CITY OF DOVER, NEW HAMPSHIRE MASTER PLAN

2007 Update to the Land Use Analysis Chapter

It's About Context

LAND USE ANALYSIS CHAPTER

It's About Context

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CITY OF DOVER

CERTIFICATE OF ADOPTION

Agenda Item# : 4A

Adopting: Land Use Analysis Chapter of the Master Plan

WHEREAS: The Planning Board and Planning Department, have written and completed the Land Use Analysis chapter of the Master Plan in accordance with RSA 674:3, and

WHEREAS: A concerted effort was undertaken to include participation by the general public through the use public meetings, a citizen working group, visual preference survey, a telephone survey, and a citizen steering committee; and

WHEREAS: A formal public hearing on said Chapter, in accordance with RSA 675:6, was held before the Planning Board on October 23, 2007; and

WHEREAS: The Dover Planning Board voted on November 13, 2007 to adopt the Land Use Analysis Chapter;

NOW, THEREFORE, BE IT RESOLVED BY DOVER PLANNING BOARD THAT:

1. The Land Use Analysis Chapter of the Master Plan is adopted and certified in accordance with RSA 674:4;

2. The Planning Board Chairman is authorized to sign and label as "adopted" the final reproduced documents of said Chapter; and

3. The Planning Department is authorized to forward a certified copy of the adopted Chapter to the Office of Energy and Planning, as required by RSA 675:9.

AUTHORIZATION

Approved as to Legal Form: Allan B. Krans, Sr.
City Attorney

Ronald A. Cole,
Planning Board Chair

Date of Adoption: November 13 2007

Members in Favor: 9

Members in Opposed: 0

CITY OF DOVER	CERTIFICATE OF ADOPTION
	Agenda Item# : 4A
	Adopting: Land Use Analysis Chapter of the Master Plan

BACKGROUND MATERIAL:

According to New Hampshire Planning and Land Use Regulation 647:2, the Master Plan is intended to clearly and practically propose the best and most appropriate future development of the City under the jurisdiction of the Planning Board, to aid the Board in designing ordinances, and to guide the Board in the performance of its other duties in a manner that achieves the principles of smart growth, sound planning and wise resource protection.

The Master Plan is a set of statements about land use and development principles for the municipality with accompanying maps, diagrams, charts and descriptions to give legal standing to the implementation of ordinance and other measures of the Planning Board. A Master Plan should lay out a physical plan which takes into account social and economic values describing how, why, when and where the community should build, rebuild and preserve. This physical plan should be comprehensive in nature, and have a long range vision – 10 years is the average. The master plan shall include, at a minimum, the following required sections:

- A vision section
- A land use section

The master plan may also include the following sections:

• A transportation section	• A cultural and historic resources section
• A community facilities section	• A regional concern section
• An economic development section	• A neighborhood plan section
• A natural resources section	• A community design section
• A natural hazards section	• A housing section
• A recreation section	• An implementation
• A utility and public service section	

Dover has completed Master Plans in 1963, 1978, 1988 and most recently in 1998. It is the intention of this plan to be revised again in 2012, which will put the community on a 10 year revision cycle that is in line with the release of US Census Bureau data. The Land Use Chapter will then be revised in 2022, 2032, etc.

The Master Plan process involves 8 steps:

- Collect data about the community
- Analyze the data
- Define a community vision
- Evaluate alternative development scenarios
- Select a preferred alternative
- Implement recommendations
- Monitor the plan
- Amend the plan

By updating the 1998 Master Plan, this chapter effectively completes a full cycle of activity for the previous Master Plan and starts the cycle for the next plan.

Exhibits

NUMBER	EXHIBIT TITLE	PAGE	SOURCE
1	Dover in the Region	8	SRPC
2	Projected Population	9	NH OEP
3	Population Change	10	NH OEP
4	Distribution of Age - Dover	11	DemographicsNow!
5	Distribution of Age - Region	11	DemographicsNow!
6	Dwelling Units by Type '86 – '06	12	City
7	Population and Household Change – Dover	13	DemographicsNow!
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9	Household Income – Dover	14	DemographicsNow!
10	Household Income – Region	15	DemographicsNow!
11	Residential Development By Year	16	City
12	Construction Value – Non-residential	17	City
13	Building Square Footage Approved	18	City
14	2005 Wage/Employment Information	19	SRPC
15	Classification of Workers	20	SRPC
16	Educational Attainment – Dover	20	DemographicsNow!
17	Educational Attainment – Region	21	DemographicsNow!
18	Retail Sales Within 25 Miles of Dover	22	SRPC
19	Acreage Rezoned Since 1998	25	City
20	Existing Land Uses – 2007	28	City
21	Lots Created By Year	30	City
22	Developable Vacant Land – 2007	31	City
23	Land By Zone Type – 2007	32	City
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26	Build Out Analysis Results	45	City

SRPC = Strafford Regional Planning Commission

NH OEP = New Hampshire Office of Energy and Planning

City = Department of Planning and Community Development

Section

1

Goals and Objectives

Dover is shaped by the way we preserve and protect our resources, capitalize on our strengths and improve on our weaknesses. The Master Plan is the ultimate vehicle to capture the vision of the community. The recommendations are made by us as residents, it is our choice of where and how to build and the decisions we make as we live here.

Introduction

The place we know as the City of Dover will become a different place in the course of our lifetimes. In some small way, it may even be different tomorrow. By evaluating the past and making recommendations toward the future, we can ensure that the community develops and grows in a managed and meaningful way.

This plan is a statement of what the Dover community hopes to be, and how it might get there.

ICON KEY
Demographic information
Survey result
Build Out exercise
Check the Appendix

To increase the usability of this plan, the "icon key" at left was produced. The icons will appear throughout the chapter to help readers identify concepts and ideas that will be used and explained. Furthermore, words in *italics* are defined at the end of the chapter.

The folder icon represents information gathered through demographic data gathering. The pencil icon represents information gathered by the committee through the use of the SpeakOut Dover! sessions, the telephone survey or the Visual Preference Survey. The computer icon represents information related to the build out analysis that was completed for the plan. Finally, the book icon indicates that there is further information available in an Appendix to this chapter.

History

Land is a community's most basic resource. The use of land determines, to a large extent, the character and quality of life within the community. The rate, location and type of growth and protection of unique features affect not only a community's physical appearance but also its need for public services and facilities. A municipality that plans wisely for its land use will be far better equipped to deal with future demands and problems. This Master Plan is Dover's

fundamental tool to help the City make sound decisions related to its development and economic health.

According to New Hampshire Planning and Land Use Regulation 647:2, The Master Plan is intended to clearly and practically propose the best and most appropriate future development of the City under the jurisdiction of the Planning Board, to aid the Board in designing ordinances that result in preserving and enhancing the unique quality of life and culture of New Hampshire, and to guide the Board in the performance of its other duties in a manner that achieves the principles of smart growth, sound planning and wise resource protection.

The Master Plan is a set of statements about land use and development principles for the municipality with accompanying exhibits (images, diagrams, charts) and descriptions to give legal standing to the implementation of ordinance and other measures of the Planning Board. A Master Plan should lay out a physical plan which takes into account social and economic values describing how, why, when and where the community should build, rebuild and preserve.

This physical plan should be comprehensive in nature, and have a long range vision – 10 years is the average. Dover has completed Master Plans in 1963, 1978, 1988 and most recently in 1998.

It is the intention of this plan to be revised again in 2012, which will put the community on a 10 year revision cycle that is in line with the release of US Census Bureau data. The Land Use Chapter will then be revised in 2022, 2032, etc.

As a community evolves so does its Master Plan. Dover's evolution has included a broadening of scope and more detailed chapters with each iteration. Not only does a Master Plan reflect a vision for the future, it also documents its past.

The Master Plan process involves 8 steps:

- Collect data about the community
- Analyze the data
- Define a community vision
- Evaluate alternative development scenarios
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SpeakOut Dover!

SPEAK OUT LOCATIONS AND DATES
1. Horne Street Elementary School | July 13, 2006
2. Dover Public Library | July 18, 2006
3. St. Thomas Aquinas High School | July 27, 2006
4. Garrison Elementary School | August 1, 2006
5. Strafford County Court House | August 10, 2006
6. St. Johns Methodist Church | August 16, 2006
7. City Hall | August 29, 2006

During the summer of 2006, the City of Dover sponsored a SpeakOut Dover series as part of a larger city-wide effort to foster citizen participation in setting directions for City government. Primarily conceived to allow citizen input into the master planning process, SpeakOut Dover became an opportunity for the citizens of Dover to communicate their thoughts and concerns about the community and to offer ideas and visions for what they hope to see Dover become in the future. This SpeakOut Dover series was modeled after a similar effort undertaken by the City in 1995 as part of a public participation process in preparation of an update of the City's Master Plan.

More than 220 people took part in the seven Speak Out Dover sessions that began in July and ended in August. Of those who came to the Speak Out Dover sessions, 56 completed a written questionnaire designed to provide City government with a greater understanding of what it is the citizens of Dover value in the community and what changes they would like to see. In addition, the questionnaire was placed on the City web-site to allow those citizens that could not attend one of the sessions to be able to complete the same questionnaire. Approximately 27 citizens took the time to download the questionnaire off the web-site, fill it out and submit it to the Planning Department.

The seven SpeakOut Dover sessions were held at various locations around the City that were accessible to the general public. These locations were specifically selected in order to insure that all of the residents were given an opportunity to participate in a neighborhood setting. One session was held in each of the City's six wards and the seventh session was held at City Hall. The last SpeakOut Dover session was one last opportunity for any citizen to answer the questions and provide their input on the future of the City. Additionally, the final session was used to summarize the results from the first six Speak Out Dover sessions held up to that point.

The SpeakOut Dover sessions generated many diverse interests and concerns that were broadly representative of the various neighborhoods of Dover. SpeakOut Dover participants were guided in their discussions by a moderator that prompted them to consider topics that fell into five major categories:

(1) Neighborhood strengths and needs for improvement;

(2) What people value about the City of Dover and how it can improve;

(3) The needs of families and how government can meet those needs;

(4) The reasons why people volunteer for community service and what it would take to become more active;

(5) What people's vision is for the kind of community they would like to see Dover become in the future?

A report summarizing the responses in each of these five categories from all seven of the SpeakOut Dover sessions was completed in the fall of 2006, and is enclosed in the Appendix of this document.

Visual Preference Survey

CATEGORIES
Residential : 24 Slides
Commercial: 42 Slides
Industrial: 18 slides
Streetscape: 18 Slides

A *visual preference survey* uses images and simulations to help people focus on how they would like to see future development occur.

The Visual Preference Survey (VPS) was administered at the McConnell Center on Saturday, May 12, 2007, by the Master Plan Committee. Participants rated individual images in four categories based on how appropriate they felt it would be to promote that pattern or design in Dover.

The process consisted of five sessions of the survey. Participants reviewed 102 slides categorized into Residential, Commercial, Industrial and Streetscape categories. The survey took approximately 30 minutes to complete and was based on participants viewing a slide and then circling their reaction on a scale of -3 to +3. Average and Median results were calculated as part of the results.

Telephone Survey

The City of Dover hired the University of New Hampshire Survey Center to complete a Master Plan Telephone Survey of a random sampling of Dover citizens. The telephone survey was conducted during the second week of June, 2007. A total of 411 surveys were successfully completed. The survey contained about 50 questions and took approximately 10 to 15 minutes to complete on the telephone. The questions in the survey were developed by a local sub-committee with the assistance of the staff of the UNH Survey Center.

The survey provided an opportunity for citizens to express their opinions on a variety of topics including the quality of municipal services, economic development, growth, and transportation. Residents were also asked several demographic questions so that the results can be cross-tabbed by factors such as age, education level, income, and the ward they reside in.

The results of the telephone survey will be used to help formulate the recommendations of each of the chapters of the Dover Master Plan. The survey is a crucial scientifically accurate component of the public participation process to encourage citizen involvement. This survey

follows the City's successful SpeakOut Dover sessions held in each ward of the City during the summer of 2006. A similar telephone survey was completed in 1995 as part of the previous Master Plan update.

Vision Statement

A City with an emerging urban vibrancy guided by a small town sense of community.

Goals and Objectives

I. To be an attractive place where people live, work, and recreate.

II. To encourage neighborhoods to build a sense of community.

III. To preserve and respect the rural elements of the city.

IV. To promote a vibrant downtown with diverse uses.

V. To be a City that offers diversity of housing types and price ranges.

VI. To create and maintain a safe, clean and aesthetically pleasing natural and man-made environment.

VII. To achieve economic viability by attracting quality job and investment opportunities that promotes economic development throughout the City.

VIII. To develop and redevelop land respecting the surrounding context and the environment.

IX. To encourage sustainable growth that is sensitive to environmental issues and minimizes energy consumption.

X. To investigate *contract zoning* for commercial development to ensure contextually and high quality developments.

Section

2

Existing Conditions

This section describes Dover in 2007and provide a baseline to use as the community moves forward.

From a demographic and economic perspective, Dover is central to the Portsmouth-Dover-Somersworth-Rochester corridor and is part of the larger Seacoast region of New Hampshire. The previous update to this chapter utilized a data center that became obsolete as a result of the 2000 census. In order to effectively compare Dover to surrounding communities, this chapter uses Strafford and Rockingham Counties for comparisons.

Information for this analysis was obtained from the following sources:

- City of Dover
    - Assessor's Office
    - Department of Planning and Community Development
- DemographicsNow (a private, third-party provider of detailed census data and forecasts)
- The New Hampshire Department of Employment Security
- The New Hampshire Office of Energy and Planning
- The U.S. Census Bureau
- Strafford Regional Planning Commission

Demographic Profile

The City of Dover is the county seat for Strafford County, which lies in southeastern New Hampshire, bordering the state of Maine. Dover is bisected by the Spaulding Turnpike (NH Route 16) which connects northern New Hampshire and the Seacoast region. Additionally, NH and US Routes 4 travel through Dover, as do Routes 155, 108 and 9.

