



Strategic Plan for Needham Center

Small Town New England, not Anytown USA

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Table of Contents

- 1- Acknowledgements**
 - 2- Executive Summary**
 - 3- Introduction**
 - 4- Barriers To Implementation**
 - 5- Target Areas**
 - 6- Implementation Strategy**
 - 7- Conclusion**
 - 8- Appendices**
-

1- Acknowledgements

We would like to acknowledge those individuals who have lent us their time and expertise to make this plan a success.

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2- Executive Summary

This plan articulates Needham's vision for its town center and demonstrates the steps necessary to achieve it. The community's vision for the study area is of a vibrant destination offering diverse recreational and retail amenities in addition to many new housing options. Though competent plans and guidance documents have been generated, a separation exists between planning and action in the town. An analysis of the existing conditions determined that several key barriers cause this disconnect and hinders planning efforts. We believe that addressing these barriers and building on the town's previous body of work is the best way to effect meaningful change. We feel it is important for the town to form strategic alliances and work in partnership to achieve common goals and efficiently allocate scarce resources. In sum, this plan will lay out practical strategies and techniques for revitalizing Needham center.

Our Needham Center Plan provides implementation strategies for revitalization and overcoming the barriers to change. The plan is structured around six target areas. Target areas are clusters of integrated issues bound by a common theme. These themes include: 1) sense of place; 2) affordable housing; 3) streetscape and built form; 4) traffic; 5) parking; and 6) retail. We developed a range of recommendations for each target area that apply to the short, middle, and long term. Finally, we present redevelopment proposals for two sites, the Needham Center Commuter Lot and the YMCA Block. Redeveloping these sites could be pivotal to Needham Center's revitalization as catalysts to further change and private reinvestment.

The principle barriers are summarized below:

Zoning. Existing regulations support a car-oriented, low density land use. This development pattern has fragmented the urban fabric in the study area, contributed to the town's affordability problem and stifled the creation of diverse housing.

Implementation Strategy

Barriers to Planning

2- Executive Summary

Parking. The majority of parking lots are private, leading to a lack of publicly available parking for residents and shoppers.

Fiscal Reality. The usual sources for capital projects are largely unavailable. The town's ability to float municipal bonds is effectively capped and annual appropriations for public works projects continue to decrease.

Regional retail competition. The area is saturated with retail business. Needham Center business district is a small, community-oriented retail district that currently does not attract comparison shopping from adjacent centers.

Target Areas:

An introductory discussion of target areas and recommendations follow:

Sense of Place

Needham Center's Sense of Place quickly dissolves as one travels even a single block from the town center. Through changes in zoning that would allow densification and a return to historical building heights, better definition of the town center using signs, and an increase in artistic landmarks such as fountains, benches, and sculptures, Needham Center's "sense of place" may be readily enhanced.

Affordable Housing

Demographic trends are moving Needham toward economic homogeneity and greater affluence. The town's population is becoming unbalanced. Needham is also losing economic diversity. Nearly half of its households earn \$100,000 or more, twice that of just a decade ago. Add to this a medium home price of \$527,000, and you quickly realize that the typical citizen can no longer afford housing here. Adding incentives to zoning, creating overlay districts and making simple text amendments can increase the stock of multi-family and affordable housing. These zoning changes are necessary for Needham to make up its deficit of 633 affordable housing units.

Streetscape and Built Environment

Needham center has a strong visual anchor in the historic town hall and green. However, the historic typology does not extend much beyond the center business district. The study area as a whole lacks definition and a clear articulation of boundaries. The Chestnut Street business corridor is an automobile-oriented environment. Its streetscape is comprised of disjointed sidewalks caused by curb cuts that provide access to numerous independent private parking lots. Parking in the Center and Chestnut Street business districts covers the area of 21 football fields. With some creative zoning changes regarding setbacks, design review, and density, Needham Center's aesthetic quality and pedestrian environment can be greatly improved.

2- Executive Summary

Parking is a contentious issue in Needham. While small business owners and consumers feel that there is not enough, careful analysis shows that there is not a lack of absolute parking spots but a lack of public parking. Making existing parking more efficient, adding on-street parking, and building a parking structure will all assist with the supply problem. Many of the undeveloped parcels in the town center are used for parking; thus, in order for any meaningful redevelopment plans to move forward there, the parking problem must be addressed in concert.

Parking and Traffic

Needham is at a geographic disadvantage to its neighbors as a shopping destination. Needham may never become a retail destination, however there is potential to increase the retail mix and make Needham Center a vibrant retail community. A retail gap analysis shows deficiencies in the entertainment, apparel, and food sectors. Additionally, revising zoning to allow more entertainment and light industrial/ manufacturing uses would enhance the diversity and marketability of the retail mix. Finally, adding housing to the center will increase demand and make Needham more attractive to potential retailers.

Retail Competetion

Needham Center is already an inviting and interesting town center. Our recommendations for change in the Needham Center and Chestnut Street Business Districts will help address some of the problems Needham faces regarding affordable housing and pedestrian safety. Other recommendations are focused on revitalizing Needham Center's aesthetics, economic vibrancy, and streetscape. Comprehensively, the changes discussed in this plan have the potential to affect every member of the community, and dramatically improve the quality of life for the citizens of Needham.

Conclusion

3- Introduction

Project Overview

The town of Needham is a suburban community located 10 miles southwest of Boston, MA and is served by route 128 and a commuter rail line. It is bordered on two sides by the Charles River. The study area is comprised of the Needham Town Center and Chestnut Street Business Districts. Both areas are key to the economic and social activity of the town.

The purpose of this study was to involve citizens, business interests and municipal and state agencies in a focused and prioritized planning effort for the revitalization of downtown Needham. This strategic plan will illustrate and dissect existing barriers to revitalization and offer planning tools and implementation strategies to facilitate change.

The town has undertaken planning studies and produced guidance documents in the past, however the desired intentions have not been fully realized. Political, physical, economic and even legal barriers have dissuaded redevelopment and limited planning efforts. The study area continues to be an area of concern for town officials, local business owners and residents alike.

The resolve that will be required for the Town of Needham to achieve its vision extends far beyond the timeline of this proposal. Nonetheless, this project is a way to: 1) build community momentum behind future redevelopment; 2) reassess community desires; 3) demonstrate that Needham Center has great potential to be a vibrant, mixed-use destination and community asset; and 4) present realistic tools and strategies for success.

The collaboration with graduate students from MIT's Department Of Urban Studies and Planning has provided an opportunity for Needham's planning department to direct the town's collective

Contents:

- **Project Overview**
- **Narrative Vision**

Project Goals:

- **Build community support for action**
- **Reassess community desires**
- **Demonstrate Needham Center's potential**
- **Present realistic planning strategies**

3- Introduction

attention towards the Needham Center and the Chestnut Street Business Districts. The project team assembled for this planning study consists of five MIT students with guidance and support from MIT professor Terry Szold and Needham's Planning Director, Lee Newman.

Terry Szold is Adjunct Associate Professor of Land Use Planning in the City Design and Development group at MIT's Department of Urban Studies and Planning. Terry Szold is a land use planning consultant with more than 20 years of experience in the municipal planning and zoning arena. She is the founding principal of Community Planning Solutions (CPS), based in Andover, Massachusetts. She received her Master's Degree in Regional Planning from the University of Massachusetts at Amherst, and an undergraduate degree from Bard College in New York.

Ursula Hester is a second year Master in City Planning student at Massachusetts Institute of Technology. Before discovering planning she studied and worked in business administration and marketing in both her home country of Germany and the United States. At MIT she is focusing her studies on sustainable transportation and land use planning.

Raymond Hodges is a second year Master in City Planning student at Massachusetts Institute of Technology. He has a background in environmental psychology. At MIT he is focusing on ways in which urban physical planning and design affect housing provisions and whether residents are satisfied with this housing.

David Masenten is a second year Master in City Planning student at Massachusetts Institute of Technology. He has extensive experience in retail, residential and office space architecture from design to project management. While at MIT, he is concentrating in Urban Design and policy.

David Ritchay is a second year Master in City Planning student at Massachusetts Institute of Technology. He has extensive experience in residential construction, from carpentry to project management; while at MIT he is studying affordable housing development, real estate and land use management.

Eric Simonton is a candidate in the Master's of Science in Real Estate Development program at the Massachusetts Institute of Technology. His previous experience is in construction management. After MIT, he hopes to pursue a career in real estate development, focusing on brownfield and infill redevelopment.

Narrative Vision

Leanne emerged from her doorway into the pleasant pedestrian way nestled between two buildings typical of Needham's town center. The smell of fresh coffee and warm bagels sifting out from beneath Not Your Average Joe's awning caught her attention, and she checked her watch to make sure she had time for a quick stop. Peering through the glass storefront on the opposite side of the shop, Leanne could see the sun warming the town common and the leaves waving in the breeze beginning to present the bright oranges and yellows characteristic of autumn in New England.

Leanne left the shop and stepped back into the pedestrian way just as her husband, Saul, closed the door to their stairway with their 3-year-old daughter, Dannika, in his opposite arm. Saul and Dannika were headed to the day-care center on the first floor of their building before Saul would walk to the high school where he worked as an aid. Two-and-a-half stories of rental apartments rose above the center's space reflecting the historic building typology of late 19th century Needham complete with peaked roofs, wood paneled exterior, and large glass storefronts on the first floor. The couple had moved into a two bedroom unit five months before Dannika was born. The apartment was quite affordably priced given its proximity to transit and its desirable location along the pedestrian way just one hundred feet from the town common and the convenience provided by the commerce surrounding it.

After quick kisses to Saul and Dannika, Leanne strolled past the restaurants and shops lining the pedestrian way and emerged onto Chapel Street. The common looked beautiful in September's bright sunshine and was surprisingly active for a Friday morning. She recognized two families who lived in other apartments above stores facing the common. She wished for that evening when her family would meet another couple who lived in nearby Wellesley for a picnic in the common. They would surely not be the only folks picnicking at the Needham High School band's yearly fall performance in front of the town hall, nor would they be the only group to stroll through stores and grab a bite to eat afterward.

Leanne's walk down Chestnut Street was much more pleasant these days than she remembered it being when she first moved back to Needham almost four years earlier. New businesses were popping up along the street, and they were addressing the widened sidewalks creating an interesting environment protected not only by the three and four story buildings, but also by a new line of Chestnut Trees planted along the street. Her best friend from high school, who was also moving back to Needham, was having trouble deciding between a new apartment atop one of the Chestnut Street businesses and a cute accessory unit above a garage next to a large old



3- Introduction

home on Warren Street, three blocks east of Chestnut.

