

## Chapter 2

# Land Demand - Demographic and Employment Trends

The Wheeling Metropolitan Statistical Area (MSA) is defined by the U.S. Census Bureau as a three-county area including Ohio and Marshall counties in West Virginia and Belmont County in Ohio. The analysis in this Plan Update is prepared for the larger metropolitan area because it will provide a more complete picture of the context in which a Comprehensive Plan for the City of Wheeling must be implemented.

The data shown here is taken from the U. S. Census and from the County Business Patterns prepared by the U.S. Department of Commerce. The projected future trends were prepared specifically for this Plan Update by Dr. Andrew Isserman of the Regional Research Institute at West Virginia University in Morgantown.

### Population Trends

Over the last 60 years, the Wheeling metropolitan area has experienced a declining population, beginning during the Great Depression in the 1930s and continuing through the 1990 Census. Map #3 indicates the population and density and distribution in Wheeling as reported by the 1990 U.S. Census. In 1930, the population in the City of Wheeling reached its peak at 61,659. By 1990, the population of the City of Wheeling had fallen to 34,700, a decrease of 44%. The historic population trends for the Wheeling MSA are illustrated in Graph

In addition to the overall decline in population, there is another demographic trend which has particular significance for the City of Wheeling. Not surprisingly, over the years the out-migration which has occurred has been primarily among younger people. This trend has occurred through much of West Virginia but is especially pronounced within the City of Wheeling. In the spring of 1990, the West Virginia State Data Center published a projection prepared by the U.S. Census Bureau that indicates that by the year 2020, West Virginia will rank fourth in the nation in terms of the percentage of population over the age of 65<sup>1</sup>, trailing only Florida,

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<sup>1</sup> Source: West Virginia Data Center  
Newsletter, Spring 1996

#1 .

The decline in population is not limited to the City of Wheeling itself. Over the same period (1930-1990), the population of the three-county Wheeling MSA fell from a high of 208,918 in 1940 to 159,301 in 1990, a drop of 24%. As a percentage of the metropolitan area, the City of Wheeling has also declined (though less dramatically) from 29% in 1930 to 22% in 1990. Graph #2 illustrates the recent trends (1970-1993) among the different components of the Wheeling MSA. It should be noted that this shift occurred during a period when the overall U.S. population increased by 190%.

As can be seen, the overall decline in population has primarily been in Wheeling and in Belmont County. The population shift in the Wheeling MSA has for the most part been one of migration out of the region rather than a city to suburb shift within the region.

In early 1996, the Census Bureau issued an estimate of 1995 population in Ohio County of 49,865, a decline of approximately 2% over five years. This rate of decline is less than half of the rate that has been experienced over the last thirty years and suggests a stabilization in population particularly as it relates to out-migration. This is an important development, as it has been out-migration that has led to the decline in population over the last half century.

Arizona, and Arkansas. West Virginia is unique among this group as it is not now a major destination for retirees and thus will achieve this status as a result of internal demographic trends. Within West Virginia in 1990, Ohio County ranked first among the counties for population over the age of 75. Within Ohio County, the percentage of population in excess of age 75 is twice as high in the City of Wheeling as it is in areas of the County outside the City limits (9% vs. 4.5%). Thus Wheeling in particular has an unusual concentration of elderly citizens.

