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# Land Use, Zoning & Traffic Study Needham Center

Prepared for Town of Needham Planning Board

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Prepared for Town Of Needham

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#### INTRODUCTION

Needham Center, defined as the area surrounding Town Hall, is a typical town center, complete with the Town Hall, Town Common, Police and Fire Stations, churches, and a central business district bordered by residential neighborhoods. The boundary of the area included in this Needham Center planning study is shown on Figure 1 below.

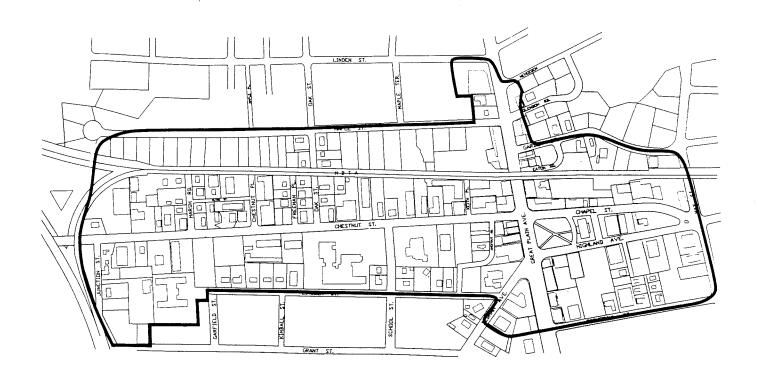


Figure 1 Needham Center Study Area

After undergoing a period of relatively little new business activity, Needham Center has recently become subject to development and redevelopment pressures as the convenience and attractiveness of this small downtown has been rediscovered. Local public and private efforts, in conjunction with the booming Massachusetts economy and the strong residential market in Needham, have reestablished the economic viability of Needham Center.

Efforts to revitalize Town Centers, with the participation of local citizens and Town governments, have been occurring throughout Massachusetts, and Needham is no exception. Initial Needham Center revitalization efforts began in the early 1980's. In 1980 a Commercial Area Revitalization District (CARD) plan for Needham Center was developed by the Town and was approved by the Executive Office of

Communities and Development. The CARD plan, which has since been renewed three times (1982, 1984, and 1986), has enabled Needham to address issues pertaining to the "health" and appearance of Needham Center through various financing and technical assistance programs, with efforts focused on infill development and improvements to existing buildings, as well as improved regulation of land use, signs, and parking. Accomplishments include: three MIFA assisted construction projects; several new zoning measures (i.e. Site Plan Review, new business district dimensional requirements, and revisions to parking regulations), a Downtown Parking Garage Study, and a street planting program carried out by the Needham Business Association in conjunction with the Town. The coordinated focus under the CARD program has contributed to the revitalization of Needham Center.

Needham Center was also a focus of the Town's Planning Studies 1983 report which is a "comprehensive analysis of Needham [which] sets forth the future steps and efforts which should be undertaken to preserve the quality of life in Needham and to ensure future development which is compatible with community goals and objectives." The "area plan" for Needham Center includes policies and action items that focus on maintaining the local orientation of downtown, enhancing the pedestrian orientation, fostering collective public/private involvement, and developing a parking strategy. Efforts to implement the recommendations of this study are on-going, and, in conjunction with the CARD plan, these efforts have created a Needham Center which is now an attractive location for business.

The renewed attractiveness of Needham Center as a viable place to work and shop has contributed to an overall positive Town image in addition to providing a boost to the local economy. While continuation of this renewed interest in downtown is desirable, it is important to assure that Needham Center continues to reflect the needs of both the business community and the surrounding residential community. New development, as well as underlying development pressures, have raised land use compatibility concerns as the impacts of growth, most notably traffic, have begun to spill over into adjoining neighborhoods. Chestnut Street has been a particular focus of concern. To assure that Needham Center remains both a good neighbor to its residential abutters, and continues to serve its important economic role in Needham, a plan to guide growth is needed.

It is in this context that the Needham Center Land Use, Zoning and Traffic Study was commissioned, with direction to focus special attention on Chestnut Street where change has been occurring more rapidly. This report presents the study findings, and provides two planning tools which will help to guide future development decisions and public actions.

- 1. A set of Chestnut Street Landscape and Street Improvement Recommendations.
- 2. An overall downtown Implementation Plan that identifies those actions needed to positively shape the long term character of Needham Center.

#### Study Process

The Needham Center Land Use, Zoning and Traffic Study was conducted over a five month period. The study process was designed to solicit the input of all sectors of the community. The primary forum for citizen participation was a regular series of meetings with the Needham Center Task Force comprised of representatives of the Planning Board, the Board of Selectmen, the Needham Business Association, and the residential neighborhoods. Several public meetings were held over the course of the project, and the consultants also made presentations to the Planning Board.

The work was divided into the following tasks:

- 1. Land Use Analysis
- 2. Market Analysis
- 3. Infrastructure and Public Utilities Analysis
- 4. Traffic and Parking Analysis
- 5. Development of Area Plan
- 6. Public Participation

The initial stage of work included a land use, zoning and market analysis which was performed in order to determine the future development potential of the Needham Center study area. Concurrently, a traffic analysis of existing and future conditions was conducted, and a limited urban design assessment and infrastructure analysis was prepared. The findings from all of these efforts established the framework for developing a plan for Needham Center that would reflect future development patterns and community concerns. The findings were presented to the Task Force, the Planning Board, and the public.

Following discussions of the analyses results with the Task Force, each member drew up a list of goals for Needham Center. The individual lists were compiled into one list of goals, that was then presented to the public along with the study findings. After this first public meeting, using the goals as a guide and the analyses findings as a framework the Chestnut Street Roadway Improvement and Landscape Design Recommendations, and the Implementation Plan with general guidelines for zoning, marketing, urban design, traffic and parking were developed.

These products were presented to the Task Force, and were submitted for review to the Planning Board, the Board of Selectmen, and the Needham Department of Public Works.

Revisions were made to the products based on comments received, and the design recommendations and implementation plan were the presented to the public at a second public meeting. Final revisions were then made, and this report includes the final products of the study (the Implementation Plan is presented in Chapter 4; the Chestnut Street Roadway Improvement and Landscape Design Recommendations are presented in Chapter 5).

## Implementing the Plan

To be truly effective, planning documents must be updated to reflect the changes which take place within a community. The planning tools from this study are no exception. The Chestnut Street Landscape and Street Improvement Recommendations, along with the Implementation Plan, will carry Needham Center into the next decade. Near the end of this next decade, Needham should look again at the future of Needham Center and develop tools which will be effective in guiding growth for the following ten years.

The tools which this study has produced must be used regularly to effectively guide growth. New developments and public actions must be monitored for their contribution to the goals for Needham Center. The active involvement of citizens, local businesses and town officials in the creation of a healthy and attractive Needham Center is a prerequisite to success.

#### STUDY FINDINGS

#### Introduction

The first step in developing a plan for Needham Center was an analysis of the various components that contribute to the personality of Needham Center and influence development in the downtown. These factors include land use, zoning, market conditions, design elements, and traffic conditions.

The original impetus for this study centered around concerns about the possibility of overdevelopment in Needham Center, especially on Chestnut Street. Therefore, it was initially anticipated that a rezoning article might be the outcome of this study. The purpose of such a article would be to update the zoning for Needham Center to better reflect the desired level of growth. To respond to this concern, and to determine the focus of the study's response to the concern, land use, zoning and market analyses were carried out on a parcel by parcel basis throughout the study area. Each parcel was evaluated with respect to its potential for new development, its probable new use (usually retail or office) and its size. In addition, a limited urban design evaluation for the study area was conducted. The most salient finding about Needham Center is that relatively little additional development can be anticipated.

Concurrent with the new development analysis an existing traffic conditions analysis was carried out to determine traffic volumes and levels of service at major intersections (e.g. Oak Street/Chestnut Street; Great Plain Avenue/Chestnut Street). After completing the existing conditions analysis, a future conditions analysis was conducted which projected future traffic volumes based on existing traffic levels, additional traffic to be generated by projected Needham Center development, and growth in underlying regional traffic. The purpose of the future traffic conditions analysis was to determine the focus for specific street improvement recommendations. Of particular concern to the Town in the traffic analysis were two items: the impact of the temporary closing of the High Rock Street Bridge; and the return of the MBTA commuter rail service, with two stops in Needham Center.

The findings of the above analyses are presented below in summary form; the detailed analyses can be found in Appendices A, B and C.

## Land Use Analysis Findings

Utilizing basic land use data provided by the Town (based on a survey done in 1986 of all properties in the business district) an assessment of the potential for new development and land use change in Needham Center was

conducted. Underlying the evaluation was an assumption that the zoning boundaries of the Needham Center business area are fixed, and that any commercial development would occur within those boundaries (see Figure 2 below).



Figure 2 Business Zoned Land in Needham Center

The assessment of potential change was based on the following factors.

1. The calculation of the extent to which existing buildings make use of the allowable site FAR or building coverage.

Determining the "percent of allowable density built" for each parcel in Needham Center allowed assessment of the potential to build a larger building on a particular site, hence the likelihood of a site being redeveloped.

2. Examination of existing land use.

Each parcel's existing land use (residential; retail; office; industrial-auto; institutional) was examined in the context of the strong market for certain types of uses (retail and/or office), to determine what potential shifts in land use might result if new development or re-use of existing buildings were to occur.

# 3. Parcel size and shape.

The allowable density under existing zoning is a potential maximum figure for building size, which can only be achieved within the limitations of other regulations such as height restrictions, parking, and setbacks. Whether these other regulations can be met, and the maximum allowable density achieved, ultimately depends on the size of a parcel. Hence, a review of parcel size and shape was conducted, along with an analysis of the economics of building on certain parcel sizes given the zoning and other regulations, to further determine the likelihood of potential new development.

4. Analysis of site ownership patterns.

In conjunction with the review of parcel size, a review of ownership was conducted to determine the likelihood of combining parcels to create larger buildable sites.