Before boarding the commuter train bound for Boston and her job downtown, Leanne stopped at the YMCA for a quick morning swim. During her workout, she thought about the numerous changes that had taken place since she left for college. Leanne loved the new look of Needham's town center and the Chestnut Street area. In many ways she thought, the environment was actually more similar to that of Needham in 1900 as described to her years ago by her great-grandfather, and it felt appropriate. It also seemed to be becoming somewhat of a destination for shoppers partly because of the new businesses opening in the area, but also because of the attractive setting through which pedestrians were invited to stroll. As she boarded the commuter train at the improved Needham Junction station, Leanne smiled knowing Dannika would grow up in a community that would fully support the diverse needs of her family.

4- Barriers to Implementation

Existing Conditions: Barriers to Revitalization

The town of Needham and its residents have spent a lot of time and energy thinking about the town center. Quality plans, policies and guidance documents have been produced and implemented. However there is a disconnect between the plans and their desired results. Our analysis concludes that a combination of barriers to implementation is responsible for this disconnect.

These barriers can be grouped into five categories:

Land Use Regulations

Current zoning supports a car-oriented, low density environment in Needham Center. This has lead to the development of a fragmented urban fabric characterized by large swaths of parking and inefficient development of the town center. In addition, present restrictions leave little room for multi-family units, especially at affordable costs. This inability to provide housing is one reason for the quickly-rising price of housing in the rest of Needham.

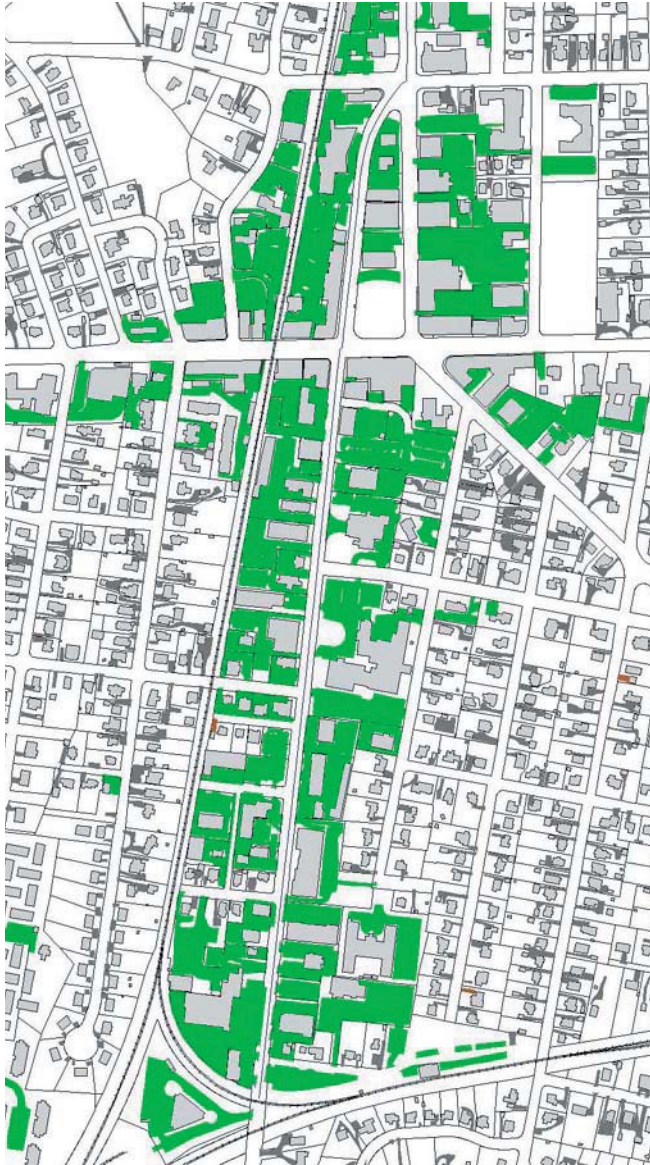
Regional Retail Competition

Needham Center is a small community-oriented center, which competes directly with larger community centers in Newton and Wellesley as well as regional and super-regional malls in Chestnut Hill and Natick. Given the competition, it is unable to attract comparison shopping or draw many non-residents to downtown Needham.



Chestnut Street

4- Barriers to Implementation



Parking within the study area: green

Parking

The amount of land dedicated to parking in the study areas is roughly equivalent to twenty-one football fields. While parking in Needham center and Highland business district is sufficient, it needs to become more efficient. The abundance of parking lots interrupts the urban fabric and detracts from the pedestrian experience. Furthermore, current parking arrangements are inefficient. However, as long as residents and retailers insist upon high parking ratios, parking will always be a major barrier to redevelopment and change.

Fiscal Reality

Revitalization requires public funds, which in many cases is then followed by increased private investment. In Needham, the usual sources are largely unavailable because of their limited ability to float bonds, and the current trend of decreasing annual appropriations for public projects.

Resistance to change

Needham is already a great place to live. “Why fix something that ain’t broken?” is a valid question. We believe that Needham could be even better and that a direction set now could ensure and increase the quality of life in Needham as it goes through changes in time.

5- Target Areas

Sense of Place

Existing Conditions

Needham's Town Center is highlighted by an historic town hall and common which appear together on the National Register of Historic Places. These are the recognizable features of the district, and one reason residents love the town of Needham. Unfortunately, much of the built form that surrounds these landmarks does not invoke the same feeling because it does not match the historic form that the area once displayed. During the town center's heyday in the late 1800s and early 1900s, many beautifully designed buildings stood within a block of the town hall at two-and-a-half, three, and even four story heights. Examples are the Moseley Block, Odd Fellow's Block and the Kingsbury Block, all 3 1/2 story buildings that once lined the streets around the town common. Historic photos of Needham show that intricate buildings taller than one and two stories are not unfamiliar to the area. In fact, the one story buildings that occupy so much of the land within a block of the town hall and common today must have looked quite out of place to Needham residents when they first began to appear.

The development of what would become Needham's town center began with the arrival of the Charles River Railroad in 1853. A new town center was located near this site when the town split in 1881 and the previous town hall was located on land that became part of Wellesley. Needham town center underwent a second development boom beginning in 1901 with the construction of new town hall and a shift in the town economic base from agriculture to cottage industry.

The town's first zoning map was produced in 1925, and although many zoning districts have been added, few alterations have been made to those original districts. In fact, the town center

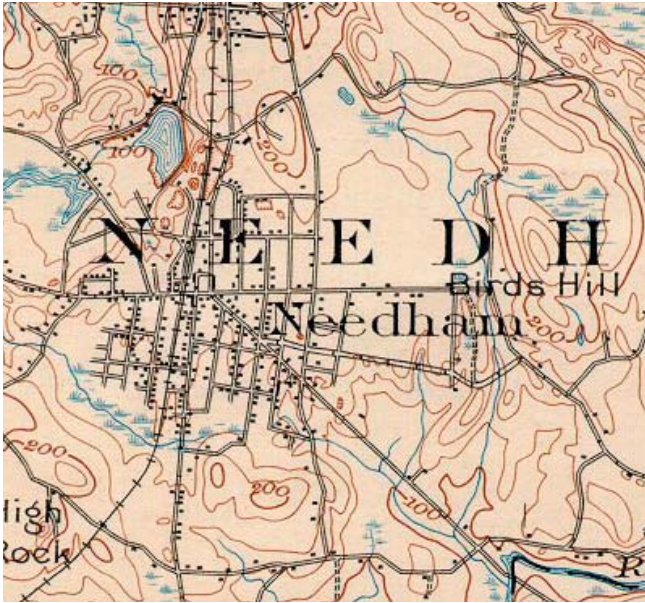
Contents:

- **Sense of Place**
- **Affordable Housing**
- **Streetscape and Built Form**
- **Traffic**
- **Parking**
- **Retail**



5- Target Areas

Sense of Place



Establishing a strong sense of place is critical to revitalization



zoning district is virtually unchanged from its original designation on the 1925 map.

Opportunities for Improvement

While the town center zoning district has not changed much, the underlying regulations and requirements have. The zoning regulations have contributed to the gradual erosion of the districts historic charm and scale. New changes made today will affect the built form of Needham tomorrow. Since the development of a town is a slow process that takes years to mature, it is critical to take positive actions now.

Many benefits will come from changing zoning to reflect historic densities within the town center. It will re-establish Needham's unique sense of place: its historic, small town New England character that is still embodied in the town hall and common. Establishing a strong sense of place is critical to revitalization because it will make the town center a destination and draw visitors.

To realize these benefits and facilitate a desirable sense of place, we suggest the following recommendations:

Recommendation: Revise the zoning for Needham Center to allow historical densities and building heights.

Recommendation: Revise the zoning for Needham Center to allow historic architectural details that add less than 10 feet of height to a building. These elements should be disregarded in building height calculations. Such details can include parapets, cupolas and pitched roofs.

Recommendation: Revise the zoning for Needham Center to provide easily achievable height bonus incentives for developers who agree to construct buildings that reflect Needham's historic aesthetics. Such buildings should be allowed to be built higher than the 2½ story limit. Revise zoning to include the following standards:

For 3 full stories:

- *Provide housing in floors 2 and 3.*
- or*
- *Present historic aesthetic.*

For 3½ stories:

5- Target Areas

Affordable Housing

- *Housing must be provided in floors 2, 3, and 3½, 20% of which must be affordable.*

For 4 full stories:

- *Housing must be provided in floors 2, 3, and 4, 20% of which must be affordable.*
and
- *Historic aesthetic must be presented.*

Affordable Housing

Existing Conditions

With a stable population of 29,000, Needham fits the profile of a typical New England town. Some changing demographic trends are particularly noteworthy, such as a significant increase in the number of households, a high median household income, rapidly rising property values, and an unbalanced age distribution.

The age distribution in Needham shows an older than average population of seniors and baby boomers and a below average population of generation X and Y.

Needham's median income is significantly above the regional average. The average household income was \$88,079 in 2000, a jump from \$60,357 in 1990. In addition, 44.6% of households in town have incomes higher than \$100,000, compared to 21.6% in 1990. This rising trend has reduced Needham's affordability and affected the town's demographic composition by diminishing ethnic and economic diversity. The lack of affordable and mid-range housing options helps explain the low representation of 20 – 35 year olds despite the proximity of several colleges and the commuter rail line.

Needham's housing affordability problem is witnessed by the following indicators:

- An income of \$51,560 is necessary to rent at the median fair market rent of \$1289. 25% of Needham residents cannot afford this rent.
- An income of \$160,000 is necessary to support a mortgage to buy the average priced home of \$527,000 (Banker & Tradesman, July 2003).



