

By:

Maureen Dunne, M.B.A. Martha Meaney, M.A. Fahlino Sjuib, Ph.D.

with assistance by MERC Interns:
Sean Stevens
Renee Leonard
Garrett Mezzetti

June 2008

Commissioned by the 495/MetroWest Corridor Partnership







# FRAMINGHAM STATE COLLEGE

Copyright 2008 Framingham State College

No material from this publication may be reproduced in whole or in part without the permission of the MetroWest Economic Research Center,
Framingham State College.

MERC provides regional economic data and analysis. MERC takes no position on policy issues at any level.



# METROWEST ECONOMIC RESEARCH CENTER at Framingham State College

Towers Hall, 100 State Street, Framingham, MA 01701-9101 508-626-4033 • FAX: 508-626-4018 www.merc-online.org



June 20, 2008

This report, 2008 Economic Indicators for the 495/MetroWest Region, was commissioned by the 495/MetroWest Corridor Partnership to build on the success of last year's inaugural analysis, and provide a deeper understanding of our region's economic strengths and foundations.

Through a unique public-private collaboration with businesses, municipalities, and other stakeholders, the Partnership is the regional leader for creating an environment that prepares for and cultivates sustainable growth. We accomplish this by coordinating, educating and advocating for solutions to regional constraints and limited natural resources.

While the state's top companies are very visible signs of our regional success, until last year's report little analysis had been performed on the economic and demographic strengths of the 495/MetroWest region. Due to the success of last year's analysis focusing on the growing role of this region as an employment center, the Partnership commissioned this report from the MetroWest Economic Research Center at Framingham State College to provide updated data on unemployment, employment, and housing indicators. Once again, this analysis bolsters the Partnership's advocacy on behalf of the regional economy, by pointing out that in 2006...

- > Our region's total payroll was \$16.4 Billion, up from only \$2.6 Billion in 1980;
- > Our region's employment has grown faster than the labor force since 2003, and the region is poised to become a net importer of labor;
- Our region's employment is almost 90% private sector-based;
- > Our region's economy benefits greatly from hosting company headquarters, with management of companies providing the leading average annual wage of \$106,700; and
- > Our region has a very strong manufacturing sector, with a 63% higher concentration of manufacturing jobs when compared to such employment for the entire state.

As these highlighted findings demonstrate, this report provides a detailed examination of the 495/MetroWest economy and the foundations of our ongoing success. While many faculty members, staff, and students at Framingham State College have worked on this report, I would like to thank Maureen Dunne, Don MacRitchie, Martha Meaney, Fahlino Sjuib, and Amy Weader, along with their interns Sean Stevens, Renee Leonard, and Garrett Mezzetti. The breadth and depth of this report is due to their detailed data collection and thoughtful analysis.

This report, although illuminating on its own merits, provides the Partnership and regional leaders with further justification for attention and investment by state and federal policymakers. With fierce competition from regions across the nation and the globe, the data this report provides is crucial to understanding our regional success and continuing to build upon it over the coming years.

We hope that the findings on the following pages provides you with a deeper understanding and appreciation for the 495/MetroWest region's vibrant and growing economy.

Sincerely yours,

Paul F. Matthews Executive Director

495/MetroWest Corridor Partnership

Muthun

www.arc-of-innovation.org

#### 495/METROWEST CORRIDOR

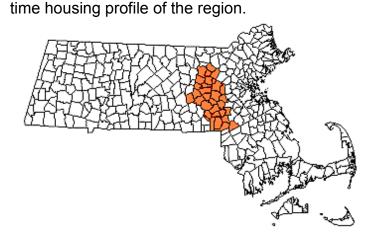
The 495/MetroWest Corridor includes 32 communities along Interstate Route 495 west of Boston. Route I-495, a main north-south highway in eastern Massachusetts, is intersected by several major highways including the Massachusetts Turnpike (I-90), Route I-95, Route 9 and Route 2. With a population of 524,200, the 495/MetroWest Corridor has a well educated resident

labor force of 289,200 with household incomes above the state average. The 495/MetroWest Corridor's 17,800 establishments provided 285,500 jobs and a record \$16.4 billion payroll in 2006. The region generates nearly 10% of the Commonwealth's economic power.

Formed in 2003, the 495/MetroWest Corridor Partnership is a regional advocacy non-profit corporation governed by municipal officials, regional employers, legislators, environmentalists, and educators from the 32 communities. The 495/MetroWest Partnership has amassed an impressive record of accomplishment in addressing development, regional economic transportation, water resources. workforce development, housing and permitting issues. while recognized by policy makers as the voice for a region crucial to the Commonwealth's economy.

LITTLETON HARVARD BOXBOROUGH ACTON BOLTON STOW MAYNARE HUDSON SUDBURY (WAYLAN MARLBOROUGH FRAMINGHAM SOUTHBOROUGH SHREWSBURY NATICK WESTBOROUGH ASHLAND SHERBORN HOPKINTON MEDFIELD HOLLISTON MILLIS MILFORD MEDWAY NORFOLK HOPÈDALE FRANKLIN BELLINGHAM WRENTHAM ) FOXBOROUGH)

This second study, commissioned by the 495/MetroWest Corridor Partnership, updates labor force data and expands employment data and analyses to include structural and cyclical changes, location quotients and detailed sector data. In addition, this study provides a first





# **TABLE OF CONTENTS**

OVERVIEW	1
UNEMPLOYMENT Annual Unemployment Rates 1990-2007 Monthly Unemployment Rate 1990-2007 Labor Force vs. Unemployed 1990-2007 Jobs vs. Labor Force 1990-2006	2 3 4 5 6
EMPLOYMENT  Total Employment 1980-2006 Annual Net Change in Employment 1981-2006 Employment by NAICS Supersector 2006 Net Change in Employment 2001-2006 Major Supersectors 2001-2006 Location Quotients by Supersector Employment by Sector 2006 Location Quotients by Sector 2006 Total Payroll 1980-2006 Total Payroll by NAICS Supersector 2006 Net Change in Payroll 2001-2006 Payroll by Sector 2006 Nominal vs. Real Average Wage 1980-2006 Average Wage by NAICS Supersector 2006 Average Wage by Sector 2006 Total Establishments 1980-2006 Total Establishments 1980-2006 Total Establishments by NAICS Supersector 2006 Net Change in Establishments 2001-2006 Jobs per Establishment 1980-2006 Establishments by Sector 2006 Table A	7 8 9 10 11 12 13 14 15 16 17 18 20 21 22 23 24 25 26
HOUSING  Building Permits Issued 1996-2007  Single Family Building Permits Issued 2006, 2007  Building Permits Issued Index 1996-2007  Single Family Homes Number of Units Sold 1998-2007  Single Family Home Price 1998-2007  Condominiums Number of Units Sold 1998-2007  Condominiums Price 1998-2007  Median Sales Price 2007  Median Gross Rent 1990, 2000	30 31 32 33 34 35 36 37 38
APPENDIX	40

SOURCES AND ACKNOWLEDGEMENTS



# 495/METROWEST CORRIDOR - OVERVIEW

#### **OVERVIEW**

This second report on the economy of the 495/MetroWest Corridor includes three sections: Unemployment, Employment and Housing. The Unemployment section updates data about the region's residents while data in the Employment Section refer to jobs in business establishments sited within the region. The Employment section expands the previous report and provides new data and analyses of cyclical and structural change, location quotients and NAICS sectors. Both sections rely on data from the Massachusetts Division of Unemployment Assistance. The Housing section provides for the first time trends in housing permits, sales and prices for the 32 communities of the 495/MetroWest Corridor using data from the U.S. Census and Banker and Tradesman. Please note the latest annual data is utilized in all three sections. Since the data come from difference sources, the report may contain different estimates of the same values. The highlights of the report include:

# <u>Unemployment</u>

- The 495/MetroWest Corridor annual unemployment rate fell to 3.6% in 2007, less than the state rate of 4.5% and the national rate of 4.6%.
- Since recovery began in 2003, jobs have grown faster than the labor force.

# **Employment**

- With 2006 employment climbing to 285,500, the 495/MW Corridor has fully recovered from the 2001-03 recession. In 2006 the region generated a record payroll of \$16.4 billion and a record average wage of \$57,600.
- In 2006 the region produced nearly 10% of the Commonwealth's total employment and payroll.
- Between 1980-2006 the region's employment grew at 1.8% per year, more than twice the annual state rate and exceeding the U.S. rate.
- The Trade, Transportation, and Utilities, Professional and Business Services and Manufacturing supersectors dominate regional employment and payroll.
- Between 2001-06 Manufacturing and Information lost 13,000 jobs.
- Location quotients identified the region as a center for Management of Companies, Manufacturing, Wholesale Trade, Professional and Technical Services, Information, Retail Trade, and Arts, Entertainment & Recreation.

# **Housing**

- The number of building permits issued for single family homes in the 495/MetroWest Corridor in 2007 fell to its lowest level in 12 years.
- In 2007 the estimated price of an existing single family home in the region declined for the first time since the early 1990s to about \$438,000, a 4.6% decline from 2006.
- The numbers of existing single family homes and condominiums sold in the region have plummeted since 2004.
- Between the census years of 1990 and 2000, the number of housing units in 495/MW increased over the decade by 12.5%, as the number of owner-occupied units rose by 21.9% and the number of renter-occupied units actually fell by 0.6%.

#### 495/MW CORRIDOR - UNEMPLOYMENT

# UNEMPLOYMENT1

Each month the MetroWest Economic Research Center (MERC) at Framingham State College calculates a composite unemployment rate for the 495/MetroWest Corridor. The unemployment rate is household-based and reflects the labor market status of the **residents** of the regions. The information for the rate is obtained from the Massachusetts Executive Office of Labor and Workforce Development, Division of Unemployment Assistance, that provides monthly estimates of the size of the local labor force, the number of employed and unemployed residents, and the unemployment rates for all Massachusetts cities and towns.

The unemployment rate is a measure of the amount of unutilized labor in the economy. The rate represents the proportion of unemployed individuals in the labor force. The labor force is defined as all civilian non-institutionalized persons age 16 and over who are either employed or unemployed. **employed** are those individuals who work as paid employees, are self-employed, or who work 15 hours or more as unpaid workers in a family operated enterprise. Also included as employed are people who did not work but who had a job from which they were temporarily absent due to vacation, illness, childcare problems or other personal obligations, whether or not they were paid during their absence. The **unemployed** are those who did not hold a job during the survey period but were actively seeking employment. For example, the December 2007 unemployment rate in Framingham of 3.0% was based on the following information: the size of the labor force was estimated at 36,702 workers, the sum of 35,598 residents who were employed and 1,104 residents who were unemployed. The rate, expressed as a percentage, was obtained by dividing the unemployed (1,104) by the labor force (36,702) and multiplying by 100 to get the unemployment rate of 3.0%.

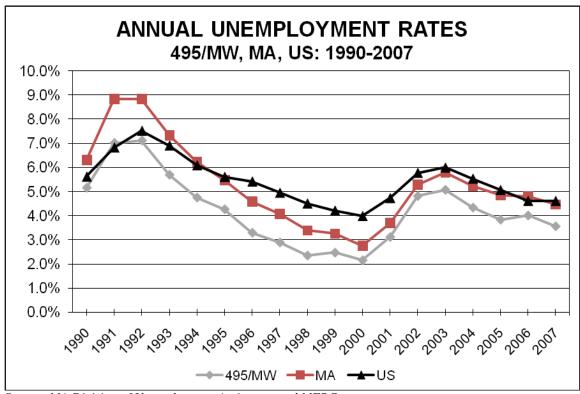
Not everyone in the working age population is included in the labor force. Individuals who were in the working age population but who could not be classified as employed or unemployed (a full time homemaker, for example) would not be counted in the labor force.