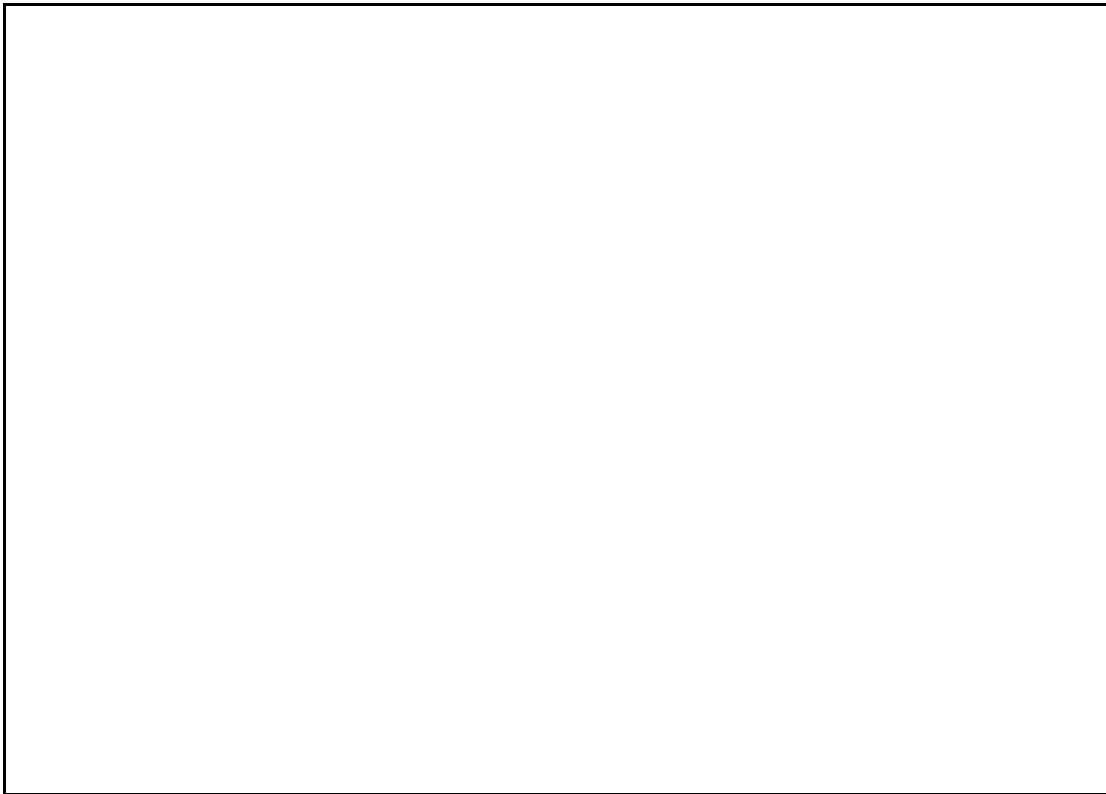
# Map #3 Population Density



Graphs #3 through #8 illustrate in dramatic fashion the trend that led to this state of affairs. These are population pyramids, which graph the population in five year age group increments, with the group at the top representing the population exceeding age 75, and the group at the bottom being the population below the age of 5. The graphs illustrate data found in each U.S. Census beginning in 1940 and ending in 1990. The 1940 graph shows a nearly classic population pyramid form, with the exception of a slight decrease in the youngest age groups reflecting lower birth rates during the Great Depression. While the 1950 and 1960 graphs clearly show the effect of the postwar “baby boom generation,” closer examination also reveals that as early as 1950, there was a distinct trend towards population loss in the age brackets between 20 and 35. This trend continues through

each succeeding census extending through 1990, by which time the continuing loss of younger population has resulted in a population profile that is heavily weighted towards the upper age brackets.

Graphs #9 and #10 indicate the age distribution of population in Ohio County and the Wheeling MSA. By comparison, these show a similar, though less pronounced, trend towards an aging population. These local demographic trends, combined with the broader nationwide trends towards more people remaining childless, smaller families, and longer life spans, have produced a population in Wheeling that is markedly older than in other parts of the country. The reasons for this trend can be found in the analysis of economic and employment trends found in the following section of this chapter.



# Population Age Distribution 1940 - 1990

# 1990 Population Age Distribution, Ohio County and Wheeling MSA

The statistical documentation supports the anecdotal material gathered during the public participation phase of this Plan Update, and it bears out the concern that the City of Wheeling needs to aggressively develop strategies to keep younger persons in the area, as well as to attract young families into the Wheeling area from other regions. In one respect, the Wheeling area is now experiencing a trend which is expected to sweep the nation in the coming two decades as the postwar generation ages. Given the current demographic makeup of the Wheeling population, this change may be somewhat less pronounced over the next twenty years in Wheeling than it will be in other parts of the country.