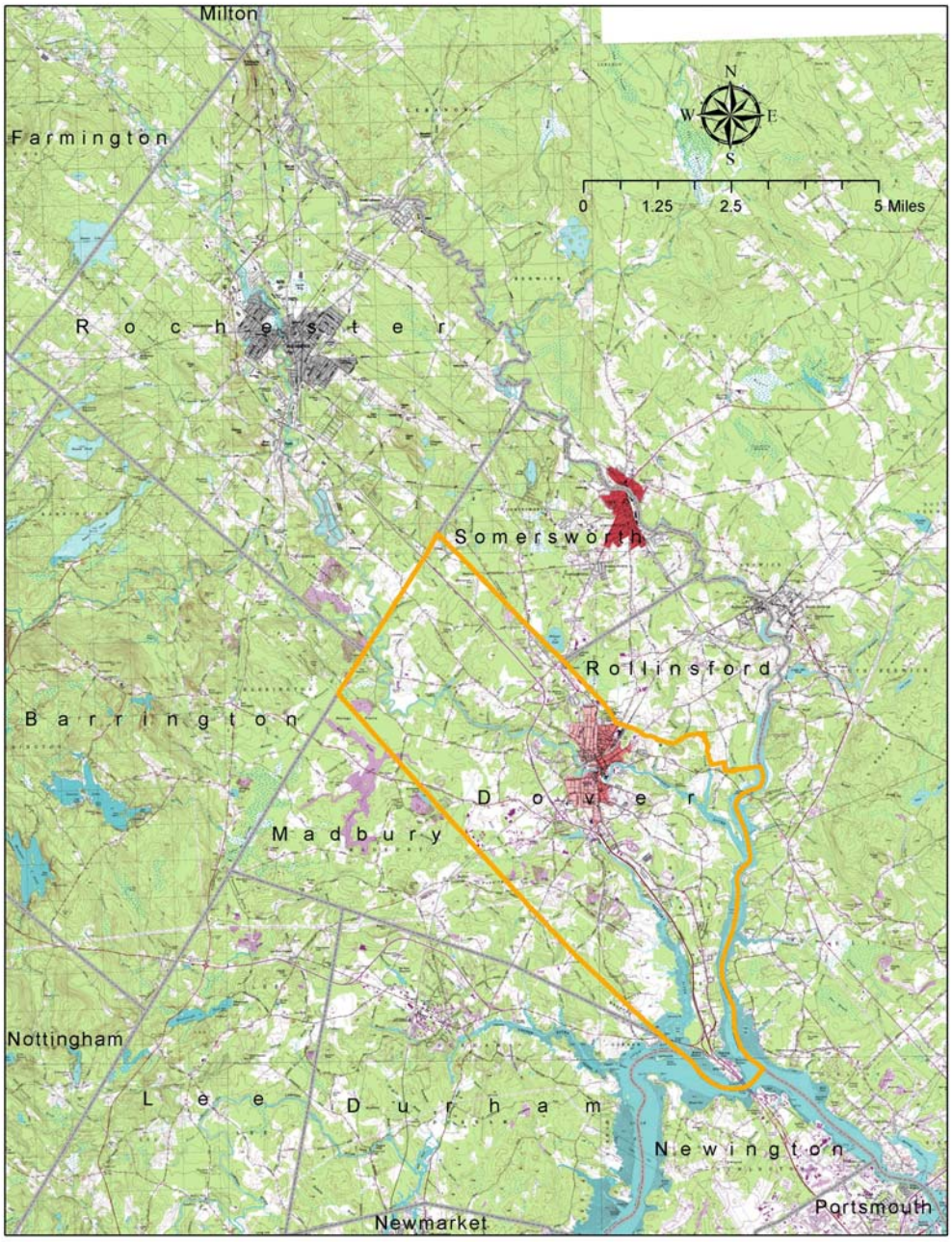


Exhibit 1Dover

Population

POPULATION	
2006:	29,068
2000:	26,884
1990:	25,042

Based on estimates provided by DemographicsNow, Dover had a 2006 population of 29,068, which represents an increase of 2,180 (8%) since 2000. This is slightly higher than the 7.3% growth rate that Dover experienced between 1990 and 2000. Dover remains the State's seventh most populated community, and the second most populated in Strafford County. After the 2000 census, the

New Hampshire Office of Energy and Planning projected that by 2010, Dover's population would be 29,310. Presuming that the current growth rate of 364 people a year will move to the city between 2007 and 2010, this number would be shy by 1207 people. Exhibit 1 shows the NH Office of Energy and Planning projected population growth trends and projections for the region. **For purposes of this Chapter update the following Communities are included when a reference to the region is made.**

Projected Population for Dover and surrounding region						
	2005	I---------- Projections ----------I				
Municipality	**Est.**	**2010**	**2015**	**2020**	**2025**	**2030**
Barrington	8,180	8,510	8,990	9,450	9,900	10,270
Dover	**28,730**	**29,310**	**29,970**	**30,450**	**30,900**	**31,250**
Durham	13,440	13,840	14,480	15,070	15,630	16,100
Farmington	6,710	6,390	7,280	7,610	7,930	8,190
Lee	4,440	4,580	4,830	5,080	5,310	5,510
Madbury	1,750	1,800	1,880	1,950	2,020	2,080
Middleton	1,710	1,770	1,880	1,990	2,090	2,170
Milton	4,370	4,530	4,790	5,040	5,270	5,460
New Durham	2,490	2,640	2,920	3,180	3,440	3,650
Rochester	30,680	31,560	32,930	34,290	35,560	36,650
Rollinsford	2,660	2,740	2,870	2,990	3,100	3,190
Somersworth	11,880	12,080	12,290	12,480	12,950	13,350
Strafford	3,990	4,180	4,400	4,620	4,830	5,010
Strafford County	**121,020**	**124,490**	**129,500**	**134,210**	**138,930**	**142,890**
Brookfield	670	730	800	860	910	950
Newmarket	9,310	9,530	9,820	10,050	10,280	10,500
Northwood	3,980	4,120	4,300	4,450	4,600	4,740
Nottingham	4,370	4,560	4,810	5,010	5,220	5,420
Wakefield	4,780	5,150	5,540	5,930	6,270	6,490
SRPC	**144,130**	**148,580**	**154,770**	**160,510**	**166,210**	**170,990**
Exeter	14,560	15,070	15,580	16,040	16,500	16,930
Hampton	15,390	15,960	16,670	17,240	17,820	18,360
Portsmouth	21,000	21,320	21,990	22,730	23,610	24,390
*Berwick, ME	7,072	7,777	8,486	9,159	-	-
*Kittery, ME	9,119	8,471	7,640	6,611	-	-
20 Mile Radius	**211,271**	**247,178**	**225,136**	**232,290**	**224,140**	**230,670**

*Exhibit 2 * Projection data only available up to the year 2020.*

While the growth projections above may seem high for Dover, many communities in the region are anticipating a similar population increase. Exhibit 2 documents the change in population for the New Hampshire communities within the region used for this plan. A quick scan of the table shows that the town of Middleton received a 44.5% population increase between 1990 and 2005. Dover realized a 14.7% increase ranking 9th out of 13 communities in Strafford County. Of all New Hampshire communities in the region, Dover ranked 16th out of 21 communities. In fact, of all the communities in the study region during the previous 20 years, all have seen annual population gains, except for the City of Portsmouth which has lost population each year.

Population Change 1990 - 2005

County	Municipality	Change - 1990-2005	% Change - 1990-2005	Rate of Change - 1990-2005
Strafford	Middleton	527.0	44.5%	35.1
	Strafford	1,020.0	34.4%	68.0
	Barrington	2,011.0	32.6%	134.1
	New Durham	514.0	26.0%	34.3
	Madbury	344.0	24.5%	22.9
	Milton	681.0	18.5%	45.4
	Farmington	971.0	16.9%	64.7
	Rochester	4,054.0	15.2%	270.3
	Dover	**3,686.0**	**14.7%**	**245.7**
	Durham	1,625.0	13.8%	108.3
	Somersworth	631.0	5.6%	42.1
	Rollinsford	17.0	0.6%	1.1
	Lee	707.0	0.2%	47.1
Carroll	Brookfield	153.0	29.5%	10.2
	Wakefield	1,727.0	56.5%	115.1
Rockingham	Exeter	2,082.0	16.7%	138.8
	Hampton	3,116.0	25.4%	207.7
	Newmarket	2,149.0	30.0%	143.3
	Northwood	858.0	27.5%	57.2
	Nottingham	1,432.0	48.7%	95.5
	Portsmouth	-4,930.0	-19.0%	-328.7

Exhibit 3

In 1990, the median age of the total population in the study area was 31.6, and in 2000, it was 35.5. The median age in 2006 was 37.1 and it is predicted to change in five years to 38.5 years. In 2006, females represented 52.0% of the population with a median age of 38.4 and males represented 48.0% of the population with a median age of 35.9 years. In 2006, the most prominent age group in this geography is age 25 to 34 years. The age group least represented in this geography is 15 to 19 years.

For the region, the 1990 median age of the total population was 31.5, and in 2000, it was 36.3. The median age in 2006 was 38.8 and it is predicted to change in five years to 40.5 years. In 2006, females represented 51.4% of the population with a median age of 39.8 and males represented 48.7% of the population with a median age of 37.9 years. In 2006, the most prominent age group in this geography is age 45 to 54 years. The age group least represented in this geography is 0 to 4 years.

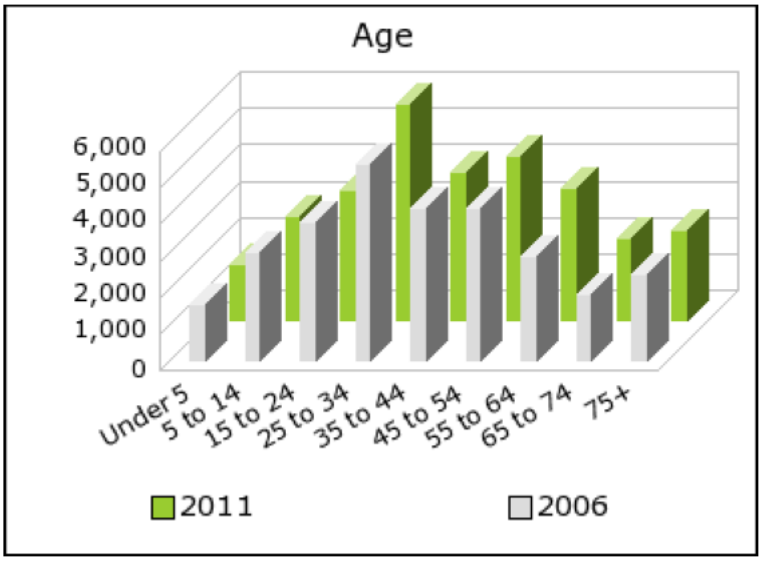


Exhibit 4: Distribution of Ages in Dover

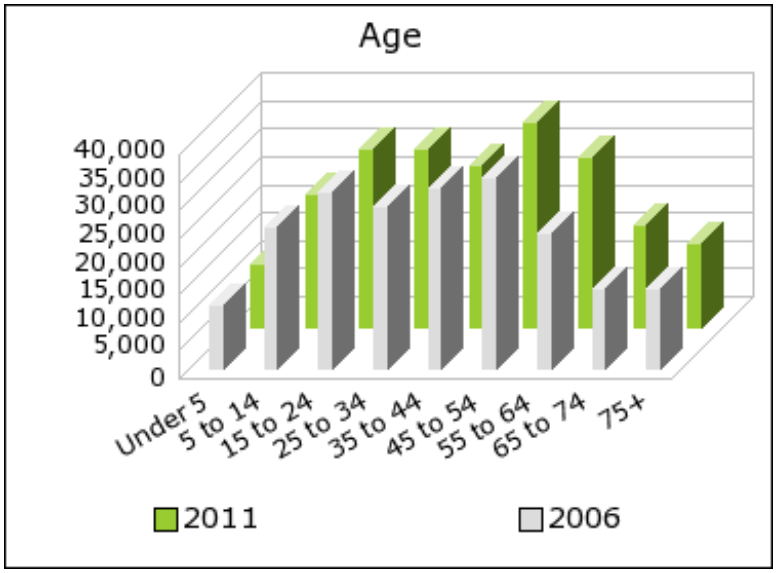


Exhibit 5: Distribution of Ages in the region

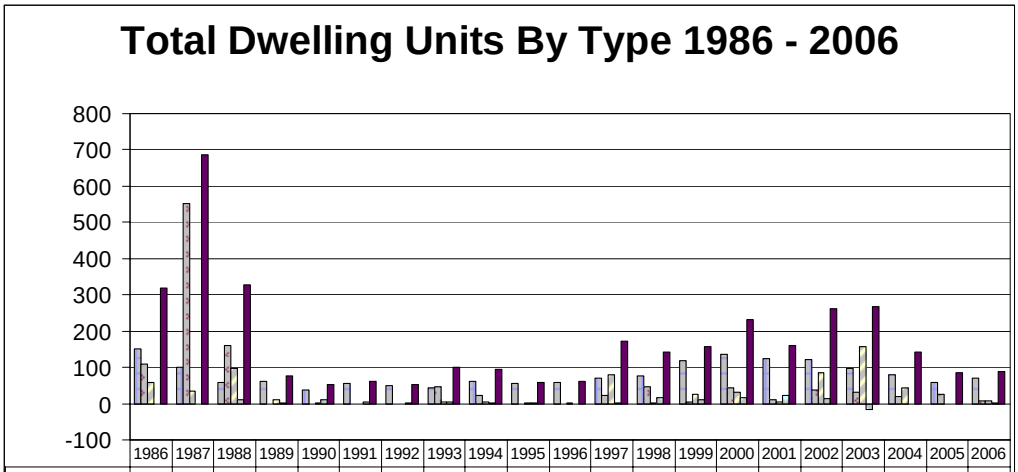
Dwelling Units

The City of Dover is comprised of 12,259 dwelling units, which represents an increase of 1,998 (7%) since 2000, and 3,829 (11.9%) since 1990. In 2005, Dover represented about 8% of the region's household base, which is essentially unchanged since 1990. Between 1990 and 2005, the region's household base increased by almost 25% - over ten percentage points more than Dover's growth over the same time period illustrating that Dover has grown at a much more moderate pace, compared to surrounding communities. The following Exhibit demonstrates the types of housing units built in the City of Dover over the past 20 years.

Type	Percent of total 1997	Percent of total 2006
Single Family	40%	80%
Apartment	45%	8%
Townhouse	14%	9%
Mobile Home	.5%	3%

As evident in the following Exhibit, there has been a leveling out in new home construction as of 2006. The average number of units constructed within the past 10 years is 170 a year; however this is almost double the 2005 and 2006 numbers.

In addition to the leveling off of the number of units constructed, there has been a shift from apartments towards single family units. This seems to be the direction residents support based upon the surveys and input from the public.



	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Single Family	150	100	57	61	39	56	50	44	61	55	59	70	76	117	137	123	122	96	80	59	70
Townhouse	110	553	161	0	0	0	0	48	24	0	0	24	48	4	45	10	38	32	19	25	8
Apartments	59	34	98	12	2	0	0	4	6	3	3	78	1	26	31	4	86	157	43	0	7
Mobile Homes	0	0	12	3	11	4	1	4	2	1	0	1	16	11	18	22	15	-17	0	0	3
total	319	687	328	76	52	60	51	100	93	59	62	173	141	158	231	159	261	268	142	84	88

Exhibit 6

The study area (including Dover) experienced a faster growth rate for the number of households, than population. One explanation for this could be that household sizes continue to decline.

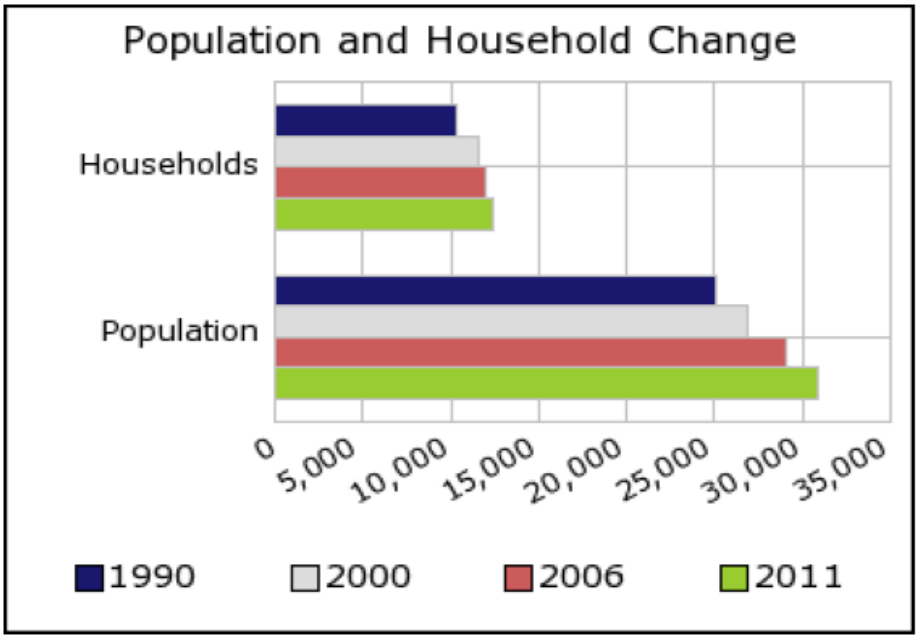


Exhibit 7: Dover's Population/ Household Change

Projections between 2005 and 2010 indicate that Dover's household base may increase by 6.4% (788 households) – modestly below the growth rate of the region over the same time period. Chart 3 shows household growth trends and projections for the region.