The above steps provided the basis for an estimate of the likelihood that new development would occur. Table 1 summarizes the estimated change in square feet of development on Chestnut Street and downtown. As Table 1 indicates, the actual increase in square footage is expected to be relatively small (less than 20 percent), with almost one quarter of the new square footage having already been approved. The type of new development is expected to be retail and office uses, generally replacing auto related uses, and some underutilized retail space.

While the overall increase represents <u>new</u> development that is expected to occur, it is also expected that some redevelopment will take place. Many of the remaining residences within the business zoned district along Chestnut Street are likely to be converted for office use. Approximately 12,700 square feet of residential conversion to office use can be expected.

[Note: The future traffic projections are based on both the new development that is expected as well as the shift in uses that is likely through redevelopment.]

The following summarizes the general findings of the land use analysis, which was conducted separately for Chestnut Street and downtown.

#### Chestnut Street

o A relatively small increase in the total square feet of development can be expected on Chestnut Street.

Substantial new development is not expected to occur for four reasons:

- 1. Almost 40 percent of the parcels are currently built to 50 percent or greater of allowable density. This limits the incentive for demolishing an existing structure to achieve a greater density on a site.
- Certain long time uses, as well as recent developments, are unlikely to change (e.g. Glover Memorial Hospital; police and fire stations; Roche Brothers; McDonald's; Friendly's; and several new professional office buildings).
- 3. Current parking requirements, along with the small parcel sizes, limit the feasibility of new development (see below).
- 4. The high number of single parcel owners limits the likelihood of assembling contiguous parcels for new development.
- o There is likely to be a shift away from auto related uses and residential uses.

The strong demand for retail and office space, along with rising land costs and rents, will result in a shift away from auto related and residential uses.

o There is likely to be a shift toward general retail and small office use.

The market analysis indicates the demand in Needham Center is for retail and office space.

o The limiting factors for development are parking requirements and parcel size rather than zoning, traffic or the real estate market.

The allowable density is not the absolute limiting factor for development. New development generally could not achieve the allowed density on a site because of parking requirements and small parcel sizes. However, the densities that can be achieved are only ten to twenty percent less than that allowed under zoning. Therefore, while the constraints of parking and parcel size hold density below its technically allowable limit the difference is not substantial.

#### Downtown

o A relatively small increase in the total square feet of development can be expected downtown.

The substantially built-up nature of downtown (over 50 percent of the parcels are currently built to 50 percent or more of allowable density, with 18 percent of all the parcels being built to 100 percent or greater) limits the likelihood of new development occurring in this area.

o There is likely to be a minor shift away from auto related uses.

See discussion under Chestnut Street.

o There is likely to be a shift toward general retail and small office use.

See discussion under Chestnut Street.

o The limiting factors for development are parking requirements and maximum height.

Much as parking is a limiting factor for new development on Chestnut Street, so to is it in downtown. In addition, the height limitation restricts the feasibility of constructing a new building. There are very few sites where a two story building can accommodate the required parking, as well as the necessary square footage to be economically viable.

o Several underutilized sites have a negative effect on the image and cohesiveness of the downtown.

Auto related uses at the entrances to Needham Center detract from an overall image of downtown as an attractive, pedestrian oriented area.

Based on the findings, it was concluded that the focus for guiding development on <u>Chestnut Street</u> lies in design and land use guidelines rather than underlying zoning; and that the focus of planning for the <u>downtown</u> lies in finding the means to allow some development to occur in positive ways, rather than in constraining development.

### Market Analysis

#### Retail

Downtown Needham consists primarily of older single and two-story commercial buildings. The existing mix of retail businesses in Needham, emphasizing convenience retail and service-related commercial use, is typical of a small suburban community. Service firms, especially hair-related, predominate throughout the central business district. The Town has the normal assortment of apparel and accessory, furniture and fixtures, automobile/gasoline stations, food stores, drug stores, and building materials stores.

The increasing population and income of Needham and the surrounding communities present the Town with a unique opportunity to influence retail development in Needham Center. The demand for greater retail representation by

both retailers and consumers has been met with a revitalized downtown in towns such as Wellesley. In Needham, however, retail development has not kept pace with consumer demand. The push toward a more upscale retail mix in downtown Needham is already occurring, as evidenced by the leap in retail rents over the last twelve months.

#### Office

The past several years have seen a flurry of office development in Needham and the surrounding towns due to the strong economy in Eastern Massachusetts and the relocation of some staff from Boston based firms to the suburbs. Employment in the Route 128 area has increased, and although Needham is a relatively small player in the overall Route 128 market, it has exhibited stronger percentage growth over the last three years than have most of its neighboring communities.

Based on the above, the market analysis concluded that:

- o Continued growth in population and income in Needham and surrounding communities will encourage additional office and retail development.
- o The challenge for the Town of Needham is not one of generating enough demand to support increased downtown development; directing development to areas where the Town would like it to occur is the critical focal point.

Table 1	ESTIMATED	CHANGE IN DEVELOPMENT SQUARE FEET IN NEEDHAM	CENTER 1987-2000		
Type of Land Use	Year	Existing, Approved and Projected Square Feet of Development	Percent Change (Of Total)		
Retail	1987	Existing: Chestnut Street 208,310  Downtown 231,149  TOTAL 439,459			
	1989	Village Square + 18,000	+ 4%		
	2000	Projected New: Chestnut Street + 11,860 Downtown + 19,210	+ 3% + 4%		
Office	1987	Existing: Chestnut Street 74,571  Downtown 130,417*  TOTAL 204,988			
	1989	Village Square + 19,600	+10%		
	2000	Residential conversion to office + 12,700	+ 6%		
	2000	Projected New: Chestnut Street + 35,700 Downtown + 51,853	+17% +25%		
Industrial (Auto)	1987	Existing: Chestnut Street 25,698			
	2000	Conversion to retail or office - 10,530	-41%		
Resident.	1987	Existing: Chestnut Street 72,288  Downtown 2,115  74,403			
	2000	Residential conversion to office - 12,700	-17%		
Instit.	1987	Existing: Chestnut Street 91,466  Downtown 33,312  TOTAL 124,778			
	2000	Projected New: Chestnut St. + 8,000**	+ 6%		
TOTAL BUILT SQUARE FEET	1987	Existing: Chestnut St. 472,333  Downtown 396,993  TOTAL 869,326			
	1989	Village Square + 37,600	+ 4%		
		Projected New: Chestnut Street + 45,030  Downtown + 71,063  TOTAL SF YEAR 2000 1,023,019	+ 5% + 8% +17%		

## Traffic Analysis

The following paragraphs summarize the key findings of the traffic analysis:

- o Currently, Chestnut Street south of Oak Street lacks curbing and the edge of the roadway becomes indistinguishable from adjacent sidewalks, driveways and parking areas in many sections. In addition, utility poles encroach on the travelway and driveway at many locations.
- o Existing daily traffic volumes on Chestnut Street range from approximately 8,000 vehicles south of Junction Street to approximately 19,000 vehicles south of Oak Street.
- o Total midday and PM peak hour traffic along Chestnut is projected to increase by 25 to 28 percent by the Year 2000 for annual increase of 2.5 percent.
- o Background traffic increases are expected to account for approximately half the total increase in traffic.
- o Development within the study area is anticipated to generate approximately 4,460 net new daily vehicle trips with approximately 2,430 net new trips generated by office development. Four hundred eighty net new vehicle trips are anticipated to be generated by new development during the midday peak hour, while 575 net new trips are anticipated to be generated during the PM peak hour.
- o Under existing conditions, all intersections operate at acceptable levels of service in both the midday and evening peak hours.
- O Under No-Build conditions (background traffic increases only), only the intersection of Chapel Street at Highland Avenue and May Street is expected to decline to an unacceptable level of service in the evening peak hour.
- o Under Build conditions (with both background traffic increases and traffic increases from Needham Center development), no additional intersections will operate at an unacceptable level of service, although all locations will experience some increase in average stopped delay per vehicle.
- o The length of the exclusive pedestrian phases at downtown intersections is somewhat short based on accepted engineering standards.

o Current zoning regulations generally require adequate parking for office and retail uses. Although, Saturday retail demand may exceed the requirements, unused office parking spaces in mixed-use developments would meet the excess demand.

#### Conclusions

Based on the analyses described above it was concluded that no new zoning regulations are needed at this time. In fact, Needham has several new and recently amended by-laws in place (Site Plan Review; revised business district dimensions) that provide considerable review and approval powers that have yet to be fully realized. The recent adoption of these measures, along with the relatively small number of downtown projects that have come under their purview, have not yet allowed Needham full use of the tools that already exist to manage growth.

The focus of the study consequently shifted from specific zoning changes to a broader look at Needham Center and the type of planning tools necessary to address both current problems and future objectives. The findings from the analyses, along with discussions at Task Force meetings and public meetings, revealed that the problems facing Needham Center are not so much related to overdevelopment and the need to control it, as they are to design/aesthetics, parking, traffic flow, and marketing. Although the products which the study would produce were revised based on the findings, the focus on Chestnut Street was maintained as the study confirmed that the problems confronting this area are distinct from those in the heart of downtown.

# DEVELOPMENT OF GOALS FOR NEEDHAM CENTER

The development of a plan for Needham Center began with the solicitation of goals for Needham Center from the Task Force. Task Force members were asked to provide ideas or visions for the future of Needham Center. An initial list of goals was compiled from individual contributions, and provided the basis for discussion of a plan by the Task Force (see Appendix for the original list ). This list was also used to elicit comments and reactions during a public meeting. Based on these discussions, the original list of goals was revised to reflect the consensus of the Task Force. The goals have been divided into six categories: overall goals; and goals related to zoning, street improvements, urban design, parking and marketing.

The goals, in addition to guiding the products of this study, are also an expression of wider community aspirations for the future of Needham Center. They reflect the issues that are, and will continue to be, important to the health and vitality of downtown. Hence, future decisions, actions, and planning efforts should refer back to the goals presented below.

