

1. Introduction, Goals and Key Recommendations

INTRODUCTION

Community Values

At the outset of the master plan process, the Master Plan Committee sponsored two public forums to engage residents in shaping a community vision and goals for Tewksbury's future.¹ The forums attracted a mixed population in terms of age, interests and concerns. Most of the 60 participants had lived in Tewksbury for more than a decade. They spoke enthusiastically about the benefits of living in Tewksbury and passionately about the disadvantages. Ultimately, their words had a profound impact on this Master plan.

The public meetings encouraged residents to identify and explain what they value about Tewksbury. Their spontaneity and words conveyed fond sentiments toward the town and the people who live in it. For many residents, Tewksbury seems to have retained the close-knit feel that suburbs of comparable size often lose. Participants with long-term ties to the town said they had moved here because of family roots, jobs, the town's convenient highway access or its affordably priced homes, and many of the older residents recalled Tewksbury as a pleasant, unpretentious place with a warm, rural feel. As participants discussed their town's past and present, the word "rural" came to embody a set of visual, economic, social and environmental meanings: tree-lined roads, farms, a community of families, and plenty of open space. People appreciate and want to protect the small-town qualities that endure in Tewksbury today.

Residents said that while new development has created problems for Tewksbury, they do not oppose growth per se. They sensed that with responsive leadership, better zoning regulations and a commitment to open space, Tewksbury could accommodate development and simultaneously protect both the visual character and property values of established neighborhoods. Some of the residents said they yearn for a downtown or village center near Town Hall, well-organized business areas of high-quality design on Route 38, and attractive points of entry into their community.



¹ A transcript of the October-November 2002 community meetings appears in Appendix A.

When asked about places they consider special to Tewksbury's identity, participants had many ideas and they spoke without hesitation. They nominated the large expanse of open space around Tewksbury State Hospital, water resources such as Ames, Round and Mud Ponds, and Tewksbury's unusual collection of public art, notably Mico Kaufman's sculptures. They also cited the civic space around Town Hall, Krochmal Farm on South Street and Trull Brook, and they spoke affectionately of local events that build a sense of community: parades, youth sports, winter sledding, or activities at the Teen Center. One speaker's words brought nods of agreement from many in the room when she classified Raytheon as special for its role as a major source of local employment. In short, the visioning forums provide useful guidance about what residents want to preserve, enhance or encourage as the town continues to develop.

Community Concerns

The forums showed that many residents worry about Tewksbury's present and future condition. Two beliefs permeated the vision process: Tewksbury does not have enough control over high-impact commercial and industrial development, and local government responds more to "special interests" and developers than to the needs of residents. Participants cited a number of land use conflicts, particularly between industrial and residential zones, and though the proposed mall was not discussed, it was clearly on the minds of those who said they prefer Tewksbury's base of small businesses to "big box" commercial development. They think Tewksbury deserves an attractive, higher-quality business zone that enhances their town and respects the way of life in established neighborhoods. While they bemoaned public "apathy," participants claimed that many townspeople "do not feel empowered" to engage in civic life. They criticized town officials and developers for actions that make it difficult for the public to make knowledgeable decisions, e.g., by providing inadequate or incomplete information or failing to plan for the town's future.

Residents seemed especially concerned about the environmental, fiscal and "quality of life" impacts of uncontrolled growth. They foresee the loss of mature, character-defining vegetation along Tewksbury's roads because of insensitive or needlessly intrusive clearing of land for new development. They anticipate more severe traffic congestion on Route 38 and neighborhoods made unlivable by their proximity to large industrial, warehouse and shipping operations. They worry about the air and water pollution that industry may bring, and the vulnerability of flood-prone areas as land is put to more intensive use. Residents are also troubled by the large housing developments they associate with Chapter 40B. Overcrowded schools, water shortages, traffic-burdened roads and inadequate sidewalks, public safety services pushed beyond capacity and spiraling tax bills formed the basis for a disturbing image of tomorrow's Tewksbury, as expressed by participants in the vision forums.

The sense that outsiders have imposed unwanted conditions on Tewksbury surfaced a number of times during the visioning forums. At both meetings but more forcefully at the second, participants mentioned problems at the town's motels: disturbances and crime on one hand, and on the other, long-term tenancy by a number of homeless families placed in Tewksbury. The objections lay less with the presence of homeless families than with the mandate that Tewksbury educate children for whom the town receives little or no financial support – in schools that may already have reached their planned operating capacity. Participants also expressed great disdain for Chapter 40B, a topic that seemed to unite people who disagreed on other issues. While conscious of Tewksbury's Chapter 40B shortfall and sympathetic to low-income households, several speakers chastised Chapter 40B developers who bypass local zoning to build housing for "people who do not need it."

In addition, cut-through traffic on Route 38 and regional sprawl were named as external factors that reduce the quality of life in Tewksbury.

Master Plan Goals

The visioning process suggested several priorities for Tewksbury's new master plan. Strategies to address the following goals became essential:

- Reduce conflicts between industrial zones and adjacent neighborhoods.
- Promote a traditional village center in the area surrounding Town Hall.
- Promote a coordinated approach to land use on Route 38, aiming for small-scale, mixed-use development of high-quality design, consolidated curb cuts, and attractive landscaping, lighting and parking.
- Subordinate the rate and total amount of development to the capacity of Tewksbury's environmental resources.
- Improve and enhance Tewksbury's gateways.
- Recognize and protect Tewksbury's character-defining roads, natural and built assets and unique local landmarks.
- Establish and follow sustainable economic development policies to provide local employment and tax revenue, encourage a diverse economic base and direct business and industrial growth to appropriate locations.
- Preserve large tracts of open space and recreation land.
- Give preference to reuse and redevelopment of existing structures and infill development over new growth, assuring that reuse activities respect the architectural integrity of historic buildings.
- Preserve Tewksbury's traditional housing affordability by providing a mix of residential use types and home prices.
- Manage development so that it respects the topography and character of the land, existing vegetation and scenic road features.
- Encourage pedestrian and bicycle access throughout Tewksbury by providing a safe network of roads, sidewalks and trails.
- Establish and follow capital improvement and asset management plans to assure the adequacy of municipal and school facilities.
- Eliminate existing and potential environmental hazards.
- Provide quality municipal and school services at a price affordable to average homeowners.

Priority Needs

A technical review of Tewksbury's policies and regulations, the capacity and operation of its roads, the quality of its natural resources, neighborhoods and business districts, and its fiscal condition brought several needs into focus. These needs form the basis for the master plan's major recommendations:

