

# Barnstable County Nexus Study

A Study of the Relationship Between Non-Residential  
Developments of Regional Impact and the Availability  
of Housing for Low- and Moderate-income Residents

Prepared For  
Cape Cod Commission  
Barnstable, MA

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## Executive Summary

As part of its review of the Regional Policy Plan, the CCC engaged John Ryan, Principal of Development Cycles located in Amherst, MA, to perform this Nexus Study. The study examines the relationship between the development of non-residential property and the supply of needed housing for Barnstable County residents. Legal challenges to commercial linkage fees in other jurisdictions have established the importance of performing a Nexus Study to evaluate: 1) whether there is a “rational basis” for assessing commercial developments with costs aimed to address affordable housing needs; and 2) where a rational basis does exist, what standard ensures that there is “rough proportionality” between the nature of the impact and the assessment of costs. The study attempts to answer three basic questions:

- Is there an adequate supply of fair affordable housing for Very Low, Low and Moderate-income residents on Cape Cod and, if not, how great a need exists for such housing?
- Is there a relationship between new commercial development and the kind of job growth that affects the need for affordable housing?
- What options exist for commercial developments to insure that they are contributing positively and fairly to the creation of an adequate supply of affordable housing for Cape residents?

The following provides a brief summary of study’s key findings:

### Housing Need

With respect to rental housing, the consultant sees a clear, existing need for affordable rental housing to serve Very Low, Low and Moderate-income renters on Cape Cod. In general, the affordability problems of rental housing focus on three groups: 1) low-wage workers; 2) family households with only one working resident; and 3) non-working residents. These are the groups most likely to be Very Low and Low-income renters and to pay high percentages of their income for rent across Massachusetts. Within this context, Barnstable County is among the least affordable areas of the state. The county has the highest percentage of elderly residents; it has a very high percentage of low wage jobs; and is home to a relatively high percentage of single parent households. It is the consultant’s view that it would require an increase of at least 1,800 year-round rental units affordable to Low and Moderate-income renters to have a meaningful impact on the current availability of affordable rental housing on the Cape.

Further, it is the consultant’s view that home ownership options do not really exist for the Cape’s roughly 13,450 very low and low-income renter households. For even 3,250 moderate-income renters, ownership options are limited to properties significantly below the lowest quartile of housing values. Since 2000, the home buying power of moderate-income

households grew by 40 percent but home prices doubled. That results in a 60 percent loss of real buying power in five years. In order to return the home buying capacity of moderate-income residents to the level it had five years ago would require an estimated 1,000 moderately price homes county-wide, reserved for moderate-income, year-round residents. To address the homeownership needs of moderate income residents more fully and to begin to address the ownership needs of non-elderly households earning between 70-80 percent of median income would require an additional 1,500 affordable ownership units countywide.

In all, the consultant estimates current affordable housing need at no less than 4,300 housing units, including 1,800 rentals for very-low and low-income residents and 2,500 ownership units for Low and Moderate-income renters. Given the Cape's projected trends in household and employment growth, the consultant sees the need for affordable housing growing by an additional 200-225 units per year for the next decade.

In the consultant's view, there are three interconnected reasons why Cape Cod has and will continue to experience problems of housing affordability for the foreseeable future. First, is the appeal of the Cape as a destination for vacation and retirement homes. A significant share of all homes countywide sell to buyers who do not rely on local employment to support their home purchase and earn significantly more money than local residents. Secondly, these two groups of buyers (along with transient visitors) generate demand for a relatively large number of low-wage jobs. Wealthier buyers not only drive up the cost of housing, they create demand for more workers with little capacity to afford that cost of housing. Finally, the limited supply and high cost of developing land on the Cape limits the ability of housing production to keep up with both local and external demand. As the huge cohort of "baby boomers" reaches its maximum earning potential and begins retiring over the next decade, the external market pressures on Cape Cod real estate will likely increase; so too will their demands for additional low-wage jobs.

Without significant increases in rental production, the Cape will be unable to provide rental housing for many of the lower paying jobs the economy expects to add over the next decade. In addition, there is a relatively large cohort of 10-19 year olds (24,521 in 2000) living on the Cape who will become young adults looking to start new households over the next decade. The Cape's ability to meet the needs of these two groups is currently very limited. In the consultant's view, the demand for affordable rental housing, which is already experiencing a deficit of at least 1,800 units, will see new demand for affordable rental housing at a rate of at least 100 units of housing annually over the next ten years.

At this stage, the ownership market is beyond the reach of over 90 percent of the county's roughly 16,650 Very low, Low and Moderate-income renters. As renters lack ownership options they will stay in rental housing longer, further exacerbating the demand for rental housing. At the same time, the consultant estimates that the existing deficit of at least 1,000 units of affordable homeownership for moderate-income renters and 1,500 units for lower income residents (earning 70-80 percent of median) will continue to grow by 100 to 125 units per year over the next decade so long as housing prices continue to outpace the buying power of the county's moderate-income working residents.

## **Relationship Between Commercial Development, Job Growth and Affordable Housing Need**

Since 1990, the Barnstable County's population has increased by a 26 percent and households by 27 percent. The Cape has also registered a 34 percent increase in the number of local jobs and a roughly 20 percent increase in commercial property.

According to the MA Division of Career Services/ Division of Unemployment Assistance (DCS/DUA), the average annual wage paid for all jobs performed in Barnstable County during the second quarter of 2004 was \$34,008. The average annual wage for all jobs statewide was \$46,696 or 37 percent higher than the Cape. Forty-two percent of all year-round jobs on Cape Cod fall into one of four industry sectors: retail; food service and accommodations; arts, entertainment and recreation; and other non-governmental services. According to the DCS/DUA, none of these four job types pays an average wage of \$25,000. From 1990 to 2004, 47 percent of the Cape's net job growth came in these four sectors.

In 2000, the DCS/DUA projected job growth for the Cape and Islands from 1998 to 2008. Nine of the 10 fastest growing occupations projected currently pay average wages less than the average for jobs generally. Indeed, the study projects that 95 percent of the net job growth on the Cape and Island will come in areas that pay less than the average wage for this region.

At the same time, the cost of rental housing on the Cape is at least 5.7 percent higher than it is statewide, and the median cost of homeownership is 20 percent higher. To afford a median priced home on Cape Cod now takes an additional down payment of \$131,400 to \$172,000 for a three-person household earning between 80 to 100 percent of median income. Even a home in the lowest 25 percent of value requires an added down payment of between \$51,400 and \$92,000.

Clearly, the wages for jobs created in the past 15 years do not match the cost of housing countywide. Moreover, we can expect that trend to continue through the next decade as job growth continues to focus on lower-paying health, retail and service employment.

In the consultant's view, both new residential and new commercial endeavors play a role in diminishing the availability of housing for Low and Moderate-income for Cape Cod residents. The residents of new high-cost housing help generate demand for low paying service and retail jobs, while commercial developments provide the space for these jobs to take place. Both new housing and new commercial developments derive much of their economic benefit from the attractiveness of the Cape as a tourist, second home and retirement community. Because both residential and non-residential types of development play a role in generating the jobs filled by new Low and Moderate-income residents, both have an appropriate role in assuring that Cape Cod can provide year-round housing for these residents. A rational basis does exist between the development of commercial property and the housing needs of the employees generated by that commercial property. Commercial development by its very nature satisfies the space needs of new jobholders. To the extent that those new jobholders earn wages insufficient to afford housing, they negatively affect affordable housing conditions in the area. As such, commercial development is one link in the nexus of conditions that results in high cost housing and low wage jobs on Cape Cod.

## **Summary of Linkage Programs**

A relatively small but growing number of other communities, largely in high cost states, like California and Massachusetts, have by-laws that link commercial development applications with contributions for affordable housing. A review of existing linkage policies nationwide suggests that there is no uniform application of the rational basis or rough proportionality legal standard needed to justify a link between commercial development and housing contributions. Some but not all jurisdictions exempt certain types of development or certain sizes of project; some provide incentives for affordability contribution, or tie contributions to the cost of housing; others base fees on the likely number of employees per SF of development; still others give applicants suggestions for contributions rather than specific charges. The CCC has considerable flexibility in fashioning its Minimum Performance Standard for non-residential development.

## **Options for CCC Minimum Performance Standard**

The consultant reviewed several approaches to creating a Minimum Performance Standard for non-residential developments. One option is to apply the same standard as is currently applied to residential developments. This would result in a requested affordable housing contribution of between \$3.06- \$4.37 PSF (or alternatively between 1.5- 2.5 percent of Total Development costs) from all commercial DRIs. A strong case can also be made to discount the requested contribution from commercial DRIs to reflect lower values, greater risk, and other tax and employment benefits these types of development generate. The consultant also evaluated options that would adjust expected contribution for other factors including employee density and percentage of average wage paid to each job classification.

## **Summary and Recommendations**

Based on all the data collected and analysis performed, the consultant considers there to be a clear need for affordable housing on Cape Cod and a clear nexus of relationship between commercial development and the need for affordable housing. In order to provide proof of overall benefit to life on Cape Cod, commercial DRIs bear some responsibility for contributing to an adequate supply of affordable housing.

The consultant does not believe that the Minimum Performance Standard should be as high generally for new commercial developments as for new residential developments for the reasons suggested in the Section IV, Part 2 “Commercial Fees Discounted to Reflect Lower Values and Greater Risk.” Moreover, the consultant does believe that the contributions made by commercial DRIs should reflect differences in employee density and average wages for job classifications common to each type of development. The consultant also recommends consideration be given to allowing commercial developments to pay contributions over time to reflect the reality that these developments commonly earn their revenue through rents rather than sale of property.

In all, the consultant believes that a Minimum Performance Standard that recommends a contribution based on the following PSF basis would fairly reflect the nexus of relationship between commercial development and affordable housing need, as well as reflect the differences that exist between development types. Overall, these recommended contributions bring in roughly 50 percent of the PSF value of those recommended for residential DRIs. The consultant’s rationale for recommending these lower rates focuses primarily on 1) the positive

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contribution commercial development has on the property tax base compared to residential development; 2) the lower appreciated values commercial properties have shown compared to residential properties on Cape Cod; and 3) the greater access residential developments have to housing subsidies to cover part of the cost of meeting their affordable housing requirements.

Office	\$1.25- \$1.75 PSF
Health & Medical	\$1.75- \$2.25 PSF
Retail	\$1.75- \$2.25 PSF
Restaurant/ Food Service	\$2.25- \$2.75 PSF
Warehouse & Distribution	\$0.30- \$0.50 PSF

Other development types (e.g. hotels, recreational facilities) should be expected to contribute to meet affordable goals as well. The consultant suggests that contribution be based on \$1.25-\$1.75/ PSF for each employee/ 1,000 SF of total space in a job classification that pays less than the overall average wage for the Cape.

The consultant sees the potential for greater contributions to housing affordability, as well as greater levels of partnership with the development community, if the Commission can tie higher levels of affordable housing contribution to density bonuses or regulatory exemptions. It may be possible for the CCC to work with local municipalities to provide a density bonus for commercial developments that make greater contributions toward addressing affordable housing need. An added density of up to 10 percent for each \$1.25 to \$1.75 PSF of contribution to affordability on the entire project should balance both incentive to the developer and assurance that the majority of benefit goes to serve affordability goals. The consultant recognizes that the power to grant density bonuses resides with the local municipalities and the CCC's role in this regard is educational and advisory.

Efforts to increase local zoning incentives to develop affordable housing above new commercial space may also provide relatively low-cost options for commercial developers to add to the supply of fair affordable housing.

Another approach offered by stakeholders was to offer limited exemptions from the DRI approval process for projects that meet certain higher standards of performance with respect to affordable housing contributions.

## Introduction

### ***1. Purpose of this Study***

The Cape Cod Commission Act of 1990 imposes a duty on the Cape Cod Commission (hereafter CCC or the Commission) to balance the probable benefits and detriments of each application for a Development of Regional Impact (DRI). In making a finding of the probable benefits and detriments of a proposed development, the Commission must consider, as one factor along with other factors, whether the development provides “an adequate supply of fair affordable housing.” Each DRI must demonstrate that it is consistent with the Cape Cod Regional Policy Plan and must show its overall benefits outweigh its detriments. The Act indicates that certain commercial developments including retail, wholesale, office, industrial, and private health, recreational, and educational developments fall within the purview of the DRI when they meet certain thresholds, including:

- New construction or use changes exceeding 10,000 SF
- Additions exceeding 5,000 SF
- Outdoor commercial developments exceeding 40,000 SF of floor area
- Developments creating 10 or more commercial or industrial businesses regardless of overall size

The Cape Cod Regional Policy Plan (CCRPP) recommends that residential developments that create ten or more housing units or home lots provide 10 percent of its housing as affordable housing [Sections 5.1.1 and 5.1.2]. The Plan recommends affordable housing be provided as part of residential and mixed use DRIs [5.1.15]; requires commercial DRIs to provide an analysis of affordable housing needs generated by the project [5.3.1]; and requires that new developments with a high need for seasonal workers shall make provisions for employee housing or assist in placing summer employees [5.3.2]. The CCRPP does not give a specific Minimum Performance Standard to commercial developments, as it does to residential developments, for insuring an adequate supply of fair affordable housing.

This Nexus Study proceeds in four parts:

- Part I examines Affordable Housing Needs on Cape Cod. It asks: “Is there a current need for affordable housing for Very Low, low and moderate-income residents of Cape Cod?” How many homes (rental and ownership) are needed to meet that need?” and “What is the projected need for such housing over the next decade?”
- Part II looks at trends in commercial development and employment on Cape Cod since 1990. It provides a description of the scale of development and the character of employment in the county. This section evaluates the relationship between job growth and affordable housing need.
- Part III reviews commercial linkage programs nationwide and explores issues for the Commission to consider when giving DRI applicants guidance for insuring that commercial development will have a beneficial impact on affordable housing needs.

- Part IV looks at key differences between office, health/medical, retail, restaurant, and warehouse/ distribution space and provides a summary of options and recommendations for the CCC to consider when evaluating a commercial DRI.

## **2. Methodology**

The consultant performed the following tasks in the preparation of this study:

- Met with key stakeholders to discuss issues related to commercial development and the supply of needed Low and Moderate-income housing for county residents.
- Reviewed the CCC enabling legislation, the Cape Cod Regional Policy Plan, the Commission's list of residential and non-residential DRIs since 1990, and the 2005 HUD CDP Consolidated Plan prepared by Commission staff for the Barnstable County HOME Consortium.
- Collected relevant demographic, employment, wage, income and commercial development information for Barnstable County since 1990.
- Identified and evaluated other jurisdictions that have policies linking commercial development to the provision of affordable housing.
- Evaluated alternative models for determining the nexus between commercial development and affordable housing.

In the course of this research, the consultant used a wide range of sources, including: the 1990 and 2000 U.S. Census of Population; employment and wage data provided by the MA Divisions of Career Services and Unemployment Assistance (DCS/DUA); tax assessment data provided by the MA Department of Revenue and by local Assessors; as well as published reports and discussions with city officials in communities with linkage programs for commercial development.

