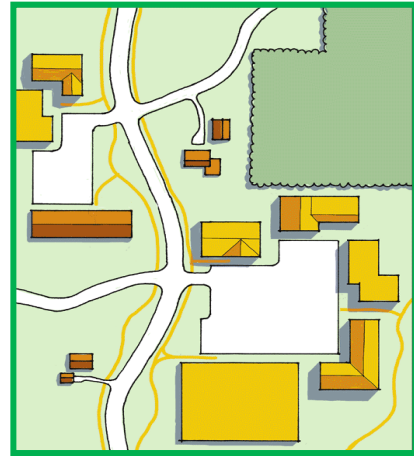


# COMMERCIAL DESIGN GUIDELINES HARVARD, MASSACHUSETTS



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ADOPTED BY THE PLANNING BOARD

OCTOBER, 2016

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## PART 1: INTRODUCTION

### A. Purpose and Applicability

The purpose of this document is to promote principles of good design in new development and to foster growth that enhances the scenic beauty and built environment of Harvard. The Commercial Design Guidelines presented in this report apply only to the Commercial District (C District), the area located along Ayer Road north of Route 2 to about one-quarter mile south of the Ayer town line. Map 1 displays the location of the district and the parcel boundaries. These Guidelines specifically apply to development proposals in the C District for projects that require a building permit for new construction, an addition, or exterior alteration, or are subject to site plan review and/or a special permit granted by the Planning Board.

This document is a short version of a comprehensive Design Guidelines study that provides a detailed examination of existing conditions in the C District and the zoning bylaw standards that promoted unsustainable development. This version provides essential information to professional engineers, designers and land developers to understand the type of development Harvard wishes to promote for the C District in order to provide for a smooth approval process by local boards and officials. Readers may refer to the original document for a better understanding of the faults and problems with previous development in the District.

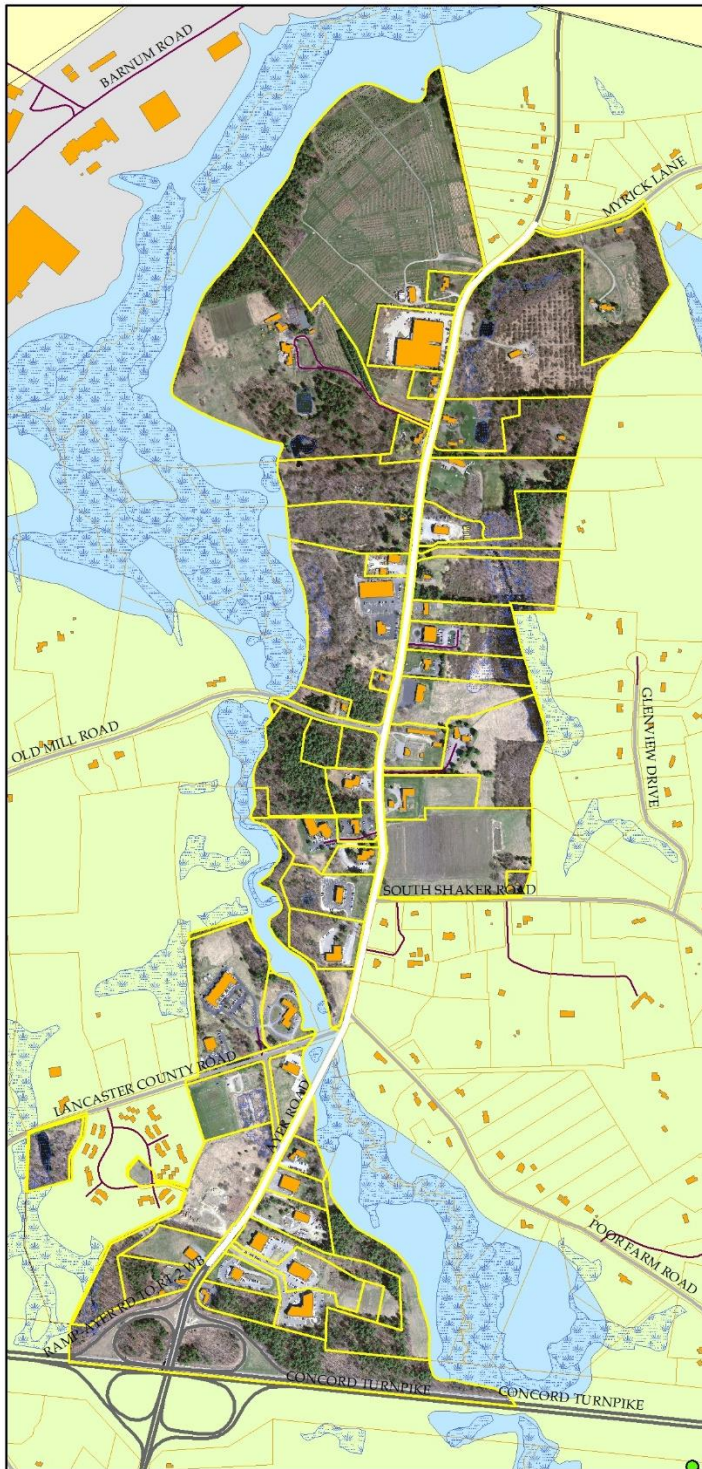
### B. Sustainable Development Themes for the Commercial District

1. The District should be pedestrian friendly. Visitors should find it a pleasant experience to walk in the area, both along Ayer Road and within parking lots to access building entrances. Sidewalks should provide safe access for visitors to move to neighboring lots without re-entering their vehicles. Site planning should consider pedestrian needs and provide separation from autos in landscaped pathways, where possible, to contribute to a project's welcoming form.
2. Building design should promote a "Harvard Character". Harvard has retained its small-town New England roots in residential areas, but the limited commercial development has largely ignored the Town's past. Each project should have a unifying architectural theme, and commercial buildings should be attractive and interesting. Visitors should feel that they are really in Harvard, not in a cookie-cutter franchise operation that could be anywhere. Each project should have distinguishing architectural features and fit the unique context of its site.
3. A development's site design should incorporate generous landscaping to help the project settle into its surroundings. Parking lots should not dominate the streetscape, and where possible, lots should be placed behind or to the side of buildings to minimize their visual impact. Features that may negatively affect adjacent residential uses should be appropriately buffered so that residents may enjoy their privacy. Utility boxes should be out of the public's view and suitably enclosed to minimize visual intrusion.
4. The long-term vision for the Ayer Road Corridor is to transform the strip commercial character into a cohesive Village. Distinguishing features of Villages include active street fronts with a mix of goods and services, buildings brought-in close to the street, sidewalks along building frontages to promote pedestrian activity, multi-story buildings on both sides of the street to provide a sense of enclosure, on-street parking and shared parking lots, pedestrian crosswalks, and a mix of residential dwelling types with some second floor apartments. To accomplish this Vision, Ayer Road will require significant modifications to narrow the road to slow traffic, accommodate pedestrians, and establish an inviting streetscape; and utility companies will need to re-locate their overhead lines underground. While these changes may take a decade or more to accomplish, new developments should be consistent with this long-range plan in their design.

5. Harvard residents strongly support the concept of sustainability. Development should be energy efficient, with buildings taking advantage of solar orientation and meeting energy conservation standards. Parking lots should minimize heat capture through landscaping and shading from tree canopies. Stormwater should be treated on-site through Low Impact Development (LID) techniques wherever possible. Development should retain unique natural features and have minimal impact on wetlands, wildlife habitat, and other environmental resources. As growth occurs, transit service may become viable, and projects should anticipate the ability to accommodate fixed route service for employment and shopping destinations.
6. Site design should incorporate measures to lessen congestion and preserve traffic capacity of Ayer Road. Developments should provide the minimum number of curb cuts necessary to service the development. Curb cuts should be shared with adjacent properties if possible, and locate immediately opposite cuts across the street. Provision should be made to connect to adjacent properties so traffic can afford entry onto Ayer Road. Separate left and right turn lanes should be constructed to reduce delays for through traffic.



## Ayer Road Commercial District Harvard, Massachusetts



### Legend

- Harvard Parcels
- Structures
- Zoning**
  - AR
  - Commercial
  - Devens
  - Watershed Protection

0 750 1,500 Feet

## PART 2: BUILDING GUIDELINES

The following sections contain Design Guidelines to assist architects, engineers, landscape architects and other design professional to incorporate measures that exemplify traditional New England design elements in their projects.