The local area unemployment rates for the cities and towns are not seasonally adjusted and are subject to periodic revision and re-bench marking. For purposes of comparison, the rates referred to for the state and the nation are also not seasonally adjusted.

<sup>&</sup>lt;sup>1</sup>The definition of terms such as labor force, employed, and unemployed are based on those in *The BLS Handbook of Methods*, U. S. Bureau of Labor Statistics, April 2003.



The 495/MetroWest Corridor posted an unemployment rate of 3.6% in 2007. The region's unemployment rate experienced a recent peak in 2003 of 5.1%. From 2003, the unemployment rate declined for two consecutive years before it increased to 4.0% in 2006. Massachusetts' unemployment rates have fallen since 2003, reaching 4.5% in 2007. The United States' unemployment rate in 2007 was the same as in 2006 with a rate of 4.6%. During the entire 18 year period, the region's unemployment rates were below both the Massachusetts and United States rates, except in 1991 when the region posted a higher unemployment rate than the United States. In 2007, the 495/MetroWest Corridor and Massachusetts unemployment rates had a 0.9% difference. The region's unemployment rate was also 1.0% lower than the United States unemployment rate of 4.6% in 2007.

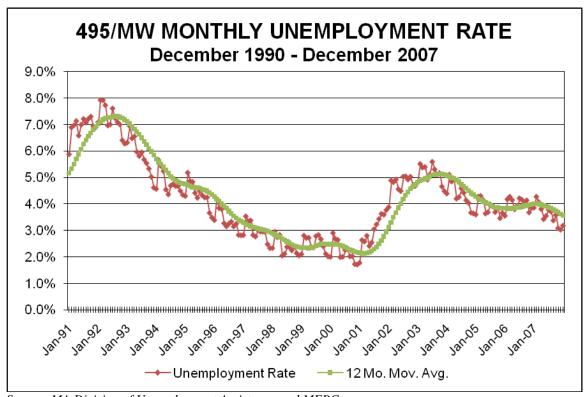


Source: MA Division of Unemployment Assistance and MERC

Year	495/MW	MA	U.S.
1991	7.0%	8.8%	6.8%
1993	5.7%	7.3%	6.9%
1995	4.3%	5.5%	5.6%
1997	2.9%	4.1%	5.0%
1999	2.5%	3.3%	4.2%
2001	3.1%	3.7%	4.7%
2003	5.1%	5.8%	6.0%
2005	3.8%	4.9%	5.1%
2007	3.6%	4.5%	4.6%



The unemployment rate in the 495/MetroWest Corridor (shown in red) in December 2007 was 3.2%, down 0.2% from the previous month. The unemployment rate recorded in November 2007 of 3.0% was the lowest it has been since June 2001. During the 17 year period, the region experienced two prominent peaks in its unemployment rate. The first peak occurred in the early 1990's when the unemployment rate reached 7.9% in January 1992. In June 2003, the region reached its second peak of 5.6%. The 12-month moving average (shown in green), which smoothes out the seasonal variation in the data, was 3.6% in December 2007, which was the lowest the region has experienced since February 2002. The 12-month moving average of 3.6% in December 2007 was 0.4% lower than in December 2006.

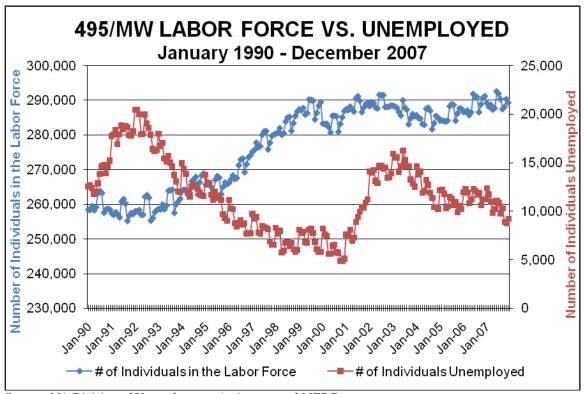


Source: MA Division of Unemployment Assistance and MERC

Month/Year	Unemployment Rate	12-Month Moving
		Average
April 2005	3.6%	4.0%
August 2005	3.7%	3.9%
December 2005	3.5%	3.8%
April 2006	3.8%	3.8%
August 2006	4.0%	3.9%
December 2006	3.8%	4.0%
April 2007	3.4%	3.9%
August 2007	3.4%	3.8%
December 2007	3.2%	3.6%



The total number of individuals in the labor force in the 495/MetroWest Corridor (shown in blue and using the left hand scale) was 289,214 in December 2007. The number of individuals unemployed in the region (shown in red, using right hand scale) was 9,151 in December 2007. The smallest amount of total labor force in the 495/MetroWest Corridor was recorded in September 1992 with 255,242 workers. The highest number of persons in the labor force recorded in this 18 year period was 292,490 in June 2007. There were two prominent peaks during this 18 year span in the number of individuals unemployed. The number of unemployed persons reached a peak of 20,389 in February 1992. In June 2003, the region reached its second peak of 16,170 unemployed workers. The number of unemployed individuals posted its lowest number of 4,833 persons in the month of November 2000.

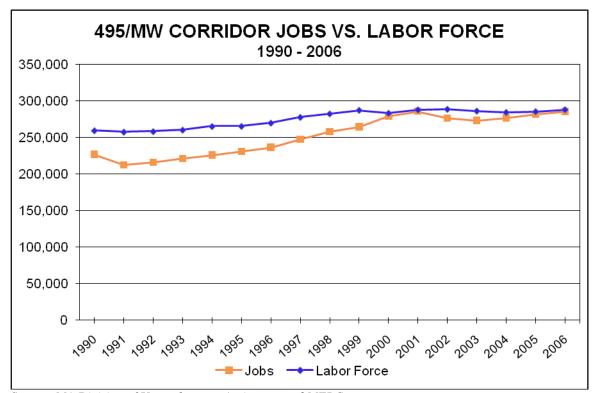


Source: MA Division of Unemployment Assistance and MERC

Month/Year	Persons in the Labor Force	Persons Unemployed	Unemployment Rate
Jan. 1993	258,641	17,923	6.9%
Jan. 1995	265,581	13,717	5.2%
Jan. 1997	275,096	9,678	3.5%
Jan. 1999	287,336	8,012	2.8%
Jan. 2001	287,350	7,534	2.6%
Jan. 2003	288,369	15,850	5.5%
Jan. 2005	284,069	12,110	4.3%
Jan. 2007	289,186	12,309	4.3%



The 495/MetroWest Corridor's jobs (shown in orange) refers to the number of jobs located in local area establishments, while the labor force (shown in blue) consists of all the area residents who are currently employed or unemployed. The region's jobs peaked at 285,725 in 2001, while the labor force peaked at 289,087 workers in 2002. The region recorded its lowest number of jobs, 212,980, in 1991 while the labor force also reached its lowest value in 1991 of 257,807 workers. Between 1990 and 2006 the number of jobs was consistently lower than the number of individuals in the labor force. This implies that the region has been a net exporter of labor. The greatest difference between the number of jobs and the size of the labor force was 44,827 in 1991. Since 2003, the number of jobs has grown more than the number of individuals in the labor force, resulting in a narrowing of the gap between jobs and the labor force. In 2006, the number of jobs was recorded at 285,462 and the labor force was at 288,552 individuals, a difference of only 3,090.



Source: MA Division of Unemployment Assistance and MERC

Year	Jobs	Labor Force
1994	226,338	265,477
1996	236,561	270,128
1998	258,209	282,791
2000	279,430	283,687
2002	276,539	289,087
2004	276,679	284,864
2006	285,462	288,552



# EMPLOYMENT<sup>1</sup>

The MetroWest Economic Research Center (MERC) at Framingham State College maintains an employment database for the MetroWest CCSA, the Greater Marlborough Region, and other substate economies. MERC has documented remarkable growth in regional employment and wages as well as major changes in the type and location of industrial employment over the past 26 years. For this publication MERC has developed employment data for the 495/MetroWest Corridor.

MERC research relies on the Massachusetts Executive Office of Labor and Workforce Development, Division of Unemployment Assistance, ES-202 series to develop time series for employment, payroll, wages and establishments in the 495/MetroWest Corridor. ES-202 data are derived from reports filed by all employers subject to unemployment laws, both state and federal.

In 2002, for the first time, employers were classified by industry solely in accordance with the North American Industry Classification System (NAICS). NAICS groups together establishments that use the same processes to produce goods and services. NAICS has permanently replaced the Standard Industrial Classification (SIC) system, which was in use for the previous 70 years. For a more detailed description of NAICS categories as used in this publication, please see the Appendix.

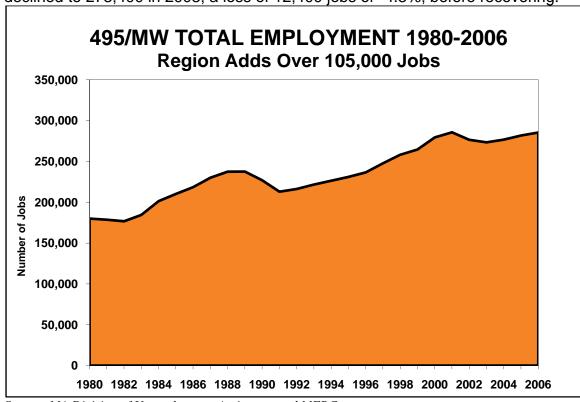
In the ES-202 series **employment** refers to the count of all persons on the payroll of establishments subject to the law, who worked full-time or part-time within the 32 communities of the 495/MetroWest Corridor. Annual **payroll** includes all wages and salaries paid to covered employees including commissions, bonuses, stock options, overtime and sick pay. The **average annual wage** is derived by dividing the gross annual payroll by the average annual employment. **Establishment** or place of work refers to an economic unit that produces goods or services at a single location and is engaged in one type of economic activity. A firm therefore may have one or more establishments where work is produced. More complete definitions are included in the Appendix.

Please note that data and analysis included in this section (495/MetroWest Corridor - Employment) refer to business establishments, *not* residents, located within the 32 communities. Please also note that totals may not always add due to rounding.

<sup>&</sup>lt;sup>1</sup>The definition of terms included in this introduction are based on those in the *Handbook of U.S. Labor Statistics* (1998), *Employment and Wages in Massachusetts and the Major Metropolitan Statistical Areas Annual Averages* 1993-1996, and the *North American Industry Classification System - United States*, 2002.



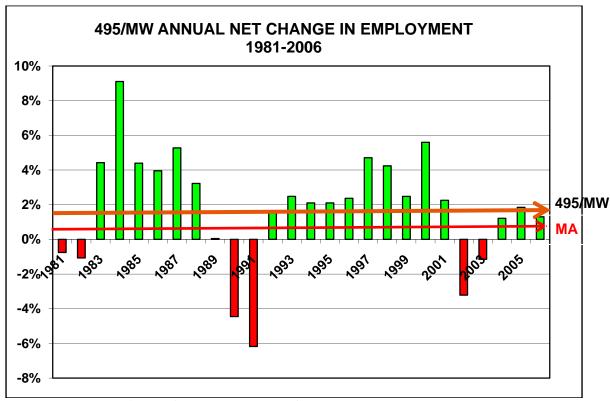
In 2006 495/MetroWest Corridor employment totaled 285,500, up 3,700 jobs or 1.3% from 2005 and just below its historical peak of 285,700 in 2001. The region has recovered from the 2001-03 recession unlike Massachusetts that remained -2.4% below its 2001 peak. Between 1980 and 2006, employment climbed from 180,000 jobs to 285,500, a gain of 105,500 jobs. Over 27 years regional employment grew by 58.6%, more than twice the state increase (23.2%) and exceeding the nation (50.1%). The 495/MW Corridor outperformed the Commonwealth as its share of state employment rose from 6.9% in 1980 to 8.9% or one out of every 11 jobs in Massachusetts in 2006. Two major expansions fueled the region, the first in the 1980s with jobs peaking in 1989 at 237,600. In the subsequent severe recession employment fell to 213,000 in 1991, a loss of 24,600 or -10.4%. From 1992-2001 the 495/MW Corridor added another 72,700 jobs to reach its historical peak of 285,700. In the recent recession employment declined to 273,400 in 2003, a loss of 12,400 jobs or -4.3%, before recovering.