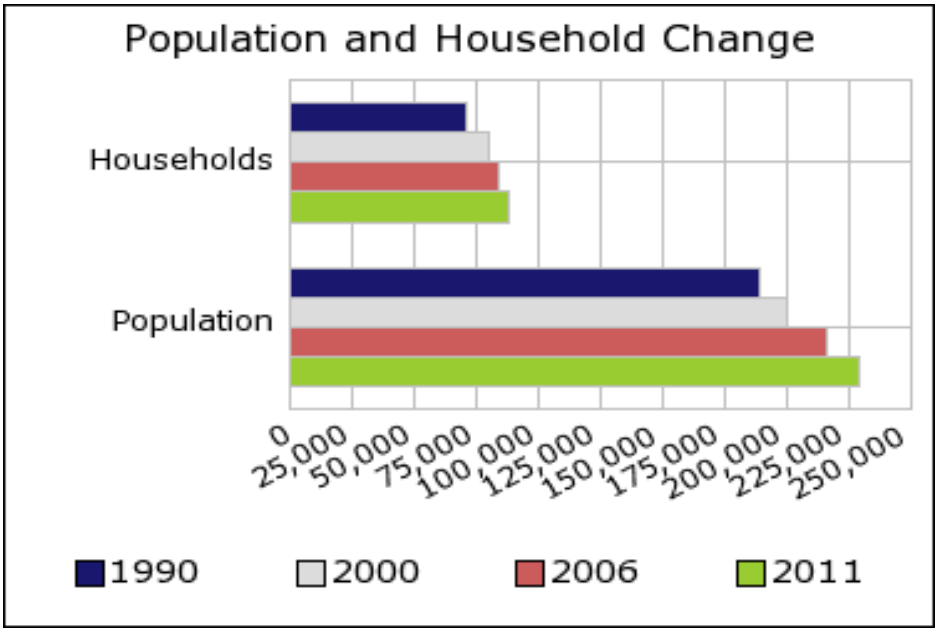


Exhibit 8: Regions' Population/ Household Change

The number of households in the study area in 1990 was 70,600 and changed to 79,502 in 2000, representing a change of 12.6%. The household count in 2006 was 84,049 and the household projection for 2011 is 87,660, a change of 4.3%.

The population in the study area in 1990 was 188,888 and in 2000 it was 199,740, roughly a 5.7% change. The population in 2006 was 216,272 and the projection for 2011 is 229,273 representing a change of 6.0%.

Household Income

	DOVER
1990:	$31,645
2000:	$44,395
2006:	$50,725

	REGION
1990:	$33,436
2000:	$46,484
2006:	$52,905

Over the sixteen years between 1990 and 2006, Dover's household income has risen dramatically. According to the 1990 census, Dover's median household income was $31,645. By 2006 it was $50,725, which represents an increase of $19,080 (60%) during that period. Comparatively, Dover's household income has been keeping pace with the region. During the same period, the region saw an increase of $19,469 (58%).

Projections between 2006 and 2011 indicate that Dover's median household income will increase by almost 8% (to $54,986). The regions' median household income is projected to increase by 8.3% to $57, 308.

In 2006 the predominant household income category in Dover, and the region, was $50K - $75K, and the income group that is least represented of both the region and Dover is $150K +. This is evident that Dover is an economically diverse community.

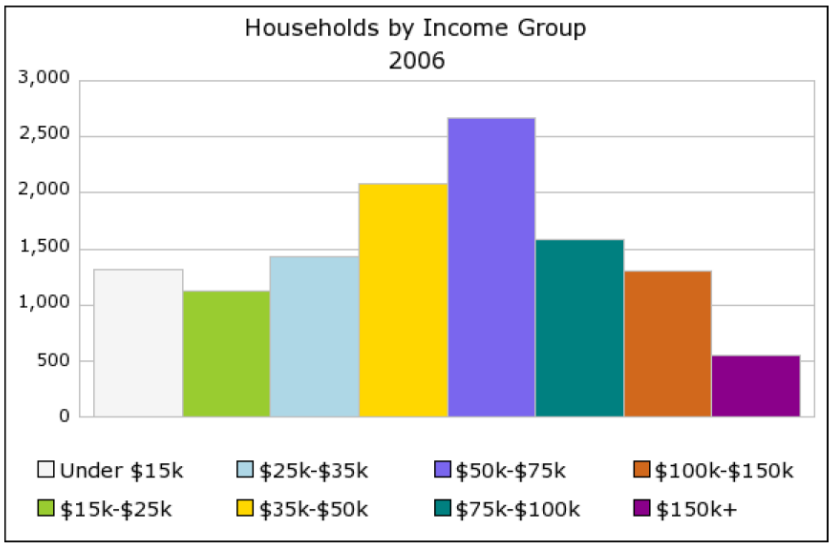


Exhibit 9: Dover's Household Income

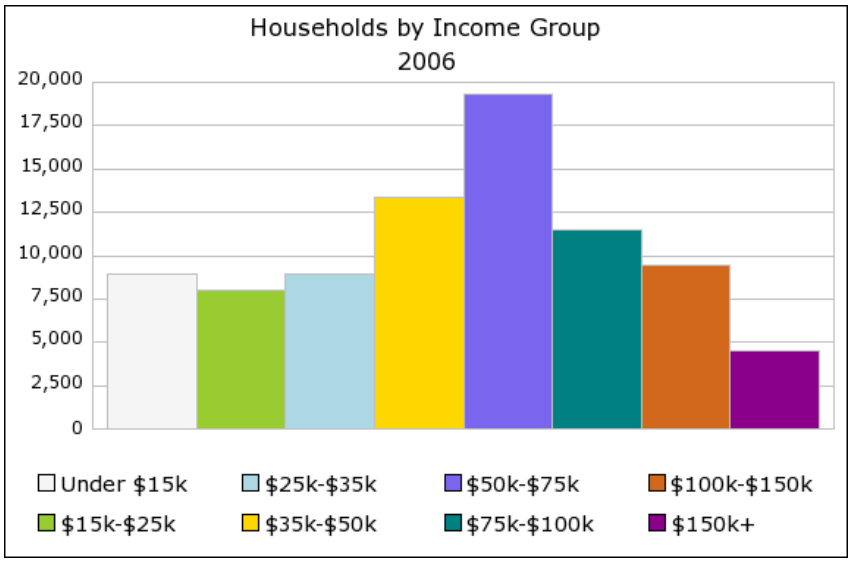


Exhibit 10: Region's Household Income

Economic Trends

Economically, Dover acts as a hub for surrounding towns in Maine and New Hampshire. This is a homogeneous area, with many people working and shopping for goods and services in communities other than the one they live in. The region also attracts workers from other areas of New Hampshire, Maine and Massachusetts and serves as home for many people who commute out of the area on a daily basis. The most comparable geography to use in analyzing trends is the Census Bureau's Portsmouth-Dover-Rochester Metropolitan Statistical Area (MSA)

Residential Units built

Residential growth in Dover hit an all time high in 1985, when 466 units were built. By contrast between the years 1998 and 2006, the most units created in a year were 268 in 2003. Over the 9 year period the average amount of units built was 130. This is up moderately higher than the 90 unit average over the previous 9 years.

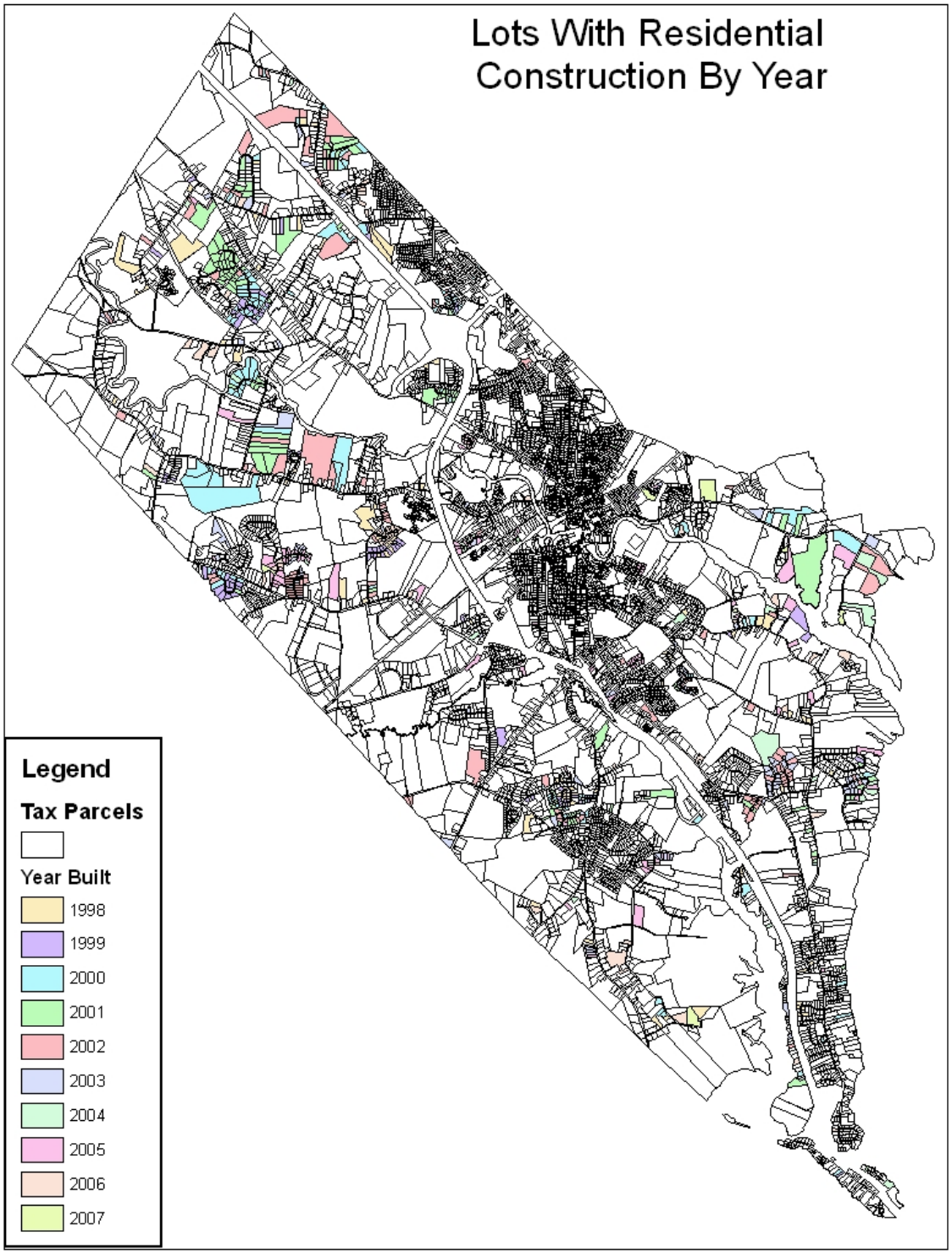

Lots With Residential Construction By Year
Legend
Tax Parcels
Year Built
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007

Exhibit 11

Nonresidential Building

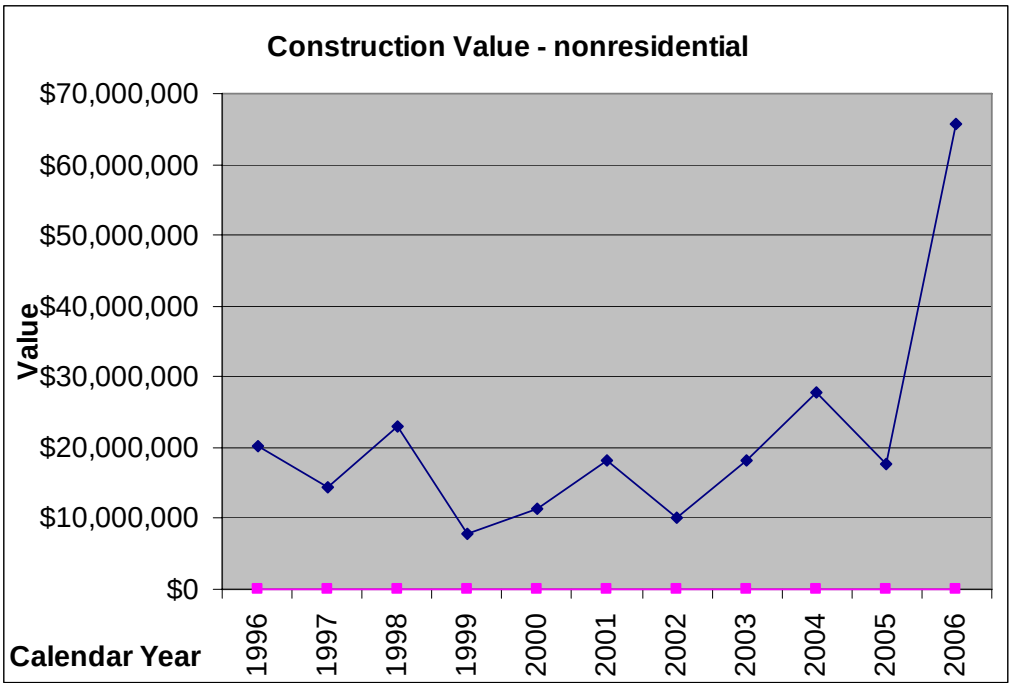


Exhibit 12

Dover has continued to attract large scale, high quality non-residential projects. Since the 1998 chapter update, non-residential growth has fluctuated, ultimately trending upwards. In 2006 the City saw the addition of 2 hotels, as well as growth at Enterprise Park. Additionally, Liberty Mutual's 350,000 square foot addition on Liberty Way, coupled with the 2005 and 2006 additions by Measured Progress continue to increase the growth along Sixth Street.

In 2007, projects such as a 100,000 square foot medical office; a fourth hotel and restaurant along Indian Brook Drive will bring even more non-residential development to the Exit 9 corridor. In addition there has been the approval of the mixed-use development along Dover Point Road and Durham Road. The Durham Road project is slated to open phase 1 (45,000 square feet retail) in 2007, with the future build out reaching 82,000. The Dover Point project is expected to exceed 150,000 square feet of non-residential uses by 2012. All told, the City of Dover has approved 2,528,802 square feet of non-residential buildings over the previous 10 year period.

