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Technical Report  
**Fiscal Impact of Metrorail on  
The Commonwealth of Virginia**

Prepared by  
Peat, Marwick, Mitchell & Co.  
1990 K Street, N.W.  
Washington, D.C. 20006

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## TECHNICAL REPORT

### I. INTRODUCTION

The purpose of this study is to ascertain what benefits of the Metrorail system in Virginia accrue to the Commonwealth of Virginia in the tangible form of development, which creates jobs, incomes, and sales that generate tax revenues to the Commonwealth.

This study estimates the net increases in development attributed to Metrorail and relates this development to measures of economic activity. From measures of economic activity, estimates of state tax revenues are projected.

The study considers the time period 1972 through 1995. This time period corresponds to the starting period for the Commonwealth's contribution to the Metrorail system to the estimated completion of the lines in Virginia in 1995.

#### WHY METRORAIL SPURS DEVELOPMENT

Would development have occurred anyway? Certainly development would have occurred in Virginia, but it would have been on a smaller scale and of lower quality. Without Metrorail, the region loses an important attraction: fixed-route, rapid, and reasonably priced transportation.

The capacity of land to support development is a function of the public and private services available. Transportation accessibility is one of the most critical elements of development capacity. The provision of Metrorail service to Virginia represents the creation of additional development potential beyond that which previously existed. Metrorail station areas are major nodes of economic activity. Without Metrorail service, these areas would not be attractive to high density development, nor would they be able to accommodate it.

The presence of Metrorail service in Virginia has caused the refocusing of metropolitan economic growth forces. Rather than having high density development confined to downtown Washington, this type of development is attracted to Virginia station sites. High density development results in more efficient land use patterns. By supporting development of new employment and commercial centers, jobs that would have located downtown without Metrorail access are attracted to and captured by Virginia, bringing substantial tax revenues to the Commonwealth.

Following are comments by the business community that relate the importance of Metrorail to their decisions to invest in Virginia:

- o V. Orville Wright, Vice Chairman of the Board, MCI Communications Corporation. "The Metro system was the primary reason that we purchased a large office building and had a second one built for us in Virginia. We have about 2,000 employees in

those buildings in Virginia. During the next 15 months, we expect to increase the number of employees in Virginia to about 4,000 people and add three additional office buildings. Metro is the key to the relocation of a large number of our functions from the District of Columbia into Virginia." (MCI is a \$2 billion provider of long distance and other telecommunications services, serving more than 220,000 commercial and residential customers in Virginia.)

- o Giuseppe Cecchi, President, International Developers, Inc. (IDI). "Metrorail has been at the very heart of many of IDI's projects. The Rosslyn Center office complex, the Montebello and Belvedere condominium projects, and an IDI-planned Ballston mixed-use development were dependent upon the presence of the rail system. For example, we would not have developed the Montebello community of over 1,000 units on Route 1 without the Huntington Metro station being adjacent to it." (IDI has developed projects valued at \$685,000,000 in the metropolitan area. Current Virginia projects include Ballston Metro Center, Montebello, and The Belvedere.)
- o Oliver T. Carr, Jr., President, The Oliver T. Carr Co. "Our suburban development strategy has been driven to a great extent by Metrorail. Were it not for Metro, we would not have ventured out of our traditional District of Columbia market and into the King Street and Ballston areas. Together, these two Carr projects will eventually represent 3,000,000 or more square feet of urban scale, mixed-use development." (The Oliver T. Carr Co. is a major developer in the Washington metropolitan area. Carr has developed over six million square feet of mixed-use projects in the last 10 years.)
- o Robert H. Smith, President, The Charles E. Smith Companies. "The Charles E. Smith Companies' development of mixed-use projects, specifically Crystal City and Rosslyn Plaza, has been keyed to the parallel development of Metrorail. In the absence of such a superb mass transit system, development in Northern Virginia would have been generally slower. Projects such as ours would have been more speculative." (The Charles E. Smith organization is the major developer of the Crystal City station area. Smith has 37 buildings completed or under construction.)
- o James C. Cleveland, President, Mobil Land Development Corp./VA, A Subsidiary of Mobil Oil Corporation. "Colonial Place, our 760,000 square foot mixed-use project being built adjacent to the Courthouse Metro Station, combines the advantages of high quality urban design and suburban location. The proximity to downtown business and government facilities, direct underground access to Metrorail, the commitment of the Commonwealth of Virginia and the local governments to Metro, and the existence of nearby residential neighborhoods were major factors supporting our decision to build this project. The Metrorail system has made it possible for suburban localities in this

area to compete effectively in the national and international development marketplace." (Mobile Land engages primarily in the development of mixed-use projects. Major properties in Virginia include Colonial Village and Reston.)

#### WHAT THE COMMONWEALTH PROVIDES TO METRORAIL

The Commonwealth of Virginia has been, and continues to be, an important contributor to Metrorail. Metrorail service and public transit in general are not self-supporting. Substantial ridership reduces traffic congestion and dependence on the highway mode of travel, thus adding to the efficiency of the total transportation system.

