing a written notice of appeal within fifteen (15) days of service of notice of violation.

1.583 Stop Work Orders

Persons receiving a notice of violations will be required to halt all construction activities. This “stop work order” will be in effect until the [Name of Town Administrative Entity] confirms that the development activity is in compliance and the violation has been satisfactorily addressed. Failure to address a notice of violation in a timely manner can result in civil, criminal, or monetary penalties in accordance with the enforcement measures authorized in this Ordinance.

1.584 Criminal and Civil Penalties

Any person who violates any provision of this ordinance, valid regulation, or the terms or conditions in any permit or order prescribed or issued thereunder, shall be subject to a fine not to exceed \$300.00 for each day such violation occurs or continues or subject to a civil penalty, which may be assessed in an action brought on behalf of the City in any court of competent jurisdiction.

1.585 Non-Criminal Disposition

As an alternative to criminal prosecution or civil action, the City of Westfield may elect to utilize the non-criminal disposition procedure set forth in [Name of Town] ordinances. The _____ shall be the enforcing entity. The penalty for the 1st violation shall be up to \$100. The penalty for the 2nd violation shall be up to \$200. The penalty for the 3rd and subsequent violations shall be \$ 300.00. Each day or part thereof that such violation occurs or continues shall constitute a separate offense.

1.586 Restoration of Lands

Any violator may be required to restore land to its undisturbed condition. In the event that restoration is not undertaken within a reasonable time after notice, the [Name of Enforcement Entity] may take necessary corrective action, the cost of which shall become a lien upon the property until paid.

1.587 Holds on Occupancy Permits

Occupation permits will not be granted until corrections to all stormwater practices have been made and accepted by the [Name of Town Administrative Entity].

1.6 Severability

The invalidity of any section or provision of this Ordinance shall not invalidate any other section or provision thereof.

- f. All height limitations shall be measured from ground level to the highest part of the sign or its supporting structure, whichever is higher.
- g. The maximum height for freestanding signs, unless otherwise provided, shall not exceed fifteen (15) feet above ground level.
- h. Except where specifically prohibited, freestanding and projecting signs may be double-faced, and the maximum sign area shall apply to each side. The area of the sign shall include each and every part of the sign, including moldings and frames. Where the sign is supported by a post or pylon whose surface is being used for advertising purposes, the area of this post, pylon or other supporting members shall be considered as part of the total area and items of information.
- i. Wherever the message on a wall sign is divided between a number of panels or parts, the total area of all of the panels or parts shall be considered as one (1) sign, and where a sign consists of individual numbers or letters, the area of the smallest rectangle or rectangles which can collectively enclose all of the letters or numbers shall be the total sign area.
- j. Wall signs erected flat against the side of a building shall be within the sign band area.
- k. Every property shall be required to place their street address number(s) in four (4) inch high numbers on, or adjacent to, the entrance door. Commercial and Industrial uses shall be required to place their street address number(s) on any free standing ground signs.
- l. The supporting members for any pole sign, projecting sign, or any other sign shall be in acceptable proportion to the size of the sign.
- m. No sign shall be erected so as to obstruct any door, window or fire escape on a building.
- n. No more than one sign indicating the meetings and existence of any civic organization may be erected within a street right-of-way at each boundary line or each gateway of the City/Town. Said sign shall not exceed 25 square feet in area.
- o. If lighting is provided for a sign, the source of light shall be either from within the sign or shall be white light exterior to the sign and shielded so as prevent direct glare from the light source onto any public street or onto any adjacent property, unless otherwise permitted elsewhere in this bylaw.
- p. In any district one unlighted temporary sign offering premises for sale or lease for each parcel in one ownership shall be permitted, provided that it shall not exceed six square feet in surface area; and it shall be set back at least 10 feet from the street lot line or 1/2 of the building setback distance whichever is less.
- q. Temporary signs for advertising public functions or fundraising events for charitable or religious organizations shall be permitted for a period of twenty-one (21) days prior to and during the event and shall be removed within five (5) days after the event. The sign shall be non-illuminated, not larger than sixteen (16) square feet in area, not exceeding eight (8) feet in height and may be erected flat against a building or freestanding. This does not apply to banner signs.
- r. Temporary sale signs painted or attached to a window which must be removed at the expiration of the event sale for which it was erected or posted. Temporary signs may be erected or posted up to fourteen (14) days prior to the event or sale. Temporary sales signs must identify the sale date start and end. No more than twenty (20) percent of the square footage of any single window or single window display area shall be devoted to signs or other advertising material attached thereto or otherwise exposed to the public view.
- s. Temporary signs pertaining to campaigns, sales, promotions, drives or events of political, civic, philanthropic, educational or religious organizations shall be permitted provided such signs comply with the following:
 - i. In all Districts such signs:

1. shall not exceed one sign per candidate/cause per lot frontage (signs that are different but substantially equivalent for the same candidate/cause shall be considered the same sign)
 2. shall not exceed a size of six (6) square feet on each side, excluding incidental supporting frames or structures,
 3. shall not be any closer than ten (10) feet from any lot line,
 4. shall not be any higher (the top) than three (3) feet from the ground,
 5. may not be displayed on a building or structure unless said building or structure is the headquarters or chief office of the candidate or organization (said wall sign shall conform to the wall sign criteria for that Zoning District within which it is located),
 6. may only be permitted to be placed on a building which is not the headquarters or chief office of the candidate or organization, when the Building Inspector determines that, because of the size of the lot's setback areas and the location of the building on the lot, such a sign cannot be adequately displayed on the ground itself,
 7. shall not be illuminated or light emitting,
 8. shall not contain moving elements,
 9. shall not be displayed more than three (3) months prior to the event,
 10. shall not be displayed more than three (3) months in any calendar year,
 11. shall be taken down within three (3) days following the event date,
 12. shall not be posted on public property.
- ii. In all Business and Industrial Districts such signs:
1. shall not exceed one ground sign and one wall sign per candidate/cause per lot frontage,
 2. must comply with the requirements for sign in that district
- t. A school, college or other educational institution may erect temporary signs for identification of special programs, alumni events, or other temporary or short-term (less than 12 weeks) educational programs. Such signs shall be permitted, provided that such signs:
- i. Shall not exceed a size of three square feet and shall not be any closer than two feet from any lot line.
 - ii. The top of the sign shall not be more than four feet above the ground.
 - iii. Shall not be displayed for more than three days prior to nor one week (a total of 10 days) after the start of said program or event.
 - iv. For temporary events which occur every year, signboards must be of durable construction.
- u. Fraternity or sorority – one (1) sign identifying the group residing on the premises and not to exceed twelve (12) square feet in area.
- v. Each membership club, funeral establishment, hospital, place of public assembly, community facility or public utility may have one identification sign (not to exceed 10 square feet in surface area) and churches, community facilities not places of public assembly may have one additional sign (not to exceed 40 square feet in surface area), provided that such signs shall be set back at least 1/2 the required depth of the front yard setback.
- w. Signs of builders, electrical contractors, painters and other artisans may be erected and maintained during the period in which such persons are performing work on the premises, provided that the size of any such sign shall not exceed sixteen (16) square feet in area. Such signs shall be removed promptly upon completion of the work.
- x. Directional signs necessary for the safety and direction of residents, employees, customers, and visitors (whether in a vehicle or on foot) identifying parking areas, loading zones, entrances, exits and similar locations shall be permitted. The sign may include a logo, business or professional name (provided it is clearly secondary in nature to the primary directional function

of the sign) but shall not include any advertising message and shall not exceed three (3) square feet in size nor exceed a height of four (4) feet.

- y. Warning and no-trespassing signs, not exceeding three (3) square feet in area or as prescribed by a Town Department or State requirement shall be permitted.
- z. Flags or emblems of religious, educational, civic or governmental organizations may be flown from supports on the buildings or grounds occupied by the organization. The American Flag may be displayed whenever and wherever flown in accordance with the laws and rules and promulgated by the federal government.
- aa. Lawn signs identifying residents, not exceeding three (3) square foot in area for each side shall be permitted. The sign shall not contain any advertising message and shall not be illuminated, except by a light which is an integral part of a lamppost if used as a support.
- bb. Signs which are an integral part of vending machines, including gasoline pumps, soda machines and ATM machines shall be permitted, provided that they do not exceed the height and width of the machine on which they are located. No additional signs shall be provided at the facility or added to the machine beyond the height or width of the machine.
- cc. Real estate signs, announcing the sale, rental or lease of the premises on which the sign is located, such sign not to exceed six (6) square feet in area. If double-faced the sign shall not exceed twelve (12) square feet of area for both sides. The sign shall be non-illuminated. Such signs shall not be located closer to other such signs than one (1) in every one hundred fifty (150) feet, measured either along the front of the lot or along the depth of the lot.
- dd. On corner lots, no sign or portion thereof shall be located that would interfere with vehicular traffic site distances.
- ee. All signs shall be removed within 30 days of the date from which they no longer serve their intended function (i.e., no longer provide the service, establishment or product being advertised).
- ff. The Building Commissioner is authorized to order the repair or removal of any sign and its supporting structure which, in his or her judgment, is dangerous, or in disrepair or which is erected or maintained contrary to this chapter.

4. ADDITIONAL SIGN REQUIREMENTS FOR RESIDENTIAL DISTRICTS

- a. For approved residential subdivisions, townhouse and multifamily developments, one ground sign identifying the development shall be permitted, provided that:
 - i. it shall not exceed 12 square feet in surface area, on any one side and shall not have more than two sides.
 - ii. it shall be located on private property and set back at least 15 feet from any street lot line.
 - iii. the top of the sign shall not rise more than five feet above the lowest point on the ground or sidewalk within five feet of the sign.
 - iv. such a sign shall only be permitted so long as the approved access within the development is not a City/Town-accepted public way. Once said access has been accepted as a City/town right-of-way, said sign shall be removed, and a standard municipal street sign shall be installed.
- b. In the case of a dwelling or use accessory thereto – one (1) sign indicating the address and/or names of the owners or occupants for each household residing on the premises shall be permitted, provided that each sign is not over two (2) square feet in area, and the total area of all such signs shall not exceed a total of eight (8) square feet in area.
- c. No sign allowed under this section shall exceed four feet (4') in height above grade, except that projecting signs with a total area of three square feet or less may be up to six feet (6') in height above grade.

- d. Signs shall be set back from any property boundary a distance equal to or greater than their height above grade, and signs shall not be located so as to interfere with vehicular site distances.
- e. Non-Residential Signs
 - i. The Planning Board may issue a Special Permit permitting a larger sign for non-residential uses (uses other than 1-3 dwelling units) legally permitted and operating in a Residential District where they find all of the following:
 - 1. the type, size, scale, location, character and design of the sign is consistent with and complementary to the character of the neighborhood
 - 2. where such sign is a wall sign, it shall have one face and shall be affixed flush on the building's wall facing the street frontage
 - 3. where such sign is a free standing ground sign it shall:
 - (I) not have more than two (2) faces and such faces must be configured back to back.
 - (II) not exceed four (4) feet in height to its tallest point, including support structures.
 - (III) conform to the minimum side yard setback requirements for buildings in the district.
 - (IV) be setback at least 10' from a front lot line.
 - 4. for Family Home Day Care uses each sign face may not exceed nine (9) square feet in area, including support structures
 - 5. for all other non-residential uses permitted in those districts, each sign face, unless already regulated elsewhere in the Zoning Ordinance, may not exceed twenty-four (24) square feet in area, including support structures
 - 6. if illuminated, signs shall not be lit internally and shall not be illuminated during hours that the use is not in operation.
 - ii. The Planning Board may:
 - 1. permit a setback of less distance than the minimum required provided that it finds:
 - (I) that meeting the required setback is impractical or impossible
 - (II) that said distance is not less than half the distance between the front lot line and the front of the building located thereon.
 - (III) that the location of such sign will not be detrimental or inconsistent with the character of the neighborhood.
 - 2. require a sign size smaller than the maximum permitted or setbacks greater than the minimum permitted where they find that such sign and/or location would be more consistent with and complementary to the character of the neighborhood.
 - 3. permit one ground sign and one wall sign and/or more than one of both signs where they find that:
 - (I) it is necessary based on the nature of the use and the physical characteristics of the lot, and
 - (II) that the number of signs will not be detrimental to, or inconsistent with, the character of the neighborhood

5. ADDITIONAL SIGN REQUIREMENTS FOR BUSINESS & INDUSTRIAL DISTRICTS (unless otherwise specified)

- a. For All Business Districts
 - i. Permitted wall signs:
 - 1. One main (frontage) wall sign on the street frontage for each establishment in the structure plus one directory wall sign, provided that:

- (I) when an establishment is located on a lot with more than one frontage, a main (frontage) wall sign may only be displayed on one of the frontages. The other frontage(s) may display a side wall sign as allowed below.
 - (II) it shall be attached and parallel to the wall of the building
 - (III) it shall not project horizontally more than 12 inches from the wall to which it is attached (unless otherwise specified) and, if the sign is designed to allow pedestrian traffic under the sign, shall be a minimum of seven feet above the ground. Signs projecting more than 12 inches over a public way require approval by the Board of Public Works
 - (IV) the sign's surface area shall not be larger than 10% of the frontage wall area of the facade of the story which is occupied by the establishment or 100 square feet, whichever is less, and shall be displayed on that surface
2. One side wall sign per structure on each side wall facing a non-rear lot line, provided that:
 - (I) the surface area of the sign shall not be larger than 25 square feet; and
 - (II) side wall signs are not permitted on side walls which face or abut (within 100 feet) a residential zoning district.
 3. One rear wall sign (facing a rear lot line) per structure, provided that:
 - (I) the rear wall abuts upon a public right-of-way or a public or private parking lot; and
 - (II) the surface area of the sign shall not be larger than 25 square feet; and
 - (III) the sign shall not be higher than 10 feet above grade.
- ii. Flashing and Moving Signs
1. Clocks and signs indicating time and/or temperature, by means of white intermittent lighting are permitted in non-residential districts. Their longest dimension shall not exceed ten feet.
 2. The Planning Board may issue a Special Permit for signs that contain, include, or are illuminated by any flashing, blinking, intermittent, moving, scrolling, rotating, revolving, animated lights, or have any animated, mechanical or moving parts provided they.
- iii. Permitted awning/canopy and awning/canopy signs as follows:
1. An awning/canopy may display the street address for the building and may also have either one sign along the bottom of the front of the awning/canopy or a sign along the bottom of both sides of the awning/canopy, identifying the establishment located therein, provided that the letters, numbers, characters, logos, etc., of such address and signs do not exceed a height of four inches. The purpose of said additional awning/canopy signage is for pedestrian (not automobile) traffic.
 2. Instead of the wall sign permitted above, an awning/canopy attached to the building may have a sign of the size that would otherwise be allowed on the building wall itself. Said sign must conform to all other requirements for a wall sign.
 3. The entire backlit or illuminated area of a lit awning/canopy which has any letter or symbols anywhere on the canopy shall be considered a wall sign and must conform to the size and location requirements of wall signs.
 4. Awnings/canopies overhanging a public right-of-way must also be approved by the Department of Public Works.
- iv. Permitted free standing ground signs as follows:
1. one ground sign for each lot, provided that:
 - (I) it shall not exceed 100 square feet in surface area on any one side; and
 - (II) it shall be set back at least 15 feet from any street lot line; and

- (III) it shall not rise to more than 15 feet from the ground or sidewalk to the top of the sign; and
- (IV) it shall not have more than two sign faces, which must be configured back to back.
- (V) it shall be located on the same lot as the structure(s) or establishment(s) being advertised.
- (VI) where a single lot is occupied by more than one business, whether in the same structure or not, there shall not be more than one ground sign per lot.
- v. Permitted temporary outdoor signs shall be permitted as follows:
 - 1. one temporary banner at a time per structure of no more than 25 square feet on a property for retail, service and restaurant uses for a cumulative period not to exceed 30 days per year.
- b. Neighborhood Business - Additional Sign Requirements
 - i. Ground Signs. One (1) lighted, non-interior illuminated or non-lighted ground sign may be permitted per parcel by a special permit issued by the Planning Board. If the parcel is occupied by more than one establishment, the multiple establishments may be advertised on the single ground sign. Any sign permitted under this section must meet the following requirements:
 - 1. The type, size, scale, location character and design of the sign must be consistent with and complementary to the character of the neighborhood.
 - 2. Each sign face may not exceed twenty-four (24) square feet in area, including support structures.
 - 3. Such sign may not exceed six (6) feet in height to its tallest point, including support structures.
 - 4. Such sign shall conform to the minimum side yard setback requirements for buildings in the district. The Planning Board may approve a setback of less distance than the minimum required provided that it finds:
 - (I) That said distance is not less than half the distance between the front lot line and the front of the building located thereon, and
 - (II) That the location of such sign will be consistent with and complementary to the character of the neighborhood.
- c. Downtown/Central Business - Additional Sign Requirements
 - i. Wall Signs
 - 1. Main (frontage) Wall - one Wall Sign for each establishment in the structure, provided:
 - (I) when an establishment is located on a lot with more than one frontage a Main (frontage) wall sign may be displayed on all of the frontages.
 - 2. Awning/Canopy Signs
 - (I) The wall sign permitted under this Section may be placed on an awning/canopy attached to the building instead of being placed on the building wall itself. Such sign must conform to all of the requirements for a wall sign. Said awning/canopy may also display the street address for the building and may also have either: a) one additional sign along the bottom of the front of the awning/canopy; of b) an additional sign along the bottom of each side of the awning/canopy, identifying the establishment located therein, provided the letters, numbers, characters, logos, etc. of such signs do not exceed a height of six inches. The purpose of said additional awning/canopy, signage is for the visibility of pedestrian traffic.
 - 3. Ground Signs - The Planning Board may issue a Special Permit for one ground sign for each lot for each street frontage, provided that the Board finds that:

- (I) there must be unique features to the structure, the orientation of the structure, the location or setback of the structure, or the location of establishments in the structure, especially affecting such structure or establishment, but not generally affecting the zoning district, which restrict the visibility of wall sign(s) otherwise allowed by this Ordinance, and
 - (II) said ground sign is to be located on the same lot as the structure or establishment being advertised, and
 - (III) said ground sign does not exceed a height of fifteen (15) feet, nor have a surface area greater than eighty (80) square, though the Board may require a lesser height or size, and
 - (IV) if lighted, it shall be illuminated internally, or by indirect method with white light only
4. Projecting Blade Signs - The Planning Board may issue a Special Permit for a projecting “blade” sign (projecting perpendicular from the face of the building) in addition to a wall sign provided that the Board finds that:
- (I) There shall only be one blade sign per business. If there is more than one business in the same building, there may not be more than one sign per 20 feet of frontage on the same building.
 - (II) The sign may not project more than three feet from the façade of a building
 - (III) The sign may not exceed six square feet of total surface area per sign.
 - (IV) The sign may not exceed two inches in width.
 - (V) The bottom of the sign shall not be less than nine feet measured above the sidewalk.
 - (VI) The sign shall not be internally lit.
5. Overhanging Signs - Awnings/canopies and signs overhanging a public right-of-way must also be approved by the Department of Public Works.
- d. General Business & Highway Business – Additional Sign Requirements
- i. Shopping Centers - If a single lot is occupied by more than one business, whether in the same structure or not, there shall not be more than one ground sign at each street frontage providing access to the lot. When said sign is two sided back-to-back, each side may meet the maximum size permitted in that district. For the purposes of this section, primary street frontage shall mean that single street frontage on a public way from which the primary access to the uses on the lot is provided. Secondary street frontage shall mean that frontage from other public ways from which access to the site is also provided. All signs shall be setback from all property lines a distance at least equal to the sign’s height. Said sign may only include the names of the individual businesses on the lot, a name for the shopping center if one exists, and a message board. The size of the sign(s) shall be based on the anticipated cumulative gross floor area square footage of the site in accordance with the chart below:

District	Cumulative gross floor area (sq.ft.)	Maximum Size (square feet)		Maximum Height (feet)	
		Primary St. Frontage	Secondary St. Frontage	Primary St. Frontage	Secondary St. Frontage
General Business	<50,000	100	50	25	20
	50,000-100,000	150	75	25	20

	>100,000	200	75	25	20
Highway Business	<50,000	100	50	25	20
	50,000-100,000	200	75	30	20
	>100,000	300	75	30	20

- ii. The Planning Board may issue a Special Permit permitting additional Primary Street Frontage Signs (but no more than one per individual street) where they find that such additional streets generate traffic flows substantial enough to provide additional primary access to the site, and where such larger signs will be consistent with the character of the general area.
 - e. Industrial Districts - Additional Sign Requirements
 - i. Front wall sign
 - 1. One front wall sign for each establishment located in a building is permitted, provided that:
 - (I) The sign must be located on a portion of the front wall that is occupied by the establishment
 - (II) The sign's surface area shall not be larger than 7.5% of the frontage wall area of the facade of the story which is occupied by the establishment
 - (III) when an establishment is located on a lot with more than one frontage a Main (frontage) wall sign may be displayed on all of the frontages.
 - ii. Side Wall sign
 - 1. One side wall side per establishment is permitted, provided that:
 - (I) The surface area of each side wall sign shall not aggregate more than 5% of the side wall area of the facade of the story which is occupied by the establishment.
 - (II) side wall signs are not permitted on side walls which directly face or abut (within 100 feet) a residential zoning district.
 - iii. Free Standing Ground Sign
 - 1. Where a number of individually owned parcels are developed as a single collective entity (such as an industrial/business park or planned business development) the Planning Board may grant a special permit permitting one additional ground sign for each entrance to the development (not to a specific building) off of a collector street identifying the collective entity and/or the individual business located therein. Said sign must conform to all of the requirements for ground signs in the applicable zoning district.
6. SPECIAL PROVISIONS
- i. The Planning Board may issue a special permit allowing more than the number of signs herein permitted and/or for signs of a larger size or height than herein permitted, provided that:
 - 1. signs are located only where they are otherwise permitted in the district; and
 - 2. the Planning Board determines that the architecture of the building, the location of the building or the land or nature of the use being made of the building or land is such that additional signs or signs of a larger size would not detract from the character of the neighborhood and should be permitted in the public interest. Additional ground signs shall only be approved if there are exceptional circumstances to warrant their approval

and if all efforts are undertaken to keep additional ground signs as small and low as possible, and

3. the Planning Board specifies in the special permit the exact sign permitted, the size and location of the sign or signs, and, if applicable, imposes other restrictions. Any change in said signs requires a new or revised special permit unless the special permit specifies what types of changes are allowed.