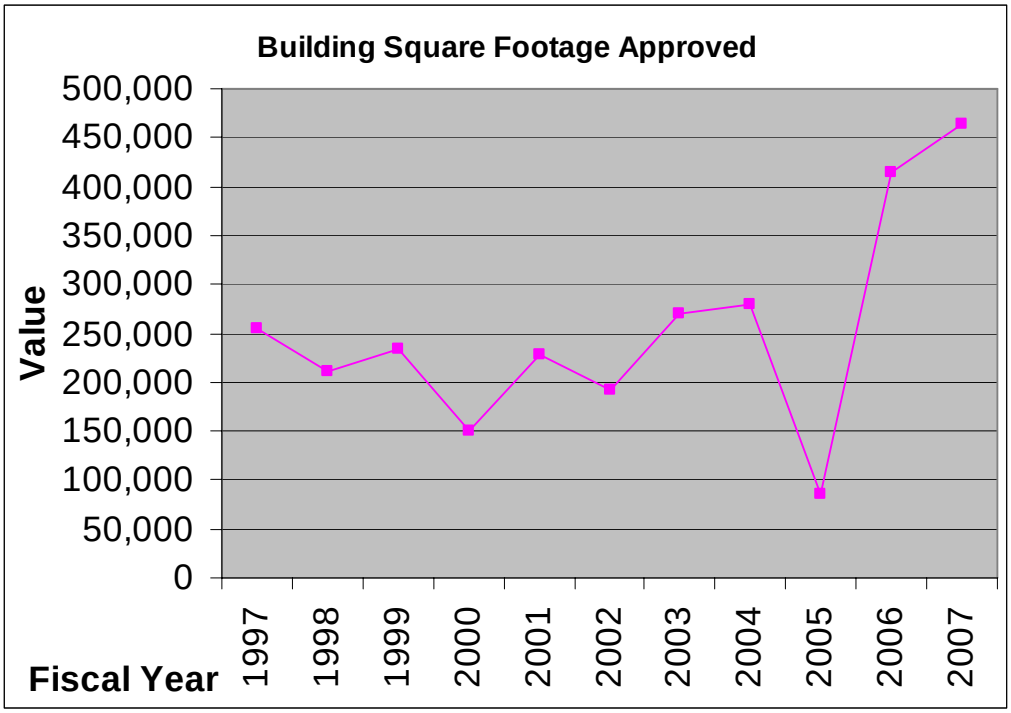


Exhibit 13

Employment

In 2006, there were 17,588 people over the age of 16 in the labor force in Dover. 97.2% of these were employed, 2.6% were unemployed, 28.2% were not in the labor force and 0.2% were in the Armed Forces. In 1990, unemployment in this area was 5.6% and in 2000 it was 3.1%. Both of these numbers were below the regional unemployment levels of 6.2% in 1990 and 3.5%.in 2000.

For the region, there were 124,182 people over the age of 16 in the labor force. Of these 95.4% were employed, 3.9% were unemployed, 29.6% were not in the labor force and 0.4% were in the Armed Forces.

In 2006, there were 15,033 employees in Dover (daytime population) and there were 1,510 establishments. This compares to 95,892 employees in the region (daytime population) with 10,629 establishments.

For Dover in 1990, 63.5% of employees were employed in white-collar occupations and 36.5% were employed in blue-collar occupations. In 2000, white collar workers made up 68.6% of the population, and those employed in blue collar occupations made up 31.4%.

For the region in 1990, 58.5% of employees were employed in white-collar occupations and 41.5% were employed in blue-collar occupations. In 2000, white collar workers made up 62.4% of the population, and those employed in blue collar occupations made up 37.6%.

For a Dover resident in 1990, the average time traveled to work was 13 minutes and in 2000 it was 19 minutes. Comparatively, the region experienced an average travel time to work of 13 minutes in 1990 and in 2000 it was 21 minutes.

Wages

NAICS Code	Industry	Units	Average Annual Employment	Average Weekly Wage
	Total, Private plus Government	903	15847	$746.60
	Total Private	873	13991	$757.40
101	Goods-Producing Industries	122	2439	$862.80
11	Agriculture/Forestry/Fishing	N/A	N/A	N/A
21	Mining	0	0	$0.00
23	Construction	N/A	N/A	N/A
31-33	Manufacturing	53	2041	$884.60
102	Service-Providing Industries	751	11553	$735.10
22	Utilities	N/A	N/A	N/A
42	Wholesale Trade	67	465	$1,068.40
44-45	Retail Trade	115	1737	$567.70
48-49	Transportation and Warehousing	13	300	$666.00
51	Information	20	810	$706.60
52	Finance and Insurance	N/A	N/A	N/A
53	Real Estate and Rental and Leasing	47	178	$587.50
54	Professional and Technical Service	91	505	$1,045.60
55	Management of Companies/Enterprises	8	247	$1,334.20
56	Administrative and Waste Services	63	785	$557.50
61	Educational Services	16	378	$653.20
62	Health Care and Social Assistance	122	2820	$813.40
71	Arts, Entertainment, and Recreation	N/A	N/A	N/A
72	Accommodation and Food Services	75	1333	$273.10
81	Other Services Except Public Admin	67	438	$585.40
99	Unclassified Establishments	N/A	N/A	N/A
	Total Government	30	1856	$665.40
	Federal Government	3	120	$783.80
	State Government	12	114	$539.20
	Local Government	15	1622	$665.50

Exhibit 14: Dover's 2005 Wage/Employment Levels

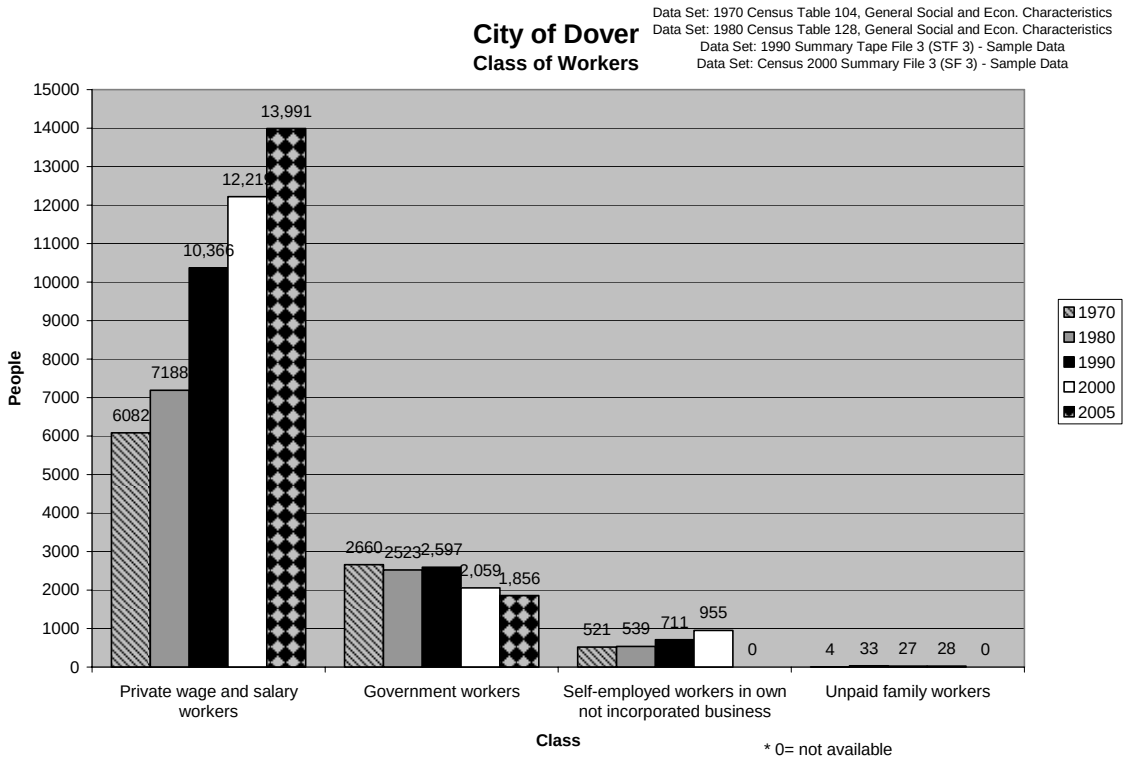


Exhibit 15

Education

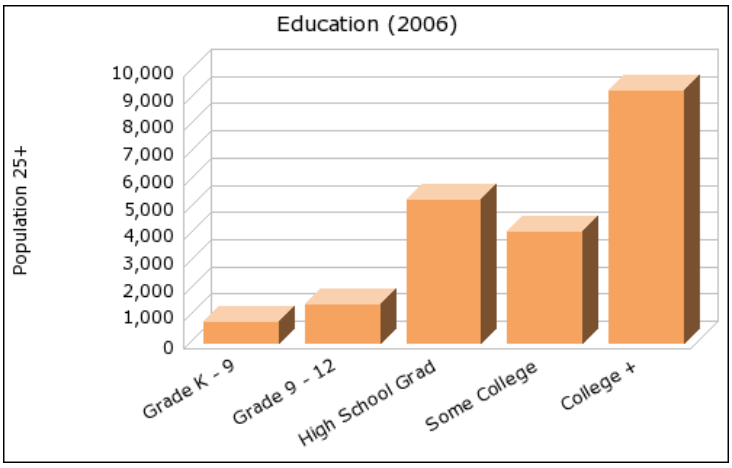


Exhibit 16: Dover's Education Attainment Levels

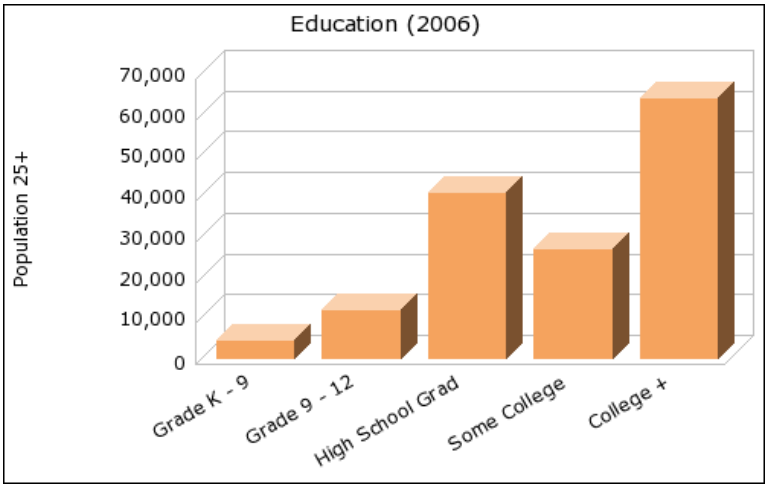


Exhibit 17: Region's Education Attainment Levels

Dover has continued to meet the regional rates of educational attainment. Specifically, between 1990 and 2000 the percentage of citizens 25 years old or older with bachelor degrees increased 40%, and graduate degrees increased 75%. According to DemographicsNow the percentage of total population that had a High School Education in 1990, was 30%. The next highest percentage was those with some college (20.2%). By 2000, the High School Graduate percentage was 25.1%, and the next highest was Bachelor's Degree which was 22%. In 2006, these numbers were even closer. High School Graduate was 25.3% and Bachelor's Degrees were at 23.1%.

2006 PERCENTAGE	
Grade K - 8	3.9%
Grade 9 - 12	6.8%
High School Graduate	25.3%
Some College, No Degree	19.7%
Associates Degree	9.6%
Bachelor's Degree	23.1%
Graduate Degree	11.6%

These numbers indicate that Dover is attracting a more educated demographic and residents are encouraged to receive a higher education level.

Educational attainment had a profound impact on the local economy, and the eligibility of residents for available jobs: According to the Bureau of Labor Statistics Occupational Outlook Handbook, occupations which require a bachelor's degree or above will average 23% growth, almost double the 12% growth expected for occupations that require less education and training. The City is looking to continue to attract jobs within the top job growth fields (health care or technology-related), which require high levels of education.

Retail Sales

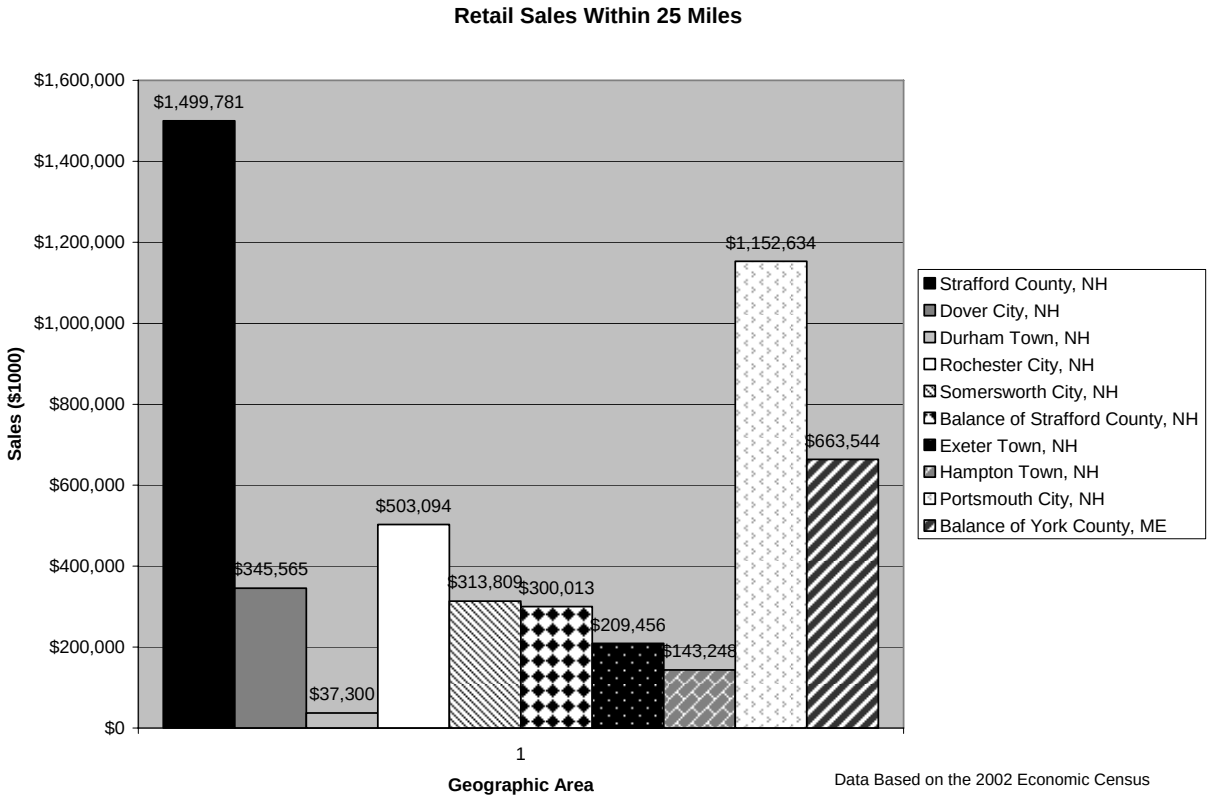


Exhibit 18

	DOVER
TOTAL:	$48,373
RETAIL:	$21,294
%:	44

	REGION
TOTAL	$51,350
RETAIL:	$22,569
%:	44

Dover has shown competitive retail sales with surrounding communities and captures 24% of the total retail sales in Strafford County. This is slightly above Somersworth and the remainder of Strafford County. Rochester exceeds Dover, but benefits from a larger retail area to the north. Comparatively, the City of Portsmouth, with a larger retail sector, brings in 76% of all of Strafford County's retail sales.

According to DemographicsNow!, Dover's 2006 annual household expenditure is $48,373, with $21,294 dedicated to retail purchases. It is estimated that this will rise 5.1% to $50,834 by 2011. This compares to a regional household expenditure of $51,350, with $22,569 being spent on retail purchases. The region is expected to have its household expenditure levels rise to $53,999 in 2011, which represents a 5.2% increase. In both the region and Dover, retail expenditures are 44% of total household expenditures.

Section

3

Land Use Trends

Dover's land use pattern is well established, with little remaining undeveloped land within its urban core. This core is surrounded by land zoned residential, commercial and industrial, which contains both upland and wetland. This section will review the recommendations of the 1998 chapter and how the City has reacted to those recommendations.