## **Future Population Projections**

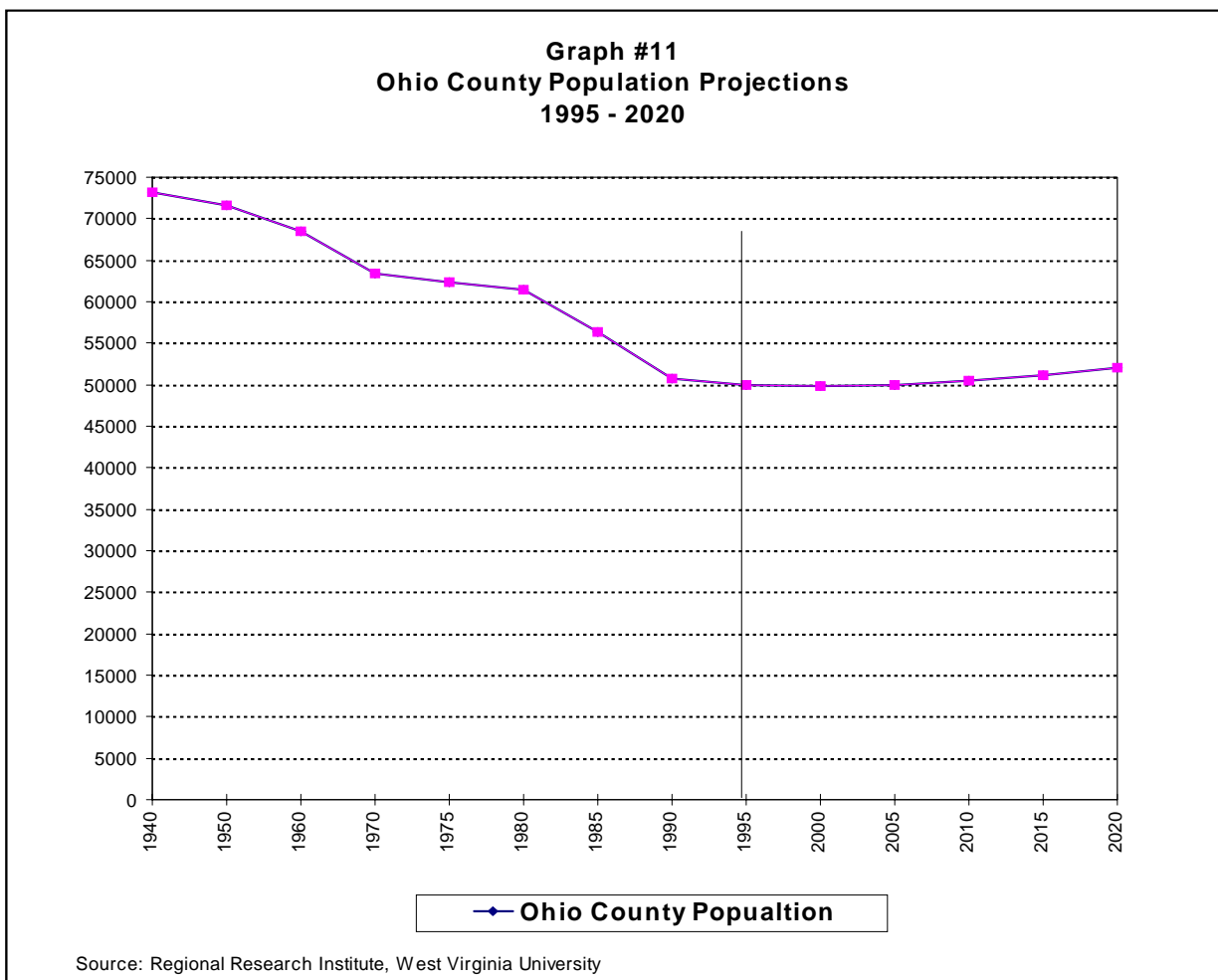
A normal part of the comprehensive planning process is the development of estimates regarding future population trends. Such estimates are normally derived from projections based on past trends, as well as on known factors which may influence future trends. In circumstances such as that found in Wheeling, this is an especially difficult task.

Historically, population trends in the State of West Virginia have tended to fluctuate based on local circumstances, and often do not reflect the broader trends found in other parts of the nation. Historically, out-migration has in West Virginia been closely tied to specific economic trends. For that reason, the Regional Research Institute at West Virginia University in Morgantown was retained to prepare population forecasts for the Wheeling Metropolitan area based on a specific understanding of trends that are unique to the West Virginia area. The estimates were prepared based on an analysis of the situation in the entire Wheeling MSA.

The projections, which are shown in Graph #11, suggest that the long population decline that the Wheeling area has experienced has bottomed out, and that a modest increase in population can be expected to occur in the metropolitan area before the year 2020. This increase will be in the range of 10% - 15% over the period. In part, the rationale behind this projection is the assumption that the major economic displacements which led to the out-migration over the last forty years have now occurred and thus cannot be repeated. Overall, in West Virginia there is some evidence of a small return migration as former residents of the state return home.