Illicit Connections and Discharges to the Municipal Storm Drain System Bylaw

1.0 Purpose

Regulation of illicit connections and discharges to the municipal storm drain system is necessary for the protection of the [town/city] water bodies and groundwater, and to safeguard the public health, safety, welfare and the environment. Increased and contaminated stormwater runoff are major causes of :

- a. impairment of water quality and flow in lakes, ponds, streams, rivers, wetlands and groundwater;
- b. contamination of drinking water supplies;
- c. alteration or destruction of aquatic and wildlife habitat; and
- d. flooding.

The objectives of this bylaw are:

- a. To prevent pollutants from entering the [town/city] municipal separate storm sewer system (MS4);
- b. To prohibit illicit connections and unauthorized discharges to the MS4;
- c. To require the removal of all such illicit connections;
- d. To comply with state and federal statutes and regulations relating to stormwater discharges; and,
- e. To establish the legal authority to ensure compliance with the provisions of this bylaw through inspection, monitoring, and enforcement.

2.0 Definitions

For the purposes of this bylaw, the following shall mean:

Authorized Enforcement Agency: The _____, its employees or agents designated to enforce this bylaw.

Best Management Practice (BMP): An activity, procedure, restraint, or structural improvement that helps to reduce the quantity or improve the quality of stormwater runoff.

Clean Water Act: The Federal Water Pollution Control Act (33 U.S.C. § 1251 *et seq.*) as hereafter amended

Discharge of Pollutants: The addition from any source of any pollutant or combination of pollutants into the municipal storm drain system or into the waters of the United States or Commonwealth from any source.

Groundwater: All water beneath the surface of the ground.

Illegal Discharge: Any direct or indirect non-stormwater discharge to the municipal storm drain system, except as specifically exempted in Section 7 or permitted pursuant to Section 8 of this bylaw. The term does not include a discharge in compliance with an NPDES Storm Water Discharge Permit or resulting from fire fighting activities exempted pursuant to Section 7, subsection 4, of this bylaw.

Illicit Connection: Any surface or subsurface drain or conveyance, which allows an illegal discharge into the municipal storm drain system. Illicit connections include conveyances which allow a non-stormwater discharge to the municipal storm drain system including sewage, process wastewater or wash water and any connections

from indoor drains sinks, or toilets, regardless of whether said connection was previously allowed, permitted, or approved before the effective date of this bylaw.

Impervious Surface: Any material or structure on or above the ground that prevents water from infiltrating the underlying soil

Municipal Separate Storm Sewer System (MS4) or Municipal Storm Drain System: The system of conveyances designed or used for collecting or conveying stormwater, including any road with a drainage system, street, gutter, curb, inlet, piped storm drain, pumping facility, retention or detention basin, natural or man-made or altered drainage channel, reservoir, and other drainage structure that together comprise the storm drainage system owned or operated by the [town/city].

National Pollutant Discharge Elimination System (NPDES) Storm Water Discharge Permit: A permit issued by United States Environmental Protection Agency or jointly with the State that authorizes the discharge of pollutants to waters of the United States.

Non-Stormwater Discharge: Any discharge to the municipal storm drain system not composed entirely of stormwater.

Person: Any individual, partnership, association, firm, company, trust, corporation, and, any agency, authority, department or political subdivision of the Commonwealth or the federal government, to the extent permitted by law, and any officer, employee, or agent of such person.

Pollutant: Any element or property of sewage, agricultural, industrial or commercial waste, runoff, leachate, heated effluent, or other matter whether originating at a point or nonpoint source, that is or may be introduced into any sewage treatment works or waters of the Commonwealth. Pollutants shall include:

- a. paints, varnishes, and solvents;
- b. oil and other automotive fluids;
- c. liquid and solid wastes and yard wastes;
- d. refuse, rubbish, garbage, litter, or other discarded or abandoned objects, ordnances, accumulations and floatables;
- e. pesticides, herbicides, and fertilizers;
- f. hazardous materials and wastes; sewage, fecal coliform and pathogens;
- g. dissolved and particulate metals;
- h. animal wastes;
- i. rock; sand; salt, soils;
- j. construction wastes and residues;
- k. and noxious or offensive matter of any kind.

Process wastewater means any water which, during manufacturing or processing, comes into direct contact with or results from the production or use of any material, intermediate product, finished product, or waste product.

Recharge: The process by which groundwater is replenished by precipitation through the percolation of runoff and surface water through the soil.

Stormwater: Runoff from precipitation or snow melt.

Toxic or Hazardous Material or Waste: Any material, which because of its quantity, concentration, chemical, corrosive, flammable, reactive, toxic, infectious or radioactive characteristics, either separately or in combination with any substance or substances, constitutes a present or potential threat to human health, safety, welfare, or to the environment. Toxic or hazardous materials include any synthetic organic chemical, petroleum product, heavy metal, radioactive or infectious waste, acid and alkali, and any substance defined as Toxic or Hazardous under M.G.L. Ch.21C and Ch.21E, and the regulations at 310 CMR 30.000 and 310 CMR 40.0000.

Watercourses: A natural or man-made channel through which water flows or a stream of water, including a river, brook or underground stream.

Waters of the Commonwealth: all waters within the jurisdiction of the Commonwealth, including, without limitation, rivers, streams, lakes, ponds, springs, impoundments, estuaries, wetlands, costal waters, and groundwater.

Wastewater: any sanitary waste, sludge, or septic tank or cesspool overflow, and water that during manufacturing, cleaning or processing, comes into direct contact with or results from the production or use of any raw material, intermediate product, finished product, byproduct or waste product.

3.0 Applicability

This bylaw shall apply to flows entering the municipally owned storm drainage system.

4.0 Responsibility for Administration

The _____ shall administer, implement and enforce this bylaw. Any powers granted to or duties imposed upon the _____ may be delegated in writing by the _____ to employees or agents of the _____.

5.0 Regulations

The _____ may promulgate rules and regulations to effectuate the purposes of this bylaw. Failure by the _____ to promulgate such rules and regulations shall not have the effect of suspending or invalidating this bylaw.

6.0 Prohibited Activities

6.1 Illegal Discharges

No person shall dump, discharge, cause or allow to be discharged any pollutant or non-stormwater discharge into the municipal storm drain system, watercourse, or into the waters of the Commonwealth. Emergency pumping performed by the Fire Department must utilize appropriate best management practices (BMPs) and follow hazardous materials disposal guidelines to prevent contamination of the municipal storm drainage system with hazardous materials. If hazardous materials are observed within the flooded area, or are suspected to be contained within the flooded area, a qualified hazmat technician must be consulted before pumping. If hazardous materials are observed at any point during pumping, cessation of pumping is required until a qualified hazmat technician can be consulted and BMPs put in place to prevent the contamination of nearby water ways and the municipal storm drainage system.

6.2 Illicit Connections

No person shall construct, use, allow, maintain or continue any illicit connection to the municipal storm drain system, regardless of whether the connection was permissible under applicable law, regulation or custom at the time of connection.

6.3 Obstruction of Municipal Storm Drain System

No person shall obstruct or interfere with the normal flow of stormwater into or out of the municipal storm drain system without prior approval from the _____.

6.4 Exemptions

This section shall not apply to any of the following non-stormwater discharges or flows provided that the source is not a significant contributor of a pollutant to the municipal storm drain system.

- a. Waterline flushing;
- b. Flows from potable water sources;
- c. Springs;
- d. Flows from riparian habitats and wetlands;
- e. Diverted stream flows;
- f. Rising groundwaters;
- g. Uncontaminated groundwater infiltration as defined in 40 CFR 35.2005(20), or uncontaminated pumped groundwater;
- h. Water from exterior foundation drains, footing drains (not including active groundwater dewatering systems), crawl space pumps, or air conditioning condensation;
- i. Discharges from landscape irrigation or lawn watering;
- j. Water from individual residential car washing;
- k. Discharges from dechlorinated swimming pool water (less than one ppm chlorine) provided it is allowed to stand for one week prior to draining and the pool is drained in such a way as not to cause a nuisance;
- l. Discharges from street sweeping;
- m. Discharges or flows resulting from fire fighting activities;
- n. Dye testing, provided written notification is given to the _____ prior to the time of the test;
- o. Non-stormwater discharges permitted under an NPDES permit, waiver, or waste discharge order administered under the authority of the United States Environmental Protection Agency, provided that the discharge is in full compliance with the requirements of the permit, waiver, or order and applicable laws and regulations; and
- p. Discharges for which advanced written approval is received from the _____ if necessary to protect public health, safety, welfare or the environment.

7.0 Emergency Suspension of Storm Drainage System Access

The _____ may suspend municipal storm drain system access to any person or property without prior written notice when such suspension is necessary to stop an actual or threatened illegal discharge that presents or may present imminent risk of harm to the public health, safety, welfare or the environment. In the event any person fails to comply with an emergency suspension order, the _____ may take all reasonable steps to prevent or minimize harm to the public health, safety, welfare or the environment.

8.0 Notification of Spills

Notwithstanding any other requirements of local, state or federal law, as soon as any person responsible for a facility or operation, or responsible for emergency response for a facility or operation has information of any known or suspected release of materials at that facility operation which is resulting or may result in illegal discharge of pollutants that person shall take all necessary steps to ensure containment, and cleanup of the release. In the event of a release of oil or hazardous materials, the person shall immediately notify the municipal fire and

police departments and the _____. In the event of a release of non-hazardous material, said person shall notify the _____ no later than the next business day. Written confirmation of all telephone, facsimile or in person notifications shall be provided to the _____ within three business days thereafter. If the discharge of prohibited materials is from a commercial or industrial facility, the facility owner or operator of the facility shall retain on-site a written record of the discharge and the actions taken to prevent its recurrence. Such records shall be retained for at least three years.

9.0 Enforcement

9.1 Enforcement Agent

The _____ or an authorized agent of the _____ shall enforce this bylaw, and the regulations promulgated thereunder, as well as the terms and conditions of all permits, notices, and orders, and may pursue all civil and criminal remedies for such violations.

9.2 Orders

The _____ may issue a written order to enforce the provisions of this bylaw or the regulations thereunder, which may include: (a) elimination of illicit connections or discharges to the storm drainage system; (b) termination of access to the storm drainage system; c) performance of monitoring, analyses, and reporting; (d) cessation of unlawful discharges, practices, or operations; and (e) remediation of contamination in connection therewith. If the _____ determines that abatement or remediation of contamination is required, the order shall set forth a deadline for completion of the abatement or remediation. Said order shall further advise that, should the violator or property owner fail to abate or perform remediation within the specified deadline, the [town/city] may, at its option, undertake such work, and expenses thereof shall be charged to the violator or property owner.

Within thirty (30) days after completing all measures necessary to abate the violation or to perform remediation, the violator and the property owner will be notified of the costs incurred by the [town/city], including administrative costs. The violator or property owner may file a written protest objecting to the amount or basis of costs with the _____ within thirty (30) days of receipt of the notification of the costs incurred. If the amount due is not received by the expiration of the time in which to file a protest or within thirty (30) days following a decision of the _____ affirming or reducing the costs, or from a final decision of a court of competent jurisdiction, the costs shall become a special assessment against the property owner and shall constitute a lien on the owner's property for the amount of said costs. Interest shall begin to accrue on any unpaid costs at the statutory rate provided in M.G.L. Ch. 59, § 57 after the thirty-first day at which the costs first become due.

9.3 Equitable Remedy

If anyone violates the provisions of this bylaw, regulations, permit, notice, or order issued thereunder, the _____ may seek injunctive relief in a court of competent jurisdiction to restrain the person from activities which would create further violations or compelling the person to abate or remediate the violation.

9.4 Non-Criminal Disposition

As an alternative to criminal prosecution or civil action, the [town/city] may elect to utilize the non-criminal disposition procedure set forth in M.G.L. Ch.. 40, §21D. The _____ shall be the enforcing person. The penalty for the 1st violation shall be \$50. The penalty for the 2nd violation shall be \$100. The penalty for the 3rd and subsequent violations shall be \$300.00. Each day or part thereof that such violation occurs or continues shall constitute a separate offense.

9.5 Right-of-Entry

To the extent permitted by state law, or if authorized by the owner or other party in control of the property, the _____, its agents, officers, and employees may enter upon privately owned property for the purpose of performing their duties under this bylaw and regulations and may make or cause to be made such examinations, surveys or sampling as the _____ deems reasonably necessary

9.6 Remedies Not Exclusive

The remedies listed in this bylaw are not exclusive of any other remedies available under any applicable federal, state or local law.

10.0 Severability

If any provision, paragraph, sentence, or clause, of this bylaw shall be held invalid for any reason, all other provisions shall continue in full force and effect.

11.0 Transitional Provisions

Residential property owners shall have 120 days from the effective date of the bylaw to comply with its provisions provided good cause is shown for the failure to comply with the bylaw during that period.

MODEL STORMWATER MANAGEMENT / LID ORDINANCE/BYLAW
Pioneer Valley Planning Commission
March 17, 2011

Section 1 Purpose and Authority

- A. The purpose of this section is to protect, maintain, and enhance the public health, safety, and general welfare of the citizens of [name of Town/City] by establishing minimum requirements and procedures to control the adverse impacts associated with stormwater runoff from new development and redevelopment.
- B. The objectives of this section are:
1. Establish regulations for land development activities that preserve the health of water resources by reducing the adverse impacts to water quality from stormwater discharges to rivers, lakes, reservoirs and streams in order to attain federal water quality standards;
 2. Require that new development, redevelopment and all land conversion activities maintain the natural hydrologic characteristics of the land in order to reduce flooding, stream bank erosion, siltation, nonpoint source pollution, property damage and the integrity of aquatic habitats and stream channels;
 3. Prevent the discharge of pollutants, including hazardous chemicals, into stormwater runoff;
 4. Minimize the volume and rate of stormwater which is discharged, to rivers, streams, reservoirs, lakes and combined sewers that flow from any site during construction and following development;
 5. Prevent erosion and sedimentation from land development, and reduce stream channel erosion caused by increased runoff;
 6. Require post-development runoff volume and quality to be equivalent to or an improvement on pre-development runoff conditions by reducing runoff volumes, increasing infiltration and, improving runoff water quality.
 7. Provide for the recharge of groundwater aquifers and maintain the base flow of streams;
 8. Encourage the use of Low Impact Development (LID) practices such as reducing impervious cover, treating and infiltrating stormwater at the source, utilizing environmentally sensitive site design and, the preservation of open space and natural areas, to the maximum extent practicable;
 9. Coordinate site plans which include open space with the [Town/City's] Open Space and Recreation Plan [or other community plans] to promote the connection of open space corridors.
 10. Provide stormwater facilities that are attractive, maintain the natural integrity of the environment, and are designed to protect public safety;

11. Minimize damage to public and private property from flooding;
12. Establish maintenance provisions to ensure the stormwater treatment devices and facilities will continue to function as designed;
13. Establish procedures for the [City/Town's] review of stormwater management plans, and for the [City/Town's] inspection of approved stormwater controls; and,
14. Comply with state and federal statutes and regulations relating to stormwater discharges.

COMMENT: Palmer added the following objectives:

Inform the public about the value and benefits of groundwater recharge, pollution reduction and importance of clean water.

It is the intent that upon having followed the guidance of the Ordinance that the applicant will have done sufficient planning and documentation for Conservation Commission review (where there is jurisdiction) and for U.S. Environmental Protection Agency review where a National Pollution Discharge Elimination System construction general permit is required.

- C. The Authorized Permitting Agency shall administer and implement this [division/chapter/section].

COMMENT: *Authorized permitting agency* may vary depending on staffing capabilities and expertise of individual boards and departments. Most communities seek to incorporate Stormwater Permit review concurrent with other permit application review.

Example #1 (Westfield) - The board of public works or planning board or city council when an eligible project involves a zoning special permit, site plan approval or definitive subdivision approval. When a project requires a Notice of Intent from the Conservation Commission and does not require review or permitting from any of the aforementioned boards and departments, the Conservation Commission shall administer and implement this section.

In the case of a special permit, site plan approval and/or definitive subdivision approval said application for a stormwater management permit shall be incorporated and included as a part of the applications for such other zoning and/or subdivision permit approvals, and shall be issued with and become a part of said other approved zoning and/or subdivision permits. In the case of a Notice of Intent to the Conservation Commission, said application for a Stormwater Management Permit shall be incorporated and included as part of the applications if none of the aforementioned permits are also triggered by the project.

Example #2 (Holyoke) - The City Engineer shall administer and implement this division. A Building Permit shall not be issued without a Stormwater Permit. For projects that do not trigger review by any City Board or Commission, the City Engineer shall independently conduct an administrative Stormwater Management Plan review and issue a Stormwater Permit. For

projects that trigger Subdivision, Special Permit, Site Plan, Conservation Commission or any other Review, the City Engineer's review of the Stormwater Management Plan shall take place concurrently, and the appropriate reviewing Board or Commission shall approve the Stormwater Management Plan pursuant to recommendations made by the City Engineer. Once approved by the

Example #3 (Palmer) – Authority shared between Department of Public Works and the Planning Board.

Authorized Administrative Agency is the Department of Public Works for all development projects involving new construction of single or two-family dwellings, and any additions to existing single or two-family dwellings that result in $\leq 25\%$ increase in floor area, vehicle traffic, parking, number of tenants, and/or number of employees. The Department of Public Works shall also administer this Ordinance for any land disturbance of one acre or more that does not fall under the Planning Board's purview under this Ordinance. The Planning Board is the Authorized Administrative Agency for all other land or building uses, and additions that result in $>25\%$ increase in floor area, vehicle traffic, parking, number of tenants, and/or number of employees. Authorized Administrative Agency can include Building Inspector or Planning Board employees or agents designated to administer and implement this Ordinance by vote of either board.

Some communities also identify an Authorized Enforcement Agency if different than Authorized Administrative Entity (permit granting authority)

Example (Palmer) - Authorized Enforcement Agency The Zoning Enforcement Officer, Department of Public Works, Conservation Commission, Planning Board, Town Manager, and/or its employees or agents.

Section 2 Definitions

The following definitions describe the meaning of the terms used in this ordinance:

Adverse impact: Any deleterious effect on waters or wetlands, including their quality, quantity, surface area, species composition, aesthetics or usefulness for human or natural uses which are or may potentially be harmful or injurious to human health, welfare, safety or property, to biological productivity, diversity, or stability or which unreasonably interfere with the enjoyment of life or property, including outdoor recreation.

Authorized permitting agency: The [board of public works or planning board or conservation commission or city council] when an eligible project involves a [zoning special permit, site plan approval or definitive subdivision approval or building permit or Notice of Intent].

COMMENT: See Section 1 Purpose and Authority above for further guidance on designating an Authorized permitting agency.

Best management practices (BMP): Stormwater management systems and facilities including structural or biological devices, manmade or natural, that temporarily store, treat, or convey stormwater runoff to reduce flooding, remove pollutants, recharge groundwater, and provide other amenities. They can also be nonstructural practices that reduce pollutants at their source.

BMPs are further described in a stormwater design manual, *Massachusetts Stormwater Handbook: Volume 2 Technical Guide for Compliance with the Massachusetts Stormwater Management Standards* (February 2008, Massachusetts Department of Environmental Protection).

Clean Water Act: The Federal Water Pollution Control Act (33 U.S.C. section 1251 et seq.) as hereinafter amended.

Construction activity: Disturbance of the ground by removal or moving of vegetative surface cover or topsoil, grading, excavation, clearing or filling.