Mosley block: historical density imposed on existing conditions

Rising property values are pricing out long-term residents

5- Target Areas

Affordable Housing

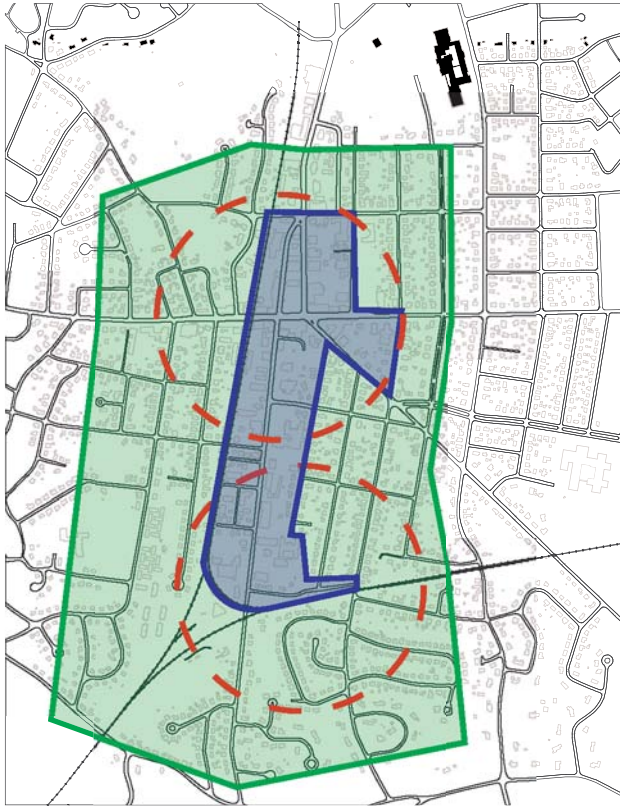


Exhibit 1

Blue: Primary Overlay
Green: Secondary Overlay
Red: 10 minute walk

Increasing housing opportunities in Needham Center

- Out of 589 building permits approved for new units between 1990 and 2002, only 30 were 2+ family units, approximately 5.1% of the total.
- Extensive single-family zoning: 98% of undeveloped land and 90% of developed land is zoned single-family.
- The maximum possible build-out under current zoning allows for only 30 multi-family units.
- Needham would need to add 663 affordable units to comply with the state's 10% affordability threshold.

Opportunities for Improvement

Needham's zoning ordinances offer few tools to increase the number of housing units in the town.

Recommendation: Revise the zoning ordinances to allow up to four floors of development within each of the two business districts. This is an ideal location for housing and would bring more activity and potential customers to the CBD.

Recommendation: Allow residential use on upper levels in the Town Center by right. Currently, zoning for the Center Business District allows apartments on the second story of structures by special permit, but limits the building height to 2½ floors. Zoning should reflect the desire to configure buildings this way by fully allowing such development, rather than requiring a special permit.

Recommendation: Add an overlay district to allow for increased density and compact development patterns appropriate to the size of the lot. The degree of compactness will be determined on a sliding scale depending on the size of the lot, so the larger the lot the higher the allowable density. This density schedule will be as-of-right in the primary overlay over the study area and by special permit in the secondary overlay over the surrounding residential zones. Please refer to Exhibit 1.

Recommendation: Revise the residential use schedule to allow conversions and accessory units.

Needham lacks ample affordable housing. Current zoning by-laws do little to encourage its development.

5- Target Areas

Affordable Housing

Recommendation: Allow higher density for housing developments that have an affordability component of 20%. This zoning change is applicable to the study area as-of-right and the adjoining residential zones by Special Permit. Site plan and design review are required for proposed development.

Recommendation: Create an inclusionary provision. This would be applicable to any new multi-family buildings and subdivisions. An Inclusionary provision would require that any residential development equal to or over a specified threshold number of dwelling units must include additional affordable units in perpetuity.

- *Suggested trigger threshold: 5 units*
- *20% affordable component*
- *Bonus: density adjustment for every affordable unit an additional market rate unit can also be built*

Example:

Original # of Units	Affordability Component	Affordable Units	Market Rate Unit Match	Total Units	Density Adjustment
10	20%	2	2	14	40%

Recommendation: Create a linkage-type fee that would be charged to any development or redevelopment that contributes to Needham's housing affordability problem. This would apply to the construction of any house over 3500sf or the construction of an addition to an existing house that would increase the gross square footage of the dwelling to 3500sf or greater. The owner would pay a percentage (1/2 to 1%) of the project's cost into an affordable housing trust fund.

Affordable housing mandates



Accessory Apartment

5- Target Areas

Streetscape/Built Form



Streetscape/Built Form

Existing Conditions

Providing the town of Needham a strong identity will only occur through gradual stages of intervention. To generate the excitement necessary to propel future projects, the town should begin with small interventions that have significant impacts on the entire community.

Needham Center has a strong visual anchor in the historic town hall and green. These are the symbols of the town, and should be the primary focal point for civic activity. Unfortunately, this civic center only influences a small zone around the central business district. While the surrounding area is not unpleasant in appearance, it lacks boundaries and the character of the town green. When entering Needham Center from Great Plain Avenue, Highland Avenue or Chestnut Street, it is difficult to identify where the town begins or what area bounds the town center. The town center island, highlighted by a gas station on the northern tip, is one of the key gateways into the city, as many people enter from Interstate 95. This intersection does not continue the visual language of the town green a block to the south, nor does it provide clear direction for oncoming traffic. As the primary gateway into the town center, this intersection requires specific attention at the outset of any central business district street improvements.

Chestnut Street has become an automobile-oriented environment. Near Great Plain Avenue and Needham Center, the built form is a continuation of the design standards of the central business district. However, within one block of Great Plain Avenue, the built environment erodes. From this point south to Needham Junction, the streetscape on Chestnut Street is characterized by a series of setback strip-malls which are strongly oriented to automobiles. This “pedestrian unfriendliness” is reinforced by disjointed sidewalks that are continuously broken by numerous curb cuts, required by each business’ privatized parking lot. At certain locations, the sidewalk is eliminated altogether and replaced with a sloped asphalt ramp.

One of the primary impediments to upgrading this condition is that a large stretch of Chestnut remains a State-maintained highway. Chestnut Street also lacks appropriate landscaping, which can provide separation between vehicles and pedestrians, shielding the numerous parking lots that line the roadway. The proliferation of parking lots adds to the visual perception of setbacks, making the street appear wider than it is, reducing the number of buildings along the roadway, and creating a barren, un-landscaped 'yard' that becomes the primary focal point of the buildings they serve. The majority of parking lots do not contain any landscape amenities that would help mitigate their unpleasant appearance.

5- Target Areas

Streetscape/Built Form

Opportunities for improvement

The appearance of buildings varies throughout the central business district. The design guidelines specifically stipulate standards for new construction in chapter 1, Buildings and Facades. Exhibit 2 shows those buildings that generally comply with the standards (blue), those that appear to have integrated some of the standards (orange) and those that are not in compliance with the standards (red). Existing buildings could be retrofitted in future renovations with an extended parapet, elevating the facades slightly above the first floor level. This is similar to some of the buildings shown on page 11 of the design guidelines.

Recommendation: Limit exemptions within the individual building review process to ensure that these design guidelines are met. Apply design guidelines to existing buildings if the owner renovates their property at a value equal to or greater than 25% of its assessed value. Building facade guidelines should stipulate that one floor buildings in the central business district that renovate their facades must increase their parapet height. These changes will ensure that non-compliant buildings that decide to expand or make large interior renovations will be upgraded to the standards the planning department has set. This will not only increase the valuation of the owners building, but will also increase the property values within the area as a whole.

One of the key components of giving a street a strong sense of place is a unified street front, created by the faces of surrounding buildings. Seventy percent of the buildings in the town center front directly on the street that serves them. In comparison, only 41% of the buildings do on Chestnut Street where a 20-foot setback is currently required for new construction. Buildings on Chestnut Street have side yard setback requirements that create wide "alleys" between each building. In contrast, buildings in the town center are built to the lot lines on three sides in many cases. Many of the parcels on Chestnut are not much larger than those in the town center, but the building's location on the lot change the character of the area dramatically. The city design guidelines briefly deal with this issue on page 9, section 1.1.

Recommendation: Revise the zoning laws on Chestnut to bring buildings to the sidewalk edge and fill the alleys between buildings. Remove all setback and side walk requirements, institute lot coverage restrictions of 50% in the Chestnut Street district and 75% in the center business district.

The use of Pylon signs is prevalent in both the center business district and on Chestnut Street. These signs emphasize the large setbacks, dwarf surrounding signage, and detract from the

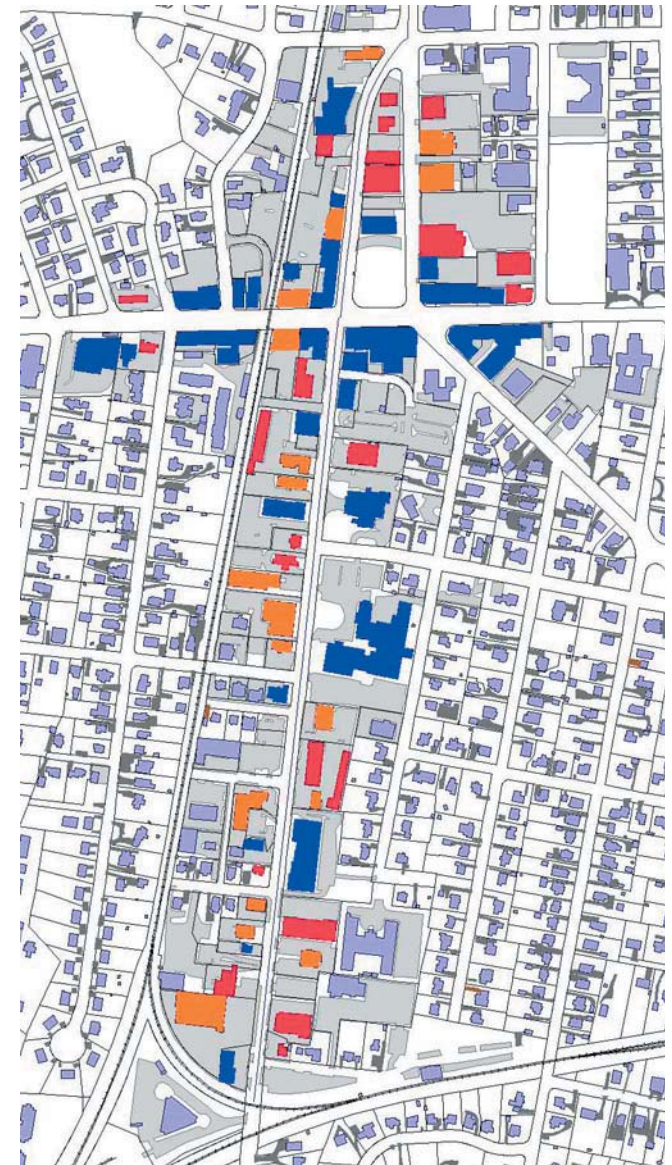


Exhibit 2

5- Target Areas

Streetscape/Built Form

Building on Needham's historic image

small-town appeal that Needham desires.