Summary of 1998 Economic and Land Use Recommendations

1. "Develop a formal image enhancement program, with a coordinated approach between the City's Economic Development Office and the Dover Chamber of Commerce."

2. "The Dover Economic Development Office should promote the City using the theme that the City is the seacoast's affordable alternative for new and expanding enterprises."

3. "The City should work to improve the image of downtown Dover."

    - Image enhancement program has been initiated on two levels; a bricks - and mortar level and a regional significance level.

        - The Dover Main Street program has commenced upon a "front porch" initiative to improve the bricks and mortar look of Dover's downtown. Additionally, the organization hosts an annual Dover Clean Up Day event.

        - While no formal coordinated citywide program has been adopted, the City's image has been enhanced by the quality of residential and commercial opportunities that have been attracted to Dover, such as the Liberty Mutual complex, Measured Progress buildings and the continued expansion of the Wentworth Douglas Hospital. This is evident through community development activities such as the Cochecho Arts Festival, and the revealed series of historical reenactments

4. "The Dover Economic Development Corporation and the City should continue to aggressively promote the remaining sites at Enterprise Park and to identify and acquire an additional significant site for future industrial development activity."

- Enterprise Park continues to be a successful industrial park including the recent additions of Heine USA Inc. and Certified Parts Wharehouse. There are approximately 38 acres of land left to be built upon.

- The City has not envisioned an Enterprise Park II, as recommended by the 1998 Master Plan. Rather the City has rezoned land off of Mast Road, Columbus Avenue, Littleworth Road and Dover Point Road from residential to Industrial, increasing the amount of land in City zoned Industrial by 241 acres.

5. "The Dover Economic Development Office should develop a computerized database of available commercial and industrial sites, in conjunction with the seacoast brokers active in the Dover market."

    - In 2002 the Economic Development office began to utilize a computerized database. Additionally, the office has taken advantage of the City's Geographic Information System. Although the database is not widely used, one does exist.

6. "The City should immediately initiate rezoning of residential areas to nonresidential use so as to preserve their ability to accommodate the nonresidential tax base that is critical to the City's fiscal health."

    - Since 1998, the City has rezoned 736 acres from residential to non-residential. See Exhibit 4 for a complete rezoning summary.

	RESIDENTIAL ZONES					
Area	**R-40**	**R-20**	**R-12**	**RM-20**	**RM-12**	**RM-10**
Dover Point Rd	-121					
Central Ave			-15			
Knox Marsh Rd				-77		
Littleworth Rd		-8				
Central Ave						-10
Gulf Rd	50		-50			
New Rochester Rd			-25			
Littleworth Rd						
Columbus	-126					
Gulf Rd	160				-160	
Back River Rd			30	-30		
Mast Rd			185		-185	
Mast Rd				12	-12	
Back River Rd			1			
River St			2			
River St						
Mast Rd	-250					
Mast Rd	-107					
Central Ave						

Totals	-394	-8	128	-95	-357	-10
				Residential		-736

Citywide Before	***15983***
Citywide after	15247

NON-RESIDENTIAL ZONES

Area	O	B-1	B-3	B-4	I-1	I-2	I-4	CWD	ETP	UMUD
Dover Point Rd									121	
Central Ave	15									
Knox Marsh Rd				77						
Littleworth Rd				8						
Central Ave	10									
Gulf Rd										
New Rochester Rd	25									
Littleworth Rd						-142	142			
Columbus							126			
Gulf Rd										
Back River Rd										
Mast Rd										
Mast Rd										
Back River Rd										-1
River St					-2					
River St					-37			37		
Mast Rd							250			
Mast Rd				107						
Central Ave	-4		4							
Totals	46	0	4	192	-39	-142	518	37	121	-1
						Non-Residential				736

Citywide Before	***2607***
Citywide after	3343

Exhibit 19

7. "The City should undertake a parking enhancement program in downtown to make it easy for through traffic to stop, shop and visit the services in downtown, while still accommodating the needs of longer term parkers."

8. "The City should form a Parking Commission or Parking Authority to formalize the relationship between the City and downtown business interests as they mutually address downtown parking issues."

- Since 1998 the City has completed a "two-way traffic" study as well as a Downtown Parking and Traffic Circulation study, commonly known as the "Rizzo Study." While the recommendations are being implemented over an extended period of time, some parking and traffic recommendations have been adopted.

- The recommendations that have not been fully implemented include the migration towards two way traffic along Central Avenue, Washington Street and a portion of Main Street.

- In addition to the circulation studies, the City has completed a Parking Facility and Management Study investigating the feasibility and need of a parking garage, as well as revamping how parking is managed in the downtown area.

- The Police department and Transportation Advisory Commission continue to work towards improving and formalizing the relationship between the City, merchants, business owners and customers of the downtown.

9. "The City should apply for inclusion into the NH Main Street Program."

    - The City was accepted into the Main Street program in 1999. In 2004 the program was recognized as the Outstanding Main Street program of the year. Additionally, the Organization has garnered many awards on an annual basis.

10. "The City should establish a Special Downtown District to add an additional tax levy onto downtown properties to fund the staffing of a downtown manager's position and at least partially fund parking solutions for the downtown."

    - This goal has not been met to date. Enabling legislation was defeated in 2005.

11. "The City should identify the public interest in the riverfront and the best way to preserve public access to the Cochecho River. That is, any private investment on the City's riverfront holdings should not preclude public access to the riverfront."

12. "Any private investment in the riverfront should balance residential and nonresidential uses."

13. "Any private investment in the riverfront should build on the potential for excitement and entertainment including, for example, a place for outdoor concerts and a marina facility."

14. "The City should preserve public dockage opportunity to support, for example, touring and dinner cruise boats that could attract a new market segment to downtown and strengthen the tie to other port communities."

    - In 2003, the City rezoned the waterfront parcel from I-1 (Restricted Industrial) to CWD (Cochecho Waterfront District). This change allowed for the mixture of uses encouraged by the 1998 chapter. Additionally, maritime uses were created and added to the zoning chapter.

- In 2004, the Cochecho Waterfront Development Advisory Committee was created to review all aspects of redeveloping the City's River Street parcel and facilitate a plan for developing the parcel as a multi-faceted destination point, offering recreational, economic and quality of life opportunities.

- The 1995 waterfront Charette was updated in 2005 and a Request for Proposal was drafted and responded to. In 2007 the City and the Dickinson Corporation agreed to terms that will allow for the development of the waterfront in a unique public/private scenario.

15. "The City needs to guard against becoming inundated with residential development and needs to encourage higher value residential investment. If the pace of new development exceeds 200-250 new units per year, Dover should carefully consider imposing a development timing ordinance."

16. "The City Planning staff should re-examine the density provisions of the City's multi-family zoning to consider lower density development."

    - Dover has rezoned 736 acres of residential to non-residential. Additionally, 462 acres of multifamily residential land was rezoned to single family. Reducing density encourages higher value developments. Although new development did exceed 250 units per year in 2002 and 2003, it coincided with a national housing boom. The average since 1998 has been 186 units a year (including the two boom years), and the 2005 number was 84 units.

17. "The City should reserve large lot zoning along the City's water sites to promote quality development."

18. "The City should establish a watershed protection area around the Bellamy and Cochecho Rivers which would establish appropriate setbacks, minimum lot sizes and density requirements."

    - In 1999, the City created a riverfront overlay district, which mandates that all lots within 250 feet of a tidal river be two times the standard minimum lot size. This alteration encourages habitat preservation.

    - Additionally, setbacks from the water were increased and minimum frontage along the rivers was created.

19. "The City should consider the establishment of an urban service boundary to prevent the extension of utilities to low-density residential neighborhoods."

    - In lieu of the creation of an urban service boundary, the City removed the density bonus allowed in the R-40 (Rural Residential) zone, which was given if services were extended to the development.

20. "The City should eliminate wetlands from lot density calculations city-wide."

- As a result of recommendations from the 1998 update to this Chapter, the City refined its definition of minimum lot size for residential lots. In 1999, the City removed wetlands from the calculation of lot size. In 2003, the City further amended the minimum lot size to mandate that for residential lots the minimum lot had to be calculated by contiguous upland. Neither change precluded a lot from being comprised of wetlands; rather it altered the amount of land needed to meet the lot size.

21. "Potential municipal well sources should be identified and acquired, and existing sources should be adequately protected."

    - Since the 1998 Master Plan, 2 lots have been purchased for water development potential and 2 lots have been protected via easement.

    - In 2007 the Buchard Well located along French Cross Road became operational.

22. "As part of the Master Plan process, the City's parks and recreation needs should be examined closely."

    - In 2000 a separate Open Space and Recreation chapter was created and the recreation needs were evaluated. A comprehensive plan for the use and expansion of the recreation needs is ongoing.

Existing Land Uses - 2007

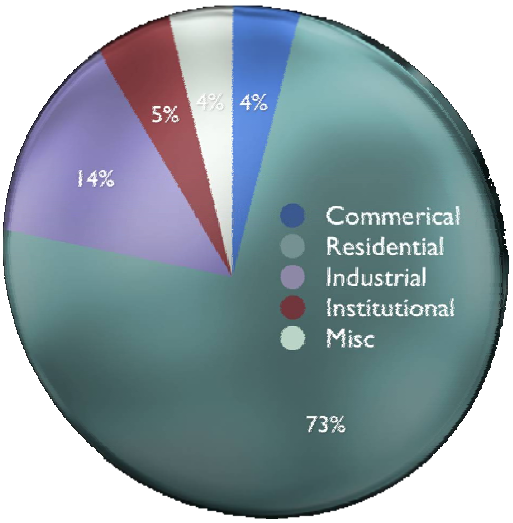


Exhibit 20

Exhibit 20 demonstrates the basic breakdown of land uses in Dover. 73% of the City has a residential land use associated with it, including vacant land. In fact 14,391 acres are zoned single family residential out of 18,587 acres in the City. Combined, non-residential land uses equal 18% of the City.

Subdivision Activity

Lot Creation

Between 1998 and August of 2007, 953 lots were created in Dover. Of those 918 (96%) were residential lots. Exhibit 21 shows the location of the lots created.

The subdivided lots created equaled 1594.34 acres of land. This represents a 175 acre increase over the previous ten year period where 1418.61 acres were developed. While the number of acres of land subdivided increased, the amount of land per lot decreased. The 1418.61 acres subdivided between 1988 and 1997, representing the creation of 539 lots, which averaged 2.38 acres per lot. The lots created between 1998 and 2007 averaged 1.67 acres.

✐Results of the Visual Preference Survey and public comment indicate that residents are concerned about the proportionality of lots. Many lots created since 2000 include tight building envelopes and lots where the non-buildable area contains large swaths of wetlands buffer areas, which should not be built in.

Open Space Subdivisions

In 1978, the City created the Alternative Design Subdivision, to encourage open space and habitat preservation. This was an environmentally friendly alternative to conventional subdivisions. In order to encourage developers to use this method, density bonuses, which encouraged view shed preservation and public use of the preserved land, were developed.

In 2003, the City mandated that major subdivisions (the creation of 4 or more lots), for parcels located in the 3 residential single family zones follow this style of development if the original parcels lot size exceeded a certain acreage. The Alternative Design Subdivision was renamed the Open Space Subdivision.

As a result of this mandated form of subdivision, 280 acres of land has been preserved through Open Space Subdivisions between 2003 and 2007. During the period between 1998 and 2007 a total of 596 acres was preserved through subdivision. If the 596 acres preserved are deducted from the overall 1594 acres, that leaves 997 (63%) acres created for development purposes.

✐ Results of the Visual Preference Survey indicate that the community supports the Open Space Subdivision concept. Of the -3 to +3 scale, conventional subdivisions scored between "-3" and "0", while the Open Space variant scored multiple "2" rankings. Comments indicated that respondents perceived that conventional subdivisions are too dense and lacked in creativity and a neighborhood feel to them.

✐One area residents commented on during both the Visual Preference Survey, as well as the SpeakOut Sessions, was density allocation. When the Open Space subdivision was an alternative, the City instituted density bonus as a way to encourage the use of that form of subdivision. Now that the Open Space subdivision is no longer an alternative in many cases there may no longer be a need for the density bonus.

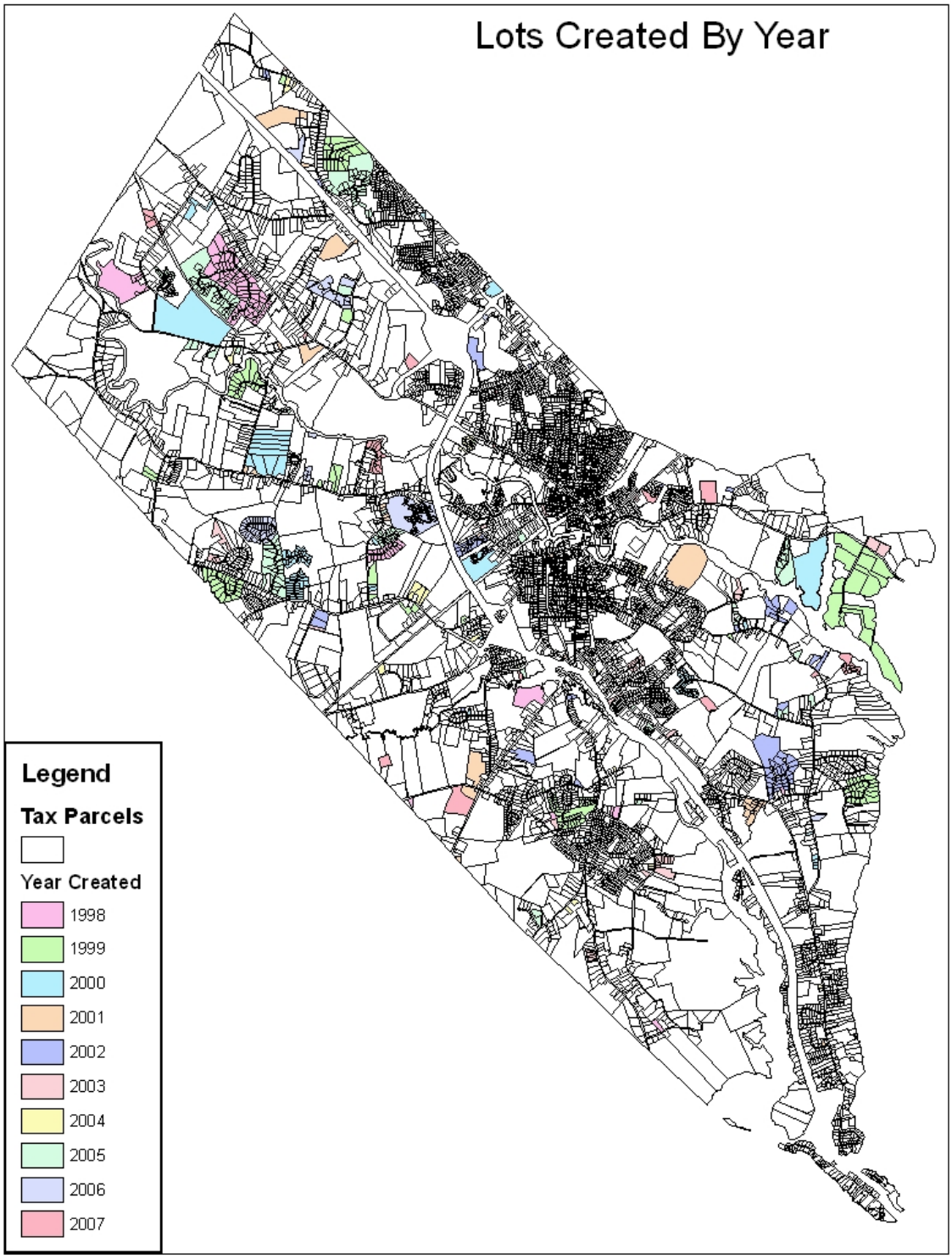

Lots Created By Year
Legend
Tax Parcels
Year Created
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007

Exhibit 21

Developable Vacant Land and Percentage of Land by Zone Type

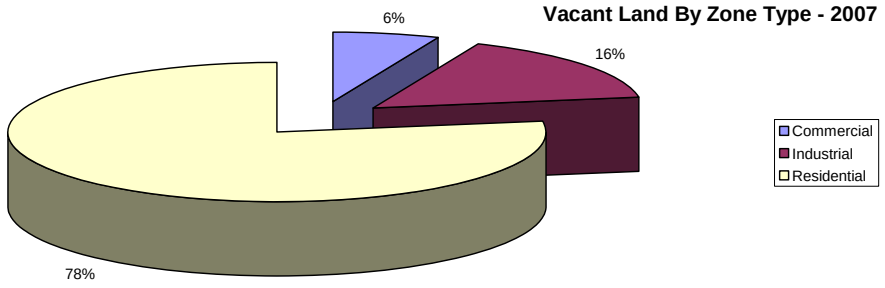


Exhibit 22

Dover continues to develop following a pattern which emphasizes single family homes as the primary land use. As Exhibit 22 demonstrates, the majority of developable land available in Dover is zoned primarily for single family homes. During the telephone survey and SpeakOut Dover! respondents overwhelmingly supported single family over multi-family development.