To date, the Commonwealth's financial contribution has grown and is now stable and substantial. This contribution should be viewed as an investment in transportation and as an investment that offers financial returns to the state.

#### WHAT THE COMMONWEALTH GETS FROM METRORAIL

Metrorail may be treated as an investment, from the Commonwealth's perspective. In this case, the investor receives financial returns in the form of enhanced state tax revenues. These tax revenues come from the principal levies imposed at the state level:

- o sales tax
- o personal income tax
- o corporate income tax
- o recordation fees

Viewed as an investment, the tax revenues which accrue to the Commonwealth would not have been generated without Metrorail. Quite simply, Metrorail enables and encourages development of a magnitude that sustains economic activities and provides substantial returns to the Commonwealth in the form of ever-increasing tax revenues. Thus, the Commonwealth is able to recoup more than its investment through its Metrorail partnership with the federal government, local jurisdictions, and fare-paying passengers.

#### OVERVIEW OF REPORT CONTENTS

The remainder of the report contains seven sections and three appendices. Section II provides an orientation regarding the Metrorail system, Virginia Metrorail corridors, and stations and station areas. Section III presents projections of development with Metrorail. This section discusses projection methods and presents projection results. Section IV presents projections of development with no Metrorail in Virginia.

Section V is a comparison of with-Metrorail development projections to without-Metrorail development projections. This section assesses the net development attributable to Metrorail.

Section VI provides estimates of state tax revenues with and without Metrorail. Estimates of state revenues are provided for Metrorail activities, construction activities, and recurring state tax revenues generated by employment, sales, and residents attributed to development. The material from Section VI is used to calculate the returns to the Commonwealth of Virginia from Metrorail investment, which are described in Section VII.

Section VIII contains concluding study comments followed by three appendices. Appendix A provides information of a technical nature that supports the quantitative analysis in the report. Appendix B presents detailed projections of development with and without Metrorail by jurisdiction. Appendix C provides projections of development by station area.



## II. STATION AREAS AND METRORAIL CORRIDORS

This section describes the Metrorail system and station sitings in Virginia.

### THE METRORAIL SYSTEM

Metrorail extends from a District of Columbia core in a spoke pattern to Montgomery and Prince George's counties, Maryland, and the city of Alexandria and Arlington and Fairfax counties, Virginia. When the Orange Line opens to Vienna in mid-1986, Virginia will have the following 17 stations:

<u>Jurisdiction</u>	<u>Stations</u>
Arlington	Arlington Cemetery Pentagon Pentagon City Crystal City Rosslyn Court House Clarendon Virginia Square Ballston East Falls Church
Alexandria	Braddock Road King Street Eisenhower Avenue
Fairfax	Huntington West Falls Church Dunn Loring Vienna

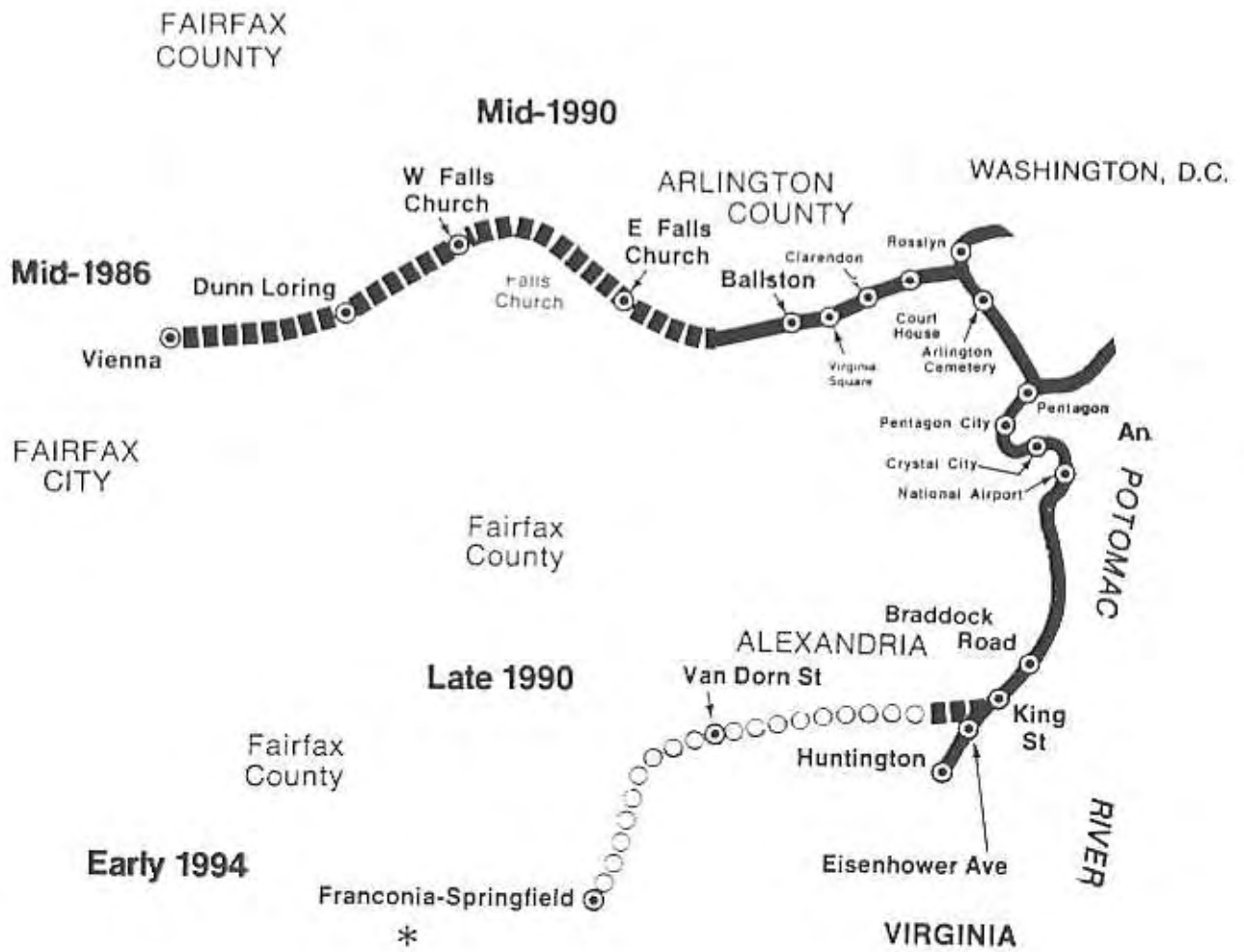
Two more Virginia stations are planned--Van Dorn Street in Alexandria and Franconia-Springfield in Fairfax County. Figure 1 shows the Virginia section of the Metrorail system.