Recommendation: Eliminate the use of pylon signs through zoning and design guidelines.

Needham has very unique features around which a stronger image can be built. The town green, town hall and town green cupola are visible throughout much of the study area. It is a site with historical significance, and provides a strong visual image commanding attention from afar. One of these elements may be an effective image to use on signage at the gateways of the central business district, as well as various town improvements in the future.

Recommendation: Use the cupola, town hall, or town green as a symbol of Needham Center that will tie in and enclose the area.



On the same theme, the center business district boundaries need to be highlighted to create a sense of place and enclosure. This is recommended on page one, paragraph 3 of the city design guidelines with respect to architecture. While buildings may be a more long-term solution, smaller interventions may create this sense immediately.

Recommendation: Simple interventions such as signs, plaques, or brick pillars on each side of the roadway at the center business district entrances will make this transition a noticeable gateway. By using the unifying town symbol recommended above, these signs would have continuity as well as speak to the towns history and its greatest asset.

To reinforce that the town center is a special place and to increase pedestrian safety and comfort, the streets around town hall could be enhanced with several traffic calming improvements. The results would be increased access to the town common and surrounding businesses and improved character of the town center area.

Recommendation: Provide raised intersections at the three main center business district gateways. Extend the main town hall island, as well as the Great Plain Avenue sidewalk at Highland Avenue to clarify intersections, provide more public green space and make pedestrian crossing safer (see exhibit 3 and 4).

Great Plain Avenue and Chestnut Street are wide streets that are difficult to cross and

5- Target Areas

Traffic

unpleasant to walk along as there is little protection from fast moving traffic. Along Chestnut Street sidewalks are patched together and disappear near Needham Junction due to numerous curb cuts, the elimination of the curb altogether and the use of asphalt. Street parking is only available close to the town center.

Recommendations: Widen the sidewalks on Great Plain and provide sidewalk bump-outs at crosswalks. Add street parking to Chestnut Street and create sidewalks with new curbs.

While many of the parking lots are behind the buildings, they do not share common driveways, leading to a proliferation of curb cuts, especially along Chestnut Street. In some cases, these driveways are next to one another, only separated by a built-up asphalt curb.

Recommendation: If shared driveways could be incorporated into the plan, the width and number of curb cuts could be limited, creating a more contiguous sidewalk, improving the pedestrian environment.

Lighting and benches within the town center--particularly around the town green--can create a strong sense of connection and place. The city design guidelines have included these amenities on page 47 and 54 respectively. They also outline trash receptacles, bike racks and other street furniture. Many of these amenities can only go in if the sidewalks are widened to allow for them.

Recommendation: Provide benches and trash containers as stipulated in the city design guidelines.

Traffic

Existing Conditions

While the main arteries going through Needham Center carry fairly large volumes of traffic, there is no serious traffic congestion in Needham. The busiest stretch of Highland Avenue falls north of the study area where a daily volume of 11,815 vehicles southbound and 5,729 vehicles northbound were observed, with a notable peak of over 1,000 vehicles/hour during lunch time. Both Chestnut Street and Great Plain Ave. carry between 13,500 and 14,600 vehicles per day with the highest hourly volumes observed being just over 400/hour. Highland Avenue below May Street is less busy than Chapel Street.

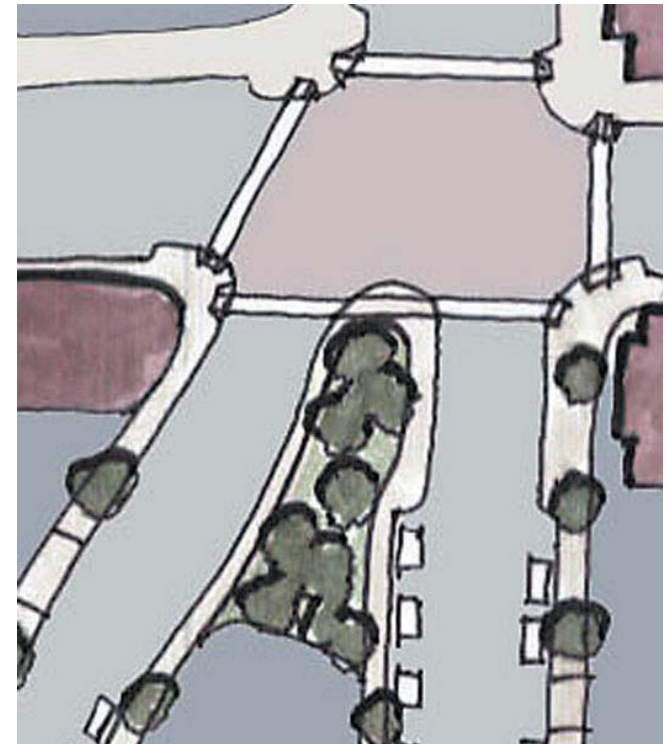


Exhibit 3: The Northern Gateway

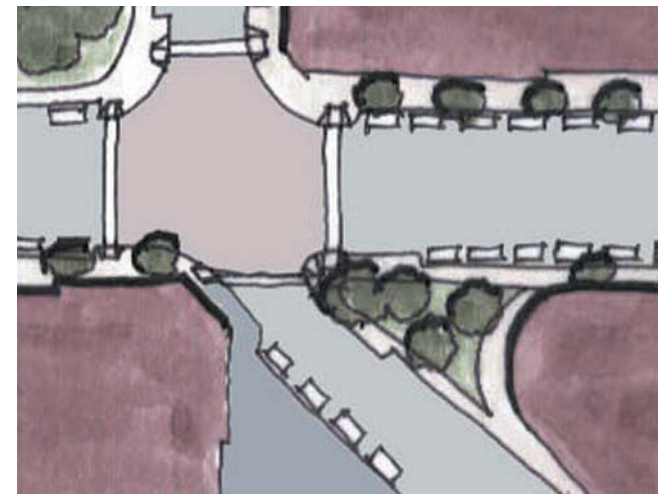


Exhibit 4: Great Plain and Highland Avenue

5- Target Areas

Traffic



Improving signage and lane markings

Traffic entering the town center from the north on Highland Avenue travels at speeds that are not conducive to a safe pedestrian environment. While the northern gateway intersection slows the vehicles through signaling, this intersection causes confusion for some, and does little to slow local traffic.

Chestnut Street is wide, with varying levels of road markings. At points, it is unclear whether Chestnut is a two-lane or four-lane roadway. There are no crosswalks south of Great Plain Avenue, reinforcing the notion that this is a vehicular thoroughway, not a pedestrian walkway. There are no traffic lights, allowing cars to treat the road as a highway.

Exclusive pedestrian signal phases stop the traffic for approximately 20 seconds every 2 minutes at the intersections of Great Plain Ave. with Highland/Dedham Street and Chapel/Chestnut Street. The long pedestrian wait and short pedestrian crossing periods lead to frequent jaywalking, which effectively reduces the safety of pedestrians and drivers.

Opportunities for Improvement

Since many users of Needham's roads are only passing through the town center to reach other destinations, comprehensive traffic solutions must be viewed within the context of the regional road network. However, since traffic congestion was not identified as a major problem at this time and the scope of this plan is limited to the town center, our recommendations focus on creating an environment in which pedestrians are safe and comfortable without adding delays to drivers.

The lane markings throughout the central business district and Chestnut Street make the area difficult to navigate for both vehicles and pedestrians. This conflict creates increased danger and confusion that can be changed with improved lane markings.

Recommendation: Improve lane markings, particularly on Great Plain Ave. to avoid confusion and clearly delineate the driver's space. Provide a left turn lane for drivers turning from Chapel Street into the Highland/May intersection.

Signage is sparse throughout the study area. By incorporating a new signage program, the town will become easier to navigate for those not familiar with the area, while providing a strong sense of place for all who pass through.

Recommendation: Improve signage to direct drivers and pedestrians to public parking lots;

5- Target Areas

Parking

create a “sense of place” by indicating the arrival into Needham Center; and facilitate easy travel through Needham Center through the use of clear road signs.

In coordination with traffic control, the adjoining pedestrian areas should be upgraded to clearly delineate the automobile and pedestrian environments.

Recommendation: Incorporate the Streetscape improvements discussed later in this report under built environment and sense of place. These include improvements such as wider sidewalks, bulb-outs and raised intersections.

While exclusive pedestrian walk periods might be perceived as pedestrian friendly, they actually delay both pedestrians and cars significantly. As mentioned in the 1987 traffic study by VHB, a switch to concurrent pedestrian phase with vehicular traffic could cut vehicle delays by 6 – 19 seconds. In addition, it would significantly reduce the time pedestrians have to wait for a safe crossing (maximum wait time is currently 2 minutes at Chapel/Chestnut and Great Plain, with concurrent crossing the maximum wait time would be less than one minute). Even a diagonal crossing (in two steps under the proposed system) would effectively take less time than under the current system. This change would promote pedestrian movement, while positively impacting vehicular flow. Our suggested streetscape changes (discussed in the Streetscape and Built Form section of this report) will ensure safer crossings by reducing the potential for conflict between pedestrians and vehicles (achieved through bulb-outs, which make pedestrian more visible to drivers and decrease the crossing distance; and raised intersections, which signal to drivers that they are entering pedestrian turf).

Recommendation: Remove exclusive pedestrian signal cycles within the town center.

Parking

Existing Conditions

In absolute numbers, Needham does not lack parking spots, however, since most parking is privately-owned, there is a lack of conveniently located *free, public* parking. Under current conditions, additional development in the town center has the potential, if poorly managed, to worsen the situation.

Improving pedestrian and vehicular circulation



5- Target Areas

Parking



One of the primary problems with Needham's parking arrangements is the high percentage of privatized lots. With few exceptions, all of the parking is owned and controlled by individual businesses or strip malls and dedicated solely to the customers of those establishments. Many of these lots have separate street entrances, lie directly adjacent to one another, and some remain almost entirely empty most of the day. Since many are exclusive, a great deal of area in each parking lot must be set aside for circulation and street access. This inefficient use of space results in an unusually large overall space necessary to accommodate the required number of spaces. The current situation is proliferated by the high minimum parking requirements dictated by the zoning code, which forces building developers to dedicate a large percentage of the lot to parking. In considering the number of smaller parcels, especially in the central business district, these parking requirements create a clear restraint on any development.