Design storm: A rainfall event of specified size and return frequency that is used to calculate the runoff volume and peak discharge rate to a BMP.

Detention: The temporary storage of storm runoff in a BMP, which is used to control the "peak discharge" rates, and which provides gravity settling of pollutants.

Discharge of pollutants: The addition from any source of any pollutant or combination of pollutants into storm drain systems or into the waters of the United States or commonwealth from any source.

Disturbance: Any land clearing, grading, bulldozing, digging or similar activities.

Drainage area: That area contributing runoff to a single point measured in a horizontal plane, which is enclosed by a ridgeline.

Drywell: Similar to an infiltration trench but smaller with inflow from a pipe; commonly covered with soil and used for drainage areas of less than 1 acre such as roadside inlets and rooftops runoff.

Easement: A right of use over the property of another, generally for a specific purpose such as rights of access or rights regarding flowing waters or drainage.

Environmental Site Design (ESD): Site planning and layout that seeks to create pockets of development that avoid sensitive natural areas to prevent disruption of the natural hydrology and habitat function of the site.

Flow attenuation: Prolonging the flow time of runoff to reduce the peak discharge.

Groundwater: All water beneath the surface of the ground not contained in a manmade structure.

Hydrology model: One of the following:

- * TR-20, a watershed hydrology model developed by the Natural Resources Conservation Service Act that is used to route a design storm hydrograph through a pond;
- * TR 55, or Technical Release 55, "Urban Hydrology for Small Watersheds" is a publication developed by the Natural Resources Conservation Service to calculate stormwater runoff and an aid in designing detention basins; or
- * Hydrocad.

Illegal discharge: Any direct or indirect non-stormwater discharge to storm drain systems, except as specifically exempted in [*insert reference to local Illicit Discharge Detection and Elimination Bylaw*]. The term does not include a discharge in compliance with an NPDES stormwater discharge permit or resulting from fire fighting activities exempted pursuant to aforementioned bylaw.

Illicit connection: Any surface or subsurface drain or conveyance, which allows an illegal discharge into storm drain systems. Illicit connections include conveyances which allow a non-stormwater discharge to storm drain systems including sewage, process wastewater or wash water and any connections from indoor drains, sinks or toilets, regardless of whether said connection was previously allowed, permitted or approved before the effective date of this division.

Impervious surfaces: Developed areas, such as pavement or rooftops, which prevent the infiltration of water into the soil. Any material or structure on or above the ground that prevents water from infiltrating the underlying soil.

Infiltration: The downward movement of water from the surface to the subsoil.

Infiltration trench: A stormwater management excavation filled with aggregate which removes both soluble and particulate pollutants. Trenches are not intended to trap coarse sediments.

Low Impact Development (LID): Stormwater management techniques appropriate to the size, scale, and location of the development proposal that limit off-site stormwater runoff (both peak and non-peak flows) to levels substantially similar to natural hydrology (or, in the case of a redevelopment site, that reduce such flows from pre-existing conditions), by emphasizing decentralized management practices and the protection of on-site natural features. LID approaches mimic a site's predevelopment hydrology using design techniques that infiltrate, filter, store, evaporate and detain runoff close to its source. Instead of conveying, managing and/or treating stormwater in large, end-of-pipe facilities, LID utilizes small-scale, decentralized practices that infiltrate, treat, evaporate, and transpire rain water and snow melt, including bioretention areas, grassed swales, reducing impervious areas, preservation of open space, development density, lot size and configuration, street design, parking design, and other structural stormwater treatment methods.

Municipal separate storm sewer system (MS4) or municipal storm drain system: The system of conveyances designed or used for collecting or conveying stormwater, including any road with a drainage system, street, gutter, curb, inlet, piped storm drain, pumping facility, retention or detention basin, natural or manmade or altered drain channel, reservoir, and other drainage structure that together comprise the storm drainage system owned and operated by the City of Westfield.

National Pollutant Discharge Elimination System (NPDES) stormwater discharge permit: A permit issued by the United States Environmental Protection Agency or jointly with the state that authorizes the discharge of pollutants to waters of the United States.

Non-stormwater discharges: Any discharge to the storm drain systems not composed entirely of stormwater.

Outfall: The terminus of a storm drain or other stormwater structure where the contents are released.

Owner: Every person who alone, jointly or severally with others:

1. Has legal title to any building, structure or parcel of land; or,
2. Has care, charge or control of any building, structure, or parcel of land in any capacity including but not limited to, an agent, executor, executrix, administrator, administratrix, trustee or guardian of the estate of the holder of legal title; or,
3. Lessee under a written lease agreement; or,
4. Mortgagee in possession; or,
5. Agent, trustee or other person appointed by the courts.

Peak discharge: The maximum instantaneous rate of flow during a storm, usually in reference to a specific design storm event

Permeable soils: Soil materials with a sufficiently rapid infiltration rate so as to greatly reduce or eliminate surface and stormwater runoff. These soils are generally classified as NRCS hydrologic soil types A and B.

Person: Any individual, association, partnership, corporation, company, business, organization, trust, estate, administrative agency, public or quasi-public corporation or body, the commonwealth or political subdivision thereof or the federal government, to the extent permitted by law and agent of such person.

Pollutant: Any element of property or sewage, agricultural, industrial or commercial waste, runoff, leachate, heated effluent, or other matter whether originating at a point or nonpoint source, that is or may be introduced into any sewage treatment works or waters of the commonwealth. Pollutants shall include:

1. Paints, varnishes and solvents;
2. Oil and other automotive fluids;
3. Nonhazardous liquid and solid wastes and yard wastes;
4. Refuse, rubbish, garbage, litter, or other discarded or abandoned objects, ordnances, accumulations and floatables;
5. Pesticides, herbicides and fertilizers;
6. Hazardous materials and wastes; sewage, fecal coliform and pathogens;
7. Dissolved and particulate metals;
8. Animal wastes and residues;
9. Rock, sand, salt and soils;
10. Construction wastes and residues;
11. Noxious or offense matter of any kind.

Process water: Any water which, during manufacturing or processing, comes into direct contact with or results from the production or use of any material, intermediate product, finished product or waste product.

Recharge: The process by which groundwater is replenished by precipitation through the percolation of runoff and surface water through the soil.

Retention: The holding of runoff in a basin without release except by means of evaporation, infiltration, or emergency bypass.

Start of construction: The first land-disturbing activity associated with a development, including land preparation such as: clearing and grubbing, grading and filling; installation of streets and walkways; excavation for basements; footings, piers or foundations; erection of temporary forms; and installation of accessory buildings such as garages.

Stormwater: Runoff from precipitation or snow melt.

Storm drain system: The system of conveyances designed or used for collecting or conveying stormwater, including any road with a drainage system, street, gutter, curb, inlet, piped storm drain, pumping facility, retention or detention basin, natural or manmade or altered drainage channel, reservoir, and other drainage structure that together comprise the storm drainage system on public or private ways within the _____.

Swale: A natural depression or wide shallow ditch used to temporarily store, route, or filter runoff.

Toxic or hazardous material or waste: Any material which, because of its quantity, concentration, chemical, corrosive, flammable, reactive, toxic, infectious or radioactive characteristics, either separately or in combination with any substance or substances, constitutes a present or potential threat to human health, safety, welfare of to the environment. Toxic or hazardous materials include any synthetic organic chemical, petroleum product, heavy metal, radioactive or infectious waste, acid and alkali, and any substance defined as toxic or hazardous under M.G.L.A. c. 21C and c. 21E, and the regulations at 310 CMR 30.000 and 310 CMR 40.000.

Uncontaminated: Water containing no pollutants.

Watercourses: A natural or manmade channel through which water flows or a stream of water, including a river, brook or underground stream.

Waters of the commonwealth: All waters within the jurisdiction of the Commonwealth, including, without limitation, rivers, streams, lakes, ponds, springs, impoundments, estuaries, wetlands, coastal waters and groundwater.

Wastewater: Any sanitary waste, sludge or septic tank or cesspool overflow and water that during manufacturing, cleaning or processing, comes into direct contact with or results from the production or use of any raw material, intermediate product, finished product, byproduct or waste product.

Section 3 Applicability

COMMENT: NPDES only requires stormwater controls for sites disturbing one acre or more. Some communities have chosen to regulate additional uses and disturbances whether or not they disturb one acre or more of land, such as the construction of single-family dwellings.

Example (Palmer) - ...all land disturbance uses requiring a Special Permit, Site Plan Approval, and any residential uses, including residential dwellings that create land disturbances and require a Building Permit. It shall also apply to all other land disturbances of one acre or more.”

NPDES requires communities to regulate stormwater discharges to the MS4. Some communities have chosen to regulate stormwater management at sites that do not discharge to the MS4 and manage all stormwater on site in order to establish community wide standards for achieving improved water quality and groundwater recharge objectives.

A. Applicability

This [division/chapter/section] shall apply to stormwater entering the municipally-owned storm drainage system, and stormwater on private property for those activities identified in Section 3 (B) whether or not flows enter the municipally owned storm drainage system.

B. Permit or Waiver Required

Prior to the commencement of construction for any proposed development listed below, a stormwater management permit, or a waiver of the requirement for a stormwater management permit, must be approved by the applicable authorized permitting agency. No person shall, on or after the effective date of the section, initiate any land clearing and grubbing, land grading, earth moving or development activities without first complying with this ordinance. The following uses and activities shall be required to submit drainage reports, plans, construction drawings, specifications and as-constructed information in conformance with the requirements of this [division/chapter/section]:

1. Multifamily residential developments involving four or more units;
2. Any new commercial, industrial, and institutional structures under the same ownership, with at least 5,000 square feet of gross floor area, 10,000 square feet of impervious surface, or that require ten or more parking spaces;
3. Redevelopment or additions to existing commercial, industrial, and institutional uses which result in an additional impervious surface area or gross floor area of greater than 5,000 square feet, or which results in an increase of ten or more parking spaces.
4. Construction activities and subdivisions disturbing greater than or equal to one acre.
5. Development or redevelopment involving multiple separate activities in discontinuous locations or on different schedules if the activities are part of a larger common plan of development that together disturbs one or more acres.

COMMENT: Some communities have categorized projects as major and minor projects, creating different Stormwater Management Plan submittal requirements under Section 5. The objective is to minimize costs associated with development of a Stormwater Management Plan for those projects, typically smaller (or minor) projects, that may have a minimal impact on stormwater runoff, but collectively contribute to runoff problems and thus need to be evaluated for that potential. Major and Minor projects can be defined under Section 3, or defined under Section 5.

C. Exemptions

The following use and activities are exempt from the requirements for submittal and approval of a Stormwater Management Plan. All exempt uses and activities must still comply with the

purposes and the stormwater performance standards of this [division/chapter/section]. Failure of an exempt use or activity to comply with the provisions of this [division/chapter/section] shall be interpreted as a violation and exempt status revoked.

1. Any agricultural activity which is consistent with an approved soil conservation plan prepared or approved by the Natural Resources Conservation Service;
2. Any logging which is consistent with a timber management plan approved under the Forest Cutting Practices Act by Massachusetts Department of Environmental Management;
3. Developments that do not disturb more than one acre of land, provided that they are not part of a larger common development plan;

COMMENT: Some communities have chosen to regulate disturbances smaller than one acre such as the construction of single-family dwellings. For those communities, this exemption is not appropriate. Alternatively, this exemption could be for disturbances of less than 5,000 or 10,000 square feet so that the larger single-family home disturbances are reviewed.

4. Repairs to any stormwater treatment system deemed necessary by the [town/city Department of Public Works/Highway Department];
5. Any emergency activity that is immediately necessary for the protection of life, property or the environment, as determined by the [Department of Public Works/Highway Department]; and
6. Any uses and activities not specified in subsection (3)(B).

D. Stormwater Design Manual

A stormwater design manual, Massachusetts Stormwater Handbook (Massachusetts Department of Environmental Protection, February 2008), as updated or amended, is hereby incorporated by reference as part of this [division/chapter/section], and shall furnish additional policy, criteria and information including specifications and standards, for the proper implementation of the requirements of this division. This manual includes a list of acceptable stormwater treatment practices, including the specific design criteria for each stormwater practice. The manual may be updated and expanded from time to time, based on improvements in engineering, science, monitoring and local maintenance experience, at the discretion of the Massachusetts Department of Environmental Protection. Stormwater treatment practices that are designed and constructed in accordance with these design and sizing criteria will be presumed to meet the minimum water quality performance standards.

Section 4 Permit Procedures and Requirements

A. Permit required

No owner or operator may apply for nor be issued any of the building, grading, or other land development permits required for land disturbance activities as described in subsection (3) above, and no owner shall commence any such land disturbance activities, without the prior approval of a stormwater management permit from the authorized permitting agency and meeting the requirements of this [division/chapter/section].

B. Application

Application for approval of a stormwater management permit shall include the following:

1. A Stormwater Management Plan which shall contain sufficient information to describe the nature and purpose of the proposed development (see Section 5 Stormwater Management Plan Contents below). The plan shall serve as the basis for all subsequent construction.
2. Supporting computations, drawings, and sufficient information describing the manner, location, and type of measures in which stormwater runoff and erosion will be managed for the entire development during and after construction.
3. Ongoing maintenance agreement.
4. Nonrefundable permit fee.

COMMENT: Fees are discussed in detail under (H) below.

The applicant may request, and the authorized permitting agency may grant, a waiver from any information requirements it judges to be unnecessary to the review of a particular plan.

C. Procedures for review and approval of stormwater permits

1. A stormwater management plan (or an application for waiver) shall be submitted to the authorized permitting agency for review and approval for any proposed development specified in subsection (4). [*Number of*] copies of the stormwater management plan shall be submitted (along with all other documents required for any zoning or subdivision permits/approvals when required).
2. The procedures for review and approval of stormwater management plans shall be consistent with review procedures of the authorized permitting agency, as appropriate to the use.
3. The authorized permitting agency shall refer copies of the stormwater management plan to [*the city engineer, department of public works, planning department, water department, health department, conservation commission, building department and the gas and electric department*] for review, and shall consider any comments submitted by said departments during the review period.
4. The authorized permitting agency shall hold a public hearing. If the project triggers Definitive Subdivision, Special Permit, Site Plan, Conservation Commission or any other Board or Commission review, the authorized permitting agency shall include the Stormwater Management Plan in the applicable public hearing(s).

COMMENT: It is recommended that the procedures of the public hearing and amount of time for final action be consistent with other permits issued by the authorized permitting authority.

D. Criteria for review of stormwater management plans

In addition to other criteria used by the authorized permitting agency in making permit decisions, for the uses specified in this [division/section/chapter], said authorized permitting agency must also find that the stormwater management plan submitted with the permit application meets the following criteria:

1. The stormwater management plan is consistent with the purposes and objectives of this division in subsection (1);
2. The stormwater management plan meets the performance standards described in subsection (6); and,
3. The stormwater management plan meets the design requirements in subsection (7).

E. Authorized permitting agency action

The authorized permitting agency's action, rendered in writing, shall consist of either:

1. Approval of the stormwater management permit application based upon determination that the proposed stormwater management plan meets the purposes in subsection (1), the standards in subsection (6), and is in compliance with the requirements set forth in this [division/section/chapter]; or,
2. Approval of the stormwater management permit application subject to any conditions, modifications or restrictions required by the board which will ensure that the project meets the purposes in subsection (1) and the performance standards in subsection (6); or,
3. Disapproval of the stormwater management permit application based upon a determination that the proposed stormwater management plan, as submitted, does not meet the purposes in subsection (1) and the performance standards in subsection (6) to adequately protect water resources, as set forth in this [division/section/chapter].

Failure of the authorized permitting agency to take final action upon a complete application within ____ days shall be deemed to be approval of said application. Upon certification by the city clerk that the allowed time has passed without authorized permitting agency action, the authorized permitting agency must issue a stormwater management permit.

F. Inspections

No plan will be approved without adequate provision for inspection of the property before development activity commences. The applicant shall arrange with the authorized permitting agency (or its appointed agent) for scheduling the following inspections, or upon request by the authorized permitting agency, shall have a qualified third party as determined by the [City Engineer /DPW Superintendent] perform the inspections and submit a detailed report as to their findings:

1. Initial inspection prior to approval of any plan;
2. Erosion control inspections after site clearing, rough grading and final grading to ensure erosion control practices are in accord with the plan;

3. Bury inspection prior to backfilling of any underground drainage or stormwater conveyance structures; and,
4. Final inspection when all work, including construction of stormwater management facilities and landscaping have been completed.

Inspection reporting shall either approve it or notify the applicant in writing in what respects there has been a failure to comply with the requirements of the approved plan. Any portion of the work which does not comply shall be promptly corrected by the applicant or the applicant will be subject to the bonding provisions of subsection (9) or the penalty provisions of subsection (10). The authorized permitting agency or its agent may conduct random inspections to ensure effective control of erosion and sedimentation during all phases of construction.

G. Right of entry for inspection

The filing of a Stormwater Management Permit application shall be deemed as the property owner's permission to the authorized permitting agency, or its agent, for the right to enter the property at reasonable times and in a reasonable manner for the purpose of the inspection. This includes the right to enter a property when it has a reasonable basis to believe that a violation of this [division/section/chapter] is occurring or has occurred, and to enter when necessary for abatement of a public nuisance or correction a violation.

H. Stormwater permit fees

COMMENT: Fee structures vary greatly and are determined by the availability of each communities staffing and funding resources to oversee permit applications, review plans, perform inspections, and seek enforcement if needed. Some communities set a fee for the review of the application and a separate fee for inspections. One fee rather than two separate fees with separate accounting needs is recommended to provide for both application review and inspection services.

If the bylaw establishes a single authorized permitting authority, the fees can be set via regulations adopted by that board. However, if there are multiple permit granting authorities, the fee should be established in the bylaw.

Communities also have the right to require applicants to pay reasonable costs for outside professional expertise employed by the municipality to assist in review of an application in accordance with MGL Chapter 44, Section 53G.

Example (Westfield) - For permits issued by the Planning Board, Conservation Commission or City Council, no additional fee is required. For permits issued by the Board of Public Works the fee for review of any land development application shall be based on the amount of land to be disturbed at the site and the fee structure established by the board.

Example (Holyoke) – The Stormwater Permit Fee is found in the Board of Public Works Fee Schedule.

The stormwater permit fee is as follows _____ .

Section 5 Contents of the stormwater management plan

COMMENT: For communities seeking to regulate disturbances from single-family dwellings, a less technical stormwater management plan is required. For all other activities regulated under this bylaw, a more detailed stormwater management plan is required.

1. A Stormwater Management Plan submitted with the permit application shall contain sufficient information for the Authorized Permitting Agency to evaluate the environmental impact, effectiveness and acceptability of the measures proposed for reducing adverse impacts from construction stormwater runoff and post-development stormwater runoff. This plan shall comply with the criteria established in the [division/section/chapter] and must be submitted with the stamp and signature of a professional Engineer (PE) licensed in the Commonwealth of Massachusetts.

COMMENT: The following use of the distinction between Minor and Major Projects is best for those communities that are experiencing problems with stormwater runoff associated with the construction of single-family homes disturbing less than one acre. NPDES Phase II does not require site disturbances of less than 1 acre to be regulated. However, many communities find that the collective disturbance of many ANR projects significantly deteriorates the quality of stormwater runoff, increases peak flows, and causes extreme downstream erosion and degradation. The items to be documented in a Stormwater Management Plan for Minor Projects are information that would be needed for construction of a single-family home and are not above and beyond the parameters of normal construction activity. However, the information is sufficient for local officials to evaluate the impact of site development on runoff.

2. Minor Projects - For land altering activity subject to this [division/section/chapter] involving construction of a single-family dwelling, where “approval is not required” (ANR), as defined in the Subdivision Control Act, and that disturbs less than 1 acre of land, the Stormwater Management Plan shall include:

- a. A locus map;
- b. The existing zoning and land use at the site;
- c. The proposed land use;
- d. The location(s) of existing and proposed easements;
- e. The location of existing and proposed utilities;
- f. The site's existing and proposed topography with contours at two-foot intervals unless the applicant can demonstrate that the proposed activity will meet the requirements of this [division/section/chapter] without such information;
- g. Proposed limits of disturbance;
- h. Estimate of the total area expected to be disturbed by excavation, grading or other construction activities;
- i. Description of existing site hydrology;
- j. Description and location of existing stormwater conveyances, impoundments, and wetlands on or adjacent to the site or into which stormwater flows;

k. Description of the proposed management systems post-construction for runoff from impervious surfaces including roofs and driveways and the locations of any foundation drains, curtain drains, or other site features that serve to collect and convey stormwater and their outfalls; and

l. Description of erosion and sediment control measures during construction.