### Delineation of Station Areas

Metrorail station areas were not defined by the consultant for purposes of this study. The station impact areas were defined in terms of the station area plans promulgated by the city of Alexandria and Arlington and Fairfax counties. Station areas were defined by each local jurisdiction based on long-range comprehensive planning processes. These plans guide and delimit development options and act to focus growth around Metrorail stations through zoning that allows favorable ratios of floor area to the size of the land parcel. For analytic purposes, data on development (in-place, under construction, and planned) are keyed to the geographic areas covered by these station area plans.

Station areas are not of a uniform shape or size. For example, the Virginia Square station area in the Rosslyn-Ballston corridor most resembles a rectangle measuring approximately 3,300 by 2,500 feet. In contrast, the

FIGURE 1  
METRORAIL IN VIRGINIA





Crystal City station area in the Jefferson Davis corridor is highly elongated, with a length of approximately 11,000 feet and a maximum width of 2,400 feet.

### III. DEVELOPMENT PROJECTIONS WITH METRORAIL

This section of the report contains projections, to 1995 with Metrorail, of development in Virginia Metrorail corridors and describes the methods used to develop projections.

#### OVERVIEW OF PROJECTION METHODOLOGY

Development projections were developed for each station site. For stations with a development history, projections of development with Metrorail were based on:

- o actual development
- o development under construction
- o projects that have site-plan approval
- o projects cited by developers that conform to the station area plans

Station sites include:

- o Rosslyn
- o Court House
- o Clarendon
- o Virginia Square
- o Ballston
- o Pentagon City
- o Crystal City
- o Braddock Road
- o King Street
- o Eisenhower Avenue

For stations without a development history, projections of development with Metrorail were based on station area plans provided by Fairfax County. These stations, which are in Fairfax County, include:

- o West Falls Church
- o Dunn Loring

- o Vienna
- o Huntington

Five stations were not included in development projections. The Van Dorn and the Franconia-Springfield stations were not included in development projections because the line will not open until near the end of the study period. The East Falls Church station was not included because it has no actual development, no development under construction, no projects that have site-plan approval, and no projects cited by developers which conform to the station area plans. In addition, the planning process for East Falls Church is at the most preliminary stage. No development is envisioned for Arlington Cemetery and Pentagon due to current land uses of the station areas.

The development projections are made for four types of land use:

- o office
- o retail
- o residential
- o hotel

The projections are stated in terms of space (square feet) or units (number of housing units, number of hotel rooms).

The timing of build-out at each station is critical to attributing (or not attributing) the development to Metrorail. Date built corresponds to the issuance of the master certificate of occupancy. This is the date when the property can be let (or sold) and the economic activities creating jobs, incomes, and sales begin. Until this point, the return to the Commonwealth in the form of tax revenues results from construction activities.