There is no reliable method of forecasting how much of this increase will occur in Wheeling as opposed to other parts of the area, as this will depend on local market factors and on the supply of available housing. It must be emphasized, however, that policy decisions made by the City of Wheeling can play either a negative or positive role in determining how much of this growth occurs within the Wheeling City limits. Wheeling must be prepared to compete with other parts of the region

by providing a quality of life that makes it more desirable in comparison with the other choices available. Likewise, it should be noted that projections are based on existing trends, and it is possible to exceed projections through aggressive actions to market the City. Likewise it is also possible that a failure by the City to compete effectively within the region could result in a continuation of the trend of decline in spite of an improvement in the overall region.



## Employment Trends

Analysis of employment trends in the

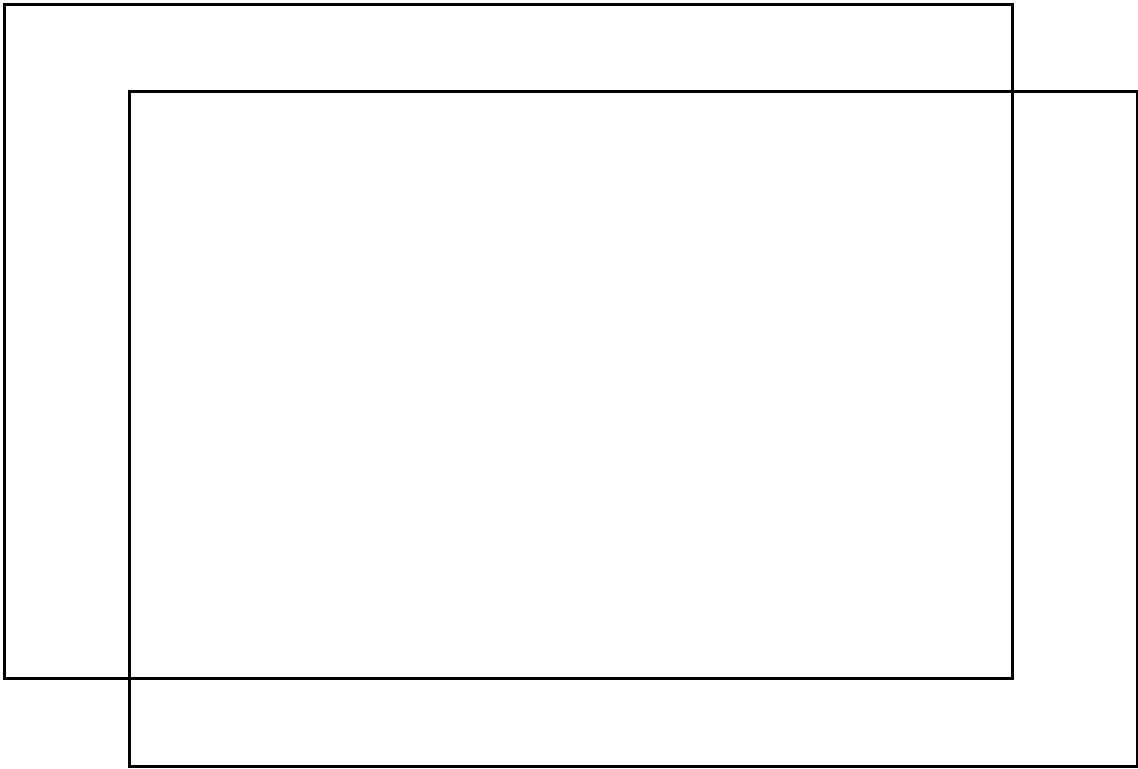
Wheeling MSA results in a vivid picture of the economic changes that have affected Wheeling over the last quarter century. The results also suggest that the role of the City of Wheeling within the metropolitan region has changed over the last two decades. The overall employment levels in the Wheeling metropolitan area have remained fairly steady over the twenty year period as can be seen in Graph #12. However, the components and geographic distribution of the employment base have changed dramatically.

When Wheeling was first founded, its role was that of a transportation center and frontier town. Its location at the junction of the National Road (later U.S. 40) and the Ohio River made it an important crossroads as the nation expanded west. During certain times of the year, Wheeling was the northernmost port on the navigable portion of the Ohio River.