## **3. Limitations**

There are a number of limitations to consider when evaluating the findings and recommendations of this report. These limitations largely represent gaps in the chain of information that would allow for a direct determination of the impact of non-residential development on the need for affordable housing on Cape Cod. Each gap increases the number of assumptions or judgments the consultant must make. Among these gaps include the following:

- The U.S. Census information on household income does not report household income by household tenure and size, nor does it report household income in a manner that directly corresponds to HUD's definition of Very Low, Low and Moderate-income households. Thus, the number of county residents included in this report as low-or moderate-income households is estimated.

- The MA DCS/DUA lists the average wage for a large number of occupations. This information does not, however, report wage distributions, making it more difficult to determine the exact relationship between a given job sector and the actual number of low-paying jobs it creates.
- Barnstable County Assessor records do not provide enough information to determine precisely how much commercial property exists or how much was added to the market since 1990. This makes it more difficult to track the historical increase in occupied commercial space in a manner consistent with changes in employment or household formation.

In each case, the consultant used professional judgment to estimate the impact based on the available information after reviewing approaches used in other jurisdictions.

## I. Affordable Housing Needs

### 1. Background

The enabling legislation that created the Cape Cod Commission (CCC) gives the Commission the responsibility to evaluate the impact of Developments of Regional Impact (DRI) on “the availability of fair, affordable housing for Low and Moderate-income residents” of Barnstable County. Moreover in its Regional Policy Plan, the CCC sets a goal of “meeting the needs of the most vulnerable segments of the Cape’s population, including but not limited to Very Low-income, Low-income, single heads of household, racial minorities, and others with special needs.” It is important at the outset to define what we mean by “affordable” by “Very Low, Low and Moderate-income” and by “need.”

#### **What do we mean by affordable?**

For the purposes of this study, a home or apartment is considered affordable if a household can pay the monthly costs of the residence with no more than 30 percent of gross household income. For renters, that means the cost of rent and utilities (“gross rent”); for homeowners, it includes the cost of principal, interest, mortgage insurance, homeowners insurance, and property taxes (“PITI”).

#### **What do we mean by Very Low, Low and Moderate-income residents?**

First of all, this study is referring only to year-round residents. This study uses the CCC’s working definition for very-low-, low- and moderate-income households:

- Very Low-income households earn 50 percent or less of the area’s Median Family Income\* adjusted for household size as determined annually by the U.S. Department of Housing & Urban Development (HUD).
- Low-Income households earn between 50 and 80 percent of the area’s Median Family Income as defined above
- Moderate-Income households between 80 and 100 percent of the area’s Median Family Income as defined above

\* NOTE: HUD refers to its income data as “Family Income” but it applies to both family and non-family households equally. When HUD refers to Median Family Income, they define that as the median income calculated for a four-person household. HUD Median Household Income represents the median income calculated for a three-person household. In all cases, HUD assumes that the larger the household-size the higher the median income. In this report, the consultant relies primarily on the “household” or “three-person family” definition because it more closely relates to reality of household size in Barnstable County.

## What do we mean by need?

There is no standard definition of “need” when it comes to affordable housing. It seems reasonable that the Commission may establish a practical definition of need based on the conditions present in the county. In this section, the consultant provides information on the several potential definitions of need, in order to give the Commission some guidance in defining that term.

- **Housing Problem Definition:** The Barnstable County Home Consortium’s definition of housing need expressed in its Consolidated Plan looks at all Very Low and low-income households experiencing one of three housing problems – lack of plumbing facilities, overcrowding, or cost burden (paying more than 30 percent of their gross income for housing). This represents perhaps the broadest definition of need. *By this definition, roughly 7,000 renters and 11,500 owners on the Cape currently experience one of these housing problems (mostly cost burden) and thus have a housing need.*
- **Ten Percent Rule:** Chapter 40B of Massachusetts General Laws sets a goal for every community in the Commonwealth to make ten percent of its year-round housing units affordable to low-income residents. The Cape Cod Regional Policy Plan’s Goal 5.1 calls for each town to raise its affordable housing stock to a minimum of 10 percent of all year-round units by 2015. This definition of need suggests that Barnstable County’s housing need represents whatever shortfall it may have in reaching that ten percent goal. Currently the MA Department of Housing & Community Development (DHCD) reports Barnstable County’s affordable stock as 4.81 percent of all year-round housing units. *To meet the need using the Ten Percent Rule, the Cape would have to add 5,200 units of affordable housing based on a 2000 Census count of year-round residences.*
- **Meeting the Massachusetts Average:** A less rigorous definition than the Ten Percent Rule would argue that the Cape’s need represents whatever shortfall may exist between the percent of affordable units on the Cape compared to the percentage that exists statewide. DHCD currently defines 9.0 percent of year-round housing units in Massachusetts as affordable by the standards of Chapter 40B. *To meet the need using the Massachusetts Average, the Cape would have to add 4,350 units of affordable housing.*
- **Thirty Percent of Income Definition:** Given that the standard definition for affordability requires a monthly housing cost no greater than 30 percent of a household’s income, a fourth definition could be that Barnstable County should have no greater percentage of owners and renters paying more than 30 percent of their income for housing than the percentage for the State or nation as a whole. Need would then represent the number of affordable units required to insure that the county and state or nation percentages were at least equal in this regard. It should be noted that by comparing Barnstable County to Massachusetts, it is making a comparison to one of the least affordable states in the nation for housing. *By this definition, the Cape has a shortfall equal to 650 units of affordable rental housing and 1,200 units of affordable homeownership housing compared to the State and 400 units of affordable rental and 2,000 units of affordable homeownership housing compared to national averages based on 2000 U.S. Census data.*

- Lowest Quartile Definition for First Time Buyers: Renter households are the primary focus of affordability need. They represent the households seeking rental units as well as those hoping to become first time homeowners. Statistically, renters have significantly lower household incomes than their home-owning counterparts. In Barnstable County the median renter income in 2000 was only 55.4 percent of median owner income. On the Cape, as in most communities in New England, only higher-income renters can realistically aspire to homeownership. It is also generally true that first-time buyers look for housing in the lower cost range of housing for a given area. The Lowest Quartile Definition defines need as the number of units needed to ensure that a renter household earning at least 80 percent of median household income (Moderate-income) can afford to purchase a home priced at the lowest 25 percent of all homes sold. *Using this definition, the consultant estimates the Cape needs roughly 3,000 units of ownership housing affordable to buyers earning 80 to 100 percent of area median income. If you extend this definition to provide for affordable ownership to those low-income households earning between 70-80 percent of median, you would add an additional 1,500 units of affordable ownership need.*
  
- Living Wage Definition for Rental Housing: A sixth approach suggests that average-wage workers should be able to find rental housing they can afford using no more than 30 percent of their income. Need then represents any additional affordable rental units required to insure that there are enough units to provide at least average wage-workers with affordable rental housing. In Barnstable County an average-wage worker can indeed afford the Fair Market Rent (FMR) of a one-bedroom apartment, but can pay only 89 percent of the cost of a two-bedroom FMR as defined by the US Department of Housing & Urban Development (HUD). In nearly all other reporting jurisdictions in the state, a single average-wage worker can afford the full cost of a not only a one-bedroom but also a two-bedroom FMR. *Given the distribution of gross rents reported in the 2000 Census, the consultant estimates that it would take roughly 2,750 additional below market rental units (or 11 percent of existing rental stock) to provide enough housing to ensure that a single average-wage worker could afford the cost of a median priced two-bedroom apartment.*

These alternative definitions, when applied to the conditions present on the Cape, provide a very wide range of need: 650 to 7,000 affordable rentals (representing 3 to 30 percent of existing rental housing); and 1,200 to 11,500 affordable ownership units (representing 1.5 and 15 percent of existing ownership housing) needed to serve Very Low, Low and Moderate-income residents in Barnstable County today. This gives the Commission a great deal of latitude in addressing how much of a “problem” there is to fix. Of these definitions, the consultant considers the state’s ten percent goal as having the strongest legal basis for establishing a working definition of need. In the summary sections of this Needs Analysis, the consultant has recommended a single, moderate estimate of rental and ownership need and projected the likely change in housing need over the next decade.

## **2. Rental Housing Affordability**

Figure I.1 indicates HUD’s current determination of Fair Market Rent (FMR) for Barnstable County in April 2005\*. FMR represents the combined rent and utilities paid by 40 percent of market rate renters as determined periodically by a random telephone survey method. Between Census surveys, it represents the most comparable indicator of market rate rents across the state (though its accuracy as a reflection of true market rents is often disputed).

Figure I.1

HUD Fair Market Rents

Barnstable County, FY2000, FY2005

	One Bedroom	Two Bedroom	Three Bedroom	Four Bedroom
FY2000	\$ 675	\$ 887	\$ 1,107	\$ 1,238
FY2005	\$ 699	\$ 917	\$ 1,098	\$ 1,131
Percent Change	3.6%	3.4%	-0.8%	-8.6%

Source: U.S. Department of Housing & Urban Development (www.huduser.org), 2005.

\* Barnstable County data throughout this section averages the Barnstable-Yarmouth MSA with the non-metro portion of the county.

Over the past five years, Barnstable County's FMR has changed very little. HUD appears to have adjusted Cape rents downward after the 2000 U.S. Census reported lower area rents than HUD was using. This relative freeze in HUD fair-market rents likely understates the true nature of current market rate rents. In January and February 2005, the Barnstable County Home Consortium reviewed the rental apartments advertised by the *Cape Cod Times*. They report that advertised apartment rents averaged between 25 percent and 57 percent higher than FMRs, depending on bedroom size. The consultant uses the HUD FMRs throughout this study but recognizes that they may understate the true cost of rental housing and therefore the burden of rents on Low and Moderate-income residents.

Figure I.2 provides HUD's estimate of household income by household size for Very Low, Low and Moderate-income households over the same time period. Moderate-income households earn between 80 and 100 percent of an area's median income adjusted for their household size. HUD defines Low-income as earning between 50 and 80 percent of median income, and Very Low-income as earning less than 50 percent of this size-adjusted median income.

Figure I.2

HUD Family Income Limits by Household Size

Barnstable County, FY2000, FY2005

	One Person	Two Persons	Three Persons	Four Persons	Five Persons
FY2000					
Very Low-income	\$ 18,050	\$ 20,650	\$ 23,200	\$ 25,800	\$ 27,850
Low-income	\$ 28,900	\$ 33,000	\$ 37,120	\$ 41,280	\$ 44,560
Moderate-income	\$ 36,100	\$ 41,300	\$ 46,400	\$ 51,600	\$ 55,700
FY2005					
Very Low-income	\$ 23,050	\$ 26,300	\$ 29,600	\$ 32,900	\$ 35,550
Low-income	\$ 36,850	\$ 42,100	\$ 47,400	\$ 52,650	\$ 56,850
Moderate-income	\$ 46,100	\$ 52,600	\$ 59,200	\$ 65,800	\$ 71,100
Annual Change	5.5%				

Source: HUD (www.huduser.org), 2005

Over the past five years, HUD estimates show household income increasing by 5.5 percent annually. If HUD's estimates of income and rents are accurate, the cost of renting a fair market apartment has grown significantly more affordable to very-low, Low and Moderate-income renters on the Cape since 2000.

Figure I.3 looks at the current ability of a Very Low, Low and Moderate-income Household to afford the FMR rent. This table looks at whether one-person households can afford one-bedroom rents at FMR in 2005. It also looks at the affordability of a two-bedroom rent for a two-person household and a three-bedroom rent for a four-person household. This table indicates that a "rent burden" falls on all Very Low-income households and about half of all Low-income households. For the household at the upper limit of Very Low-income, the cost of a FMR is between \$123 and \$275/ month more than they can afford, based on household size.

Figure I.3  
Rental Affordability for Very Low, Low, and Moderate-income Households  
Barnstable County, FY2005

	Very Low-income	Low-income	Moderate-income
<b>One Person/ One Bedroom</b>			
Affordable Rent at Upper Limit	\$ 576	\$ 723	\$ 903
FMR	\$ 699	\$ 699	\$ 699
Affordability Gap	\$ 123- \$699	\$0-123	\$0
Income Needed to Afford FMR		\$ 27,960	
<b>Two Person/ Two Bedroom</b>			
Affordable Rent at Upper Limit	\$ 658	\$ 1,053	\$ 1,315
FMR	\$ 917	\$ 917	\$ 917
Affordability Gap	\$ 259- \$917	\$0- \$259	\$0
Income Needed to Afford FMR		\$ 36,680	
<b>Four Person/ Three Bedroom</b>			
Affordable Rent at Upper Limit	\$ 823	\$ 1,316	\$ 1,645
FMR	\$ 1,098	\$ 1,098	\$ 1,098
Affordability Gap	\$ 275- \$1,098	\$0-\$275	\$0
Income Needed to Afford FMR		\$ 43,920	

Source: HUD (www.huduser.org), 2005

Figure I.4 compares the relative affordability of rental housing in Barnstable County with that of other jurisdictions in the state. This table looks at the percentage of a two-bedroom FMR a three-person household at Very Low, Low and Moderate-income limits can afford in their area. In Massachusetts, Barnstable County ranks 13<sup>th</sup> of 18 reporting jurisdictions in terms of rental affordability for Very Low, Low and Moderate-income renters.