This is also supported by the overwhelming amount of land zoned for the single family home, as a primary use. Exhibit 23 illustrates that 73% of Dover is zoned residentially for single family homes. Of Dover's 18,587 acres, over 9,400 acres are zoned R-40 (Rural Residential). In total, 14,391 acres are zoned single family residential.

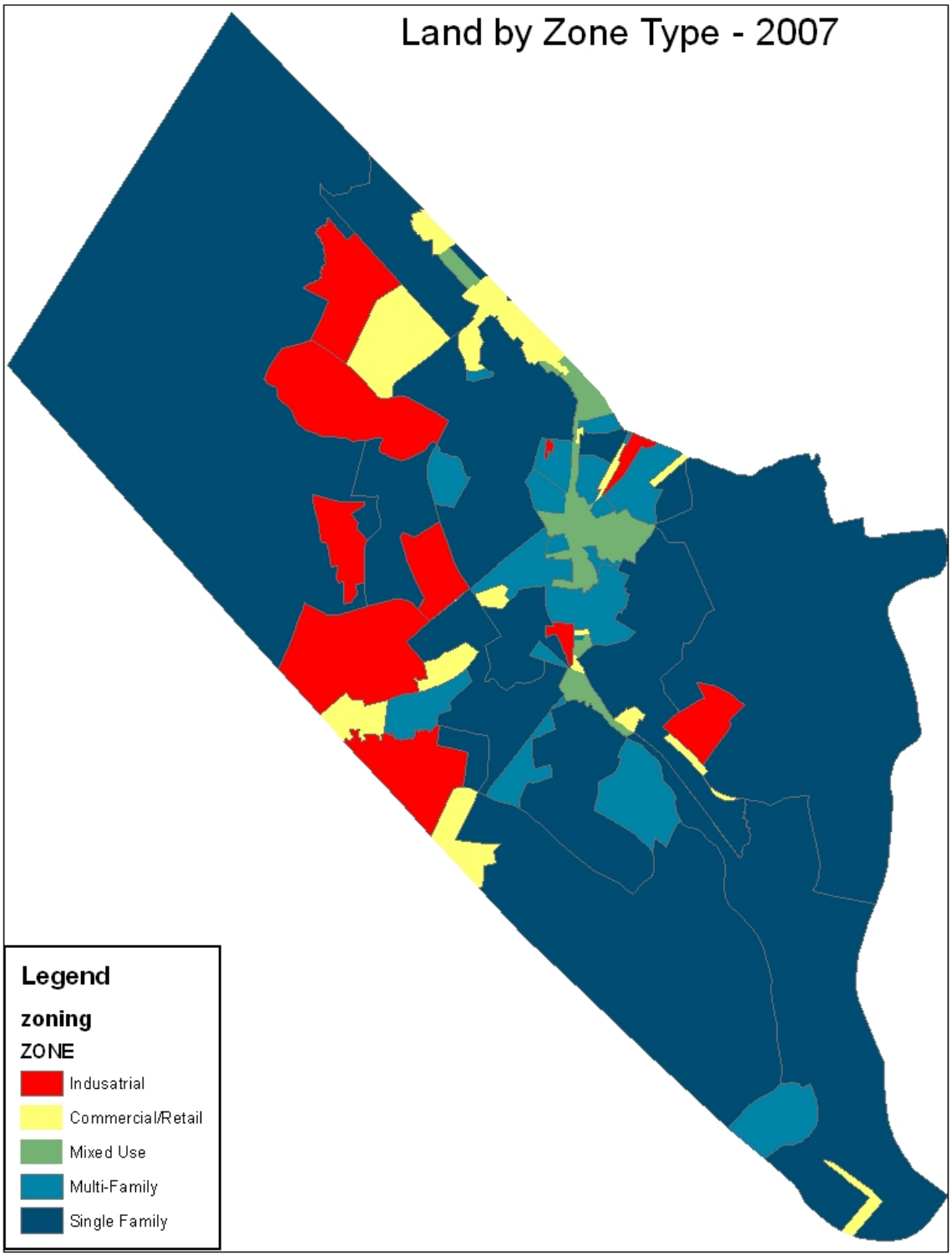

Land by Zone Type - 2007
Legend
zoning
ZONE
Indusatrial
Commercial/Retail
Mixed Use
Multi-Family
Single Family

Exhibit 23

Commercial/Retail

Zone	Acreage	Developable
B-1	46	12
B-2	104	36
B-3	248	114
B-4	472	134
B-5	31	5
Total	**901**	**301**

Dover lacks large tracts of vacant commercial land in heavily traveled routes. Recent attempts to rezone areas have failed. However, mixed use projects, downtown redevelopment and higher and better use opportunities are beginning to be seen in the City.

The B-5 (Rural Commercial/Retail) zone was created in 1999 as a result of concern about the allowance for multi-family residential in the existing B-3 (Thoroughfare Business) zones. The focus of the zone is to encourage commercial uses with a higher level of aesthetic and site review potential.

In 2003, the City also created more B-4 (Rural Residential) land along Route 155/Knox Marsh Road. This use is more compliant with the existing development pattern and encourages commercial uses along current high density residential areas.

✐ Additionally, in 2003 the City amended its site plan regulations to include architectural design guidelines. These guidelines encourage integrity in construction and their goal is to improve the aesthetic character of the non-residential and multi-family buildings. The respondents to the Visual Preference Survey seem to agree that more traditional building styles and materials were encouraged for the community. "Strip Mall" design and functionality of a building set behind a sea of asphalt was not encouraged. Respondents supported images that reflected a walk able and safe commercial sector that was integrated with its surroundings. These guidelines build upon contextual development and encourage unity and cohesiveness in development. By revising the guidelines into standards, the Planning Board would strengthen its ability to require a higher quality built environment.

✐ Respondents ranked buildings with blaring signage and franchise designs low, while supporting those signs and buildings that blended into their surroundings and reflected a higher caliber of design and materials used in constriction. Comments encouraged designs that were multi-storied and used brick and other hardy material. Architectural elements, such as parapets, and peaked roofs were also supported.

Currently, there are many commercial zones that allow for multi-family residential units. In the B-2 zone residential units are allowed on the second floor or above, and this should be expanded to the UMUD, B-3, and O zones.

The City shares boundaries with Madbury, Rochester, Rollinsford and Somersworth. These boundaries include lots that cross from Dover into the neighboring community. In many cases the access and utilities would be developed from Dover. Development that followed this methodology would provide a negative tax benefit for the City.

One final area of commercial development that the City has experienced since 2000 is a growth in elderly care facilities. The City has various definitions for this type of use and needs to review and update the definitions to coincide with industry and state standards.

Industrial

Zone	Acreage	Developable
I-1	58	21
I-2	450	134
I-4	764	352
ETP	528	122
Total	**1800**	**692**

In 1998, Dover rezoned 250 acres off Mast Road from R-40 (Rural Residential) to I-4 (Assembly and Office). This addressed a desire to move existing gravel pits from the residential zone and place them in an appropriate industrial zone. This will encourage industrial development as a potential reuse when the environmental constraints that exist no longer allow for mining activities to continue.

The 1998 Chapter recommended rezoning an area off Littleworth Road and Columbus Avenue from residential to industrial. A portion of this was developed as residential along the east side of Columbus Avenue before the area was rezoned to I-4 in 2003.

In addition to the success of the industrial zones, the City has been able to attract high quality professional jobs to the ETP (Executive Technology Park) zone along Sixth Street. Liberty Mutual established a 200,000 square foot office building at this site in 1997, and in 2007, the company constructed an additional 350,000 square foot building on the same site. Adjacent to the Liberty Mutual site is Measured Progress' 80 acre site, which is houses the national educational testing services' scoring center.

✐ Visually, these service-oriented industrial uses are more appealing to residents, as evident in the Visual Preference Survey. Responders also encouraged reuse of mill style industrial buildings, rather than the construction of one story steel buildings.

✐ There are three pockets of former industrial areas (Locust Street, Maple Street and Broadway), where factories existed prior to zoning. These I-1 (Restricted Industrial), zones should be encouraged for mixed redevelopment, as they are surrounded by residential. They could become neighborhood commercial/residential nodes.

Mixed Use

Zone	Acreage	Developable
CWD	67	31
O	192	48
UMUD	61	8
Total	**320**	**87**

Downtown Dover continues to remain strong. It plays an important part in the City's regional economic role. The downtown will also be home to the Children's Museum of New Hampshire in late 2008 when they occupy the Butterfield gym building. The facility is expected to attract over 100,000 visitors annually.

Downtown is uniquely poised to become an economic and tax generating engine for the community. Downtown is not without challenges, however, including traffic and parking and these issues are in the study phase to be acted upon in the short term.

Recently, the City implemented a new overlay zone, the Residential/ Commercial Mixed-Use Overlay District, which allows for mixed use commercial/residential development on sites zoned ETP or I-4/B-4. This zone will encourage commercial development by allowing over -

55 residential developments on the same parcel. The 2 parcels in this zoning are already being developed and potentially will add 250,000 square feet of commercial space, and 100 housing units, while contributing approximately $500,000 to the tax base with minimal impacts on City services.

✐ Residents support mixed-use development. The highest rated commercial images within the Visual Preference Survey were those that demonstrated reuse of older buildings and those that showed mixed-use commercial buildings in a downtown area. Residents also supported stronger streetscapes and encourage pedestrian friendly designs promoting interaction and community building along commercial corridors.

✐ Dover needs to continue to enhance and rely on its downtown as a prosperous and functional downtown, while encouraging new and diverse reuses for its storefronts. Redevelopment should be encouraged along side streets that currently are single use residential structures. They provide an opportunity for mixed-use redevelopment and an opportunity for expansion of the existing commercial services Dover provides with limited creation of new infrastructure.

The 1998 update of this chapter discussed at length the potential of developing the City's waterfront property. In 2007 the City and Dickinson Development of Quincy Massachusetts, signed an agreement granting Dickinson the right to develop the City's property. Much thought went into drafting design guides and regulations to ensure that there was a high level of integrity and concern for design put into the development.

The concept developed by Dickinson is a mixed use node with commercial (retail and office) and a mixture of house types. The roadways will be public and there will be access points along River Street and from the reconstructed Washington Street Bridge linking the parcel with the existing downtown. This project is intended to enhance and continue the growth of downtown Dover, and nor supplement or replace it.

Additionally, there is opportunity for further infill development along the First Street, Second Street and Chestnut Street corridors. These areas downtown offer opportunity for the City to encourage *transit oriented development*, which encourages development that is multi-modal. Residential growth in the B-2 zone is allowed on the second floor or above, and this should be expanded to the UMUD, B-3, and O zones.

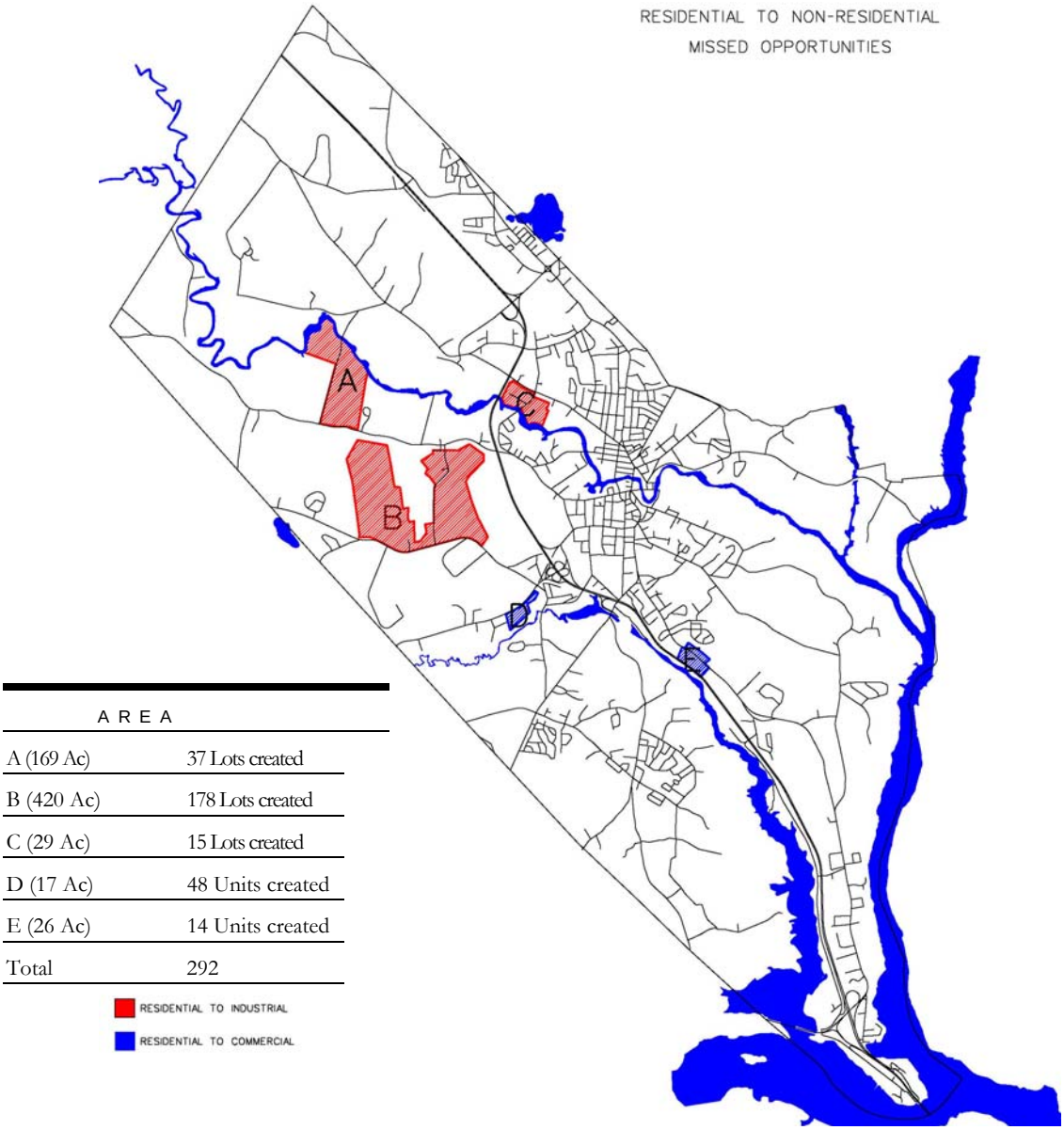
Infill development should be also encouraged to provide recreational funding towards urban recreation elements such as the Community Trail which ultimately will run from Central Avenue to County Farm Road. Additionally, were appropriate, public spaces should be contained within infill development to encourage civic components.