The Guidelines serve two purposes:

- 1) To provide an expression of desired features that should actualize the Town's rural ethic in a modern form that will meet Harvard's needs for commercial services efficiently and aesthetically.
- 2) To aid Town staff and committees during project reviews and provide a baseline for discussion of major design elements of proposed developments.

Each section begins with written guidance to encourage certain design features consistent with Harvard's vision and to discourage other features that may not be appropriate here. Photos, plans and renderings help to demonstrate these principles. Specific comments further explain design aspects of the graphics. These are not meant to be unbreakable rules. Each project has its own unique elements that may make implementation of the Guideline unfeasible. The Planning Board will work closely with a development's designers to apply these Guidelines in a thoughtful manner to achieve the long-range goal of improving the economic climate of the Commercial district.

## A. Roof Guidelines

Roofs should adhere to the following standards:

1. Provide variation in roof lines using gable, shed, and hip roofs.
2. Alter roof forms to break down large roof masses using authentic dormers, chimneys, cupolas, etc. Prohibited are non-functioning dormers that suggest unoccupied upper floors and other unrealistic appendages that create false detailing and take away from the building's integrity.
3. Overhangs and eaves should be incorporated.
4. Steep roof pitches are encouraged. Low pitches are acceptable at small roof sections such as porches, arcades, entries, etc.
5. Roofs should have sufficient depth to appear as a functional roof. Mansard roofs are discouraged. Roofing materials should not be used as siding for a top story. Roofs should read as functional over a building and not as a decorative feature added to the façade.
6. Flat roofs with articulated parapets that become an expression of the building façade are permitted but subject to review. False gable-end shaped parapets at flat roofs are strongly discouraged and should be avoided.
7. Rooftop equipment should be concealed from ground view.

### *Recommended*



*Village Trading Co. Cataumet, MA*

- ❖ Varied roof forms help to create a distinctive impression.
- ❖ Roof overhang provides safety from the elements and indicates building entrance.

### *Not Recommended*



*Credit: Northborough, MA*

- ❖ Unarticulated roof creates a very plain looking building.
- ❖ Roof signs are prohibited in Harvard.



## B. Façade Guidelines

1. Avoid unarticulated and monotonous façades that create blank walls. Incorporate columns, arcades, porches, windows, etc. to prevent uninterrupted lengths of façade greater than 30 feet.
2. Vary the building footprint so there are pronounced changes in wall planes (5 feet or greater) so there are no straight walls longer than 75 feet facing a public street or parking area.
3. Create a variety of story heights along façades.
4. Provide clearly visible and identifiable entrances that are recessed or articulated with projected coverings. In mixed use buildings, distinguish entrances for upper floor residential or commercial uses through different façade treatments.
5. Windows should make up a minimum of 30% of the total area of the front façade. There should have a sufficient quantity of appropriately scaled windows and doors with a balanced spacing and rhythm. Retail storefronts should be modestly scaled, with vertically proportioned windows articulated with muntins. Windows and glass portions of doors should be clear, non-mirrored, and non-opaque glass.
6. When parking is located to the rear of a building, provide additional windows, lighting, and possibly an entrance to create a favorable impression of the uses within.
7. Use a variety of materials or patterns in the façade to add visual interest but limit the number to avoid visual overload.
8. Encourage shadow lines and patterns using architectural elements such as overhangs, projections, reveals, etc.
9. Strive for visual simplicity rather than complexity.

### *Recommended*



*Mashpee Commons*

- ❖ Ample, vertically-proportioned windows enhance the façade's appearance.
- ❖ The façade contains a variety of materials and patterns that add visual interest.
- ❖ Recessed entrances are easily identified.
- ❖ Breaks in the façade occur at reasonable lengths to delineate individual storefronts and doorways to the second floor.

### *Not Recommended*



*285 Ayer Road, Harvard*

- ❖ Blank wall along frontage is a missed opportunity for connection to a busy road.
- ❖ Plain roof form provides monotonous appearance to façade.
- ❖ Mansard roofs are discouraged. Roofs should not be a decorative part of the façade.
- ❖ Roof should have sufficient depth to appear as a functional roof.

### C. Building Composition Guidelines

1. Encourage multi-story buildings. Single story buildings should be articulated with design features discussed in these Guidelines.
2. Buildings with two or 2½ stories will more readily achieve the long-range vision for the Commercial District. New development should be designed with a usable second or third story to reduce the footprint of the building and achieve a scale more appropriate for a flourishing Main Street environment.
3. Break large building volumes into smaller forms to lessen the total building mass. Step back and forth with smaller sub-masses. Use one-story projections with arcades or porches on two and three-story buildings, and address the pedestrian scale at the street level.
4. Vary the building footprint so there are pronounced changes in the wall planes.
5. Continue the main architectural treatments of the building's front façade, including the materials used, around all sides of the building that are visible from a street or pedestrian access.

#### *Recommended*



*200 Ayer Road, Harvard*

- ❖ Many building elements help compose a distinctive architectural theme, including symmetrical windows, pitched roofs, octagonal roof, porch overhang, façade treatments, columns, and gable ends.
- ❖ Parking lot in the rear allows building features to take prominence and leaves front setback nicely landscaped.
- ❖ Materials consist of natural elements in earth tone colors.

#### *Not Recommended*



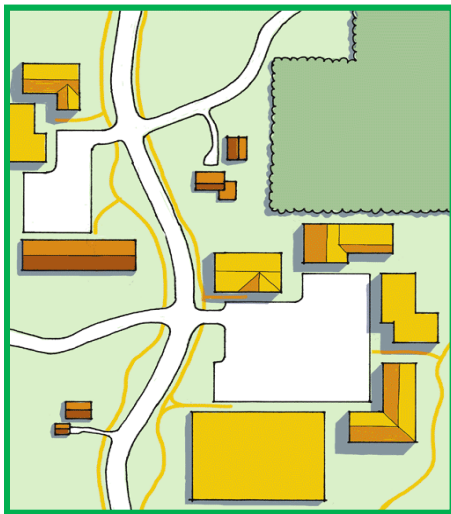
*Auburn, MA*

- ❖ Plain building front, minimal windows, and long blank wall offer no visual interest.
- ❖ Flat roof without ornamentation lacks originality.
- ❖ Unarticulated entrance is uninviting for pedestrians.
- ❖ Mechanical equipment on the roof is visible at street level.
- ❖ No plantings along the road leaves feeling of barrenness.
- ❖ Single-story building and deep setback provides no sense of enclosure.

#### D. Guidelines for Organization of Buildings and Uses

1. Organize buildings to promote a compact pattern of development, create pedestrian-friendly spaces and streetscapes, create areas of naturalized landscaping, and screen parking areas.
2. For property with more than one building on a site, develop a coherent architectural site plan with an organized composition (e.g. buildings clustered around a central space/focal point or configured in a linear pattern).
3. For large developments, establish a visual and functional focal point (e.g. town green, outdoor sculpture, water feature, landmark structure, park, etc.).
4. Arrange multiple buildings so that their primary orientation complements one another.
5. Locate uses that generate more pedestrian activity (e.g., restaurants, retail stores) at the street level and less active uses on upper floors.
6. Design the main building entrance to be clearly visible and identifiable from the primary vantage points or public right-of-way.
7. Where nearby buildings establish a defined relationship to the street, new buildings should maintain the rhythm of building setbacks and front yard composition and foster a strong street edge.
8. The elements of building height, yards, setbacks, and architecture should establish a sense of spatial enclosure and create a comfortable human scale. A 1:3 ratio of height to width is appropriate for a commercial corridor to create a sense of place but may vary depending upon existing conditions. Street trees can contribute to spatial enclosure where lots have substantial yards and deep building setbacks.

##### *Recommended*



*Phase 1 Report, Harvard Master Plan  
Brown Walker Planners, and Wolf Landscape Architecture*

- ❖ Clustered, mixed use development concept for Ayer Road, with commercial buildings sharing a common parking lot and a single curb cut.
- ❖ Sidewalks and few driveway crossings reduce vehicle conflicts with pedestrians and bicyclists. Internal paths connect uses within a site and with adjacent properties.
- ❖ Compact development pattern provides large buffer for residential neighborhood behind.