3. Major Projects - For all other land altering activity subject to this [division/section/chapter], the Stormwater Management Plan shall fully describe the project in narrative, drawings and calculations and shall include:

a. A locus map;

b. The existing zoning, and land use at the site;

c. The proposed land use and area of disturbance;

d. The location(s) of existing and proposed monumentation and easements;

e. The location of existing and proposed utilities;

f. The site's existing and proposed topography with contours at two-foot intervals;

g. Description of existing site hydrology;

h. A description and location of existing stormwater conveyances, impoundments, and wetlands on or adjacent to the site or into which storm water flows;

i. A delineation of 100-year flood plains, if applicable;

j. Estimated seasonal high groundwater elevation (November to April) in areas to be used for stormwater retention, detention, or infiltration;

k. The existing and proposed vegetation and ground surfaces with runoff coefficient for each;

l. A drainage area map showing pre and post-construction watershed boundaries, drainage area and storm water flow paths;

m. A description and drawings of all components of the proposed drainage system including:

(1) Locations, cross sections, and profiles of all brooks, streams, drainage swales and their method of stabilization;

(2) All measures for the detention, retention or infiltration of water;

(3) All measures for the protection of water quality;

(4) The structural details for all components of the proposed drainage systems and storm water management facilities;

(5) Notes on drawings specifying materials to be used, construction specifications, and typicals;

(6) Expected hydrology with supporting calculations;

(7) Proposed improvements including location of buildings or other structures, impervious surfaces, and drainage facilities, if applicable;

n. Environmentally sensitive site design and LID analysis demonstrating application of principles, where feasible, through:

(1) reduced impervious surface coverage through street design, street width, parking design, and sidewalks;

(2) open space/tree retention;

(3) increased development density in exchange for open space protection in other areas of site; and,

(4) incorporation of decentralized, naturalized LID stormwater management systems to treat and infiltrate stormwater at the source.

o. Erosion and Sediment Control Plan (ESCP) for Construction Activities:

(1) A description of construction and waste materials expected to be stored on site, and a description of controls to reduce pollutants from these materials

- including storage practices to minimize exposure of the materials to stormwater, and spill prevention and response;
- (2) Timing, schedules, and sequence of development including clearing, stripping, rough grading, construction, final grading, and vegetative stabilization;
 - (3) An inspection and maintenance schedule for the period of construction.

Section 6 Stormwater management performance standards

A. Minimum control requirements

Projects that require a permit under this [division/section/chapter] must meet the standards of the Massachusetts Stormwater Management Standards. These standards are:

1. No new stormwater conveyances (e.g. outfalls) may discharge untreated stormwater directly to or cause erosion in wetlands or water of the commonwealth.
2. Stormwater management systems must be designed so that post-development peak discharge rates do not exceed predevelopment peak discharge rates.
3. Loss of annual recharge to groundwater should be minimized through the use of infiltration measures, including but not limited to environmentally sensitive site design, low impact development techniques, stormwater best management practices, and good operation and maintenance, to the maximum extent practicable. The annual recharge from the post-development site should approximate the annual recharge rate from the predevelopment or existing site conditions, based on soil types.
4. Stormwater management systems must be designed to remove 80 percent of the average annual load (post development conditions) of total suspended solids (TSS).
5. For land uses with higher potential pollutant loads, source control and pollution prevention shall be implemented in accordance with the Massachusetts Stormwater Handbook to eliminate or reduce the discharge of stormwater runoff from such land uses to the maximum extent practicable. The use of infiltration practices without pretreatment is prohibited.
6. Stormwater discharges within the Zone II or Interim Welhead Protection Area of a public water supply, and stormwater discharges near or to any other critical area, require the use of the specific source control and pollution prevention measures and the specific structural stormwater best management practices determined to be suitable for managing discharges to such area, as provided by the Massachusetts Stormwater Handbook.
7. Redevelopment of previously developed sites must meet the stormwater management standards to the maximum extent practicable. However, if it is not practicable to meet all the standards, new (retrofitted or expanded) stormwater management systems must be designed to improve existing conditions.

8. Erosion and sediment controls must be implemented to prevent impacts during disturbance and construction activities.
9. All stormwater management systems must have an operation and maintenance plan to ensure that systems function as designed.

When the proposed discharge may have an impact upon a sensitive receptor, including streams, wetlands, vernal pools, storm sewers, and/or combined sewers, the authorized permitting agency may require an increase in these minimum requirements, based on existing stormwater system capacity.

B. Stormwater management measures

1. Stormwater management measures shall be required to satisfy the minimum control requirements and shall be implemented in the following order of preference:
 - a. Infiltration, flow attenuation, and pollutant removal of runoff on site to existing areas with grass, trees, and similar vegetation and through the use of open vegetated swales and natural depressions;
 - b. Use of stormwater on site to replace water used in industrial processes or for irrigation;
 - c. Stormwater detention structures for the temporary storage of runoff which is designed so as not to create a permanent pool of water; and
 - d. Stormwater retention structures for the permanent storage of runoff by means of a permanent pool of water; and,
 - e. Detention and evaporation of stormwater on rooftops or in parking lots.
2. Infiltration practices shall be utilized to reduce runoff volume increases. A combination of successive practices may be used to achieve the applicable minimum control requirements.
3. Best management practices shall be employed to minimize pollutants in stormwater runoff prior to discharge into a separate storm drainage system or water body.
4. All stormwater management facilities shall be designed to provide an emergency overflow system, and incorporate measures to provide a non-erosive velocity of flow along its length and at any outfall.
5. The designed release rate of any stormwater structure shall be modified if any increase in flooding or stream channel erosion would result at a downstream dam, highway, structure, or normal point of restricted stream flow.

COMMENT: Prioritize LID approach first - decentralized, watershed-wide approaches that treat and infiltrate stormwater at the source rather than large end of pipe systems.

Example (Palmer) - Stormwater best management practices that mimic natural hydrology (i.e., nonstructural and small-scale upland management approaches) should be considered as first-line practices. Given appropriate soils and conditions, all opportunities to use nonstructural and small-scale upland management designs must be exhausted prior to exploring end-of-pipe stormwater management approaches.

C. Specific design criteria

Additional policy, criteria, and information including specifications and design standards may be found in the stormwater design manual.

1. All development that disturbs more than one acre of land must utilize low impact development techniques, and projects of all sizes subject to this

[*division/section/chapter*] must consider the following environmentally sensitive site design and Low Impact Development (LID) techniques:

- (a) Identify, map and preserve the site's natural features and environmentally sensitive areas such as wetlands, native vegetation, mature trees, slopes, drainage ways, permeable soils, flood plains, woodlands, and prime agricultural soils to the maximum extent practicable;
- (b) Minimize grading and clearing;
- (c) Delineate potential building envelopes, avoiding environmental resource areas and appropriate buffers by clustering buildings and reducing building footprints;
- (d) Develop methods to minimize impervious surfaces, and protect and preserve open space. Reduce impervious surfaces where ever possible through alternative street design, such as omission of curbs and use of narrower streets, shared driveways and through the use of shared parking areas;
- (e) Manage runoff using smaller, decentralized, low-tech stormwater management techniques to treat and recharge stormwater close to the source; Lengthen flow paths and maximize sheet flow;
- (f) Use nonstructural, low-tech methods including open drainage systems, disconnection of roof runoff and street sweeping where possible;
- (g) Use native plant vegetation in buffer strips and in rain gardens (small planted depressions that can trap and filter runoff);
- (h) Use of vegetation that does not require irrigation during periods of drought; and,
- (i) Integrate the following techniques into the site design to create a hydrologically functional site, including but not limited to the following:
 - (1) Grass swales along roads;
 - (2) Rain gardens;
 - (3) Buffer strips;
 - (4) Use of roof gardens where practicable;
 - (5) Use of amended soils that will store, filter and infiltrate runoff;
 - (6) Bioretention areas;
 - (7) Use of rain barrels and other cisterns to provide additional stormwater storage; and,
 - (8) Use of permeable pavement.

2. Infiltration systems

- (a) Infiltration systems shall be equipped with clean stone and or filter fabric adjacent to the soil or other sediment removal mechanisms;
- (b) Infiltration systems greater than three feet deep shall be located at least ten feet from basement walls;
- (c) Due to the potential for groundwater contamination, dry wells shall not be an acceptable method for management of runoff containing pollutants;

- (d) Infiltration systems designed to handle runoff from commercial or industrial impervious parking areas shall be a minimum of 100 feet from any drinking water supply well;
- (e) Infiltration systems shall not be used as sediment control basins during construction unless specific plans are included to restore or improve the basin surface;
- (f) Infiltration basins shall be constructed with a three foot minimum separation between the bottom of the structure and the seasonal high groundwater elevation, as determined by a certified soil evaluator; and,
- (g) Provisions shall be made for safe overflow passage, in the event of a storm which exceeds the capacity of an infiltration system.

3. Retention and detention ponds

Retention and detention ponds shall be designed and constructed in accordance with the criteria of the Massachusetts Stormwater Handbook: Volume 2 Technical Guide for Compliance with Massachusetts Stormwater Management Standard (Massachusetts Department of Environmental Protection, February 2008), as updated or amended.

4. Natural topography and land cover

The applicant shall give consideration in any plan to incorporating the use of natural topography and land cover such as natural swales, and depressions as they exist prior to development to the degree that they can accommodate the additional flow of water.

5. Swales

The authorized permitting agency shall give preference to the use of swales in place of the traditional use of curbs and gutters based on a case by case review of stormwater management plans by the city engineer and authorized permitting agency.

6. Public safety

The applicant shall consider public safety in the design of any stormwater facilities. The banks of detention, retention, and infiltration basins shall be sloped at a gentle grade into the water as a safeguard against personal injury, to encourage the growth of vegetation and to allow the alternate flooding and exposure of areas along the shore. Basins shall have a four-to-one slope to a depth two feet below the control elevation. Side slopes must be stabilized and planted with vegetation to prevent erosion and provide pollutant removal. The banks of detention and retention areas shall be designed with sinuous rather than straight shorelines so that the length of the shoreline is maximized, thus offering more space for the growth of vegetation;

7. Where a stormwater management plan involves direction of some or all runoff off of the site, it shall be the responsibility of the applicant to obtain from adjacent property owners any easements or other necessary property interests concerning flowage of water. Approval of a stormwater management plan does not create or affect any such rights.

8. All applicants for projects which involve the storage or use of hazardous chemicals shall incorporate handling and storage "best management practices" that prevent such chemicals from contaminating runoff discharged from a site into infiltration systems, receiving water bodies or storm drains, and shall include a list of such chemicals in the application and the Material Safety Data Sheets (MSDS) for each listed chemical

9. Runoff from parking lots and streets shall be treated by oil and water separators or other controls to remove oil and sediment;

10. The basic design criteria methodologies and construction specifications, subject to the approval of the authorized permitting agency and review and recommendation of the city engineer, shall be those generally found in the most current edition of the Massachusetts Stormwater Handbook: Volume 2 Technical Guide for Compliance with Massachusetts Stormwater Management Standard (Massachusetts Department of Environmental Protection, February 2008), as updated or amended.

D. Design requirements for construction related activities

The design requirements for construction related activities in the Stormwater Management Plan are:

1. Minimize total area of disturbance;
2. Sequence construction activities to minimize simultaneous areas of disturbance;
3. Minimize peak rate of runoff in accordance with the Massachusetts DEP Stormwater Policy;
4. Minimize soil erosion and control sedimentation during construction. Prevention of erosion is preferred over sedimentation control;
5. Divert uncontaminated water around disturbed areas;
6. Maximize groundwater recharge;
7. Install and maintain all erosion and sediment control measures in accordance with the manufacturer's specifications and good engineering practices;
8. Prevent off-site transport of sediment including off-site vehicle tracking of sediment;
9. Protect and manage on- and off-site material storage areas (overburden and stockpiles of dirt, borrow areas, or other areas used solely by the permitted project are considered a part of the project);
10. Comply with applicable federal, state and local laws and regulations including waste disposal, sanitary sewer or septic system regulations, and air quality requirements, including dust control;
11. Prevent adverse impact from the proposed activities to habitats mapped by the Massachusetts Natural Heritage and Endangered Species Program as endangered, threatened or of special concern, estimated habitats of rare wildlife and certified vernal pools, and priority habitats of rare species;
12. Institute interim and permanent stabilization measures. The measures shall be instituted on a disturbed area as soon as practicable but no more than 14 days after construction activity has temporarily or permanently ceased on that portion of the site; and,
13. Properly manage on-site construction and waste materials.

E. Maintenance

1. Operation, maintenance and inspection agreement
 - (a) Prior to issuance of any building permit for which stormwater management is required, the authorized permitting agency shall require the applicant or owner to execute an operation, maintenance and inspection agreement binding on all subsequent owners of land served by the private stormwater management facility. The agreement shall be designed to ensure that water quality standards are met in all seasons and throughout the life of the system. Such agreement shall provide for access to the facility at reasonable times for regular inspections by the [town/city] or its authorized representative and for regular or special assessments of property owners to ensure that the facility is maintained in proper

working condition to meet design standards and any provision established. The agreement shall include:

- (1) The name(s) of the owner(s) for all components of the system.
 - (2) Maintenance agreements that specify:
 - i. The names and addresses of the person(s) responsible for operation and maintenance
 - ii. The person(s) responsible for financing maintenance and emergency repairs.
 - iii. A maintenance schedule for all drainage structures, including swales and ponds.
 - iv. A list of easements with the purpose and location of each.
 - v. The signature(s) of the owner(s).
2. Stormwater management easements as necessary for:
 - (a) Access for facility inspections and maintenance;
 - (b) Preservation of stormwater runoff conveyance, infiltration, and detention areas and facilities, including flood routes for the 100-year storm event.
 - (c) Direct maintenance access by heavy equipment to structures requiring regular cleanout.
 3. Stormwater management easement requirements
 - (a) Purpose of each easement shall be specified in the maintenance agreement signed by the property owner.
 - (b) Stormwater management easements are required for all areas used for off-site stormwater control, unless a waiver is granted by the city.
 - (c) Easements shall be recorded with the registry of deeds prior to issuance of a certificate of completion.
 4. Changes to operation and maintenance plans
 - (a) The owner(s) of the stormwater management system must notify the authorized enforcement agency of changes in ownership or assignment of financial responsibility.
 - (b) The maintenance schedule in the maintenance agreement may be amended to achieve the purposes of this bylaw by mutual agreement of the authorized permitting agency and the responsible parties. Amendments must be in writing and signed by all responsible parties. Responsible parties must include owner(s), persons with financial responsibility, and persons with operational responsibility.
 - (c) The agreement shall be recorded by the applicant and/or owner in the land records of the registry of deeds. Proof of such recording shall be filed by the applicant and/or owner with the authorized permitting agency.
 - (d) The agreement shall also provide that, if after notice by the city engineer to correct a violation requiring maintenance work, satisfactory corrections are not made by the owner(s) within 30 days, by the authority, granted inter alia, Amendment Article 89 to Article II of the Massachusetts Constitution, Chapter 294 of the Acts of 1920, as amended, Sections one through twenty-four of Chapter 83 of the General Laws of the Commonwealth of Massachusetts, the City may seek civil penalties of up to \$5,000 for each day of violation of this division, and/or seek remedy in Superior Court.

COMMENT: Amendment Article 89 to Article II of the Massachusetts Constitution, Chapter 294 of the Acts of 1920, as amended, Sections one through twenty-four of Chapter 83 of the

General Laws of the Commonwealth of Massachusetts, allows municipalities to seek civil penalties of up to \$5,000 for each day for stormwater related violations, and/or seek remedy in Superior Court.

5. Maintenance responsibility

(a) The owner of the property on which work has been done pursuant to this division for private stormwater management facilities, or any other person or agent in control of such property, shall maintain in good condition and promptly repair and restore all grade surfaces, walls, drains, dams and structures, vegetation, erosion and sediment control measures and other protective devices. Such repairs or restoration and maintenance shall be in accordance with approved plans.

(b) A maintenance schedule shall be developed for the life of any stormwater management facility and shall state the maintenance to be completed, the time period for completion, and who shall be legally responsible to perform the maintenance. This maintenance schedule shall be printed on the stormwater management plan.

(c) Records of installation and maintenance.

(d) Failure to maintain practices.

F. Performance bond

The authorized permitting agency shall require from the developer a surety or cash bond, irrevocable letter of credit, or other means of security acceptable to the authorized permitting agency prior to the issuance of any building permit for the construction of a development requiring a stormwater management facility. The amount of the security shall not be less than the total estimated construction cost of the stormwater management facility. The bond so required in this subsection shall include provisions relative to forfeiture for failure to complete work specified in the approved stormwater management plan, compliance with all of the provisions of this division and other applicable laws and regulations, and any time limitations. The bond shall not be fully released without a final inspection of the completed work by the [city engineer], submission of "as-built" plans, and certification of completion by the authorized permitting agency of the stormwater management facilities being in compliance with the approved plan and the provisions of this division.

G. As-Built Affidavit

When site construction is complete, the design engineer must either:

1. Submit an affidavit that the construction complies with the approved Stormwater Management Plan, or
2. If as-built construction deviated from the approved Stormwater Management Plan, submit an affidavit indicating what changes were made along with as-built plans and a statement that the construction will meet all applicable stormwater management requirements as detailed in this division/section.

The affidavit must be submitted to _____ for review and approval.

H. Enforcement and penalties

1. Violations

Any development activity that has commenced or is conducted contrary to this division may be restrained by injunction or otherwise abated in a manner provided by law.

2. Notice of violation

When the authorized permitting agency or its designated agent determines that an activity is not being carried out in accordance with the requirements of this division, it shall issue a written notice of violation to the owner of the property. The notice of violation shall contain:

- (a) The name and address of the owner applicant;
- (b) The address when available or the description of the building, structure, or land upon which the violation is occurring;
- (c) A statement specifying the nature of the violation;
- (d) A description of the remedial measures necessary to bring the development activity into compliance with this division and a time schedule for the completion of such remedial action;
- (e) A statement of the penalty or penalties that shall or may be assessed against the person to whom the notice of violation is directed;
- (f) A statement that the determination of violation may be appealed to the Authorized Permitting Authority by filing a written notice of appeal within 15 days of service of notice of violation.

3. Stop work orders

Persons receiving a notice of violations will be required to halt all construction activities. This "stop work order" will be in effect until the authorized permitting agency or its designated agent confirms that the development activity is in compliance and the violation has been satisfactorily addressed. Failure to address a notice of violation in a timely manner can result in civil, criminal, or monetary penalties in accordance with the enforcement measures authorized in this division.

4. Criminal and civil penalties

Any person who violates any provision of this division, valid regulation, or the terms or conditions in any permit or order prescribed or issued there under, shall in accordance with Section 10 of Chapter 83 of the Massachusetts General Laws, be subject to a civil penalty of \$5,000 for each day such violation occurs or continues, which may be assessed in an action brought on behalf of the [city/town] in any court of competent jurisdiction together with such equitable relief as is appropriate.

5. Noncriminal disposition

As an alternative to criminal prosecution or civil action, the city may elect to utilize the noncriminal disposition procedure set forth in [Town/City Bylaw/Ordinance]. The [Department of Public Works] shall be the enforcing entity. The penalty for the first violation shall be up to \$100.00. The penalty for the second violation shall be up to \$200.00. The penalty for the third and subsequent violations shall be \$300.00. Each day or part thereof that such violation occurs or continues shall constitute a separate offense.

COMMENT: Not all municipalities have adopted Noncriminal Disposition procedures. If your community has not done so, these procedures would need to be enacted separately as part of the General Bylaws/City Ordinance in order to utilize this alternative mode of enforcement.

6. Restoration of lands

Any violator may be required to restore land to its undisturbed condition. In the event that restoration is not undertaken within a reasonable time after notice, the [Department of Public Works] may take necessary corrective action, the cost of which shall become a lien upon the property until paid.

7. Holds on occupancy permits

Occupancy permits will not be granted until corrections to all stormwater practices have been made and accepted by the [Department of Public Works].

8. Severability

The invalidity of any section or provision of this section shall not invalidate any other section or provision thereof.

COMMENT: Some communities are seeking to incentivize Low Impact Development techniques by offering the following bonuses.

Section 7 Incentives for exceeding stormwater management performance standards and implementing Low Impact Development (LID) techniques

If an applicant demonstrates that the Stormwater Management Plan substantially incorporates Low Impact Development (LID) techniques or other enhanced practices as described in this division/section, and/or substantially exceeds the requirements of this division/section, the applicant may submit a request to the authorized permitting agency for:

- A. A waiver of permit review fees up to 100%; and/or
- B. A partial to full waiver of parking space requirements. To obtain this waiver, the applicant must demonstrate that sufficient parking will be available to the development (i.e. through shared parking, use of on-street parking, reduced vehicle use, timing, etc.); and/or
- C. A density or dimensional bonus.

LID techniques manage rainfall at or near the source and may include reducing impervious surface coverage (i.e. through street design, street width, parking design, sidewalks, etc.), treating and infiltrating stormwater at the source, utilizing environmentally sensitive site design and, preserving open space and natural areas, etc. For example, LID runoff management techniques such as rain gardens, green roofs, bioretention basins, etc. may help a project to qualify for these incentives.