- Developing a strong, diverse tax base while protecting wetland and water resource areas is a major challenge for Tewksbury, one that is not adequately addressed by existing regulations, policies or administrative procedures. Tewksbury needs stronger tools to protect wetlands and water resources, and to prevent and mitigate flooding, pollution and environmental harms.
- In many parts of town, Tewksbury is over-developed in relation to the capacity of land and water resources to absorb growth impacts. Additional development in these areas will simply aggravate existing environmental problems. However, the town needs ways to grow so it can support a thriving economy, maintain property values and assure a balanced fiscal future. Policies that encourage higher-density housing in established areas, close to community services and shops, would provide a variety of housing types and encourage reinvestment while also helping Tewksbury reduce the burdens of development on environmentally sensitive land.
- Tewksbury needs more open space – in terms of amount, location, usability, and to protect the community’s natural and cultural assets. Capacity to manage land, identify conservation and recreation opportunities, and network with regional and national land trusts, coupled with open space-sensitive development rules, will be key to a successful open space program in Tewksbury.
 - Making logical connections between open space and natural and cultural resources will help Tewksbury achieve multiple goals of the Master plan.
 - Tewksbury needs to protect its existing land holdings and enhance them with additional open space, whether acquired by the town or provided in new residential, industrial and commercial development. A regional approach could help Tewksbury meet some of its open space needs if residents take an active role in regional open space initiatives that affect their community.
 - Neighborhoods are comprised not only of homes and streets, but also shared or common space -- woods, open fields, parks and playgrounds – and facilities that foster social cohesiveness, giving residents a sense of neighborhood identity. Tewksbury needs community development policies that build neighborhoods. By requiring high-quality open space in developments on outlying roads and investing in traditional neighborhood design principles along roads approaching Route 38, Tewksbury will be able to provide great places for people to live.
- The future evolution of Route 38 is critical to Tewksbury’s visual character, the safety and efficiency of local traffic circulation, and the economic and fiscal health of the town. An inviting town center should act as the focal point for a reconceived Route 38. In fact, past master plans emphasized the importance of developing a recognizable town center, yet Tewksbury was unable to follow through. The absence of a downtown area or town center detracts from the quality of life in Tewksbury, and it is symptomatic of land use and economic weaknesses that have existed in town for many years.
- Tewksbury needs a commonly shared vision of its economic base, effective strategies and local capacity to guide industrial development. While much of the town’s industrial land is located around I-495, significant amounts are adjacent to single-family homes. Zoning and economic development policy should work together, not at cross-purposes, by fostering a safe, pleasant and attractive environment for those who live and work in the community.

- Tewksbury needs to focus on strategies to revitalize and reuse existing commercial and industrial property. The condition and appearance of established built assets directly affect the town's image and its ability to attract high-value development.
- Tewksbury needs local capacity to manage the economic development process. Better regulations will help to improve the quality, appearance and operational features of commercial and industrial development, but zoning does not build an economic base. Communities that want a vibrant, diverse economy have to work for it by offering resources, opportunities and incentives that meet the needs of existing and prospective businesses.
- Tewksbury needs responsible policies and mechanisms to create and retain quality homes that are affordable to low-income people. At the same time, Tewksbury needs to withstand pressure from the state and housing developers to reach the 10% goal of Chapter 40B at a speed that it cannot sustain.
 - Tewksbury cannot afford to absorb the fiscal impacts of large-scale development or the environmental impacts of badly sited development. Local affordable housing policies must be consistent with policies to address other, equally important needs in the community.
 - Tewksbury needs to preserve the diversity of housing that exists within its established base of development. Retaining small, older single-family homes for elders, young citizens and couples and providing regulatory flexibility to convert larger buildings to duplexes or multi-family units will help to assure housing choice as the town continues to grow and change.
- Reducing congestion on Route 38 "Main Street" is Tewksbury's most critical transportation need and a key objective of the Master plan. If any single road is the face of Tewksbury, it is Main Street.
 - The condition and appearance of major entry points into a city or town cast an impression of the entire community. These "gateway" locations need careful consideration, not only in terms of land use but also roadway treatments: signage, landscaping, and friendly "ground rules" for the use of a community's roads.
 - Walkable communities need safe, accessible facilities for pedestrians. Tewksbury needs to improve its sidewalk network – for the sake of local residents, businesses and those who drive through town.
 - Tewksbury needs to address the seriousness of residential-industrial traffic and land use conflicts on East Street.
- Tewksbury's local government would benefit from a comprehensive approach to capital planning and asset management.
 - The process for identifying and disposing of surplus municipal property needs to be made open and more inclusive.
 - Tewksbury needs more capacity to focus on water resource management.

KEY RECOMMENDATIONS

Growth Management

Take a planned approach to mixed-use development, recognizing that some uses function quite compatibly while others do not. Mixed-use development provides many benefits that range from convenience for local residents and employees to reducing dependence on auto trips for routine activities. The Zoning Bylaw should allow developers more flexibility to propose a mix of uses appropriate to areas where they plan to build. “Mixed-use development” does not mean that a particular combination of uses should apply equally to all situations, or that prescribed ratios of commercial, residential, industrial and open space uses should be achieved by every project. In Tewksbury, appropriate mixed-use development could include the following approaches:

- Convenience retail in residential areas. The corner store may seem like an emblem of the past, but retail development remains appropriate within higher-density residential areas such as multi-family and retirement housing communities. As part of the special permit process for these types of developments, developers should be encouraged to integrate retail and service businesses that cater to the housing development and its immediate vicinity.
- Convenience retail in office and industrial areas. Within Office/Research areas, developers should be allowed to include small, convenience retail and service establishments that cater mainly to the workers within an Office/Research development. This will meet the needs of employees and minimize the amount of traffic they generate in order to conduct small daily errands. Having small stores and service establishments within easy walking distance of the office may also encourage workers to carpool.
- Moderately high-density housing mixed with limited commercial uses. Multi-family and townhouse development should be allowed in planned “transitional” zones between industrial or commercial areas and single-family neighborhoods, carried out in conjunction with small-scale, low-impact commercial and office development and shared community facilities, e.g., small neighborhood parks and playgrounds.

The master plan promotes a philosophy of locating residences, shopping, and workplaces within close proximity to one another wherever possible. Policies to encourage live-work situations and other strategies to reduce auto dependent travel should be pursued wherever possible in Tewksbury.

Give primacy to design. Tewksbury seems to have focused all of its regulatory attention on use and dimensional requirements which, while necessary, do not address the visual impact of development on nearby neighborhoods or on views from the road. Clear architectural design guidelines and site plan standards should be drafted to require that new construction respect, reinforce and enhance the town’s historic development patterns. Design standards can be accomplished by supplement to the town’s site plan review bylaw or by a separate design review bylaw, which would be administered by an appointed design review board.

Think strategically about infill development. Infill development refers to the targeted redevelopment of vacant parcels in otherwise developed areas. The redevelopment of these parcels, along with high-quality redevelopment of underutilized land throughout Tewksbury, should be a top priority for both land use and economic development reasons. Other communities have successfully used incentives to promote infill redevelopment, including density bonuses for desired types of development and a streamlined permitting process for targeted areas. Public investments in

streetscape enhancements and amenities such as public parking can generate matching private investment in an area.

Put pedestrians first. Tewksbury should focus on enhancing the pedestrian environment along Route 38, but especially in the Town Center, Shawsheen and South Tewksbury areas. This will require a combination of public investments and regulations. Public investments should prioritize safe, attractive sidewalks and landscaping. Private business owners can and should play a role in these improvements, however. Development regulations should focus on controlling curb cuts, parking and landscaping on private property.

Make zoning an agent of high-value, quality development. The range of uses allowed in the Heavy Industrial district is not conducive to establishing a planned, sustainable economic base. Similarly, the Zoning Bylaw's general lack of design standards in the Commercial District is not conducive to public safety or fostering a favorable image of the town, especially in the Town Center. Elements of a pedestrian-oriented village typically include small (or no) building setbacks, a mix of small retail and service establishments, and parking either on the street or behind the building. Flexible dimensional rules would be beneficial for promoting village-style development. In addition, regulations to encourage village development should establish a maximum setback distance and prohibit auto-oriented site layouts with large parking lots in front of the building.

Open space is a public asset and should be treated accordingly. At various times during the development of the master plan, discussions about open space revealed a sense that some local officials perceive open space advocacy as tantamount to no-growth advocacy. The master plan's emphasis on open space protection has very little to do with curbing future development. Rather, it promotes open space as a central component of neighborhood design and environmental quality, just as it promotes stronger building and site standards as central components of commercial and industrial design.