##### *Not Recommended*



*Sorrento's Plaza, 285 Ayer Road*

- ❖ Separate uses on one lot are isolated from each other by a large, formless parking lot.
- ❖ The site offers no pedestrian amenities for walking through the parking lot or to adjacent uses on Ayer Road.
- ❖ Lacking a central focal point, the site has no sense of place.
- ❖ Arrangement of buildings lacks coordination and provides no feeling of enclosure.

## E. Building Materials Guidelines

1. Use traditional and natural building materials that weather naturally, such as brick, stone, wooden shingles, and clapboard. Be consistent with the traditional New England building vernacular.
2. Use materials that have texture, pattern, or lend themselves to a high quality of detailing.
3. Synthetic materials and exterior insulation finish systems are discouraged.
4. Use durable, eco-friendly materials whenever possible.
5. Mix building materials where appropriate to add visual interest to the exterior.
6. Avoid metallic and reflective materials; natural colors and earth tones are preferred.
7. Contemporary forms and materials are welcome as long as they reinterpret and echo the region's traditional design forms and materials.

### *Recommended*



*206 Ayer Road, Harvard*

- ❖ Different materials add character and are consistent with local vernacular.
- ❖ Varying wall heights and providing breaks in the building line lend variety and depth to the façade fronting on Ayer Road.
- ❖ Steep roof pitches heighten architectural composition.

### *Not Recommended*



*Credit: Montgomery County Planning Commission*

- ❖ Otherwise attractive building would not fit with Harvard's historic character.
- ❖ Plain façade lacks ornamentation and visual interest.
- ❖ Contemporary form and mix of materials do not evoke traditional design for Harvard.



## F. Energy Guidelines

1. Orient buildings consistent with energy conservation principles.
2. Encourage “green building” design, i.e. energy efficient windows and skylights, occupancy sensors, roof top gardens, active and passive solar systems, etc. (Note: Harvard is a “Green Community” and has adopted the Stretch Code to promote energy efficiency in building construction.)
3. Use building materials from recycled or renewable sources.
4. Consider roof-top solar systems and ground source heat pumps (geo-thermal) to reduce fossil fuel use.
5. Provide shade trees in parking lots to reduce pavement heat gain and help keep vehicle interiors cool.
6. Use LED lights for exterior lighting to reduce use of electricity. Convert older, high pressure sodium (HPS) lights to LED lights.
7. Place hedgerows or evergreen plantings to slow prevailing winter winds.
8. Incorporate electric charging stations in parking lots to promote the use of electric vehicles.

### *Recommended*



*Credit: Cape Cod Commission*

- ❖ Orient building to maximize the use of natural daylight in interior lighting and install roof-top solar panels to reduce the power use of building tenants.
- ❖ Use a variety of window forms to increase use of natural light, such as transom windows, display windows, dormers, skylights, etc.

### *Recommended*



*Credit: Montgomery County Planning Commission*

- ❖ Trees in parking lots can reduce excess heat generated by large areas of paving and help to reduce stormwater runoff and pollution.
- ❖ In time, trees provide shade to cool pavement surface, reduce air temperature, and mitigate heat island effect.



## PART 4: LANDSCAPING AND SITE STANDARDS

### A. Parking Guidelines

1. Locate parking lots behind or to the side of buildings to create a strong street edge and an inviting pedestrian environment. Allow some parking in front of a building upon provision of landscaping, berms, or other design features that reduce visual impact.
2. Break up large parking lots into distinct parking areas by landscaped and curbed planting beds.
3. Parking areas should provide safe, convenient, and efficient access for vehicles and pedestrians. They should be distributed around large buildings in order to shorten the distance to other buildings and public sidewalks and to reduce the overall scale of the paved surface.
4. For side parking areas, do not locate parking closer to the street than the front line of the principal structure.
5. When a building with a front parking lot is renovated, explore options for mitigating the impact of the parking on the streetscape, such as adding additional landscaping or architectural design elements.
6. Locate lots in such a way that connections to adjacent lots are feasible in order to facilitate internal vehicular circulation and share parking among uses with different hours of peak use.

#### *Recommended*



*Credit: Northborough, MA*

- ❖ Parking lot lies appropriately to the side of the building to reduce visual impact of the lot from the road.
- ❖ A strong street edge is created when parking is away from the front of the building and the building is brought close to the road.

#### *Not Recommended*



*231 Ayer Road*

- ❖ Parking lot between the building and road isolates the business from its surroundings.
- ❖ Parking in front detracts from building appearance.
- ❖ Lack of landscaping in the green strip along the road leaves the site unadorned and provides little comfort for pedestrians.

## B. Parking Lot Landscaping Guidelines

1. Reduce the visual impact of wide expanses of parking with landscaped islands and planting strips. Islands should include a variety of trees, shrubs, and groundcover to provide vegetation at varied heights and to achieve a visual buffer within the parking area.
2. As a rule of thumb, seek to provide one 3" caliper tree for every 10 parking spaces. Trees should have at least 50 square feet of permeable area for growth.
3. Use canopy trees as a visual break and to provide shade for vehicles and pedestrians.
4. "Parking areas shall be subdivided so that such areas shall extend no more than 160 feet along a parking access aisle or other driveway without a green area of width at least 20 feet. Alternatively, such extent shall be no more than 80 feet without a green area of width at least 10 feet." (Harvard Zoning Bylaw, §125-39.A(3))
5. Plant species appropriate for parking lot landscaping may include a mix of native and non-native vegetation, so long as the non-native vegetation is not invasive and does not cause excessive fruit drop or leaf litter. An invasive species is one that appears on a list prepared by the Massachusetts Invasive Plant Advisory Group (MIPAG) as Invasive, Likely Invasive, or Potentially Invasive (<http://www.massnrc.org/mipag/index.htm>).
6. Parking facilities with more than (20) parking spaces should be bordered on all sides with a landscaped buffer strip at least 10 feet in width.

### *Recommended*



*Renaissance Office Park, Harvard, MA*

- ❖ Generous parking lot landscaping provides shade for parked vehicles on sunny days and enhances overall appearance of the site plan.
- ❖ Landscaped perimeter of the parking lot reduces visual effect of large area of pavement.
- ❖ Service uses and utility lines are hidden from public view.

### *Not Recommended*



*Donelan's Supermarket, Acton MA*

- ❖ This parking lot has a small amount of internal landscaping, but not enough to soften large area of pavement.
- ❖ The large lot offers no refuge for customers walking to and from the store.
- ❖ Breaking the large lot into smaller lots or providing landscaped islands would soften the visual impact of asphalt.
- ❖ With little landscaping, the high ratio of impervious surfaces increases runoff, and pavement radiates heat to the environment.

### C. Site Landscaping Guidelines

1. Provide one 3" caliper street tree of varied species for every 30 feet of street frontage. Trees should have 50 square feet of permeable area for growth. Retaining existing trees within the right-of-way or front setback area may substitute for new street trees. In areas of overhead power lines, substitute ornamental trees or other shrubbery.
2. Plantings shall not obscure site entrance and exit drives and road intersections.
3. Preserve existing trees where possible, or replace removed trees with its equivalent. For example, replace a tree that had a 15-inch caliper dbh (diameter at breast height) with five 3-inch caliper dbh trees. Leave soils undisturbed under the drip line of existing trees.
4. Use natural features and landscape berms to screen buildings. Use plant materials of different size, species and textures to give depth to the screen.
5. Add depth to facades with landscaping. Use pedestrian-oriented landscape areas adjacent to the building to add variety and depth to a large building facade.
6. Landscape the front and side yards with a mix of drought-resistant plantings including ground cover, trees, flowers, shrubs, succulents, and ornamental grasses.
7. When renovating a building with minimal landscaping, incorporate landscaping upgrades into the site.
8. Do not obscure building façades with landscaping. Landscaping should focus attention on the front face of the building and screen parking areas.
9. Where possible, the landscape design should embrace natural site features such as rock outcroppings, topography, etc.
10. Planting design should give priority to native species that promote local pollinators and are drought resistant. Irrigation systems are allowed, but plants that contribute to water conservation are preferred.
11. Overhead utility lines significantly detract from a site's appearance. New construction should incorporate underground wiring wherever possible.

#### *Recommended*



*280 Ayer Road*

- ❖ Trees along the side yard line provide a nice buffer between uses.
- ❖ Foundation landscaping and plantings in front add visual amenity.
- ❖ Parking lot in the rear allows the more pleasant view of greenery to prevail from the road.