Street parking is available and highly utilized in the town center. In some cases, street parking can provide closer access to local businesses than parking lots located behind buildings. Street parking is not available on Chestnut Street, adding to the increased parking needs of retailers in this area.

An apparent conflict exists between MBTA commuter parking at Needham Center and town center visitors and residents. Needham's commuter parking lots are estimated to be at 90% capacity with most of the available capacity at Needham Heights (source: Central Transportation Planning Staff). The data below suggests that Needham Center commuters may be parking on-street in surrounding residential areas or in public and private lots not dedicated to commuter parking, which reduces the amount of parking available for shoppers and residents. While this is highly speculative it warrants further research and analysis.

Station	Parking Spots	Passengers/day
Needham Center	36	466
Needham Junction	175	542
Needham Heights	243	447

Sources: MBTA Web Site and National Railroad Passenger Corporation Commuter Rail Audit (2003)

Opportunities for Improvement

In the short term, many opportunities exist to increase the parking supply with very little capital

5- Target Areas Parking

investment. This can be achieved through rearranging of existing parking, creating incentives to share parking, parking pricing and enforcement. In the long-term, there will be a need to provide at least one parking structure to accommodate increasing parking needs due to new developments.

There are opportunities to increase parking capacity in the town center area with little visual impact and added safety benefits for pedestrians. Doing so would help make parking in the town easier without adverse effects on the town's historic sense of place.

Recommendation: Add on-street parking wherever possible. Work with Mass Highway to add on-street parking to the length of Chestnut Street in all feasible locations. This could add a minimum of 50 spots and provide pedestrian protection from travel lanes.

Pricing of parking at commuter rail stops can be used to direct commuters who park at packed MBTA lots (like the Needham Center stop) to underutilized lots (Needham Heights, for example). This would lead to reduced transaction costs, increased revenue and a more predictable stream of parking revenue in addition to preferential treatment of Needham residents.

Recommendation: Increase cash commuter parking rates to at least \$3 and allow Needham residents to purchase passes that will reduce their rates to \$2. Give additional discounts for long-term passes (yearly). Encourage out-of-towners to use the Needham Junction and Needham Heights lots. Create incentives for commuters to park at Needham Heights (highest available capacity) by charging lower rates there than at Needham Junction.

Recommendation: Move Needham Center MBTA parking to Needham Junction. The majority of spots lost in Needham Center could be replaced by rearranging the spots at the Needham Junction parking lot (by reducing the bus waiting area, and rearranging the current parking layout).

Providing ample parking for residents, shoppers, employers and employees in the town center is of the utmost importance.

Recommendation: Consider residential permit parking in areas adjacent to the town center and adjust and enforce parking limits in the town center area to avoid commuter parking there.

- *Short-term on-street metered parking to ensure customer parking (30 minutes or 1 hour limit around town square)*
- *Non-metered on-street parking with 2 hour limit along Chestnut Street*

Rethinking Commuter Rail Parking



5- Target Areas

Parking



- 2-hour parking limit in public lots
- Provision for all-day parking spots (employee parking) through parking passes

Recommendation: Encourage shared parking and make in-lieu payments into a parking fund an option to raise money for future-term parking projects. To do this, assemble private and public parcels to create more public parking (exhibit 5). Utilize private/public arrangements whereby private owners provide the town with an easement to use their parking as part of a larger lot. The owner could be guaranteed a number of dedicated spaces in the new lot. This allows for a more efficient use of land by accommodating more spaces than the individual lots were providing before. This was done successfully with the Chestnut Street lot and could be done in the current commuter lot on Garden Street once commuter parking has been moved to Needham Junction. Purchase or lease parcels for public or employer parking

Recommendation: Encourage shared parking between private owners. Adjust the zoning code to encourage shared parking and offer an in-lieu parking fee option. Provide incentives for shared parking agreements between neighboring lot owners (share driveways, take down impediments, make room for more spots), for example in form of a density bonus for redevelopments and new developments.

Establish an in-lieu parking fund and specify maximum parking. Allow downtown developments or redevelopments to significantly reduce mandatory parking requirements if they pay into a parking trust fund. Specify maximum parking requirements.

With expansion and growth in the Needham town center, increased parking will one day become necessary. While this could be dealt with in a number of ways, the option that makes the most sense spatially and price-wise is a parking deck.

Recommendation: A parking structure would be best suited to fit Needham's parking needs and allow for further development in the town center and along Chestnut Street. Financing could be arranged through a private-public partnership with public funds coming from an in-lieu parking fund, parking fees and parking ticket revenue. Needham Junction would be one location to consider for a parking structure, especially if built in conjunction with a new mixed-use development in the area (see key parcels section).

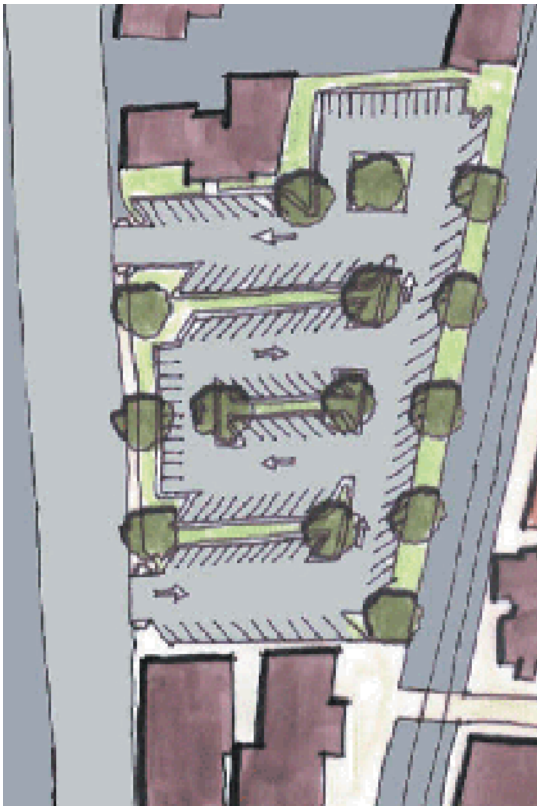


Exhibit 5: new Garden Street Parking lot combines existing lots at a higher efficiency

Once additional parking options have been created, “unbundling” of residential parking from housing development becomes an attractive option (rent units separately from parking spots).

Retail Mix

Existing Conditions

Needham Center features a variety of predominantly independent retail and service establishments. A retail gap analysis of Needham Town Center determined that businesses in the town of Needham are only fulfilling consumer demand in one category: personal care products and services. Significant gaps exist in the following categories:

- Entertainment (0% of demand met)
- Food away from home (24% of demand met)
- Household goods (22% of demand met)
- Apparel and accessories (47% of demand met)
- Groceries (60% of demand met).

Further analysis shows that Needham businesses capture only about 50% of Needham residents' aggregate consumer spending. Competition from adjacent retail and business districts partially account for this inefficiency. Two larger community business districts, Wellesley and Newton, are located within 4 miles of Needham Center and provide easy access to shopping and services, particularly for residents in the northern part of Needham. Additionally, two regional malls (Chestnut Hill & Dedham Mall) as well as one super-regional mall (Natick) are located within an 8-mile radius of Needham Center, providing an abundance of locations that offer comparison shopping opportunities. Also contributing to the problem is the fact that Needham is not convenient to highways or major thoroughfares. As a result Needham center has a lower probability of drawing regional consumers. Exhibit 6 illustrates Needham Center's geographic disadvantage.

Needham's business district is a neighborhood district that primarily serves Needham residents and the local, daytime workforce. Our analysis shows that certain types of businesses have the potential to flourish in Needham and play a part in the downtown revitalization efforts. Adding the following types of businesses will make Needham Center more of a retail and shopping destination, thus drawing more shoppers:

- Sit-down restaurants
- Specialty grocery stores

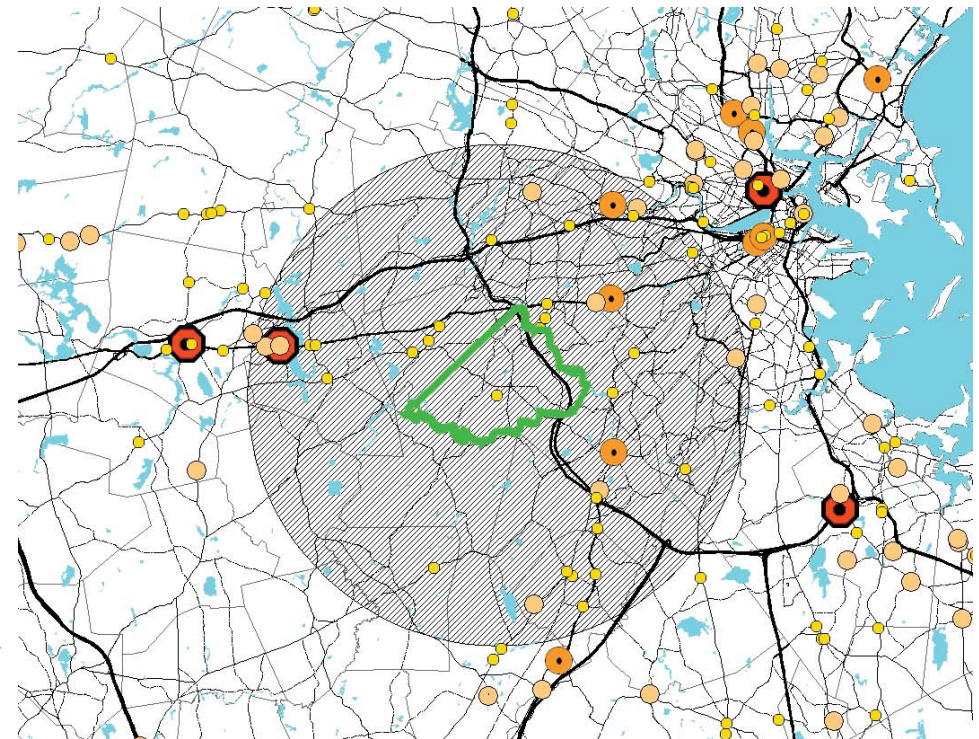


Exhibit 6

- Neighborhood Center
- Community Center
- Regional Mall
- Super-regional Mall
- 8-mile radius from Needham Center

5- Target Areas

Retail Mix

- Entertainment venues
- Specialty clothing stores

Opportunities For Improvement

Needham Center is lacking in several retail categories. This is due in part to zoning by-laws that prohibit certain types of beneficial uses and a shortage of quality retail space.

Recommendation: Modify zoning by-laws to allow for increases in FAR and building height. This will allow developers to build to optimal dimensions for modern retail uses.