All abatements and waivers are granted at the discretion of the authorized permitting agency. Requests must be made in writing and must fully state how the project's Stormwater Management Plan substantially incorporates LID techniques or exceeds the performance standards described in the division/section.

RESIDENTIAL LOW IMPACT DEVELOPMENT

Prepared by the Pioneer Valley Planning Commission

Section 1.0 Stormwater Management Bylaw

1.1 Purpose

The purpose of this bylaw is to protect, maintain and enhance the public health, safety, environment and general welfare by establishing minimum requirements and procedures to control the adverse effects of increased post-development stormwater runoff and non-point source pollution associated with new development and redevelopment. Smart site planning and proper management of post-development stormwater runoff will minimize damage to public and private property and infrastructure, safeguard public health, safety, environment and general welfare of the public, protect water and aquatic resources, and promote groundwater recharge to protect surface and groundwater drinking water supplies.

1.2 Applicability

This bylaw shall be applicable to all land disturbance uses requiring a Special Permit, Site Plan Approval, and residential uses including single-family detached dwellings creating land disturbances and requiring a Building Permit.

1.3 Application Procedures

1. For land disturbance uses requiring a Special Permit, a Stormwater Management Plan should be submitted to the Permit Granting Authority for review and approval.
2. For land disturbance uses requiring Site Plan Approval, an Stormwater Management Plan should be submitted to the Permit Granting Authority for review and approval.
3. For all residential uses not requiring a Special Permit or Site Plan Approval, a residential Stormwater Management Plan identifying post-construction drainage controls for the roof, driveway and any drains, including their locations on a site plan, shall be submitted to the Zoning Code Enforcement Officer on a form provided by the Zoning Code Enforcement Officer prior to application for a Building Permit. The Zoning Code Enforcement Officer will refer Stormwater Management Plan submittals to the Conservation Commission and Board of Health for review and comment to ensure consistency with this bylaw. For residential uses not requiring a Special Permit or Site Plan Approval, the Zoning Code Enforcement Officer will have authority to render a final decision as to whether the Stormwater Management Plan is satisfactory.
4. The Conservation Commission and Board of Health shall have 30 days to provide comments to the Zoning Code Enforcement Officer. If comments are not received within 30 days, the Zoning Code Enforcement Officer may render a decision without comment.

5. The Zoning Code Enforcement Officer shall render a decision regarding whether the Stormwater Management Plan is consistent with the standards of this bylaw within 45 days of submittal of such plan.

6. If the Stormwater Management Plan is determined to be inconsistent with this bylaw, the project proponent may amend and re-submit the plan at any time, in order to meet the requirements of this bylaw.

1.4 Stormwater Management Plan Contents

1. This plan shall be submitted in accordance with the criteria established in this bylaw and must be submitted with the stamp and signature of a Professional Engineer (PE) licensed in the Commonwealth of Massachusetts.

2. The Stormwater Management Plan shall fully describe the project in drawings, narrative and calculations. For uses causing land disturbance and requiring a Special Permit and Site Plan Approval, the Stormwater Management Plan shall contain the following:

- a. Contact Information: Name, address and telephone number of all persons having legal interest in the property, and the parcel number (map and lot) of the property or properties affected;
- b. A locus map;
- c. Existing site plan;
- d. Existing zoning and land use at the site;
- e. Proposed land use;
- f. Location(s) of existing and proposed easements;
- g. Location(s) of existing and proposed utilities;
- h. Existing and proposed topography at the site with contours at 2-foot intervals;
- i. Existing site hydrology (both groundwater recharge and surface runoff);
 - j. Description and delineation of existing stormwater conveyances, impoundments, wetlands, drinking water resource areas, swimming beaches or other critical environmental resource areas, on or adjacent to the site into which stormwater flows;
- k. Delineation of 100-year flood plains, if applicable;
 - l. Estimated seasonal high groundwater elevation in areas to be used for stormwater retention, detention or infiltration;
 - m. Existing and proposed vegetation and ground surfaces with runoff coefficients for each;
 - n. Drainage area map with pre- and post-construction watershed boundaries, drainage area and stormwater flow paths, including municipal drainage system flows;
 - o. Recharge area analysis that calculates pre-and post-construction annual groundwater recharge rates on the parcel;

p. A description and drawings of all components of the proposed LID Management system including:

- i. Locations, cross sections, and profiles of all brooks streams, drainage swales and their method of stabilization;
- ii. Structural details and constructions specifications for the detention, retention or infiltration of water;
- iii. Any other information requested by the permit granting authority or the Building Inspector.

q. Hydrologic and hydraulic design calculations for the pre- and post-development conditions for the 2-year, 10-year and 100-year 24 hour storm events. Such calculations shall include:

- i. Description of the design storm frequency, intensity and duration;
- ii. Time of concentration;
- iii. Soil Runoff Curve Number (RCN) based on land use and soil hydrologic group;
- iv. Peak runoff rates and total runoff volumes for each watershed area;
- v. Information on construction measures used to maintain the infiltration capacity of the soil where any kind of infiltration is proposed;
- vi. Infiltration rates, where applicable;
- vii. Culvert capacities;
- viii. Flow velocities;
- ix. Data on the increase in rate and volume of runoff for the specified design storms, and
- x. Documentation of sources for all computation methods and field test results.

r. Post-Development downstream analysis if deemed necessary by the granting authority. The permit granting authority may request that the applicant evaluate the hydrologic impacts immediately downstream of the project.

s. Soils Information from test pits performed at the location of proposed Stormwater Management facilities, including but not limited to soil descriptions, depth to seasonal high groundwater, depth to bedrock, and percolation rates. Soils information will be based on site test pits logged by a Massachusetts Registered Soil Evaluator, or a Massachusetts Registered Professional Engineer;

t. Landscaping plan describing the woody and herbaceous vegetative stabilization and management techniques to be used within and adjacent to the stormwater practice.

3. For single-family residential uses creating land disturbance and requiring a building permit, the contents of the Stormwater Management Plan shall include a description of the site hydrology and proposed systems for management of runoff from impervious surfaces including roofs and driveways and the locations of any foundation or curtain drains and their outfalls. The contents of the Stormwater Management Plan shall be submitted on a form provided by the Zoning Code Enforcement Officer.

1.5 Operation and Maintenance Plan

1. An Operation and Maintenance Plan (O&M Plan) is required at the time of application for all Special Permit and Site Plan Approval projects rendering 15 percent or more of a site impervious. The maintenance plan shall be designed to ensure compliance with this Bylaw and that the Massachusetts Surface Water Quality Standards, 314, CMR 4.00 are met in all seasons and throughout the life of the system. The Operation and Maintenance Plan shall remain on file with the permit granting authority and shall be an ongoing requirement. The O&M Plan shall include:

- a. The name(s) of the owner(s) for all components of the system;
 - b. A map showing the location of the systems and facilities including catch basins, manholes/access lids, main, and stormwater devices;
 - c. Maintenance agreements that specify:
 - (i) The names and addresses of the person(s) responsible for operation and maintenance;
 - (ii) The person(s) responsible for financing maintenance and emergency repairs;
 - (iii) An Inspection and Maintenance Schedule for all LID Management facilities including routine and non-routine maintenance tasks to be performed;
 - (iv) A list of easements with the purpose and location of each;
 - (v) The signature(s) of the owner(s).

2. Stormwater Management Easement(s)

- a. Stormwater management easements shall be provided by the property owner(s) as necessary for:
 - (i) Access for facility inspections and maintenance;

(ii) Preservation of stormwater runoff conveyance, infiltration, and detention areas and facilities, including flood routes for the 100-year storm event;

(iii) Direct maintenance access by heavy equipment to structures requiring regular maintenance.

b. The purpose of each easement shall be specified in the maintenance agreement signed by the property owner.

c. Stormwater Management easements are required for all areas used for off-site stormwater control, unless a waiver is granted by the Building Inspector.

d. Easements shall be recorded with the Hampshire County Registry of Deeds prior to issuance of a Building Permit by the Building Department.

3. Changes to Operation and Maintenance Plans

a. The owner(s) of the Stormwater Management system must notify the permit granting authority of changes in ownership or assignment of financial responsibility.

b. The maintenance schedule in the Maintenance Agreement may be amended to achieve the purposes of this Bylaw by mutual agreement of the permit granting authority and the Responsible Parties. Amendments must be in writing and signed by all Responsible Parties. Responsible Parties shall include owner(s), persons with financial responsibility, and persons with operational responsibility.

4. Stormwater Performance Standards

The following performance standards must be met for the Stormwater Management Plan to be determined to be in conformance with this bylaw:

a. Open space must be preserved to the maximum extent possible through the use of site planning that identifies important natural resource areas, such as critical recharge areas and species habitat, and seeks to prevent disturbance of these areas by development.

b. Stormwater management systems must be designed so that post-development peak discharge rates do not exceed pre-development peak discharge rates.

c. Loss of annual recharge to groundwater should be minimized through the use of infiltration measures to the maximum extent possible. The annual recharge from the post-development site should approximate the annual recharge from the pre-development or existing site conditions based on soil types.

d. Stormwater must be managed to prevent flooding of neighboring and other down gradient properties.

e. Existing vegetation should be preserved to the maximum extent possible and native plant communities must be replicated in post-construction landscaping.

f. Appropriate best management practices to meet the intent of this bylaw include but are not limited to: detention/retention basins, drywells and other infiltration devices equipped with oil/grease pretreatment systems, rain gardens, green roofs, rain barrels, porous pavement, vegetated swales, and constructed wetlands.

MODEL STORMWATER UTILITY BYLAW/ORDINANCE

Section _____. Established.

There is hereby established within the department of (public works (DPW)/highway department (HD)), a division known as the stormwater management division under the day-to-day supervision of the deputy superintendent of public works and the general supervision of the superintendent of public works.

Section _____. Purpose.

The stormwater management division shall administer the stormwater management program of the (city/town). It shall be funded by revenue collected through the stormwater utility fee and such other revenue as may, from time to time, be appropriated. The stormwater management program is designed to promote the health and safety of the public, to protect property from flooding and the damage caused by stormwater runoff, and to protect and manage water quality by controlling the level of pollutants in stormwater runoff and the flow of water as conveyed by manmade and by natural stormwater management systems and facilities whether publicly or privately owned.

Section _____. Authority.

This article is adopted in accordance with the authority granted, inter alia, by Amendment Article 89 to Article II of the Massachusetts Constitution, Chapter 294 of the Acts of 1920, as amended, Sections one through twenty-four of Chapter 83 of the General Laws of the Commonwealth of Massachusetts and such other powers as granted to cities in the said General Laws.

Section _____. Definitions.

The following words, terms and phrases, when used in this article, shall have the meanings ascribed to them in this section, except where the context clearly indicates a different meaning:

Credit means a reduction in the amount of a Stormwater Utility Fee charge to the owner of a particular property for the existence and use of privately owned, maintained and operated on-site or off-site stormwater management systems or facilities, or continuing provision of services or activities that reduce or mitigate the (Town's/City's) cost of providing stormwater management services for that particular property.

Developed land shall mean a parcel of land in single and separate ownership altered from its natural state to include impervious surface area greater than four hundred (400) square feet.

Drainage system shall mean natural and manmade channels, swales, ditches, swamps, rivers, streams, creeks, wetlands, branches, reservoirs, ponds, drainage ways, inlets, catch basins, gutters, pipes, culverts, bridges, head walls, storm sewers, lakes, and other physical works, properties, and improvements that transfer, control, convey or otherwise influence the movement of stormwater runoff.

Dwelling unit means the individual, private premises contained in any building intended, whether occupied or not, as the residence for one household, regardless of the number of individuals in the household. A building may contain more than one dwelling unit.

General Laws means the General Laws of the Commonwealth of Massachusetts.

Improved property means property altered from its natural state by construction or installation of greater than four hundred (400) square feet of impervious surfaces.

Impervious surface means those areas which prevent or impede the infiltration of stormwater into the soil in the manner in which it entered the soil, in natural conditions, prior to development. Common impervious surfaces include, but are not limited to, rooftops, buildings or structures, sidewalks, walkways, patio areas, driveways, parking lots, storage areas, compacted gravel and soil surfaces, awnings and other fabric or plastic coverings, and other surfaces which prevent or impede the natural infiltration of stormwater runoff which existed prior to development.

Non-residential property means improved property that is not residential property as defined herein including, but not limited to such property as commercial and office buildings, public buildings and structures, industrial and manufacturing buildings, storage buildings and storage areas, parking lots, parks, recreation properties, tennis courts, swimming pools, public and private schools and universities, research facilities and stations, hospitals and convalescent centers, airports, agricultural uses, water and wastewater treatment plants, and any other form of use not otherwise mentioned which is not a residential property, and which has private parking lots and private drives or roads

Residential property means improved property, without regard to form of ownership, containing three or fewer dwelling units except as may be modified from time-to-time herein by the term “single family”. Residential properties shall not include improved property containing structures used primarily for nonresidential purposes (i.e. hotels, motels, retirement centers, nursing homes or assisted living homes or properties designated as “mixed use” properties by the Board of Assessors.

Stormwater shall mean the runoff from precipitation that travels over natural state or developed land surfaces and enters a drainage system.

Stormwater management services mean all services provided by the (Town/City) which relate to the:

- (a) Transfer, control, conveyance or movement of stormwater runoff through the (Town/City);
- (b) Maintenance, repair and replacement of existing stormwater management systems and facilities;
- (c) Planning, development, design and construction of additional stormwater management systems and facilities to meet current and anticipated needs;
- (d) Regulation of the use of stormwater management services, systems and facilities; and

(e) Compliance with applicable State and Federal stormwater management regulations and permit requirements. Stormwater management services may address the quality of stormwater runoff as well as the quantity thereof.

Stormwater management systems and facilities mean those natural and manmade channels, swales, ditches, rivers, streams, creeks, branches, reservoirs, ponds, drainage ways, inlets, catch basins, pipes, headwalls, storm sewers, lakes and other physical works, properties and improvements which transfer, control, convey, detain, retain, treat or otherwise influence the movement of stormwater runoff.

Stormwater Utility Fee means the periodic user fee imposed pursuant to this article by the (Town/City) of _____ for providing stormwater management services.

Undeveloped land shall mean all land that is not altered from its natural state to an extent that results in greater than four hundred (400) square feet of impervious surface area.

Section _____. Stormwater Utility Fee Established; Quarterly Billing; Deposit To Special Revenue Account.

(a) Pursuant to section 16 of Chapter 83 of the General Laws, the (town/city) hereby establishes a charge for the use of the stormwater management services of the (town/city) to be known as the stormwater utility fee.

(b) The stormwater utility fee is imposed on each parcel of residential property and each parcel of nonresidential property, whether occupied or not. The fee shall be billed in advance on a quarterly basis to the record title owner of the property. The quarterly billing shall be consolidated in the same bill as is sent to the said property owner for other services provided by the city supported by fees, including water service, solid waste management and sanitary sewer use.

(c) Receipts generated from the stormwater utility fee shall be deposited to a special revenue account to be known as the stormwater management account set up in accordance with the authority granted by Section 53E of Chapter 44 of the General Laws. The funds deposited to this account shall be used to fund the stormwater management program of the city.

(d) The Superintendent of (public works/highway department), under the general supervision of the superintendent of (public works/highway department), shall within forty-five (45) days after the close of each fiscal year, prepare an annual report of the change in cash balances which shall detail the cash receipts and disbursements for the year and which shall be submitted to the (Select Board/Mayor, City Council and (town/city) auditor.

Section _____. Rates.

(a) The (Select Board/City Council) shall establish reasonable rates to defray the cost of administering and implementing the stormwater management program of the (town/city). The initial rates, and any later modifications, shall be based upon recommendation of the

(Board/Superintendent) of public works and shall be set by the adoption of a written Resolution by vote of the (Select Board/City Council). A schedule of said rates shall be on file in the office of the (Town/City Clerk) of the (Town/City) of _____.

(b) There shall be two classifications for the rates, Residential and Non-residential. Residential rates will be billed at a flat rate per the fee structure adopted by the (Select Board/City Council) as provided in Exhibit A.

(c) Non-residential rates shall be based upon the total area of impervious surface on a parcel of land in single and separate ownership as determined by the (Engineering/Public Works/Highway) Department by identifying such parcels from the records of the Board of Assessors and utilizing available GIS data layers including building footprints, building structures, driveways, pathways, pools, sport courts, and parking areas. Any impervious areas within the (town/city)-owned right-of-way will not be attributed to the parcel and will not be considered as part of the total impervious area of the parcel.

Section _____. Scope of Responsibility for Stormwater Management Systems and Facilities

(a) The (Town/City) owns or otherwise has rights which allow it to operate, maintain, improve and access those stormwater management systems and facilities which are located:

(1) Within public road rights-of-way;

(2) On private property but within easements granted to, and accepted by, the (Town/City) of _____, or are otherwise permitted to be located on such private property by written agreements for rights-of-entry, rights-of-access, rights-of-use or such other lawful means to allow for operation, maintenance, improvement and access to the stormwater management system facilities located thereon;

(3) On public land which is owned by the (Town/City) and/or land of another governmental entity upon which the (Town/City) has agreements providing for the operation, maintenance, improvement and access to the stormwater management systems and facilities located thereon.

(b) Operation, maintenance and/or improvement of stormwater management systems and facilities which are located on private or public property not owned by the (Town/City), and for which the (Town/City) lacks a lawful right of entry, maintenance and repair shall be and remain the legal responsibility of the property owner, except as otherwise provided for by state and federal laws and regulations.

Section 18-200. Purposes of the Fund.

Receipts from the stormwater utility fee shall be used for the following purposes:

(a) The acquisition by gift, purchase or condemnation of real and personal property, and interests therein, necessary to construct, operate, and maintain stormwater management systems and facilities.

(b) All costs of administration and implementation of the stormwater management program, including the cost of labor attributable to the stormwater management program and the establishment of reasonable operating and capital reserves to meet unanticipated or emergency stormwater management requirements.

- (c) Engineering and design, debt service and related financing expenses, construction costs for new facilities, and enlargement or improvement of existing facilities.
- (d) Operation and maintenance of the stormwater system, including catch basin cleaning, ditch maintenance and street sweeping.
- (e) Capital projects for stormwater management.
- (f) Illicit discharge detection and elimination.
- (g) Monitoring, surveillance, and inspection of stormwater control devices.
- (h) Water quality monitoring and water quality programs.
- (i) Retrofitting developed areas for pollution control.
- (j) Inspection and enforcement activities.
- (k) Billing and related administrative costs.
- (l) Other activities which are reasonably necessary including costs related to regulatory compliance.

Section _____. Stormwater Utility Fee Exemptions.

- (a) The (Town/City) finds that all real property in the (Town/City) contributes to runoff and either uses or benefits from the maintenance of the stormwater system. Therefore, except as provided in this section or otherwise provided by law, no public or private property located in the (Town/City) of _____ shall be exempt from the stormwater utility fee charges. No exception, credit, offset, or other reduction in stormwater utility fee charges shall be granted based on age, tax status, economic status, race, religion or other condition unrelated to the cost of providing stormwater management services and facilities.
- (b) Notwithstanding the foregoing, the (Town/City) establishes exemptions to the Stormwater Utility Fee as follows:
 - (1) Undeveloped land.
 - (2) (Town/City)-owned property.
 - (3) Railroad rights-of-way (tracks). However, railroad stations, maintenance buildings, and/or other improved property used for railroad purposes shall not be exempt from Stormwater Utility Fee charges.
 - (4) Public streets, highways and rights-of-way. However, maintenance buildings and/or other improved property used for road maintenance purposes shall not be exempt from Stormwater Utility Fee charges. All other State, Federal, and County properties are subject to the user fee charges on the same basis as private properties.

Section _____. Stormwater Utility Fee Credits.

- (a) The superintendent of (highway department/public works) is hereby authorized to grant credits to property owners to be applied against the stormwater utility fee based on the technical and procedural criteria set forth in the Stormwater Utility Credit Policy (Credit Policy) as developed, maintained and, from time to time, amended by the Board of (Public Works/Highway Department/Selectmen). The Credit Policy shall be available for inspection by the public at the (Public Works/Highway Department/Town Hall).
- (b) Any credit allowed against the stormwater utility fee charge is conditioned on continuing compliance with the (Town/City)'s design and performance standards as stated in the Credit Policy and/or upon continuing provision of the controls, systems, facilities, services, and activities provided, operated, and maintained by the property owner or owners upon which the credit is based. The superintendent of (highway department/public works) may revoke a credit at

any time for noncompliance with applicable standards and criteria as established in the Credit Policy or this article.

(c) In order to obtain a credit, the property owner must make application to the (Town/City) on forms provided by the (highway department/public works) for such purpose, the forms to be fully completed in accordance with the procedures outlined in the Credit Policy.

(d) When an application for a credit is deemed complete by the superintendent of (highway department/public works) shall have thirty (30) days from the date the complete application is accepted to either grant the credit in whole, grant the credit in part, or deny the credit. Credits applied for by the property owner and granted in whole or in part, shall apply to all stormwater utility fee charges in accordance with the terms defined in the Credit Policy.