Figure IV.4

Rental Affordability for Very Low, Low and Moderate-income Households

HUD Reporting Areas in MA, FY 2004

<i>Percentage of FMR Affordable to Households at Maximum Income Level</i>	Very Low-income	Low-income	Moderate-income
Worcester County	120%	192%	239%
Berkshire County	117%	187%	233%
Hampden County	111%	177%	222%
Franklin County	109%	175%	218%
Pittsfield MSA	109%	174%	218%
New Bedford, MA PMSA	105%	168%	210%
Prov.-Fall River-Warwick PMSA	97%	154%	195%
Hampshire County	97%	155%	193%
Springfield MSA	92%	148%	184%
Fitchburg-Leominster MSA	91%	145%	181%
Worcester, MA-CT MPMSA	85%	136%	170%
Lawrence, MA-NH PMSA	84%	129%	169%
Lowell, MA-NH PMSA	82%	118%	164%
<b>Barnstable County</b>	<b>81%</b>	<b>130%</b>	<b>162%</b>
Nantucket County	74%	118%	148%
Brockton, MA PMSA	74%	120%	148%
Boston, MA-NH PMSA	73%	118%	147%
Dukes County	70%	112%	140%

*NOTE: This compares the percentage of a two-bedroom FMR affordable to 3 person households at the maximum income eligibility using no more than 30% of their gross household income  
Barnstable County FMR averages Barnstable-Yarmouth MSA and non-metro county*

**Source:** U.S. Department of Housing & Urban Development (www.huduser.org), 2005

Another way to look at the issue of rental affordability is to look at the ability of an average-wage worker to afford the local rent. In Barnstable County, the average-wage worker makes \$34,008 annually (based on the most recent reporting period). With its high dependence on lower paid service and retail workers, Barnstable County's average wage is 27 percent lower than the average wage for the state as a whole. The Cape's average wage corresponds to an affordable rent of \$850/ month. Figure I.5 compares various Massachusetts jurisdictions with respect to the ability of an average-wage worker to afford a one- or two-bedroom FMR using no more than 30 percent of his or her income. In this comparison, the Cape is one of the least affordable areas, again ranking 13<sup>th</sup> of the 18 reporting jurisdictions

Figure I.5  
Ability of Average Wage Worker to Afford One and Two-Bedroom FMR  
HUD Reporting Areas in MA, FY 2004

	% of Fair Market Rent			
	Average Wage	Affordable Rent	One Bedroom	Two Bedroom
Worcester County	\$ 40,768	\$ 1,019	192.3%	144.4%
Pittsfield MSA	\$ 37,544	\$ 939	181.5%	143.5%
Berkshire County	\$ 35,464	\$ 887	174.2%	147.8%
Springfield MSA	\$ 36,504	\$ 913	149.9%	118.2%
Hampden County	\$ 36,608	\$ 915	147.1%	110.4%
Lowell, MA-NH PMSA	\$ 50,856	\$ 1,271	144.3%	119.4%
Worcester, MA-CT MPMSA	\$ 40,300	\$ 1,008	143.7%	119.9%
Franklin County	\$ 31,876	\$ 797	142.3%	111.3%
Lawrence, MA-NH PMSA	\$ 43,628	\$ 1,091	141.5%	112.3%
Fitchburg-Leominster MSA	\$ 34,788	\$ 870	139.2%	110.9%
Hampshire County	\$ 35,672	\$ 892	138.0%	103.5%
New Bedford, MA PMSA	\$ 34,000	\$ 862	121.1%	104.7%
<b>Barnstable County</b>	<b>\$ 34,008</b>	<b>\$ 850</b>	<b>121.1%</b>	<b>93.0%</b>
Boston, MA-NH PMSA	\$ 52,208	\$ 1,316	115.9%	92.7%
Brockton, MA PMSA	\$ 38,740	\$ 969	113.5%	92.6%
Dukes County	\$ 32,292	\$ 807	111.7%	84.0%
Providence-Fall River-Warwick PMSA	\$ 31,460	\$ 787	107.4%	93.1%
Nantucket County	\$ 36,400	\$ 910	84.1%	63.1%

Source: MA DCS/DUA, HUD

Figure I.6 reports the percentage of renter households paying more than 30 percent of their income for rent in Barnstable County and Massachusetts in 2000 based on age and household income. The table shows that the problem of “rent burden” is largely the problem of Low and Very Low-income residents. Two-thirds of renters earning less than \$20,000 pay at least 30 percent of their income for rent in Barnstable County. That percentage drops to slightly less than half for those earning between \$20,000- \$34,999, and falls dramatically to 7.6 percent for those earning more than \$35,000. At each income level Cape renters are more likely than their counterparts statewide to experience rent burdens. Overall, 38.5 percent of renters in Barnstable County experience rent burdens, compared to 35.4 percent statewide. In order for Barnstable County to have the same overall level of rent burden as the state, a total of 650 Cape renters would need more affordable rental housing options.

The rent burden data by age tells a somewhat different story. It is actually slightly less likely that either elderly or non-elderly households on the Cape will experience a rent burden compared to their counterparts statewide. It is only because the Cape has a much higher percentage of elderly renters, and older renters are more likely to experience rent burden, that the Cape experiences a higher overall level of renters paying more than 30 percent of their income for housing.

Figure I.6  
 Renters Paying at Least 30% of Income for Rent  
 By Income and By Age of Householder,  
 Barnstable County & Massachusetts, 2000

	Barnstable County	Massachusetts
Percent of All Renter Households		
Less than \$20,000	67.6%	65.3%
\$20,000- \$34,999	48.8%	47.1%
\$35,000 and over	7.6%	6.5%
Total	38.5%	35.4%

Percent of Renters, By Age of Householder		
15-64 years	30.6%	33.0%
65 and over	44.4%	45.6%
Total	38.5%	35.4%

Source: 2000 U.S. Census, SF-3 H-71,H-73

Figure I.7 provides the consultant’s estimate of the number of Very Low, Low, and Moderate-income renters living in Barnstable County. The consultant’s model correlates 2000 HUD income limits with 2000 Census Data that details household income by tenure, age, household size, and presence of children. In this model, roughly two-thirds of all non-elderly rental households qualify as Moderate-income or less. Among senior renters, that percentage is even higher at 90.3 percent. Overall, 72.2 percent of renters would qualify as Very Low to Moderate-income. In total, the consultant estimates that 8,550 Cape renters would qualify as Very Low-income. This represents 37.1 percent of the Cape’s roughly 23,050 renter households. Another 4,850 (21 percent) are Low-income and 3,250 are moderate-income (16.7 percent).

DHCD credits Barnstable County communities with 4,808 subsidized housing units. A CCC staff review of Chapter 40B projects on the Cape (about 1/3 of the total affordable inventory) shows that the subsidized housing total includes 549 ownership units, 235 homeowner rehab units, and 235 market rate rentals. This leaves, at most, 3,814 rental units reserved for low-income residents. This provides enough affordable rental housing to serve no more than 45 percent of Very Low-income renters or about 26 percent of Very Low and Low-income renters combined.

Figure I.7  
 Estimate of Very Low, Low, and Moderate-income Renters  
 Barnstable County 2005

	Very Low-income	Low-income	Moderate-income	Total Low-Mod Households	Total Renter Households	Percentage Low-Mod
Householder 15-64	5,600	3,850	3,000	12,450	18,400	67.7%
Householder 65+	2,950	1,000	250	4,200	4,650	90.3%
Total	8,550	4,850	3,250	16,650	23,050	72.2%

Source: Development Cycles, 4/05 based on U.S. Census, SF-1, SF-3, SF-4, 2000

### Summary of Current Rental Housing Need

With respect to rental housing, the key findings for Barnstable County include the following:

- The average wage in Barnstable County is 27 percent below the average for the state as a whole. At the same time, the median rent is 5.7 percent above the statewide median according to the 2000 Census.
- Barnstable County has a smaller percentage of “affordable” housing units than exists in the state as a whole (4.9% compared to 9.0% statewide); the substantial majority of these units are rental both on the Cape and statewide)

- Barnstable County has a higher percentage of renters paying at least 30 percent of their income for rent (38.5% to 35.2% statewide)
- Barnstable County has a significantly lower ratio of Average Wage to Fair Market Rent compared to most other Massachusetts jurisdictions identified by HUD
- Barnstable County also has a significantly lower ratio of Very Low, Low and Moderate-incomes compared to Fair Market Rent in relationship to most other Massachusetts jurisdictions identified by HUD
- Barnstable County has a significant gap between what all Very Low-income and many Low-income residents can afford current FMRs
- Barnstable County has enough subsidized rental housing to meet the needs of no more than 60 percent of its Very Low-income renters or 38 percent of its Very Low and Low-income renters combined.

Among these findings, the consultant sees the disparity of low wages and relatively high rents to be the most significant factor in the current market.

The consultant sees a clear, existing need for affordable rental housing to serve Very Low, Low and Moderate-income renters on Cape Cod. In general, the affordability problems of rental housing across the state focus on three groups: 1) non-working residents, 2) low-wage workers, and 3) family households with only one working resident. These are the groups most likely to be Very Low and Low-income renters and to pay high percentages of their income for rent. Within this context, Barnstable County is among the least affordable areas of the state. The county has the highest percentage of elderly residents; it has a very high percentage of low wage jobs; and is home to a relatively high percentage of single parent households. Just to bring Barnstable County's current need for affordable rental housing into line with the rest of Massachusetts, it would take between 650 and 1,800 additional units of affordable rental housing, depending on the definition of need applied. Just coming into line with the rest of Massachusetts does not address the real need. It is the consultant's view that it would require an increase of at least 1,800 year-round rental units affordable to Low and Moderate-income renters to have a meaningful impact on the current availability of affordable rental housing on the Cape. This represents 7.8 percent of the existing rental stock countywide.

## ***2. Homeownership Affordability***

The relative affordability of a home purchase involves the interplay of income, housing prices, interest rates, and property taxes. For the purposes of this study "affordable" homeownership represents the cost of a home for which the buyer uses no more than 30 percent of gross household income to cover the monthly cost of principal, interest, taxes, and insurance (PITI) for a 30-year fixed rate mortgage at the average mortgage rate available for the year in question. In evaluating homeownership affordability the MA Department of Housing & Community Development (DHCD) assumes that first time buyers will have enough funds to cover closing costs and a five percent down payment. The consultant uses those assumptions in the following analysis.

Figure I.8 summarizes the current range of “affordable” purchase prices for Very Low, Low and Moderate-income households of various sizes in Barnstable County. Again, these represent affordability limits at the top of the income limit for each group.

Figure I.8  
Range of “Affordable” Purchase Prices for Very Low, Low and Moderate-income Households, By Household Size  
Barnstable County, FY 2005

Maximum "Affordable" Purchase Price	Very Low-income	Low-income	Moderate-income
One Person	\$ 79,300	\$ 126,700	\$ 156,600
Two Persons	\$ 90,500	\$ 144,800	\$ 180,900
Three Persons	\$ 101,800	\$ 163,000	\$ 203,600
Four Persons	\$ 113,150	\$ 181,100	\$ 226,300

*Note: based on household purchasing a single family home paying 30 percent of income for PITI, with 5 percent down payment using a conventional 30-year fixed rate mortgage @ 5.5 percent interest.*

**Source:** Development Cycles based on HUD Income Limits and the Mortgage Calculator at [www.mhpfund.com](http://www.mhpfund.com), 4/05. The interest rate represents the default standard for the state’s soft second program.

It is important to recognize that households earning less than 80 percent of median income can afford only a fraction of the cost of housing in today’s market.

Between 2000 and 2004, the affordable purchase price for Barnstable County households rose by 40 percent, due largely to significant declines in long-term interest rates combined with increases in household income. In 2000, the county’s median income household needed an extra \$25,600 in down payment to afford the cost of a median priced home. By 2004, despite the increase in buying power, that same median income household would need an extra \$131,400 in down payment to be able to afford the cost of a median priced home.

Figure I.9  
Maximum Affordable Purchase Price for Median Income Household

Barnstable County, 2000-2004

2000	\$ 145,300
2004	\$ 203,600
Percent Change	40.1%

*Note: based on household paying 30 percent of income for PITI, with 5 percent down payment given current average interest rate for each year using HUD median income for a family of three.*

**Source:** Development Cycles, 5/ 2005

Figure I.10 summarizes the median and lowest quartile of home value sold on Cape Cod from 2000 to 2004. This represents the sale of all single family, condominium and 2-4 family homes. During that five-year period, median home prices nearly doubled to \$335,000 and the lowest quartile home prices more than doubled to \$255,000. The Cape's median home price in 2002 is lower than its lowest quartile of value just two years later.

Figure I.10  
Median and Lowest Quartile Home Prices

Barnstable County, 2000-2004

	Lower Quartile Home Price	Change Previous Year	Median Home Price	Change Previous Year
2000	\$ 116,750		\$ 169,900	
2001	\$ 138,600	18.7%	\$ 198,950	17.1%
2002	\$ 171,000	23.4%	\$ 245,200	23.2%
2003	\$ 216,000	26.3%	\$ 289,900	18.2%
2004	\$ 255,000	18.1%	\$ 335,000	15.6%
Total Change		118.4%		97.2%

Source: The Warren Group, 4/05

Figure I.11 compares the purchasing power of Very Low, Low and Moderate-income households to the actual cost of housing in 2004. This table looks at the gap between what a three-person household can afford and what it costs to purchase a home on the Cape today. Very Low-income residents can afford less than one-third the price of a median value home on Cape Cod. There is a gap of \$233,200 between what they can afford to pay and what it costs to purchase a median priced home. That gap is smaller (though still unbridgeable) at \$153,200 when comparing their buying power and the price of a lower quartile value home. Among Low-income residents, the gap is \$172,000 (median value) and \$92,000 (lowest quartile value). Among Moderate-income households, those earning up to \$59,200/ year, they fall at least \$131,400 short of buying a median priced home and \$51,400 short of affording a lower quartile home. For smaller households at each income grouping, that gap is significantly larger. It is important to recognize that these are the affordability gaps for those at the top of the income range. As the market currently stands, fewer than 10 percent of the Cape's estimated 3,250 Moderate-income renters can afford to purchase a home at even the lowest quartile of value.

Figure I.11  
Relationship of Purchasing Power to Cost of Housing, Very low, Low and  
Moderate-income Households, Three Person Households

Barnstable County, 2004

	Very Low- income	Low- income	Moderate- income
Affordable Purchase Price at Maximum Income	\$ 101,800	\$ 163,000	\$ 203,600
Median Purchase Price	\$ 335,000	\$ 335,000	\$ 335,000
Lowest Quartile Purchase Price*	\$ 255,000	\$ 255,000	\$ 255,000
Gap to Reaching Median Sales Price	\$ 233,200	\$ 172,000	\$ 131,400
Gap to Reaching Lowest Quartile Sales Price	\$ 153,200	\$ 92,000	\$ 51,400

\* 25% sold below this level, 75% above.

Source: Development Cycles based on The Warren Group, 4/05

Figure I.12 reports the percentage of home-owning households paying more 30 percent of their income for Selected Housing Costs in Barnstable County and Massachusetts in 2000 based on household income as well as age. Again, the county experiences an anomaly. At each income level, Cape owners were actually less likely to experience high ownership costs. However, because the county has a higher concentration of lower-income owners, the overall percentage of high cost burden is greater on the Cape than in the state as a whole.

Figure I.12  
Owner Households Paying More Than 30 Percent of Household  
Income for Selected Housing Costs, By Age and Household Income  
Barnstable County and Massachusetts, 2000

	Barnstable County	Massachusetts
<b>By Household Income</b>		
Less than \$20,000	64.5%	69.0%
\$20,000- \$34,999	39.9%	42.7%
\$35,000 and over	12.9%	14.5%
Total	24.5%	22.7%
<b>By Age of Householder</b>		
Householder 15-64 years	24.5%	22.0%
Householder 65 and over	24.6%	24.6%
Total	24.5%	22.7%

Source: 2000 U.S. Census, SF-3 H-94, 96 & 97

Figure I.13 compares the rate of change from 2000 to 2004 in Median and Lowest Quartile housing cost, Median Home Buying Power, and Average Wage, and Very Low, Low and Moderate Household Income growth. These various growth rates suggest that the homeownership continues to grow dramatically beyond the reach of Very Low and Low-income households who do not already own their home. In addition, the number of Moderate-income renter households who cannot afford to purchase a home in the Lower Quartile of Value has increased from roughly 70 percent to over 90 percent in four years.