The Task Force goals are discussed briefly below, with particular attention called to certain goals that pertain specifically to the future of Needham Center, as distinct from those goals that have been accomplished by this study.

## Overall goals

O Sustain and support the economic potential of Needham Center as a local downtown shopping and business district.

Perhaps the most important goal for Needham Center, this goal reflects both where Needham Center has come from and where it can go. The renewed interest in downtown has positive potential, and is an interest that should be cultivated and sustained. Needham Center should not be allowed to stagnate. Decisions and actions that pertain to Needham Center should all reflect this overriding concern that Needham Center remain a vital local shopping and business district.

This goal also reflects a strong feeling that Needham Center continue to be a <u>local</u> downtown, serving primarily local needs. An influx of activity with a regional draw is not desirable, from either a character or a traffic point of view. The attractiveness of Needham Center for new retail may bring pressure for other than local uses, so Needham should look carefully at the mix of retail that exists and the type that is desired (see Marketing Goals below).

o Identify ways to improve the physical character of Needham Center (especially Chestnut Street), and to create an attractive pedestrian environment.

The physical character of Needham Center has long been of particular concern to the community, as evidenced by the Needham Center Urban Design Study (1980), and a subsequent street planting program. The Needham Center Land Use, Zoning and Traffic Study has continued efforts to identify ways to improve Needham Center aesthetically, developing specific recommendations and a concept plan for Chestnut Street.

Long-term beautification of Needham Center will require continued review of any new development, taking advantage of any opportunities to influence the physical character. The establishment of a design review bylaw (being proposed at Town Meeting) will help to assure that the Town continues to make improvements that will help create an attractive pedestrian environment in Needham Center.

 Protect the residential community abutting the business district from traffic and business spillover.

Needham Center is bordered on all sides by residential neighborhoods. These neighborhoods enjoy the convenience of close proximity to downtown, but they also occasionally suffer from the effects of living close to a business and shopping destination point. That is, they experience traffic seeking short-cuts to and from downtown destinations on less busy residential streets. Maintaining the character of these neighborhoods, which is diminished by through traffic, is important to the residents that live there and also to the overall image of downtown. Needham Center can and should be a good neighbor. Continued attention to maintaining a compatible relationship between the residential community and downtown activity is critical to the future of Needham Center.

#### Zoning Goals

o Evaluate the need for zoning revisions (i.e., several distinct business zones and their specific dimensional and use requirements) in Needham Center, and make recommendations based on the analysis.

Needham Center may benefit from establishment of a new business zoning district which could reflect the qualities that make downtown different from other business districts in Needham. The Town should consider developing a specific downtown zoning district, not so much to prevent overdevelopment, as to encourage a Needham Center that is distinct from other business

areas. Further discussion of a variety of zoning tools which reflect this goal is provided in the Implementation Plan in Chapter 4.

# Street and Traffic Improvement Goals

o Develop a street improvement plan for Chestnut Street.

Chestnut Street has been the subject of recent development proposals, as well as recent new development. Changes on Chantout Street have raised concerns in the Town about traffic and safety operations, and this study addressed some of the issues. A street improvement plan was developed to address specific problems such as traffic flow and lack of curbing on Chestnut Street. Carrying out this plan, which sets the stage for improving conditions on Chestnut Street, will need to be preceded by a street survey and final design of all street improvements. Tackling the street improvements on Chestnut Street should be a priority for the Town, as these improvements can go a long way towards alleviating problems that characterize the area. The recommendations for Chestnut Street are presented in Chapter 5.

 Develop recommendations to improve traffic flow in Needham Center.

The improvement plan for Chestnut Street cannot be developed without consideration of traffic flow on Needham Center. Both the Center and Chestnut Street are integral parts of the same traffic and roadway network. As recognized in this study, however, problems in Needham Center are different from those along Chestnut Street. Likewise, the range of potential solutions is different. Nevertheless, the improvements for both need to be coordinated in order to assure that they are effective in both cases.

Needham Center is more fully developed and there are greater restrictions on the development of roadway improvements. Buildings are built to the edge of the sidewalk, leaving no room for physical expansion of roadways. Improvements must concentrate on more efficient utilization of the facilities already in place. These possible improvements must be balanced against the competing needs of pedestrians and for parking. Along Chestnut Street there is more space available and a greater opportunity to more fully satisfy the competing needs of various groups. Although the opportunities are greater, constraints still exist which also serve to limit the range of options available. In both cases, the design of improvements must be consistent with and supportive of the land use goals for Chestnut Street and Needham Center.

# Urban and Landscape Design Goals

o Maintain the Town Hall and Common as the focal point of the Center.

The Town Hall and Town Common are proud landmarks in Needham Center. Future activity in downtown should continue to reinforce the prominence of these features.

 Encourage continuity of design in Needham Center, especially on Chestnut Street.

Elaborating on the desire to improve the physical character of Needham Center (see above), this goal underlines the desire that Needham Center look like a coherent downtown, where individual buildings, landscaping and street elements work together to create a unified whole. New construction should be reviewed with the intent of achieving the greatest possible harmony of design.

#### Parking Goals

o Provide guidance for the on-going discussion about parking in Needham Center by identifying the role of parking requirements in future development.

Parking, even more than physical character, has been an issue which has generated much discussion and several studies over the years. Although this study was not designed to develop a solution to the parking problem, the land use and potential development analysis concluded that parking is one of the factors, and in some instances the most important factor, constraining new development in Needham Center. In general, parking requirements cannot be met on each individual parcel and still allow for enough land to build an economically viable and aesthetically pleasing building.

A comprehensive review of the parking needs in Needham Center, and a creative analysis of all possible ways of addressing the parking needs should be included in planning efforts for the future of Needham Center. See the discussion of these issues in the Implementation Plan in Chapter 4.

#### Marketing Goals

 Encourage small, locally owned, specialty businesses with a service orientation.

Future marketing efforts for Needham Center should focus on encouraging locally owned businesses, including some small specialty, or "upscale", businesses to complement the existing mix of retail. Independent, non-chain

stores should be encouraged, and a healthy mix of stores, whose marketing lines complement each other should also be sought.

## Planning Tools

Based on the above goals, and discussions with the Task Force, Planning Board, and public, the following products were developed; these products are presented separately in the following two chapters.

- 1. An Implementation Plan which outlines measures to guide growth in Needham Center.
- 2. Landscape and street improvement recommendations for Chestnut Street to help correct traffic operation problems and to help improve the pedestrian environment south of Oak Street.

# NEEDHAM CENTER IMPLEMENTATION PLAN

#### Introduction

The Implementation Plan which is described below and outlined in the accompanying schedule, comprises a set of activities which should be undertaken over the next three years in order to achieve the previously described goals for Needham Center. The activities fall into five basic categories: zoning; street and traffic improvements; urban and landscape design; parking; and marketing. Some of the activities are directed very specifically at Needham Center or Chestnut Street, others more broadly address land use issues in Needham.

Included in the Implementation Plan is the identification of the responsible party for carrying out the work required. Most of the tasks fall to Needham's public bodies or staff (some of these may require outside consultant services as well), but commitment is also required from the Needham Business Association. The partnership of public and private action is crucial to achieving an active, healthy and handsome Needham Center. The cooperation of the business community is needed to create a positive business climate and to insure that business activities do not impinge in a negative way on the abutting residential neighborhoods.

The schedule which is proposed for the Implementation Plan is fairly ambitious. It has been designed this way because the success of the Plan is contingent on having a sufficient level of ongoing activity to generate interest and enthusiasm. If each piece of the Plan occurs separately over a long stretch of time, there will never be enough activity to create a sense that the Town and the business community are "making things happen."

Two of the appendices attached to this report address very important Needham Center issues which have been looked at by other Town committees and consultants. These are Design Guidelines for downtown, and parking for downtown. The information and recommendations made in the Needham Center Urban Design Study (Needham Downtown Design Committee and Metropolitan Area Planning Council, 1980) and the Needham Parking Feasibility Study (Vanasse Hangen Brustlin, Inc., 1987) should be reviewed and modified where necessary, and then incorporated into the Implementation Plan for Needham Center.

Progress with the Implementation Plan should be monitored by the Planning Board and Planning Director, and a brief annual report on progress should be made to the citizens of Needham. It is important to provide some public information on the Implementation Plan to insure that progress is being made, and also, to keep interest alive and to maintain support for the continued viability and vitality of Needham Center.

Each task noted in the Implementation Plan schedule is described below. The identifying numbers correspond to those in the schedule, and are also used for cross-reference between different tasks in the Implementation Plan.

#### Responsible Party Key

BoS Board of Selectmen

DRB Design Review Board

NBA Needham Business Association

NDPW Needham Department of Public Works

NPD Needham Police Department

PB Planning Board

PC Parking Facilities Study Committee

WFA Wallace, Floyd, Associates Inc. Consultant Team

Work Item

Respond. 3/88 6/88 1/89 1/90 6/90 Party

#### ZONING

#### Design Review

1. Use Chestnut Street design recommendations during siteplan review

PB/WFA X

2. Add building design review to the zoning bylaw

DRB/PB

Х

#### Business Zones

3. Investigate creation of different business zones for zoning bylaw.

PB

X

4. Develop zoning language for different business zones.\*

PВ

Х

#### Use definitions

- 4A. Consider different use tables for different business zones.
- 4B. Consider permitting apartments in some business areas.
- 4C. Consider means to limit fast food and convenience stores.
- 4D. Consider prohibiting drive-thru operations.

### Dimensional Regulations

- 4E. Review front setbacks.
- 4F. Review rear and side setbacks.
- 4G. Review minimum lot size requirements.
- \* May require outside consultants

### Responsible Party Key

BoS Board of Selectmen

DRB Design Review Board

NBA Needham Business Association

NDPW Needham Department of Public Works

NPD Needham Police Department

PB Planning Board

PC Parking Facilities Study Committee

WFA Wallace, Floyd, Associates Inc. Consultant Team

Work Item

Respond. 3/88 6/88 1/89 1/90 6/90 Party

#### Operational Regulations

- 4H. Consider requiring ground floor retail use.
- 4I. Consider requiring separate entrances for each retail occupant.
- 4J. Consider requiring principal entrances to be on principal streets.