Recommendation: Amend zoning by-laws to allow for entertainment uses. Arcades, bowling alleys, and skating rinks are all prohibited in Needham Center and the Chestnut Street Business District.

6- Implementation Strategies

Implementation Timeline

The recommendations proposed in this plan vary with respect to how fast they can be implemented and how soon benefits will occur. For example, zoning changes can be implemented relatively quickly, yet their impact may not be apparent until decades later. Physical changes, such as streetscape improvements, might take longer to implement, but the benefits will occur immediately following implementation. The implementation timeline matrix in appendix A indicates timelines for the strategies recommended. This tool will be useful in selecting a range of actions to prioritize, including “quick successes” and catalyst projects.

Opportunities: Funding sources

Community Preservation Act

The Community Preservation Act (CPA) allows participating cities and towns to adopt a real estate tax surcharge up to 3% in order to fund three key community purposes: open space, historic preservation and community housing. Through the Community Preservation Trust Fund, the state offers matching the funds collected in the community up to 100%. For Needham, the state match could be over \$1.5 million. In 2003 the Massachusetts Department of Revenue distributed \$27.16 million to 54 cities and towns who had adopted the CPA and added the CPA surcharge to their property tax bills in the previous fiscal year. These state matching funds represent a 100% match of what the communities raised locally. Communities who have implemented the CPA include Wellesley, Newton, Cambridge, Weston and 50 others across MA.

Contents:

- **Implementation Timeline**
- **Financing Change**
- **Key Parcels: Redevelopment Strategies**

6- Implementation Strategies

More information about the program and a tool for estimating costs and benefits for each town is available at: <http://www.communitypreservation.org> and <http://www.communitypreservation.org/CPACalculator.htm>

Total Funding: Up to \$1.5 million (not including locally raised funds)

Application Deadline: Rolling

Transportation Enhancements

Transportation Enhancements (TE) funding is available for twelve different community focused activities defined in TEA-21:

- Pedestrian and Bicycle Facilities
- Pedestrian and Bicycle Safety and Education Activities
- Acquisition of Scenic or Historic Easements and Sites
- Scenic or Historic Highway Programs, Including Tourist and Welcome Centers
- Landscaping and Scenic Beautification
- Historic Preservation
- Rehabilitation and Operation of Historic Transportation Buildings, Structures, or Facilities
- Preservation of Abandoned Railway Corridors
- Control and Removal of Outdoor Advertising
- Archaeological Planning and Research
- Mitigation of Highway Runoff and Provision of Wildlife Connectivity
- Establishment of Transportation Museums

Transportation Enhancements are Federal-aid reimbursement activities; TE is not a grant program. In most cases, the Federal government pays 80% of the project cost, and the project sponsor is responsible for the remaining 20%, also called the matching funds.

Total Funding: Varies by project, usually 80% government funded with 20% local match

Application Deadline: Rolling

More information: <http://www.enhancements.org/>

6- Implementation Strategies

National Trust Funding

The web site below is a gateway to a variety of information and funding sources related to historic preservation. <http://www.nthp.org/help/govtfunding.html>

Total Funding: Varies by grant

Application Deadline: Varies by grant

National Endowment for the Arts Grants: Grants for Arts Projects

The National Endowment for the Arts' primary funding opportunities for organizations and may be an opportunity for Needham to secure funding for town beautification projects. One of the eligible categories is Design, which includes planning, urban design, architecture and landscape architecture:

<http://www.nea.gov/grants/apply/index.html>

Total Funding: From \$10,000 to \$40,000

Application Deadline: Guidelines will be available in January 2004

New England Foundation for the Arts

NEFA administers grant-making programs that support dance, performing arts, and public art projects in New England and beyond. Fund for the Arts awards grants to Boston-based artists, pairing the artist with a nonprofit community organization to create public artworks of lasting impact in the Greater Boston area.

Total Funding: From \$10,000 to \$40,000

Application deadline: April 1 (available annually)

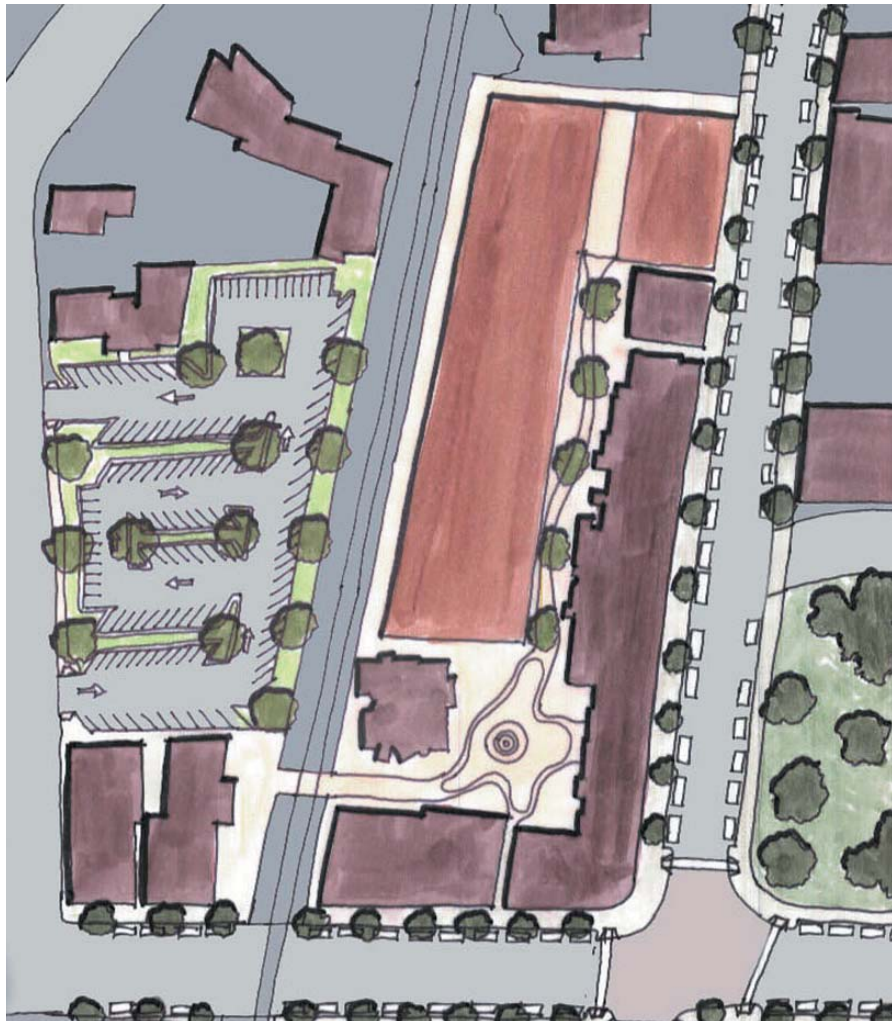
More information: <http://www.nefa.org/grantprog/index.html>

6- Implementation Strategies

Grants and grant writing resources

<http://www.fdncenter.org/>

<http://www.cfda.gov/>



Opportunities: Key Parcel Redevelopment strategies

Cursory analysis of the local Real Estate market has shown that economies of scale will dictate the viability of any redevelopment in Needham. Since small parcel size prohibits some redevelopment opportunities, we chose to focus on large scale developments. Additionally, we elected to examine redevelopment options for parcels that the town or a community group had interest in so as to increase the town's opportunity to influence any development. We selected 2 different sites for the creation of redevelopment plans:

- Needham Center Commuter Lot
- YMCA Block on Chestnut Ave

Needham Town Center Commuter Lot

Overview:

The Needham Town Center Commuter Lot serves as the gateway for transit commuters into downtown Needham. It is located adjacent to the Needham train stop, across the street from town hall with 80 feet of frontage on Chapel Street. We feel that this parcel is one of the premier redevelopment sites in Needham Center for several reasons:

- It is one of the larger parcels in the Needham CBD
- It is currently inefficiently designed and used
- It serves a redundant purpose: there is already commuter parking available in Needham Junction
- The town owns the parcel, thus allowing it to leverage the ownership rights to create a development that serves the town as a whole

6- Implementation Strategies

Description:

We are proposing a 3 and 4 story mixed-use building with an approximate floorplate of 25,000 sf. The structure would run behind the existing storefronts on Chapel St, separated by an attractive pedestrian way. The structure would have a 10' setback from the MBTA owned railway parcel. The development would offer 25,000 sf of retail space on the 1st floor with approximately 80 ft of frontage on Chapel St, and an additional 350 ft of frontage on the new pedestrian way.

The building would also have approximately 70,000 sf (gross) multifamily housing, but some portion could also be used for office space. This 70,000 sf of upper level space equates to approximately fifty, 1100 sf apartments.

The city owned parcel is approximately 35,000 sf. Our design is based upon acquiring an adjacent 7,000 sf parcel of underutilized private parking as well as a small parcel owned by the MBTA for a total of 42,000 sf.

There would be an option for underground parking, but because of its proximity to the Garden St parking lot and the high costs of underground parking, we do not feel that it is economically feasible or necessary to include parking as part of this development.

Financial Feasibility:

A project of this type would cost roughly \$17 million to construct. A simple financial feasibility analysis model that we developed determined that market rents can support an acquisition cost of up to \$3.5 M. It is not unusual for municipalities to dispose of land at a significant discount for development that satisfies programmatic requirements, such as affordable housing. We assume the total acquisition price for assembling the land could be reduced to \$1.5 M, thus lowering the required net rent needed to make the project viable to approx \$17/sf.

Based on these figures and an analysis of the current market, we determined that this project would be very feasible for a private developer, especially if the town were willing to subsidize the land acquisition.



6- Implementation Strategies

Since this is a large undeveloped parcel, it lends itself well to development. More importantly, the town holds ownership interest, allowing it to subsidize the land cost and influence the character of a development.

Benefits of Redevelopment:

Redevelopment will provide a number of benefits to the immediate redevelopment area as well as the town as a whole. Several of these benefits are:

- Add housing density to the CBD
- Create a “catalytic” development that will trigger future development
- Increase potential for retail mix
- More efficiently utilize existing land
- Increase municipal tax base

Course of Action:

The following steps must be taken to allow for this type of development:

- Revise zoning to allow building heights of up to 4 floors, increased FAR of 2.7 or above and residential uses in Needham Center
- Move commuter parking to Needham Junction
- Increase efficiency of other parking lots across tracks
- Acquire small MBTA parcel
- Acquire the adjacent, privately owned lot
- Assemble parcels and put out a RFP

6- Implementation Strategies

YMCA Parcel

Overview:

Currently, Chestnut Street is lacking a strong anchor at its southern end. The prevailing sense of place that is present in Needham's town center quickly fades as one travels south on Chestnut Street to Needham Junction. There is a greater potential for change on Chestnut Street than in Needham Center because there are more opportunities, more underdeveloped parcels, and lower density.