In many parts of Tewksbury, open space – even in small, relatively isolated pockets – provides visual or scenic relief from development and preserves a clear impression of Tewksbury's rural past. The large expanse of open space around Tewksbury State Hospital has a character-defining impact on a key point of entry into town, but it does not provide neighborhood-level or geographically distributed benefits. Moreover, much of Tewksbury's land is directly influenced by wetlands and floodplains because of the town's relationship to three watersheds, especially that of the Shawsheen River. Open space, whether wetlands or upland, should be seen as a critical environmental protection tool for the town. It provides a measure of relief from the impact of existing development on Tewksbury's water resources. The town may not be able to acquire more open space in the future, but every effort should be made to retain and protect land the town already owns.

Land Use Plan

The master plan promotes a conceptual future land use pattern for Tewksbury, including desired land uses, land allocation, and the physical layout for the town. As the centerpiece of the Master plan, the land use concept plan is supported by recommendations found in other elements. It should serve as the basis for new zoning regulations, as a blueprint for future development and open space, and as a guide for residents, town officials and developers.

An effective land use concept plan recognizes the physical, environmental, cultural and economic features of different areas. Although Tewksbury has several zoning districts, most of the planning that it represents occurred many years ago. The town seems to have implemented past plans in a

haphazard, often incomplete way. As a result, the zoning map encourages outcomes that are sometimes inconsistent with the aspirations and needs of residential, business and industrial property owners. For example, the industrial zoning along East Street was promoted as part of a larger plan that called for an industrial connector road between I-93 and I-495. Tewksbury adopted the zoning, but the roadway was never built. In addition, the town wanted to cultivate a strong tax base and toward that end, nearly all of Route 38 was zoned for relatively undifferentiated commercial development, with few incentives for a coordinated approach.

The Land Use Concept Plan² is reasonably simple, straightforward, and responsive to the Master plan goals expressed at the visioning forums. It does not reduce Tewksbury's overall build-out potential to a significant degree. Rather, its purpose is to promote an appropriate mix of residential, commercial and industrial development, emphasize traffic safety and secure, healthy environment for the town's present and future residents.

Open Space and Public Use Areas. The Land Use Concept Plan combines three existing zoning districts with other land into a single designation for areas that serve open space and community needs. It includes virtually all land owned by the Commonwealth and the Town, along with private property that should be protected because of its environmental sensitivity or importance for neighborhood-level open space and recreation uses. Where appropriate, land in Open Space and Public Use Areas could be developed for active recreation areas, such as ballfields or playgrounds, for municipal and school uses, or for passive recreational activities such as walking, picnicking, fishing, or bird watching. To the extent possible, all sections of Tewksbury should have the benefits of open space.

Single-Family Home Neighborhoods. The Residential Development Areas in the Land Use Concept Plan are very similar to Tewksbury's existing Residential District. The key difference between them lies in a proposed reallocation of town-owned land in the Residential District to "Open Space and Public Use" to reflect their status as community resource areas. The Land Use Concept Plan promotes no change to the town's basic dimensional regulations, e.g., the minimum lot size of 43,560 ft². Clustering of new development should be required or strongly encouraged through incentives in order to provide for useable open space, contiguous trails and other amenities. Compatible uses such as agriculture, conservation, and recreation should be permitted in Residential Areas, as should accessory uses such as accessory dwelling units and home occupations. Non-residential development should be limited to exempt uses, e.g., schools and religious organizations, and municipal uses approved by town meeting. In all cases, non-residential uses should be subject to Site Plan Review.

Multi-Family Residential Development. For Multi-Family Areas, the Land Use Concept Plan corresponds mainly to Tewksbury's existing MFD, MFD-55 and Community Development Districts. Since the town has allocated only a few areas for multi-family residential development, Tewksbury should reserve them exclusively for multi-family housing. It is appropriate to encourage senior housing in these areas, perhaps by providing a modest density bonus or allowing senior housing as of right, but the town should reconsider its existing policy of restricting some MFD areas to over-55 housing.

Neighborhood Compatibility Areas. The Land Use Concept Plan identifies several "neighborhood compatibility areas" that are intended to encourage a predominantly residential mix of uses and

² See Chapter 2, Land Use Map 3.

provide generous landscaped buffers between industrial, commercial and residential areas. The areas lie along East Street opposite the proposed Mixed-Use Planned Development Area, off Route 38 between the Town Center and an area designated for Light Industrial uses, northwest of the Highway Industrial area by I-495 and Andover Street, and between the Light Industrial area between East and North Streets and property that belongs to Tewksbury State Hospital. Permitted uses might include townhouse and multi-family residences, small professional or medical offices, business and personal service establishments. These areas need further study and time to build neighborhood consensus as to the boundaries and permitted uses for special overlay districts that should be developed in the future.

Wamesit Commercial Area. Existing development and traffic patterns suggest that the area along Route 38 adjacent to the I-495 interchange should remain designated for traditional highway commercial uses: larger regional retail establishments in stand-alone or “power-center” shopping areas. Tewksbury should establish special design guidelines and site plan standards for development in these areas in order to provide a more attractive point of entry to the town, control for environmental impacts, and improve pedestrian safety.

Gateway (Mixed-Use) Area. Route 38 needs a transition zone from highway and regionally oriented commercial uses at the I-495 interchange to land use that has a more local and neighborhood character, with more traditional signage and greater attention to aesthetics. Toward that end, Tewksbury should consider a “gateway” area, one that provides the public with a more welcoming sense of arrival to the Town Center. As conceptually proposed, the Gateway Area begins near the intersection of Main Street and Pike Street and extending southeasterly to the vicinity of Marshall Street and Erlin Avenue. A wide selection of retail uses and personal services would be permitted, but big-box development and large-scale retail and regional shopping would be discouraged through the use of density and dimensional requirements and floor area limits. Flexible design standards could be crafted to further shape the form and function of this area.

Town Center. The Town Center surrounds the Town Hall, the library, and other older school and building sites. As presented in the Land Use Concept Plan, the Town Center begins at the Gateway Area and extends southeasterly on Route 38, incorporating a portion of North and Pleasant Streets and terminating just beyond the Route 38/Chandler Street intersection. This area’s main objective is to promote a sense of place by creating an identifiable village center with pedestrian activities, traditional building form, mixed uses, and greater coherence of architectural treatment and design. For example, future design guidelines should foster and encourage:

- Traditional building form
- Subordination of parking in relation to buildings
- New standards of signage and overall aesthetics
- High quality landscaping and pedestrian amenities
- On-site lighting in traditional and pedestrian scale
- An improved "sense of entry" to the Town Center
- Protection of older buildings that contribute to the Town Center's image.

Tewksbury could implement the Land Use Concept Plan’s proposed Town Center Area by establishing a special zoning district with new design standards and special use regulations. Permitted uses within the district could include municipal, office, small retail and a mix of residential uses, designed to be compact and representative of a traditional village scale and form.

When properties are re-developed, parking areas could be encouraged to be located to the side and rear of properties, and be subordinated in relation to building form. Landscape treatments should reinforce the vocabulary of civic uses characteristic of a traditional town or village center. To enhance village-style development, the town may need to consider a number of public improvements, including ornamental lighting, landscaping, and village-style street furniture. These improvements should be part of a long-range capital plan for the Town Center, one that is developed with ample input from residents and local businesses.

Shawsheen Area. The Shawsheen Area shown on the Land Use Concept Map begins north of the intersection of Main Street and Salem Street, and extends northwesterly to the intersection of Main Street and Colonial Drive. The objective of this area is to foster high-quality commercial development that serves residents of the town and surrounding neighborhoods. A wide selection of retail uses and personal services are envisioned. Large box stores and large-scale retail and regional shopping would be discouraged through the use of density and dimensional requirements (including floor area limits) that would be carefully tailored to the district objectives. Flexible design standards could be crafted to further shape the form and function of this area. Incentives could be provided to encourage improved signage, building design, curb-cut consolidation, and landscape treatments.