#### Parking Regulations

- 4K. Consider different locational parking requirements in different business zones.
- 4L. Consider modification of parking space requirements in different zones.

# Clarity of Zoning Regulations

5. Modify Chestnut Street height limit to 2 1/2 stories.

РВ Х

Clarify FAR/percent coverage in zoning code.

PB

X

7. Review business district site design requirements in detail.

PΒ

X

8. Review use of parking special permits, consider setting guidelines.

PB

X

 Review parking regulations for consistency with long term goals.\*

PB/PC

X

<sup>\*</sup> May require outside consultants

### Responsible Party Key

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Wor	k Item	Respond. Party	3/88	6/88	1/89	1/90	6/9
STR	EET AND TRAFFIC IMPROVEMENTS						
10.	Prepare concept design for Chestnut Street improvements.	WFA	X				
11.	Develop intersection improvement recommendations.	WFA	X				
12.	Identify potential funding sources for street improvements.	WFA	X				
13.	Continue efforts to reopen High Rock Bridge.	BoS,NDPW	X				
14.	Initiate discussions with Mass. DPW about Chestnut Street improvements.	BoS,NDPW		Х			
15.	Work with Needham Police to improve traffic enforcement.	BoS,NDPW		X			
16.	Coordinate Chestnut Street design with Hospital parking study.	WFA, PB	X	X			
17.	Develop coordination plan for on-street loading activities throughout Downtown.	NDPW,NPD			X		
18.	Prepare final design for Chestnut Street improvements.	NDPW			X		
19.	Prepare signalization plans for all downtown intersections.*	NDPW			X		
20.	Construct Chestnut Street improvements.	BoS, NDPW					Х
URBA	AN AND LANDSCAPE DESIGN						
21.	Prepare landscape and urban design concept plan for Chestnut Street.	WFA	Х				
* Ma	ay require outside consultants						

# Responsible Party Key

BoS Board of Selectmen

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PB Planning Board

PC Parking Facilities Study Committee

WFA Wallace, Floyd, Associates Inc. Consultant Team

Wor	k Item	Respond. Party	3/88	6/88	1/89	1/90	6/90
22.	Initiate discussions with utilities to place lines underground.	BoS	X				
23.	Investigate funding strategies for streetscape improvements.	WFA	X				
24.	Prepare final design for Chestnut Street improvements. (See Task 18)	NDPW			X		
25.	Construct landscape improvements on Chestnut Street.	A11		x			
26.	Prepare refined urban design/landscape plan for Town Center.*	РВ				X	
27.	Develop storefront improvement program, provide tech. assistance to businesses.*	PB,NBA				X	
28.	Develop a Needham Center sign plan for all public and private signs.*	DRB,NBA					X
PARI	KING						
29.	Continue investigation of parking issues and solutions.	PC	X				
30.	Provide tech. assistance to businesses and employers with parking problems.	PB		X			
MARI	CETING						
31.	Initiate annual storefront design awards program.	NBA		X			
32.	Develop unified promotional tools for Needham Center retailers.	NBA			X		
33.	Develop ongoing program to attract new retailers to Needham Center.	NBA				X	

### ZONING

Zoning is the primary tool of land use planning for communities. It describes in a regulatory manner the basic, underlying set of opportunities and restrictions on the use of all land. Also built into the Needham Zoning Bylaw are a set of more refined tools for regulating land use. These include such regulations as definitions of allowable densities, requirements for providing parking, and requirements for undergoing site plan review.

The Needham Center Study has concluded that no major re-zoning of Needham Center (downtown or Chestnut Street) is needed at this point in time. However, a number of broad zoning issues should be addressed during the next three years, and these are put forward as an important piece of the Implementation Plan. The zoning recommendations fall into three categories: design review; business zones; and clarity of implementation.

### Design Review

Design and site plan review mechanisms are becoming a basic tool of zoning in the United States. They provide communities with the opportunity to address a fairly broad range of environmental and aesthetic issues with developers.

1. Use the design recommendations for Chestnut Street as part of site plan review for Chestnut Street projects.

Responsible Party: Planning Board

Wallace, Floyd, Associates Inc.

Date of Completion: March 1988

A set of Chestnut Street roadway improvement and landscape design recommendations were developed as part of this Needham Center Study. A detailed description and drawings of these recommendations are included in Chapter 5 of this report. Use of these recommendations during the site plan review process will help to insure that new developments on Chestnut Street will have a positive impact on the quality of the streetscape and pedestrian environment.

2. Add building design review to the Zoning Bylaw.

Responsible Party: Design Review Board

Planning Board

Date of Completion: 1988 Town Meeting

Under the aegis of the Design Review Study Committee, an ordinance has been written that will require all exterior building changes, or new construction of commercial

structures to come before an advisory Design Review Board (DRB) which will make recommendations about design quality. The DRB will also review all sign permits.

#### Business Zones

The Needham Zoning Bylaw presently has only one business district which is used throughout the Town. The creation of several different types of business districts with different use and dimensional characteristics would provide an opportunity to more logically control the development of Needham's different business areas. There are many tasks associated with developing different business zones. For the purposes of the Implementation Plan they are simply divided into two major tasks, each of which is described in some detail below.

3. Investigate the creation of different Business Zones and determine their number and basic characteristics.

Responsible Party: Planning Board

Date of Completion: January 1989

The initial task is to determine what type and how many different business zones would be reasonable for Needham (these might be a downtown zone, a secondary zone [i.e. Chestnut Street and Highland Avenue], and a neighborhood business zone); and their broad use definitions.

This first phase of work would entail all major policy decisions regarding different business zones. The product of this task should be a policy statement adopted by the Planning Board which outlines the expected content of new business zoning for the Town, and a map showing where those different district are located.

4. <u>Develop detailed zoning language for different business zones.</u>

Responsible Party: Planning Board

Date of Completion: June 1990

When considering the creation of different business zones for Needham the critical task will be the development of zoning language that reflects the desired character and function of each different business zone. The detailed zoning language can be divided into four categories: use definitions; dimensional regulations; operational regulations; and parking regulations. Presented below are an initial list of issues which will need to be considered in the development of different business districts for Needham.

## Use Definitions

# 4A. Consider different use tables for different business zones.

It is possible that a wider variety of uses may be appropriate for some business zones than for others, and that different use tables should be developed for each business zone. For example, office use may be a permitted use in the downtown and secondary business districts, but require a special permit in a neighborhood business district. Or, gas stations could be permitted in the secondary and neighborhood business districts, but not be allowed downtown. The set of uses should be tailored to the character of each different business zone.

# 4B. Consider permitting apartment use in some business areas.

Apartments currently are not permitted within business districts. Allowance of some apartments (perhaps by special permit) in some business areas, such as Needham Center, would increase street activity after the business day has ended and thus create new opportunities for shopping and restaurant business by extending the "daily life" of downtown into the evening. Adding some residents to downtown would also increase the market base for Needham Center businesses.

In addition to their economic benefits, "downtown" apartments would offer a new housing alternative for Needham residents. In particular, there is likely to be a growing demand among elderly Needham residents for housing options which minimize maintenance requirements and which are located within walking distance of shops and services.

# 4C. Consider means to limit fast food and convenience store proliferation.

Fast food restaurants and convenience stores are major generators of heavy traffic with large numbers of entering and exiting moves. These activities can hinder smooth traffic flow and detract from the pedestrian environment. Limiting this activity, particularly within Needham Center, will help ensure that these uses are located appropriately and do not have a negative impact on the character of downtown.

Some of the regulatory measures available to control these uses include such measures as special licensing requirements, special parking requirements, and setting of a minimum distance between similar uses. New categories in the Use Regulations for fast food establishments and

convenience stores could call out these uses for special permit review, and allow specific conditions to be tailored and attached to these uses distinct from other "eat in or take out restaurants" and "retail establishments" (the existing categories applicable to these uses under current zoning).

# 4D. Consider prohibiting drive-thru operations.

Similar to fast food restaurants and convenience stores, drive-thru operations generate significant traffic volumes. Such uses also do not contribute to the pedestrian environment. It may be appropriate to allow drive-thru operations in only some (or none) of the Town's business zones. Drive-thru's seem particularly inappropriate for downtown Needham.

## Dimensional Regulations

### 4E. Review front setbacks.

The definition of the distance which buildings are set back from the front property line is an important design tool by which different streetscapes are created. This aspect of zoning's dimensional regulations should be tailored to areas where specific effects are desired.

In downtown Needham, where retail activity is strongly desired, and an existing design vernacular is in place, the zoning code should require that new buildings contribute to that sense of built form. The front setback should be consistent with that which exists, and an unbroken building line should be created.

In contrast to areas where it is desirable to have buildings lining the street edge, there may be areas where retail uses are not dominant (e.g. some parts of Chestnut Street) and where it may be appropriate to require a greater front setback and significant site landscaping. This more "suburban" feel has already been established on Chestnut Street in association with some of the newer office buildings.

Review of the front setback requirements, with specific goals in mind, will eliminate situations where the setback area is wider than a comfortable sidewalk width, or where the area is too small to accommodate attractive landscaping. Likewise, careful consideration must be given to parcel depth, in order to insure that required setbacks do not significantly (and inadvertently) affect the development potential of parcels.

## 4F. Review rear and side setbacks.

There are currently no rear or side setback requirements in business districts, with the exception of the 50 foot buffer zone that is required between business and residential uses in areas where business zoning has been modified since April 1952.

Just as the front setback should be tailored to specific business zones, so should side and rear yard requirements. In the downtown area, it may be appropriate to have a zero side yard requirement (to assure an unbroken building line along the street), but to require some rear yard setback. In other business zones it may be appropriate to have minimum setbacks for both side and rear yards. These setbacks could be used to assure that any possible future office or retail development is sufficiently buffered from the adjacent neighborhood, and also to create a "suburban" feel for any new development.