Section _____. Stormwater Utility Fee Billing, Delinquencies, Collections, Abatements.

(a) Failure to receive a stormwater utility bill is not justification for non-payment. The property owner, as identified from public land records of the (Town/City) of _____, shall be obligated to pay the appropriate stormwater utility fee for that property. If a property is unbilled, or if no bill is sent for a particular parcel of developed land, the (Town/City) may back bill for the fees as applicable for a period not to exceed one year of charges, but no late fees or delinquency charges of any kind shall be charged or recovered from any property owner so back billed.

(b) Stormwater utility bills shall be committed to the (Town/City) collector for collection. The (Town/City) collector shall notify the superintendent of (highway department/public works) monthly of the amounts collected, and shall keep records of all paid and unpaid stormwater utility bills.

(c) In any case of nonpayment of a stormwater utility bill for sixty (60) days after the same is due, the (Town/City) collector shall send a notice to the delinquent, and shall inform the superintendent of (highway department/public works) in writing that such notice has been sent.

(d) In accordance with the authority granted by Sections 16A through 16F of Chapter 83 of the General Laws, charges for the stormwater utility fee, together with interest thereon and costs relative thereto, shall be a lien upon the real estate for which the charge was billed. Such lien shall take effect by operation of law on the day immediately following the due date of such charge and, unless dissolved by payment or abatement, shall continue until such charge has been added to or committed as a tax in accordance with the requirements of Section 16C of Chapter 83 of the General Laws, and thereafter, unless so dissolved, shall continue as provided in Section 37 of Chapter 60 of the said General Laws.

(e) In addition to the method of collection specified in Sections 16A through 16F of the General Laws, the overdue charge may be collected through any other lawful means.

(f) In the event that a property owner believes the stormwater utility fee is improperly calculated or is otherwise incorrect, the property owner may, within thirty (30) days from the date of issuance of the stormwater utility bill, and after payment of the bill in full, apply to the superintendent of (highway department/public works) for an abatement. The application for abatement shall be supported by such information as is necessary for a reasonable person to conclude that it is more likely than not that the billing is in error. The superintendent of (highway department/public works) shall have sixty (60) days to consider the request for abatement and render a written decision which may deny the abatement, grant the abatement in full or grant the abatement in part.

Section 18-204. Appeals, Hearings.

(a) In the event that a property owner is aggrieved by a written decision from the superintendent of (highway department/public works) denying an application for abatement in whole or in part, or denying an application for a credit, in whole or in part, the property owner shall have thirty (30) days from the date of the written decision to file an appeal to the board of (highway department/public works/selectmen). The appeal shall be in writing and shall specify the grounds thereof. Upon the filing of the notice of appeal with the (highway department/public works/selectmen), the department shall forthwith transmit to the board of (highway department/public works/selectmen) all documents constituting the record upon which the particular decision was made. The board of (highway department/public works/selectmen) shall set a date for hearing which shall be within ninety (90) days of the date of the filing of the appeal and notice thereof setting forth the place, date and time of hearing shall be sent to the property owner no less than ten (10) days prior to the hearing date. The board of (highway department/public works/selectmen) shall render a written decision within ten (10) days of the conclusion of the hearing affirming the action of the department or reversing the action. If reversing the denial of an abatement, the decision shall specify the sum to be abated, which shall not exceed the amounts paid. If reversing the denial of a credit, the decision shall specify the credit to be applied prospectively against future charges unless the property owner has paid the full amount of the stormwater utility fee as charged and has also requested an abatement.

(b) In the event that a property owner fails to pay the stormwater utility fee as charged and the (Town/City) utilizes the process set forth in sections 16A through 16F of Chapter 83 of the General Laws to collect the unpaid charges, the property owner shall have the right to seek an abatement by filing an application for abatement with the board of (highway department/public works/selectmen) in accordance with the remedy specified in Section 16E of Chapter 83 of the said General Laws with a copy delivered to the board of assessors. The application for abatement shall conform to the requirements for a notice of appeal as set forth in subsection “a”, above, and the process for a hearing before the board of (highway department/public works/selectmen), including the applicable time limits, shall be as set forth therein. In the event that the board of (highway department/public works/selectmen) denies the abatement, in whole or in part, it shall, in its written decision, include a statement notifying the property owner of the right to seek a review of the decision by the filing of an appeal with the appellate tax board of the Commonwealth of Massachusetts within three months of the date of the decision of the board of (highway department/public works). As the right to appellate tax board review under this subsection “b” is derived from applicable sections of the General Laws as contained in Chapters 59 and 83 thereof, to the extent that the terms of this ordinance conflict with the terms specified therein, the terms specified in the General Laws control.

MODEL TRADITIONAL NEIGHBORHOOD DISTRICT (TND) BYLAW/ORDINANCE AND SUBDIVISION REGULATIONS

1.0 TRADITIONAL NEIGHBORHOOD DEVELOPMENT

1.1 CONCEPT AND INTENT

Traditional Neighborhood Development (TND) focuses on building well-planned, housing within close proximity of the town center. It is a pedestrian-oriented concept which provides an alternative to highway-based suburban sprawl. TNDs may link up with, or adjoin, existing town centers, or they may be built outside of town, with their own stores and other town center amenities. TNDs are established to preserve land, promote energy conservation, and provide alternatives to automobile use, such as walking, biking, and public transport. TNDs include a variety of residential dwellings interspersed with small scale commercial establishments and public spaces. They are characterized by:

- a. walkable neighborhood centers and focal points;
- b. small, efficient lots with modest sized buildings fronting on, and aligned with, streets in a disciplined manner, generally uninterrupted by parking lots;
- c. generally regular geometric patterns of streets and blocks arranged to provide comprehensible routes of travel;
- d. well-configured squares, greens, gardens, and parks woven into street and block patterns and dedicated to collective social activity, recreation and visual enjoyment;
- e. civic buildings for assembly or other civic purposes, sited to act as visual landmarks and symbols of identity within the community;

1.2 PURPOSES

The purpose of this bylaw/ordinance is to encourage traditional neighborhood developments that:

- a. provide a variety of housing types and commercial services;
- b. are designed to provide more efficient use of open space associated with development;
- c. preserve the rural, historic, and agricultural character of the community by directing new development to appropriate locations;
- d. promote the creation of a neighborhood center that exhibits the design features of traditional neighborhoods, hamlets, villages, and small towns in Massachusetts.
- e. consist of a harmonious grouping of buildings connected by plazas, pedestrian links, and open space.;
- f. facilitate the provision and maintenance of adequate public services and infrastructure.

1.3 PROCEDURES FOR IMPLEMENTING THE TND

Traditional Neighborhood Developments shall be allowed by right in the TND district but must comply with the Lot Development, Design, Parking and other standards in this bylaw/ordinance

1.31 Procedures for Review

An applicant for TND development shall follow the submission procedures as outlined in the (Name of Community) Subdivision Regulations.

1.32 Location

The (town name) TND shall be an overlay zoning district for that portion of the (name of town) labeled "TND" on the map annexed to this TND Bylaw and declared to be a part hereof. The boundaries of the TND district will be as shown on the map entitled "Traditional Neighborhood Development District", dated _____, and on file with the Town/City Clerk.

1.4 GENERAL LOT DEVELOPMENT STANDARDS FOR A TND

1.41 General Standards

- a. The minimum tract size for development is 40 acres.
- b. Public water and sewer service is required for all development. All utility lines such as telephone, cable television, and electric are to be located underground.
- c. The tract of land to be developed shall be in one ownership, or shall be the subject of an application filed jointly in accordance with an approved plan
- d. All uses which are permitted by right in underlying zoning district bylaw are permitted by right in the TND district.

1.42 Permitted Uses

- a. **Residential Uses.** Each of the following residential uses is permitted within the TND District: single family dwelling, single family semi-detached dwelling, single family attached dwelling, two-family dwelling, townhouse, cluster dwelling, guest house, home occupation, and elderly housing.
- b. **Commercial Uses.** Each of the following non-residential (commercial) uses is permitted within the TND District: professional office (such as law office, doctor's office, or corporate office); church, public and private schools, daycare center, artists studio and accessory gallery use, bakery, restaurant (without drive-in service), bicycle shops, garden supplies, office equipment and supplies, neighborhood markets and hotels/motels. Other uses may be permitted by the planning board based on similarity of use.
- c. **Community and Public Service Uses** including a public park, playground, recreation and community building, public parking lot, child care and adult day care service, cultural or civic use, and places of worship are permitted within the TND District.
- d. **Accessory Uses.** Buildings and structures customarily incidental to any primary use located on the same lot are permitted within the TND District.

1.43 Lots & Buildings

- a. All lots shall share a frontage line with a street, square, courtyard or park (public access).
- b. All buildings, except accessory structures, shall have their main entrance (include in definitions) opening onto a street, square, courtyard, or park.
- c. Stoops, open colonnades, and open porches may encroach into front setbacks as indicated in this bylaw.
- d. All lots shall have an uninterrupted sidewalk 5 feet wide the entire width of the lot.

1.44 General Building Requirements

- a. The primary building entrances for small business and office establishments shall generally open to the front sidewalk
- b. Civic buildings shall be located adjacent to greens, parks, or squares.
- c. Within the TND district, setback restrictions of the (town name) Zoning

Bylaw/Ordinance shall not apply. Setbacks shall be those established by the TND bylaw in Section 4.5.

- d. The front of an attached garage shall be set back at least twenty (20) feet from the front facade of the principal building of which the garage is a part.

1.45 Building Regulations for Specific Lot Types and Frontages

A varied mix of land uses is fundamental to the concept of a TND. The following table of land uses establishes lot size, frontage and setback requirements for each land use type:

Table _____ TND Building Regulations

Land Use Type	Lot Size	Setbacks	Frontage
<p>Open Space Open space is land not covered by buildings, parking lots, private residential yards, easements, setbacks, streets, public or private golf courses. Open space may be used solely for parks, street boulevards, greenbelts, squares, community gardens, and as natural areas. Open space must be owned by a property owner’s association, a land trust or similar organization, or town.</p>	N/A	N/A	N/A
<p>Civic Community meeting hall, library, post office, museum, historical society, public school, theater for performing arts, etc.</p>	N/A	N/A	N/A
<p>Residential type I One and two-family detached dwellings. Their function is residential, but they may contain limit office and limited lodging.</p>	<p>Max.-20,000 sq.ft. Min. lot size: 4,000 sq.ft.</p>	<p>Front-10 ft. min-40 ft. max. Side – 8 ft. min Rear – 30 ft. min.</p>	<p>Min – 24 ft. Max – 150 ft.</p>
<p>Residential Type II Attached home lots reserved for townhouses or row houses.</p>	<p>Max. – 5,000 sq. ft. Min – 2,800 sq. ft.</p>	<p>Front – 5 ft. min 15 ft. max. Side – 0 ft. min Rear – 35 ft. min</p>	<p>Min- 16 ft./unit Max. – 30 ft./unit</p>
<p>Small Business/Office These lots are reserved for small-scale retail and office uses. Structures may provide a variety of uses and are designed to be flexible and compatible with residential and other commercial use lots.</p>	<p>Max. – 20,000 sq. ft. Min – 2,560 sq. ft.</p>	<p>Front – 0 ft. Side – 0 ft. required Rear – 20 ft. required</p>	<p>Max. – 250 ft. Min. – 24 ft.</p>

Table _____ TND Building Regulations continued

<p>Commercial These lots are reserved for somewhat larger commercial enterprises, usually requiring greater parking spaces.</p>	<p>Max. – 20,000 sq. ft. Min. – 10,000 sq. ft.</p>	<p>Front – Max. 15 ft. Side – 0 ft. required Rear – 20 ft. required</p>	<p>Max. – 250 ft. Min. – 24 ft.</p>
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1.46 Miscellaneous Design Standards

- a. **Porches.** Porches are encouraged for residential uses and may be built within the setback line or required front area. Where porches are not built, a “picket” fence or garden wall a minimum of two (2) feet in height is required.
- b. **Pedestrian Crossings.** Street and pedestrian way design shall minimize pedestrian crossings at through streets. Advance tactile warning of pedestrian street crossings shall be given to motorists by placing cobblestone or other similar materials across the street in a band of at least 6 feet wide at the same surface elevation as the adjacent pavement. The warning bands shall be located between twenty and sixty feet from a pedestrian crossing.
- c. **Lighting.** Street lights shall be provided along all active pedestrian ways no more than one hundred feet apart. Such street lights shall consist of a pole or pedestal mounted luminaire, ten to twelve feet in height, having a full-spectrum bulb of not more than one hundred seventy-five watts.
- d. **Appearance/Architectural Design:** Architectural design shall be compatible with the character and scale of buildings in the neighborhood and the Town/City through the use of appropriate building materials, screening, breaks in roof and wall lines and other architectural techniques. Variation in detail, form and siting shall be used to provide visual interest and avoid monotony. Proposed buildings shall relate harmoniously to each other with adequate light, air circulation, and separation between buildings where appropriate.

1.47 Landscape Standards

- a. Street trees shall be planted within the right-of-ways parallel to the street along all streets. Trees shall have a minimum spread of 7’ and a minimum caliper of 2.5” at the time of planting.
- b. Tree spacing shall be determined by species type. Large maturing trees shall be planted a minimum of 40 feet and a maximum of 50 feet on center. Small and medium maturing trees shall be planted a minimum of 10 feet and a maximum of 30 feet on center.

1.48 Modifications to Standards

The Planning Board may permit the modification of the provisions of this bylaw/ordinance, including but not limited to provisions relating to the percentage of types of dwelling units and the amount of commercial development, in order to encourage traditional neighborhood development, based on the following standards:

- a. The design and improvement of the TND shall be in harmony with the purpose and intent of this bylaw.
- b. The design and improvement of the TND shall generally enhance the development plan, or in any case not have an adverse impact on its physical, visual, or spatial

- characteristics.
- c. The modification shall not result in configurations of lots or streets which shall be impractical or detract from the appearance of the proposed TND.
 - d. Landscaping and other methods shall be used to insure compliance with the design standards and guidelines of this bylaw.
 - e. The minimum lot size of any lot to be created shall not be reduced below the requirements of this bylaw.
 - f. The landowner shall demonstrate that the proposed modification will improve the TND.

1.5 PARKING

1.51 General Standards

There shall be no minimum parking requirements in the TND. Land reserved for parking shall comply with the following maximum parking regulations within the TND.

- a. Office: Three (3) parking spaces per one thousand (1,000) square feet.
- b. Small Business: Five (5) parking spaces per one thousand (1,000) square feet.
- c. Restaurants: Twenty (20) spaces per one thousand (1,000) square feet.
- d. Residential: One and one-half (1.5) spaces per dwelling unit.

1.52 Specific Standards

- a. Parking lots shall generally be located at the rear of, or at the side of buildings and shall be no closer than 6 feet from a building.
- b. When two adjacent lots contain parking areas it is encouraged to develop them as one parking area.
- c. Parking lot layout, landscaping, buffering, and screening shall prevent direct views of parked vehicles from streets and sidewalks, avoid spill-over light, glare, noise, or exhaust fumes onto adjacent properties, in particular residential properties, and provide the parking area with a reasonable measure of shade, when trees reach maturity. In order to achieve these objectives, parking lots exposed to view shall be surrounded by a minimum of a five foot high, year-round visually impervious screen, hedge, or wall. The height of any required screen shall decrease where driveways approach sidewalks or walkways, in order to provide adequate visibility of pedestrians from motor vehicles, and shall not interfere with clear sight requirements.
- d. The interior of all parking lots shall be landscaped to provide shade and visual relief. This is best achieved by protected planting islands or peninsulas within the perimeter of the parking lot. Parking lots with ten or less spaces may not require interior landscaping if the planning board determines that there is adequate perimeter landscaping. If this perimeter landscaping is found to be inadequate, and in parking lots with eleven or more spaces, a minimum of one deciduous shade tree shall be planted for every six parking spaces. A six foot planting diamond or equivalent planter is required. Choice of plant materials, buffer width, type of screening, location, and frequency of tree planting shall be flexible, provided these objectives are substantially satisfied.
- e. Parking lot layout shall take into consideration pedestrian circulation - pedestrian crosswalks shall be provided, where necessary and appropriate, and shall be distinguished by textured paving, and integrated into the wider network of pedestrian walkways.

1.53 Property Owner's Association

- a. Membership in a Property Owners Association (POA) established by the Master Developer shall be mandatory for all property owners within the TND, and shall be required as a covenant in all deeds to property in the TND granted after Definitive Plan approval.
- b. Common elements including, but not limited to, open space, recreation, plazas, roads, parking, sewer, water, and stormwater management facilities which will not be publicly owned, shall be subject to a form of ownership established in private agreements acceptable to the town, upon recommendation of the town's attorney.
- c. The Master Developer shall prepare documents which provide at a minimum that the POA shall accept title to any open space or Civic Lots which may be deeded to them, and shall provide for the maintenance of any common area improvements, private streets or sidewalks, rights-of-way, Civic Buildings, utilities, open space or Civic Lots or other property owned by the owners association. The documents shall establish voting and use rights and shall provide for the collection of dues, levies or assessments to cover expenses including, but not limited to, tax liabilities, maintenance, insurance, and municipal or state assessments. The homeowner's association shall have the authority to acquire a lien upon the property of any of its members in order to secure collection of any amounts due.
- d. The town shall be authorized to maintain the common elements and assess the private ownership accordingly if private ownership fails to function as required in any private agreements.

1.54 Severability and Enforcement

- a. **Conflict with other laws.** All development activities with the TND shall comply with applicable laws, regulations, and standards of the (Name of Town), except that in the event of a conflict between this TND Bylaw and any such laws and regulations, the provisions of this TND shall control, provided that they are consistent with state and federal laws.
- b. **Severability.** If any section or provision of this TND Bylaw is found by a court of competent jurisdiction to be invalid, such invalidity shall not affect the validity of any other section or provision of this TND Bylaw.
- c. **Enforcement.** The administration, enforcement, and penalties of (refer to appropriate local zoning bylaw section) are hereby included by reference as applicable to the TND. In addition to the Town's enforcement rights and obligations, the homeowner's association(s) shall have these same enforcement rights and the authority to seek equitable remedies at law against any lot owner, tenant, or other TND user if a nuisance or violation of the TND has been created.

Active Pedestrian Way: Land area or areas developed for immediate use by pedestrians, including sidewalks, bicycle paths and jogging trails.

Building Height: The vertical distance from the average finished ground level of a building to: the highest point of the coping of a flat roof; or to the decline of a mansard roof; or to the average of the heights of the eaves and the height of the highest ridgeline for a pitched or hipped roof.

Build-to-Line: A line establishing a location for all, or a specified portion of, a structure's

facade or vertical face.

1.6 STREET STANDARDS

1.61 Street Standards for Inclusion in Subdivision Regulations

TND Streets and layouts shall meet the following performance standards:

- a. Streets serve as the main public space of any town and are the primary vantage points from which a town is observed. They should be designed as a public space containing sidewalks, trees, lighting, signs and buildings.
- b. Design of streets should provide for both the movement of traffic and to invoke the unique qualities of the place.
- c. Street networks should be designed to be a series of interconnected streets to allow traffic to filter through a variety of routes rather than concentrating all traffic from a neighborhood onto a single major collector road. The network should facilitate the movement of traffic at a slower speed to encourage pedestrian traffic through the use of on-street parking, narrower streets, smaller curb radii, and placing buildings closer to the streets.
- d. Pedestrian activity is also encouraged by the relationship of width of the street to the height of adjacent buildings or trees. A height of 1 and a width of 3 is preferred. In any case, the maximum height to width ratio should be 1 to 5.

1.62 General Street Standards

- a. A hierarchy of street types shall be established as described in sections 2.0 through 6.0.
- b. All streets, alleys and pedestrian pathways shall connect to other streets within the neighborhood and connect to existing and projected through streets outside the development.
- c. Alleys shall be provided for access to the rear of residential lots
- d. Streets may terminate at the intersection of another street or at the rear of a private or public lot.
- e. All lots and private/public tracts shall be accessible by a street with a minimum all-weather driving surface of 20 feet.
- f. The average perimeter of all blocks within the TND shall not exceed 1500 feet. No block side shall have more than 500 feet of street frontage without a dedicated street alley or pedestrian pathway providing access through it.
- g. Prominent streets shall be designed to have a unique terminal view, such as a specifically designed building facade, a scenic view, or a public monument.
- h. Street layouts forming blocks shall be connected in a grid fashion and generally rectilinear with "deformations" as may be physically proper to adapt streets to topographic or other natural conditions, including the preservation of large trees, and waterbodies.

1.63 Type 1 Lane or Alley: A lane shall be a private street or easement and shall not be dedicated to the community and shall be characterized by the following:

- a. Adjacent land uses shall include: garages, parking pots, and accessory units above garages.
- b. The minimum paved width shall be 12 feet.
- c. The width of the right-of-way or easement shall be 20 feet.
- d. Buildings or fences shall be set back a minimum of 3 feet.