South Tewksbury Area. The Land Use Concept Plan identifies the South Tewksbury Area as the segment of Route 28 that runs from the Wilmington town line northwesterly to the beginning of the Shawsheen Area. The objective of this area is to encourage local businesses that serve surrounding neighborhoods. Much like the Shawsheen Area, the South Tewksbury Area is envisioned as a local shopping area with small, pedestrian-oriented retail and service centers. Here, the town's zoning should allow a wide selection of retail uses and personal services while discouraging big-box stores and large-scale retail and regional shopping through density and dimensional requirements and maximum floor area limits. Small grocery stores, delicatessens, dry cleaning establishments, gift stores and general retail in small- to medium-scale buildings.

Much like the Shawsheen District, the South Tewksbury District needs incentives to encourage improved signage, building design, curb-cut consolidation, and landscape treatments. As these shops will likely (and should) attract pedestrian traffic, site design guidelines should identify appropriate building layout, site configuration, and required pedestrian facilities. Design guidelines must address setback requirements, sidewalks, curb cuts and other aesthetic guidelines, including design and signage standards to promote attractive development. Some public investment may be required to maximize the economic potential of these areas, such as streetscape improvements or public/shared parking facilities.

Mixed-Use Planned Development. The Mixed-Use Planned Development Area applies to one location on the Land Use Concept Map, an area presently zoned for "Heavy Industry" on East Street. This area needs special attention because it is a key gateway location into the community for traffic entering from the Dascomb Road/I-93 interchange in Andover. Tewksbury should encourage a mix of retail, office, service and multi-family residential uses in order to maximize the area's market appeal to investors, but rigorous site plan, architectural design, signage and landscaping standards are a must for all development that occurs in this area. The same standards should govern development that occurs in a recently created "Highway Services Overlay District," which was adopted by town meeting as work on the new Master plan was coming to a close.

Office-Research Areas. Areas for Office/Research are intended to provide designated zones for high-value office developments and similar uses. Office-research development generally requires that

land be reserved for these uses, i.e., by discouraging a wide variety of other commercial or industrial uses in close proximity. The Office-Research areas shown on the Land Use Concept Map include several parcels northwest of the I-495 and Route 38 interchange, and land presently zoned for “Heavy Industry” in the southwest corner of town, near Billerica.³ In these areas, allowed uses should be limited to office buildings, research laboratories and similar facilities. Industrial and other commercial uses should be prohibited except for small-scale retail and service establishments as accessory uses that serve employees in the Office-Research areas: restaurants, coffee shops, dry cleaners, and similar businesses. Generous landscaped buffers should be provided to shield the residents from the visual impacts associated with the office development.

Light Industrial Areas. These areas include land in Tewksbury’s existing HI district but in close proximity to residential property. A range of light industrial and professional uses should be encouraged, subject to extensive landscaping and buffer requirements. Owing to existing development in these areas, the town should allow the continuation and limited expansion of businesses such as distribution, warehousing, and manufacturing facilities and utilities because the retention of these businesses will allow Tewksbury to retain economic diversity and balance. Transitional districts between light industrial and predominantly residential neighborhoods must be factored into any plan for the Light Industrial Areas. In addition, the town should adopt and enforce performance standards to minimize negative impacts associated with noise, air pollution, and traffic that might be generated by development in the Light Industrial Areas. As referenced above, eco-industrial uses should be considered, particularly those that produce or develop natural food or other environmentally friendly products. Major retail development and regional shopping centers should not be allowed.

Natural, Cultural and Open Space Resources

Wetlands & wildlife habitat. Wetlands perform several important functions that contribute to a community’s ecological health. G.L. 131 Section 40, the Wetlands Protection Act, provides significant protection for wetlands in Massachusetts, but many cities and towns supplement it with local wetland regulations in order to exercise greater local control over the review of projects proposed in or near wetland resource areas. Although Tewksbury has a local wetlands bylaw, some of its provisions are weak or ambiguous and there needs to be consistent enforcement.

Functioning habitats and ecosystems depend on large, contiguous areas of undeveloped land. In fragmented landscapes, many indigenous species are no longer able to find adequate habitat and ecosystem functions (such as groundwater and surface water flow) become impaired. An effective natural resource protection plan should preserve undeveloped areas that represent the full range of natural habitats occurring within a town, and these areas should be connected with natural corridors. The Master plan promotes such objectives by designating areas that are most important for plant and wildlife habitat. Development may continue to occur in or adjacent to some of these areas, but Tewksbury’s zoning and other policies should work to minimize impacts on natural communities. For example, open space in cluster developments should be designed to preserve parcels with the best habitat value and forge connections with adjacent open space. Cluster open space that consists of leftover scraps of land, unusable for humans or wildlife, should be discouraged.

³ See also, Economic Development Element.

Tewksbury needs to take a stronger, multi-faceted approach to protecting wetland resources and wildlife habitat. The Master plan recommends three regulatory measures:

- Adopt a Wetlands and Riparian Corridor Overlay Zoning District, the proposed boundaries of which are illustrated on Natural & Cultural Resources Map 5.
- In the Wetlands and Riparian Corridor District, the Conservation Commission should use its power under the Wetland Bylaw to require conservation restrictions when issuing an Order of Conditions for work in or near a wetland resource area.
- Remove the Great Swamp from the Heavy Industrial District and reclassify it as land in the proposed Open Space and Public Use District. For additional protection, industrial land abutting the Great Swamp should be subject to more stringent open space and landscape buffer requirements than would normally be applied to industrial development elsewhere in town.

Without companion actions, protecting land from development is not an adequate strategy to assure that the land will continue to function as habitat for native plants and wildlife. Owing to pollution, soil and hydrological disturbances, the species composition in many wetlands throughout the state has been altered by invasive species. Tewksbury could promote ecologically sound land management by taking several steps, such as:

- Develop and implement management plans for municipal property and conservation areas in order to maximize their value for native plant and wildlife species.
- Work with local volunteers to monitor invasive species on Tewksbury's open space and develop eradication plans where appropriate. The DPW and volunteers should remove invasive species along pond shores and plant native vegetation.
- Promote wildlife movement by minimizing fencing in conservation areas, particularly where adjacent open space parcels abut one another, and by providing for the preservation of uninterrupted wildlife habitat.

Water resources and open space. Natural buffers around surface water bodies are effective barriers against pollutants that might otherwise enter the water from surface runoff or groundwater discharge. Vegetated buffers absorb nitrogen and phosphorous pollution, neutralize organic and hydrocarbon chemicals, and detain sediment and the heavy metals that often adhere to it. The Massachusetts Rivers Protection Act is a powerful environmental law that restricts development within 200 feet of any perennial river or stream. If properly enforced by the Conservation Commission, the Rivers Protection Act will ensure adequate buffering around Tewksbury's perennial streams.

For ponds and intermittent streams that are not protected by the Rivers Protection Act, Tewksbury needs to focus on establishing and enhancing natural land buffers. This is particularly important for seasonal drainage channels that fill with water during major storms when sediment and pollutant loads are large. The protection of land around intermittent streams should be explicitly identified as a performance standard for residential and non-residential development.

Nonpoint source pollution (or polluted runoff) comes from many sources, mainly human activity and sometimes from natural landscapes. Common human activities like clearing and fertilizing land, controlling pests, salting and sanding roads, disposing of household and automotive cleaners, and failing septic systems cause persistent pollutants to accumulate in the environment.