Figure I.13  
 Rate of Change in Median and Lowest Quartile Housing Cost,  
 Median Home Buying Power, Average Wage, and Household  
 Income Growth, Barnstable County, 2000-2004

	<b>Percent Change 2000-2004</b>
Median Housing Cost	97.2%
Lowest Quartile Housing Cost	118.4%
Median Home Buying Power	40.1%
Average Wage	19.8%
Median Household Income	27.5%

Source: The Warren Group, MA DCS/DUA, HUD

### **Summary of Current Affordable Homeownership Need**

In summary, it is the consultant's view that ownership options do not really exist for the Cape's roughly 13,450 Very Low and Low-income renter households. For even 3,250 Moderate-income renters, ownership options are limited to properties significantly below the Lowest Quartile of housing values. In five years, the home buying power of moderate-income households grew by 40 percent but prices doubled. That results in a 60 percent loss of real buying power in five years. In order to return the home buying capacity of Moderate-income residents to the level it had five years ago would require an estimated 1,000 moderately price homes county-wide, reserved for Moderate-income, year-round residents (earning 80-100 percent of median). With respect to current renters earning between 70 and 80 percent of median, there are an estimated 1,500 additional households who need assistance to purchase housing in the current market.

### 3. Projecting Affordable Housing Need

#### Population & Household Trends

Figure I.14 records and projects population and household change in Barnstable County from 1980 to 2015. The trend shows population and household growth declining to around one percent growth annually. This is based, at least in part, on the high cost of housing and the limited areas for continued residential development. Over the next ten years, the consultant sees the Cape population growing by roughly 27,500 residents and 11,225 additional households.

Figure I.14  
Population & Household Change  
Barnstable County, 1980-2015 Projected

	Population	Annual % Increase	Households	Ave HH Size	Annual % Increase
1980	147,925		58,556	2.53	
1990	186,605	2.6%	77,586	2.41	3.2%
2000	222,230	1.9%	94,822	2.34	2.2%
2003 estimate	229,545	1.1%	98,000	2.34	1.1%
2005 estimate	234,595	1.1%	101,000	2.33	1.5%
2010 projection	250,000	0.7%	107,500	2.33	1.3%
2015 projection	262,000	1.0%	112,250	2.33	1.1%

Source: U.S. Census, 1980-2003 estimate;  
Projections Development Cycles based on MISER population projections, 1999

#### Housing Trends

Figure I.15 tracks Cape Cod's housing units over time. From 1990 to 2005, there has been no net gain in rental households but a 38.6 percent increase in homes owned by year-round residents. Seasonal homes have grown by an estimated 13.6 percent. For the next ten years, the consultant projects the need for ownership units to grow by 11,200, the need for rental units to grow by 2,250, with seasonal units declining as more seasonal residents eventually convert their properties to year-round retirement homes.

Figure I.15  
Projected Change in Housing Units, By Tenure  
Barnstable County, 1990-2015

	Owner Occupied	Renter Occupied	Seasonal	Other Vacant	Total
1990	56,136	21,450	46,834	10,772	135,192
2000	73,787	21,035	47,016	5,245	147,083
2005 estimate	77,800	21,000	53,200	1,200	153,200
2010 projection	84,000	22,500	48,700	3,500	158,700
2015 projection	89,000	23,250	47,000	3,750	163,000

Source: U.S. Census, 1990-2003; Projections Development Cycles, 4/05.

More than 80 percent of the growth is projected in ownership units. This reflects expected increases in seasonal and retirement housing as the “baby boom” population reaches retirement age in the next decade. It also reflects the reality that ownership housing is much easier to produce than rental housing. With respect to rental housing this projection is less a reflection of need than a reflection of the reality of the development environment. The ability of the Cape to develop the 2,250 units of projected rental growth is dependent on a commitment to meet the affordable housing goals laid out in the CCRPP.

## Employment Trends

Figure I.16 records and projects average annual job growth for Barnstable County by employment sector from 1990 to 2008. A 1998 Department of Employment & Training (DET now known as DCS/DUA) study for the Cape & Islands Service Delivery Area (SDA), projected a 10-year growth in employment of 13.6 percent (second highest in the state). Half way through that period, Barnstable County employment had already grown by 9.7 percent. The 1998 study highlighted several trends that suggest a growing concentration of lower-paid workers on the Cape and Islands. The study projected this area to have the by far the lowest level of need for college educated workers (36%) among projected new jobs. The Cape and Islands had the highest percentage of new growth in retail jobs and the highest in service jobs. The greatest growth in the Service sector was in Health and Social jobs. All of these jobs cluster below the average of wages paid. From 1998 to 2003, the average wage paid for jobs performed in Barnstable County grew 10 percent more slowly than the state as a whole.

Figure IV.16  
 Average Annual Job Growth, by Employment Sector  
 Barnstable County, 1980-2008

	Services	Retail	Government	All Other	Total
1990	20438	23544	9956	16395	70333
1999	27133	26151	12588	19640	85512
2003*	50047	16896	13529	12028	92500
2008	30932	30074	14679	21997	97681
Average Annual Change 80-08	2.9%	1.5%	2.6%	1.9%	2.2%
* Note: 2000 marked a change in the SIC classification of job types. For consistency, the consultant used the old classification system for					

2008 projections. Job Projections based on MA DET, "Projected Job Openings by SDA and Occupation, 1998 through 2008,"

Source: MA DCS/DUA (formerly DET)

If Barnstable County continues to maintain a 2.2 percent job growth through 2015, the county will be home to 113,500 jobs or roughly 20,000 more jobs than in 2003. In the consultant's view, the rate of job growth will begin to decline as population growth declines and problems of affordable housing grow. Over the next ten years, the consultant sees an average net job growth of 1.4 percent or about 1,200 new jobs per year.

### **Summary of Affordable Housing Demand, 2005-2015**

Without significant increases in rental production, the Cape will be unable to provide rental housing for many of the lower paying jobs the economy expects to add over the next decade. In addition, there is a relatively large cohort of 10-19 year olds (24,521 in 2000) living on the Cape who will become young adults looking to start new households over the next decade. The Cape's ability to meet the needs of these two groups is currently very limited. In the consultant's view, the demand for affordable rental housing, which is already experiencing a deficit of at least 1,800 units, will see new demand for affordable rental housing at a rate of at least 100 units of housing annually over the next ten years.

At this stage, the ownership market is beyond the reach of over 90 percent of the county's roughly 16,650 Very Low, Low and Moderate-income renters. As renters lack ownership options they will stay in rental housing longer, further exacerbating the demand for rental housing. At the same time, the consultant estimates that the existing deficit of at least 1,000 units of affordable homeownership for Moderate-income renters and 1,500 units for lower income residents (earning 70-80 percent of median) will continue to grow by 100 to 125 units per year over the next decade so long as housing prices continue to outpace the buying power of the county's Moderate-income working residents.

In all, the consultant estimates current affordable housing need at no less than 4,300 housing units, including 1,800 rentals for very-low and low-income residents and 2,500 ownership units for low and Moderate-income renters. Given the Cape's projected trends in household and employment growth, the consultant sees the need for affordable housing growing by an additional 200-225 units per year for the next decade.

## **II. Commercial Development and Employment Trends**

The following section looks at trends in commercial development and employment on Cape Cod since 1990. It provides a description of the scale of development and the character of employment in the county. It also summarizes the relationship between commercial development, job growth and affordable housing need.

### **1. Commercial Development, 1990-2004**

The consultant found no direct measure for determining the number of square feet of non-residential space built in Barnstable County since 1990. Three of the county's 16 local assessors (representing half of the Cape's total commercial value) maintain data that measures non-residential property by square foot or by gross lease-able area (GLA). The following presents relevant data that allowed the consultant to make a reasonable estimate of the annual development of commercial property on Cape Cod.

#### **Land Use Change**

In the broadest sense, commercial development represents only a relatively small portion of the overall land development on Cape Cod. The University of Massachusetts at Amherst tracks land use change from satellite photographs. Between 1990-1999, 17,318 acres of Cape Cod's 265,710 acres changed use. That represents a change to 6.5 percent of the county's land mass. This percentage is more than double the rate of change for the state as a whole during that time period. Of the total use change, 10,010 acres or 58 percent of all change was attributable to new residential development. By comparison, only 252 acres represented new commercial development, 162 acres were given over to new industrial development, and 140 acres of new mining operations. Together, these three enterprises account for only 3.2 percent of the overall change in land use during the past decade. Another 523 acres (2%) was undergoing development of some undetermined type. Appendix A lists Cape Cod land use changes by type.

#### **Department of Revenue Data**

The Massachusetts Department of Revenue collects local assessment data from each community for various property classifications. Figure II.1 indicates that the number of commercial properties in Barnstable County grew by roughly 1,250 during the 1990s but has been declining since 2000. Industrial parcels grew by 500 from 1990 to 1995 but have since declined by 364 parcels in the past ten years. Over the 15-year period, the DOR data suggests that the Cape has experienced a net addition of 55 commercial and ten industrial properties per year.

Figure II.1  
Number and Value of Commercial and Industrial Properties  
Barnstable County 1990-2005

	YEAR	PROPERTIES	CHANGE	ASSESSED VALUE	CHANGE
COMMERCIAL	1990*	7,090		\$ 3,170,989,939	
	1995	7,825	10.4%	\$ 2,197,206,880	-30.7%
	2000	8,339	6.6%	\$ 2,516,889,181	14.5%
	2005**	7,967	-4.5%	\$ 4,682,197,655	86.0%
INDUSTRIAL	1990	812		\$ 261,572,120	
	1995	1,313	61.7%	\$ 165,575,820	-36.7%
	2000	1,091	16.9%	\$ 182,861,020	10.4%
	2005	949	13.0%	\$ 370,392,684	102.6%

\*Provincetown data is from 1991 and Sandwich data from 1992. \*\* Provincetown data is from 2004.

**SOURCE:** MA Department of Revenue

From 1990 to 1995, commercial and industrial property values on Cape Cod dropped by more than 30 percent, losing over \$1 billion in assessed worth. From 2000 to 2005, however, the assessed value of commercial property increased by 86 percent and industrial property values more than doubled. In the past five years, the value of the Cape's commercial properties increased by over \$2.1 billion, even as the number of such properties declined. In all, commercial property represents just 6.6 percent of the total property values for Cape Cod. Industrial Property represents another 0.5 percent. From 1990 to 2005, total residential property assessments countywide increased by 150 percent, compared to just 61 percent for commercial properties and 42 percent for industrial properties. In 2005, residential assessments accounted for 91.1 percent of all real estate values on the Cape, up from 86.6 percent in 1990. Over the past 15 years, commercial property has played a decreasing role in the tax base of the Cape, giving way to greater dependence on residential property. On a per parcel basis, the value of commercial property has increased about 18 percent slower than residential property over this period.

### Local Assessment Data

The consultant requested assessment information on commercial properties from each of the Cape's Town Assessors. All but Yarmouth provided data indicating the date of construction for commercial properties since 1990. Of the 14 responding communities, three (Barnstable, Falmouth, and Provincetown) provided both the assessed value of each property as well as its GLA. From 1990 to 2004, these 14 communities report a total of 949 new commercial properties totaling \$885 million in assessed value. Compared to DOR data, the number of new commercial properties built since 1990 represents roughly 20 percent of the total value of commercial property on the Cape. The number of new properties reported by

local Assessors corresponds very closely with the DOR's reported net change in commercial properties countywide.

In order to estimate the size of commercial development built since 1990, the consultant applied the PSF assessed value supplied by three communities to all of the reporting communities. These three "sample" communities represent fifty percent of the total commercial property value on the Cape. This approach suggests that from 1990 to 2004, these 14 Cape towns saw an increase of 5.7 million square feet of new commercial space with an average assessment value of \$155 PSF. With the addition of Yarmouth properties, the consultant estimates that the Cape added roughly 1,000 new commercial properties totaling 6 million square feet of new commercial development in 15 years from 1990 to 2004. This represents 65 new developments annually, totaling 400,000 square feet of GLA.

Fig.II.2

### New Commercial Properties

Barnstable County, 1990-2004

Year	# of Properties	Assessed Value	Estimated PSF Value*	Estimated GLA*
1990	50	\$ 90,291,200	\$ 192.40	469,291
1991	20	\$ 11,856,600	\$ 147.02	80,648
1992	43	\$ 55,060,400	\$ 170.78	322,402
1993	44	\$ 28,185,580	\$ 200.64	140,478
1994	30	\$ 48,987,700	\$ 160.89	304,474
1995	55	\$ 35,928,960	\$ 153.04	234,773
1996	66	\$ 115,401,900	\$ 191.43	602,834
1997	70	\$ 44,489,200	\$ 93.46	476,048
1998	61	\$ 66,010,600	\$ 150.84	437,608
1999	70	\$ 58,020,000	\$ 179.46	323,311
2000	100	\$ 84,069,510	\$ 119.52	703,418
2001	88	\$ 93,177,820	\$ 172.51	540,119
2002	102	\$ 60,502,900	\$ 113.63	532,457
2003	115	\$ 64,283,460	\$ 190.42	337,596
2004	35	\$ 29,110,600	\$ 140.44	207,284
<b>Total</b>	<b>949</b>	<b>\$ 885,376,430</b>	<b>\$ 154.98</b>	<b>5,712,739</b>

\* Based on information provided by Barnstable, Falmouth and Provincetown

**SOURCE:** Local Assessors, 4/05

### Commercial DRIs, 1990-2004

The CCC maintains a database of DRIs approved by the Commission since 1990. Figure II.3 summarizes the character of commercial projects approved and built. Though it varies significantly from year to year, the Commission has approved an average of seven commercial DRIs, authorizing roughly 240,000 square feet of additional space annually. The key sectors involved in these commercial DRIs include retail (33 percent of approved space), health (25%), distribution (15%), office (15%), and manufacturing (7%). DRIs account for roughly 60 percent of all new commercial development built on the Cape over this time period.

Fig.III.3  
Approved & Built Commercial DRIs, 1990-2004

Cape Cod Commission, 1990-2004

	Number	Added Square Footage	Pct of Total Square Footage	Average SF per Project
Retail and Restaurant	26	1,164,211	32.6%	47,777
Health and Assisted Living	15	905,384	25.4%	60,359
Warehouse/ Distribution	14	520,389	14.6%	37,170
Office/ Research	17	535,730	15.0%	35,713
Industrial	12	240,400	6.7%	20,016
Recreation	12	185,400	5.2%	15,450
Hotel	2	18,050	0.5%	9,025
<b>TOTAL</b>	<b>98</b>	<b>3,569,564</b>	<b>100.0%</b>	<b>36,424</b>

SOURCE: Cape Cod Commission, 4/05

## 2. Employment Trends, 1990-2004

The following summarizes employment trends in Barnstable County from 1990-2004.

### Total Jobs

Figure II.4 reports job changes for Barnstable County and for Massachusetts since 1990. During that 15-year period, the Cape's job base grew by 23,440 or 33 percent. Over the 15-year period, the Cape has added an average of 1,565 new jobs annually. Cape jobs grew at a rate five times faster than the state for this period. While the Cape accounts for only three percent of the state's total jobs, it accounted for 12.5 of the state's net job growth over the last fifteen years. Since 2000, the Cape has grown by 5,200 jobs while the state has seen losses of nearly 160,000 jobs.