#### *Not Recommended*



*289 Ayer Road*

- ❖ Lack of street plantings exposes building and outdoor storage to plain view.
- ❖ Outdoor storage areas should be screened and located behind front face of the building.
- ❖ On a positive note, tall pines shield view of property from residential neighborhoods.

#### D. Access Management Guidelines

1. Combine curb cuts where feasible. New developments should generally have no more than one entrance and one exit per street.
2. For multiple building developments, one combined entrance/exit location is preferable at the main entrance to facilitate traffic movement. A landscaped traffic island is encouraged to separate in and out movements.
3. If needed to reduce congestion on Ayer Road, construct separate right and/or left turning lanes to facilitate entry and exit from the site.
4. Reduce the number of conflict points between vehicles, between vehicles and pedestrians, and between vehicles and bicyclists to limit driver mistakes and possible collisions. For example, align driveways on opposite sides of the road and increase spacing between driveways where possible to increase driver reaction time.
5. Where it is proposed to re-develop property, evaluate existing access on Ayer Road and re-design curb cuts to improve safety and traffic flow. Remove unnecessary driveway openings in favor of fewer access points with a greater level of traffic management.
6. Driveways too close to intersections can cause conflicts with traffic entering from side streets. Seek to preserve intersection capacity by locating access driveways away from intersections.

##### *Recommended*



*Route 12, Auburn, MA*

- ❖ Traffic island with granite curbs and low-growth landscaping help to separate entering and exiting traffic while maintaining motorists' visibility.
- ❖ Single entrance serves multiple uses on adjoining lots, reducing the number of curb cuts onto Route 12.
- ❖ Native New England trees in perimeter of parking lot provide autumn colors and summer shading as they mature.

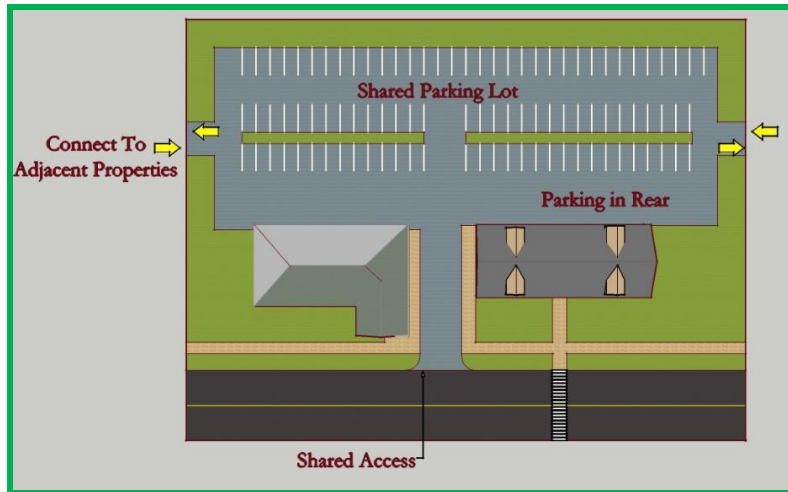
##### *Not Recommended*



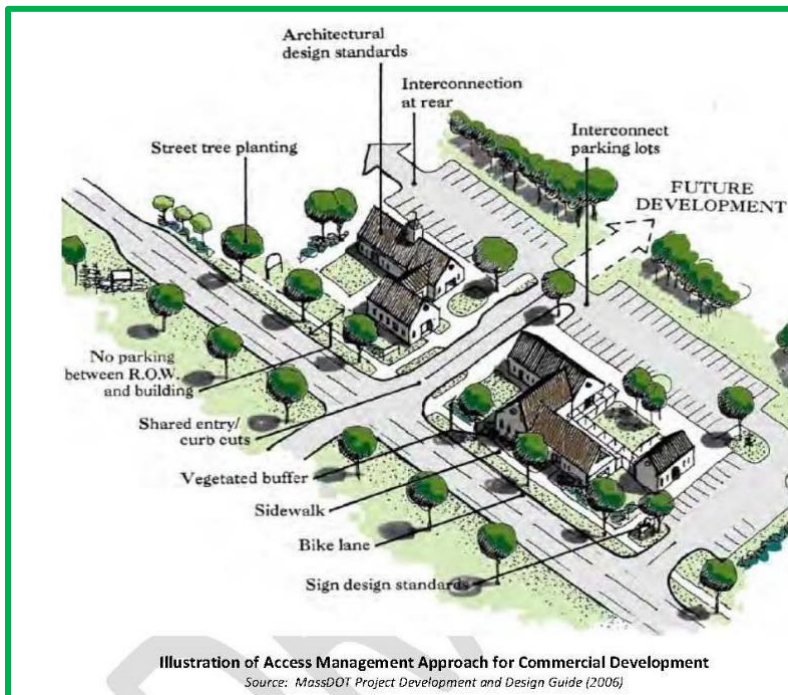
*259 Ayer Road, Harvard*

- ❖ Multiple curb cuts and broad openings present hazards to motorists.
- ❖ Minimal parking lot landscaping and parking in front of the building means pavement dominates the view of the property.
- ❖ Landscaping and curbing can help to channel traffic to defined driveway openings and limit conflicts with pedestrians and bicyclists.





- ❖ Share driveways where possible to reduce the number of turning positions on Ayer Road.
- ❖ Provide parking behind buildings to allow architecture to inform the sense of the business.
- ❖ Sharing parking spaces can reduce the number of spaces needed to accommodate business needs, especially when uses have different times of day for peak parking demand. Fewer spaces mean less impervious surfaces and lower stormwater impacts.
- ❖ Encourage connections with adjacent lots to minimize turning movements on Ayer Road.



- ❖ Combine access for adjacent lots where feasible, and interconnect parking lots in the rear in order to share parking and reduce the number of spaces for each individual use.
- ❖ Do not place parking between the road right-of-way and the principal building.
- ❖ Provide landscaping in a green belt along the street frontage.
- ❖ Install sidewalks for pedestrian safety and provide shoulders for bicyclists.



## E. Guidelines for Connectivity

1. Consider interconnecting parking lots of abutting commercial properties to improve vehicle flows.
2. Encourage alternative means of travel. Develop an interconnected path network that provides choice of walking and cycling routes that lead to important destinations.
3. Provide paths on both sides of all streets if possible. Consider pedestrian easements through private property to continue an uninterrupted network over long distances.
4. Where street width permits, provide four-foot shoulders/bicycle lanes adjacent to travel lanes to improve safety for bicyclists from automobiles.
5. Connect to sidewalks and paths on adjacent properties, and extend walkways to connect to public parks, conservation areas, and other civic uses.
6. Provide bicycle parking next to building entrances.

### *Recommended*



*Credit: Cape Cod Commission*

- ❖ Off road bicycle paths can meander through scenic areas and provide a safe, alternative mode of transportation for recreation or business purposes.
- ❖ Landscaped green belt between the sidewalk and road protects pedestrians from passing autos and provides pedestrians a sense of safety.

### *Recommended*



*Abbey Road Cover Photo*

- ❖ Provide crosswalks and clear signage to help pedestrians cross Ayer Road.
- ❖ Textured or imprinted pavement on crosswalks provide cues to motorists to watch out for pedestrians.

## F. Guidelines for Delivery Areas

1. Vehicle access to delivery areas should be away from the primary face of buildings.
2. Locate loading areas away from primary visual corridors.
3. Shield loading docks and storage areas from view by separate structures matching the building's exterior or by opaque landscaping and fencing.
4. Provide walls, fences, or dense landscape screen to muffle the noise impacts on nearby residential neighborhoods.

### *Recommended*



*Donelan's Supermarket, Lincoln Station, MA*

- ❖ Loading docks in the rear minimize noise from deliveries.
- ❖ Tree belt screens unsightly views from neighbors and absorbs sound.
- ❖ Consider proximity of residential uses and locate services to avoid noise impacts.

### *Not Recommended*



*Route 32, Monson, MA*

- ❖ Provide separation of trucks and autos to minimize conflicts.
- ❖ Inappropriate delivery location blocks traffic on a main thoroughfare.
- ❖ Orient service areas to not be visible from the public way.