Tewksbury's planned extension of sewer service throughout the town may help to improve water

quality in its streams, rivers and ponds. However, surface water resources and wetlands will remain vulnerable to runoff from roadways, a condition that argues for an assessment of local highway maintenance policies. Since nonpoint source pollution is diffuse, an effective control program usually requires several coordinated strategies that involve a cross-section of the community, including homeowners. Tewksbury should consider the following actions to address nonpoint source pollution:

- Site design. The town's subdivision regulations and cluster bylaw should promote layouts that minimize impervious surfaces such as roadways and driveways, and retention of natural vegetation. Lawns generate a significantly higher runoff rate and pollutant load than do perennial plantings, natural vegetative cover and undisturbed forests.
- Environmental management practices. Roadway maintenance and management have a significant effect on water quality. The Town's DPW, Conservation Commission and MassHighway should collectively assess their current programs for road de-icing, street sweeping and maintenance of roadway drainage facilities, and identify opportunities to reduce the impact of road management on water quality.
- Public education. Since nonpoint source pollution results primarily from many small, individual actions, public education is essential to the success of any water resource protection strategy. Tewksbury should work to increase the knowledge base of residents and local businesses, pointing out ways that individuals can help to protect and improve the quality of their town's water resources. For example, informational brochures on topics such as the proper use and maintenance of septic systems, low-impact lawn and garden care, and information for homeowners about how to protect wetlands on their property might be distributed with water bills or made available on the town's web site. In addition, the school department could compete for EPA curriculum development grants to develop an environmental science program on nonpoint source pollution. Many suburban school districts in Massachusetts have used EPA environmental education grants to amplify their middle- and high-school science curricula, sponsor local "Earth Day" and science fair events, and build resident capacity to protect land and water resources.
- Special protection areas. Tewksbury needs to rezone environmentally sensitive areas in order to assure that they are not developed in a way that will exacerbate pollution loads. The town has already has important erosion control regulations in place, but in some locations the zoning is inappropriate from the standpoint of wetlands and water resource protection, notably the Great Swamp.

Tewksbury has several ponds that will benefit from greater attention to surrounding open space, improved public access and increased community awareness. Ames, Long, Round and Mud Ponds are important public amenities and significant natural resources. The Master plan promotes several actions, including:

- Assign responsibility to the Conservation Officer and/or the Recreation Department for annual pond inspections, organizing shoreline clean-ups and sign posting.
- Encourage high schools students, scout troops, neighborhood associations and other groups to adopt a pond as part of a community service project.

- Take tax title properties along pond shores and rivers to create public access points, picnic areas and non-motorized boat access.
- Develop management plans for town-owned open space, providing for a range of allowed public uses, including seasonal restrictions and fees, maintenance of trees and vegetation, and maintenance of trails, trash removal and sign posting.

Groundwater resources. Tewksbury should consider replacing its Groundwater Protection Overlay District with an Aquifer Protection Overlay District (APOD) that includes all medium and high yield aquifer resources in the town.⁴ The proposed district is shown on Natural & Cultural Resources Map 6. In any APOD area, the town should pursue low-intensity land uses, maintain existing open space holdings and acquire new open space wherever possible. Where non-residential uses already exist within a designated APOD area, Tewksbury should adopt and apply protective guidelines to any redevelopment or significant expansion of uses on a site.

Sutton Brook Disposal Area. Tewksbury should continue to work with EPA Region 1, DEP and town counsel to determine the town's liability at Sutton Brook Disposal Area. After the town's liability status is resolved, the Community Development Office should investigate submitting a joint application with the Town of Wilmington to the EPA for a Superfund Redevelopment Project pilot grant to develop a reuse plan that is coordinated with site clean-up.

Historic buildings, sites, landmarks and roadways. Despite the knowledge that exists locally, Tewksbury does not have many policies in place to protect its cultural assets. Significantly, Tewksbury Hospital is the only site listed on the National Register of Historic Places, Tewksbury clearly has many eligible sites and collections of sites. The town has taken an important step by adopting a demolition delay bylaw, but on its own, demolition delay has limited value as a strategy to protect important buildings. The Master plan recommends several coordinated actions to increase Tewksbury's capacity to preserve historic resources:

- Apply for and match Survey and Planning Grants from the Massachusetts Historical Commission (MHC) to complete historic property inventories in the town center, and prepare nominations for eligible properties to the National Register of Historic Places.
- Survey additional areas along Andover, Chandler and Shawsheen Streets where there are collections of historic buildings, and in South Tewksbury.
- Consider establishing a local historic district in the town center, and neighborhood conservation districts in other areas of town where there are noteworthy historic property collections.
- Establish a program to negotiate preservation restrictions with property owners who want to protect their historic homes or commercial buildings.
- Use the Scenic Roads Act to designate several of the town's character-defining streets as scenic roads.

⁴ Since the town currently does not rely on groundwater for public drinking water, DEP could decommission the town's Zone II areas and the Groundwater Protection Overlay District's legal purpose will be diminished. Establishing an Aquifer Protection Overlay District that covers all of the town's medium and high yield aquifers would change the statement of purpose in the zoning bylaw from controlling activities in a Zone II area to controlling activities that affect any significant groundwater resource.

Resource inventories. Tewksbury has a considerable amount of resource information, but not in a form suitable for nominating buildings, sites or landmarks for listing on the National or State Registers. Periodically, the Massachusetts Historical Commission offers Survey and Planning Grants so that cities and towns can undertake the basic tasks of historic preservation: preparing National Register nominations, creating local historic districts, planning special preservation projects, and conducting public education. Since the state's grants require a local match, Tewksbury will need to provide some financial support for preservation activities.

It is important to point out that listing on the National Register does not protect buildings from inappropriate alteration or demolition. However, it is a threshold for eligibility to use special tax incentives (investment tax credits) to finance the cost of historic preservation. It also triggers a heightened review process for properties affected by a federally or state-assisted project. In addition, listing on the National Register automatically qualifies properties for listing on the State Register of Historic Places. Listing on the State Register enables owners of historically significant properties to qualify for phased increases in the assessed value of their homes when they invest in a significant restoration project, assuming the town adopts the enabling legislation for this purpose (Chapter 191, Acts of 1996). Coupled with demolition delay and zoning incentives to preserve buildings that are ineligible for investment tax credits, National Register status is a crucial preservation tool. It will also be crucial if the town wants to compete for a Preservation Projects Fund grant to preserve town hall.

Preservation areas. A local historic district created under G.L. c.40C is the most powerful historic preservation tool in Massachusetts. Communities often resist creating local historic districts because residents think the controls are excessive and unduly burdensome on private property owners. In fact, the most commonly cited concern – regulating the color of exterior paint – is exempt under local district guidelines in many cities and towns. By law, a local historic district consists of one or more properties. As a result, communities may place an isolated, historically significant property under the protective umbrella of a local historic district. Since Tewksbury has significant buildings scattered throughout the town, a single-property district may be a very important preservation tool. An accurate, complete inventory is essential to the study process and to the endorsement required from MHC for a local historic district to be adopted by town meeting.

Scenic resources. Tewksbury has a frame of older roadways that define the visual character of the town. Under the Massachusetts Scenic Roads Act, G.L. c.40 Section 15C, Tewksbury can designate these streets as scenic roads and gain additional review power for the Planning Board over activity that affects significant trees and stone walls. The town should consider placing Andover Street, Trull Road, Whipple Road, Pleasant Street, Chandler Street, North Street, Kendall Road, Fiske Street, Pinnacle Street, East Street, Shawsheen Street, South Street and Foster Road under the protective umbrella of the Scenic Roads Act.