Fig.II.4  
Total Jobs

Barnstable County & Massachusetts, 1990-2004

	Barnstable County	Massachusetts
1990	70,333	2,931,144
1995	75,775	2,920,900
2000	88,583	3,275,104
2001	89,761	3,276,103
2002	91,004	3,202,323
2003	92,500	3,142,281
2004*	93,778	3,118,569
% Change	33.3%	6.4%

\* 1st 9 months (all other equals Annual Average)

SOURCE: MA DCS/DUA

### Jobs by Key Sectors

Arts, entertainment and recreation jobs, as well as health care and construction jobs represent the fastest growing job sectors on the Cape since 1990. These three account for about one quarter of local jobs. Government, another large employment sector (15% of all jobs), has grown slightly faster than employment as a whole since 1990. Surprisingly, the retail trade, and restaurant and accommodations sectors – the two biggest job sectors with 32 percent of all jobs – have grown at a rate of only one percent annually since 1990, representing less than a third of the county’s overall growth rate. The Health sector accounted for 28 percent of the net job gains over that period, followed by other non-governmental Services (19%), Government (16%), Construction (12%), Retail Trade (10%), Restaurants and Accommodations (9%), and Arts, Entertainment & Recreation (9%).

Fig.II.5  
Jobs, By Key Sectors

Barnstable County 1990-2003

Year	Arts, Enter. & Rec.	Health Care	Construct	Government	Retail Trade	Accommo dations & Restaurant
1990	859	6,859	3,113	9,956	14,560	12,556
2000	1,998	11,554	4,791	13,161	15,912	14,737
2003	2,865	13,496	5,892	13,629	16,896	14,536
% Change	233.5%	96.8%	89.3%	36.9%	16.0%	15.8%

SOURCE: MA DCS/DUA

## Seasonal Employment

As a tourist area, seasonal employment has a relatively large impact on the Cape's employment picture. February marks the month with the lowest average employment and July the highest. In 2004, July employment was 30 percent higher than February employment with 24,320 more persons employed on the Cape in July. Interestingly, summer jobs have actually grown more slowly than year-round job growth since 1990.

Fig.II.6  
Total Jobs, By Season

Barnstable County 1990-2004

Year	Feb	July	Ave
1990	61,767	81,719	70,333
2000	77,874	98,580	88,583
2004*	81,844	106,164	93,778
% Change	32.5%	29.9%	33.3%

\* Average through September 30, 2004

SOURCE: MA DCS/DUA

## Average Wages

Average wages on Cape Cod are significantly lower than for the state as a whole. In the first half of 2004, the average wage paid in Barnstable County was \$34,008 or 72.8 percent of the \$46,696 paid statewide. Since 1990, average wages on the Cape have risen by an average of 4.8 percent annually. This increase is slightly less than the state's increase over the period.

Fig.II.7  
Average Wages

Barnstable County & Massachusetts, 1990-2004

	Barnstable County	Massachusetts	County as Percent of State
1990	\$ 19,742	\$ 26,652	74.1%
2000	\$ 29,727	\$ 44,329	67.1%
2001	\$ 31,044	\$ 44,980	69.0%
2002	\$ 32,032	\$ 44,980	71.2%
2003	\$ 33,072	\$ 46,332	71.4%
2004*	\$ 34,008	\$ 46,696	72.8%
% Change	72.3%	75.2%	96.1%

\*2nd Quarter (all other equals Annual Average)

SOURCE: MA DCS/DUA

## Wages by Job Sector

The ten largest job sectors account for 90 percent of all jobs on Cape Cod. In 2004, only Finance and Insurance jobs paid average wages greater than the county's median household income for that year. Four others, including the two largest -- Retail Trade and Accommodation & Food Services -- pay average wages below 50 percent of median household income. These four low paying categories account for 42 percent of all Cape Jobs. Only one job sector pays an average wage greater than the average for workers in that sector statewide.

Figure III.8  
Wages by 10 Largest Job Sectors

Barnstable County, 2004 2nd Quarter

Industry Classification	Average Employment	Average Wage	Cape Cod as a Percentage of MA Average	Average Wage as a % of Median Income (3-Person Household: HUD, 2004)
52 - Finance and Insurance	2,616	\$61,204	\$0.69	103%
54 - Professional and Technical Services	4,637	\$48,620	\$0.64	82%
92 - Public Administration	5,314	\$47,060	\$0.98	79%
61 - Educational Services	7,340	\$43,108	\$0.90	73%
23 - Construction	6,371	\$41,808	\$0.86	71%
56 - Administrative and Waste Services	3,856	\$40,352	\$1.30	68%
62 - Health Care and Social Assistance	13,962	\$37,648	\$0.95	64%
44-45 - Retail Trade	17,159	\$24,908	\$0.94	42%
81 - Other Services, Ex. Public Admin	3,811	\$24,232	\$0.96	41%
71 - Arts, Entertainment, and Recreation	2,928	\$24,232	\$0.87	41%
72 - Accommodation and Food Services	15,128	\$16,796	\$0.99	28%

SOURCE: MA DCS/DUA

## Summary of Commercial and Employment Trends

The consultant estimates that over the past 15 years, the Cape has seen roughly 6 million square feet of commercial development. That amounts to roughly 400,000 square feet annually or about 255 SF for each new employee hired within the county. This comes very close to the 250 SF per employee rule of thumb for the relationship between commercial space and employment. This would suggest that the overall estimates of new commercial space may be relatively accurate.

Retail, Restaurants and Accommodations account for about a third of all jobs on the Cape but they represent only about 20 percent of the net job growth over the past 15 years. DRIs for these job sectors did account for 33 percent of all approved commercial space during the period.

Average wages vary significantly among key job sectors. In 2004, only Finance and Insurance jobs paid average wages greater than the county's median household income. Four others, including the two largest -- Retail Trade and Accommodation & Food Services -- pay average wages under 50 percent of median household income. These four low paying categories account for 42 percent of all Cape Jobs.

### **Relationship Between Commercial Development, Job Growth and Affordable Housing Need**

Since 1990, the Barnstable County's population has increased by a 26 percent and households by 27 percent. It has also registered a 34 percent increase in the number of local jobs and a roughly 20 percent increase in commercial property. A key question is whether the wages paid for the jobs created match the changes in housing costs over the decade.

According to the MA DCS/DUA, the average annual wage paid for all jobs performed in Barnstable County during the second quarter of 2004 was \$34,008. The average annual wage for all jobs statewide was \$46,696. Forty-two percent of all year-round jobs on Cape Cod consist of retail, food service and accommodations, arts, entertainment and recreation jobs or other non-governmental services. According to the DCS/DUA, none of these four job types pays an average wage of \$25,000. From 1990 to 2004, 47 percent of the Cape's net job growth came in these four sectors.

In 2000, the DCS/DUA projected job growth for the Cape and Islands from 1998 to 2008. The following lists the ten fastest growing jobs projected:

Home Health Aides	Laborers, Landscaping
Registered Nurses	Nursing Aides
Waiters & Waitresses	Cashiers
Retail Salespersons	General Office Clerks
General Mgrs & Top Execs	Teachers Aides

Nine of these 10 growth areas currently pay average wages less than the average for jobs generally. Indeed, the study projects that 95 percent of the net job growth on the Cape and Island will come in areas that pay less than the average wage for this region.

At the same time, the cost of rental housing on the Cape is at least 5.7 percent higher than it is statewide, and the median cost of homeownership is 20 percent higher. The ability of a Moderate-income renter in Barnstable County to purchase a home has declined by 60 percent since 2000. To afford a median priced home on Cape Cod now takes an additional down payment of \$131,400 to \$172,000 for a three-person household earning between 80 to 100 percent of median income. Even a home in the lowest 25 percent of value requires a downpayment of between \$51,400 and \$92,000.

Since 1990, the Cape's supply of commercial space grew by 20 percent to support the demands of its new and existing employers. Based on information provided by the MA Department of Revenue and by local Assessors, the consultant estimates that approximately 400,000 square feet of new commercial space came on line annually from 1990 to 2004 to support the roughly 1,565 new jobs created each year. This represents 255 square feet of commercial space for each new job created. Based on data provided by the MA DCS/DUA,

the consultant projects Cape employment to grow by an average of 1,200 workers annually over the next decade. Given the nature of the projected job growth, this will add between 600 and 800 more Low and Moderate-income households annually. Commercial development will increase by an estimated 300,000 SF per year to satisfy the space needs of new job-holders.

Clearly, the wages for jobs created in the past 15 years do not match the cost of housing countywide. Moreover, we can expect that trend to continue through the next decade as job growth continues to focus on lower-paying retail and service employment. In the consultant's view, there are three interconnected reasons why Cape Cod has and will continue to experience problems of housing affordability for Low and Moderate-income residents for the foreseeable future. First, is the appeal of the Cape as a destination for vacation and retirement homes. A significant share of all homes countywide sell to buyers who do not rely on local employment to support their home purchase and earn significantly more money than local residents. Secondly, these two groups of buyers (along with transient visitors) generate demand for a relatively large number of low-wage paying jobs. Wealthier buyers not only drive up the cost of housing, they create demand for more workers with little capacity to afford that cost of housing. Finally, the limited supply and high cost of developing land on the Cape limits the ability of housing production to keep up with both local and external demand. As the huge cohort of "baby boomers" reaches its maximum earning potential and begins retiring over the next decade, the external market pressures on Cape Cod real estate will likely increase; so too will the demands for additional low-wage jobs.

In the consultant's view, both new residential and new commercial endeavors play a role in diminishing the availability of housing for Low and Moderate-income for Cape Cod residents. The residents of new high-cost housing help generate demand for low paying service and retail jobs, while commercial developments provide the space for these jobs to take place. Both new housing and new commercial developments derive much of their economic benefit from the attractiveness of the Cape as a tourist, second home and retirement community. Because both residential and non-residential types of development play a role in generating the jobs filled by new low and moderate-income residents, both have an appropriate role in assuring that Cape Cod can provide year-round housing for these residents. A rational basis does exist between the development of commercial property and the housing needs of the employees generated by that commercial property. Commercial development by its very nature satisfies the space needs of new jobholders. To the extent that those new jobholders earn wages insufficient to afford housing, they negatively affect affordable housing conditions in the area. As such, commercial development is one link in the nexus of conditions that results in high cost housing and low wage jobs on Cape Cod.

### **III. Review of Linkage Programs and Issues**

This section asks the following question:

*What issues might the Commission consider when giving DRI applicants guidance for insuring that commercial development will have a beneficial impact on affordable housing needs?*

Given that there is a rational basis for linking commercial development to the availability of affordable housing, the CCC has the responsibility to make clear to prospective DRI applicants how they may insure that their proposal provides a positive regional benefit in this regard. In judicial reviews of linkage programs in other jurisdictions, the courts look to see that this guidance meets two criteria: 1) there be at least a rough proportionality between the expected impact of the DRI and the affordable housing contribution needed to offset that impact; and 2) there be enough flexibility to reflect the unique conditions of any given non-residential development and its overall benefit to the area of regional impact. In order to more fully explore how the CCC might provide such guidance, the consultant examined the experience of commercial linkage programs nationwide, focusing on some important legal and practical considerations

#### **1. Commercial Linkage Programs Nationwide**

A relatively small but growing number of other communities, largely in high cost states like California and Massachusetts, have by-laws that link non-residential development applications with contributions for affordable housing. Some of these by-laws date back to the mid-1980s.

Appendix B summarizes the provisions of these by-laws in 23 separate jurisdictions identified by the consultant. The table indicates a relatively wide distribution of approaches and fee structures, probably reflecting differing Nexus study approaches as well as inevitable political negotiation. The larger cities tend to focus fees only on larger commercial developments, whereas smaller communities more commonly apply a lower fee to all developments. More than half of all jurisdictions set variable fees for different types of development; the others charge one fee for all types of non-residential development. Communities commonly exempt government, education, and social organizations from paying linkage fees. Three communities listed (Seattle, WA, Sunnyvale, CA and Westwood, MA) only apply fees when applicants seek density bonuses. A review of these provisions raises a number of issues that may be relevant to the CCC's deliberations.

#### **Pay out schedule**

Commercial property more frequently derives its development benefits over time through rents, rather than through the sale of a property. Recognizing this, some communities allow developers to spread out their linkage payments over time. Boston claims that their program has allocated more than \$50 million for the construction of nearly 5,000 affordable housing units since 1986. Boston's by-law offers an extended payment schedule that varies from 7-years for downtown developments to 12-years for neighborhood developments. The longer pay out schedule reduces the developer's burden for upfront capital; it also results in a

discounted present value for the funds received. Other communities vary payment terms, ranging from payment at receipt of a building permit, to payment at time of occupancy, to payment spread out over several years. The City of Boston's linkage program insures compliance contractually through a Development Project Agreement that is a part of the zoning approval each project must receive. They have never had a default on payment of the linkage fee, and suggested that commercial lenders ensure compliance for fear that a default would jeopardize the zoning and therefore the occupancy permit of the project.

### **Affordability payment linked to density bonus**

Westwood, MA's and Seattle, WA's provisions apply only when a developer seeks to exceed the standard Floor Area Ratio (FAR) established for the commercial development generally. This concept of providing incentives for contributions to affordability held significant appeal to the stakeholders gathered by the CCC to discuss this issue. Expanding the capacity of commercial developers to build affordable housing above retail space and to trade payments for expended density may provide additional resources to help meet affordability goals.

### **Payment indexed to home prices**

Westwood's fee is pegged to the amount of subsidy needed for a resident earning 80 percent of the region's median to be able to afford the purchase price of a home in the bottom 10-percent of homes sold in the community using 30 percent of their income. Westwood calls for developers to fund this difference on one home for each 12 new employees. The Nantucket Planning Board has the zoning authority to require up to one affordable unit for each 4,000 feet of gross floor area. The fee in lieu of payment is negotiable but is based on the average sale price of non-exempt residential property for their RC-2 district in the prior year. This represents a huge fee ceiling given the current cost of housing on Nantucket where the median priced home now costs over \$1,000,000. Still, the Nantucket Planning office reports the provision continues to be applied, without legal challenge, to all larger non-commercial developments including a golf course and most recently a public skating rink.

### **Employment density factors**

A number of nexus studies recognize that different types of commercial development will result in more or less employees per square foot. An obvious example is that warehouse or distribution space would typically have far fewer employees per square foot than retail or restaurant space. Interestingly enough, almost half of the communities reviewed choose to charge a uniform rate for all types of development.

### **Fee ceiling with capacity to negotiate**

Berkeley, CA's program set a range of fees from \$3.00 to \$6.00 PSF, providing explicit opportunity for developers to demonstrate that they provide other benefits that may reduce their overall contribution. As with Berkeley's linkage program, the CCC may wish to pose its guidance in terms of a maximum requested fee and provide the client specific opportunity to demonstrate other benefits to the community that may argue for a smaller affordable housing contribution.

### Minimum Development Size Thresholds

Larger communities with linkage programs typically exempt smaller projects. Somerville’s by-law exempts projects under 30,000 square feet in size, but ensures that, when developments proceed in phases, it is the sum of all phases that determines the size of the project. In discussions with stakeholders on the Cape, the concern arose that the CCC’s commercial DRI threshold of 10,000 SF may be having the unintended consequence of encouraging projects just under that threshold and thereby increasing sprawl and decentralization of services.

Figure III.1 estimates the number of employees by employer size for the Cape and Islands in 2003.