Absorption of office space is assumed to occur one year from date built. Occupancy rates are assumed at 90 percent beginning one year from date built. This means that for projection purposes each unit is assumed to be totally vacant during the entire first year and no preleasing of space occurs. In essence, no leasing activity occurs for 28 months, (16-month construction period, 12-month vacant period). Similar assumptions regarding absorption and occupancy rates are assumed for retail space.

Residential development is assumed to clear the market within the year construction is completed. It is assumed all units are absorbed. Hotel operations are assumed to begin upon issuance of the master certificate of occupancy.

Complete details regarding projection methods are contained in Appendix A.

#### DEVELOPMENT PROJECTIONS WITH METRORAIL

The following exhibits contain the projections of development at Metrorail station impact areas. These projections relate to the gross impact of Metrorail service and station sitings on development.

Exhibit 1 is a summary table showing build-out associated with Metrorail by category for all station areas. The data shown for 1978 and 1979 apply only to Rosslyn, Crystal City, and Pentagon City. Projections for years beginning with 1980 also include the station areas for:

- o Court House
- o Clarendon
- o Virginia Square
- o Ballston

The development data shown for 1984 cover these additional station areas:

- o Braddock Road
- o King Street
- o Eisenhower Avenue
- o Huntington

The projections from 1986 through 1995 consider Metrorail-associated development at all station areas in Virginia except East Falls Church, Van Dorn, and Franconia-Springfield.

As the data in Exhibit 1 show, build-out through 1995 for all Virginia station impact areas is:

- o 21,003,500 square feet - office
- o 3,414,800 square feet - retail
- o 5,462 hotel rooms
- o 14,970 new residential units

The next series of exhibits shows development associated with Metrorail service and station sitings by category for the three jurisdictions. Exhibit 2 shows the build-out of office space by year aggregated across station areas for the city of Alexandria and Arlington and Fairfax counties. Exhibits 3, 4, and 5 show build-out aggregated by jurisdiction for retail, hotel, and residential use through 1995.

As shown in Exhibit 2 the major portion of the build-out of office space has occurred and is projected to occur in Arlington. Station areas leading this growth from 1978 through 1984 have been Crystal City and Rosslyn. The Ballston and Crystal City station areas are projected to be the leading growth centers for 1985 through 1995.

## EXHIBIT 1

ACTUAL AND PROJECTED DEVELOPMENT  
METRORAIL STATION AREAS

<u>Year</u>	<u>Office (Thousands of Square Feet)</u>	<u>Retail (Thousands of Square Feet)</u>	<u>Hotel (Rooms)</u>	<u>Residential (Units)</u>
1978*	342.6	0	0	240
1979	231.1	12.6	0	542
1980**	1,423.5	65.7	0	125
1981	629.0	69.0	0	708
1982	1,151.6	209.7	1,065	0
1983	635.7	13.0	197	821
1984***	556.6	43.6	0	302
1985	1,994.7	160.9	267	1,169
1986****	2,171.4	883.1	500	1,932
1987-1995	<u>11,867.3</u>	<u>1,957.2</u>	<u>3,433</u>	<u>9,131</u>
TOTAL	21,003.5	3,414.8	5,462	14,970

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\* Blue Line service to Rosslyn, Pentagon City, and Crystal City in Arlington began July 1977.

\*\* Orange Line service to Rosslyn, Court House, Clarendon, Virginia Square and Ballston in Arlington began December 1979.

\*\*\* Yellow Line service to Braddock Road, King Street, and Eisenhower Avenue in Alexandria and Huntington in Fairfax began December 1983.

\*\*\*\* Orange Line service to East Falls Church in Arlington and West Falls Church, Dunn Loring, and Vienna in Fairfax will begin mid-1986.

EXHIBIT 2

ACTUAL AND PROJECTED OFFICE DEVELOPMENT  
METRORAIL STATION AREAS BY JURISDICTION

(Thousands of Square Feet)

<u>Year</u>	<u>Arlington</u>	<u>Alexandria</u>	<u>Fairfax</u>
1978*	342.6	0	0
1979	231.1	0	0
1980**	1,423.5	0	0
1981	629.0	0	0
1982	1,151.6	0	0
1983	635.7	0	0
1984***	309.6	247.0	0
1985	1,504.3	490.4	0
1986****	1,854.4	317.0	0
1987-1995	<u>7,892.9</u>	<u>1,854.5</u>	<u>2,119.9</u>
TOTAL	15,974.7	2,908.9	2,119.9

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\* Blue Line service to Rosslyn, Pentagon City, and Crystal City in Arlington began July 1977.

\*\* Orange Line service to Rosslyn, Court House, Clarendon, Virginia Square and Ballston in Arlington began December 1979.

\*\*\* Yellow Line service to Braddock Road, King Street, and Eisenhower Avenue in Alexandria and Huntington in Fairfax began December 1983.

\*\*\*\* Orange Line service to East Falls Church in Arlington and West Falls Church, Dunn Loring, and Vienna in Fairfax will begin mid-1986.