## 4G. Review minimum lot size requirements.

The current minimum lot size for business districts is 10,000 square feet. Currently 40 percent of the lots in Needham Center are under this minimum requirement; and only 22% are over 20,000 square feet in size. In order to diminish the likelihood of a fragmented development pattern, and to increase the probability that development will be of sufficient scale to encourage below grade or structured parking, it may be desirable to increase the minimum lot size. Increasing the minimum lot size requirement could put a greater premium on those few larger lots which already exist because development would be otherwise limited to those situations where an owner could acquire several adjacent lots in order to create an adequately sized development parcel.

#### Operational Regulations

# 4H. Consider requiring retail use on the ground floor in some areas.

Pedestrian activity is an important component of a healthy downtown and a healthy retail environment. While the majority of Needham Center buildings currently include ground floor retail use, the market for new office space suggests that the potential exists for non-retail use on the ground floor. Maintaining the continuity of ground floor retail use is important to the vitality of Needham Center. In order to encourage pedestrian activity, and to insure that there is sufficient density and variety of retail activity in the downtown area, it may be appropriate to require that all new buildings in the downtown business area have retail uses on their ground floors.

# 41. Consider requiring separate entrances for each retail $\frac{\text{occupant.}}{\text{occupant.}}$

It is suggested that where several retail uses are accommodated within a single structure, each store be required to have an individual public entrance onto the abutting street.

As discussed above, pedestrian activity is a vital component of a healthy shopping district. To insure that new retail activities contribute to the vitality of the street, it is important to direct pedestrians outside, rather than have them concentrate their activities indoors (such as within a mall). By requiring each separately leased retail space within a building to have an entrance onto the street, pedestrian activity will be directed to the public domain.

# 4J. Consider requiring that principal building entrances be located on principal streets.

Where a parcel abuts Chestnut Street, Great Plain Avenue, Highland Avenue, or Chapel Street, development of that parcel should be designed such that all principal business entrances face those streets. This regulation is also directed toward the issue of encouraging new development to contribute to the "life" of the street. The principal building entrance, or front of a building, would be required to face the center of activity, thus ensuring that "lifeless/faceless" walls (i.e. sides of buildings) do not detract from the overall "face" of downtown. This requirement would also direct pedestrians toward the main streets, keeping activity visible. In addition, this regulation would prohibit interior strip malls where retail activities open onto internal private streets or driveways.

#### Parking

# 4K. Consider different locational requirements for parking in different business zones.

The location of parking associated with a business can significantly affect the aesthetics of both the building site and the neighborhood around the building. This is particularly true where parking for businesses in close proximity to each other lacks coordination and order. Of particular concern in Needham Center is the placement of parking in front of buildings in an area that should be designed to be appealing to pedestrians.

Different types of businesses, and different business districts, have different parking needs. Regulations guiding the placement of parking, and the landscape standards which parking lots should meet, should be developed in concert with aesthetic and functional objectives for each business district.

# 4L. Consider modification of parking space requirements for different business areas.

An important issue to be resolved in the development of Needham Center is how much, and in what location, parking space is to be supplied. If all parking must be provided by each developer on individual development sites, the prospects for any downtown redevelopment are severely limited. The small size of parcels, and their constrained boundaries (due to the location of the MBTA tracks, zoning boundaries and other natural features), will prevent new development from occurring if all parking must be provided on-site.

Serious consideration should be given to creating a more flexible zoning bylaw which allows off-site provision of parking or shared use of parking facilities in some parts of Needham. Several Massachusetts communities (e.g. Belmont) have enacted bylaws for their central business districts which allow developers to contribute to a general parking fund which will be used to construct public, shared-use parking facilities. This approach may be an appropriate one to explore for downtown Needham.

The intent of a revised parking bylaw is not to reduce the number of spaces provided, but rather to find some means of providing parking other than individual parking lots on every site.

## Clarity of Zoning Regulations

# 5. Modify Chestnut Street height limit to 2 1/2 stories.

Responsible Party: Planning Board

Date of Completion: June 1988

In order to clarify the height limits recently enacted for Chestnut Street, and to insure that new building designs can incorporate pitched roofs, the planning board has undertaken the modification of the height limit for Chestnut Street to allow buildings to be 2 1/2 stories in height, with two occupied floors.

# 6. Clarify FAR/percent coverage regulations in zoning code.

Responsible Party: Planning Board

Date of Completion: January 1990

In Section 4.4 of the Needham Zoning Bylaw, Dimensional Requirements for Business Districts, two different methods are used for determining allowable building sizes: the percent coverage method; and the Floor Area Ratio (FAR)

method (adopted in 1986). The latter applies to all buildings on property within 500 feet of Town Hall; the former applies to all other properties in the business district.

The practicality of continuing to use two methods in one district should be reviewed, with consideration given to adopting an FAR method for all business districts.

## 7. Review business district site design requirements in detail.

Responsible Party: Planning Board

Date of Completion: June 1990 (or later if

appropriate)

Needham's Site Plan Review Bylaw (enacted in 1985) has provided the Town with a new means of reviewing development proposals. In conjunction with more traditional zoning tools (such as use and dimensional requirements), site plan review can be an effective tool for managing growth and for shaping projects to achieve stated goals.

The influence of site plan review on Needham's new downtown development has not yet been fully tested, as few projects have been proposed for Needham Center since the bylaw was adopted (the major exception to this is the Village Square project which has come under significant review). Once the bylaw has been put into use several times, it should be reviewed in the context of the goals outlined in this study, and modifications should be made if necessary.

# 8. Review use of parking special permits - consider setting guidelines.

Responsible Party: Planning Board

Date of Completion: January 1990

The issuance of parking special permits on a case-by-case basis, as is currently the practice, may not adequately address the cumulative effect of waiving parking requirements for businesses, especially those which are in close proximity to one another. Several individual special permits in one area (i.e. Chestnut Street) may result in undesirable effects such as excessive pavement areas or impaired pedestrian and/or traffic flow. This is of particular concern when small lot size translates into a building surrounded by pavement to accommodate parking.

Guidelines for the issuance of special permits would establish a framework for considering such applications. This framework should encourage a comprehensive look at the parking situation for an area, not just for an individual site.

## 9. Review parking regulations for consistency with long term goals.

Responsible Party:

Planning Board/Parking Facilities

Study Committee

Date of Completion:

January 1990

Parking requirements, in conjunction with existing parcel sizes and height regulations in Needham Center, are a major limiting factor for development. New development, including additions or rehabilitations, must bring the entire site into compliance with Needham's revised (1985/1986) parking requirements. In most of Needham Center, parcel size, a two story height limit and the need to provide all parking on-site, effectively rule out parcel redevelopment.

While it is not suggested that Needham strongly encourage development, consideration should be given to the need to set regulations that allow some development to occur. As described under item 4L above, to the extent that parking requirements are unintentionally constraining new development in Needham Center, and existing parking facilities are considered inadequate, the Planning Board should review the Town's parking regulations for their contribution to, and consistency with, goals for Needham Center. These goals include maintaining the economic viability of Needham Center by allowing some change to occur. The Town, in conjunction with considering the appropriateness of a special zoning district for downtown, must determine whether specific parking policies (i.e., incorporating the use of municipal parking facilities) for Needham Center might better serve the long range goals for downtown.

#### STREET AND TRAFFIC IMPROVEMENTS

Traffic operations on Chestnut Street have raised questions about safety and efficiency among both residents and business operators in Needham. The tasks described below will serve to allow improvements to occur in both of these areas.

### 10. Prepare concept design for Chestnut Street improvements.

Responsible Party: Vanasse Hangen Brustlin, Inc.

Date of Completion: March 1988

A set of recommendations for roadway improvements have been prepared for Chestnut Street as part of this study. These recommendations are presented in the following chapter which contains a map and text detailing the recommendations.

### 11. Develop intersection improvement recommendations.

Responsible Party: Vanasse Hangen Brustlin, Inc.

Date of Completion: March 1988

As part of the development of recommendations for Chestnut Street improvements, the major intersections along Chestnut Street and in Needham Center were analyzed to identify potential improvements that are needed now or that might be needed in the future. Existing levels of service were determined from observed traffic volumes and future levels of service were determined for projected volumes for the year 2000. These projected volumes were based on anticipated changes in land use along Chestnut Street and in Needham Center and expected growth in areawide traffic. Improvements considered included signal phasing and timing changes, parking restrictions, and changes in land utilization.

## 12. Identify potential funding sources for street improvements.

Responsible Party: Vanasse Hangen Brustlin, Inc.

Date of Completion: March 1988

Also included in this study was an investigation of available sources of funding for roadway improvements. Appendix G contains a description of programs which might be appropriate for upgrading Chestnut Street and should be pursued in more detail.

## 13. Continue efforts to reopen High Rock Bridge.

Responsible Party:

Board of Selectmen, Needham Department of Public Works

Date of Completion:

March 1988

Currently efforts are underway to reopen the High Rock bridge across the railroad tracks. It is anticipated at this time that the bridge will reopen in the summer of 1988. A major concern with the reopening of the bridge is the hope that it will reduce traffic that is currently diverted along Oak Street and Chestnut Street. As part of this study, a license plate trace of vehicles using Oak Street and Chestnut Street was conducted to determine the potential reduction in traffic with the reopening of the bridge. The results of the trace are provided in detail in Appendix C and indicate the potential for some reduction in traffic, especially in the evening peak hour.

# 14. Initiate discussions with Massachusetts DPW about Chestnut Street improvements.

Responsible Party:

Board of Selectmen, Needham Department of Public Works

Date of Completion: June 1988

The first step to be taken in the process to secure State support for improvements to Chestnut Street is for the Town to write a letter to the Massachusetts Department of Public Works (MDPW) describing the problem and requesting their assistance in addressing the problem. This letter should be signed by the Town's chief elected official and should be addressed to the District Highway Engineer, with copies to the Chief Engineer at the MDPW and to the Metropolitan Area Planning Council (MAPC). The request may be a simple one page letter. Because of the intense competition for funds, however, the MDPW is better able to respond in a timely fashion to requests that are well documented and reflect a commitment on the part of the community. The request should be filed as early as possible, but the Town should undertake survey and design work as soon as practical in order to expedite the review and funding process.