#### G. Guidelines for Utilities and Mechanical Equipment

1. Screen exposed storage areas, machinery, dumpsters, service areas, generators, and other utility buildings and equipment from the view of abutting properties and streets using plantings, fences, and other building design techniques.
2. Screen garbage dumpsters with solid walls a minimum of six feet high with materials similar to the principal building materials.
3. Locate trash dumpsters, loading docks, mechanical equipment, etc. away from residential properties in a location that reduces visibility and noise intrusion.
4. Where feasible, place wire utilities underground.

##### *Recommended*



*Credit: Montgomery County, PA Planning Commission*

- ❖ Dumpster enclosure screens unsightly use and location does not affect parking.
- ❖ If possible, use materials to match architectural themes.
- ❖ Avoid chain link or metal for enclosures and consider vernacular materials.

##### *Not Recommended*



- ❖ Exposed dumpster sticks out like a sore thumb and interferes with parking.

## H. Planning for Pedestrians and Bicyclists

1. Install sidewalks along sides of the property that abut a public street, even if sidewalks do not presently exist on such streets. This will permit extension of the sidewalks in the future. Sidewalks should be at least 6 feet in width.
2. Where sidewalks are placed along a road, provide a vegetative buffer between the road and sidewalk to shield pedestrians.
3. To help pedestrians reach store entrances, incorporate traffic calming features in parking lots to slow cars and clearly give pedestrians the right-of-way. Consider using speed tables, different paving materials, bump-outs, etc. between parking spaces and building entrances.
4. Enhance pedestrian safety by installing walkways in landscaped strips and by clearly delineating pedestrian crossings near building entrances.
5. Where pedestrians are likely to cross Ayer Road, work with the DPW Director to plan for a crosswalk with appropriate signage, markings, and road changes (e.g. raised crossing, curb extension) to allow pedestrians to cross safely. Give pedestrians priority over traffic, or install pedestrian signals if high pedestrian counts are possible.
6. Provide walkways that have a smooth surface and comply with standards of the Mass. Architectural Access Board. The accent surfaces should be durable brick, pavers, slate, or textured concrete. Asphalt sidewalks are discouraged.
7. Sidewalks that cross driveway entrances shall have a maximum cross slope of 2% to insure pedestrians in wheelchairs can safely cross the driveway.
8. Provide continuous internal pedestrian walkways, no less than six (6) feet in width, from the street to the principal customer entrances. Consider routes that connect focal points of pedestrian activity and pass through landscaped areas that include trees, shrubs, benches, flower beds, ground covers or other such materials.
9. Provide pedestrian paths, or reserve easements, to adjacent lots in anticipation of future connections to promote a multi-purpose path system throughout the district.
10. Provide bicycle parking at the rate of one bicycle space for every ten vehicle parking spaces. Separate bicycle parking facilities from motor vehicle parking areas to protect parked bicycles from damage by motor vehicles. Whenever possible, place the bicycle parking area within 50 feet of building entrances and in well-lit areas.
11. Where a proposed development abuts a trail, consider a connection between the trail and the lot to promote alternative modes of public access.



### Recommended



*Credit: EOEEA*

- ❖ Internal pedestrian walkway leads from the street to the principal customer entrance and ensures pedestrian safety from unpredictable vehicular movements.
- ❖ Different paving materials help to distinguish driving surfaces from pedestrian pathways and enhance the attractiveness of the walkways.
- ❖ Low level lighting helps pedestrians navigate pathways after dusk.
- ❖ Planting beds protect trees and create pleasant site amenity.



*Maine Planning Office*

- ❖ Shade trees and landscaping create an attractive area for cars and bicycles.

### Not Recommended



*Existing Condition on Ayer Road*

- ❖ Lack of sidewalks along Ayer Road puts pedestrians in peril.
- ❖ Green belt along the road would separate pedestrians from on-coming traffic.
- ❖ Utility poles may need re-location.
- ❖ Creating a sidewalk/path system along Ayer Road will require public and private participation.



*Safe Routes Study – MRPC*

- ❖ Lack of sidewalks by Elementary School on Mass. Ave. poses a safety hazard for students.
- ❖ Opening doors from cars parked on shoulder could cause serious bicycle crashes.



## I. Open Space and Environment Guidelines

1. Consider location of property in the context of community open space and trail network and provide linkages if within reasonable proximity.
2. Provide public spaces within a development for casual interaction.
3. Provide outdoor amenities such as a patio seating area, water feature, sculpture, pedestrian plaza with benches and planters, etc.
4. Establish greenbelts along streams, with the larger side yard setbacks adjacent to the streams to help preserve ecological functions.
5. Integrate natural features and open space into the overall plan of development.

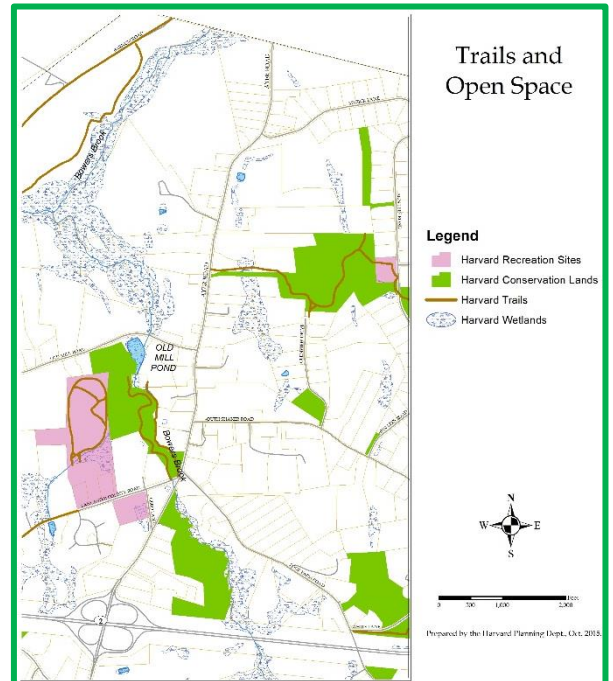
### *Recommended*



*Lincoln Station, Lincoln, MA*

- ❖ Public artwork invites pedestrians to enjoy a quiet moment.
- ❖ Foundation landscaping/front lawn is noteworthy for lack of pavement and view of autos.
- ❖ Internal path leads from sidewalk on street to building entrance.

### *Existing Trails and Open Space*



- ❖ The McCurdy Track and soccer field are popular destinations, but walking there along Ayer Road without paths is difficult. Providing connections to parks and conservation areas will help promote healthy exercise.
- ❖ The Bowers Brook ecosystem shapes the natural environment and physical form of the C District. Development should preserve the environmental integrity of natural resources.

## J. Lighting<sup>1</sup>

1. Lighting must conform to §125-40, Lighting, of the Zoning Bylaw. Its intent is to “to reduce light pollution, light trespass, unnecessary sky glow and other glare in order to preserve and enhance the natural, scenic and aesthetic character and historical environment, and to preserve the night sky as a natural resource to enhance nighttime enjoyment of property within the Town of Harvard.”
2. Building lighting should highlight the building rather than attract attention to the light fixture itself, and be appropriate to the building’s architectural style, in order to maintain a positive nighttime image.
3. Lighting should be fully shielded.
4. Light fixtures should provide an even illumination level while operating. Flashing, pulsating or similar dynamic lighting should not be used.
5. Provide lighting for sidewalks and paths that link buildings with public spaces, parking areas, and sidewalks on adjacent land wherever practical.
6. Lighting should not cast glare onto streets, public ways, or onto adjacent properties.
7. Indirect lighting should be provided where possible.
8. Illumination levels should be minimal along property lines.

### *Recommended*



*Credit: Architectural Area Lighting*

- ❖ Site lighting should meet “Dark Sky” standards through the careful placement and style of lighting fixtures.
- ❖ Use energy efficient fixtures with LED luminaires.
- ❖ Select posts with classic look, and materials should be dark in color to reduce light reflectivity.

### *Not Recommended*



*Auburn, MA*

- ❖ Uncontrolled lighting in parking lot casts light into the night sky.
- ❖ Unappealing concrete bases pose parking hazard.
- ❖ Poles should be lower in height, have cutoff fixtures, and be located in planting islands.
- ❖ Lot provides no pedestrian amenities whatsoever.

<sup>1</sup> See §125-40 of the Protective Bylaw for zoning requirements.

### *Recommended*



*Credit: Montgomery County Planning Commission*

- ❖ Traditional light fixtures create a welcoming experience for pedestrians.
- ❖ Fixtures with cutoffs reduce light trespass and enhance property aesthetics.