EXHIBIT 3

ACTUAL AND PROJECTED RETAIL DEVELOPMENT  
METRORAIL STATION AREAS BY JURISDICTION

(Thousands of Square Feet)

<u>Year</u>	<u>Arlington</u>	<u>Alexandria</u>	<u>Fairfax</u>
1978*	0	0	0
1979	12.6	0	0
1980**	65.7	0	0
1981	69.0	0	0
1982	209.7	0	0
1983	13.0	0	0
1984***	0	43.6	0
1985	74.4	86.5	0
1986****	827.2	55.9	0
1987-1995	<u>1,350.0</u>	<u>327.2</u>	<u>280.0</u>
TOTAL	2,621.6	513.2	280.0

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\* Blue Line service to Rosslyn, Pentagon City, and Crystal City in Arlington began July 1977.

\*\* Orange Line service to Rosslyn, Court House, Clarendon, Virginia Square and Ballston in Arlington began December 1979.

\*\*\* Yellow Line service to Braddock Road, King Street, and Eisenhower Avenue in Alexandria and Huntington in Fairfax began December 1983.

\*\*\*\* Orange Line service to East Falls Church in Arlington and West Falls Church, Dunn Loring, and Vienna in Fairfax will begin mid-1986.

EXHIBIT 4

ACTUAL AND PROJECTED HOTEL DEVELOPMENT  
METRORAIL STATION AREAS BY JURISDICTION

(Number of Rooms)

<u>Year</u>	<u>Arlington</u>	<u>Alexandria</u>	<u>Fairfax</u>
1978*	0	0	0
1979	0	0	0
1980**	0	0	0
1981	0	0	0
1982	1,065	0	0
1983	197	0	0
1984***	0	0	0
1985	267	0	0
1986****	500	0	0
1987-1995	<u>2,847</u>	<u>386</u>	<u>200</u>
TOTAL	4,876	386	200

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\* Blue Line service to Rosslyn, Pentagon City, and Crystal City in Arlington began July 1977.

\*\* Orange Line service to Rosslyn, Court House, Clarendon, Virginia Square and Ballston in Arlington began December 1979.

\*\*\* Yellow Line service to Braddock Road, King Street, and Eisenhower Avenue in Alexandria and Huntington in Fairfax began December 1983.

\*\*\*\* Orange Line service to East Falls Church in Arlington and West Falls Church, Dunn Loring, and Vienna in Fairfax will begin mid-1986.

EXHIBIT 5

ACTUAL AND PROJECTED RESIDENTIAL DEVELOPMENT  
METRORAIL STATION AREAS BY JURISDICTION

(Number of Units)

<u>Year</u>	<u>Arlington</u>	<u>Alexandria</u>	<u>Fairfax</u>
1978*	240	0	0
1979	542	0	0
1980**	125	0	0
1981	708	0	0
1982	0	0	0
1983	471	96	254
1984***	48	0	254
1985	915	0	254
1986****	1,678	0	254
1987-1995	<u>5,700</u>	<u>401</u>	<u>3,030</u>
TOTAL	10,427	497	4,046

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\* Blue Line service to Rosslyn, Pentagon City, and Crystal City in Arlington began July 1977.

\*\* Orange Line service to Rosslyn, Court House, Clarendon, Virginia Square and Ballston in Arlington began December 1979.

\*\*\* Yellow Line service to Braddock Road, King Street, and Eisenhower Avenue in Alexandria and Huntington in Fairfax began December 1983.

\*\*\*\* Orange Line service to East Falls Church in Arlington and West Falls Church, Dunn Loring, and Vienna in Fairfax will begin mid-1986.

The King Street station area is projected to lead the growth in office space developed in Alexandria. In Fairfax County, the Vienna station area accounts for more than half of the total office space development projected through 1995 in the station areas.

Exhibit 3 shows projected retail development by jurisdiction to 1995. Again, Arlington County is projected to generate the major growth in development for retailing activities. The Ballston and Pentagon City station areas are projected to be the leading growth centers for 1985 through 1995. Currently, a retail mall is under construction at Ballston and one is planned for Pentagon City. Past retail development, 1978 to 1984, centered in Crystal City and Rosslyn.

The King Street station area is projected to lead the growth in retail space developed in Alexandria. The Vienna station area accounts for almost two-thirds of the retail space projected for station areas in Fairfax County through 1995.

Projections of development of hotel facilities are provided in Exhibit 4. Arlington County is projected to account for almost all of the hotel rooms added during the projection period ending in 1995. The Crystal City station area is both the past and projected growth center for hotel facilities in Arlington County.

Alexandria's hotel facilities are projected for King Street and Eisenhower Avenue. Fairfax County's projected hotel rooms are for the Vienna station area.

Exhibit 5 displays projections of residential units for the three jurisdictions. Arlington and Fairfax Counties have to date generated and are projected to generate almost all of the growth in housing stock in the Metrorail corridors. The growth in housing stock is distributed among most of the Metrorail station areas.