Year	Total Employment	% of MA Employment
1980	180,000	6.9%
1982 (low)	176,700	6.8%
1985	210,200	7.3%
1990	227,000	7.7%
1995	231,100	7.9%
2000	279,400	8.5%
2001 (peak)	285,700	8.7%
2005	281,800	8.9%
2006	285,500	8.9%



Between 1980 and 2006, 495/MetroWest Corridor employment climbed from 180,000 to 285,500 jobs, a gain of 105,500 jobs or 58.6%. On average over more than two and half decades, 495/MW Corridor employment increased by 1.8% per year as shown by the orange arrow below. The region's employment expanded at more than twice the MA annual average rate of 0.8% shown by the red arrow below, and exceeded the U.S. average annual gain of 1.6%. Thus, the 495/MW Corridor pulled up the average annual growth rate for the state over what would have occurred without the region's strong gains. The average annual net change in individual years for the 495/MW Corridor did vary widely. The largest annual increase in employment, 9.1%, occurred in 1984 while the largest annual decline, -6.2%, occurred in 1991. Two major business cycles marked the period. The two long expansions of the 1980s and 1990s are shown in green; the recession years of 1981-82, 1990-91, and 2002-03 are indicated in red.

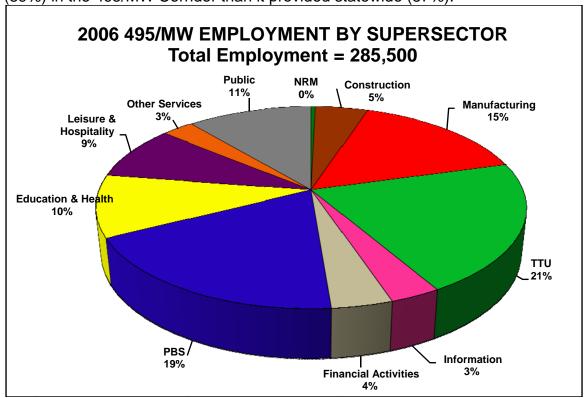


Source: MA Division of Unemployment Assistance and MERC

1980-2006	495/MW Corridor	MA	US
% Gain Over Period	58.6%	23.2%	50.1%
Avg Annual Net Change	1.8%	0.8%	1.6%
Largest Annual Increase	9.1% (1984)	5.8% (1984)	5.1% (1984)
Largest Annual Decrease	-6.2% (1991)	-5.8% (1991)	-1.8% (1982)



Employment in the 495/MetroWest Corridor totaled 285,500 jobs in 2006, up 1.3% from 2005. The three largest supersectors, Trade, Transportation, & Utilities (TTU) (21%), Professional & Business Services (PBS) (19%), and Manufacturing (15.6%), contributed over half of all regional employment. Of these, PBS experienced the most growth in 2006, adding 1,600 jobs while Manufacturing added 600 and TTU lost 300. The next largest supersectors, Public, Education & Health, and Leisure, together provided 30% of the region's employment. The remaining supersectors each provided less than 6% of the regional jobs. The private sector generated a higher percentage of employment (89%) in the 495/MW Corridor than it provided statewide (87%).

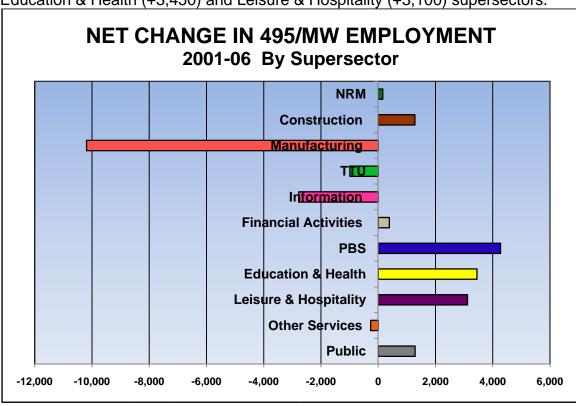


Source: MA Division of Unemployment Assistance and MERC

Supersector	2006 Jobs	% of Region
Natural Resources (NRM)	1,100	0.4%
Construction	13,200	4.6%
Manufacturing	44,400	15.6%
Trade, Transportation, & Utilities (TTU)	60,000	21.0%
Information	9,300	3.3%
Financial Activities	11,100	3.9%
Professional & Business Services (PBS)	53,500	18.8%
Education & Health	28,400	9.9%
Leisure & Hospitality	24,700	8.7%
Other Services	8,100	2.8%
Public	31,600	11.1%
Total Employment	285,500	100.0%



Between 2001 and 2006, total employment in the 495/MetroWest Corridor declined on net by -250 jobs or -0.1%. The regional decrease fell between the Massachusetts net loss of -2.4% in employment and the U.S. net gain of 3.2%. Most importantly, major structural changes occurred in several supersectors. Among all supersectors, Manufacturing suffered the largest loss, -10,200 jobs. Information and Trade, Transportation and Utilities (TTU) also declined by -2,800 and -1,000 jobs respectively. Professional and Business Services (PBS) generated the largest net gain in employment, adding 4,300 jobs, followed by the Education & Health (+3,450) and Leisure & Hospitality (+3,100) supersectors.

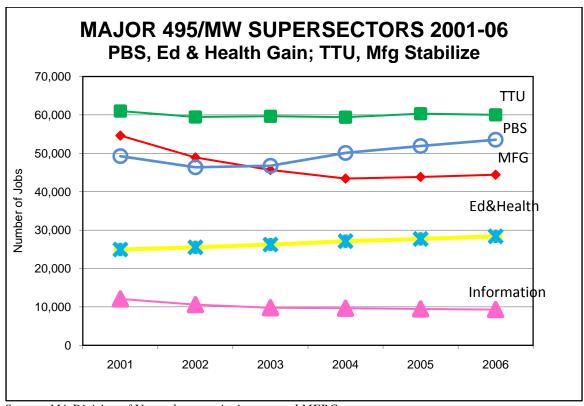


Source: MA Division of	f Unemployment	Assistance	and MERC

Supersector	Net Change in Jobs 2001-06	% Change 2001-06
Natural Resources (NRM)	150	17.1%
Construction	1,300	10.7%
Manufacturing	-10,200	-18.7%
Trade, Transportation, & Utilities (TTU)	-1,000	-1.6%
Information	-2,800	-23.0%
Financial Activities	400	3.6%
Professional & Business Services (PBS)	4,300	8.7%
Education & Health	3,450	13.8%
Leisure & Hospitality	3,100	14.4%
Other Services	-250	-3.2%
Public	1300	4.2%
495/MetroWest	-250	-0.1%
MA	-78,800	-2.4%
US	4,198,000	3.2%



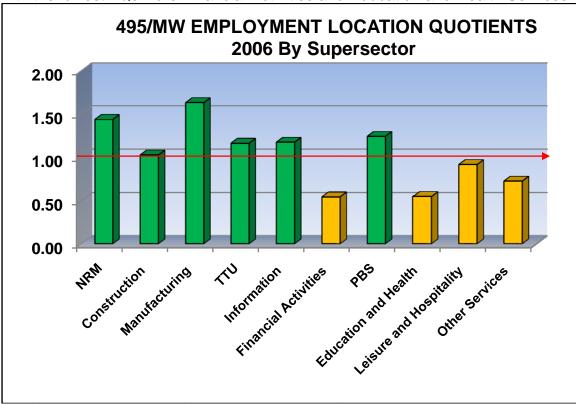
Following its 2001 historical peak in employment the 495/MetroWest Corridor entered the 2001-03 recession. Cylical and structural change during the recession and subsequent recovery realigned the region's private supersectors. Trade, Transportation and Utilities (TTU), the region's largest private supersector in terms of employment, remained stable over the five year period of 2001-06. Manufacturing, the region's second largest supersector in 2001, fell sharply between 2001-04 losing 11,200 jobs or -20.5%. Manufacturing then added 1,000 jobs between 2004-06. After a dip in 2002 Professional and Business Services (PBS) climbed to become the second largest supersector in 2003, replacing Manufacturing. Education and Health increased employment each year. In contrast, Information, the region's the highest wage supersector, lost employment all five years, resulting in a total job loss of 2,800 or -23%.



Supersector	2001	2003	2005	2006
Trade, Transportation & Utilities (TTU)	61,000	59,600	60,300	60,000
Professsional & Business Services (PBS)	49,300	46,700	51,900	53,500
Manufacturing	54,600	45,700	43,800	44,400
Education & Health	24,900	26,200	27,700	28,400
Information	12,100	9,800	9,500	9,300



Location quotients (LQ) compare the regional industry share of total private employment to the state share for the same industry in the same year. A regional LQ higher than 1.0 shows an industry concentration higher than that of the state. In 2006 the 495/MetroWest Corridor supersector with the highest LQ was Manufacturing, 1.63, or a 63% higher concentration of Manufacturing jobs than existed statewide. Five other supersectors achieved LQs higher than 1.0: Natural Resources & Mining (NRM), Construction, Trade, Transportation and Utilities (TTU), Information, and Professional and Business Services (PBS). The high location quotients for PBS, TTU, and Manufacturing, confirm the importance of the region's largest supersectors to the state. The supersectors with the lowest LQs were Financial Activities and Education and Health Services.