### 15. Work with Needham Police to improve traffic enforcement.

Responsible Party:

Board of Selectmen, Needham Department of Public Works

Date of Completion:

June 1988

This item refers to enforcement of truck bans, and limits on hours or track use of residential streets.

# 16. Coordinate Chestnut Street design with Hospital Parking $\overline{\text{Study.}}$

Responsible Party: Wallace, Floyd, Associates Inc.,

Planning Board

Date of Completion: March - June 1988

The Wallace, Floyd, Associates Inc. consultant team has spoken with the consultants working with Glover Hospital. Within the context of concept level design studies, the two efforts have been coordinated. As one or both of the efforts moves into the final design stage, further coordination should be carried out.

# 17. Develop coordination plan for on-street loading activities throughout Downtown.

Responsible Party: Needham Department of Public

Works, Needham Police Department

Date of Completion: January 1989

Some of the traffic problems which are presently experienced on Great Plain Avenue and particularly along Chestnut Street, are the result of on-street loading activities. While it would not be realistic to enforce a ban on all such activities, it may be feasible to limit their hours or coordinate the loading periods of adjacent businesses and thus reduce congestion caused by delivery vehicles.

### 18. Prepare final design for Chestnut Street improvements.

Responsible Party: Needham Department of Public Works

Date of Completion: January 1989

The first step toward this goal is the performance of a street survey to determine all right-of-way lines, the location of all utilities, and the documentation of all existing conditions. Once a survey has been completed, the final engineering design of the street can commence. Final design will require decisions about a number of different items including the following:

- Utility locations (whether they are all to be placed underground).
- Negotiation with property owners about closing of continuous curb cuts. While this could be done "as of right" by the Town, the consequences to some businesses could be important, thus the Town will want to work closely with individual owners to develop appropriate solutions.

- o The precise pavement markings to be used on the street (in particular whether to use a two-lane or a three-lane layout on Chestnut Street).
- O The extent of landscape and streetscape improvements to be made, including street tree planting, grass or shrub planting, street lighting, and provision of street furniture.
- 19. Prepare signalization plans for all downtown intersections.

Responsible Party: Needham Department of Public Works

Date of Completion: January 1989

Plans for any signal phasing and timing changes should be prepared to allow programming for any equipment changes which may be necessary. The most immediate need is for a new controller at the Chestnut Street/Great Plain Avenue/Chapel Street intersection in order to allow an advance left turn arrow on Chestnut Street northbound. As part of this effort, institution of peak period parking restrictions should be considered and, if approved, appropriate signing should be prepared and put in place.

### 20. Construct Chestnut Street improvements.

Responsible Party: Board of Selectmen, Needham

Department of Public Works

Date of Completion: June 1990

The State procedure for approving funding for roadway improvements is a lengthy process which consists of several steps. Completion of the construction of the Chestnut Street improvements in a timely fashion will require a continuing and closely coordinated effort by the Town. The preparation of a street survey, filing of an application with the MDPW, and preparation of partial plans and a final plan must all be completed in a timely fashion. Delay in accomplishing any of these major efforts will delay the ultimate completion of the improvements.

#### URBAN AND LANDSCAPE DESIGN

The physical appearance of Needham Center is important to the continued success of the downtown, both as a Town Center which Needham residents can be proud of, and as a place to do business where stores can thrive and a varied array of retail opportunities and services can be provided for Town residents. Improving the physical appearance of Needham Center was a concern that was expressed throughout this study, by residents and business people alike. There was widespread concern expressed that Needham Center does not meet the positive expectations of its users.

A number of plans for improving Needham Center's appearance have been prepared over the years; one of them is attached as an Appendix to this report. The steps outlined below provide a starting point for implementing positive changes in Needham Center. As with other plans, this one can only be of help if the impetus that now exists for change is acted on by the citizens and businesspeople of Needham.

21. Prepare a landscape and urban design concept plan for Chestnut Street.

Responsible Party: Wallace, Floyd, Associates Inc.

Date of Completion: March 1988

A landscape and urban design concept plan for Chestnut Street has been developed for Chestnut Street as part of this study. It is described in detail in the following chapter.

22. Initiate discussions with utilities to place utility lines underground.

Responsible Party: Board of Selectmen

Date of Completion: March 1988

Inquiry into the possibility and the cost of placing the utilities on Chestnut Street underground has been undertaken by the Needham Board of Selectmen. Discussion with the utilities, as well as with other town boards, departments, and local residents, should continue and a plan for paying for and carrying out this goal developed.

23. <u>Investigate funding strategies for streetscape improvements.</u>

Responsible Party: Wallace, Floyd, Associates Inc.;

Planning Board

Date of Completion: March 1988

Financial assistance for streetscape improvements may be available through state and/or federal funding programs. Possible programs are described in Appendix G to this report.

24. Prepare final design for Chestnut Street public improvements.

See Item 18 above.

25. Construct landscape improvements on Chestnut Street.

Responsible Party:

A11

Date of Completion:

Ongoing

Landscape improvements (i.e. tree plantings, landscape strips adjacent to sidewalks) should be carried out on an ongoing basis. A priority list for construction may be helpful in targeting certain areas for treatment. Although many landscape improvements should be constructed in conjunction with the street improvements (to avoid doing them twice), areas where improvements could be made now, independent of and unaffected by any potential street improvements, should be identified as initial projects.

26. Prepare refined urban design/landscape plan for Town Center.

Responsible Party:

Planning Board

Date of Completion:

January 1990

To complement the landscape plan developed for Chestnut Street as part of this study, a similar urban design/landscape plan for the downtown center should be developed. Much of the groundwork for this plan has been laid by the Needham Center Urban Design Study. With an updating of conditions in this report, an incorporation of goals mentioned in this study, and a full-scale concept plan drawn-up, Needham could complete the urban design/landscape "picture" for Needham Center.

27. Develop storefront improvement program and provide technical assistance to businesses.

Responsible Party:

Planning Board; Needham Business

Association

Date of Completion:

January 1990

Storefronts are traditionally the "face" of a downtown, and their condition conveys a message about the community. Collective efforts to improve the way a downtown looks can be successful, especially when carried out in an organized

fashion. State funds are available to assist communities in "putting on a new face." The Main Street Program provides funds to hire a downtown program manager, funds for consultant assistance, and various forms of technical assistance (see Appendix G).

The Planning Board and the Needham Business Association should work together to determine if they are interested in working with the Main Street Program, or if they want to tackle this issue in some other way. By the beginning of 1990, there should be a program in place, and businesses should have a place to go for assistance in initiating storefront improvements.

28. Develop a Needham Center sign plan for all public and private signs.

Responsible Party:

Design Review Board; Needham

Business Association

Date of Completion: June 1990

The coordination of both public and private signs in Needham Center could reduce some of the cluttered look that now exists, especially on Chestnut Street where signs compete for drivers' attention, obscure each other and through general clutter actually eliminate their own usefulness. This inelegant situation could be alleviated through the development of a comprehensive sign plan.

The sign plan could provide guidelines for height, size, location, and distance between signs. The guidelines could also require sign review to assure that those signs that are posted are needed, that they serve the stated need, and that they conform to the established placement and aesthetic guidelines.

#### **PARKING**

As discussed in the previous chapter, and in a number of the tasks described above, parking problems are an important issue in Needham Center. The Needham Center Study which this report describes did not have parking as one of its mandates. However, the Implementation Plan would be incomplete without a Parking Section.

29. Continue investigation of parking issues and solutions.

Responsible Party: Park

Parking Committee

Date of Completion:

Ongoing

The Parking Committee for Needham Center should take under consideration the many options for Needham Center, and most

importantly, should suggest implementable solutions for solving the problems. A concerted and wide-ranging public involvement process should be carried out so that the residents of Needham understand the costs and benefits of both undertaking a municipal parking policy and program, and of <u>not</u> undertaking a parking solution.

30. Provide technical assistance to businesses and employers with parking problems.

Responsible Party: Planning Board

Date of Completion: June 1988 and Ongoing

While some of the larger Town Center parking problems require policy decisions by the Town, a number of smaller, individual issues could be helped by an ongoing technical assistance effort. The kinds of services which the Planning Board could consider offering include: hosting discussions between neighboring property owners about achieving efficiencies of use between parking lots; providing businesses with the names of engineers or landscape architects who might be able to design more efficient parking layouts for their properties; and providing employers with information about public transit services that could reduce parking needs or help them to encourage higher vehicle occupancies (in particular, CARAVAN is a publicly funded agency which designs ride-sharing programs for private businesses).

#### MARKETING

Maintaining the economic potential of Needham Center as a local downtown shopping and business district can be accomplished, in part, by developing a strategy for marketing downtown. Needham Center is an attractive place to shop, with a mix of local stores that cater to basic shopping needs and offer an alternative to the "could be anywhere" feeling that characterizes many indoor regional shopping malls. Promoting downtown Needham as a viable shopping alternative, and as an exciting place to conduct business, will benefit existing businesses as well as help to attract new businesses which can lend variety to the mix and thereby benefit all. Some specific marketing suggestions are discussed below.

31. Initiate annual storefront design awards program.

Responsible Party: Needham Business Association

Date of Completion: June 1988

To encourage attractive, and changing, storefront window displays the Needham Business Association should consider establishing a design awards program for window displays.

Many merchants do not realize the vast marketing potential that exists in a storefront window, hence many window displays remain in place long after their usefulness has expired. Changing window displays that are creative encourage "window shopping" which in turn can bring new business. An awards program would provide an incentive for involving as many merchants as possible; a collective effort to "dress up" windows would have a cumulative positive aesthetic effect for all of downtown.