- e. No parking is permitted on either side of the right-of-way.
- f. Lane or alley lighting shall be provided on all garages or on poles adjacent to parking areas. Lighting fixtures and poles shall be consistent in architectural style and shall complement the predominant architectural theme.
- g. Design speed shall not exceed 10 m.p.h.

1.64 Type 2 Two-way residential street (parking on one side) shall be characterized by:

- a. Adjacent land uses shall include small and medium single family lots, duplex units, townhouses, multi-family, large lot single family with large setbacks.
- b. The right-of-way width is 44 feet.
- c. The paved width is 24 feet.
- d. Curbside parking shall be permitted on only one side of the road.
- e. Sidewalks shall be provided on both sides of the road, and shall be a minimum of four feet in width.
- f. Curbing shall be required. Granite block curbing or equivalent is recommended.
- g. Decorative street lamps, a maximum of twelve feet in height shall be provided on both sides of the street, at a minimum spacing of 80 feet on center, and at intersections.
- h. Design speed shall not exceed 25 m.p.h.

1.65 Type 3 Two-way residential street (parking on two sides) shall be characterized by the following:

- a. Adjacent land uses shall include small, medium, and large single family lots, duplex units, townhouses, multi-family, and home offices.
- b. The right-of-way width shall be 60 feet.
- c. The paved width shall be 34 feet.
- d. Curbside parking is permitted on both sides of the street, except within 25 feet of any intersection.
- d. Sidewalks are required on both sides of the street, a minimum of five feet in width.
- f. Curbing shall be required.
- g. Design speed shall not exceed 25 m.p.h.

1.66 Type 4 Commercial Mixed Use street shall be characterized by:

- a. Adjacent land uses shall include: community buildings, commercial, office or retail mixed use.
- b. The right-of- way width is 64 feet.
- c. The paved width is 40 feet.
- d. Parallel parking shall be provided on both sides of the street. Diagonal head-in parking may be permitted along the front of commercial uses and/or the community green, in which case no parking will be permitted on the other side of the street. Curbside parking shall not be permitted within 25 feet of an intersection.
- e. Planted parkways with a minimum width of five feet shall be provided, except where the road abuts a community green. The planting parkway abutting the community green shall be a minimum of nine feet in width. Along commercial uses, brick pavers may be substituted for vegetative ground cover typically found in parkways of residential areas. Sidewalks shall have a minimum width of six feet, except along commercial uses where the sidewalk shall be ten feet in width. At corners, handicapped ramps shall be provided and sidewalks shall be continued across street surfaces using paving materials to

delineate crosswalks.

- f. Design speed shall not exceed 25 m.p.h.

1.67 Type 5 Two lane arterials are characterized by:

- a. Adjacent land uses shall include agricultural, open space, large lot single family estates (six plus acres).
- b. The right-of-way width shall be 70 feet.
- c. The paved width shall be 22 feet.
- d. A six foot wide bicycle path or a five foot wide sidewalk shall be located on a minimum of one side of the road, with a minimum setback of six feet from the roadway.
- e. Curbside parking is not permitted.
- f. The design speed shall not exceed 45 m.p.h.
- g. Decorative street lamps, not exceeding sixteen feet in height, shall be provided at intersections.

MODEL TRANSFER OF DEVELOPMENT RIGHTS BYLAW/ORDINANCE

Prepared by Pioneer Valley Planning Commission 9-5-14

SECTION 1.0 PURPOSES

- 1.00 The purposes of this bylaw/ordinance is to allow for the transfer of development rights from outlying lands designated as critical resource areas to designated areas and properties within and near developed centers in the Town/City, in order to further the following public interests:
- a) The protection of farmland, aquifer recharge and areas of important rural character;
 - b) The protection of greenbelts along river corridors;
 - c) The protection of the visual and ecological integrity of the upland and mountain areas;
 - d) The preservation of remaining rural, historic and agricultural character through the fostering of compact, appropriately dense housing and mixed use business development in and near existing downtown and outlying village centers and other areas already served by public services, infrastructure, transportation, and access to employment.
 - e) Promoting the retention and strengthening of existing traditional neighborhood developments with compact, pedestrian-friendly, predominantly residential areas on gridded streets in village centers;
 - f) The preservation, rehabilitation, and restoration of historic structures, buildings, sites, and landscapes;
 - g) The preservation and enhancement of property values and the opportunity for a fair economic return to property owners; and
 - h) The preservation of the remaining rural, historic, and agricultural character of the community by directing compact new development to appropriate locations adjacent to existing village centers.

SECTION 2.0 TRANSFER OF DEVELOPMENT RIGHTS

- 2.1 Transfer of Development Rights provides for increased density of residential and commercial development in the designated Receiving Areas, when suitable open space land in the Sending Areas is permanently preserved from development. The transfer of development rights is accomplished by the execution of a Conservation Restriction or Agricultural Preservation Restriction, and the increased density is permitted by the issuance of a Special Permit, both as hereinafter provided.

SECTION 3.0 ELIGIBILITY & PERMITTING

- 3.1 All lots shown on a plan, or described in a deed, recorded at the Registry of Deeds in a Sending Area are eligible to apply for a Special Permit from the Special Permit Granting Authority to transfer all or part of the development rights on the subject property or properties in the Sending Area to a lot in the Receiving Area. The Special Permit Granting Authority shall be that permit granting body authorized to act on the associated use or development method for which the transfer is sought.

SECTION 4.0 ESTABLISHMENT OF SENDING AND RECEIVING AREAS

- 4.1 The following areas are hereby established as overlay districts:

- a) TDR Sending (TDRS) District
- b) TDR Receiving (TDRR) District

These districts are as delineated on the Official Zoning Map incorporated as part of this Zoning Bylaw/Ordinance.

SECTION 5.0 SPECIAL PERMIT PROCESS FOR TRANSFER OF DEVELOPMENT RIGHTS

- 5.1 Any applicant proposing to develop specified land in a Receiving Area at an increased density allowed under Table 2 of this Bylaw/Ordinance with transfer of development rights shall make an application for a Special Permit. The application shall clearly illustrate a land parcel or parcels in the Sending Area and a parcel or parcels in the Receiving Area proposed for transfer of development rights, and shall document the basis for the number of development rights proposed for transfer.
- 5.2 As part of the Special Permit application, the applicant shall determine the number of lots eligible for transfer from the parcel in the Sending Area, using the following process:
 - a) After conferring with the Conservation Commission, all acreage which is identified as wetlands, Floodplain District, 100-year floodplain, or riverfront area under the Mass Rivers Protection Act shall be added together to constitute the Unbuildable Land Area. The Conservation Commission may require the applicant to complete wetland delineations or identify the boundaries of riverfront resource area. Fifty percent (50%) of the Total Unbuildable Land Area shall then be subtracted, leaving a Net Parcel Area.
 - b) Eight percent (8%) of the Net Parcel Area shall then be subtracted, to account for land which would be used for roads if the parcel were developed. The remainder shall be considered the Net Buildable Area for the purposes of this calculation.
 - c) Using the minimum lot area and frontage for the applicable zoning district(s) for the parcels in the Sending Area, determine the number of lots allowable in the Sending Area property or properties based on a conceptual development plan;
- 5.3 The Special Permit Granting Authority shall review the applicant's assessment of acreage and lots eligible for transfer, and shall make a final determination of the lots eligible for transfer.
- 5.4 The applicant shall also file with the Special Permit Granting Authority a preliminary development plan for the parcel in the Receiving Area, indicating the lots created using the transferred development rights, and illustrating all wetland and floodplain areas.
- 5.5 The applicant shall propose and the Special Permit Granting Authority shall determine one or more entities to hold the permanent restriction on the property or properties in the Sending Area. The restriction may: (1) be conveyed to the Town/City and be accepted by it for conservation or farmland use, or (2) be conveyed to a non-profit organization, the principal purpose of which is the conservation of open space or preservation of farmland, or (3) be conveyed to a private, non-profit or public entity for the purposes for which the restriction is established, with the restriction being made enforceable by the Town/City and providing that the land in question shall be kept in an open or natural state, or shall be actively farmed, and shall not be built upon for residential use or developed for accessory uses such as parking or roadway. The entity or entities and the applicable state agencies shall be notified of the application and shall be provided with drafts of the proposed permanent restriction for review and comment.

- 5.6 Approval of the Special Permit shall require the applicant to submit to the Town/City Clerk, with a copy to the Special Permit Granting Authority, a valid instrument granting to the Town, or other entity authorized in Section 5.5 above, a permanent Conservation Restriction or Agricultural Preservation Restriction for the eligible land in the TDR Sending District from which development rights are transferred. If the designated holder(s) of the restriction(s) includes the Town/City, then the restriction shall be transmitted as a gift of land interest to the Town/City for conservation purposes to be under the care, control, and custody of the conservation commission in accordance with G.L. c. 40, Section 8C, subject to the certification of the Conservation Commission, and the approval of the Board of Selectmen.
- 5.7 The Special Permit Granting Authority shall not approve any Special Permit for Transfer of Development Rights for a project where the subject property in the TDR Receiving District is not served by public sewer and water lines.
- 5.8 Upon final approval of site plans and acceptance by the recipient or recipients of the permanent restriction, the Special Permit Granting Authority shall make a decision to grant, deny, or grant with conditions, the Special Permit to increase in number and density of units in the TDR Receiving District, based on Tables 1 and 2 in Section 6.0.

In addition to the Special Permit findings under Section (Special Permit section of zoning bylaw/ordinance) , the Special Permit Granting Authority shall find that the following criteria are met before granting a Special Permit for transfer of development rights:

- a) The proposed use is in harmony with the purposes of this Article, as set forth in Section 1.00.
 - b) The proposed use meets all of the procedural, dimensional and density requirements, and design standards of this Article, except as otherwise altered by another Special Permit.
- 5.9 Following the granting of a Special Permit under this Article, and upon a determination by Town Counsel that the Conservation Restriction or Agricultural Preservation Restriction document is valid and sufficient, the Select Board shall vote to authorize acceptance of the Conservation Restriction or Agricultural Preservation Restriction by either the Conservation Commission or a designated non-profit land trust or other approved entity. If the Special Permit application is valid and sufficient, the Conservation Commission, acting on behalf of the Town, shall accept the Conservation Restriction for recording in the County Registry of Deeds.

SECTION 6.0 TDR DIMENSIONAL & DENSITY REGULATIONS

- 6.1 Each residential building lot within the TDR Sending District authorized under Section 5 is equivalent to one of the development rights in the TDR Receiving District shown in the following Table 1, Exchange Standards for Transfer of Development Rights.

TABLE 1. EXCHANGE STANDARDS FOR TRANSFER OF DEVELOPMENT RIGHTS

Sending District	Receiving District	Notes
1 RESIDENTIAL BUILDING LOT EQUALS:	A 5% increase in maximum building coverage for a single commercial or industrial lot	1) The Planning Board may allow an increase in building coverage from the maximum building coverage required in Table 2 - Dimensional Regulations, up to a maximum 75% building coverage for commercial or industrial uses.

OR	1.2 residential building units, plus a 5% increase in residential building coverage	2) An additional 10% increase in the number of units may be allowed if the development provides for affordable home ownership. Affordable housing shall be as defined in Section ____ and controlled by deed.
OR	1 neighborhood commercial building lot	3) See Section ____ for commercial uses allowed on a neighborhood building lot within a Traditional Neighborhood Development. Only one “neighborhood commercial building lot” may be approved per ten residential building lots within a TND.
OR	A reduction in required parking of twenty commercial parking spaces, or	4) The Planning Board may reduce the minimum parking requirements in Section ____ of the Zoning Bylaw for off-street parking area. The Planning Board may reduce this requirement for off-street parking area to a minimum of 75% of the required parking. To obtain this waiver, the applicant shall demonstrate that sufficient parking will be available to the development (i.e. through shared parking, use of on-street parking, reduced vehicle use, timing, etc.).
OR	an increase of 5 feet in building height, or	5) The maximum increase in building height shall be 15 feet.
OR	A reduction in minimum front setback requirements of five feet	6) The maximum reduction in front setback requirements shall be five feet.
OR	A reduction in minimum side or rear yard requirements of five feet	6) The maximum reduction in side or rear yard requirements shall be five feet.
OR	A reduction of 20 feet in frontage requirements.	6) The maximum reduction in frontage requirements shall be 40 feet.

6.2 For development rights purchased for every one (1) lot meeting minimum dimensional requirements for the zoning district within the TDR Sending District, the developer can add the equivalent of 1.2 residential lots or one neighborhood commercial lot in a Traditional Neighborhood Development in the TDR Receiving District above what could normally be built under the underlying zoning standards, provided the dimensional requirements indicated in Table 2 of this Bylaw and other requirements of the bylaw are met. Fractions of building lots at or above 0.5 shall be rounded up to the next whole number.

For example, if a developer buys the development rights to 14 buildable lots in the TDR Sending District, the developer is entitled to:

$$14 \text{ lots} \times 1.2 = 16.8 \text{ lots}$$

in addition to the underlying density in the TDR Receiving District. In this example case, with the transfer of development rights the applicant could construct 17 units above what could normally be built under the underlying zoning standards.

- 6.3 A landowner may sell less than the total number of development rights available on a parcel or parcels, provided that the subject property is subdivided and a permanent restriction as required under the Section 5 of this bylaw is placed on the portion from which development rights are transferred.
- 6.4 The maximum limits on density, building coverage, and parking reductions permitted to be developed by Special Permit in the TDR Receiving District shall be determined by reference to the Table 2, TDR Dimensional Standards for TDR Receiving District found below in this section.

TABLE 2. TDR DIMENSIONAL STANDARDS FOR RECEIVING AREAS*

Underlying Zoning District	Dimensional Requirements in Underlying Zone	Dimensional Requirements in Receiving District (with TDR)
R-VC Village Center Residence	Min. Lot Size: 15,000 s.f. Min. Frontage: 120 ft. Min. Front Setback: 15 ft. Min. Side Setback: 15 ft. Min. Rear Setback: 15 ft. Max. Building coverage: 25% Max. Lot Coverage: 40% Max. Height: 35 feet	Min. Lot Size: 12,000 s.f. Min. Frontage: 100 ft. Min. Front Setback: 10 ft. Min. Side Setback: 10 ft. Min. Rear Setback: 10 ft. Max. Building coverage: 35% Max. Lot Coverage: 45% Max. Height: 40 feet
B-VC Village Center Business	Min. Lot Size: 15,000 s.f. Min. Frontage: 100 ft. Min. Front Setback: 10 ft. Min. Side Setback: 25 ft. Min. Rear Setback: 25 ft. Max. Building coverage: 35% Max. Lot Coverage: 70% Max. Height: 40 feet	Min. Lot Size: 10,000 s.f. Min. Frontage: 80 ft. Min. Front Setback: 10 ft. Min. Side Setback: 15 ft. Min. Rear Setback: 15 ft. Max. Building coverage: 45% Max. Lot Coverage: 85% Max. Height: 50 feet
B-G General Business	Min. Lot Size: 12,000 s.f. Min. Frontage: 100 ft. Min. Front Setback: e Min. Side Setback: e Min. Rear Setback: e Max. Building coverage: 70% Max. Lot Coverage: 95% Max. Height: 50 feet	Min. Lot Size: 10,000 s.f. Min. Frontage: 80 ft. Min. Front Setback: Min. Side Setback: Min. Rear Setback: Max. Building coverage: 75% Max. Lot Coverage: 95% Max. Height: 50 feet
B-L Limited Business abutting B-G	Min. Lot Size: 20,000 s.f. Min. Frontage: 125 ft. Min. Front Setback: 20 ft. Min. Side Setback: 25 ft. Min. Rear Setback: 25 ft. Max. Building coverage: 35% Max. Lot Coverage: 70% Max. Height: 35 feet	Min. Lot Size: 15,000 s.f. Min. Frontage: 80 ft. Min. Front Setback: 10 ft. Min. Side Setback: 15 ft. Min. Rear Setback: 15 ft. Max. Building coverage: 45% Max. Lot Coverage: 85% Max. Height: 40 feet

*Note: Sample for illustration purposes only.

- 6.5 TDR Transaction Reporting: Buyers and sellers must report to the Building Commissioner all TDR transactions (options, sales, gifts, donations) within ten (10) business days of the effective date of the transaction.

SECTION 7.0 RELEASES OF RESTRICTIONS

- 7.1 No Conservation Restriction or Agricultural Preservation Restriction which has been conveyed under this Bylaw may be released unless the provisions for release of Agricultural Preservation Restrictions such restrictions in M.G.L. Chapter 184, Section 32 have been met, which include:

- a) The restriction must be repurchased from the Town by the land owner at its then fair market value, and funds returned to the Town bank for development rights;
- b) The restriction shall only be released by its holder(s) only if the land is no longer deemed suitable for agricultural or horticultural purposes and the release is approved by vote of the Amherst Select Board and Conservation Commission and/or by the holder's governing body if a private non-profit land trust, and by a two-thirds vote of both branches of the Massachusetts General Court, in accordance with the provisions of Article 97 of the Amendments to the Massachusetts Constitution.

SECTION 8.0 ALTERNATE METHOD FOR TDR TRANSACTIONS

- 8.1 In lieu of transferring development rights using the process described Sections 5-7 above, an applicant for a Special Permit under Section 5 may elect to make a cash contribution to the Town/City Conservation Fund to be used for the purpose of purchasing agricultural preservation restrictions, conservation restrictions or other permanently protected open space for conservation purposes. The Conservation Commission shall oversee all expenditures from this fund.
- 8.2 In either case, the contribution shall be of a value equal to the value of the required development rights, as determined in the Table of Exchange Standards for Transfer of Development Rights. This value shall be determined by multiplying the number of acres of developable farmland required by the average cost for the purchase of Agricultural Preservation Restrictions in the _____ County over the previous three years, as determined by the Conservation Commission.
- 8.3 Additionally, a combination of cash contribution and transferred development rights may be applied towards an application under this bylaw.

SECTION 9.0 REGISTRY OF WILLING SELLERS

The Town shall establish and maintain a confidential registry of landowners in the Sending Area who have expressed interest in selling development rights under this bylaw. Applicants for TDR may use this registry to seek development rights from landowners.

SECTION 10.0 BANKING OF DEVELOPMENT RIGHTS

- 10.1 Development rights in the TDR Sending Zone may be purchased, donated, or exchanged, or any combination thereof, by private for-profit or non-profit entities or by government agencies, and banked for future use in the Receiving Zone. A Special Permit is not required for purchasing Development Rights, but is required for transfer and use of Development Rights in the Receiving Zone. The number of development rights eligible for banking shall be determined by the landowner and Planning Board or planning staff using the procedure under Section 6 above.
- 10.2 A parcel must be placed under a permanent restriction as defined under this bylaw prior to or simultaneously with sale, donation, or exchange of development rights from the parcel. An instrument defining the number of development rights sold, donated, or exchanged in the initial transaction and in each subsequent transaction shall be recorded in the _____ County Registry of Deeds, and a copy thereof delivered to the Building Commissioner.
- 10.3 Banked development rights may be redeemed for use in the Receiving Area, upon approval under a Special Permit granted as set forth in Section 5.

SECTION 11.0 TRADITIONAL NEIGHBORHOOD DEVELOPMENT REGULATIONS

11.1 Minimum Standards Required for a Traditional Neighborhood Development

The Traditional Neighborhood Development permits greater residential densities than allowed in the Residential ____ district. This greater density is only permitted when development rights from the Sending Area are transferred to the Receiving Area as described in this ordinance. The following standards are required for the approval of a Traditional Neighborhood Development:

- a) Public water and sewer service is required for all development. All utility lines such as telephone, cable television, and electric are to be located underground.
- b) The tract of land to be developed shall be in one ownership, or shall be the subject of an application filed jointly in accordance with an approved plan.

11.2 Uses Allowed by Special Permit in a Traditional Neighborhood Development

Within a Traditional Neighborhood Development, the Planning Board may approve the following uses as part of the Special Permit:

- a) Single family dwelling;
- b) Neighborhood commercial uses, provided that the gross floor area of the store does not exceed seven hundred and fifty (750) square feet, and provided that only one neighborhood commercial lot shall be approved for every ten residential lots within a TND. These uses may include:
 - Service oriented business, including bank, barber shop, beauty salon, medical or dental clinic, and automatic self-serving laundry;
 - Retail service store or custom store such as a bakery or confectionery, florist, food store (no booth or restaurant facilities) or grocery designed primarily to provide daily service to the residents of the immediately surrounding neighborhood;
- c) Home office;
- d) Accessory uses, buildings, and structures customarily incidental to any primary use located on the same lot.