In the mid-nineteenth century the City of Wheeling took the adventurous step of subscribing to \$1,000,000 in stock in the Baltimore and Ohio Railroad. The arrival of the railroad in 1853 reinforced the central role of Wheeling in the transportation system and again boosted the City's growth. Good river and rail transportation, as well as the availability of abundant natural resources such as coal, iron ore, clay, and high silica river sand, led to the development of a strong heavy industrial base in Wheeling as it did in towns throughout West Virginia's northern panhandle, western Pennsylvania, and northeast Ohio. By the turn of the century, it was said that Wheeling had more millionaires per capita than any other city in the nation.

Since 1970, however, that heavy manufacturing base of the Wheeling MSA has experienced dramatic decline. This trend is not unique to Wheeling, but rather extended across the



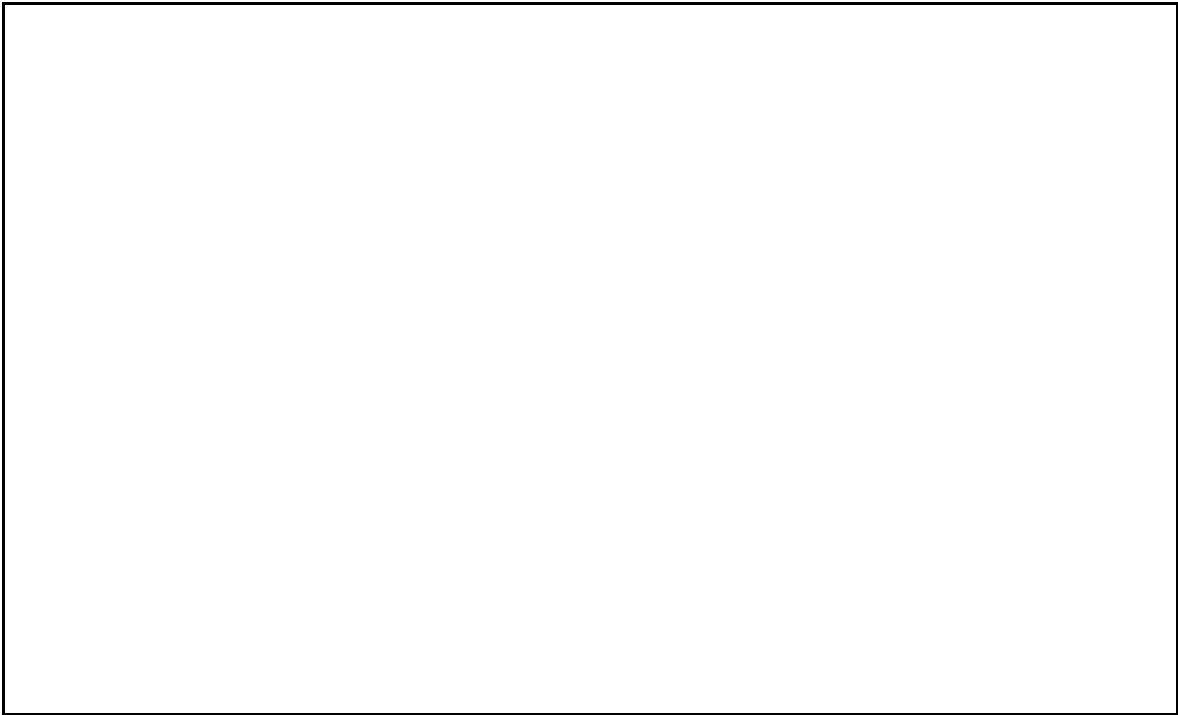


northeast and upper Midwest, an area that in the 1980s came to be known as the "rust-belt." Graphs #13 and #14 illustrate the effect of these changes in the Wheeling metropolitan area in the manufacturing and mining sectors over the last twenty-five years. In the manufacturing sector during that period there was a loss of more than 9,000 jobs, while in the mining sector there was a loss of more than 5,400 jobs.

It should be noted that while the most recent changes in the mining industry occurred primarily in Belmont County, this represents an important component of the regional economy and has most certainly had a significant effect on the economy of the City of Wheeling. In Ohio County, the mining decline occurred as the mine fields were played out. More recently the decline in mining results from the high sulfur content of coal in the area which reduces its marketability as a result of Federal clean air legislation.

It is worth noting that even in 1964, this trend was well underway. The technical report supporting the 1964 Comprehensive Plan took note of a loss of 3,900 jobs in the manufacturing sector between 1949 and 1962, mostly in the primary metals and the glass industries. Thus, the decline in the heavy industrial base in the Wheeling area roughly parallels the period of declining population discussed in the previous section.