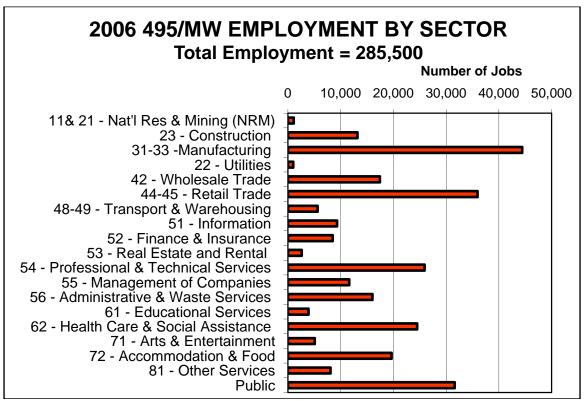


Source: MA Division of Career Services and MERC

Supersector	Employment	LQ
Natural Resources (NRM)	1,100	1.44
Construction	13,200	1.03
Manufacturing	44,400	1.63
Trade, Transportation, & Utilities (TTU)	60,000	1.16
Information	9,300	1.17
Financial Activities	11,100	0.54
Professional & Business Services (PBS)	53,500	1.24
Education & Health	28,400	0.55
Leisure & Hospitality	24,700	0.92
Other Services	8,100	0.73
Public	31,600	NA
495/MetroWest Corridor	285,500	NA

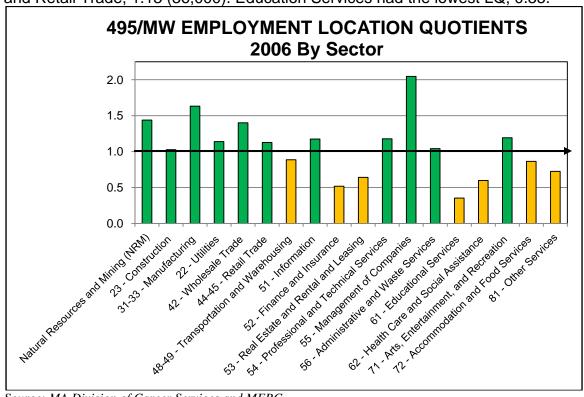


The North American Industry Classification System (NAICS) divides the 11 supersectors into 20 sectors. For this report the Agriculture and Mining sectors are combined into a single supersector, Natural Resources and Mining (NRM). In 2006 495/MetroWest Corridor employment totaled 285,500, up 1.3% from 2005. Among all private NAICS sectors Manufacturing provided the largest number of jobs in the 495/MW Corridor, 44,400 or 15.6% of regional employment. Retail Trade with 36,000 jobs (12.6% of regional employment), Professional and Technical Services, 25,900 (9.1%), and Health Care and Social Assistance, 24,500 (8.6%) followed. Five sectors generated between 10,000-20,000 jobs: Accommodation and Food Services (6.9% of regional employment), Wholesale Trade (6.1%), Administrative and Waste Services (5.6%), Construction (4.6%) and Management of Companies (4.1%). Five sectors provided between 5,000 and 10,000 jobs: Information (3.3%), Finance and Insurance (3.0%), Other Services (2.8%), Transportation and Warehousing (2.0%). The remaining sectors each supplied less than 5,000 jobs in 2006. The Public sector which includes all federal, state and local government employment generated 31,600 jobs (11.1%) in 2006. Specific data on the 19 sectors are included in Table A on page 29.





Among all 495/MetroWest Corridor sectors, Management of Companies and Enterprises generated the highest location quotient (LQ), 2.05, with employment of 11,600. Large sectors also achieving a LQ value greater than 1.0 included: Manufacturing with an LQ of 1.63 (44,000 jobs), Wholesale Trade, 1.40 (17,400), Professional and Technical Services, 1.18 (25,900), Information, 1.17 (9,300) and Retail Trade, 1.13 (36,000). Education Services had the lowest LQ, 0.35.

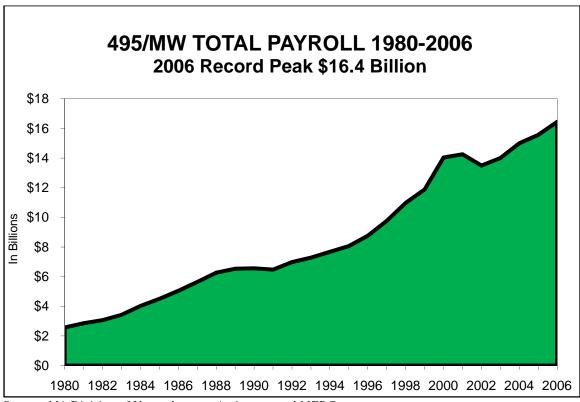


Source: MA Division of Career Services and MERC

Sector	Employment	LQ
Natural Resources and Mining	1,100	1.44
23 - Construction	13,200	1.03
31-33 - Manufacturing	44,400	1.63
22 - Utilities	1,000	1.14
42 - Wholesale Trade	17,400	1.40
44-45 - Retail Trade	36,000	1.13
48-49 - Transportation and Warehousing	5,600	0.89
51 - Information	9,300	1.17
52 - Finance and Insurance	8,500	0.52
53 - Real Estate and Rental and Leasing	2,600	0.64
54 - Professional and Technical Services	25,900	1.18
55 - Management of Companies	11,600	2.05
56 - Administrative and Waste Services	16,000	1.04
61 - Educational Services	3,900	0.35
62 - Health Care and Social Assistance	24,500	0.60
71 - Arts, Entertainment, and Recreation	5,100	1.19
72 - Accommodation and Food Services	19,600	0.86
81 - Other Services	8,100	0.73
495/MetroWest Corridor	285,500	NA

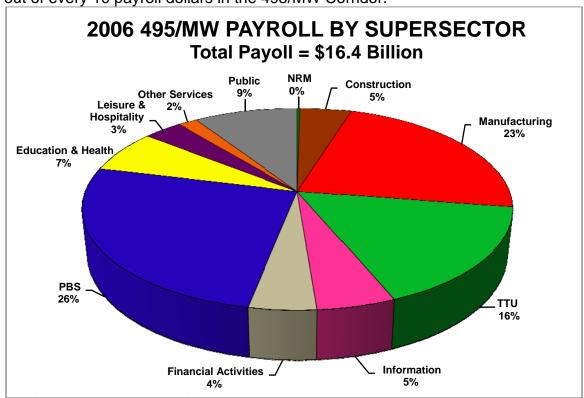


For the third year in a row, the 495/MetroWest Corridor generated a record payroll, \$16.4 billion, up \$800 million or 5.7% from 2005. The region provided one out of every 10 payroll dollars in the Massachusetts economy in 2006. The 495/MW Corridor total payroll climbed from \$2.6 billion in 1980 to \$16.4 billion in 2006, a 540% increase as compared to a 368% gain for the state and a 344% gain for the nation in 26 years. The region outperformed the state as regional payroll grew on average 7.4% per year, faster than the 6.1% for Massachusetts and 5.9% for the U.S. The region experienced dramatic growth as nominal payroll (or payroll not corrected for inflation) rose every year with only two exceptions. Changes in nominal payroll differed markedly in severity from changes in employment in the two recessions. In the severe 1990-1991 recession employment fell by 10.4% while payroll declined -1.3%. In the 2002-03 recession employment fell by -4.3% and payroll dropped more sharply by -5.3%.



Year	Total Payroll	% of MA Payroll
1980 (low)	\$2,570,943,000	7.2%
1985	\$4,504,540,000	8.0%
1990	\$6,563,346,700	8.4%
1995	\$8,062,668,100	8.5%
2000	\$14,038,897,900	9.7%
2005	\$15,566,865,100	9.8%
2006 (peak)	\$16,447,181,500	9.8%

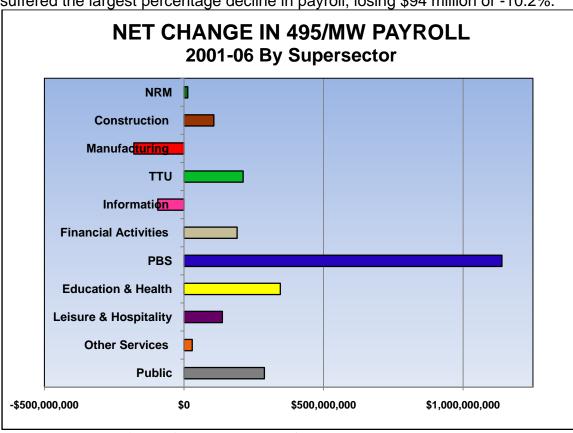
In 2006 total payroll in the 495/MetroWest Corridor reached a historical peak of \$16.4 billion. Similar to employment, the top three supersectors in share of total payroll were Professional & Business Services (PBS) (26%), Manufacturing (23%), and Trade, Transportation, & Utilities (TTU) (16%). These three supersectors generated 65% or \$10.6 billion of the region's total payroll. The Public (9%) and Education & Health (7%) supersectors contributed a combined 16% or \$2.6 billion of total payroll. The remaining six supersectors each provided 5% or less of regional payroll. The private sector generated 91%, or 9 out of every 10 payroll dollars in the 495/MW Corridor.



Supersector	2006 Payroll (In Millions)	% of Region
Natural Resources (NRM)	\$41.1	0.3%
Construction	\$745.4	4.5%
Manufacturing	\$3,735.0	22.7%
Trade, Transportation, & Utilities (TTU)	\$2,675.4	16.3%
Information	\$823.4	5.0%
Financial	\$710.4	4.3%
Professional & Business Services (PBS)	\$4,239.3	25.8%
Education & Health	\$1,125.0	6.8%
Leisure	\$559.3	3.4%
Other Services	\$278.5	1.7%
Public	\$1,514.3	9.2%
Total Payroll	\$16,447.2	100.0%



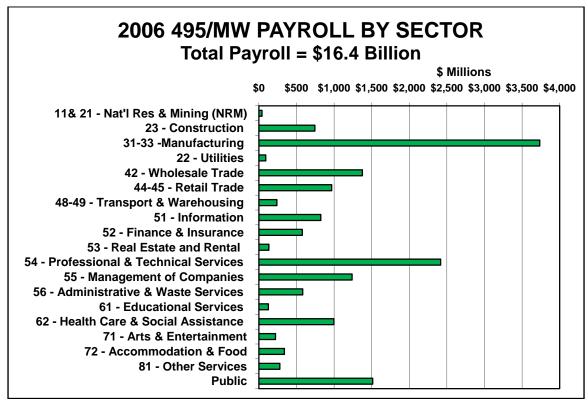
From 2001 to 2006, the 495/MetroWest Corridor produced an overall net change in payroll of \$2.2 billion, a five year increase of 15.3%. Among all supersectors, Professional and Business Services (PBS) generated the largest net gain, up \$1.1 billion or 36.7%. The second and third largest gains occurred in Education and Health and Public, up \$350 million (44.2%) and \$290 million (23.5%) respectively. In contrast, Manufacturing's total payroll declined by \$180 million over the five year period or -4.6%. This net decline reflected a \$475 million loss between 2001-03 followed by a \$295 million gain between 2003-06. Information suffered the largest percentage decline in payroll, losing \$94 million or -10.2%.



Supersector	Net Change in Payroll 2001-06 (in Millions)	% Change 2001-06
Natural Resources (NRM)	\$13.5	48.6%
Construction	\$107.0	16.8%
Manufacturing	-\$179.7	-4.6%
Trade, Transportation, & Utilities (TTU)	\$211.9	8.6%
Information	-\$93.8	-10.2%
Financial Activities	\$190.3	36.6%
Professional & Business Services (PBS)	\$1,139.0	36.7%
Education & Health	\$345.0	44.2%
Leisure & Hospitality	\$137.7	32.6%
Other Services	\$29.6	11.9%
Public	\$288.0	23.5%
Total Net Change in Payroll	\$2,188.4	15.3%

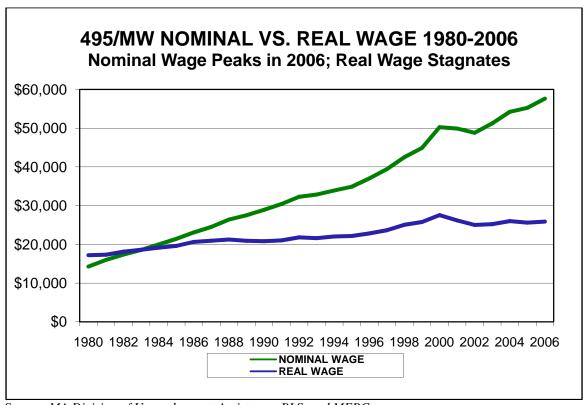


The North American Industry Classification System (NAICS) divides the 11 supersectors into 20 sectors. For this report the Agriculture and Mining sectors are combined into a single supersector, Natural Resources and Mining (NRM). In 2006 the 495/MetroWest Corridor reported a historical record of \$16.4 billion in payroll, up 5.6% from 2005. Manufacturing led all sectors providing \$3.7 billion or 22.7% of regional payroll. Professional and Technical Services generated the second largest payroll, \$2.4 billion (14.7%), followed by Wholesale Trade, \$1.4 billion (8.4%), and Management of Companies, \$1.2 billion (7.5%). The four largest private sectors generated over \$8.7 billion in payroll, more than half of the total 495/MW Corridor payroll in 2006. Six sectors produced between \$500 million and \$1 billion in payroll: Health Care and Social Assistance, Retail Trade, Information, Construction, Administrative and Waste Services, and Finance and Insurance. All other sectors each produced less than \$500 million in payroll. The Public sector which includes all federal, state and local employment generated \$1.5 billion, or 9.2% of regional payroll. Specific data on the 19 NAICS sectors is included in Table A on page 29.