Figure III.1  
 Employees, by Size of Employers  
 Cape and Islands, March 2003

	0-9	10-49	50+	Total
	Employees	Employees	Employees	
Number of Employers				
	9,131	1,751	276	11,158
	77%	20%	3%	100%
Number of Employees				
	22,246	33,673	37,409	93,328
	24%	36%	40%	100%

SOURCE: MA DCS/DUA

More than three out of four employers on the Cape and Islands have less than ten employees, but fewer than one in four employees work in firms this small. In other words, fewer than 25 percent of employers employ more than 75 percent of workers on the Cape. Despite concerns about small developments, some exemption for small employers may be worth considering given the large number of small employers on the Cape and the relatively few total workers they employ.

### Impact on development costs

One concern raised by some stakeholders in opposition to the application of linkage fees to commercial development is that it will render commercial development less feasible and/or result in higher commercial rents passed on to small employers. Discussions with local Realtors, builders and commercial developers on Cape Cod suggests that the current total development cost of commercial development runs between \$200 and \$300 PSF for fully finished interior space. At these rates, each \$1.00 PSF contribution to balance affordable housing needs would increase developer’s overall costs by 0.33 to 0.50 percent.

### **Summary**

What seems apparent from this review of other linkage policies is that there is no uniform application of the rational basis or rough proportionality standard. Some but not all jurisdictions exempt certain types of development or certain sizes of project; some provide incentives for affordability contribution, or tie contributions to the cost of housing; others base fees on the likely number of employees per SF of development; still others give applicants suggestions for contributions rather than specific charges. The CCC may wish to consider all of these issues in establishing a linkage policy for DRIs, but is free to fashion its linkage in the manner that it sees fit.

## IV. Linkage Options and Recommendations

If a basis for linking commercial development and the need for affordable housing exists, and if the projected commercial and employment growth suggests that the needs for affordable housing will also continue to grow, then the Commission must ask “How can commercial DRIs fairly address their role in providing for an adequate supply of affordable housing for Very Low, Low and Moderate-income residents.”

The Commission appears free to adopt a wide range of approaches based on linkage programs that exist nationwide. The consultant looks at the implications of several approaches in this section.

### ***1. Apply the Same Minimum Performance Standard to Commercial and Residential DRIs***

One simple approach the CCC could take is to treat new market rate residential and commercial DRIs equally. The rationale for this approach might be that, while new market rate residential DRIs overwhelmingly serve higher income and/or vacation buyers that exacerbate housing need by increasing demand for low wage service jobs, new commercial property provides the space for those jobs to take place. It could be argued that the relative risk, value and reward for commercial and residential development is broadly comparable, so their contribution should be comparable as well.

The Cape Cod Regional Policy Plan calls for each 10 units of new residential development to provide the equivalent of one new unit that is affordable to low and moderate-income residents. Assuming that each new market rate residential unit averages 3,000 SF, the CCRPP’s Minimum Performance Standard represents the equivalent of one new affordable unit for every 30,000 SF of residential development\*. That affordable unit effectively bridges an affordability gap that ranges from \$92,000, based on the buying power of a low-income household and the lowest quartile of housing costs, and \$131,000, based on the buying power of a moderate-income household and the median cost of housing (as indicated in Figure I.11). The subsidy needed to create an affordable unit of rental housing would typically fall somewhere in this cost range, as well. The cost of meeting the Minimum Performance Standard for a residential DRI could therefore be valued at between roughly \$3.06 and \$4.37 PSF or 1.5 to 2.0 percent of the total development cost of new market rate residential developments. Such a PSF or percentage of TDC contribution could be applied to commercial DRIs. A commercial linkage fee of between \$3.06 and \$4.37 would fall in the middle range of fees assessed in other jurisdictions with such programs.

\* This number can be adjusted up or down based on an evaluation of the build out size of residential DRI).

## **2. Commercial Fees Discounted by Reflect Lower Values and Greater Risk**

A case can be made that commercial development is more costly to develop and is typically subject to greater regulatory scrutiny than residential development. Commercial developments also typically derive their economic benefit through rents over an extended timeframe and are therefore more vulnerable to downturns in the economy than non-rental residential development, which can halt development during slow economic periods. Assessment records for the Cape show countywide commercial values dropping by 30 percent during the recession of the early 90s, far greater than the declines in residential assessments for those years. Over the last fifteen years, assessed commercial values have risen roughly 18 more slowly than residential property values on a per parcel basis. Moreover, residential developments have greater access to housing subsidies that pay at least some of the cost of bridging the affordability gap. At least some commercial developments also meet another CCRPP goal by providing “meaningful employment” opportunities. Finally, there is a general agreement that commercial properties generate a net benefit by providing greater property tax revenue than they typically require in municipal services. All of these factors make the case that commercial DRIs should be subject to somewhat lower expected contributions toward affordable housing than new residential DRIs.

## **3. Adjusting for Other Factors**

The following section looks at five “typical” commercial DRIs that might come before the Commission, and highlights differences that exist between these different types of commercial development. These five typical developments represent 10,000 SF each of office space, health/medical-related space, retail space, restaurant/ food service space, and warehouse/distribution space.

### **Employee Density**

The first factor that distinguishes these five development types is the average number of employees each typically generates per square foot of space. Based on the experience drawn from other Nexus analyses and from a 1999 U.S. Department of Energy’s Energy Information Administration (EIA) Nationwide Survey of Commercial Buildings, the consultant estimates the employee density of commercial developments of these five types as follows:

	OFFICE	HEALTH/ MEDICAL	FOOD SERVICE	RETAIL	WARE- HOUSE
Total Square Feet (SF)	10,000	10,000	10,000	10,000	10,000
Median SF/ Employee	250	250	300	400	1800
# of Employees	40	40	33.3	25	5.6

By this measure, 10,000 SF of office and medical space will generate 40 employees, restaurants and other food service just over 33. Retail stores have nearly 40 percent fewer employees, and warehouse distribution operations less than 1/6<sup>th</sup> the number of employees per square foot of space as office and health/ medical facilities. These numbers are highly variable from one employer and development to the next. In evaluating individual DRIs, it may be important to give prospective developments an opportunity to analyze their specific situation. The purpose here is to recognize that these significant differences do exist.

### Percentage of Average Wage Paid Each Job Classification

The MA DCS/DUA lists the average number of employees and wages annually for over 100 different job classifications in the Barnstable-Yarmouth PSMA (*the Department does not publish this information for the County or for the non-PSMA as a separate report*). The consultant sorted these individual classifications into those most likely to be found in each of the five development types compared. Health-related jobs for example were all assumed to occur in health/ medical developments, food service jobs in restaurant/ food service developments and the like. Appendix C shows the employment and wage information as sorted. The consultant then compared the average wage for each job classification against the average wage for all jobs in Barnstable County at the time, and determined what percentage of overall jobs by development type would pay less than 50 percent of average wage; 50-79 percent; 80-99 percent, and 100 percent or more. None of these job type classifications paid average wages less than 50 percent of the overall average. Among the other wage categories, the different development types varied significantly.

10,000 SF of New Development	OFFICE	HEALTH/ MEDICAL	FOOD SERVICE	RETAIL	WARE- HOUSE
Pct Earning 50-79% of Average Wage	18%	50%	61%	87%	90%
# of Employees	7.3	20.0	20.3	21.7	5.0
Pct Earning 80-99% of Average Wage	23%	4%	34%	2%	4%
# of Employees	9.1	1.6	11.3	0.5	0.2
Pct Earning 100% or more of Average Wage	59%	46%	5%	9%	6%
# of Employees	23.6	18.4	1.7	2.3	0.3

*Note: Within the Food Service sector, the consultant assumed that the real wage of waiters and waitresses (who constitute roughly 25 percent of Food Service workers) would average at least 25 percent higher than reported due to unreported tips. This moved this group of workers from the 50-79 percent of average wage to the 80-99 percent. Also, the relationship between warehouse development and the job classifications was far less clear than the other categories and produced results of questionable value.*

Office space had by far the smallest percentage of low wage jobs with fewer than one in five jobs represented by classifications paying less than 80 percent of the average for all workers. In a typical 10,000 square feet of office, 7.3 workers could be expected to work in a low wage job. Another 9.1 office workers would typically fall into moderate wage jobs, earning between 80-100 percent of the overall average wage. In a typical office development, 59 percent of jobs would pay above the overall average wage for all workers.

Health-related workers, food service and retail workers each generate about 20 low-wage jobs per 10,000 SF of space, even though their percentage of low wage jobs varies from 50 to 87 percent of all jobs. Again, it is significant to note that at least half of all health-related jobs fall in this low wage category, along with 61 percent of food service workers, and 87 percent of retail workers. Restaurant/ Food Service work also generates another 11.3 moderate paying jobs per 10,000 SF. Slightly less than half of all health-related jobs pay above the overall average wage while less than 10 percent of food service, retail or warehouse jobs do.

	OFFICE	HEALTH/ MEDICAL	FOOD SERVICE	RETAIL	WARE- HOUSE
Pct Earning 50-79% of Average Wage	18%	50%	61%	87%	90%
# of Employees	7.3	20.0	20.3	21.7	5.0
Pct Earning 80-99% of Average Wage	23%	4%	34%	2%	4%
# of Employees	9.1	1.6	11.3	0.5	0.2
Total Number of Low-Mod Employees	16.4	21.6	31.7	22.2	5.2
Ratio of Low-Mod Employees PSF ( <i>Office Space = 100%</i> )	100%	132%	194%	136%	32%

If we set office space as the standard, a health/medical development would typically produce 32 percent more low-moderate income jobs, food service 94 percent more, and retail 36 percent more on a PSF basis. Warehouse/ distribution development, with its much lower employee densities would have only about a third of the low-mod employees as an office building of equal size. A strong case could be made that this combination of employee density and wage should be factored into a commercial linkage contribution. So, for example, if the Minimum Performance Standard of an office building is \$1.00 PSF or alternatively one percent of Total Development Costs, the standard for health/ medical would be \$1.32/ PSF (or 1.32% of TDC), Food Service \$1.94 PSF (or 1.94% of TDC); retail \$1.36 PSF (or 1.36% of TDC); and Warehouse/ Distribution (\$.32 PSF (or 0.32% of TDC)). Most of the commercial linkage programs nationwide do require different contributions from these different development types.

### Relationship of Wages and Household Income

While we may be able to estimate how many Low and Moderate-wage employees a given 10,000 SF of space will typically generate based on its type, we lack the information needed to determine what size households the employees of these development types occupy; how likely they are to be full-time or part-time jobs; how many workers these households have; or whether households with low-wage workers are more or less likely to be paired with higher earning workers in one household. We know anecdotally, for example, that Retail and Food Service workers are more likely than office or health-related work to be part-time and to be held by other than the primary wage earners in a household, but the consultant could identify no data to support or quantify this.

We do know that there is some correlation between wages and family income. In 2004, the average wage paid for all jobs in Barnstable was \$34,008. This number was very nearly equal to the median income for a one-person household at the time. If you live alone and have an average wage job on Cape Cod, you also fit HUD's description of a median income one-person household. We also know that in 2000, the average number of workers living in county households 15-65 years old was 1.7. Multiplying that number by the average wage in 2004 and we get \$57,800. Again, this is very close to the Cape's median income for a family of three as reported by HUD in FY 2004. Despite many exceptions and wide variability, the consultant considers it reasonable to project that a worker's relative wage is generally indicative of his or her relative family income.

#### **4. Recommendations**

Based on all the data collected and analysis performed, the consultant considers there to be a clear need for affordable housing on Cape Cod and a clear nexus of relationship between commercial development and the need for affordable housing. In order to provide proof of overall benefit to life on Cape Cod, Commercial DRIs bear some responsibility for contributing to an adequate supply of affordable housing. The consultant does not believe that the Minimum Performance Standard should be as high generally for new commercial developments as for new residential developments for the reasons suggested in the Section 2 "Commercial Fees Discounted to Reflect Lower Values and Greater Risk" above. Moreover, the consultant does believe that the contributions made by commercial DRIs should reflect differences in employee density and average wages for job classifications common to each type of development.

The consultant also recommends consideration be given to allowing commercial developments to pay contributions over time to reflect the reality that these developments commonly earn their revenue through rents rather than sale of property.

In all, the consultant believes that a Minimum Performance Standard that recommends a contribution based on the following PSF basis would fairly reflect the nexus of relationship between commercial development and affordable housing need, as well as reflect the differences that exist between development types. Overall, these recommended contributions bring in roughly 50 percent of the PSF value of those recommended for residential DRIs. The consultant's rationale for recommending these lower rates focuses primarily on 1) the positive contribution commercial development has on the property tax base compared to residential development; 2) the lower appreciated values commercial properties have shown compared to residential properties on Cape Cod; and 3) the greater access residential developments have to housing subsidies to cover part of the cost of meeting their affordable housing requirements.

Office	\$1.25- \$1.75 PSF
Health & Medical	\$1.75- \$2.25 PSF
Retail	\$1.75- \$2.25 PSF
Restaurant/ Food Service	\$2.25- \$2.75 PSF
Warehouse & Distribution	\$0.30- \$0.50 PSF

Other development types should be expected to contribute to meet affordable goals as well. The consultant suggests that contribution be based on \$1.25-\$1.75/ PSF for each

employee/ 1,000 SF of total space in a job classification that pays less than the overall average wage for the Cape.

### **Incentive Based Performance Standards**

If the CCC had applied this recommended standard to all Commercial DRIs since 1990, it would have collected something in the order of \$400,000 to \$550,000/ year for the roughly 250,000 SF of commercial space approved annually. While this represents a significant contribution, the consultant sees the potential for even greater contributions to housing affordability, as well as greater levels of partnership with the development community, if the Commission can help tie higher levels of affordable housing contribution to density bonuses or regulatory exemptions. Density bonuses and regulatory-streamlining represent the backbone of affordable housing creation on the residential side of development in Massachusetts.

Just as residential developers providing affordable housing under Chapter 40B can exceed local density standards, it may be possible for the CCC to work with local municipalities to promote the concept of giving a density bonus for commercial developments that make greater contributions toward addressing affordable housing need. An added density of up to 10 percent for each \$1.25 to \$1.75 PSF of contribution to affordability on the entire project should balance both incentive to the developer and assurance that the majority of benefit goes to serve affordability goals. The consultant recognizes that the power to grant density bonuses resides with the local municipalities and the CCC's role in this regard is educational and advisory.

Efforts to increase the development of affordable housing above new commercial space may also provide relatively low-cost options for commercial developers to add to the supply of fair affordable housing. This approach will have the added benefit of reducing the need for commuting.

Another approach offered by stakeholders was to offer limited exemptions from the DRI approval process for projects that meet certain higher standards of performance with respect to affordable housing contributions. It may be possible to create a category of non-residential project size (i.e. 6,000 to 25,000 SF) in certain designated development areas where projects are asked to meet a specific checklist of performance standards. If the development can demonstrate to CCC staff that they meet these standards, the project receives approval without going before the full board. A point system that gives the developer opportunity to meet the exemption threshold with higher payments to offset affordable housing needs could generate added revenue to address the problem.