### *Not Recommended*



*Credit: Northborough, MA*

- ❖ Lighting fixtures are incongruous with building design and too close to the building.



*Credit: Architectural Area Lighting*

- ❖ Luminaires can have a classic or modern look provided they fit the building architecture and minimize lighting impacts.

## K. Stormwater

1. Design stormwater facilities according to best management practices using naturalized and landscaped detention basins, swales, and green islands to improve stormwater quality and infiltration rates.
  2. Integrate Low Impact Development (LID) measures within the site design where feasible, such as rain gardens, vegetated swales, permeable paving, bioretention basins, infiltration structures, etc.
  3. Stormwater systems should promote long-term water quality improvements and protect the C District's natural environment, including Bowers Brook.
  4. Landscaping within parking areas should include vegetated islands with bioretention functions.
- ❖ Bioretention cells lower the rapid rate of surface runoff, allow on-site infiltration of groundwater, absorb oils and sediments, and contribute to parking lot aesthetics.
  - ❖ LID measures can be designed as part of a landscaping scheme and add green space to a parking lot.
  - ❖ Vegetated measures decentralize stormwater treatment, reduce "heat island" effects, and enhance site aesthetics.

*Recommended*



*Credit: EOEEA*

*Recommended*



*Credit: CalTrans*

- ❖ Rain gardens filter out sediments and pollutants and recharge aquifers.
- ❖ Stormwater planters between parking rows or around the perimeter provide filtration, treatment, and infiltration of stormwater.
- ❖ Below the surface, careful construction includes geotextiles, gravel, and soil to provide stormwater treatment. Runoff from the parking lot is directed into the LID measure, where it is temporarily detained, filtered, and infiltrated.



## L. Residential Conversions

1. Conversions of residences to commercial uses should seek to incorporate the principles of good design expressed elsewhere in this report.
2. Provide parking to the side or rear of the residence, and share driveways with adjacent properties if possible.
3. Provide landscaped front yard and establish buffers next to adjoining residences.
4. Former homes can be readily adapted to accommodate professional offices and small-scale commercial services.

### *Recommended*



*Real Estate Office, Route 70, Boylston, MA*

- ❖ Shallow setbacks provide a close connection of the buildings to the street.
- ❖ Parking lots are located off to the side of the buildings to minimize visual impact.

### *Recommended*



*Antique Shop, Rt. 6, Woodbury, CT*

- ❖ Barn in the rear provides opportunity for home business.
- ❖ Residential appearance is maintained from the road except for a small sign.
- ❖ Reuse of historic home is compatible with surrounding properties.
- ❖ Driveway leads to parking lot behind the home to preserve view of house and front yard landscaping.



## PART 5: AYER ROAD VILLAGE SPECIAL PERMIT

### A. Overview

Section 125-52 of the Protective Bylaw contains a special zoning provision for the Commercial District, called the Ayer Road Village Special Permit (ARV-SP). Town Meeting adopted this section in 2004 as a direct implementation measure of the 2002 Master Plan.<sup>2</sup>

“Harvard needs to “create mixed-use village centers [with] services, amenities, and gathering places,” “direct development toward a village pattern” and “create a village atmosphere in the commercial district” with “strong design guidelines and site standards to support town character.”

The intent of the provision is to promote a village character along Ayer Road. Residents typically view the Commercial District as containing unappealing highway strip commercial development. The ARV-SP is a means to slowly change this character to a better alternative, one that promotes mixed use development, fosters community interaction, has pedestrian activity, and provides commercial development that meets the Town’s needs for goods and services. The Planning Board is the special permit granting authority and has the responsibility of working with applicants to design projects that fit the goal of transforming the district to one that has a more “Main Street” personality.

The ARV-SP section recognizes that Harvard’s dimensional regulations are counter-productive to the Master Plan’s vision, and it offers considerable flexibility to overcome site planning limitations inherent in the Bylaw. Some of these incentives include:

- ❖ Permit alternative building siting without regard to a lot width circle.
- ❖ Permit more than one main building on a lot.
- ❖ Apply alternative building and structure setback requirements.
- ❖ Apply alternative site standards relative to parking, loading and driveways.
- ❖ Apply alternative site standards relative to lighting and signs.
- ❖ Permit up to 10% more floor area than otherwise allowed.
- ❖ Allow greater building size than permitted elsewhere, up to 30,000 sq. ft. of gross floor area.

The hallmark of an ARV-SP is to allow mixed use developments, with multiple buildings on a single lot in close proximity to facilitate walking to different uses, and with central parking areas and common access to Ayer Road to reduce the number of curb cuts compared to separate lots of comparable floor area. Section 125-52.A. states the specific objectives of the provision:

- (a) Promotion of mixed use development.
- (b) Promotion of shared access in properties, with appropriate links to adjoining properties, lessening the need for curb openings on Ayer Road.
- (c) Promotion of development that emphasizes pedestrian accessible walkways, benches, pathways, bicycle racks, and pedestrian-scale lighting and signage.

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<sup>2</sup> Harvard Master Plan, page 4.5, 2002.

- (d) Encouragement of building and site designs compatible with the local architecture, rather than generic designs.
- (e) Avoidance of excessive building massing and unbroken building facade treatments.
- (f) Subordination of parking, loading docks, on-site utilities, heating, ventilation and air conditioning equipment (HVAC), utility lines, and solid waste dumpsters to building form.

Many of these objectives are in step with the Design Guidelines presented earlier in this report. Whether or not a project is in a Village development, it is important to have a consistent set of Guidelines to promote the desired vision for the Corridor.

Furthermore, in a mixed use village development (MUV) multifamily uses should constitute 30% or more of the total gross floor area. This is important because it is the principal way the Bylaw allows multifamily uses in Harvard (aside from a comprehensive permit pursuant to MGL c. 40B). MUVs also offer the opportunity to have a 30,000-sq. ft. grocery store, a live musical entertainment establishment, and a small screen arts theater (§125-52-13(Z)). Lastly, in order to facilitate a clustering concept and greater density, privately-owned communal sewage treatment systems are allowed in an ARV-SP while prohibited everywhere else in Harvard.

The ARV-SP provision will not apply uniformly throughout the C District. Many lots are small and simply do not have enough land area to accommodate a mixed use development (although consolidation of several small parcels is possible and even desirable from the perspective of changing the land use character of the district over time). Some lots may lack the minimum frontage requirement of 300 feet, and recently developed sites will be unlikely to change due purely to financial reasons. But several large parcels are vacant and appear to be good candidates for this provision, many older properties are ripe for redevelopment, and the provision could encourage the consolidation of adjoining properties. Thus, this provision can have a lasting effect on the corridor over time.

## **B Discussion of Village Concepts**

Village developments typically provide a variety of residential dwelling types at moderate to high densities. Various planning studies for Harvard have noted a need for alternatives to large single family homes on individual lots (1.5 acre minimum area), which are the norm in town. Village projects often contain units dedicated solely to seniors, which may be market rate or subsidized, independent or assisted living. Such units might be suitable for “empty-nesters” in Harvard who seek to down-size to smaller, maintenance-free living. (In fact, Bowers Brook Apartments, which received an ARV-SP, contains 42 units of housing for seniors 55 and over.) Housing for families, single professionals, and first-time home buyers are also usually part of the mix. Offering multi-generational housing is attractive to many potential buyers.

Commercial activity is integral to successful Village developments. Retail uses are perhaps the most visible, but professional offices, personal services, restaurants, and medical facilities serve not only local needs but may also offer amenities that attract customers from the regional market. Retailers will concentrate along a tree-lined “Main Street”, and multi-story buildings may offer apartments above first floor shops. The approach seeks to re-create many of the components of successful town centers that developed before zoning bylaws outlawed the concept in favor of strict separation of uses. Some villages create a unique retail environment that caters to tourists or a regional audience of shoppers looking for a pleasant experience.

Central parking lots allow visitors to park in close proximity to shops and services. Lots are well-landscaped and located behind buildings to foster close connections among uses. Wide sidewalks and pedestrian amenities encourage casual strolling and window shopping. Open space on the periphery maintains a natural setting, provides opportunities for hiking, and helps to buffer the village from established neighborhoods. Villages may also offer manicured outdoor spaces such as parks or “town commons” for community events such as concerts and festivals.