In 2006 the average annual wage for the 495/MetroWest Corridor recorded a historical peak of \$57,600, up 4.3% over 2005. In contrast, the real wage rose by 1% from 2005. Over 25 plus years the 495/MW Corridor average annual wage climbed steadily from \$14,300 in 1980 to a historical peak of \$57,600 in 2006, a gain of \$43,300 or 303%. During the entire period the average nominal wage declined only twice, in 2001 and 2002 during the recent recession. However, the real average annual wage or annual wage corrected for inflation using the CPI Boston for Urban Wage Earners, differed significantly. The real wage rose much more slowly over the period, climbing from \$17,200 in 1980 to \$25,900 in 2006, a gain of \$8,700 or 50.4%. Declines occurred during and after both recessions, in 1989, 1990 and 1993, and again in 2001, 2002, and 2005. The average real wage reached its historical peak in 2000. In 2006 the average real wage remained \$1,700 or 6% below its 2000 peak.

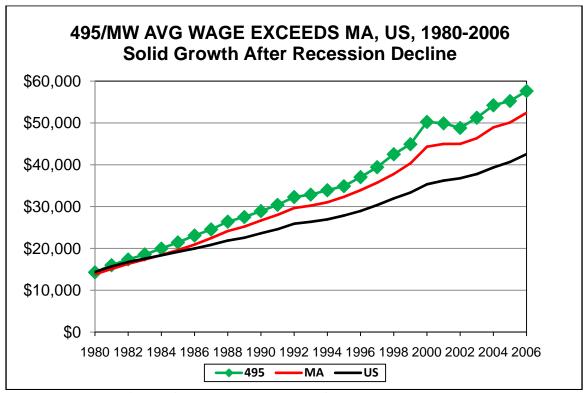


Source: MA Division of Unemployment Assistance, BLS, and MERC

Year	Nominal Wage	Real Wage
1980	\$14,300 (low)	\$17,200 (low)
1985	\$21,400	\$19,600
1990	\$28,900	\$20,800
1995	\$34,900	\$22,200
2000	\$50,200	\$27,600 (peak)
2005	\$55,200	\$25,600
2006	\$57,600 (peak)	\$25,900



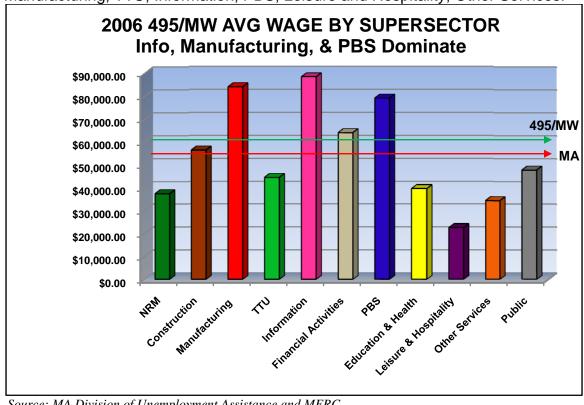
In 2006 the 495/MetroWest Corridor average annual wage reached \$57,600, exceeding the Massachusetts average wage of \$52,400 by 9.9% and the U.S. average wage of \$42,500 by 35.5%. On average over the period the 495/MW Corridor wage increased by 5.5% annually, higher than the Massachusetts and U.S. average annual gains of 5.3% and 4.3% respectively. In 1980 the average wage in the 495/MW Corridor of \$14,300 lay between the state's average wage of \$13,800 and the U.S. average wage of \$14,400. Over the next 20 years the average wage in the 495/MW Corridor, Massachusetts, and the U.S. would all increase at different rates. The gap between the 495/MW Corridor wage and those of the state and nation would widen strikingly. By 2000 the 495/MW Corridor average wage of \$50,200 exceeded the state's average wage by \$5,900 (13.3%) and the U. S. by \$14,900 (42.2%). The abrupt decline in the 495/MW Corridor average wage in 2001 and 2002 narrowed the gap somewhat.



Year	495/MW Avg Wage	MA Avg Wage	US Avg Wage
1980 (low)	\$14,300	\$13,800	\$14,400
1985	\$21,400	\$19,600	\$19,200
1990	\$28,900	\$26,700	\$23,600
1995	\$34,900	\$32,300	\$27,800
2000	\$50,200	\$44,300	\$35,300
2005	\$55,200	\$50,100	\$40,700
2006	\$57,600	\$52,400	\$42,500



In 2006 the 495/MetroWest Corridor recorded a new historical high of \$57,600 in average annual wage. The three supersectors with the highest average wages differed from the region's top three in employment and total payroll. Among all supersectors Information offered the highest average wage, \$88,400, followed by Manufacturing at \$84,100, and Professional & Business Services (PBS) at \$79,200. The Trade, Transportation, & Utilities (TTU) supersector, which ranked first in employment share and third in payroll share, ranked seventh in average wage, \$44,600. In seven 495/MW supersectors the regional average wage exceeded the state average wage in the particular supersector: Construction, Manufacturing, TTU, Information, PBS, Leisure and Hospitality, Other Services.

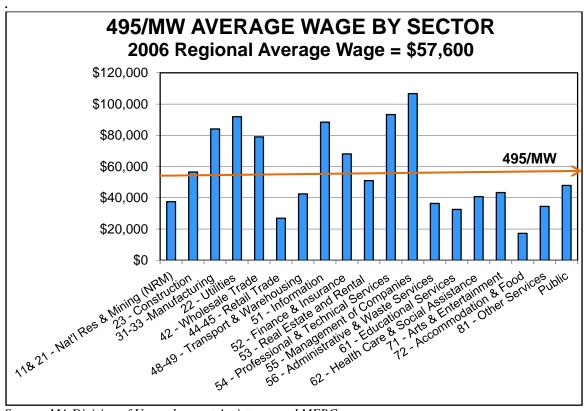


Source: MA Division of Unemployment Assistance and MERC

Supersector	495/MW Avg Wage 2006	MA Avg Wage 2006
Natural Resources (NRM)	\$37,500	\$45,200
Construction	\$56,500	\$55,600
Manufacturing	\$84,100	\$65,300
Trade, Transportation, & Utilities (TTU)	\$44,600	\$40,800
Information	\$88,400	\$81,100
Financial Activities	\$64,100	\$94,500
Professional & Business Services (PBS)	\$79,200	\$69,500
Education & Health	\$39,600	\$45,800
Leisure & Hospitality	\$22,600	\$20,200
Other Services	\$34,500	\$26,700
Public	\$47,900	\$49,700
Total Average Wage	\$57,600	\$52,400

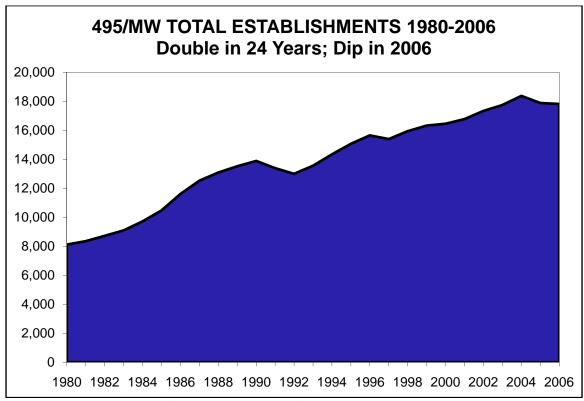


The North American Industry Classification System (NAICS) divides the 11 supersectors into 20 sectors. For this report the Agriculture and Mining sectors are combined into a single supersector, Natural Resources and Mining (NRM). The 495/MetroWest Corridor offered an average annual wage of \$57,600 in 2006, up 4.3% from 2005. Management of Companies led all sectors, generating an average annual wage of \$106,700 in 2006. Management of Companies was the ninth largest sector in terms of employment and the fourth largest in terms of payroll. Four more sectors offered average annual wages in excess of \$80,000: Professional and Technical Services (\$93,300), Utilities (\$91,900), Information (\$88,400), Manufacturing (\$84,100). The five highest wage sectors provided over 92,000 jobs in the 495/MW Corridor. In sharp contrast, six sectors offered average wages less than \$40,000: Resources and Mining (NRM) (\$37,500). Administrative and Waste Services (\$36,400), Other Services (\$34,500), Educational Services (\$32,600), Retail Trade (\$26,900), Accommodation and Food Services (\$17,200). The six lowest wage sectors provided over 84,000 jobs in the 495/MW Corridor. In 2006 the Public sector offered an average wage of \$47,900. Specific data on the 19 NAICS sectors is included in Table A on page 29.





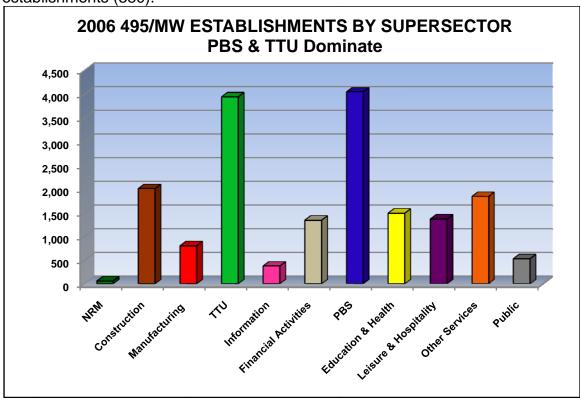
In 2006 over 17,800 establishments or separate places of work were located in the 495/MetroWest Corridor, down 0.4% from 2005 and declining for the second year in a row. Between 1980 and 2006 the number of regional establishments climbed by 120%; the region exceeded the 74% gain for Massachusetts and the 86% gain for the U.S. On average the number of establishments in the 495/MW Corridor grew 50% faster than the state climbing 3.1% annually as opposed to 2.15% for the state and 2.4% for the U.S. Rapid increases occurred during the 1980s as almost 6,000 establishments were added to the region. Subsequently the number of establishments grew at a slower rate with absolute declines in the number of establishments occurring in 1991, 1992, 1997, 2005 and 2006. The 495/MW Corridor share of all establishments located in Massachusetts rose from 6.8% in 1980 to 8.5% in 2006. One out of every 12 Massachusetts establishments was located in the 495/MW Corridor during 2006.



Year	Total Establishments	% of MA Establishments
1980 (low)	8,100	6.8%
1985	10,500	7.4%
1990	13,900	8.0%
1995	15,100	8.5%
2000	16,450	8.7%
2004 (peak)	18,350	8.6%
2005	17,900	8.6%
2006	17,800	8.5%



In 2006 the total number of establishments or separate places of work in the 495/MetroWest Corridor stood at 17,800, down 70 from 2005. The distribution of establishments by supersector differed from the distributions of both employment and payroll. Professional & Business Services (PBS) (4,050) and Trade, Transportation, & Utilities (TTU) (3,940) provided 45% of the total establishments for the region. Construction (2,000) and Other Services (1,850) followed. The Manufacturing supersector, which ranked third in the region in employment and second in payroll, ranked eighth in the number of establishments (800). The Information supersector, which ranked first in average wage, ranked tenth in establishments (380).