1990 to 1999 Land Use Land Cover Changes  
Barnstable County

<b>Appendix A</b>			
<b>Barnstable County Land Use Change 190-1999</b>			
<b>Category</b>	<b>Acres</b>	<b>Percent of Total</b>	<b>Percent of Change</b>
<b>Total Acres</b>	<b>265710</b>	<b>100.0%</b>	
No Change	248392	93.5%	
<b>Total Change</b>	<b>17318</b>	<b>6.5%</b>	<b>100.0%</b>
<b>Residential Development</b>	<b>10010</b>	<b>3.8%</b>	<b>57.8%</b>
medium residential	5121	1.9%	
light residential	4658	1.8%	
multi-unit residential	159	0.1%	
dense residential	71	0.0%	
<b>Natural/ Agricultural Change</b>	<b>4070</b>	<b>1.5%</b>	<b>23.5%</b>
forest	1481	0.6%	
open	1427	0.5%	
new areas of ocean	711	0.3%	
pasture	168	0.1%	
fresh wetland	83	0.0%	
cranberry bog	66	0.0%	
cropland	65	0.0%	
saltwater wetland	47	0.0%	
nursery	18	0.0%	
orchard	4	0.0%	
<b>Recreational Development</b>	<b>1882</b>	<b>0.7%</b>	<b>10.9%</b>
water recreation	1075	0.4%	
golf course	641	0.2%	
participation recreation	166	0.1%	
<b>Commercial/ Industrial/ Mining</b>	<b>554</b>	<b>0.2%</b>	<b>3.2%</b>
commercial	252	0.1%	
industrial	162	0.1%	
mining	140	0.1%	
<b>Public</b>	<b>279</b>	<b>0.1%</b>	<b>1.6%</b>
urban public	121	0.0%	
transportation corridor	46	0.0%	
cemetary	18	0.0%	
waste disposal	83	0.0%	
transportation facility	8	0.0%	
utility corridor	3	0.0%	
<b>Unidentified Change</b>	<b>523</b>	<b>0.2%</b>	<b>3.0%</b>
urban transitional	523	0.2%	

Appendix B  
Commercial Linkage Programs, Nationwide  
May-05

STATE	FEE BASIS	FEE APPLIES TO WHAT SIZE?	EXCLUSIONS	ADOPTION DATE
<b>MASSACHUSETTS</b>				
BOSTON	\$7.18 PSF (commercial) \$8.62 PSF ( requiring job training)	above 100,000 sf		
CAMBRIDGE	\$3.28 PSF	above 30,000 sf		adopted in 1988
SOMERVILLE	\$2.60 PSF	above 30,000 sf		adopted in 1990
WESTFORD	1 unit/ 12 employees	no minimum threshold	only when exceed FAR	adopted in 2000
NANTUCKET	Up to 1 unit/ 4,000 SF	no minimum threshold	none	adopted in 1995
<b>CALIFORNIA</b>				
PALO ALTO	\$15.58 PSF	no minimum threshold	institutions, commercial rec., private clubs, lodges, fraternal oras.	adopted in 1984, updated 3/2002
SAN FRANCISCO (CITY AND COUNTY)	\$14.96 PSF (office) \$11.21 PSF (hotel) \$13.95 PSF (retail)	above 25,000 sf	redevelopment areas and Port	adopted in 1981, updated 2002
MENLO PARK	\$10 PSF (comm/ind) \$5.45 PSF (warehouse,printing assembly)	above 10,000 sf	churches, private clubs, lodges, fraternal orgs., public facilities	adopted in 1998
MOUNTAIN VIEW	\$6 PSF (office/industrial) \$2 PSF (hotel/retail)	50% less if office < 10,000 sf or hotel and retail < 25,000 sf		adopted in 2001
MARIN COUNTY	\$7.19 PSF (office/R&D) \$5.40 PSF (retail/restaurant) \$1.95 PSF (warehouse) \$1,746/room \$3.74 PSF (manufacturing)	no minimum threshold		adopted in 2003
ST. HELENA	\$3.40 PSF (office) \$4.30 PSF (comm/retail )\$3.14 PSF (hotel) \$1.05 PSF (winery/industrial)	no minimum threshold	small childcare facilities, churches, non-profits, vineyards and public facilities	adopted in 2004
OAKLAND	\$4 PSF (office/warehouse)	above 25,000 sf		adopted in 2002 - effective 7/1/05
CORTE MADERA	\$4.79 PSF (office) \$3.20 PSF (R&D) \$2.79 PSF (light industrial) \$0.40 PSF (warehouse) \$8.38 PSF (retail) \$1.20 PSF (commercial services) \$4.39 PSF (restaurant) \$1.20 PSF (hotel)	no minimum threshold		adopted in 2001
BERKELEY	\$4 PSF (commercial) \$2 PSF (industrial)	no minimum threshold		adopted in 1993
SUNNYVALE	\$8 PSF (industrial and office)	no minimum threshold	only portion that is in excess of allowable FAR	adopted in 1984, updated in 2003
SANTA MONICA	\$3.87 PSF (office) \$8.61 PSF (office)	up to 15,000 sf > 15,000 sf	15,000 sf exemption for new construction 10,000 sf exemption for additons	adopted in 1984, updated in 2002
ALAMEDA	\$3.63 PSF (office) \$1.84 PSF (retail) \$0.63 PSF (warehouse) \$931 per room (hotel/motel)	no minimum threshold		adopted in 1989
PETALUMA	\$2.08 PSF (commercial)  \$2.15 PSF (industrial) \$3.59 PSF (retail)	no minimum threshold	fee is 50% less if located in redevelopment project area	adopted in 2003
SAN DIEGO	\$1.06 PSF (office)  \$0.64 PSF (hotel) \$0.80 PSF (R&D) \$0.64 PSF (retail) \$0.64 PSF (manufacturing) \$0.27 PSF (warehouse)	no minimum threshold	some geographic areas are excluded	adopted in 1990, fees reduced in mid 1990's

STATE	FEE BASIS	FEE APPLIES TO WHAT SIZE?	EXCLUSIONS	ADOPTION DATE
NAPA COUNTY	\$2 PSF (office) \$3 PSF (hotel) \$2 PSF (retail) \$1 PSF (industrial) \$0.80 PSF (warehouse)	no minimum threshold	non-profits	City of Napa updated in 1999 County updated in 2004
SACRAMENTO COUNTY	\$1.79 PSF (office)  \$1.70 PSF (hotel) \$1.52 PSF (R&D) \$1.43 PSF (commercial) \$1.12 PSF (manufacturing) \$0.65 PSF (warehouse/office) \$0.49 PSF (warehouse)	no minimum threshold	services uses by non-profits	adopted in 1989, updated in 2004
CUPERTINO	\$2.25 PSF (office/industrial)	no minimum threshold		adopted in 1993
LIVERMORE	\$0.81 PSF (retail)  \$0.61 PSF (service retail) \$0.52 PSF (office) \$397 per room (hotel) \$0.25 PSF (manufacturing) \$0.07 PSF (warehouse) \$0.52 PSF (business park) \$0.26 PSF (heavy industrial) \$0.16 PSF (light industrial)	no minimum threshold	church, private or public schools	adopted in 1999
PLEASANTON	\$2.31 PSF (comm/office/industrial)	no minimum threshold		fee increased in 2003
CARSON	\$0.42 PSF (retail) \$0.42 PSF (office) \$0.42 PSF (hotel) \$0.42 PSF (restaurant) \$0.33 PSF (warehouse/light man.)	no minimum threshold		
GLENDALE	\$1.02 PSF (retail) \$1.04 PSF (office) \$1.01 PSF (hotel) \$1.32 PSF (restaurant) \$0.69 PSF (warehouse/light man.)	no minimum threshold		
LONG BEACH	\$4 PSF (retail) \$3.23 PSF (office) \$3.42 PSF (hotel) \$1.49 PSF (restaurant) \$1.81 PSF (warehouse/light man.)	no minimum threshold		
LOS ANGELES	\$1.13 PSF (retail) \$1.41 PSF (office) \$1.65 PSF (hotel) \$1.67 PSF (restaurant) \$1.21 PSF (warehouse/light man.)	no minimum threshold		
LOS ANGELES COUNTY	\$0.89 PSF (retail)  \$0.89 PSF (office) \$0.89 PSF (hotel) \$0.89 PSF (restaurant) \$0.89 PSF (warehouse/light man.)	no minimum threshold		
PASADENA	\$5.59 PSF (retail) \$6.41 PSF (office) \$7.11 PSF (hotel) \$7.17 PSF (restaurant) \$5.82 PSF (warehouse/light man.)	no minimum threshold		
SANTA ANA	\$10.28 PSF (retail) \$10.28 PSF (office) \$11.20 PSF (hotel) \$11.20 PSF (restaurant) \$9.71 PSF (warehouse/light man.)	no minimum threshold		
TORRANCE	\$1.54 PSF (retail) \$1.54 PSF (office) \$1.54 PSF (hotel) \$1.54 PSF (restaurant) \$1.54 PSF (warehouse/light man.)	no minimum threshold		
WALNUT CREEK (pending)	\$5.68 PSF (office - proposed) \$4.29 PSF (retail - proposed) \$3.42 PSF (hotel - proposed)	not established	not established	under review

**WASHINGTON**

SEATTLE           \$20 PSF for purchase of extra FAR  
or construction of affordable housing

**SOURCES:**

Impact of Cambridge O: <http://www.curp.neu.edu/publications/reports.htm>  
Keyser Marston Associ: <http://www.ci.walnut-creek.ca.us/planning/commlinkagefee.htm>  
click on "Commercial Linkage Fee Analysis" for PDF file  
Impact of Cambridge O: <http://www.curp.neu.edu/publications/reports.htm>  
Keyser Marston Associ: <http://www.ci.walnut-creek.ca.us/planning/commlinkagefee.htm>  
click on "Commercial Linkage Fee Analysis" for PDF file

Appendix C  
Occupational Employment and Wage Statistics  
Barnstable-Yarmouth MSA, May 2004

SOC Code	Occupation Title	Employment	Median Wage		Mean Wage		Pet of Total Mean Wage
			Hourly	Annually	Hourly	Annually	
<b>RETAIL</b>							
1-1011	First-Line Supervisors/Managers of Retail Sales Workers	1,010	\$17.92	\$37,270	\$19.55	\$40,660	120%
1-2011	Cashiers	2,770	\$8.62	\$17,930	\$9.30	\$19,350	57%
1-2021	Counter and Rental Clerks	390	\$9.24	\$19,230	\$10.94	\$22,760	67%
1-2022	Parts Salespersons	190	\$12.65	\$26,320	\$13.11	\$27,260	80%
1-2031	Retail Salespersons	4,710	\$9.76	\$20,300	\$11.62	\$24,170	71%
<b>FOOD SERVICE</b>							
1-9051	Food Service Managers	270	\$19.18	\$39,890	\$19.78	\$41,130	121%
5-1011	Chefs and Head Cooks	130	\$16.80	\$34,940	\$20.08	\$41,760	123%
5-2011	Cooks, Fast Food	200	\$13.20	\$27,450	\$11.99	\$24,940	73%
5-2012	Cooks, Institution and Cafeteria	160	\$12.27	\$25,520	\$12.88	\$26,790	79%
5-2014	Cooks, Restaurant	740	\$12.60	\$26,200	\$13.34	\$27,740	82%
5-2015	Cooks, Short Order	***	\$9.87	\$20,540	\$11.50	\$23,910	70%
5-2021	Food Preparation Workers	800	\$9.78	\$20,330	\$10.28	\$21,370	63%
5-3011	Bartenders	560	\$11.07	\$23,020	\$12.13	\$25,230	74%
5-3021	Combined Food Preparation and Serving Workers, Including Fast Food	1,130	\$8.30	\$17,270	\$8.71	\$18,120	53%
5-3022	Counter Attendants, Cafeteria, Food Concession, and Coffee Shop	650	\$8.61	\$17,910	\$8.87	\$18,460	54%
5-3031	Waiters and Waitresses	2,040	\$10.43	\$21,700	\$10.65	\$22,150	65%
5-3041	Food Servers, Nonrestaurant	290	\$8.42	\$17,510	\$9.66	\$20,100	59%
5-9011	Dining Room and Cafeteria Attendants and Bartender Helpers	360	\$8.07	\$16,780	\$8.41	\$17,490	51%
5-9021	Dishwashers	480	\$9.31	\$19,360	\$9.39	\$19,530	57%
5-9031	Hosts and Hostesses, Restaurant, Lounge, and Coffee Shop	380	\$9.65	\$20,080	\$9.91	\$20,610	61%
<b>MEDICAL</b>							
9-1051	Pharmacists	100	\$39.39	\$81,940	\$37.27	\$77,530	228%
9-1062	Family and General Practitioners	100	\$64.19	\$133,510	\$66.60	\$138,530	407%
9-1063	Internists, General	70			\$93.93	\$195,380	575%
9-1071	Physician Assistants	90	\$33.51	\$69,710	\$38.95	\$81,020	238%
9-1123	Physical Therapists	160	\$29.73	\$61,840	\$29.24	\$60,820	179%
9-1127	Speech-Language Pathologists	50	\$27.65	\$57,510	\$26.93	\$56,020	165%
9-1131	Veterinarians	40	\$42.49	\$88,380	\$35.99	\$74,870	220%
9-1199	Health Diagnosing and Treating Practitioners, All Other	***			\$82.84	\$172,310	507%
9-2021	Dental Hygienists	360	\$32.45	\$67,490	\$31.16	\$64,820	191%
9-2041	Emergency Medical Technicians and Paramedics	180	\$19.81	\$41,210	\$19.93	\$41,460	122%
9-2052	Pharmacy Technicians	100	\$12.89	\$26,820	\$12.73	\$26,480	78%
9-2061	Licensed Practical and Licensed Vocational Nurses	300	\$20.04	\$41,690	\$20.48	\$42,590	125%
1-1011	Home Health Aides	700	\$11.88	\$24,710	\$12.17	\$25,310	74%
1-1012	Nursing Aides, Orderlies, and Attendants	920	\$12.65	\$26,300	\$12.97	\$26,980	79%
1-2021	Physical Therapist Assistants	40	\$19.33	\$40,210	\$19.53	\$40,620	119%
1-9011	Massage Therapists	20	\$19.31	\$40,170	\$19.97	\$41,530	122%
1-9091	Dental Assistants	150	\$19.89	\$41,370	\$19.60	\$40,770	120%
1-9092	Medical Assistants	150	\$14.95	\$31,100	\$14.75	\$30,680	90%
1-9095	Pharmacy Aides	30	\$10.22	\$21,250	\$11.12	\$23,120	68%
1-9096	Veterinary Assistants and Laboratory Animal Caretakers	60	\$12.28	\$25,550	\$12.24	\$25,450	75%
<b>DISTRIBUTION</b>							
1-3071	Transportation, Storage, and Distribution Managers	20	\$31.52	\$65,550	\$32.12	\$66,810	196%
3-5032	Dispatchers, Except Police, Fire, and Ambulance	60	\$14.97	\$31,140	\$15.49	\$32,230	95%
3-5061	Production, Planning, and Expediting Clerks	70	\$16.50	\$34,320	\$16.64	\$34,610	102%
3-5071	Shipping, Receiving, and Traffic Clerks	200	\$11.86	\$24,670	\$12.32	\$25,620	75%
3-5081	Stock Clerks and Order Fillers	1,280	\$10.09	\$21,000	\$11.05	\$22,980	68%