Preservation restrictions. Much like a conservation restriction to protect open space from being developed, the owner of a historically significant building may agree to a restriction that protects its historic architectural features from inappropriate alteration. This type of strategy is classified as voluntary preservation. The building owner conveys a preservation easement to a non-profit organization, such as a local historical society, which in turn gains the right to review and approve changes to the building, enforce the terms of the easement, and compel the owner to address violations (if any). The owner may use the value of the preservation easement, or the decrease in the building's market value as a result of the design restrictions (as determined by a qualified appraiser), as a charitable deduction against federally taxable income. The Tewksbury historical commission

should consider developing a voluntary preservation program, particularly if the town finds it impossible to establish regulatory controls.

Tewksbury Hospital. Tewksbury should continue to work with state government to assure that the town's interests are considered in the event of a disposition process at Tewksbury Hospital. The town needs to emphasize not only the property's own space value, but also its historic architectural significance. Redevelopment and reuse of historic buildings on the site should give due regard to the cultural importance of these structures.

Local capacity. Through the Department of Community Development, Tewksbury should provide or arrange for resource protection training workshops for members of town boards and commissions. It is very difficult for local officials to carry out their review and permitting responsibilities without a structure to coordinate their efforts. Clear, updated resource maps, periodic forums to review proposed zoning changes, and training in policies and regulations proposed in the Master plan would help volunteers successfully implement their charge.

Housing and Economic Development

Housing

Housing preservation. Tewksbury is a mature suburb with many "hidden assets" for affordable housing – both Chapter 40B and so-called "below-market" housing. The town needs to preserve the affordability and suitability of these units for moderate- and middle-income homebuyers in the future. Preservation strategies are difficult to implement and they require dedicated community involvement. However, capitalizing on the established base of development is more prudent than encouraging new construction wherever possible, including for the creation of permanently affordable, decent housing.

Mixed-use development. Consistent with the Land Use Concept Plan, the Housing Element recommends that Tewksbury allow mixed residential and commercial development on portions of Route 38. The town presently allows over-55 units throughout the Commercial District, but to induce redevelopment and higher property values, Tewksbury should provide more flexibility to developers to build units that respond to market demand. The town could consider setting a maximum percentage of total floor area for residential uses and limiting the allowed residential use to multi-family housing. To assure that units integrate well within a mixed-use development, Tewksbury should adopt guidelines that permit some freestanding multi-family units as long as housing units are also located above the ground floor of a commercial facility.

It is important to remember that "mixed use" requires a different approach to site planning than commercial-only uses. Mixed-use developments must provide safe, efficient access for businesses and simultaneously be designed for resident livability. They should be seen as integral features of neighborhood development – as opportunities to connect land, buildings and urban open space over a larger area for the betterment of those who live and work in Tewksbury.

Local housing capacity. Tewksbury should establish an Office of Neighborhood Development under the Department of Community Development. The department may be funded by a combination of local revenue, grant administration resources, a percentage of revenues generated by inclusionary housing developments (see below), the Community Preservation Act if Tewksbury were to adopt the necessary enabling legislation, and filing and review fees paid by residential developers. The town will need to establish a corresponding special revenue fund, most likely by home rule petition, to dedicate these and other potential revenue sources to office's operating

expenditures. The purposes of establishing an Office of Neighborhood Development are several, including adequate local capacity for the following functions:

- To coordinate the development review process for affordable housing, whether by comprehensive permit or permits issued under the zoning bylaw.
- To provide technical assistance to and negotiate with housing developers in order to leverage as many public benefits as possible for the town. “Public benefits” include but are not limited to Chapter 40B-eligible housing units, conventional (unrestricted) multi-family and townhouse units, special housing for senior citizens and persons with disabilities, housing units included in mixed-use developments, housing units created to make historic preservation economically feasible, or the provision of parks, playgrounds and neighborhood facilities in new residential development.
- To apply for, receive and expend federal or state grants for housing preservation and development and to administer other housing finance resources obtained by the town.
- To support, coordinate and facilitate the work of several town agencies with roles in housing development, e.g., the Housing Partnership Committee, the Planning Board, and the Zoning Board of Appeals.
- To coordinate housing development undertaken by the proposed Economic Development and Industrial Corporation (EDIC), as described below.
- To design, administer and evaluate local housing policies and development initiatives undertaken by the town.
- To represent Tewksbury’s housing interests to state agencies and housing or public policy organizations that influence state policy.
- To monitor existing affordable housing deed restrictions and prevent loss of existing affordable ownership and rental units.

Inclusionary zoning. In 2002, Tewksbury amended the Zoning Bylaw to add “inclusionary zoning” regulations for the MF and MF-55 Districts. This important step may help to increase the supply of units that qualify for listing on the Chapter 40B inventory, though the actual number of units produced may not be as high as local officials hoped when the bylaw was prepared. Most of the town’s remaining developable residential land is in the R District. The Master plan recommends that Tewksbury extend its new inclusionary zoning bylaw to single-family home development anywhere in the R district.

Zoning incentives. The town will benefit from the following additional regulatory techniques to diversify its housing stock:

- An overlay zoning district that permits townhouse and multi-family housing in select locations. The district should be applied on a case-by-case basis subject to a favorable recommendation by the Planning Board to town meeting, much like a “floating” zone. Its regulations should address one or more local objectives, such as housing affordability, elderly units and assisted living communities, or small units for young citizens and couples, while requiring high quality, usable open space and adherence to rigorous design standards.
- Modifications to Tewksbury’s existing “family suite” regulations to allow accessory apartments as of right, subject to an affordable housing deed restriction that applies when non-family members occupy the accessory dwelling unit.

- Modifications to Tewksbury’s zoning bylaw to allow single-family to multi-family conversions, up to three units as of right and more than three by special permit, subject to an affordable housing deed restriction on 25% of total development units.

Local initiatives. Chapter 40B regulations create opportunities for cities and towns to develop programs that produce “local initiative” housing. Toward these ends, Tewksbury should take the following actions:

- Create a local non-profit development corporation, such as an Economic Development and Industrial Corporation (EDIC) by special act of the legislature.
- Obtain resources from the HOME Investment Partnership Program or CDBG to acquire, renovate and sell or rent existing homes to lower-income households. If Tewksbury were adopt CPA, revenue from surcharges on property tax bills could be used to support similar types of housing programs.
- Develop group homes for persons with disabilities.

Managing Chapter 40B. Local officials throughout Massachusetts see Chapter 40B as a threat and to some extent they are right. Chapter 40B promotes a regionally equitable distribution of low-income housing across the state. It authorizes a form of streamlined permitting (the comprehensive permit) and assumes that housing needs outweigh other local needs when less than 10% of a community’s housing stock is affordable to low-income households. Accordingly, Chapter 40B supersedes zoning and other requirements that make low-income housing development uneconomic.

Comprehensive permits will remain the primary vehicle for affordable housing development in most communities. Tewksbury would benefit from instituting two devices to manage the use of comprehensive permits: a comprehensive permit policy adopted by the Board of Selectmen or Planning Board, and a plan for the development and management of affordable housing. Tewksbury has already adopted Zoning Board of Appeals (ZBA) guidelines for comprehensive permits, an important “first step” toward managing the comprehensive permit process. However, comprehensive permit procedural guidelines do not substitute for a local housing policy: a statement of housing needs, local preferences and development performance standards. Tewksbury should take three steps:

1. Adopt a comprehensive permit policy. Chapter 40B creates opportunities for negotiated development, a process that differs significantly from conventional permitting. A comprehensive permit policy helps to establish the framework for community-developer negotiations. Local officials need to be equally clear about negotiable and non-negotiable considerations, and to manage Chapter 40B effectively, town boards should not work at cross-purposes.
2. Prepare and adopt an affordable housing development and management plan. A local affordable housing plan focuses on locally defined housing needs, not state-defined housing needs. The town’s interests will be served best by a local housing plan that generates 15-20 low-income units per year, or about 15% of Tewksbury’s average annual building permit activity over the past seven years. Tewksbury should emphasize developments that address three evident housing needs: rental housing for family households, rental housing for senior citizens, and homeownership units for young citizens and couples, e.g., “starter” homes.
3. Identify Chapter 40B-eligible units. Some of the town’s existing housing units may qualify for listing on the Subsidized Housing Inventory but have not been added to it, either because the town is unaware of them or state agencies have not done an adequate analysis of the town’s

housing stock. Tewksbury should submit a written request to DHCD and the Department of Public Health to determine whether any residential units at Tewksbury Hospital qualify under Chapter 40B regulations that went into effect in December 2002.