To provide a different perspective regarding the projections of development associated with Metrorail service and station sitings, Exhibits 6, 7, and 8 show development by use category by station area. The data presented in these exhibits relate to total development by category of use of each station area through 1995. Development for station areas is shown in Exhibit 6 for Arlington County, Exhibit 7 for Alexandria, and Exhibit 8 for Fairfax County.

Projections of development at the station area level, by year by type of use, are contained in Appendix B. These projections are intended for the reader seeking the level of finest detail.

## EXHIBIT 6

ACTUAL AND PROJECTED DEVELOPMENT  
 ARLINGTON STATION AREAS  
 1978-1995

<u>Station</u>	<u>Office (Thousands of Square Feet)</u>	<u>Retail (Thousands of Square Feet)</u>	<u>Hotel (Rooms)</u>	<u>Residential (Units)</u>
Jefferson Davis Corridor				
Pentagon City*	1,250.0	1,019.3	450	1,386
Crystal City*	4,837.5	136.0	3,109	2,374
Rosslyn-Ballston Corridor				
Rosslyn*	2,807.1	386.2	532	1,544
Court House**	2,239.3	152.4	324	2,123
Clarendon	383.0	45.1	0	0
Virginia Square**	484.3	0	0	18
Ballston**	3,973.5	882.6	461	2,982

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\* Metrorail service began July 1977.

\*\* Metrorail service began December 1979.

EXHIBIT 7

ACTUAL AND PROJECTED DEVELOPMENT  
ALEXANDRIA STATION AREAS  
1984-1995

<u>Station</u>	<u>Office (Thousands of Square Feet)</u>	<u>Retail (Thousands of Square Feet)</u>	<u>Hotel (Rooms)</u>	<u>Residential (Units)</u>
Braddock Road*	427.0	75.3	0	291
King Street*	1,581.7	279.0	250	206**
Eisenhower Avenue*	900.2	158.9	136	0

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\* Metrorail service began December 1983.

\*\* 96 units completed in 1983.



EXHIBIT 8

ACTUAL AND PROJECTED DEVELOPMENT  
FAIRFAX STATION AREAS  
1983-1995

<u>Station</u>	<u>Office (Thousands of Square Feet)</u>	<u>Retail (Thousands of Square Feet)</u>	<u>Hotel (Rooms)</u>	<u>Residential (Units)</u>
West Fall Church*	289.9	0	0	600
Dunn Loring*	550.0	70	0	130
Vienna*	1,100.0	180	200	500
Huntington**	180.0	30	0	2,816

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\* Metrorail service will begin in mid-1986.

\*\* Metrorail service to this station began December 1983.

#### IV. DEVELOPMENT PROJECTIONS WITHOUT METRORAIL

Any attribution of development to Metrorail station sitings and service must consider the magnitude of development that would have occurred without Metrorail. This section discusses projection of the amount of development estimated to have occurred through 1995 if Metrorail did not serve Virginia.

##### OVERVIEW OF PROJECTION METHODOLOGY

The development trends before Metrorail station sitings and initiation of service in Virginia are shown in Exhibits 9, 10, and 11. The data clearly demonstrate that most of the land areas where stations now are located were not centers of development before Metrorail.

Exhibits 9 and 10 show development trends for Arlington. Exhibit 9 refers to the Rosslyn-Ballston Corridor, which includes the following station areas:

- o Rosslyn
- o Court House
- o Clarendon
- o Virginia Square
- o Ballston

Exhibit 10 shows pre-Metrorail development for the Jefferson Davis corridor which includes the Crystal City and Pentagon City station areas.

Exhibit 11 shows pre-Metrorail development for the station area corridor in Alexandria. This exhibit shows historical development for those land areas in proximity to the following stations:

- o Braddock Road
- o King Street
- o Eisenhower Avenue

The historical development for the station areas in Fairfax County is not shown. The land use in those areas has been predominantly low to medium density residential, with some light industrial development at Dunn Loring. If pre-Metrorail trends were used to project development to 1995 without Metrorail, the projections would be unrealistically low.

Fairfax County without-Metrorail projections were estimated from projections of development contained in Metrorail station area studies currently being conducted by the Fairfax County Office of Comprehensive Planning. Projections from these studies were compared to zoning that existed prior to

## EXHIBIT 9

PRE-METRORAIL DEVELOPMENT  
ROSSLYN-BALLSTON CORRIDOR\*

<u>Year</u>	<u>Office</u> (Thousands of square feet)	<u>Commercial</u> (Thousands of square feet)	<u>Residential</u> (Number of Units)	<u>Hotel</u> (Number of Units)
1972	0	0	291	300
1973	0	10.0	9	0
1974	0	0	35	0
1975	470.0	7.7	0	0
1976	0	0	0	319
1977	0	0	0	0
1978**	0	0	0	0
1979**	<u>0</u>	<u>0</u>	<u>12</u>	<u>0</u>
Totals	470.0	17.7	347	619
Average/ Year***	61.8	2.3	46	81

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\* Build-out by year is generally consistent with the issuance of the master certificate of occupancy.