SOC Code	Occupation Title	Employment	Median Wage		Mean Wage		Pet of Total Mean Wage
			Hourly	Annually	Hourly	Annually	
<b>OFFICE</b>							
11-1011	Chief Executives	270	\$52.79	\$109,810	\$56.68	\$117,900	347%
11-1021	General and Operations Managers	1,100	\$30.99	\$64,460	\$39.66	\$82,490	243%
11-2011	Advertising and Promotions Managers	20	\$24.07	\$50,060	\$29.26	\$60,870	179%
11-2021	Marketing Managers	60	\$45.17	\$93,960	\$45.92	\$95,510	281%
11-2022	Sales Managers	110	\$31.22	\$64,930	\$37.31	\$77,600	228%
11-2031	Public Relations Managers	30	\$26.25	\$54,610	\$33.05	\$68,740	202%
11-3011	Administrative Services Managers	90	\$24.33	\$50,600	\$27.61	\$57,420	169%
11-3021	Computer and Information Systems Managers	50	\$39.79	\$82,760	\$42.64	\$88,690	261%
11-3031	Financial Managers	270	\$27.12	\$56,420	\$32.34	\$67,260	198%
11-3041	Compensation and Benefits Managers	20	\$29.63	\$61,630	\$33.14	\$68,920	203%
11-3042	Training and Development Managers	20	\$24.90	\$51,780	\$25.87	\$53,810	158%
11-3049	Human Resources Managers, All Other	10	\$34.93	\$72,650	\$38.25	\$79,560	234%
11-3061	Purchasing Managers	20	\$42.72	\$88,850	\$48.80	\$101,500	298%
11-3071	Transportation, Storage, and Distribution Managers	20	\$31.52	\$65,550	\$32.12	\$66,810	196%
11-9021	Construction Managers	60	\$30.62	\$63,700	\$31.43	\$65,380	192%
11-9041	Engineering Managers	40	\$50.27	\$104,570	\$50.54	\$105,130	309%
11-9051	Food Service Managers	270	\$19.18	\$39,890	\$19.78	\$41,130	121%
11-9061	Funeral Directors	***	\$37.29	\$77,550	\$48.90	\$101,720	299%
11-9081	Lodging Managers	40	\$23.22	\$48,290	\$22.75	\$47,320	139%
11-9131	Postmasters and Mail Superintendents	20	\$28.24	\$58,740	\$28.14	\$58,540	172%
11-9141	Property, Real Estate, and Community Association Managers	90	\$17.31	\$36,000	\$24.00	\$49,910	147%
11-9151	Social and Community Service Managers	80	\$23.11	\$48,070	\$25.82	\$53,710	158%
11-9199	Managers, All Other	70	\$26.49	\$55,090	\$28.00	\$58,240	171%
13-1022	Wholesale and Retail Buyers, Except Farm Products	70	\$19.25	\$40,030	\$20.86	\$43,390	128%
13-1023	Purchasing Agents, Except Wholesale, Retail, and Farm Products	40	\$21.95	\$45,650	\$21.78	\$45,300	133%
13-1041	Compliance Officers, Except Agriculture, Construction, Health and Safety,	30	\$22.33	\$46,440	\$24.20	\$50,330	148%
13-1051	Cost Estimators	100	\$21.71	\$45,160	\$24.05	\$50,020	147%
13-1071	Employment, Recruitment, and Placement Specialists	50	\$20.50	\$42,640	\$25.56	\$53,170	156%
13-1072	Compensation, Benefits, and Job Analysis Specialists	30	\$17.85	\$37,120	\$25.39	\$52,800	155%
13-1073	Training and Development Specialists	40	\$20.84	\$43,350	\$21.80	\$45,330	133%
13-1111	Management Analysts	60	\$29.28	\$60,900	\$33.52	\$69,720	205%
13-1121	Meeting and Convention Planners	20	\$17.25	\$35,880	\$16.87	\$35,090	103%
13-1199	Business Operations Specialists, All Other	90	\$28.43	\$59,120	\$27.46	\$57,120	168%
13-2011	Accountants and Auditors	260	\$24.17	\$50,270	\$27.23	\$56,630	167%
13-2021	Appraisers and Assessors of Real Estate	50	\$19.01	\$39,540	\$23.65	\$49,200	145%
13-2031	Budget Analysts	***	\$19.10	\$39,730	\$19.44	\$40,430	119%
13-2041	Credit Analysts	20	\$25.70	\$53,450	\$25.11	\$52,230	154%
13-2051	Financial Analysts	50	\$32.70	\$68,020	\$37.57	\$78,140	230%
13-2052	Personal Financial Advisors	80	\$27.73	\$57,670	\$43.19	\$89,840	264%
13-2053	Insurance Underwriters	***	\$20.03	\$41,660	\$27.24	\$56,650	167%
13-2072	Loan Officers	90	\$33.23	\$69,120	\$36.44	\$75,790	223%
13-2081	Tax Examiners, Collectors, and Revenue Agents	30	\$26.49	\$55,090	\$24.82	\$51,620	152%
13-2082	Tax Preparers	***	\$10.00	\$20,790	\$12.16	\$25,290	74%
13-2099	Financial Specialists, All Other	***	\$24.05	\$50,020	\$23.80	\$49,510	146%
15-1011	Computer and Information Scientists, Research	***	\$43.36	\$90,180	\$45.32	\$94,270	277%
15-1021	Computer Programmers	60	\$28.28	\$58,810	\$29.30	\$60,940	179%
15-1031	Computer Software Engineers, Applications	110	\$36.07	\$75,030	\$35.62	\$74,100	218%
15-1032	Computer Software Engineers, Systems Software	30	\$45.29	\$94,200	\$42.37	\$88,140	259%
15-1041	Computer Support Specialists	70	\$19.38	\$40,300	\$20.18	\$41,980	123%
15-1051	Computer Systems Analysts	50	\$33.61	\$69,900	\$34.01	\$70,730	208%
15-1071	Network and Computer Systems Administrators	60	\$27.97	\$58,180	\$28.38	\$59,040	174%
15-1081	Network Systems and Data Communications Analysts	40	\$30.11	\$62,620	\$29.92	\$62,240	183%
17-1011	Architects, Except Landscape and Naval	30	\$36.12	\$75,130	\$40.75	\$84,770	249%
17-1022	Surveyors	50	\$17.53	\$36,460	\$20.02	\$41,630	122%
17-2041	Chemical Engineers	10	\$32.09	\$66,750	\$40.43	\$84,100	247%
17-2051	Civil Engineers	90	\$25.61	\$53,270	\$26.20	\$54,490	160%
17-2071	Electrical Engineers	30	\$36.40	\$75,700	\$36.11	\$75,110	221%
17-2081	Environmental Engineers	60	\$28.89	\$60,080	\$30.44	\$63,310	186%
17-3011	Architectural and Civil Drafters	100	\$20.90	\$43,470	\$23.56	\$48,990	144%
17-3022	Civil Engineering Technicians	20	\$21.66	\$45,040	\$21.62	\$44,960	132%
17-3023	Electrical and Electronic Engineering Technicians	80	\$22.77	\$47,360	\$22.26	\$46,310	136%
17-3031	Surveying and Mapping Technicians	***	\$15.85	\$32,960	\$16.72	\$34,790	102%
19-1031	Conservation Scientists	10	\$25.57	\$53,170	\$25.09	\$52,180	153%
19-2041	Environmental Scientists and Specialists, Including Health	40	\$25.78	\$53,630	\$26.88	\$55,900	164%
19-3031	Clinical, Counseling, and School Psychologists	60	\$30.49	\$63,410	\$34.40	\$71,540	210%
19-3051	Urban and Regional Planners	***	\$26.29	\$54,670	\$27.38	\$56,960	167%
19-3091	Anthropologists and Archeologists	***	\$19.10	\$39,740	\$18.52	\$38,520	113%
21-1014	Mental Health Counselors	130	\$26.78	\$55,700	\$24.92	\$51,840	152%

SOC Code	Occupation Title	Employment	Median Wage		Mean Wage		Pet of Total Mean Wage
			Hourly	Annually	Hourly	Annually	
<b>OFFICE</b>							
21-1015	Rehabilitation Counselors	180	\$12.60	\$26,210	\$14.86	\$30,920	91%
21-1021	Child, Family, and School Social Workers	160	\$23.23	\$48,310	\$22.61	\$47,020	138%
21-1023	Mental Health and Substance Abuse Social Workers	50	\$26.81	\$55,760	\$25.55	\$53,150	156%
21-1029	Social Workers, All Other	10	\$13.03	\$27,110	\$16.64	\$34,600	102%
21-1093	Social and Human Service Assistants	370	\$12.62	\$26,250	\$13.68	\$28,460	84%
21-1099	Community and Social Service Specialists, All Other	***	\$22.09	\$45,940	\$22.19	\$46,160	136%
23-1011	Lawyers	160	\$48.97	\$101,850	\$54.03	\$112,390	330%
23-2011	Paralegals and Legal Assistants	130	\$14.35	\$29,850	\$15.30	\$31,830	94%
27-1011	Art Directors	***	\$29.53	\$61,420	\$38.53	\$80,140	236%
27-1023	Floral Designers	70	\$12.72	\$26,460	\$13.62	\$28,320	83%
27-1024	Graphic Designers	80	\$19.88	\$41,350	\$20.75	\$43,160	127%
27-1025	Interior Designers	30	\$20.13	\$41,880	\$30.41	\$63,250	186%
27-1026	Merchandise Displayers and Window Trimmers	60	\$10.93	\$22,730	\$11.51	\$23,930	70%
27-3031	Public Relations Specialists	70	\$18.88	\$39,270	\$19.07	\$39,670	117%
27-3041	Editors	***	\$21.15	\$43,990	\$26.60	\$55,330	163%
27-3043	Writers and Authors	***	\$18.66	\$38,810	\$20.48	\$42,600	125%
27-3099	Media and Communication Workers, All Other	***	\$8.19	\$17,030	\$9.29	\$19,330	57%
21-3021	Insurance Sales Agents	60	\$27.74	\$57,700	\$31.32	\$65,150	192%
21-3031	Securities, Commodities, and Financial Services Sales Agents	230	\$55.71	\$115,870	\$55.46	\$115,350	339%
21-3041	Travel Agents	50	\$11.77	\$24,490	\$12.51	\$26,010	76%
21-3099	Sales Representatives, Services, All Other	120	\$19.76	\$41,100	\$26.39	\$54,890	161%
21-4011	Sales Representatives, Wholesale and Manufacturing, Technical and Scientific Products	130	\$28.85	\$60,010	\$36.82	\$76,590	225%
21-4012	Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific Products	530	\$22.76	\$47,330	\$26.26	\$54,610	161%
21-9011	Demonstrators and Product Promoters	30	\$12.01	\$24,980	\$14.32	\$29,780	88%
21-9031	Sales Engineers	20	\$30.70	\$63,860	\$33.60	\$69,880	205%
21-9041	Telemarketers	230	\$12.37	\$25,720	\$12.36	\$25,720	76%
21-9099	Sales and Related Workers, All Other	70	\$19.19	\$39,910	\$29.19	\$60,710	179%
23-1011	First-Line Supervisors/Managers of Office and Administrative Support Workers	490	\$21.44	\$44,590	\$22.39	\$46,560	137%
23-2011	Switchboard Operators, Including Answering Service	100	\$11.08	\$23,040	\$11.97	\$24,890	73%
23-3011	Bill and Account Collectors	80	\$16.03	\$33,350	\$16.85	\$35,040	103%
23-3021	Billing and Posting Clerks and Machine Operators	230	\$15.08	\$31,370	\$15.36	\$31,950	94%
23-3031	Bookkeeping, Accounting, and Auditing Clerks	1,250	\$15.38	\$32,000	\$15.38	\$31,980	94%
23-3051	Payroll and Timekeeping Clerks	120	\$16.41	\$34,120	\$16.86	\$35,060	103%
23-3061	Procurement Clerks	20	\$11.69	\$24,320	\$12.40	\$25,790	76%
23-3071	Tellers	420	\$15.39	\$32,020	\$14.79	\$30,760	90%
23-4011	Brokerage Clerks	30	\$18.02	\$37,480	\$16.73	\$34,800	102%
23-4051	Customer Service Representatives	860	\$15.89	\$33,050	\$16.45	\$34,220	101%
23-4071	File Clerks	60	\$12.31	\$25,610	\$12.37	\$25,730	76%
23-4081	Hotel, Motel, and Resort Desk Clerks	300	\$11.53	\$23,980	\$11.38	\$23,670	70%
23-4121	Library Assistants, Clerical	90	\$12.64	\$26,290	\$12.63	\$26,280	77%
23-4131	Loan Interviewers and Clerks	***	\$17.35	\$36,090	\$19.21	\$39,950	117%
23-4151	Order Clerks	60	\$15.83	\$32,930	\$15.63	\$32,520	96%
23-4161	Human Resources Assistants, Except Payroll and Timekeeping	60	\$16.19	\$33,660	\$16.44	\$34,190	101%
23-4171	Receptionists and Information Clerks	530	\$11.34	\$23,590	\$11.76	\$24,460	72%
23-4181	Reservation and Transportation Ticket Agents and Travel Clerks	140	\$10.66	\$22,170	\$10.89	\$22,640	67%
23-4199	Information and Record Clerks, All Other	20	\$18.13	\$37,700	\$19.26	\$40,070	118%
23-5032	Dispatchers, Except Police, Fire, and Ambulance	60	\$14.97	\$31,140	\$15.49	\$32,230	95%
23-6011	Executive Secretaries and Administrative Assistants	640	\$16.50	\$34,320	\$17.37	\$36,130	106%
23-6012	Legal Secretaries	180	\$19.81	\$41,210	\$19.68	\$40,940	120%
23-6013	Medical Secretaries	540	\$16.52	\$34,360	\$16.64	\$34,620	102%
23-6014	Secretaries, Except Legal, Medical, and Executive	870	\$14.88	\$30,950	\$14.58	\$30,320	89%
23-9011	Computer Operators	30	\$15.69	\$32,630	\$15.33	\$31,890	94%
23-9021	Data Entry Keyers	50	\$11.54	\$24,000	\$12.10	\$25,180	74%
23-9022	Word Processors and Typists	30	\$8.62	\$17,940	\$10.53	\$21,900	64%
23-9031	Desktop Publishers	10	\$19.98	\$41,570	\$20.13	\$41,870	123%
23-9041	Insurance Claims and Policy Processing Clerks	40	\$13.27	\$27,600	\$14.01	\$29,140	86%
23-9051	Mail Clerks and Mail Machine Operators, Except Postal Service	***	\$10.52	\$21,880	\$11.53	\$23,980	71%
23-9061	Office Clerks, General	1,350	\$12.23	\$25,430	\$12.59	\$26,190	77%
23-9071	Office Machine Operators, Except Computer	***	\$10.20	\$21,210	\$10.86	\$22,590	66%