Another significant change in the makeup of the regional economy which has special significance to the City of Wheeling is the decline in retail employment as illustrated in Graph #15. Up until the mid-1970s, downtown Wheeling was the center of retail shopping in the metropolitan area. However, the construction of a major regional mall at St. Clairsville in Belmont County has brought about a shift of retail trade and employment out of downtown Wheeling and into Belmont County.



While it is more difficult to demonstrate, easier access to suburban malls in the Pittsburgh

area made possible by highway construction has almost certainly added to the decline of downtown Wheeling as a regional retailing center. This trend also is not unique to Wheeling, but rather it reflects a nationwide trend towards retail merchandising occurring in large suburban shopping centers surrounded by large areas of free parking. Downtown areas nationwide have struggled to compete with this trend. Unfortunately, Wheeling has not had land available to accommodate the new development form, and thus it has occurred in other parts of the region.

While the mining, manufacturing and retail sectors of the economy have all experienced changes that are unfavorable to Wheeling, the service sector of the economy has grown dramatically, a trend that is illustrated in Graph #16. This graph shows the growth in service

employment in Ohio and Marshall Counties over the last 25 years. This trend reflects the national trend towards increases in the service sector. It also reflects, in part, growth in the health care industry which is consistent with an aging population. And it reflects a continued role for the City of Wheeling based on its status as the geographic center of the metropolitan area. Wheeling appears to be retaining its status as the place where one goes to obtain these sorts of services. In addition to medical services, these would include other professional services such as attorneys, banking, or institutions of higher learning. Wheeling also continues to retain its role as the seat of government as well as an entertainment center for the region. As can be seen in Graph #17, overall employment in government has remained fairly constant during the past 25 years.

Over the last forty years every plan prepared for the City of Wheeling has noted the changes in the economic base of the City and sought to provide remedies to their negative ramifications. These efforts have met with varying success. *It is inescapable, however, that continuation of these trends in both population and employment over another forty year period will have devastating consequences for the City of Wheeling.*

Another aspect of the analysis prepared by the Regional Research Institute which is of some interest in evaluating the economic climate in Wheeling is related to the nonavailability of hotel space. This analysis examined the characteristics of employment in both Ohio County and the overall Wheeling metropolitan area in relation to the size of the population. It highlights certain areas where employment is significantly higher than might be expected in relation to the population

size, and other employment categories in which it is lower. The analysis is based on the Standard Industrial Classification (SIC) developed by the U.S. Department of Labor.

Shown here are the fifteen highest employment types in each category, both for Ohio County and the Wheeling MSA. "Export Jobs" are those types in which employment is higher than would be expected, and "Export Gap Jobs" are those in which it is lower. This analysis provides a glimpse of the economy in the Wheeling area in relation to the economy of the nation as a whole and may suggest areas of opportunity for future development. The most interesting item found in this analysis is the fact that employment in hotels and motels is significantly below expectations, both for Ohio County and for the metropolitan area as a whole.

## Ohio County

### Export Jobs

1. Hospitals
2. Colleges & Universities
3. Fresh Fruit and Vegetable Wholesale
4. Doctors Offices and Clinics
5. Radio & Television
6. Steel Foundries
7. Residential Care
8. Individual & Family Services
9. Commercial Banks
10. Retail, Administration and Auxiliary Services
11. Service, Administration and Auxiliary Services
12. Religious Organizations
13. Manufacture of Plastic Plumbing Fixtures
14. Nursing and Personal Care Facilities
15. Racing, including Track Operation

### Export Gap Jobs

1. Department Stores
2. Trucking and Courier Services
3. Hotels and Motels
4. Grocery Stores
5. Real estate and Property Management
6. Business Services
7. Fire, Marine and Casualty Insurance
8. Engineering Services
9. Heavy Construction
10. Building Maintenance Services
11. Wholesale, Administration and Auxiliary services
12. Women's Clothing Stores
13. Wholesale, Computers, Peripherals and Software
14. Management Consulting Services
15. Amusement and Recreation