\*\* Data do not include the Rosslyn station area. Metrorail service to Rosslyn began July 1977.

\*\*\* Average per year is computed by a station year concept since Rosslyn received service two years prior to the remaining four stations in the Rosslyn-Ballston Corridor.

Source: Arlington, Virginia, "Development in the Metro Corridors," Department of Community Affairs, Planning, Housing, and Community Development Division, Arlington County Planning Section, October 1984.

EXHIBIT 10

PRE-METRORAIL DEVELOPMENT  
JEFFERSON DAVIS CORRIDOR\*

<u>Year</u>	<u>Office</u> (Thousands of square feet)	<u>Commercial</u> (Thousands of square feet)	<u>Residential</u> (Number of Units)	<u>Hotel</u> (Number of Units)
1972	0	0	0	0
1973	517.0	94.9	0	659
1974	0	79.3	442	0
1975	294.3	165.0	378	400
1976	0	0	206	0
1977	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
Totals	811.3	339.2	1,026	1,059
Average/Year	135.2	56.5	171	177

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\* Build-out by year is generally consistent with the issuance of the master certificate of occupancy.

Source: Arlington, Virginia, "Development in the Metro Corridors,"  
Department of Community Affairs, Planning, Housing, and Community  
Development Division, Arlington County Planning Section, October 1984.

Metrorail construction and that did not account for Metrorail's development impacts. Projected development allowed under the pre-Metrorail zoning was assumed to occur without Metrorail.

To make the projections without Metrorail reflect actual development conditions, office and commercial development in Northern Virginia was tracked for the last 20-year period for which data were available, 1964 through 1983. This development trend was compiled using data for the city of Alexandria and Arlington and Fairfax counties that predated Metrorail and/or focused on development outside station impact areas, e.g., Tyson's Corner and the Alexandria waterfront. Office and retail development totaled 25,996,800 square feet for the period 1964 to 1977. This is all pre-Metrorail development. For the period 1978 through 1983, total non-Metrorail office/retail development was 18,624,300 square feet. On an annual basis, 1964 to 1977 had an average of 1,856,300 square feet. This figure is compared with 3,104,100 square feet per year for the period 1978 through 1983.

The above comparison shows that the pace of office/retail development increased by 67 percent from the pre-Metrorail to the post-Metrorail years independent of any Metrorail-related impact. Therefore, without-Metrorail projections of office/retail development for Alexandria and Arlington station areas were increased by 67 percent above pre-Metrorail trends to reflect higher growth rates occurring outside Metrorail station areas.

Projections of development of residential units without Metrorail use the pre-Metrorail trend increased to a 3 percent annual growth rate. This 3 percent annual growth is taken from the experience of Fairfax County for the most recent five-year period (1980-1984). Since Fairfax County exhibits the greatest residential growth of the jurisdictions, the 3 percent growth rate in residential units applied to Arlington and Alexandria minimizes any impact attributed to Metrorail.

The pace of without-Metrorail hotel development was not altered from the annual averages recorded during the pre-Metrorail years and is assumed to begin the same years as actual and projected development with Metrorail. The Rosslyn-Ballston corridor was allocated build-out at 81 rooms per year beginning 1987 and the Jefferson Davis corridor was allocated 177 rooms per year beginning 1982. These without-Metrorail projections of hotel development should be regarded as optimistic.

#### PRESENTATION OF PROJECTION RESULTS

Exhibit 12 summarizes projections of development without Metrorail service by jurisdiction by category of use through 1995. As the data in Exhibit 12 show, build-out through 1995 for all Virginia station areas without Metrorail is projected at:

- o 6,810,400 square feet - office
- o 1,694,400 square feet - retail

## EXHIBIT 12

PROJECTED DEVELOPMENT WITHOUT METRORAIL  
METRORAIL STATION AREAS

<u>Year</u>	<u>Office (Thousands of Square Feet)</u>	<u>Retail (Thousands of Square Feet)</u>	<u>Hotel (Rooms)</u>	<u>Residential (Units)</u>
1978	140.2	58.6	0	173
1979	145.2	60.7	0	175
1980	214.8	65.1	0	225
1981	222.4	67.3	0	228
1982	230.0	69.5	177	233
1983	237.6	71.7	177	236
1984	330.2	88.9	177	241
1985	342.9	92.0	177	244
1986	355.5	95.1	177	512
1987-1995	<u>4,591.6</u>	<u>1,025.5</u>	<u>2,322</u>	<u>3,903</u>
TOTAL	6,810.4	1,694.4	3,207	6,170



- o 3,207 hotel rooms
- o 6,170 residential units

Exhibits 13, 14, 15, and 16 show projections by jurisdiction by category of use by year through 1995, without Metrorail.