Harvard’s Commercial District is an approximately 1.5-mile linear corridor with distances from the highway that range in depth from about 500 feet to about 1,500 feet. It is not clear how the drafters of the Zoning Map drew the boundaries for the district. A consequence, however, is that the narrow depth of the district in many locations poses limitations on the ability to design moderate to large-scale village developments with sufficient residential density and commercial space to create self-contained entities. Therefore, to attain the desired character, a vision of a linear “Main Street” is the more likely outcome, where individual property owners work in concert and build according to the Design Guidelines described in this report.

Over time, by bringing buildings closer to the street, providing parking lots in the rear, connecting uses with pedestrian pathways and sidewalks, sharing access, planting hardy New England landscaping, mixing land uses (including residences), building two and three story buildings, etc. the Ayer Road Corridor can transform from an older strip commercial model to a more compact, pedestrian-friendly, village model. Accompanying this private sector approach, the Town should work with MassDOT to reconfigure the highway geometry to allow on-street parking in appropriate locations, insure pedestrian safety with sidewalks, crosswalks and traffic calming measures, add turning lanes where necessary to favor through movements, bury overhead utility lines, and add green belts and street trees to beautify the corridor.

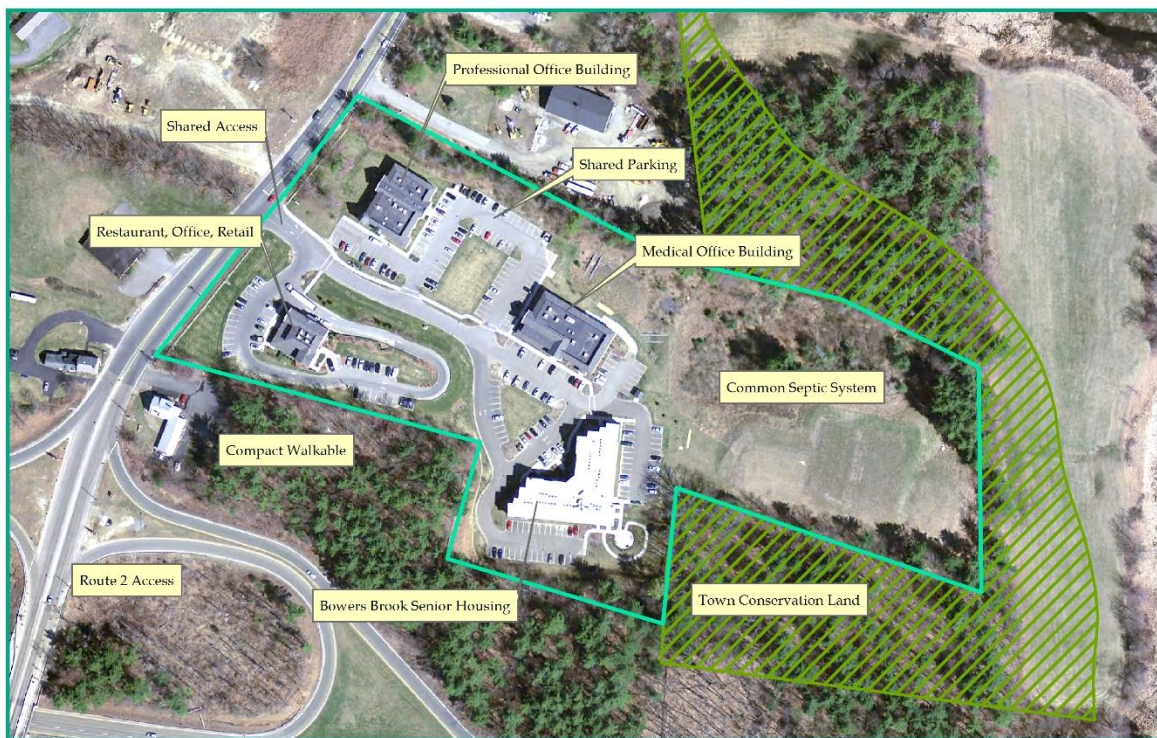
### C. Sample Village Developments

Presented on the following pages are three examples of developments that contain many characteristics of village developments. No single example is likely to encompass all of the elements discussed above, but from the representations and brief discussions of each, it is apparent that it is not only possible to avoid the trap of single purpose, stand-alone buildings but it is desirable to mix uses in a cohesive setting to create a better development paradigm for the C District.

### Ayer Road Mixed Use Development

An example of a viable mixed use development exists in Harvard today. It includes 42 units of senior rental housing in the Bowers Brook apartments. One shared driveway serves the site rather than four separate driveways serving each building. Several landscaped parking lots reduce the visual impact of automobiles on what might otherwise have required one large lot to serve the entire site. As permitted by the ARV-SP provision, a shared septic system serves the project, and on-site wells operate as a public water supply under a permit from DEP. "Ayer Road Meadows", Town Conservation land, borders the property to the east and provides opportunities for passive recreation. Buildings are in close proximity, creating a compact, walkable development. The project contains 92,000 sq. ft. of floor area, with the residential component comprising about 50% of the total.

Ayer Road Village  
Mixed Use Development





### Easthampton, Mass.: Case Study

This example shows a redevelopment proposal of a former automobile dealership in Easthampton, MA (See photo to the right of the sketch). Infill development changes the lot character from strip commercial to mixed use with a moderate land use intensity and increase of taxable value. New development places a two-story building close to the street, with parking provided to the side and rear in discrete sections to break up the visual impact of parking. The street front contains a landscaped tree belt and sidewalk to accommodate pedestrian use and links the property to other commercial properties along the street. Internal pedestrian paths around the buildings and parking areas enhance safety. The plan provides a comfortable scale for the setting, and the proposed building contains architectural detail to improve the view from the street.

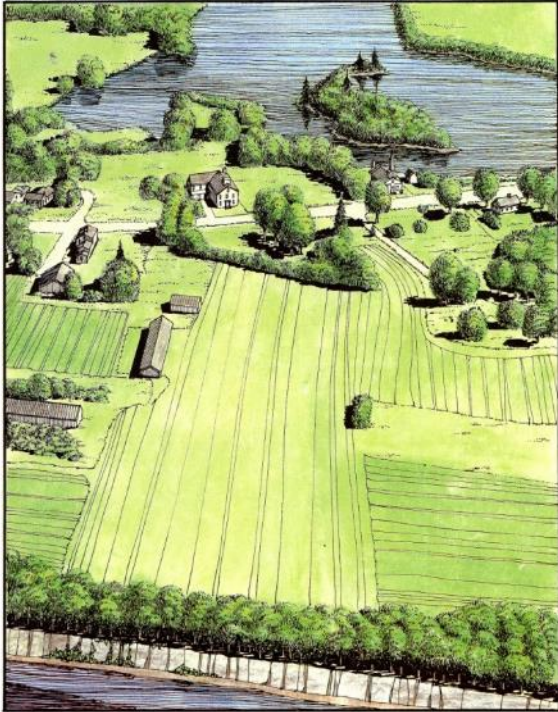


Route 10, Easthampton, MA

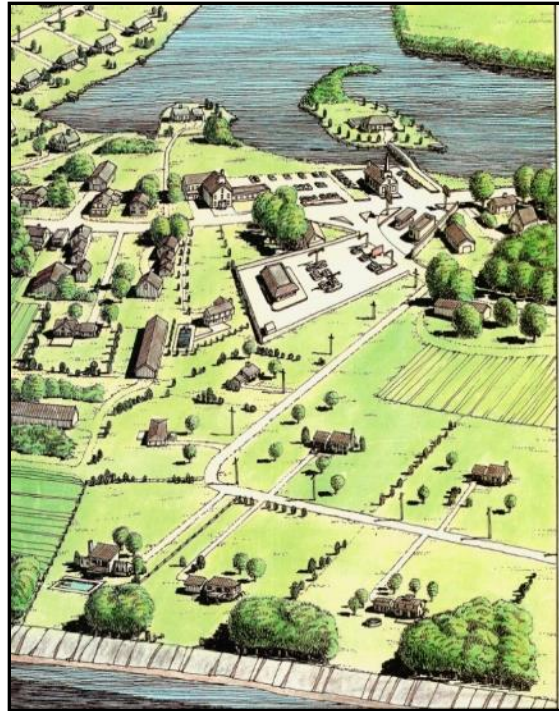
### Dealing with Change in the Connecticut River Valley, A Design Manual for Conservation and Development<sup>3</sup>

The report provides a third example of a compact village development. The following page shows a hypothetical development of a farm in Hadley, Mass. A conventional plan strips commercial development along the highway, and large lot single family homes consume the available farmland in both frontage lots and new subdivisions. The “creative development” concept preserves much of the farmland by clustering commercial uses together, placing parking behind the buildings, and providing generous landscaping to help screen the parking from view. Buildings are placed near the road to reinforce the street edge. The C district in Harvard contains two large, active farms, and the ARV-SP option offers a way to preserve the farms. A village-style development could yield a high economic return for the owners and allow farming to continue on the most productive farmland soils.