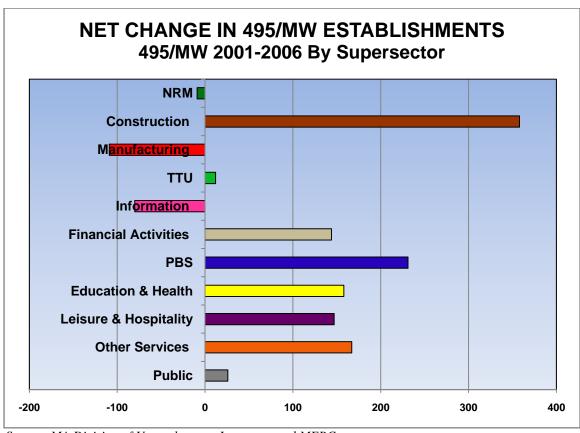


Source: MA Division of Unemployment Assistance and MERC

Supersector	2006 Est.	% of Region
Natural Resources (NRM)	60	0.3%
Construction	2,000	11.3%
Manufacturing	800	4.5%
Trade, Transportation, & Utilities (TTU)	3,940	22.1%
Information	380	2.1%
Financial	1,340	7.5%
Professional & Business Services (PBS)	4,050	22.7%
Ed & Health	1,490	8.4%
Leisure	1,370	7.7%
Other	1,850	10.4%
Public	530	3.0%
Total Establishments	17,800	100.0%



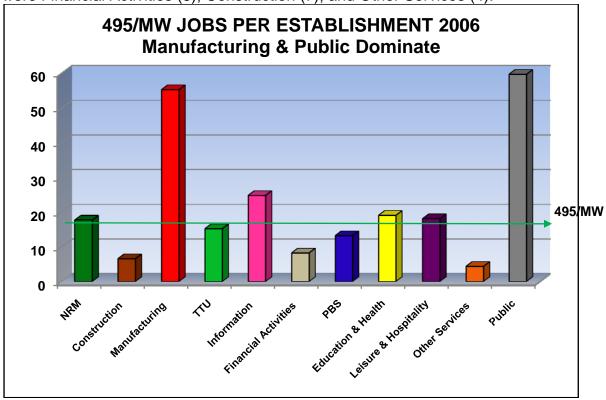
From 2001 to 2006, the total number of establishments or separate places of work in the 485/MetroWest Corridor climbed by 1,040 or 6.2%. Construction, which increased by 360 establishments or 21.7%, experienced the largest net gain. Professional and Business Services (PBS), Other Services, Education and Health, Leisure and Hospitality, and Financial Activities followed with increases of between 140 and 230 establishments. In contrast, Manufacturing declined by 110 establishments or -12%, while Information lost 80 establishments or -17.6%.



Supersector	Net Change Establishments	% Change 2001-06
Natural Resources (NRM)	-10	-12.7%
Construction	360	21.7%
Manufacturing	-110	-12.0%
Trade, Transportation, & Utilities (TTU)	10	0.3%
Information	-80	-17.6%
Financial Activities	140	12.0%
Professional & Business Services (PBS)	230	6.1%
Education & Health	160	11.9%
Leisure & Hospitality	150	12.0%
Other Services	170	10.0%
Public	30	5.2%
Total Net Change in Establishments	1,040	6.2%



In 2006 the 495/MetroWest Corridor averaged 16 jobs per establishment. Among all supersectors Public and Manufacturing provided the most jobs per establishment, 60 and 55 respectively. Information provided the next highest numbers of jobs per establishment, 25. Therefore, loss of establishments in these supersectors results in a disproportionately high number of jobs lost. Two of the remaining "big three" supersectors in the region, Trade, Transportation and Utilities (TTU) and Professional and Business Services (PBS), each provided fewer jobs per establishment than the regional average, with 15 and 13 respectively. The supersectors that provided the fewest jobs per establishment were Financial Activities (8), Construction (7), and Other Services (4).

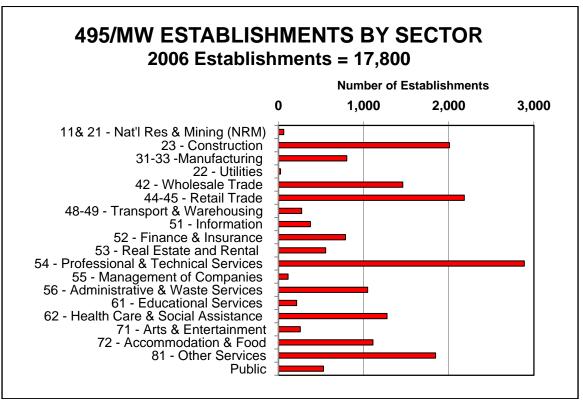


Source: MA Division of Unemployment Assistance and MERC

Supersector	2006 Jobs per Establishment
Natural Resources (NRM)	18
Construction	7
Manufacturing	55
Trade, Transportation, & Utilities (TTU)	15
Information	25
Financial Activities	8
Professional & Business Services (PBS)	13
Education & Health	19
Leisure & Hospitality	18
Other Services	4
Public	60
495/MetroWest Corridor	16



The North American Industry Classification System (NAICS) divides the 11 supersectors into 20 sectors. For this report the Agriculture and Mining sectors are combined into a single supersector, Natural Resources and Mining (NRM). In 2006 over 17,800 establishments or separate places in work were sited in the 32 communities of the 495/MetroWest Corridor, down 0.4% from 2005. Professional and Technical Services led all sectors with 2,900 establishments or 16.2% of the regional total. One out of every six 495/MW Corridor establishments belonged to Professional and Technical Services in 2006. Retail Trade generated the second largest number of establishments, 2,200 (12.3% of the regional total), followed by Construction, 2,000 (11.3%), Other Services, 1.850 (10.4%). Three sectors had between 1,000–1,500 establishments: Wholesale Trade, 1,450 (8.2%), Accommodation and Food Services, 1,100 (6.2%), Administrative and Waste Services, 1.050 (5.9%). Three sectors provided between 500 and 1,000 separate places of work in 2006: Manufacturing, 800 (4.5%), Finance and Insurance, 800 (4.4%), and Real Estate and Leasing, 550 (3.1%). Seven sectors each had less than 500 establishments: Information. Transportation and Warehousing, Arts and Entertainment, Educational Services, Management of Companies, Natural Resources and Mining, and Utilities. The Public sector had 530 establishments in 2006. Specific data on the 19 sectors is included in Table A on page 29.





**TABLE A 495/METROWEST CORRIDOR NAICS SECTORS - 2006** 

NAICS Sector	Total Employment*	Total Payroll* (Millions)	Average Wage	Number of Establishments*
11 & 21 Natural Resources & Mining**	1,100	\$41.1	\$37,500	60
23 Construction	13,200	\$745.4	\$56,500	2,000
31-33 Manufacturing	44,400	\$3,735.0	\$84,100	800
22 Utilities**	1,000	\$91.8	\$91,900	30
42 Wholesale Trade	17,400	\$1,376.5	\$79,000	1,450
44-45 Retail Trade	36,000	\$967.6	\$26,900	2,200
48-49 Transportation & Warehousing	5,600	\$239.4	\$42,500	270
51 Information	9,300	\$823.4	\$88,400	380
52 Finance & Insurance	8,500	\$577.7	\$68,100	800
53 Real Estate & Leasing	2,600	\$132.7	\$51,000	550
54 Professional & Technical Services	25,900	\$2,416.8	\$93,300	2,900
55 Management of Companies	11,600	\$1,239.5	\$106,700	110
56 Administrative & Waste	16,000	\$583.0	\$36,400	1,050
61 Educational Services	3,900	\$127.0	\$32,600	210
62 Health Care & Social Assistance	24,500	\$998.0	\$40,700	1,280
71 Arts & Entertainment	5,100	\$220.6	\$43,400	260
72 Accommodation & Food Services	19,600	\$338.7	\$17,200	1,100
81 Other Services	8,100	\$278.5	34,500	1,850
Public	31,600	\$1,514.3	\$47,900	530
495/MW Corridor	285,500	\$16,447.2	\$57,600	17,800
Massachusetts	3,197,300	\$167,653.0	\$52,400	208,860
United States	133,833,800	\$5,692,569.5	\$42,500	8,784,030

Source: MA Division of Unemployment Assistance and MERC Note: \*Rounded \*\*Estimated



#### 495/METROWEST CORRIDOR - HOUSING

#### HOUSING

The MetroWest Economic Research Center (MERC) at Framingham State College collects and analyzes data on housing permits issued and existing home sales for the 495/MetroWest Corridor. MERC gathers housing data for the 32 communities from several sources.

Annual data on new building permits issued for single family homes is collected by MERC using information from the U.S. Census. Building permits data for Massachusetts and the United States are based on estimates published by the Federal Reserve Bank of Boston.

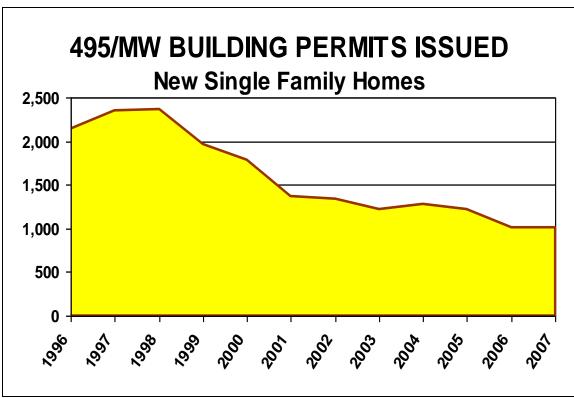
Information on existing home sales is based on data published by The Warren Group for *Banker & Tradesman*. Most data are available from 1988 forward, and were significantly revised this spring in order to better capture market activity. Data are collected on single and multi-family residences sold in the 32 495/MetroWest Corridor communities. Median house price is measured at the 50<sup>th</sup> percentile in each town; that is, half the homes sold for more than the median price and half sold for less than the median price. The prices of single family homes and condominiums for the region are estimated. It is important to remember that a change in median price does not reflect appreciation or depreciation in the value of individual homes. Rather, there is a different mix of homes sold each year.

Finally, renter-owner information and information on median gross rent are collected from the U.S. Census.



# 495/METROWEST CORRIDOR - HOUSING

New residential housing permits issued each year for single family homes in the 495/MetroWest Corridor, indicated by the height of the graph below, peaked in 1998 at about 2,367 units. There was a sharp decline over the next three years to reach a level of permits issued in 2002 that was more than 1000 units below the 1998 level, or about 1,346 permits issued. The number of new single family building permits issued in the 495/MetroWest Corridor continued to fall at a slower pace through 2006. The 2007 annual value for the region is estimated to be only 4 permits shy of the 2006 level. Of course, the behavior of this data series varies greatly within each of the 32 communities. Please see the table on next page for the relevant 2006 and 2007 values for the individual communities of the 495/MetroWest Corridor.