The Needham YMCA is currently divided between 863 Great Plain Ave and the 8,500 sf building they lease on Chestnut Street. The YMCA also leases the adjacent parking lot on Chestnut Street from Roach Bros to provide parking for their patrons. The YMCA would like to expand to at least 15,000 sf and consolidate.



Description:

This development would be comprised of several components: a YMCA component, an affordable housing component, an option for a retail/office rental component, and a community/senior center space.

Our proposed development would be comprised of 2 buildings located on the current Chestnut St YMCA site, and the adjacent parking lot currently leased by the YMCA from the Roache Brothers. Also as part of the plan, a 40,000 sf parking structure would be constructed on the triangle shaped parcel in Needham Junction currently owned by the MBTA. This parking strategy would create 125 new spaces for commuters displaced from the Needham Center Commuter lot, YMCA patrons, and new residents.

The development would be divided into a 47,000 sf YMCA/Community Center/ Affordable Housing module (with a possible commercial component) and a 27,000 sf module dedicated to housing. This would provide roughly 34 additional housing units.



6- Implementation Strategies

The project would allow the YMCA to consolidate and improve upon the services they provide, while also providing affordable housing, which is coincidentally a part of the YMCAs mission.

Financial Feasibility:

This project would cost roughly \$12 million to construct. Unlike the Needham Center development, it would require the acquisition of 3 large parcels. While our Simple Feasibility Financial Analysis (SFFA) shows that a development of this sort is feasible, it appears that there is not enough of a margin to make this project desirable for a private investor or developer alone. What makes this project both feasible and desirable is the ability to partner with the YMCA. As a non-profit and affordable housing provider, the YMCA has access the abundant, competitively allocated subsidies for affordable housing development. Subsidies in this case would almost certainly guarantee project viability. For-profit developers that partner with non-profit affordable housing providers can earn development fees equal to 15% of total development costs, making this a win-win situation.



Benefits of Redevelopment:

The Cumulative benefits to the community would be:

- Increased multifamily and affordable housing
- A consolidated YMCA
- Added space for senior or community activities
- Improved entertainment and fitness opportunities for children and adults
- Catalytic investment on Chestnut Street corridor
- Additional parking for commuters, residents, and patrons

Course of Action:

The following steps must be taken to allow for this type of development:

- Revise current zoning regarding FAR, residential use, and building height
- Assemble 3 land parcels
- Create a strategic partnership between YMCA and developer

Financial Analysis Methodology

We developed a Simple Feasibility Financial Analysis (SFFA) for the Needham Town Center and YMCA block. The SFFA is a “back of the envelope” method to determine the “feasibility” of a development, not necessarily the “desirability” from an investor’s standpoint. That is, it does not acknowledge the opportunity cost of capital for investors, nor does it evaluate different cash flows over time.

The SFFA requires the inputting of various information regarding market rents, financing terms, and construction costs. It can then be used to determine the maximum possible site acquisition cost, or the minimum annual rent per square foot needed to make the project viable.

As expected, maximizing FAR and increasing building heights to 3-4 stories is absolutely required to make mixed-use redevelopment possible in Needham Center or on Chestnut Street. The larger the parcel and potential size of the building, the more feasible the building becomes.

7- Conclusion

Needham Town Center and Chestnut Street are places of significant importance to the economic and social vitality of the community of Needham. While Needham is already a wonderful place with a committed and enthusiastic citizenry, there are some physical and ideological changes that can be made that will make Needham a better place to work, do business, or raise a family. This Strategic Plan for Needham Center provides an array of recommendations for Needham to improve its physical environment, available housing options, sense of place, and its ability to attract the retailers and service providers the town's residents desire.

All of these goals can be realistically achieved through careful strategic planning and implementation. It will take several years for the town to realize some of these goals. For this reason, it is imperative that the town begins the process of revising its zoning by-laws and parking strategy today, to make their vision a reality tomorrow. By incorporating these smaller interventions, the process as whole will gain momentum, propelling it to achieve some of its larger goals in the future.

Among the most significant challenges that lie ahead for Needham are those of implementation. As this report outlined, several well-produced studies, both by independent consultants and the planning department have failed to stimulate meaningful change. This report identifies several barriers to implementation, and subsequently offers an implementation strategy designed to overcome these issues. Additionally, this plan outlines two potential redevelopment projects that have the ability to positively impact the study area and town as a whole. More important than their exact development program and specifications are the concepts and ideals that they represent: the creation of affordable housing, transportation oriented design, mixed-use development, and sustainable growth.

This Strategic Plan is about making Needham a better place for its residents. A plan means nothing, however, if it is not acted upon. The outcome will depend on the conviction and dedication of its citizens who must be proactive in effecting change. Given the energy and support they provided to us over the past three months, we are excited about Needham's future.

Implementation Time Line

Focus Area	Recommendation	Time Frame	
		Implementation	Expected Results
Built Form	Eliminate use of pylon signs and inforce design guidelines with regards to signage	Short Term	Immediately following implementation
	Limit exemptions within building review to ensure design guidelines are met		Medium to long-term
	Remove setback requirements from zoning code		Medium to long-term
	Institute lot coverage of 50% on Chestnut and 75% in center business district		Long-term
Streetscape	Limit curb cuts by encouraging shared driveways in zoning code and design guidelines		Long-term
	Require that parking be located behind buildings in zoning code		Long-term
Sense of place	Change zoning to increase maximum building height allowed		Long-term
Traffic	Remove exclusive pedestrian phase at Great Plain Ave. intersections		Immediately following implementation
Parking	Encourage shared parking through zoning changes		Medium to long-term
	Establish a parking fund and allow payments in lieu of building parking for developments		Long-term
Housing	Impose a linkage-type fee to developments that contribute to housing affordability problems		Medium-term
	Allow conversion to multi-family buildings and creation of accessory units		Long-term
	Allow increased density in town center overlay district & mandate 20% affordable housing		Long-term
Retail	Change zoning code to allow non-invasive entertainment uses in Needham Center and Chestnut Street		Medium to long-term
Built Form	Create gateways and strengthen identity of town center through signs, plaques or brick pillars	Medium-term	Immediately following implementation
Streetscape	Bump-outs at all pedestrian crossings		Immediately following implementation
	Provide additional benches and trash receptacles		Immediately following implementation
Traffic	Improve signage and lane markings		Immediately following implementation
Parking	Expand on-street parking to all of Chestnut Street		Immediately following implementation
	Increase commuter parking rates and introduce resident discounts		Immediately following implementation
	Move Needham Center commuter parking to Needham Junction		Immediately following implementation
	Establish permit parking in residential areas around the town center and shorten public parking periods		Immediately following implementation
Streetscape	Raised intersections in the town center	Long-term	Immediately following implementation
	Wide sidewalks and add curbs		Immediately following implementation
Parking	Build parking structure with private-public financing mechanisms		Immediately following implementation
	Unbundle parking from residential developments		Long-term

8- Appendix B

Needham Center Commuter Lot - Simple Financial Feasibility Analysis

Building Dimensions

FAR	3
Stories	4
Lot Square Footage	42,000
Building Footprint	25,000
Gross SqFt	95,000
Rentable SqFt	76,000
Residential Sqft	56,000
Retail Sqft	20,000

Construction Costs

Hard Costs	\$12,350,000
Soft Costs	\$3,705,000
Construction Financing	\$963,300

Market Information

Annual Retail Rent NNN(\$/sqft)	\$23	**
Annual Residential Rent NNN(\$/sqft)	\$18	**
Occupancy Rate	95%	

Typical Ranges:

\$17-30
\$14-28
90-100%

Financing Information

DSCR	120%
Max LTV	80%
Interest Rate	7%
Annualized Mortgage Constant	0.0707

115%-130%
70-90%
6-9%

Development Costs

Site Acquisition Cost	\$1,500,000
Total Construction Cost	\$17,018,300

*Only input if solving for rent required (Front Door)

Front Door Feasibility Analysis

Total Development Cost	\$18,518,300
Permanent Mortgage	\$14,814,640
Annual Debt Service	\$1,047,395
Required NOI*	\$1,256,874
Required Effective Gross Income*	\$1,256,874
Required Gross Revenue	\$1,323,025
Avg. Annual Rent required (/sqft)	\$17

Back Door Feasibility Analysis

Projected gross income	\$1,468,000
Expected Effective Gross Income*	\$1,394,600
Expected Net Operating Income*	\$1,394,600
Max supportable project costs	\$20,547,501
Expected Construction Costs	\$17,018,300
Max Supportable Acquisition Costs	\$3,529,201

*With NNN Rents, Effective Gross Income= NOI

**A triple net lease is one in which the tenant pays all of the ongoing operating expenses. The landlord receives a net rent, because the tenant pays the property taxes, utilities, insurance premiums, maintenance and repairs.

YMCA - Simple Financial Feasibility Analysis

Building Dimensions

FAR	2
Stories	3
Lot Square Footage	32,000

Building Footprint	25,000
Gross SqFt	75,000
Rentable SqFt	62,000
Residential Sqft	34,000
YMCA/Retail/Community	28,000

Construction Costs

Hard Costs	\$8,865,000
Soft Costs	\$2,659,500
Construction Financing	\$691,470

Market Information

Annual YMCA NNN(\$/sqft)	\$21	**
Annual Residential Rent NNN(\$/sqft)	\$16	**
Occupancy Rate	95%	

Typical Ranges:

\$14-20
90-100%

	Sqft	Cost
Gym	15,000	1575000
Res	42,000	5040000
Mixed	18,000	2250000
Total:	75,000	8865000

Financing Information

DSCR	120%
Max LTV	80%
Interest Rate	7%
Annualized Mortgage Constant	0.0707

115%-130%
70-90%
6-9%

Development Costs

Site Acquisition Cost	\$2,500,000
Total Construction Cost	\$12,215,970

*Only input if solving for rent required (Front Door)

Front Door Feasibility Analysis

Total Development Cost	\$14,715,970
Permanent Mortgage	\$11,772,776
Annual Debt Service	\$832,335
Required NOI*	\$998,802
Required Effective Gross Income*	\$998,802
Required Gross Revenue	\$1,051,371
Avg Annual Rent required (/sqft)	\$17

Back Door Feasibility Analysis

Projected gross income	\$1,132,000
Expected Eff Gross Income*	\$1,075,400
Expected Net Operating Income*	\$1,075,400
Max supportable project costs	\$15,844,531
Expected Constr Costs	\$12,215,970
Max Supportable Acquisition Costs	\$3,628,561

*With NNN Rents, Effective Gross Income= NOI

**A triple net lease is one in which the tenant pays all of the ongoing operating expenses. The landlord receives a net rent, because the tenant pays the property taxes, utilities, insurance premiums, maintenance and repairs.