## 32. Develop unified promotional tools for Needham Center retailers.

Responsible Party: Needham Business Association

Date of Completion: January 1989

Needham Center is an attractive downtown, with a variety of local stores accommodating most basic shopping needs. Special efforts to promote Needham Center as a convenient, attractive and practical place to shop would go a long way towards letting residents know that many of their shopping needs can be met right downtown. A variety of marketing tools are available for Needham Center. These might include:

- o A promotional brochure distributed to Needham residents which focuses on Needham Center as a whole.
- o Coupons for a number of Needham Center businesses distributed together, perhaps in the local newspapers.
- A sidewalk sale day with plenty of advertising and some activities provided by merchants.
- o Unified advertising campaigns.

In addition to drawing attention and business to Needham Center, coordinated promotion of downtown will also encourage a supportive relationship between businesses which can benefit all.

# 33. Develop an ongoing program for attracting new retailers to Needham Center.

Responsible Party: Needham Business Association

Date of Completion: January 1990

The marketing analysis for this study concluded that a strong demand for retail exists in Needham. The challenge for the community is one of rationing the demand and developing the mix of retail uses that local residents desire. Determining the type of retail that residents would like (e.g. FROM GOALS LIST), and developing a program

### CHESTNUT STREET PLAN

Chestnut Street has two distinct zones which have different pedestrian and landscape environments (Figure 3). Upper Chestnut Street, closest to downtown, feels more like an extension of downtown. Upper Chestnut Street is a comfortable pedestrian environment, with sidewalks, landscaping, defined driveway curb cuts, parking that is generally to the side or behind buildings, and underground utilities. This comfortable feeling begins to break down south of Oak Street. Lower Chestnut Street has a maze of utility poles, has ill-defined curb cuts, very little landscaping, few sidewalks, and parking that is often in front of buildings encroaching on the pedestrian walkway.

To address these problems and to guide Chestnut Street into the future, a set of roadway and landscape recommendations was developed. The concept plan provided in this report illustrates these improvements (see Figure 4). The recommendations are designed to create a Chestnut Street where traffic operates smoothly and which complements downtown Needham Center, creates a comfortable and safe pedestrian environment, and provides an attractive and uncongested entrance into downtown for traffic coming from the south.

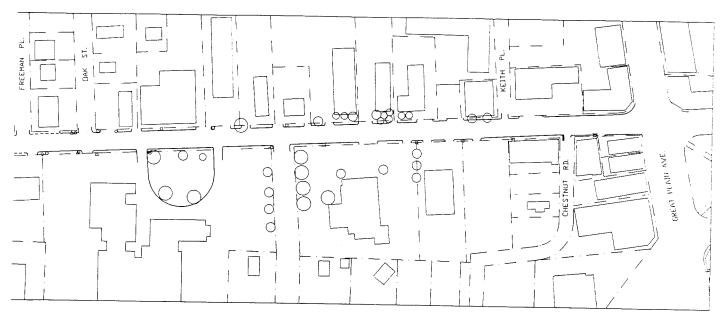
Implementation of these recommendations will require collective and coordinated efforts by the Town, individual property owners, and the State. Chestnut Street is a designated state highway south of Marsh Road, so roadway improvements will depend on working with the State DPW. Landscape improvements will involve working with private property owners to achieve the best possible pedestrian environment.

The specific roadway and landscape improvement recommendations are presented below in two parts. Although discussed separately, the two components have been combined on the concept plan to illustrate the interrelation of the pieces, and the comprehensive picture that they are designed to achieve. Construction of the improvements is not anticipated to occur all at once. A realistic program for carrying out the plan should be developed by the Town, beginning with a survey of Chestnut Street to determine the actual layout and right-of-way. Based on this survey, the concept plan developed by this study should be refined, and specific steps established for implementation. Initial steps should include carrying out landscaping improvements that can be made independent of and uneffected by roadway improvements (to avoid doing them twice). By starting with these improvements, the Town can be actively working towards implementing the plan while coordinating roadway improvements with the State.

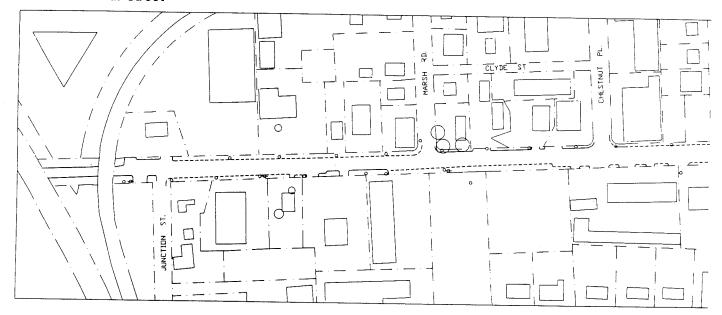
Figure: 3

### **Existing Chestnut Street**

### Upper Chestnut Street



## Lower Chestnut Street



LEGEND	
	- Curbed Areas
	Property Lines
	- Paved Areas (no curb)
	Buildings
¤	Lignt Pole
0	Utility Pole
Δ	Signal Light
<del>-0-</del>	Fire Hydrant
◉	Man Hole
$\circ$	Trees
Scale:	1"=100"

### Chestnut Street Landscape Design Recommendations

The landscape design recommendations (presented below) have been divided into three sections: General Guidelines; Guidelines for Existing Properties; and Guidelines for New Development. The General Guidelines address the overall plan for Chestnut Street, establishing the basic landscape goals. The Guidelines for Existing Properties are the specific objectives to be achieved through working with individual property owners. Since little new development which would provide an opportunity for constructing the improvements is anticipated on Chestnut Street, working with existing property owners will be critical to accomplishing the plan. Several "Typical Street Section" drawings have been provided to illustrate typical existing conditions on Chestnut Street and proposed improvements for such sites (see Figures 5-8). In the event that a new building is proposed for Chestnut Street, the Guidelines for New Development will assist the Town, when reviewing a proposal, in achieving the improvements that will contribute to the overall implementation of the Chestnut Street Plan. Figure 9 illustrates alternative setback situations for new development and associated landscaping options.

#### Landscape Plan: General Guidelines

- Establish a continuous sidewalk with adjacent landscape strip, and install curbing, to create a legible pedestrian corridor on both sides of Chestnut Street. (Within the 50 foot right-of-way there will be a 38 foot street with a six foot sidewalk/landscape strip on each side of the street.)
- 2. In order to create a landscape strip along the full length of Chestnut Street, try to combine 2 feet of public land with 2-3 feet of private land adjacent to the sidewalk to yield a buffer strip of 4-5 feet in front of buildings and parking areas (as shown on the schematic landscape plan).
- 3. Provide street trees adjacent to public property and where possible at major parking lots. The purpose of planting trees is not to establish a tree-lined boulevard, but rather to provide spatial clarity by defining a pedestrian corridor and providing a visual edge to the street.
- 4. Install additional benches on public property.
- 5. Eliminate unnecessary signs along street.
- 6. Relocate all utilities underground.

### Roadway Improvement Recommendations

The traffic portion of the Street Improvement and Landscape Plan for Chestnut Street has been developed based on the traffic findings summarized earlier. The plan is conceptual in nature and does not represent a final engineering design. Preparation of a final design can only be accomplished after a base survey of the street has been made. Such a survey will identify the exact location of property lines, pavement, utility poles, signs, traffic signals, and curbing. This information will allow the preparation of plans delineating the way in which the existing street will be altered. Based on actual conditions identified in the survey, modifications to the plan may be necessary.

Listed below are the recommendations for street improvements which are illustrated in the accompanying Street Improvement and Landscape Design Plan. These recommendations are presented in three categories. The first category is roadway improvements and involves physical improvements to the roadway itself, signal changes, and parking restrictions. The second category includes changes related to pedestrians and the third category deals with the provision of appropriate signing and pavement markings. The recommendations are based upon and address several findings noted earlier including: varying pavement width, an excessive number and size of driveway openings, lack of curbing, and utility poles near or in the roadway and driveway openings.

The Needham Department of Public Works has prepared a plan for widening Chestnut Street from Junction Street to south of the railroad bridge. The street plan presented here is intended to be compatible with that plan and provide for a suitable transition from the wider section north of Junction Street to the narrow section under the railroad bridge. The final design of the Chestnut Street improvements should be coordinated with the previously developed plans for the adjacent section of roadway.

#### Roadway Improvements

- 1. Widen pavement to a consistent 38 foot width between Oak Street and Junction Street to provide one 19 foot travel lane in each direction separated by a double solid yellow center line.
- Widen pavement to a 28 foot width under the railroad bridge
- 3. Remove or relocate all utility poles

- 4. Provide curbing on both sides of a street
  - o Reduce number of driveway openings
  - o Establish standard driveway opening of 24 feet for two-way drives
  - o Encourage shared driveways and parking areas between adjacent parcels where practical.
- 5. Provide no on-street parking along Chestnut Street south of existing parking
- 6. Consider an alternative three lane cross-section with a 12 foot center left turn lane and one 13 foot travel lane in each direction (would require a waiver of typical 40 foot width for three lane sections from MDPW).
- 7. Investigate widening pavement to increase lane widths on Chestnut Street approaches to Oak Street intersection (street survey necessary to determine if sufficient right-of-way exists)
- 8. Restrict parking during peak periods on the east side of Chestnut Street south of Great Plain Avenue and on the west side of Highland Avenue north of Chapel Street.
- 9. Investigate peak period on-street parking restrictions on other approaches to downtown intersections.
- 10. Revise signal phasing at the intersection of Chestnut Street, Great Plain Avenue, and Chapel Street to provide lead green to northbound Chestnut Street.
- 11. Consider installation of a traffic control signal at the fire station to permit stopping of Chestnut Street traffic in order to allow emergency egress of fire equipment.

#### Pedestrians

- 1. Provide additional crosswalks at selected intersection corners (avoid mid-block locations)
- 2. Consider increasing the length of the pedestrian phase at downtown locations from 16 to 18 seconds
- 3. For future conditions, consider removal of exclusive pedestrian phases and provide for concurrent phasing in order to provide greater traffic capacity.