Source: U.S. Census and MERC

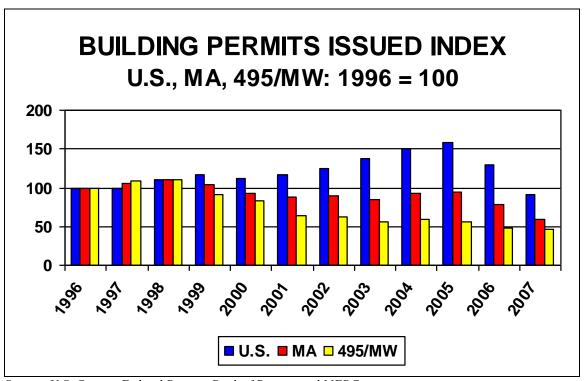
Year	# SF Permits Issued	Annual % Change
1996	2,215	NA .
1997	2,350	+ 6.1%
1998	2,367	+ 0.7%
1999	1,957	- 17.3%
2000	1,782	- 8.9%
2001	1,374	- 22.9%
2002	1,346	- 2.0%
2003	1,213	- 9.9%
2004	1,281	+ 5.6%
2005	1,213	- 5.3%
2006	1,014	- 16.4%
2007	1,010	- 0.4%

According to the U.S. Census Bureau, the number of new residential housing permits issued for single family homes in the 495/MetroWest Corridor held steady from 2006 to 2007. However, the same statistic for each of the 32 communities of the 495/MetroWest Corridor shows a wide variation, as displayed in the table below. The change in the number of new single family permits issued by community between 2006 and 2007 ranges from a 1017% increase in Berlin to an 80% decrease in Boxborough.

SINGLE FAMILY BUILDING PERMITS ISSUED				
Community	# Permits in 2006	# Permits in 2007		
Acton	71	70		
Ashland	36	21		
Bellingham	43	15		
Berlin	6	67		
Bolton	24	20		
Boxborough	10	2		
Foxborough	63	23		
Framingham	33	24		
Franklin	75	87		
Harvard	8	7		
Holliston	21	19		
Hopedale	8	5		
Hopkinton	51	37		
Hudson	64	41		
Littleton	30	21		
Marlborough	15	7		
Maynard	4	23		
Medfield	22	15		
Medway	11	11		
Milford	41	72		
Millis	5	14		
Natick	56	47		
Norfolk	40	33		
Northborough	40	43		
Sherborn	3	4		
Shrewsbury	57	50		
Southborough	19	29		
Stow	43	55		
Sudbury	50	79		
Wayland	23	17		
Westborough	21	35		
Wrentham	21	17		
495/MetroWest Corridor	1,014	1,010		



This graph compares permits issued for new single family homes in the United States, Massachusetts, and the 495/MetroWest Corridor from 1996, the base year when all indices equal 100, through 2007. The housing permit index for the United States reached a high of 158 in 2005 which means that compared to the base year of 1996, permits issued for new single family homes in the United States were 58% higher nine years later. In comparison, the U.S. index fell to 91 in 2007, falling below 100 for the first time in a decade. For Massachusetts the index was 59 in 2007. This means that the level of building activity in the state in 2007 was only 59% of the activity in 1996. Similarly, the number of permits issued in 2007 in the 495/MetroWest Corridor was 47% of the 1996 value. The one year percentage changes from 2006 to 2007 were -30% for the nation, -25% for the state, and -0.4% for the region.

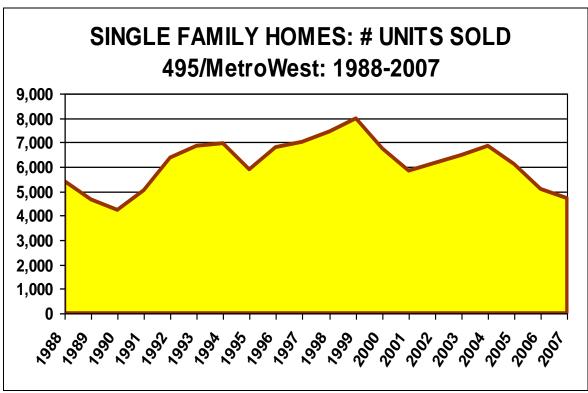


Source: U.S. Census, Federal Reserve Bank of Boston, and MERC

	U.S., MA, and 495/MW BUILDING PERMITS INDEX : 1996 = 100											
	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
U.S.	100	99	111	116	113	116	125	138	151	158	130	91
MA	100	106	111	104	94	87	90	84	93	95	79	59
495/MW	100	110	110	91	83	64	63	57	60	57	47	47



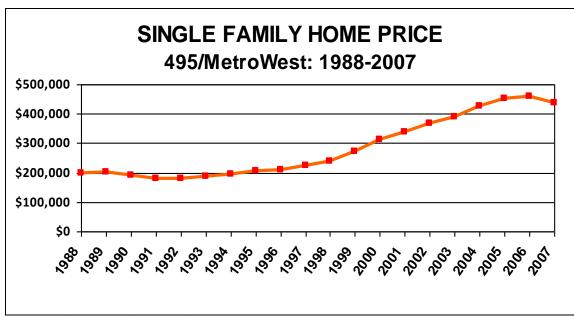
This data series refers to sales of existing single family homes in the 32 communities of the 495/MetroWest Corridor, from 1988 to 2007. These sales consist of a different mix of homes sold each year. Existing single family homes sold in the region totaled about 5,388 in 1988. There was a robust market for sales of existing single family homes during the 1990s. The peak occurred at nearly 8,000 units sold in 1999. There were sharp declines from 1999 through 2001, and then modest increases for three years from 2002 through 2004. In 2005, the number of existing single family homes sold fell by 12.5% in the region when compared to 2004, followed by a 19.4% decline in 2006, and another 7.7% decline in 2007. The number of single family units sold in 2007 was 4,735, a value not seen in this region since the early 1990s.



Year	# Units Sold	% Change from previous
	Single Family Homes	year
1988	5,388	NA
1990	4,230	-10.6%
1996	6,793	+13.4%
1999	7,984	+ 6.6%
2001	5,836	-16.0%
2004	6,849	+ 5.5%
2007	4,735	- 7.7%



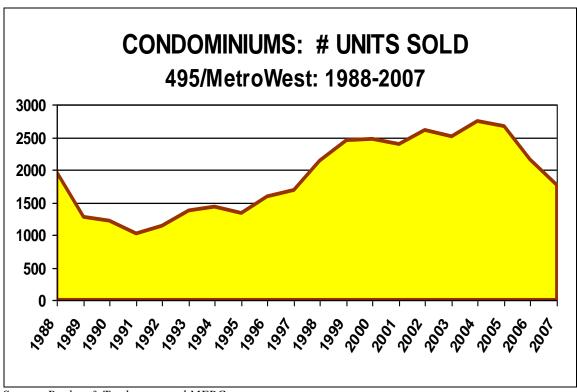
This data series refers to sales of existing single family homes in the 495/ MetroWest Corridor. These sales consist of a different mix of homes sold each year, and do not reflect appreciation in the value of individual homes. The line graph measures the estimated price of single family homes sold in 495/MetroWest between 1988 and 2007. The estimated price for the region in 1988 was just over \$200,000. The price bottomed out in 1991 at \$180,400 and then gradually climbed during the mid-1990s reaching just over \$238,000 in 1998. From 1998 through 2000 there were two consecutive years of double-digit percentage price increases, followed by five more years each with a price rise of 5% to 10%. Between 1998 and 2005, estimated price increased by more than 90%, i.e., nearly doubling in the seven year period. In 2006 estimated price peaked at more than \$458,000. In 2007, estimated price declined for the first time since the early 1990s to about \$438,000, a 4.6% decline in price. Using data from the National Association of Realtors, the Federal Reserve Bank of Boston reports that median price for existing single family homes in the U.S. fell in 2007 from 2006 by 2.8% from \$221.875 to \$215.650. This followed an increase in median price for single family homes in the U.S. from 2005 to 2006 of 2.0%. For the Greater Boston region (Boston-Cambridge-Quincy), median price for SF homes declined for both years, from \$410,775 in 2005 to \$403,275 in 2006 to \$399,000 in 2007 resulting in annual decreases in price respectively of 1.8% and 1.1%.



Year	495/MW Single Family	% Change from previous
	Home Price	year
1988	\$200,222	NA
1991	\$180,400	- 5.6%
1998	\$238,143	+ 5.8%
2000	\$312,143	+12.9%
2001	\$338,903	+ 7.9%
2005	\$453,967	+ 5.7%
2007	\$438,144	- 4.6%



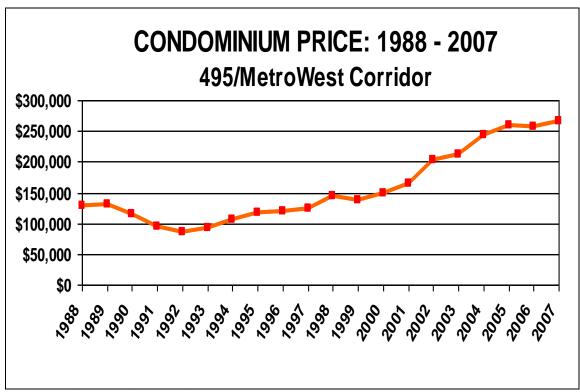
This data series refers to sales of existing condominiums in the 495/MetroWest Corridor. These sales consist of a different mix of units sold each year. Existing condominiums sold started at 1,963 units sold in 1988, with a sharp decline thereafter reflecting the bust of the late 1980s and early 1990s. It took a decade to return to the 1988 level of condo sales. There was a robust market for condominium sales during the late 1990s through 2000, and stability for five years from 2001 through 2005. The peak occurred in 2004 at 2,744 units sold. There was a sharp decline of -23.5% from 2005 to 2006 followed by another double digit decline of -21.7% from 2006 to 2007. In 2007, condominium sales in the 495/MetroWest region totaled 1,771 units, a value not seen in the region since 1997.



Year	# Units Sold Condominiums	% Change from previous year
1988	1,963	NA
1991	1,015	- 20.3%
1998	2,134	+21.4%
2000	2,471	+ 1.1%
2002	2,600	+ 8.3%
2004	2,744	+ 8.2%
2007	1,771	-21.7%



This data series refers to sales of existing condominiums in the 495/MetroWest Corridor. These sales consist of a different mix of units sold each year, and do not reflect appreciation in the value of individual condominiums. The line graph measures the estimated price of condominiums sold in 495/MetroWest between 1988 and 2007. The estimated price for the region in 1988 was nearly \$129,000. The price bottomed out in 1992 at \$86,500 and then gradually climbed during the nineties through 2001 reaching about \$164,000 in 2001. From 2001 to 2007 estimated condominium price jumped by more than \$100,000 to \$267,254, an increase of 62.8%. From 2001 to 2005, there was an increase of 58.5% followed by a slight decline of -1.4% in condominium price from 2005 to 2006. There was a 4.0% increase in estimated price from 2006 to 2007.



Year	495/MW Condominium Price	% Change from previous year
1988	\$128,782	NA
1992	\$ 86,591	- 8.9%
1998	\$144,326	+14.1%
1999	\$138,188	- 4.4%
2001	\$164,166	+ 8.7%
2003	\$211,323	+ 3.7%
2005	\$260,136	+ 6.7%
2007	\$267,254	+ 4.0%

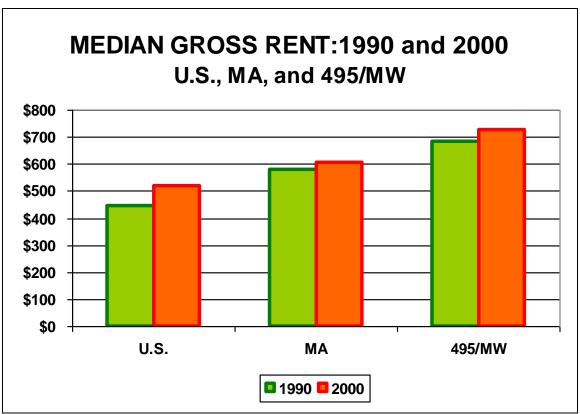


The 2007 median sales price for existing single family homes and condominiums for the 32 communities of the 495/MetroWest Corridor region are displayed below. Single family median home prices ranged from \$309,000 in Bellingham to \$663,500 in Sherborn, with an estimated value for the region at about \$438,000. Median condominium prices ranged from \$113,600 in Sherborn to \$818,000 in Sudbury, with an estimated regional value of about \$267,000.