11.3 TND Design Standards

1. Porches are encouraged for residential uses. Open porches may be built within the setback line or required front yard.
2. Street and pedestrian way design shall minimize pedestrian crossings at through streets. Advance tactile warning of pedestrian street crossings shall be given to motorists by placing cobblestone or other similar materials across the street in a band of at least 6 feet wide at the same surface elevation as the adjacent pavement. The warning bands shall be located between twenty and sixty feet from a pedestrian crossing.
3. Street lights shall be provided along all active pedestrian ways no more than one hundred feet apart. Such street lights shall consist of a pole or pedestal mounted luminaire, ten to twelve feet in height, having a full-spectrum bulb of not more than one hundred seventy-five watts.
4. Architectural design shall be compatible with the historic character and scale of buildings in the neighborhood and the City through the use of appropriate building materials, screening, breaks in roof and wall lines, and other architectural techniques. Variation in detail, form and siting shall be used to provide visual interest and avoid monotony. Proposed buildings shall relate harmoniously to each other with adequate light, air circulation, and separation between buildings where appropriate.
5. Stoops, open colonnades, and open porches may encroach into front setbacks as indicated in this ordinance but not closer than ten (10) feet from the street right of way.
6. All lots shall have an uninterrupted sidewalk at least 5 feet wide the entire width of the lot frontage.

7. The front of an attached garage shall be set back at least twenty (20) feet from the front facade of the principal building of which the garage is a part.

11.4 TND Landscape Standards

1. Street trees shall be planted within the right-of-ways parallel to the street along all streets. Trees shall have a minimum height of 6' and a minimum caliper of 2.5" at the time of planting. Where possible, a minimum of six (6) feet wide landscaped belt will be created to plant the street trees.
2. Tree spacing shall be determined by species type. Large maturing trees shall be planted a minimum of 40 feet and a maximum of 50 feet on center. Small and medium maturing trees shall be planted a minimum of 10 feet and a maximum of 30 feet on center.
3. Utilities shall be located in the street and not in the tree belt, wherever possible.

11.5 Parking Standards

1. Parking required for residential uses, if not provided on individual lots, may be provided on street, or in combined parking lots, provided each dwelling unit has at least one parking space within five hundred (500) feet from its property boundary.
2. Parking lots shall generally be located at the rear of or at the side of buildings, and shall be no closer than six (6) feet from a commercial, office or mixed-use building.
3. When two adjacent lots contain parking areas it is encouraged to develop them as one parking area.
4. Parking lot layout, landscaping, buffering, and screening shall prevent direct views of parked vehicles from streets and sidewalks, avoid spill-over light, glare, noise, or exhaust fumes onto adjacent properties. In order to achieve these objectives, parking lots exposed to view shall be surrounded by a minimum of a five-foot-high screen, hedge, or wall visually impervious year-round .
5. The interior of all parking lots shall be landscaped to provide shade and visual relief. This is best achieved by protected planting islands or peninsulas within the perimeter of the parking lot. A minimum of one deciduous shade tree shall be planted for every six parking spaces. A six foot planting diamond or equivalent planter is required.
6. Parking lot layout shall take into consideration pedestrian circulation. Pedestrian crosswalks shall be provided, where necessary and appropriate, shall be distinguished by textured paving, and shall be integrated into the wider network of pedestrian walkways.

Table 3. Parking Requirements in the Traditional Neighborhood Development

<u>Use</u>	<u>Minimum Parking Spaces Required</u>	<u>Maximum Parking Spaces Permitted</u>
a) Residential	One (1) space per dwelling unit	Two (2) spaces per dwelling unit
b) Other Uses	As per Section 2001 of this ordinance	

11.6 Annual Review

1. The Planning Board shall conduct an annual review of this ordinance at an advertised public meeting in order to assess the success of the ordinance and whether it sets a fair market for development rights. The Planning Board shall make recommendations to the Town for any changes needed in the ordinance structure or process.

Model Water Supply Protection Zoning Bylaw

Prepared by the Pioneer Valley Planning Commission

1.0 Purpose of District

To promote the health, safety and welfare of the community by protecting and preserving the surface and groundwater resources of the Town and the region from any use of land or buildings which may reduce the quality and quantity of its water resources.

1.1 Definitions

Aquifer: Geologic formation composed of rock or sand and gravel that contains significant amounts of potentially recoverable potable water.

Groundwater: All water found beneath the surface of the ground.

Hazardous Waste: A waste which is hazardous to human health or the environment. Hazardous wastes have been designated by the Regulations in 310 CMR 30.130 adopted pursuant to the Massachusetts Hazardous Waste Management Act, Massachusetts General Laws, Chapter 21C.

Impervious Surfaces: Materials or structures on or above the ground that do not allow precipitation to infiltrate the underlying soil.

Primary Aquifer Recharge Area: Areas which are underlain by surficial geologic deposits including glaciofluvial or lacustrine stratified drift deposits or alluvium or swamp deposits, and in which the prevailing direction of groundwater flow is toward public water supply wells or potential sites for such wells.

Secondary Aquifer Recharge Area: Areas which are underlain by surficial geologic deposits including till or bedrock, and in which the prevailing direction of surface waterflow is toward public water supply wells or potential sites for such wells.

Toxic or Hazardous Material: Any substance or mixture of physical, chemical, or infectious characteristics posing a significant, actual, or potential hazard to water supplies or other hazards to human health if such substance or mixture were discharged to land or water of the (Town/City) of _____ . Toxic or hazardous materials include, without limitation, synthetic organic chemicals, petroleum products, heavy metals, radioactive or infectious wastes, acids and alkalis, and all substances defined as Toxic or Hazardous under Massachusetts General Laws (MGL) Chapter 21C and 21E and 310 CMR 30.00, and also include such products as solvents and thinners in quantities greater than normal household use.

Trucking Terminal: Business which services or repairs commercial trucks which are not owned by the business.

Wastewater Treatment Works: Any wastewater treatment plants or works, including community septic systems, which require a permit from the (State Agency).

Watershed: Lands lying adjacent to water courses and surface water bodies which create the catchment or drainage areas of such water courses and bodies.

Zone I Recharge Area: That circle of a 400-foot radius extending around the wellhead of a drinking water well with the wellhead at its center and including all land within the boundaries of said circle.

Zone II Recharge Area: Means that area of an aquifer which contributes water to a well under the most severe pumping and recharge conditions that can be realistically anticipated (180 days of pumping at safe yield, with no recharge from precipitation). It is bounded by the groundwater divides which result from pumping the well and by the contact of the aquifer with less permeable materials such as till or bedrock. In some cases, streams or lakes may act as recharge boundaries. In all cases, Zone II shall extend up gradient to its point of intersection with prevailing hydrogeologic boundaries (a groundwater flow divide a contact with till or bedrock, or a recharge boundary).

1.2 Scope of Authority

The Water Supply Protection District is an overlay district and shall be superimposed on the other districts established by this bylaw. All regulations of the Town of _____ Zoning By-law applicable to such underlying districts shall remain in effect, except that where the Water Supply Protection District imposes additional regulations, such regulations shall prevail.

1.3 District Delineation

1.3.1 The Water Supply Protection District is herein established to include all lands within the Town of _____, lying within the primary and secondary recharge areas of groundwater aquifers and watershed area of reservoirs which now or may in the future provide public water supply. The map entitled "Water Supply Protection District," Town of _____, on file with the Town Clerk, delineates the boundaries of the district.

1.3.2 Where the bounds delineated are in doubt or in dispute, the burden of proof shall be upon the owner(s) of the land in question to show where they should properly be located. At the request of the owner(s) the Town may engage a professional hydrogeologist to determine more accurately the location and extent of an aquifer or primary recharge area, and may charge the owner(s) for all or part of the cost of the investigation.

1.4 Permitted Uses

The following uses are permitted within the Water Supply Protection District, provided that they comply with all applicable restrictions in this bylaw:

1.4.1 Single family residences;

1.4.2 Residential accessory uses, including garages, driveways, private roads, utility rights of way, and on-site wastewater disposal systems;

1.4.3 Agricultural uses such as farming, grazing and horticulture;

1.4.4 Forestry and nursery uses;

- 1.4.5 Outdoor recreational uses, including fishing, boating, and play areas;
- 1.4.6 Conservation of water, plants, and wildlife; wildlife management areas;
 - 1.4.7 Excavation for earth removal, provided that the requirements of Section 4.6 are met, and an earth removal permit is granted by the Board of Selectmen;
- 1.4.8 Day care centers, family day care homes, and school age child care programs;
- 1.4.9 Structures for educational or religious purposes.

1.5 Prohibited Uses

The following uses are prohibited within the Water Supply Protection District:

1.5.1 Business and industrial uses, not agricultural, which generate, treat, store, or dispose of hazardous wastes, including but not limited to metal or jewelry plating, chemical or plastics manufacturing, wood preserving, furniture stripping, dry cleaning, and auto body repair, photography laboratories, asphalt plants, hazardous materials processing or transfer, laboratory operations, machine shops, metal working, electronic components or semi-conductor manufacturing, except for the following:

- (1) Very small quantity generators of hazardous waste, as defined by 310 CMR 30.00 as amended which generate less than 20 kilograms or 6 gallons of hazardous waste per month may be allowed by Special Permit in accordance with Section 4.8 of this bylaw;
- (2) Household hazardous waste collection centers or events operated pursuant to 310 CMR 30.390 as amended;
- (3) Waste oil retention facilities required by M.G. L. C.21, s.52A; and
 - (4) Treatment works for the remediation of contaminated water supplies, which are approved by Mass. Department of Environmental Protection and designed in accordance with 314 CMR 5.00 as amended.

1.5.2 Business or industrial uses, not agricultural, which dispose of process wastewaters on-site;

1.5.3 Motor vehicle and boat service and repair businesses, car washes, motor vehicle gasoline sales, automotive body and repair shops, commercial fuel oil storage and sales;

1.5.4 Solid waste landfills, dumps, auto recycling, auto graveyards, junk and salvage yards, landfilling or storage of sludge and septage, with the exception of the disposal of brush or stumps;

- 1.5.5 Storage of liquid petroleum products, except for the following:

- (1) Storage which is incidental to:
 - (a) Normal household use, outdoor maintenance, or the heating of a structure;
 - (b) Emergency generators required by statute, rule or regulation;
 - (c) Waste oil retention facilities required by statute, rule, or regulation;
 - (d) Treatment works approved by the Massachusetts Department of Environmental Protection designed in accordance with 314 CMR 5.00 for the treatment of contaminated ground or surface waters provided that storage, listed in items 1-4 above, shall be in a free standing, above ground container within a structure or within the basement of a structure, with secondary containment adequate to contain a spill the size of the containers total storage capacity. The storage tank and piping must comply with all applicable provisions of 527 CMR 9.00 Massachusetts Board of Fire Prevention regulations.
- (2) Replacement of storage tanks or systems for the keeping, dispensing or storing of gasoline, which existed the time of adoption of this bylaw, provided that:
 - (a) All such replacement storage tanks or systems shall be located underground as required by Mass. Board of Fire Prevention regulation 527 CMR 14;
 - (b) All such storage systems shall be protected by one of the secondary containment systems specified in Mass. Board of Fire Prevention regulations 527 CMR 9.08 (3);
 - (c) The head of the Fire Department may deny an application for tank replacement, or approve it subject to conditions if he or she determines that it constitutes a danger to public or private water supplies, in accordance with 527 CMR 9.26(4)(d).

Replacement of all other storage tanks for liquid petroleum products other than gasoline must be above ground.

1.5.6 Outdoor storage of salt, de-icing materials, pesticides or herbicides;

1.5.7 Dumping or disposal of *any hazardous material or hazardous waste* on the ground, in water bodies, in septic systems or in other drainage system. This shall include the use of septic system cleaners which contain toxic chemicals such as methylene chloride and 1-1-1 trichlorethane.

1.5.8 Stockpiling and disposal of snow or ice removed from highways and streets located outside of the Water Supply Protection District that contains sodium chloride, calcium chloride, chemically treated abrasives or other chemicals used for snow and ice removal;

1.5.9 Wastewater treatment works subject to a groundwater discharge permit under 314 CMR 5.00 except the following:

(1) The replacement or repair of an existing system(s) that will not result in a design capacity greater than the design capacity of the existing system(s);

(2) The replacement of an existing subsurface sewage disposal system(s) with wastewater treatment works that will not result in a design capacity greater than the design capacity of the existing system(s); and

(3) treatment works designed for the treatment of contaminated ground or surface waters subject to 314 CMR 5.00.

1.5.10 Residential, commercial or industrial uses within Zone I of any municipal water supply well;

1.5.11 Multifamily residents uses which are not served by the municipal sewer system.

1.6 Performance Standards

All uses, whether allowed by Special Permit or by right, must meet the performance standards herein:

1.6.1 Sodium chloride for ice control shall be used at the minimum salt to sand ratio which is consistent with the public highway safety requirements, and its use shall be eliminated on roads which may be closed to the public in winter.

1.6.2 The storage of sodium chloride, calcium chloride, chemically treated abrasives or other chemicals used for the removal of ice and snow on roads shall be covered and located in a paved surface with berms, or within a structure designed to prevent the generation and escape of contaminated run-off.

1.6.3 Fertilizers, pesticides, herbicides, lawn care chemicals, or other leachable materials shall be used in accordance with the Lawn Care Regulations of the Massachusetts Pesticide Board, 333 CMR 10.03 (30,31), as amended, with manufacturer's label instructions and all other necessary precautions to minimize adverse impacts on surface and groundwater.

1.6.4 The storage of commercial fertilizers and soil conditioners shall be within structures designed to prevent the generation and escape of contaminated run-off or leachate.

1.6.5 To the extent feasible, all new permanent animal manure storage areas shall be covered and/or contained to prevent the generation and escape of contaminated run-off or leachate.

1.6.6 All hazardous materials, as defined in M.G.L. Chapter 21E, must be stored either in a free standing container within a building, or in a free standing container above ground level with protection to contain a spill the size of the container's total storage capacity.

1.6.7 For commercial and industrial uses, to the extent feasible, run-off from impervious surface shall be recharged on the site by stormwater infiltration basins or similar systems covered with natural vegetation. Such run-off shall not be discharged directly to rivers, streams, or other surface water bodies. Dry wells shall be used only where other methods are infeasible. All such basins and wells shall be preceded by oil, grease, and sediment traps to facilitate removal of contamination. All recharge areas shall be permanently maintained in full working order by the owner(s). Infiltration systems greater than 3 feet deep shall be located at least 100 feet from drinking water wells, and shall be situated at least 10 feet down-gradient and 100 feet up-gradient from building foundations to avoid seepage problems. Infiltration basins and trenches shall be constructed with a three foot minimum separation between the bottom of the structure and maximum groundwater elevation.

1.6.8 In accordance with the State Plumbing Code, all vehicle maintenance facilities must have floor drains, unless they receive a variance from the State Plumbing Board, which must be connected to a municipal sewer system or to a state-approved holding tanks in unsewered areas. All other facilities which use, store or maintain hazardous materials or wastes must, with state approval, seal floor drains or connect them to a sewer system or holding tank.

1.7 Area Regulations

Within the primary aquifer recharge area, the minimum allowable lot size shall be 40,000 square feet in areas not served by municipal sewerage systems.

1.8 Special Permit Uses

1.8.1 Uses Allowed by Special Permit obtained from the Planning Board:

- (1) Commercial, industrial, governmental or educational uses which are allowed in the underlying district, and which are not prohibited in Section 6;
 - (2) With respect to pre-existing non-conforming uses, any of the following changes in an existing business, commercial or industrial use:
 - (a) Increase in generation of hazardous wastes above quantities permitted in the Special Permit for the use;
 - (b) Increase in impermeable surfaces to greater than 15% of lot area or 2500 square feet, whichever is greater;
 - (c) Change of use;
 - (d) Enlargement in the building footprint greater than 25% of the existing footprint.
- (3) The rendering impervious of greater than 15% of the area or 2,500 square feet whichever is greater, provided that a system for artificial recharge of precipitation is developed. The management of stormwater and any artificial recharge systems developed shall be designed so as not to result in the degradation of groundwater:

(a) For commercial uses, a stormwater management plan shall be developed which provides for the artificial recharge of precipitation to groundwater, where feasible. Recharge shall be attained through site design that incorporates natural drainage patterns and vegetation, and through the use of stormwater infiltration basin, infiltration trenches, porous pavement or similar systems. All infiltration practices shall be preceded by oil, grease, and sediment traps or other best management practices to facilitate removal of contamination.

(b) For residential uses, recharge shall be attained through site design that incorporates natural drainage patterns and vegetation. To the extent possible, stormwater runoff from rooftops, driveways, roadways and other impervious surfaces shall be routed through areas of natural vegetation and/or devices such as infiltration basins, infiltration trenches or similar systems.

Infiltration practices shall be utilized to reduce runoff volume increases to the extent possible as determined in accordance with infiltration standards and specifications established by the Soil Conservation Service. A combination of successive practices may be used to achieve the desired control requirements. Justification shall be provided by the person developing land for rejecting each practice based on site conditions. Any and all recharge areas shall be permanently maintained in full working order by the owner. Provisions for maintenance shall be described in the stormwater management plan.

(4) Excavation for removal of earth, loam, sand, gravel and other soils or mineral substances shall not extend closer than five (5) feet above the historical high groundwater table (as determined from on-site monitoring wells and historical water table fluctuation data compiled by the United States Geological survey, whichever is higher). A monitoring well shall be installed by the property owner to verify groundwater elevations. This section shall not apply to excavations incidental to permitted uses, including but not limited to providing for the installation or maintenance or structural foundations, freshwater ponds, utility conduits or on-site sewage disposal:

(a) Access road(s) to extractive operation sites shall include a gate or other secure mechanism to restrict public access to the site.

(b) Upon completion of earth removal operations, all altered areas shall be restored with topsoil and vegetative plantings suitable to control erosion on the site. All fine materials, such as clays and silts, removed as part of the earth removal operation and leftover as by-products, shall be disposed of off-site to prevent damage to aquifer recharge characteristics.

1.8.2 Requirements for Special Permit in the Water Supply Protection District

The applicant shall file six (6) copies of a site plan prepared by a qualified professional with the Special Permit Granting Authority. The site plan shall at a minimum include the following information where pertinent:

- (1) A complete list of chemicals, pesticides, fuels and other potentially toxic or hazardous materials to be used or stored on the premises in quantities greater than those associated with normal household use.
- (2) Those businesses using or storing such toxic or hazardous materials shall file a hazardous materials management plan with the Planning Board, Hazardous Materials Coordinator, Fire Chief, and Board of health which shall include:
 - (a) Provisions to protect against the discharge of hazardous materials or wastes to the environment due to spillage, accidental damage, corrosion, leakage or vandalism, including spill containment and clean-up procedures.
 - (b) Provisions for indoor, secured storage of hazardous materials and wastes with impervious floor surfaces.
- (3) The applicant will submit evidence of compliance with the Regulations of Massachusetts Hazardous Waste Management Act 310 CMR 30 and information on anticipated hazardous waste generation rates. Copies of Massachusetts Hazardous Waste Reporting forms shall be made available to the Zoning Enforcement officer upon request.
- (4) Drainage recharge features and provisions to prevent loss of recharge.
- (5) Provisions to control soil erosion and sedimentation, soil compaction, and to prevent seepage from sewer pipes.
- (6) Periodic water quality monitoring may be required by the SPGA, including sampling of wastewater disposed to on-site systems and sampling from groundwater monitoring wells to be located and constructed as specified in the Special Permit with reports to be submitted to the SPGA, the Board of Health, and the Board of Water Commissioners. The costs of monitoring, including sampling and analysis, shall be borne by the owner of the premises.

1.8.3 Additional Procedures for Special Permit in the Water Supply Protection District:

- (1) The Special Permit Granting Authority shall follow all special permit procedures contained in Section ___ of this By-law. In addition the Special Permit Granting Authority shall distribute copies of all application materials to the Board of Health, the Conservation Commission, and the Water Commissioners, each of which shall review the application, and following a vote, shall submit recommendations and comments to the Special Permit Granting Authority. Failure of boards to make recommendations within 35 days of distribution of the applications shall be deemed to be lack of opposition. One copy of the application materials shall be transmitted to or retained by the Town Clerk for viewing by the public during office hours.
- (2) The Special Permit Granting Authority may grant the required special permit only upon finding that the proposed use meets the following standards and those specified in Section ___ of this bylaw. The proposed use must:
 - (a) In no way, during construction or thereafter, adversely affect the existing or potential quality or quantity of water that is available in the Water Supply Protection District; and

- (b) Be designed to avoid substantial disturbance of the soils, topography, drainage, vegetation and other water-related natural characteristics of the site to be developed.
- (3) The Special Permit Granting Authority shall not grant a special permit under this section unless the petitioner's application materials include, in the Board's opinion, sufficiently detailed, definite and credible information to support positive findings in relation to the standards given in this section.

1.9 Non-conforming Use

Non-conforming uses which lawfully existed, begun or in receipt of a building or special permit prior to the first publication of notice of public hearing for this bylaw may be continued. Such non-conforming uses may be extended or altered, as specified in M.G.L. Ch. 40a, Sec. 6, provided that there is a finding by the Planning Board that such change does not increase the danger of surface or groundwater pollution from such use.