Economic Development

Local economic development capacity. Tewksbury should have a community-based organization to assist the town with economic development policy and bring new resources into town to stabilize and strengthen the economy. The most common models include an economic development council (EDC), an industrial development commission (IDC) or an economic development and industrial corporation (EDIC). Possibly, Tewksbury's interests would be better served by working through established regional organizations than by creating its own economic development agency, municipal or non-profit.

Redevelopment and reuse of underutilized or vacant property. Tewksbury needs incentives to revitalize and improve the taxable value of established commercial and industrial areas, particularly land along Route 38 and the industrial district on Woburn Street. High-quality companies in an expansion mode favor sites in attractive, accessible, well-maintained business and industrial areas because developing new facilities is a major investment. Tewksbury cannot control all of the factors that influence corporate siting decisions, but the town's ability to attract and retain profitable firms will be affected, in part, by the image of its existing business districts.

The Master plan's land use element describes regulatory approaches to promote reuse, but convincing developers to invest in established sites is much harder than recruiting business development on vacant land. Sometimes communities have to create disincentives to develop vacant parcels – mainly by down-zoning or re-zoning – in order to focus commercial and industrial investment in established but underutilized areas. Tewksbury may need help from outside economic development organizations and state agencies, and the town should tailor its business outreach to current industry and business trends, both regionally and statewide.

A town center for Tewksbury. Tewksbury will benefit immeasurably from having a town center that provides a civic and cultural focal point for the entire community. Many of the ingredients of a traditional town center exist in Tewksbury, but the town will never have a functional center without suitable zoning, community development and transportation policies, and capital investment. Tewksbury should create a town center committee to spearhead the planning process, taking care to include residents, owners and tenants of commercial property, and representatives of community institutions with a potential stake in the outcome: banks, realtors, developers, the school department, police and other town departments, local churches, and the town's historical commission.

Transportation

Four principles guide the Master plan's transportation element and they appear as recurring themes in each of the plan's major recommendations. The principles include:

- Integration of land use and transportation planning. By locating residential neighborhoods, schools, shopping areas and workplaces in close proximity to one another, and by allowing appropriate mixed-use development, Tewksbury can reduce the need for vehicular travel to conduct one's daily activities. Areas appropriate for more compact, mixed-use development would include the town center and designated nodes along and adjacent to Route 38.

- Corridor access management. Tewksbury needs a comprehensive approach to corridor access management, notably along Route 38. Land use, transportation and public safety strategies must be integrated in order to provide safe, efficient access to property, improve traffic flow and safety, and enhance the town's visual image. At the very least, Tewksbury should require all new developments to minimize curb cuts and provide internal circulation and adequate access points, thereby minimizing traffic impacts on adjacent roads.
- Transportation demand management. Tewksbury's commercial and industrial establishments employ more than 17,000 people, of which about 16% are residents of the town. Large companies bring tax revenue to the community, but they also bring traffic. Tewksbury needs to explore transportation demand management (TDM) strategies that encourage or require alternatives to travel by single-occupancy vehicles. The feasibility of better public transportation service, ride-sharing, walking and biking should be investigated with local employers, perhaps through the aegis of a local economic development council or development corporation.
- Traffic calming. The concept of "traffic calming" includes a range of strategies to slow down traffic, reduce the use of local roads for through traffic, and improve pedestrian safety.

Throughout the Master plan process, several transportation-related issues frequently surfaced in Tewksbury: the volume of traffic and congestion along Route 38, traffic (and land use) conflicts on East Street, inadequate sidewalks, and the role of gateways in conveying Tewksbury's image and shaping driver behavior within the community. Tewksbury needs to address the following transportation issues:

Route 38 "Main Street." The completion of NMCOC's Route 38 corridor study will most likely mean that Tewksbury has to choose one or more preferred methods to improve traffic operations on Main Street. Toward that end, the town should apply several criteria to the options available for review, working to achieve consistency with the Master plan:

- Adopt a comprehensive approach to corridor access management. Give preference to solutions that limit points of vehicular access and vehicular conflict and encourage alternative modes of travel.
- Where appropriate, give preference to traffic calming techniques that have been used effectively on arterial roadways, e.g., medians and localized roadway narrowing at key intersections and pedestrian crossing points.
- Avoid transportation improvements that come at the expense of community or neighborhood quality of life.
- Encourage a walkable, attractive town center in the general vicinity of Main, Pleasant and East Streets, emphasizing traditional village development, pedestrian accessibility, and aesthetics.
- Promote safe and efficient traffic movement by controlling the amount, location and spacing of curb cuts, and coordinate the same with designated left-turn lanes.

At the level of local regulations and policies, Tewksbury should implement the following recommendations:

- Amend the zoning bylaw to include site design standards that promote coordinated access to development along Route 38, and tailor these standards to the unique needs of each proposed commercial/mixed-use district in the Land Use Policy Plan.

- Amend the zoning bylaw to include site design standards that encourage travel patterns across property lines between adjacent commercial parcels.
- Adopt a general bylaw that governs all curb cut review, including upon changes in tenancy.
- Review existing parking requirements and consider reducing them, including the introduction of maximum parking standards for uses such as “big box” or “power center” developments. Excess parking creates an incentive to drive, and there is ample visual evidence that many commercial areas along Route 38 have far more parking than they need.
- Adopt incentives to subordinate parking to commercial buildings. Although many commercial establishments prefer to place parking lots in front of buildings for visibility to customers, even “big box” and large national chains can be persuaded to locate parking in more aesthetically pleasing ways. For example, the Old Navy store shown in Fig. 4 is separated from the street by a sidewalk system along an arterial roadway, with parking located in the rear. Tewksbury needs to consider the ways in which land use regulations, transportation and access policies come together to create a safe, livable community.

Sidewalks. Tewksbury officials and residents are already aware of the town’s need for safe, accessible sidewalks, particularly in areas with higher population densities and concentrated business activity. The existing “Phase 1” sidewalks plan should be funded and implemented, and the town should take the following additional steps:

- Incorporate the existing five-year plan by reference into the Master plan.
- Authorize the Sidewalks Committee to undertake Phase 2 of the sidewalk plan.
- Incorporate proposed sidewalk improvements into the town’s five-year capital improvement plan.
- Require consistency with official sidewalk improvements plans by incorporating them by reference in the zoning bylaw.
- Require installation of sidewalks or multi-user paths and trails in other locations, in conformance with the Planning Board’s subdivision rules and regulations.

East Street. The land use and traffic conflicts that exist on East Street are complicated and entrenched by investments that have been made over a long period of time. The proposed installation of traffic signals at key intersections will help to improve general traffic operations, but ultimately the problems on East Street will require additional transportation-related and land use policies. The town should pursue the following recommendations:

- Change the zoning on East Street by replacing portions of the existing industrial district with a planned mixed-use development district and a transitional district to provide better separation between industrial and residential areas.
- Supplement traditional density and dimensional controls with performance standards for non-residential development, focusing on environmental, noise and traffic standards to reduce conflicts between industrial and residential land uses.
- Work with larger industrial, commercial and other establishments to institute transportation demand management (TDM) for employees commuting to facilities on East Street.
- Acquire land for development of a buffer zone between residential and industrial areas.
- Acquire additional East Street right-of-way when available for pedestrian and bicycle access.