Additionally, this development could rely on a parking garage, if one is built as planned. The city has the opportunity to work with developers to provide funding for the garage in lieu of providing on street parking. Current regulations allow for parking within the B-2 (Central Business District) to be as far as 1000 feet from the development. This regulation could be amended to encourage use of the municipal garage.

One last area of mixed use development is the allowance of smaller non-residential uses in residential zones to encourage walk ability to small services This could be a neighborhood

convenience store or coffee house located within a neighborhood. Special exception criteria could be developed to protect residents from too much density or encroachment.

There have been attempts at developing additional non-residential land area through zoning since 1998. On average, residential to non-residential rezoning opportunities were not realized. Exhibit 24 demonstrates 5 missed opportunities since 1998, which allowed 292 lots to be created.



AREA	
A (169 Ac)	37 Lots created
B (420 Ac)	178 Lots created
C (29 Ac)	15 Lots created
D (17 Ac)	48 Units created
E (26 Ac)	14 Units created
Total	292

Exhibit 24

Single Family Residential

Zone	Acreage	Developable
R-12	2,603	237
R-20	2,371	190
R-40	9,417	2,080
Total	**14,391**	**2,507**

As stated previously, the majority of Dover's land area is zoned residential. This is primarily single family residential. In two of the residential zones, the R-12 (Medium-Density Residential District) and the R-20 (Low-Density Residential District) zones have less than 10% of their land area remaining for development. The R-12 zones are areas closer to downtown that represent the first ring outside of the multi-family or mixed use zones.

The R-20 zone is located between the R-12 and R-40 (Rural Residential). This zone acts as a transition zone and allows for a denser level of development than the R-40, but still allows many of the agricultural uses allowed in the R-40 zone.

The R-40 or Rural Residential zone is comprised of areas on the outskirts of the City. This is the more agricultural area, and prior to 1979 was known as the Agricultural zone. This zone has experienced the majority of development in the past 9 years. This should be expected, as it is by far the zone with the most land mass within it. It is also one of the most limiting zones. This is due to the restriction to single family homes, at one unit per 40,000 square feet of contiguous upland, with non-residential uses limited to community or civic, and agriculture based uses. The zone also has mandatory open space subdivisions for major subdivisions.

One change that was made to the R-40 zone as a result of the 1998 chapter was the removal of the density bonus given to a developer who provided utilities to the development. A developer was permitted to create lots based upon a 30,000 square foot lot size. This "R-30" zone was used by developers and landowners to get bonus lots, and was removed as a growth management measure.

Multi-Family Residential

Zone	Acreage	Developable
RM-6	13	0
RM-8	184	30
RM-10	440	27
RM-12	364	0
RM-20	225	31
Total	**1,226**	**88**

Dover's multi-family zones are located closer to the central core of the City. Cumulatively, there is a total of 88 acres of land available zoned primarily multi-residential.

The RM-8 (High Density Multi-residential District) is located north of Downtown, where there are parcels that have the potential for future conversion and build out. There is a pocket along Whittier Street of vacant land. The RM-8 zone allows for the full variety of mixed housing types and styles.

The RM-10 (Low Density Multi-residential District) is a zone that is located south of Downtown. This zone encompasses the region between Locust Street and the railroad lines west of Arch Street. There is also a pocket of the zone along Court Street. This zone allows conversion of larger single family and duplex buildings into 3 and 4 family buildings through a review by the Zoning Board of Adjustment.

RM-20 (Suburban Density Multi-residential District) zone is located along Durham Road and has some limited developable potential connecting adjacent to existing townhouse projects. There is an additional area of the zone along Knox Marsh Road, which has been fully built out.

The city has converted areas from multi-residential – most notably along Back River Road, and Oak Street from multi-family to single family. This conversion is supported by the SpeakOut Dover sessions as well as the Telephone Survey, where respondents encouraged single family residential over multi-family.

Affordable Housing

Dover continues to provide a wide range of housing options. Nearly 51% of the city's housing stock is renter occupied compared to 35% in the Seacoast PMSA. Dover continues to be a City with a diverse housing stock, varied in affordability and ownership. The strong mix of renter and owner-occupied housing units promotes a healthy demographic and economic diversity.

Dover has become an increasingly attractive community to live in, attracting more affluent residents that are drawn by the amenities. This attraction, obviously, has impacted housing costs. Comparatively, Dover is more expensive to live in than surrounding communities of Rochester and Somersworth, but less than Exeter or Portsmouth. The increase in housing costs does have implications for the lower and middle class; however, Dover has continued to provide opportunities for affordable housing through its multi-family and mixed use zones.

The challenge for Dover is to continue to provide housing opportunities for all residents, particularly residents that are above the threshold for subsidized housing. The Dover Housing Authority offers many opportunities for diversity in housing. Additionally, The City offers low income loans for housing rehabilitation through the Community Development Block Grant program.

✐ The Visual Preference Survey had images of all styles of residential structures. Respondents related positively to those which represented a high quality design. Images that demonstrated diversity and creatively in design were positively ranked, while those that resembled "cookie cutter" designs were ranked poorly.

✐ People favored lots that had useable yards, and not areas where the lot was dominated by the house. Additionally, respondents supported affordable mixtures of housing, and housing that created a neighborhood feel. Some of the lowest rated residential images were those depicting townhouses with a garage under. Conversely, people like images with the garage to the rear and out of site, and traditional housing styles were ranked above modern box style houses. The City could encourage this through the development of a *Traditional Neighborhood Development* ordinance.

✐ In general, residents are not opposed to new construction. They are interested in a controlled growth, and they are especially interested in context sensitive designs. Based upon comments, images depicting new construction and old construction were not ranked differently based upon the age, but rather they were ranked based upon their contextual setting and how the structure fit in with the neighborhood. Houses that catch attention because they are new and don't fit in with their surroundings are what were ranked low. Residential structures can be

newer designs and have a more contemporary feel, but still blend into their surroundings and be context sensitive.

Natural/Vacant

Shore Land Protection:

As a result of the 1998 chapter, the City increased the minimum lot size for lots created within 250 of tidal shore land. Development adjacent to tidal waters and fourth order and higher streams (which includes the Cochecho River in Dover) are regulated statewide by the Comprehensive Shore land Protection Act (CPSA; RSA 483-B). Dover's Conservation District zoning regulations (Chapter 170-27) echo many of the requirements of the CPSA, although there are several significant inconsistencies. The Dover 2000 Master Plan, Natural Resources Chapter, included a recommendation to update the Conservation District zoning regulations to be consistent with the CPSA.

Stormwater Management:

Dover's 2000 Master Plan update of the Natural and Historic Resources chapter incorporated, by reference, the City's "Storm water Management Plan" that was required by the USEPA to be developed, approved, and implemented to meet the requirements of the federal "Phase II Storm water" regulations. Since the adoption of the 2000 chapter, the USEPA has added new requirements for storm water management that apply to Dover but are not reflected in existing zoning regulations. It is important to have consistent enforcement of these environmental protections, by local adoption of regulations.

Specifically, the USEPA requires that developers, who disturb one acre or more of land, must develop and submit a storm water pollution prevention plan. The NHDES Site Specific Bureau is also in the middle of developing new "Alteration of Terrain" regulations to be consistent and complementary with the federal Phase II Storm water program.

An additional storm water management topic, the City is experiencing rapid development in Exit 9, Indian Brook, and Sixth Street ETP areas. A persistent planning issue in this area is the desire of developers to have large parking lots. There are two local natural resource protection problems associated with runoff from these developments: 1) protection of the Smith and Cummings water supply wells, and 2) protection of the Cochecho River.

A recent study by the NH Estuaries Project indicates that the amount of impervious surfaces in Dover have increased from 11% in 1990 to 18.6 % in 2005. Ten percent impervious surface is generally regarded as the threshold for water quality impairment. More significant, the per capita amount of impervious surface has increased from 0.075 acres per person to 0.110 acres per person. This is an indicator of sprawl. While, the City can not adopt limitations on amount of impervious surface without severe economic consequences, it is possible to adopt more ordinances for more effective treatment of runoff from impervious surfaces, as well as encourage pervious surface parking lots. The UNH Storm Water Center is on the leading edge of evaluating the effectiveness many storm water treatment technologies.

The City has investigated developments in the field of *pervious surface* roadways and parking areas. This technology could be utilized to decrease run-off and to be implemented on a sliding

scale for commercial development. Pervious surface parking lots along with LEEDS certified building would be a positive move towards promoting sustainable development.

City- Owned Land Management Plan:

The City currently owns approximately 150 parcels of land, as shown on Exhibit 25 below. This land is in the form of municipal operations (City Hall, recycling center), school facilities, utilities (pump stations, wells), vacant economic parcels (those owned by the Dover Business and Industrial Development Authority), park and recreation land, and permanently protected parcels. There is no formal land management plan governing these publicly owned parcels, outside of the Chapter 79 of the Dover Code (City Property). In fact, Chapter 79 deals mostly with the disposal of surplus property and does not address the use of the property, other than providing that the City Manager may establish policies regarding the use of land.

Dover has made great strides to permanently protect open spaces throughout the City, as demonstrated by Exhibit 25. The Conservation Commission and Open Lands Committee work to identify lands that should be protected and utilize funds set aside from the Current Use penalty, which landowners pay when they remove their land from Current Use, as well as monies bonded through the Capital Improvements Program. As of August 1, 2007, 4346 acres have been (cumulatively) protected through purchase, easement, donation or set aside as part of an open space subdivision.

Transfer of Development Rights:

The City created a *transfer of development* (TDR) option for industrial and commercial uses within Enterprise Park in 1995. During the recodification of 2002/2003 the TDR option was expanded to include more industrial and commercial areas. Additionally, a residential version was drafted to allow for the protection of outlying areas, and the promotion of infill development where infrastructure has capacity. The residential TDR ordinance has not been utilized. One reason for this is that it creates a level of review that is very subjective for developers, and duplicates roles between the Open Lands Committee and Planning Board.

Energy Audit

Dover should prepare an Energy Action Plan, a long-term vision for the City's energy needs through 2020. The goals of the plan should be to:

- Secure, safe, and reasonably priced energy supplies and services to Dover's commercial, industrial, transportation, and residential customers, reduce dependence on traditional fossil fuels within municipal operations, decrease electricity and natural gas consumption, use efficient and renewable resources to supplement the city's energy needs, proactively plan for a reduction in the demand for energy.

- Promote economic growth and development. The plan should encourage and maintain economic growth prospects by recognizing and fostering the multiple functions of energy in the economy as an integral part of producing and transporting goods and services and as a potential driver of new areas of economic activity.

- Protect the environment. The plan should seek to promote the achievement of federal and state environmental requirements and objectives effectively and at reasonable cost,

considering environmental and public health costs and, where appropriate, possibly provide market-based incentives to achieve those goals.

In 2007, The City of Dover created an Energy Advisory Commission. This group is responsible for completing the action plan by the end of 2008 for incorporation into the City's Master Plan.

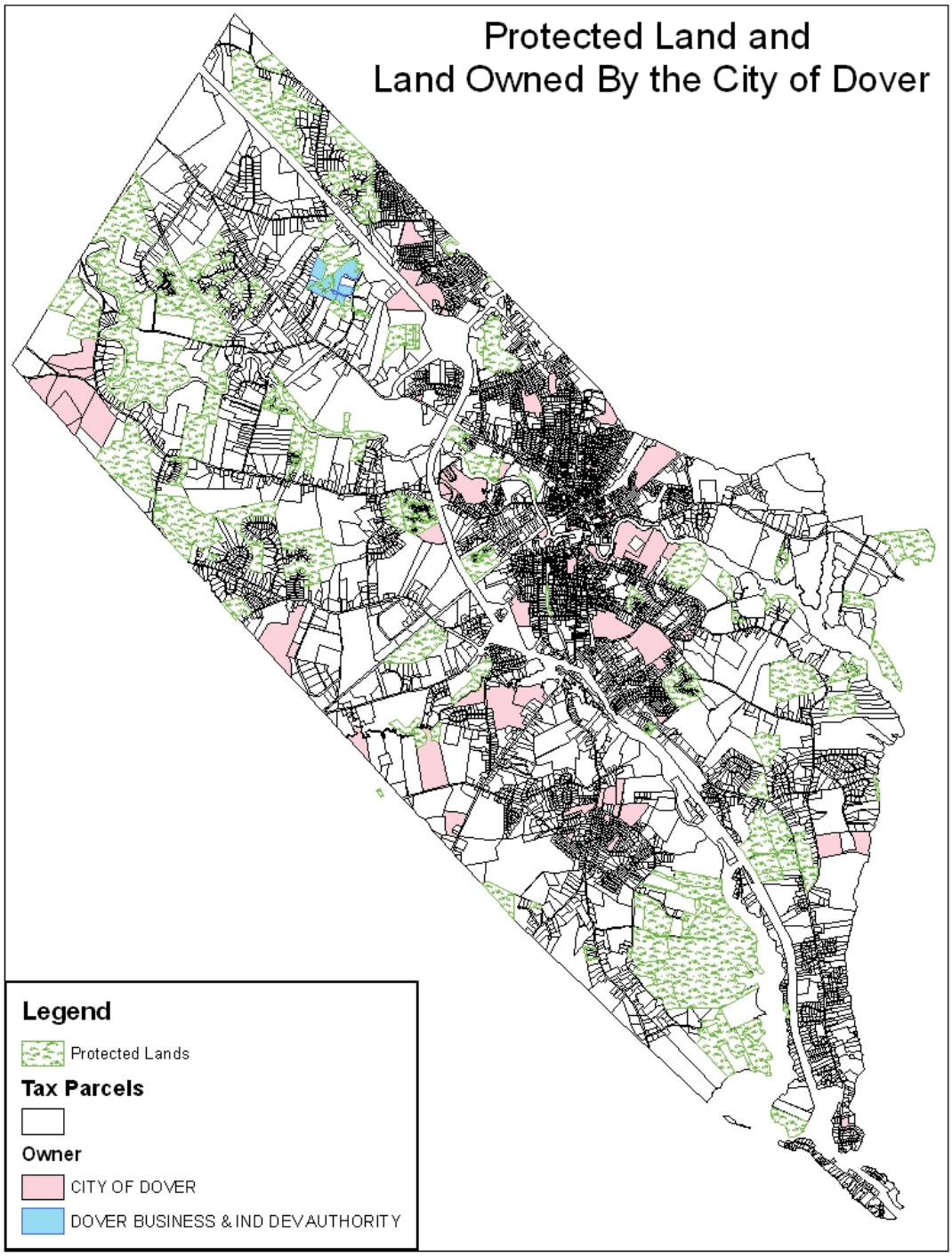

Protected Land and
Land Owned By the City of Dover
Legend
Protected Lands
Tax Parcels
Owner
CITY OF DOVER
DOVER BUSINESS & IND DEV AUTHORITY

Exhibit 25

Build Out Analysis

Zone	Acres remaining	Units
R-12	237	704
R-20	190	334
R-40	2,080	1,57
RM-8	27	135
RM-10	27	67
RM-20	31	42
B-1	11	25
B-2	36	102
B-3	113	231
O	48	109
CWD	31	608
UMUD	8	330
Total	**2,839**	**4,544**

To determine the acreage available for development, the Master Plan update committee performed a build out analysis utilizing the Community Viz software. This Geographic Information System (GIS) based software allowed for variables to be input into the calculation of land and altered development schemes based upon the manipulation of variables.