## Wheeling MSA

### Export Jobs

1. Hospitals
2. Coal Mining
3. Manufacture of Cyclic Crudes and Intermediates
4. Nursing and Personal Care Facilities
5. Grocery Stores
6. Electric Services
7. Commercial Banks
8. Offices & Clinics of Doctors
9. Eating Places
10. Wholesale, Fruit and Vegetables
11. Metal Coating and Allied Services
12. Residential Care
13. Steel Foundries
14. Radio and Television Broadcasting
15. Colleges and Universities

### Export Gap Jobs

1. Temporary Help Supply Services
2. Hotels and Motels
3. Manufacturing, Administrative and Auxiliary Services
4. Business Services
5. Real Estate Agents and Managers
6. Building Maintenance Services
7. Engineering Services
8. Fire, Marine and Casualty Insurance
9. Air Transportation, Scheduled
10. Manufacture of Motor Vehicle Parts and Accessories
11. Trucking and Courier Services
12. Wholesale, Administrative and Auxiliary Services
13. Heavy Construction, Non-highway
14. Management Services
15. Wholesale, Industrial Machinery and Equipment

## Employment Projections

Based on the available data, the Regional Research Institute has made projections of future employment in Ohio County extending to the year 2020. These projections imply relative stability in most sectors of the local economy with continued growth in the service sector, which is expected to add as many as 5,000 new jobs over the next twenty five years.

The employment projections are shown in Graph #18. Much of the increase in the service area can be expected to occur in the health care sector in keeping with the aging population in the region. As tourism and entertainment becomes a larger part of the economy, this too will result in employment increases in the service sector.

As with population, there is no reliable method of forecasting what portion of this increase in employment will occur within the City of Wheeling. A common method of doing so would assume that the current ratio of county to city employment will remain roughly the same. This would suggest that more than 90% of the employment increase will occur in Wheeling; however, this will depend in part on where new development is given room to occur.

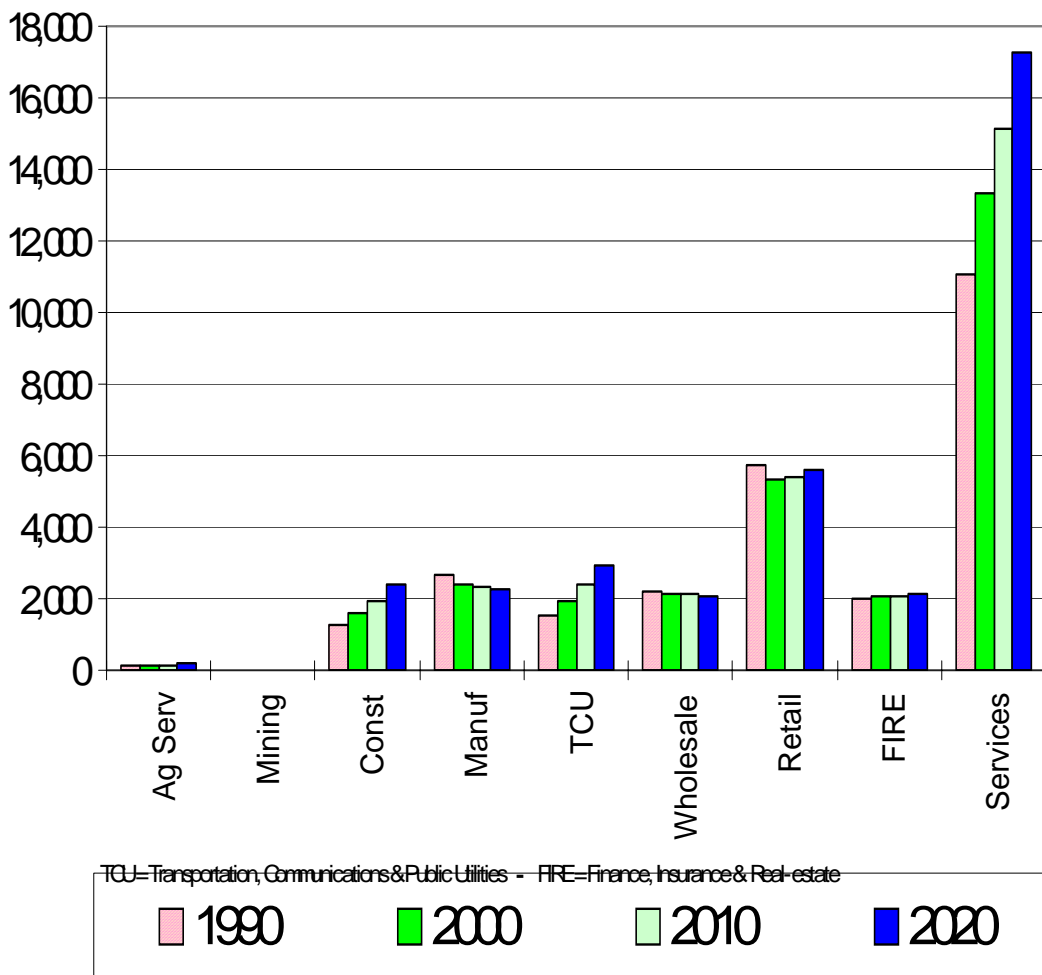
While an expected increase in service employment is good news, it is important to make