2007 MEDIAN SALES PRICE			
	Single Family	Condominiums	
Acton	\$525,000	\$253,000	
Ashland	\$388,500	\$312,500	
Bellingham	\$309,000	\$257,250	
Berlin	\$425,000	\$315,000	
Bolton	\$575,000	NA	
Boxborough	\$598,000	\$131,450	
Foxborough	\$395,000	\$256,000	
Framingham	\$360,000	\$207,000	
Franklin	\$440,000	\$260,000	
Harvard	\$550,000	\$497,500	
Holliston	\$398,200	\$199,500	
Hopedale	\$405,000	\$244,500	
Hopkinton	\$585,000	\$313,000	
Hudson	\$350,000	\$204,000	
Littleton	\$400,000	\$294,450	
Marlborough	\$338,875	\$239,500	
Maynard	\$333,000	\$279,450	
Medfield	\$550,000	\$293,500	
Medway	\$385,000	\$252,000	
Milford	\$328,500	\$263,250	
Millis	\$355,500	\$245,000	
Natick	\$430,000	\$230,000	
Norfolk	\$437,500	\$457,996	
Northborough	\$390,000	\$338,153	
Sherborn	\$663,500	\$113,600	
Shrewsbury	\$400,000	\$263,750	
Southborough	\$500,000	\$463,000	
Stow	\$440,000	\$419,775	
Sudbury	\$655,500	\$818,100	
Wayland	\$631,000	\$631,000	
Westborough	\$436,300	\$173,350	
Wrentham	\$435,000	\$241,000	



Median gross rent in the 495/MetroWest Corridor was higher than median gross rent in Massachusetts and the United States in both 1990 and 2000 according to U.S. Census. Over the decade, median gross rent in 495/MetroWest increased from \$684 in 1990 to \$725 in 2000, a gain of 6%. This gain compares to an increase of 4.3% for Massachusetts and 16.1% for the United States. Also, rent as a percentage of household income from the 1990 Census ranged from 20.5% in Norfolk to 35.1% in Sherborn; the range in Census 2000 was from 17.9% in Boxborough to 28.9% in Berlin. While the number of housing units in 495/MW increased over the decade by 12.5%, the number of owner-occupied units rose by 21.9% and the number of renter-occupied units actually fell by 0.6%.



Source: U.S. Census and MERC

Year	1990	2000
Housing Units	171,910	193,396
Occupied Housing Units	163,997	188,698
Owner Occupied Units	114,422	139,441
Renter Occupied Units	49,575	49,257
Median Gross Rent:		
United States	\$ 447	\$ 519
Massachusetts	\$ 580	\$ 605
495/MetroWest	\$ 684	\$ 725



# North American Industry Classification System (NAICS)

In 2001 the North American Industry Classification System (NAICS) permanently replaced the Standard Industrial Classification (SIC) system in use for seventy years. NAICS is an industrial classification system that groups establishments into industries based on the activities in which they are primarily engaged. It is a comprehensive system covering the entire field of economic activities, both producing and non-producing. NAICS has twenty separate industrial sectors that are described in this appendix. These twenty sectors are grouped into eleven supersectors. Most NAICS data used in this publication is presented by supersectors.

# NAICS Supersectors\*

#### **Goods-Producing Domain (GPD)**

#### **Natural Resources and Mining Supersector**

11 Agriculture, Forest, Fishing and Hunting

21 Mining

# **Construction Supersector**

23 Construction

#### **Manufacturing Supersector**

31-33 Manufacturing

# **Service Producing Domain (SPD)**

# **Trade, Transportation and Utilities Supersector**

22 Utilities

42 Wholesale Trade

44-45 Retail Trade

48-49 Transportation and Warehousing

#### **Information Supersector**

51 Information

#### **Financial Activities Supersector**

52 Finance and Insurance

53 Real Estate and Rental and Leasing

## **Professional and Business Services Supersector**

54 Professional, Scientific and Technical Services

55 Management of Companies and Enterprises

56 Administrative and Support and Waste Management and Remediation Services

#### **Education and Health Services Supersector**

61 Educational Services

62 Health Care and Social Assistance

#### **Leisure and Hospitality Supersector**

71 Arts, Entertainment, and Recreation

72 Accommodation and Food Services

#### Other Services Supersector

81 Other Services (except Public Administration)

Public Supersector\* as used in this publication, includes the Public

Administration NAICS sector defined below, plus all other jobs in federal, state and local government.



#### **NAICS Sectors**

# **Natural Resources and Mining Supersector:**

**11-Agriculture, Forestry, Fishing and Hunting** comprises establishments primarily engaged in crop growing, animal raising, and timber and fish harvesting.

**21-Mining** comprises establishments that extract naturally occurring mineral solids, liquid minerals, and gases.

# **Construction Supersector:**

**23-Construction** comprises establishments primarily engaged in the construction of buildings or engineering projects.

# **Manufacturing Supersector:**

**31-33 Manufacturing** comprises establishments engaged in the mechanical, physical, or chemical transformation of materials, substances, or components into new products.

# **Trade, Transportation and Utilities Supersector:**

**22-Utilities** comprises establishments engaged in the provision of the following utility services: electric power, natural gas, steam supply, water supply and sewage removal, through a permanent infrastructure of lines, mains, and pipes.

**42-Wholesale Trade** comprises establishments engaged in wholesaling merchandise, generally without transformation, and rendering services incidental to the sale of merchandise, including the outputs of agriculture, mining, manufacturing, and certain information industries, such as publishing. The wholesaling process is an intermediate step in the distribution of merchandise.

**44-45-Retail Trade** comprises establishments engaged in retailing merchandise, generally without transformation, and rendering services incidental to the sale of merchandise. The retailing process is the final step in the distribution of merchandise; retailers are, therefore, organized to sell merchandise in small quantities to the general public. This sector comprises two main types of retailers: store and nonstore retailers.

**48-49-Transportation and Warehousing** comprises industries providing transportation of passengers and cargo, warehousing and storage for goods, scenic and sightseeing transportation, and support activities related to modes of transportation (air, rail, water, road, and pipeline).

#### **Information Supersector:**

**51-Information** comprises establishments engaged in producing and distributing information and cultural products, providing the means to transmit these products, and processing data.



#### **Financial Activities Supersector:**

- **52-Finance and Insurance** comprises establishments primarily engaged in financial transactions (transactions involving the creation, liquidation, or change in ownership of financial assets) and/or in facilitating financial transactions.
- **53- Real Estate and Rental and Leasing** comprises establishments primarily engaged in renting, leasing, or otherwise allowing the use of tangible or intangible assets.

# **Professional and Business Services Supersector:**

- **54-Professional, Scientific, and Technical Services** comprises the performing of professional, scientific, and technical activities for others. These activities require a high degree of expertise and training. Some activities performed include: legal advice and representation, accounting, engineering services, computer services, research services, advertising services, and veterinary services.
- **55-Management of Companies and Enterprises** comprises establishments that either hold the securities of companies for the purpose of owning a controlling interest or influencing management decisions, or establishments that administer, oversee, and manage establishments of the company and that normally undertake the organizational planning and decision making role of the company.
- 56-Administrative and Support and Waste Management and Remediation Services include establishments performing routine support activities for the day-to-day operations of other organizations. Activities performed include: office administration, hiring and placing of personnel, document preparation and similar clerical services, solicitation, collection, security and surveillance services cleaning, and waste disposal services.

## **Education and Health Services Supersector:**

- **61-Educational Services** comprises establishments that provide instruction and training to a wide variety of subjects. This instruction and training provided by specialized private sector establishments, such as private schools, colleges, universities, and training centers.
- **62-Health Care and Social Assistance** comprises establishments that provide health care and social assistance for individuals.

#### Leisure and Hospitality Supersector:

- **71-Arts, Entertainment, and Recreation** comprises a wide range of establishments that operate facilities or provide services to meet varied cultural, entertainment, and recreational interests of their patrons.
- **72-Accommodation and Food Services** comprises establishments providing customers with lodging and/or preparing meals, snacks, and beverages for immediate consumption.



# Other Services Supersector:

**81-Other Services** (except Public Administration) comprises establishments engaged in providing services not specifically provided for elsewhere in the classification system. Establishments in this sector are primarily engaged in activities, such as equipment repairing, administering religious activities, grantmaking, advocacy, and providing laundry services, personal care services, death care services, pet care services, photofinishing services, temporary parking services, and dating services.

**Public Supersector\*** as used in this publication, includes the Public Administration NAICS sector defined below, plus all other jobs in federal, state and local government such as public school teacher or state police trooper.

**Public Administration** The Public Administration sector consists of establishments of federal, state, and local government agencies that administer, oversee, and manage public programs and have executive, legislative, or judicial authority over other institutions within a given area.



#### **SOURCES**

- Bureau of Labor Statistics, U. S. Department of Labor (BLS)
- Massachusetts Executive Office of Labor and Workforce Development, Division of Unemployment Assistance
- Massachusetts Executive Office of Labor and Workforce Development, Division of Career Services
- MetroWest Economic Research Center (MERC)
- United States Census Bureau, U. S. Department of Commerce (US Census)
- Federal Reserve Bank of Boston
- Banker & Tradesman

#### **ACKNOWLEDGEMENTS**

The MetroWest Economic Research Center (MERC) at Framingham State College would like to acknowledge the contributions of the following individuals and organizations:

- Massachusetts Executive Office of Labor and Workforce Development, Division of Unemployment Assistance, Economic Research and Analysis
- Massachusetts Executive Office of Labor and Workforce Development, Division of Career Services, Economic Analysis Group
- Commonwealth of Massachusetts





# METROWEST ECONOMIC RESEARCH CENTER

at Framingham State College
Towers Hall, 100 State Street, Framingham, MA 01701-9101
508-626-4033 • FAX: 508-626-4018

Christine Doyle-Burke, M.A.	508-626-4886	cdoyle@frc.mass.edu
Maureen Dunne, M.B.A.	508-626-4861	mdunne@frc.mass.edu
Donald MacRitchie, M.A.	508-626-4881	dmacrit@frc.mass.edu
Martha Meaney, M.A.	508-626-4889	mmeaney@frc.mass.edu
Mary Phelan, M.B.A., C.P.A.	508-626-4033	mphelan@frc.mass.edu
Mary Rogers, Ph.D.	508-626-4858	mrogers@frc.mass.edu
Fahlino Sjuib, Ph.D.	508-626-4884	fsjuib@frc.mass.edu
Beverly Soriano, M.S., C.P.A.	508-626-4856	bsorian@frc.mass.edu

For additional copies or further information, please contact the

# 495/MetroWest Corridor Partnership

200 Friberg Parkway, Westborough, MA 01581 <u>www.arc-of-innovation.org</u> 774-760-0495

or

# MetroWest Economic Research Center Framingham State College

Framingham, MA 01701-9101 508-626-4033 www.merc-online.org



# METROWEST ECONOMIC RESEARCH CENTER at Framingham State College

Towers Hall, 100 State Street, Framingham, MA 01701-9101 508-626-4033 • FAX: 508-626-4018 www.merc-online.org