At a base level, the City's tax parcel map was input to establish the base level of parcels available in Dover. The parcel data used was that in place on July 1, 2007. The parcel data was used by the program to demote usage and other data associated with the build out, such as the zoning designation.

The second step in the process was to identify lots that had been fully built out. In order to determine if a parcel was fully built out, the dimensional requirements for non-vacant lots was reviewed. Once the dimensional requirements were reviewed, the use of the lot was reviewed. For residential lots, the density requirements were considered to see if the lot might allow for further development, or subdivision.

For non-residential development, there are no density requirements; therefore consideration of the dimensional requirements, parking ability and other site development constraints were reviewed.

Once the lots that were fully built out were removed, the next step was to insert constraints that would be placed upon the land. These constraints include wetlands, floodways, lots that contain permanently protected open space.

After the constraints were added to the process, the software reviewed the vacant and buildable parcels, using the constraints to establish the remaining buildable area. Once that was completed, a square footage was calculated for each zone. This buildable area is reflected in the sections above.

In summary, the build out predicts the potential residential capacity for the City. Cumulatively this results in approximately 4,500 new residential units. Strictly residential zones resulted in a combined 3,00 units, with the remaining 1400 coming from non-residential and mixed uses zones which allow residential.

The analysis does not predict a build out rate or a pace of development. It also does not take into account any potential market conditions about the size or style of housing. Furthermore, it does not account fully for parking and other site condition needs, such as drainage and similar physical improvements necessary to support development.

Moreover, the build out cannot predict if non-residential and mixed use zoned land would have any residential units at all. The land could be more valuable for non-residential uses and will not generate any residential units. Finally, it does not account for any purchases of property made by the Open Lands Committee. The goal is to present a total potential build out for Dover.

These numbers reflect the constraints used. A constraint unavailable for the procedure were steep slopes (those greater than 20%), which are not buildable in Dover. Topographic constraints can greatly affect the buildable area of a lot, and Dover does not have these in complete digital format usable by the GIS for this process.

Exhibit 26 demonstrates the total land that remains buildable in the City of Dover. This is residential and non-residential land, and is a predicted outcome generated by the build out analysis.

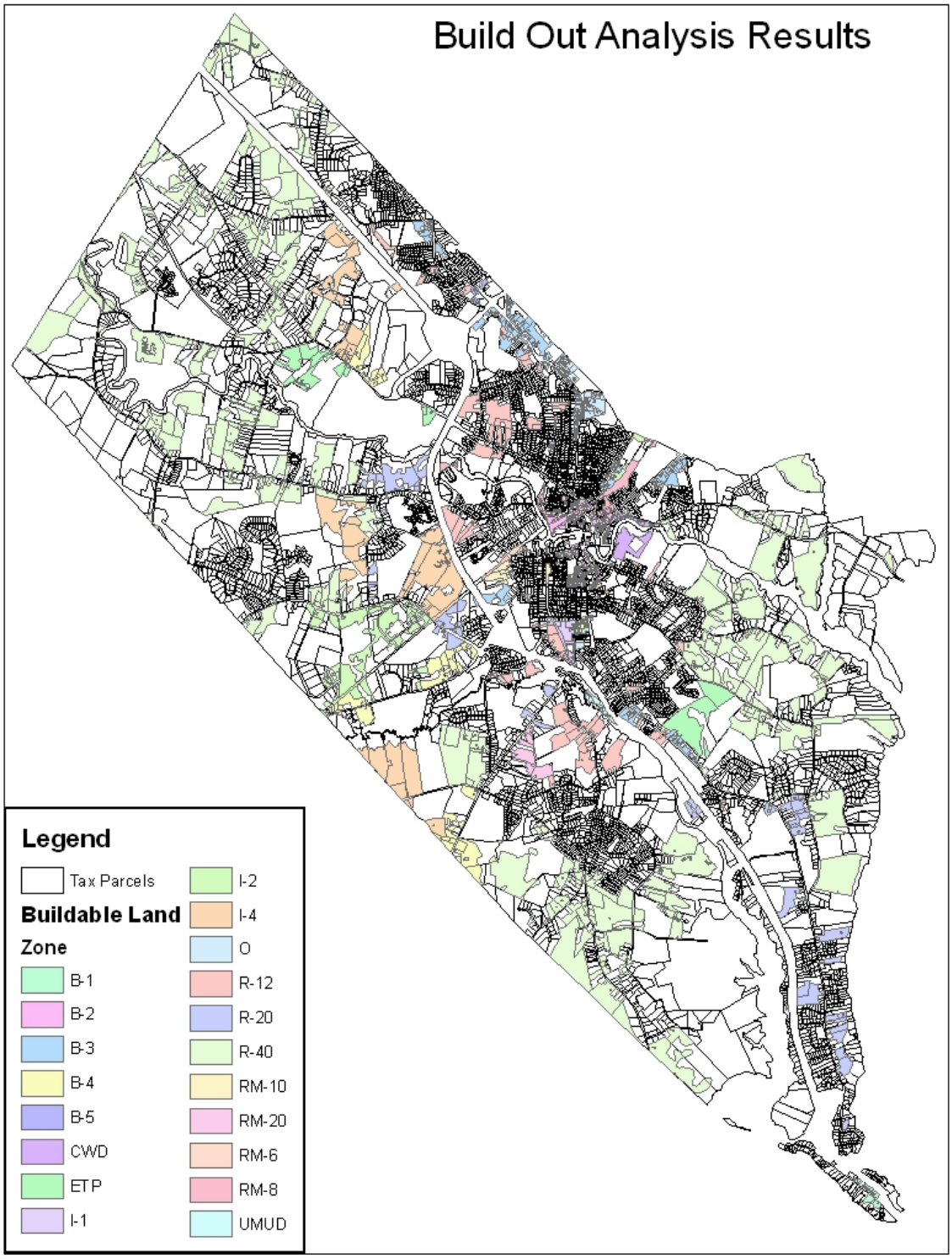

Build Out Analysis Results
Legend
Tax Parcels
Buildable Land
Zone
B-1
B-2
B-3
B-4
B-5
CWD
ETP
I-1
I-2
I-4
O
R-12
R-20
R-40
RM-10
RM-20
RM-6
RM-8
UMUD

Exhibit 26

Section

4

Recommendations

This section will provide a direction for growth and community development

Dover first adopted a Master Plan in 1963, and since that time has evolved from a community centered on manufacturing to a city boasting a reemerging downtown and varied housing opportunities. The residents of Dover have a strong sense of community and a shared vision for Dover's future, which includes development and redevelopment that is focused on creating an inviting and vibrant cultural, commercial, and residential experience.

The recommendations presented within this update are based in the theory that development should be aware of the context surrounding it. The following recommendations focus on redevelopment of existing parcels and encourage the continued use and improvement of the community's built environment. Further, the recommendations reflect the desires of the community that were collected through the community outreach programs of this Committee. Lastly, the recommendations are reflective of the evolution of attitudes and desires for development which respects nature and wishes to evolve in a sustainable fashion.

Housing Trends

Residential

R1 – Eliminate the existing "density bonus" allowances (Chapter 155-22.D1) in the Open Space Subdivision Regulations and consider incentives based on Landscaping, Building Materials, *LEEDS* Certification, and other environmentally progressive requirements.

R2 – Adopt *Traditional Neighborhood Development* and *Transit Orientated Development* Ordinances as alternatives to traditional zoning for both urban infill and new development projects.

R3 – Designate offsite recreational contributions on downtown projects for downtown recreation facilities, such as the Community Trail project.

R4 – Amend the *Residential Transfer of Development Rights* ordinance to consider a "*land bank*" as opposed to a market driven model.

R5 – Revise setbacks to create a minimum building area to incorporate expandability options and to further protect the wetlands buffer.

R6– Require a Fiscal Impact Analysis for all residential projects which create a public road.

Affordable Housing

AH1 – Form partnerships with developers to provide creative regional solutions which promote workforce housing development that keeps pace with changes in population and job growth.

AH2 – Support education and advocacy about regional housing issues.

AH3 – Continue healthy mix of single family (detached and attached), multi-family and mixed use development.

AH4 – Create a separate Housing Chapter of the Master Plan.

Non-Residential

Commercial/Retail

C1 – Make *pervious surfaces* mandatory in projects where there is over 1 acre of paving.

C2– Add commercial/retail zones to sending and receiving areas to the non-residential *Transfer of Development Rights* ordinance.

C3 – Strengthen site and building design by revising the Architectural Design Guidelines and making them Standards.

C4 – Revise the parking regulations to allow for a payment in lieu of parking provided option.

C5 – Require tax positive development on lots which cross municipal boundaries, the Dover portion of the lot should provide the positive revenue.

C6 – Designate areas as Business Investment Districts to improve infrastructure & streetscape by taking advantage of income created by an increased tax assessment.

Industrial

I1–Add industrial zones to sending and receiving areas to the non-residential *Transfer of Development Rights* ordinance.

I2 – Rezone the following areas to increase continuity with surrounding development:

- Land off Sixth St between the B-4 and I-4 zones
- Land off NH Route 155 Between the B-4 and I-2 zones

Institutional

IN1 – Update definitions for elderly care facilities.

Mixed Use

MU1 – Encourage Mixed Use as an incentive to Commercial Development, if done in context to surrounding vicinity, ensuring higher quality developments. Institute a *Contract Zoning* ordinance to promote this concept.

MU2 – Encourage Mixed Use at appropriate locations along major corridors to encourage transit use and pedestrian activities.

MU3 – Rezone the following areas to create neighborhood transition nodes in former industrial areas through *Contract zoning*:

- Existing I-1 zones
- Area bounded by Chestnut Street, the Cochecho River and Sixth Street

MU4 – Restrict allowed residential uses in non-residential zones to be limited to the second floor or above.

MU5 – Create and adopt a special exception criteria to allow small non-residential uses to be located in existing residential neighborhoods.

MU6 – Require a percentage of projects valued over $500,000 in the downtown to be dedicated for public benefit ie art, landscaped court yards, etc.

Streetscape

Public - Residential

S1 – Residential streets have a tree strip 5 to 10 feet in width between the street and the sidewalk with trees planted every 30 feet at a minimum height of 15 feet.

S2 – As neighborhoods transition from urban to rural, trees should become more random, curbs and sidewalks give way to shoulders.

S3 – Require bike lanes along all major transportation routes, and define design criteria for said lanes as well as pedestrian amenities.

Public - Downtown

S4 – Commercial streets shall have shade trees planted every 30 feet at a minimum height of 15 feet. Spaced with party walls of buildings, may be optional in the presence of conflicting awnings.

S5 – Concrete or brick sidewalks, no asphalt. Tree wells should always be brick to promote root health.

S6 – Streetlights, mailboxes, trash receptacles and other obstructions are placed within the tree strip.

S7 – Benches face each other within the tree strip or are backed up to buildings.

S8 – Transformers, HVAC equipment, ventilation and other machinery are discouraged from the streetscape.

S9 – Streetlights are low height and wattage and appear frequently toward neighborhood centers (approximately every 30 feet) and less frequently toward rural areas.

S10 – Identify strategic locations for landscaping improvements along corridors to improve aesthetics.

Private - Downtown

S11 – Change setbacks so retail buildings front directly on sidewalk with no setback.

S12 – Revise zoning so all buildings are at least three stories tall and of a mixed use in the B-2, UMUD, and CWD zones.

S13 – Develop a plan to migrate all utilities in the urban core to underground.

Other

General

G1– Review the dimensional regulations in zones, updating to promote more environmentally sensitive design ratios and promote proportional development.

G2 – Form a committee or hire a consultant to transition to an illustrated or *smart code* style of regulations.

G3 – Define a historic district and encourage use of an Historic District Commission as outlined in Chapter 30 "Historic Districts" of the City of Dover Code.

G4– Create action plans for distinct regions and neighborhoods, including Downtown.

G5 – The Dover Business and Industrial Development Authority should complete an Economic Development Master Plan.

Natural

N1 – Protect and retain wetlands, ponds, rivers and other significant natural resources.

N2 – Create public spaces and thoroughfares that are at least partially fronted by significant natural amenities.

N3 – Adopt site development regulations in such a way to maximize the preservation of specimen and significant groupings of trees.

N4 – Minimize grading to the amount necessary for safe development.

N5 – Connect natural spaces through continuous corridors, through neighborhoods or through narrow green belts.

N6 - Identify strategic locations for landscaping improvements along corridors to improve aesthetics, and amend street tree requirements to create a landscaping maintenance program.

N7 – Review allowances to construct on steep slopes.

N8 - Update the Conservation District zoning regulations to be consistent with the Comprehensive Shore land Protection Act.

N9 - Develop local regulations consistent with federal and state regulations.

N10 – Develop and maintain a City owned land management plan.

N11– Consider adapting 3X minimum lot size requirement for all lots created out of waterfront lots.

N12 - Revise R-40 zone along Back Road corridor to increase minimum lot size to promote farmland preservation.

Energy

E1– Adopt mandatory *LEEDS* certification for multi-family / commercial / industrial / office projects over a certain size.

E2– Mandate *LEEDS* certification for any new institutional projects.

E3 – Promote sustainable development through use of recycled materials, Energy Star rated products and sustainable building materials.

E4 – Encourage the use of local suppliers to minimize fuel costs and pollution and promote local job creation.

E5 – Encourage increase of required landscaping to mitigate CO2 emissions.

E6 – Encourage use of alternate/forms sources of energy, such as solar power.

E7 – Investigate incentives for L*EEDS* certification for projects that retro-fit and reuse existing buildings.

Definitions

Affordable Housing

A housing cost that does not exceed 30% of a household's gross income.

Contract Zoning

A practice that allows property owners to enter into a written agreement with the local government to rezone certain areas of land, on the condition that the limitations or restrictions set by the town for those parcels are accepted by the owner. The conditions would not necessarily be applied to other similarly zoned parcels.

LEED (Leadership in Energy and Environmental Design)

A Green Building Rating System, developed by the U.S. Green Building Council to provide a suite of standards for environmentally sustainable construction.

Pervious surfaces

A surface which allows natural water to flow into the ground and prevent water erosion except in very heavy rains, while providing a surface more conducive to biking and skating or vehicular parking.

"Smart Code"

An alternative to conventional zoning regulations, which is based on the traditional neighborhood model developed by by the Duany Plater-Zyberk Company in 2003.

Traditional Neighborhood Development

A comprehensive planning system that includes a variety of housing types and land uses in a defined area. The variety of uses permits educational facilities, civic buildings and commercial establishments to be located within walking distance of private homes.

Transfer of Development Rights

A program that uses the market to implement and pay for development density and location decisions by allowing landowners to sever development rights from properties in designated low-density areas, and sell them to purchasers who want to increase the density of development in areas that have been selected as higher density areas.

Transit Orientated Development

A tool to create of compact, walkable communities centered around high quality transit systems.

Visual Preference Survey

A technique that assists the community in determining which components of a plan or project environment contributes positively to a community's overall image or features.