the distinction between basic and non-basic economic activity. Basic activity is that which results in goods and services which are sold to the outside world. Non-basic activity is purely a local phenomena. It is basic economic activity that brings new money into the metropolitan region and provides the engine for growth. Very often, service employment tends to be non-basic. In general service employment is also less highly paid.

The mining and heavy industry, which was once such a large part of the local economy, was basic industry, and it is imperative that the City and the region continue striving to replace this lost economic base by finding ways to compete in the modern knowledge-based economy. The provision of developable sites with adequate infrastructure, transportation facilities, and an attractive quality of life are all key tools that must be in place to be effective in this endeavor. Projections are not sufficient to identify where in the area new employment will occur. Employment projections are an extrapolation of the results of existing trends. It is not a prediction. Aggressive action by local jurisdictions to increase business activity can result in growth that exceeds projections. On the other hand catastrophic economic events or a policy of inaction can result in the projections being too high.

# Graph #18

## Ohio County Employment Projections 1990 - 2020



Source: Regional Research Institute, West Virginia University

## Land Demand Analysis

Based on the projections of population and employment, an estimate was prepared of the developable land necessary to accommodate that level of growth. The total "demand" for land for new development is the result. The demand analysis is considered separately for residential uses and for commercial and industrial uses. As has been stated elsewhere in this report, this analysis should not be interpreted to mean that uses and acreage that exceed those projected cannot occur. Rather, the demand analysis is a translation of the projections of future population and employment trends into terms of land area.

### Residential Demand

The projected increase in population in Ohio County over the planning period (1997-2020) is a total of 1,400 persons. Based on past development patterns, most of this increase will occur in and around the City of Wheeling. The 1990 Census reported an average household size of 2.24 in the City of Wheeling and 2.35 persons in Ohio County. Given the national trend of falling household size and the large percentage of older residents in Wheeling, it is likely that a household size of closer to 2.20 can be expected by a point midway through the planning period. Based on an estimated density of 4 dwelling units per acre, this would result in a demand for 198 acres for residential development.

In addition to new population, there will continue to be a loss of existing housing in Wheeling through the normal attrition process. Over the period of 1980-1990, the total number of housing units declined by 1,135 units, or 6.2%. Given that very little new housing was constructed in the City of Wheeling during that period, this provides a basis for estimating an annual rate of attrition of .6% city wide. Some of this decline can be attributed to the fact that the existing housing supply was built to support a larger population, and thus some housing declines beyond its useful life due to lack of demand.

As the supply adjusts to a lower population, this rate will fall. If it is estimated that 50% of that attrition rate is merely the normal process of decline and

obsolescence, it would result in a need for 1,192 housing units during the planning period, which translates to an additional

298 acres of residential development needed simply to replace existing units lost to attrition.

*The total estimated demand for residential development during the planning period is then 1,980 dwelling units, or roughly 500 acres of residential development.*

### Commercial and Industrial Demand

Based on the projections prepared by the Regional Research Institute, the projected net increase in employment during the planning period is 4,373 jobs. These are broken down into 2,287 that are primarily office type uses, 932 employees in retail establishments, and 492 employees in businesses that utilize industrial or warehouse types of structures. Using estimates of average floor area per employee and standard ratios of floor area per acre taken from the 1993 Trip Generation Manual, published by the Institute of Transportation Engineers, this is converted to an estimate of acreage required. The results indicate a demand for 65 acres (1.3 million sq. ft.) for office uses, 93 acres (or 466,000 sq. ft.) of retail uses, and 61 acres (or 398,000 sq. ft.) of industrial and warehouse uses.

*In total, the estimated need for commercial and industrial land during the planning period is an additional 219 acres.*