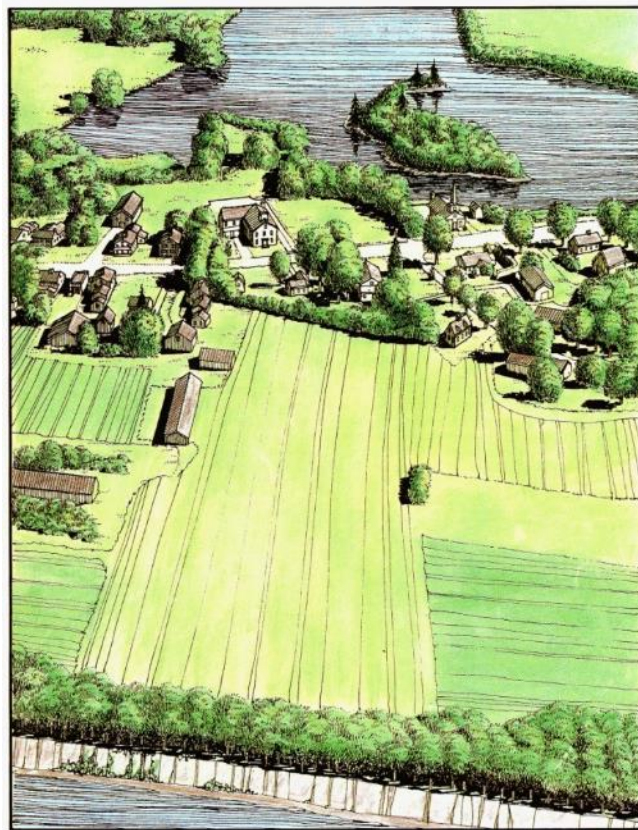
<sup>3</sup> Robert D. Yaro, et. al., Lincoln Institute of Land Policy, 1988.



*Aerial View of Site before Development*



*Aerial View of Site after Conventional Development*



*Aerial View of Site after Creative Development*



**APPENDIX 1:**  
**DIMENSIONAL REQUIREMENTS FOR THE C DISTRICT**

**Dimensional Requirements for Basic Lots**

<b>Dimensional Standard</b>	<b>Harvard Requirement</b>
Minimum Lot Size of a Basic Lot	1.5 acres (65,340 sq. ft.)
Minimum Lot Width (lot width circle)	200' at 120' from road center line (i.e. the lot must contain a circle with a diameter of at least 200' located 120' from the road center line without touching an adjacent lot)
Minimum Frontage	180'
Contiguous Area of Buildable Land	25% of required lot area (16,335 sq. ft.), which contains at least a portion of the lot width circle.
Upland (non-wetland)	3/8 ac. (16,335 sq. ft.) exclusive of land within 50' of a wetland
Lot Shape Formula	The formula applies to Type 1, 2, 3, 4, and 5 Lots. Since only Basic Lots are permitted in the C District, the formula does not apply.
Floor Area Ratio (FAR)	Total building floor area shall not exceed 10% of the land area or 8,000 sq. ft. <sup>1</sup> , whichever is larger
Height	Less than 35' and less than 3 stories. (As a practical matter buildings may not exceed 2½ stories.)
Structure Setback and Building Height	Structures other than fences shall be set back from lot boundaries by at least the height of the structure.
Structure Setback	Structures shall be set back at least 20 feet from side and rear property lines
Additional Setback from abutting property in an AR district	Uses subject to site standards shall be set back 60' from an abutting property in an AR district
Front Setback	Structures shall be set back from the front lot line a minimum of 20 feet.
Buffer Strip	A buffer strip (green area) is required around the lot perimeter with a width at least 10% of standard lot width or the maximum lot width, whichever is less. <sup>2</sup> (This is a no-build zone for parking and structures.)
Open Space	Commercial uses shall provide a green area of at least 50% of total lot area.

<sup>1</sup> For example, a 2-acre lot contains 87,120 sq. ft.; 10% is 8,712 sq. ft. In this case, the larger figure is 8,712 sq. ft.

<sup>2</sup> For a conforming basic lot, this requires a buffer of 20' (i.e. 10% of 200') around the lot perimeter. As of the 2016 Annual Town Meeting, there is now a 20-foot front, side and rear setback requirement.

Dimensional Standard	Harvard Requirement
Special Permit for Major Buildings	A nonresidential building longer than 150' or having over 10,000 sq. ft. of floor area requires a special permit from the Planning Board.
Floor Area Allowance for Certain Retail Businesses	Certain retail businesses may have up to 15,000 square feet of building space. <sup>3</sup>
Septic System Setback	Sewage disposal systems must be set back 100' from W District boundaries and inland wetlands.

### § 125-52: Ayer Road Village Special Permit (ARV-SP)

The following alternative standards apply within an ARV-SP:

- Minimum Frontage: 300 feet on Ayer Road
- Lot Width Circle: Does not apply.
- Not more than 25% of parking spaces proposed to serve the development shall be located in front of a building or buildings.
- An ARV-SP may have more than one building on a lot.
- The Planning Board may waive building and structure setbacks and apply alternative site standards.
- In a mixed use village development in an ARV-SP, may allow up to 10% more floor area than otherwise allowed and a greater building size than otherwise allowed, up to 30,000 sq. ft. of gross floor area.

### Dimensional Standards in the Zoning Bylaw Pertaining to Sewage Disposal Systems

(Refer to each section for exact text)

Sewage disposal systems shall be set back from W District boundaries, and from the boundaries of inland wetlands, by at least 100 feet; this setback shall not apply to revision of any preexisting sewage disposal system. (§125-32.B)

Sewage disposal systems shall be entirely within the lot being served and shall be set back from lot boundaries and drainage easements by at least the same distance as required for structures from lot boundaries for the particular lot. (§125-32.2.2)

The absorption area of a leaching facility for sewage disposal need be set back from a street side line by a minimum of only 25 feet. (§125-32.C.4.a)

If the entire leaching facility is below both natural and finish grade, the absorption area of the leaching facility for sewage disposal need be set back from drainage easements and side and rear lot lines by a minimum of only 25 feet. (§125-32.C.4.b)

<sup>3</sup> §125-13 J. Store, showroom, salesroom for the conduct of retail business, including a grocery, hardware, clothing, drug, or general store, not including auto sales, which uses shall not exceed 15,000 square feet of gross floor area of building space.



### **Board of Health Regulations Pertaining to Septic Systems in Addition to Title 5 Requirements**

A sewage disposal system shall not be installed within 100 feet of any watercourse (streams, brooks, rivers, ponds).

A sewage disposal system shall not be installed within 100 feet of any wetlands as defined by Massachusetts General Law.

Wells must be 100 feet from the nearest portions of the sewage disposal system.

Sewage disposal systems must meet a 25-foot ledge offset from the perimeter of the proposed leaching areas.

### **Harvard Conservation Commission Regulations for Setbacks from Wetlands**

#### **§147-17 Setbacks**

These setbacks from the edge of wetlands are the minimum and may be extended further if deemed necessary for the protection of the interests of the Bylaw by the Commission. These setbacks may be waived, modified or altered in extraordinary circumstances if the Petitioner establishes by a preponderance of the evidence that the project cannot be accomplished with any other design and there will be minimal adverse impact on the interests of the Bylaw.

Wetland dependent structures (drains, outfalls, weirs), fences, and structures necessary for upland access where reasonable alternative access unavailable	0 – foot setback
No disturb zone in which there shall be undisturbed natural vegetation, except for vernal pools shall be	50 – foot setback 100 – foot setback
Driveways, roadways, structures	75 – foot setback
Chemical-free zone – no fertilizers, lawn chemicals, etc.	100 – foot setback
Above ground or underground storage of gasoline, oil other fuels and hazardous materials	100 – foot setback
Pasture and stables/barns for animals	100 – foot setback