### Signing and Pavement Markings

- 1. Remove existing signing on Chestnut Street northbound directing Route 135 traffic via Oak Street
- Provide pavement markings indicating lane utilization on all multi-lane approaches at signalized locations
- 3. Install pedestrian crossing signs in advance of crosswalks
- 4. Install "road narrows" warning signs north of railroad bridge

Figure: 5

## Typical Street Section where there are Shallow Building Setbacks

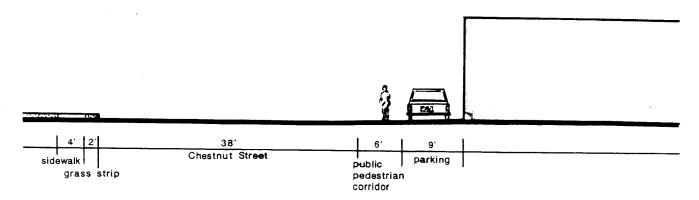
#### **EXISTING**

Parking: Parallel to building between sidewalk and building

Building Setback: 8 feet

Curb: None

Sidewalk: Undefined



#### **PROPOSED**

Parking: No parking between sidewalk and building

Curb: Install new curb that is continuous except for driveway openings

Sidewalk: Establish 4 foot sidewalk

Landscaping: 2 foot grass strip, Encourage private landscaping between sidewalk and

building where possible

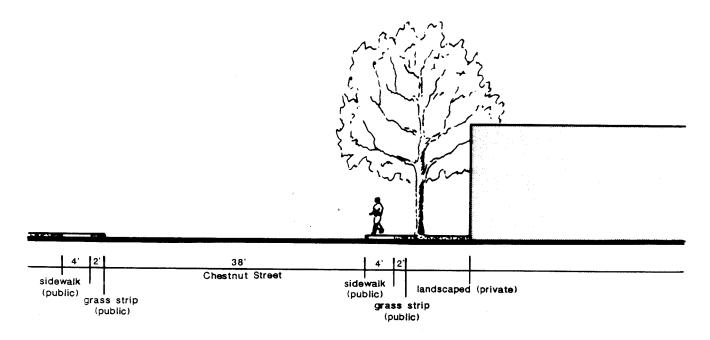


Figure: 6

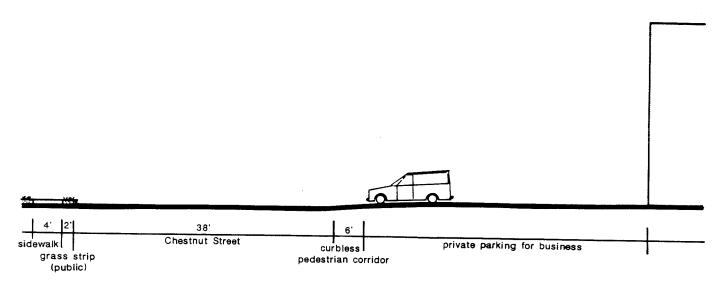
# Typical Street Section with Sidewalks Adjacent to Parking Lots

### **EXISTING**

Parking: Undefined edge of parking lot

Curb: None

Sidewalk: Undefined



#### PROPOSED

Parking: Defined by physical barriers

Curb: Install new curb that is continuous except for driveway openings

Sidewalk: Establish 4 foot sidewalk

Landscaping: 5 foot landscape strip (2 feet public and 3 feet private) for tree and shrub plantings

to define street edge and pedestrian corridor

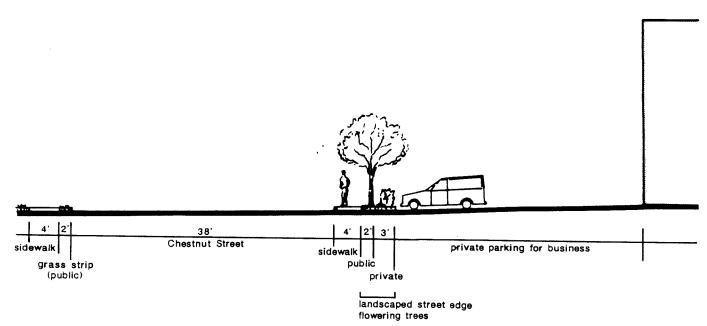


Figure: 7

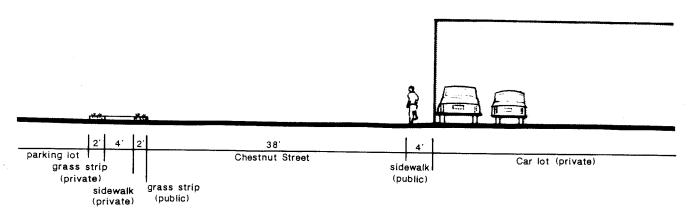
## Typical Street Section where there are Minimal Building Setbacks

#### EXISTING

Parking: Directly adjacent to building

Curb: None; curb cut full length of parking lot

Sidewalk: Undefined



#### PROPOSED

Parking: Directly adjacent to building but with additional 4 foot landscape buffer at street edge of parking lot

Curb: Install curb that is continuous except for driveway openings

Sidewalk: Establish 4 foot sidewalk

Landscaping: Landscape improvements on private property to separate parking and pedestrian corridor; requires 4 feet of parking lot for landscaping

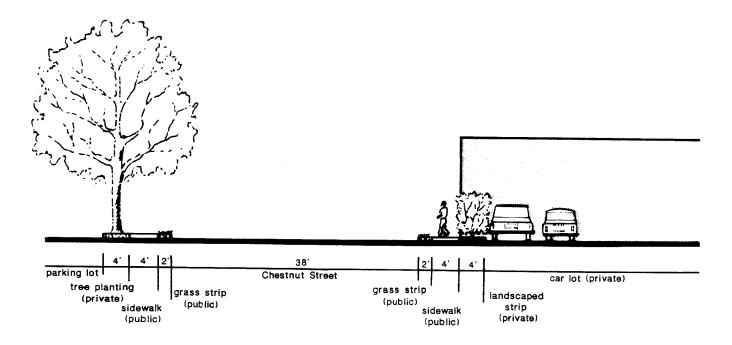


Figure: 8

## Proposed Improvements for Large Parking Lots

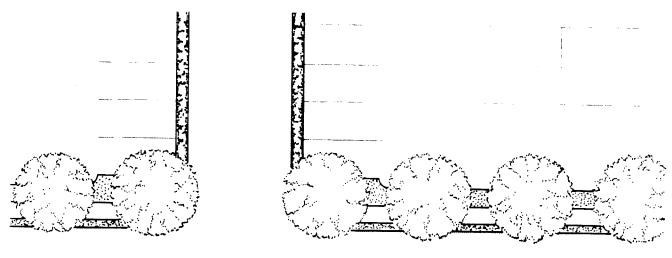
#### PROPOSED

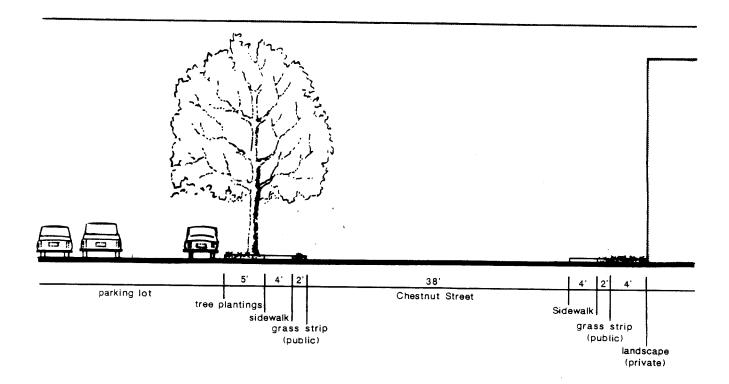
Parking: Orient parking layout parallel to street to reduce number of cars fronting on street

Curb: Install continuous curb except where driveway openings occur

Sidewalk: Establish 4 foot sidewalk

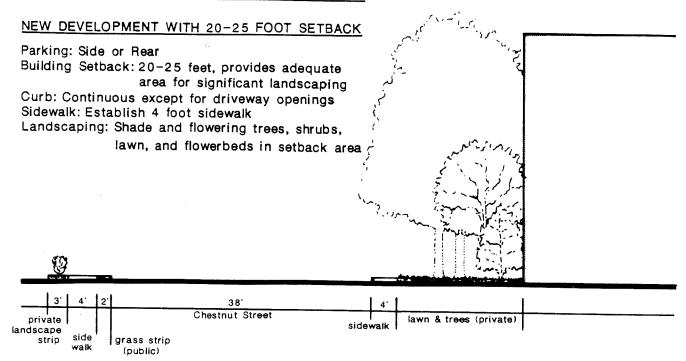
Landscaping: Street tree planting to define pedestrian corridor and to buffer views from sidewalk and street of the parking lot







## Alternative New Development Setbacks



### NEW DEVELOPMENT WITH 5 FOOT SETBACK

Parking: Side or Rear

Building Setback: 5 feet; establishes street edge with wide sidewalk appropriate to retail use

Curb: Continuous except for driveway openings

Sidewalk: Establish 9 foot sidewalk

Landscaping: Grass, shrubs, and flowerbeds set into 5 foot setback where appropriate in relation to display windows and building entrances

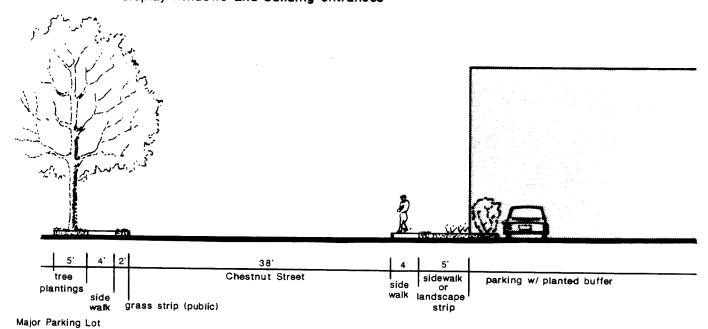


Figure: 4
Chestnut Street Roadway Improvement and Landscape Design Recommendations