8- Appendix C

Sample Zoning Code for Shared Parking

Below is an example of wording to allow shared parking in municipal parking ordinances.

Introduction

Cumulative parking requirements for mixed-use occupancies or shared facilities may be reduced where it can be determined that the peak requirements of the several occupancies occur at different times (either daily or seasonally). The submittal requirements for a parking reduction request vary according to the method used to determine the parking reduction. The reduction methods and accompanying submittal requirements are outlined in this section. In all cases, a shared parking operations plan must be prepared to the satisfaction of the Department of Planning showing that parking spaces most conveniently serve the land uses intended, directional signage is provided if appropriate, and pedestrian links are direct and clear. On-street parking spaces wholly adjacent to the property may be included in the required minimum.

Three methods for determining a parking reduction are as follows:

A. Intermittent or Seasonal Non-conflicting Uses

(1.) When required parking reductions are predicted as a result of sharing between intermittent or seasonal uses with non-conflicting parking demands (e.g. a church and a bank), then the reduction can be considered for approval by the Planning Commission without demand calculations or a parking study. Individual spaces identified on a site plan for shared users shall not be shared by more than one user at the same time.

(2.) If a privately owned parking facility is to serve two or more separate properties, then a “Shared Parking Agreement” shall be filed with the City for consideration by the Planning Commission. Unless explicitly stated to the contrary, the property owner of the parking facility accepts responsibility for operating, maintaining and accepting liability for personal injury and property damage.

B. Parking Occupancy Rate Table

When the parking reduction has been shown to be feasible by using the demand calculations as determined by Table 3, Parking Occupancy Rates, the applicant shall submit a parking demand summary sheet showing the process for calculating the reduction as outlined in this section. (Note: The default rates from the Table 3, Parking Occupancy Rates are set to include a small “safety margin” of parking beyond that minimally needed to serve an average peak demand. Therefore a local study of parking demand may yield a greater reduction in parking required.)

(1.) The minimum number of parking spaces that are to be provided and maintained for each use shall be determined based on standard methods for determining minimum parking supply at a particular site.

(2.) The gross minimum number of parking spaces shall be multiplied by the “occupancy rate” as determined by a study of local conditions (or as found in Table 3), for each use for the weekday night, daytime and evening periods, and weekend night, daytime and evening periods respectively.

(3.) The gross minimum numbers of parking spaces for each of the purposes referred to for each time period shall be added to produce the aggregate gross minimum numbers of parking spaces for each time period.

(4.) The greatest of the aggregative gross minimum numbers of parking spaces for each period shall be determined.

Table 3 Parking Occupancy Rates

Uses	M-F 8am-5pm	M-F 6pm-12am	M-F 12am-6am	Sat. & Sun. 8am-5pm	Sat. & Sun. 6pm-12am	Sat. & Sun. 12 a m - 6am
Residential	60%	100%	100%	80%	100%	100%
Office/ Warehouse /Industrial	100%	20%	5%	5%	5%	5%
Commercial	90%	80%	5%	100%	70%	5%
Hotel	70%	100%	100%	70%	100%	100%
Restaurant	70%	100%	10%	70%	100%	20%
Movie Theater	40%	80%	10%	80%	100%	10%
Entertainment	40%	100%	10%	80%	100%	50%
Conference/Convention	100%	100%	5%	100%	100%	5%
Institutional (non- church)	100%	20%	5%	10%	10%	5%
Institutional (church)	10%	5%	5%	100%	50%	5%

This table defines the percent of the basic minimum needed during each time period for shared parking.

C. Local Parking Study

When the parking reduction has been shown to be feasible by using a local parking demand analysis, the following three items must be submitted:

(1.) A parking demand analysis prepared by a qualified parking or traffic consultant, a licensed architect, city planner, or urban planner or civil engineer, which substantiates the basis for granting a reduced number of spaces. A local parking study shall be subject to the approval of the Director of Planning and Planning Commission. The study shall take into account the following three factors:

(a.) Existing parking surveys. Parking surveys shall determine parking occupancy rates of morning, afternoon and evening peaks on the seven different days of the week. The seven days of observation may take place over the span of two consecutive, typical weeks. In the case of new construction or addition of new uses, the surveys shall observe another circumstance with similar mixed uses. A combination of similar circumstances may be necessary to cover all the proposed land uses. The approximate square footages of the various land uses of the specimen projects shall be compared to the proposed project to allow the ratios of uses to be rated accordingly. In the case of an enlargement, or substitution of existing uses, the surveys shall document the occupancy rates of the existing parking facility.

(b.) Proximity and convenience factors. The following factors may influence the Planning Commission's approval of the parking reduction

8- Appendix C

figures:

- Distance between sharing uses and the parking facility
- Pedestrian connections among sharing uses and the parking facility
- Vehicular connections
- Whether parking will be paid
- Location--proximity to the CBD and general development density.
- Proximity to major transit corridors or stations.
- Special trip reduction programs, such as subsidized vanpooling, transit, shuttle or telecommuting
- Need for any reserved parking spaces. (Parking spaces to be shared cannot be reserved for specific uses or individuals except during off-peak hours.)

(c.) Captive market parking requirements. Parking requirements for retail, restaurant, hotel, convention and conference uses may be reduced where it can be determined that some portion of the patronage of these businesses comes from other uses (e.g., employees of area offices patronizing restaurants) located within a maximum walking distance of 500 feet. Parking requirements may be reduced up to 90 percent as appropriate. Whenever practical, such a reduction should be supported by surveys at similar establishments.

(2.) A covenant must be executed guaranteeing that the owner will provide the additional spaces directly or by payment of in-lieu fees if the City, upon thorough investigation of the actual use of parking spaces at the building within two years of initial occupancy, recommends to the Planning Commission that the approved reduction be modified or revoked. Said covenant shall meet the same requirements for covenants set forth in other sections of this document. The City must document insufficient parking supply by showing occupancy rates over 98 percent for a least two consecutive hours on at least three separate days within a single month.

(3.) Fee of guarantee. The owner shall pay a fee which will be applied towards the cost of a parking study of actual parking accumulation to be carried out within one to two years of occupancy.

(4.) Exception: The covenant guaranteeing either additional spaces or payment of in-lieu fees (2. above) and the fee for follow-up parking study (3. above) may be waived when the Planning Commission will certify that previous experience of similar shared parking projects indicates it is unlikely a serious deficiency would result.

d. Covenants. When a covenant between parties is required by this Ordinance, the following standards shall apply:

- (1.) Be executed by the owner of said lot or parcel of land the parties having beneficial use thereof.
- (2.) Be enforceable by either of the parties having beneficial use thereof, or both.
- (3.) Be enforceable against the owner, the parties having beneficial use and their heirs, successors and assigns, or both.
- (4.) Be first duly recorded in the Office of the Recorder of Deeds.

E. Parking Lot Location Standards. The location of all required and nonrequired parking lots with five or more spaces shall meet the location requirements below. All conditional uses hereunder shall be granted by the Planning Commission in accordance with Chapter regulations governing applications of conditional uses; procedures.

1. Permitted Locations by Right. Parking lots shall be located within the same zoning district as the use they serve. Required parking lots for uses allowed by right within a zoning district are allowed as a use by right in the same zoning district.

2. Permitted Locations as a Conditional Use. Remains the same.

3. Off-Site Locations. If off-street parking cannot be provided on the same lot as the principal use due to existing buildings or the shape of the parcel, parking lots may be located on other property not more than 600 feet distant from the principal use, subject to conditional use approval by the Planning Commission. Parking spaces serving residential units must be located within 300 feet of the dwelling unit entrances they will serve whether they are off or on the site. Clear, safe pedestrian connections must be provided, requiring no crossing of an arterial street except at a signalized intersection along the pedestrian pathway.

When Parking Requirements Must be Met

Parking requirements shall be met at the time any building or structure is erected, enlarged, or increased in capacity, changed in use, or an applicable outdoor use is established or enlarged. In mixed-use developments, or developments affected by co-operative agreements between different uses on neighboring properties, changes in use will require a parking demand analysis using Table 3 or a Local Parking Study to demonstrate the change in parking demand patterns. A forecast deficiency greater than 10% must be met by the construction of additional parking spaces, payment of in-lieu fees, or support of shuttle service or other trip reduction program satisfactory to the city. If a parking study results in a forecast deficiency of less than 10%, no covenant or guarantee payment is required.

Maximum Number Allowed

Parking lots may contain up to 20% more spaces than the required minimum. Any additional spaces above 20% shall be allowed only as a conditional use and shall be granted in accordance with City zoning governing applications of conditional uses; procedures, and upon the finding that additional spaces are needed.

8- Appendix D

Implementation Examples of Recommended Actions

Public Realm Investment to Strengthen Business District

Downtown Lodi, California (city population of 60,000) launched a \$4.5 million public-private pedestrian oriented project, including a retrofit of five main street blocks from building face to building face. On the main School Street, sidewalks were widened, curbs bulbed out at intersections and colored paving stones laid in the new sidewalks and street. A striking gateway was installed, as well as 140 street trees, lighting, benches, and other streetscape amenities. The city credits the pedestrian improvements, as well as economic development incentives, with the 60 new businesses, the drop in the vacancy rate from 18% to 6% and 30% increase in downtown sales tax revenues.

More information: <http://www.uwex.edu/ces/cced/lets/0703ltb.html>

Retail Gap Analysis Methodology

In order to find out which retail gaps exist in Needham, we first determined per capita consumer spending by category. We adjusted consumer spending data from the Boston Metropolitan Area to reflect the slightly higher average income in Needham. We then multiplied the per capita numbers by the number of residents in Needham, assuming that a trade area with a 2-mile radius is reasonable for most businesses. In a more detailed analysis, separate trade areas would be established for different types of stores and adjustments would be made based on the proximity of competing retail districts and for customers who are not Needham residents (people who work in Needham, live in surrounding communities, vacation in Needham). Due to the limited scope and time frame for this analysis, we chose to simplify by using the population of Needham as a basis for the analysis. As the next step we compared total consumer spending in Needham per category with documented sales revenues of Needham stores (Sales revenue numbers were from 1992, but adjusted for inflation to 2000 \$\$ to enable a comparison with the consumer spending data). The analysis was complicated by different categorizations of reported data and the fact that the retail sales numbers date back to 1992.

A more detailed analysis with current data would be beneficial for the town in clearly identifying which types of businesses to attract. In the mean time we believe that our analysis provides a general idea of what type of retail and services are missing.