- Develop an enforcement plan for ensuring compliance with local health, safety and land use codes as they apply to industrial uses in the area.
- Work closely with NMCOG to secure East Street improvements through the TIP process.

Transportation Demand Management (TDM). Tewksbury should work closely with developers and owners of large commercial and industrial developments to encourage (or require) alternatives to single-occupancy vehicles as a means of employee transport. Though fairly new in Massachusetts transportation planning policy, TDM is widely used in other parts of the country. Its purpose is to achieve more efficient traffic operations on established roadways by reducing vehicle trips instead of making significant, costly capital improvements. TDM also encourages “live near work” situations in which residents may walk, bike, or have a very short commute to their workplace. In this regard, it is consistent with other Master plan recommendations that promote mixed-use development.

Tewksbury needs to evaluate the appropriateness of requiring TDM as a condition of approving new non-residential development. Since TDM involves many techniques, the town should offer a menu of compliance possibilities to developers and new business establishments, such as transit, carpool and ride-sharing incentives, and appropriately maintained bicycle facilities.

Traffic calming. A practice that originated in Europe, traffic calming has gained credence in American transportation circles and is widely used throughout the western states, the Midwest and in Maryland, New Jersey and New York. Traffic calming includes simple, low-cost ways to address a variety of traffic problems – speed, volume, pedestrian-vehicular conflicts – but even the more expensive traffic calming techniques rarely cost as much as conventional roadway improvements such as widening to increase capacity. Most of the national and international applications of traffic calming have occurred on local and collector roadways in central business districts, urban areas and suburban neighborhoods, but they have also been used on arterial roads that carry traffic volumes comparable to Route 38. At least two areas in Tewksbury would benefit from traffic calming measures and they should be invested, possibly with technical assistance from NMCOG. The areas include:

- Whipple Road. A long residential street that carries a considerable amount of cut-through traffic, Whipple Road serves a number of subdivisions with dead-end or cul-de-sac roads, mainly west of Pleasant Street. Traffic calming measures to improve pedestrian safety should be considered at critical locations such as the Whipple road intersections with Marston, Rogers and French Streets, and from the Whipple Road-Pond Street intersection southward along Pond Street.
- East Street. While installing traffic signals at key intersections on East Street may result in safety improvements, East Street has some unique characteristics that go beyond the oft-cited residential-industrial conflicts. Specifically, it has extended stretches of unvaried land use due to the presence of some larger parcels and notably, the land associated with Tewksbury Hospital. As East Street progresses toward the center of town, it serves or provides indirect access to a number of civic or public uses: the Livingston Street recreation area, the town’s senior center and a cemetery. Traffic-calming strategies to reduce traffic speed and increase driver awareness of pedestrians between Maple Street and the four-way intersection on Main Street would be very appropriate in this area, and they would also enhance East Street’s function as a gateway to the town center.

Gateways. Tewksbury residents and local officials have expressed a desire to improve the appearance, function and operation of gateway areas into the community. In planning terms,

gateways include specific points of entry, such as a town line or a major highway interchange, and sections of roadways that lead to a recognized destination or landmark, such as a town center. By these standards, Tewksbury has several primary and secondary gateway areas that would benefit from transportation management policies:

Primary Gateways	Secondary Gateways
I-495/Rte. 133 (Andover Street) interchange	Whipple Road (Lowell line)
I-495/Rte. 38 (Main Street) interchange	Shawsheen Street (Billerica line)
Route 38, Wilmington line	Trull Road/Andover Street area
Route 38, Lowell line	
East St., Andover line	
Approaches to town center: East Street (from Maple Street), North Street (from railroad right-of-way) and Main Street (from Pike to Marshall Streets to the west, and from Chandler Street to the east).	

Effective gateway planning should include business leaders, public safety and public works officials, gateway neighborhood residents, local professionals with specific skills and experience, e.g., marketing, advertising, education, historic preservation, landscape architecture or urban design, and representatives of community organizations that could contribute to a gateway plan's implementation. Tewksbury needs to establish a gateway planning committee to examine each of the above-listed locations, focusing on the primary gateways first. The committee's charge should center on traffic management, directional and other public signage, landscaping and design standards. In addition, the planning process should include not only consultation with local residents, but also residents and officials of neighboring communities.

Community Facilities and Services

Capital planning: structure and process. Tewksbury should revise its capital improvements plan process in order to increase access to decision-making and strengthen public understanding of the relationship between community facilities and the operations they house. The town would establish and institute a capital planning process with four features:

- Define acceptable levels of service and building/facility standards. The acceptable levels of service would form the basis for indicators of facility adequacy or improvement needs, and guide a system of ranking and prioritizing town and school facility projects.
- Set criteria to guide financing decisions. In addition to need indicators, capital project criteria might include competitiveness factors such as population served, number of employees affected by a project, likelihood of leveraging other funds, or a project's capacity to meet multiple objectives of the town. They should also include debt capacity thresholds such as a maximum for net debt per capita and debt service as a percent of general fund revenue, and standards to distinguish general fund from non-general fund projects.

- Identify non-local sources of revenue. For example, town hall renovations may be eligible for a historic preservation grant, a very-low-interest loan from the National Trust for Historic Preservation, or CDBG funds to help pay for architectural barrier removal. In some cases, the scheduling of projects that qualify for non-local revenue sources may need to be adjusted to reflect application deadlines.
- Integrate school and municipal space needs.

Toward this end, the town should adopt a capital improvements plan bylaw that authorizes a capital planning committee to review and rank each year's project requests, make recommendations to town meeting, and assist with long-range planning and financing policies. The committee's review and ranking process should be open and participatory, enlisting other local officials affected by the CIP to advise and reach agreement about the town's short- and long-range priorities. A process such as this will help to improve communication among town boards and increase consensus about Tewksbury's most important capital priorities.

Town buildings study. Tewksbury has not conducted a comprehensive review of its municipal buildings in many years. Like most communities, Tewksbury seems to handle extraordinary maintenance and repairs when deferring them is no longer an option. The town clearly needs to invest in town hall improvements, a project that will likely be expensive due to the building's historic significance, deteriorating condition and space inadequacies. Tewksbury should retain a qualified architect to conduct a comprehensive building inventory, space needs study and code analysis, including recommendations and a capital plan for preferred options.

Asset management. A standing public assets committee with advisory and oversight responsibility for planning, extraordinary maintenance and repair, and construction of public facilities may be very useful in Tewksbury because it would bring sustained attention to the town's building improvement needs. It makes sense to charge the same group with responsibility for advising the town on facilities that are obsolete for their original purpose and cannot reasonably be altered to serve other public purposes today. From time to time, Tewksbury has sold town-owned land or buildings that were deemed to be surplus property. In at least two cases, the dispositions have been controversial and they shed light on the need for a better process to identify and dispose of municipal assets. A committee that can evaluate all town property and advise the Selectmen and Town Manager, following an appropriate public review and comment process, could help Tewksbury reach broad agreement within the community about the long-term use of town buildings and land. The committee should establish criteria not only for identifying land and facilities to retain and those to be declared surplus, but also for choosing reuse options for property the town decides to sell or lease for private development. In addition, a public review process that includes residents, boards, committees and town departments in designating developers would also provide citizens with more control over the outcome of disposition decisions. Land retained for permanent open space should be transferred to and managed by the Conservation Commission.