As was the case with the Metrorail projections, Arlington would have been expected to generate the major portion of corridor growth for office, retail, and hotel space without Metrorail.

## EXHIBIT 13

PROJECTED OFFICE DEVELOPMENT WITHOUT METRORAIL  
METRORAIL STATION AREAS BY JURISDICTION

(Thousands of Square Feet)

<u>Year</u>	<u>Arlington</u>	<u>Alexandria</u>	<u>Fairfax</u>
1978	140.2	0	0
1979	145.2	0	0
1980	214.8	0	0
1981	222.4	0	0
1982	230.0	0	0
1983	237.6	0	0
1984	245.2	85.0	0
1985	252.8	90.1	0
1986	260.3	95.2	0
1987-1995	<u>2,685.3</u>	<u>1,086.3</u>	<u>820.0</u>
TOTAL	4,633.8	1,356.6	820.0

EXHIBIT 14

PROJECTED RETAIL DEVELOPMENT WITHOUT METRORAIL  
METRORAIL STATION AREAS BY JURISDICTION

(Thousands of Square Feet)

<u>Year</u>	<u>Arlington</u>	<u>Alexandria</u>	<u>Fairfax</u>
1978	58.6	0	0
1979	60.7	0	0
1980	65.1	0	0
1981	67.3	0	0
1982	69.5	0	0
1983	71.7	0	0
1984	73.9	15.0	0
1985	76.1	15.9	0
1986	78.3	16.8	0
1987-1995	<u>803.8</u>	<u>191.7</u>	<u>30.0</u>
TOTAL	1,425.0	239.4	30.0

EXHIBIT 15

PROJECTED HOTEL DEVELOPMENT WITHOUT METRORAIL  
METRORAIL STATION AREAS BY JURISDICTION

(Number of Rooms)

<u>Year</u>	<u>Arlington</u>	<u>Alexandria</u>	<u>Fairfax</u>
1978	0	0	0
1979	0	0	0
1980	0	0	0
1981	0	0	0
1982	177	0	0
1983	177	0	0
1984	177	0	0
1985	177	0	0
1986	177	0	0
1987-1995	<u>2,322</u>	<u>0</u>	<u>0</u>
TOTAL	3,207	0	0

## EXHIBIT 16

PROJECTED RESIDENTIAL DEVELOPMENT WITHOUT METRORAIL  
METRORAIL STATION AREAS BY JURISDICTION

(Number of Units)

<u>Year</u>	<u>Arlington</u>	<u>Alexandria</u>	<u>Fairfax</u>
1978	173	0	0
1979	175	0	0
1980	225	0	0
1981	228	0	0
1982	233	0	0
1983	236	0	0
1984	241	0	0
1985	244	0	0
1986	249	0	263
1987-1995	<u>2,434</u>	<u>0</u>	<u>1,469</u>
TOTAL	4,438	0	1,732

## V. NET DEVELOPMENT ATTRIBUTED TO METRORAIL

The following data show the projections of build-out of Virginia Metrorail station areas through 1995. The projections show square footage and units (number of rooms, number of dwelling units) of build-out by category of use with Metrorail and without Metrorail. The difference is the net development attributable to Metrorail service and station siting in Virginia.

### Development Projections 1978-1995

	Office (Thousands of <u>Square Feet</u> )	Retail (Thousands of <u>Square Feet</u> )	Hotel (Rooms)	Residential (Units)
With Metrorail	21,003.5	3,414.8	5,462	14,970
Without Metrorail	<u>6,810.4</u>	<u>1,694.4</u>	<u>3,207</u>	<u>6,170</u>
Net Attributable to Metrorail	14,193.1	1,720.4	2,255	8,800

Exhibit 17 shows net development attributed to Metrorail by jurisdiction by category of use through 1995. Exhibit 18 shows net development attributed to Metrorail by category of use on a yearly basis through 1995.

Appendix B (pages B.16 through B.19) contains four exhibits that show net development attributed to Metrorail by jurisdiction by category of use by year through 1995.

To place the scale of Metrorail-related office development in perspective, Figure 2 compares the 14,193,100 square feet of projected Metrorail-related office development in Virginia (1978-1995) with total private office space in spring 1985 in downtown Richmond. As is shown in the figure, projected Metrorail-related private office space is nearly three times greater than present downtown Richmond office space.

EXHIBIT 17

NET DEVELOPMENT ATTRIBUTED TO METRORAIL  
 BY JURISDICTION  
 (1978-1995)

	<u>Office</u> (Thousands of Square Feet)	<u>Retail</u> (Thousands of Square Feet)	<u>Hotel</u> (Rooms)	<u>Residential</u> (Units)
Arlington	11,340.9	1,196.6	1,669	5,989
Alexandria	1,552.3	273.8	386	497
Fairfax	1,299.9	250.0	200	2,314



## EXHIBIT 18

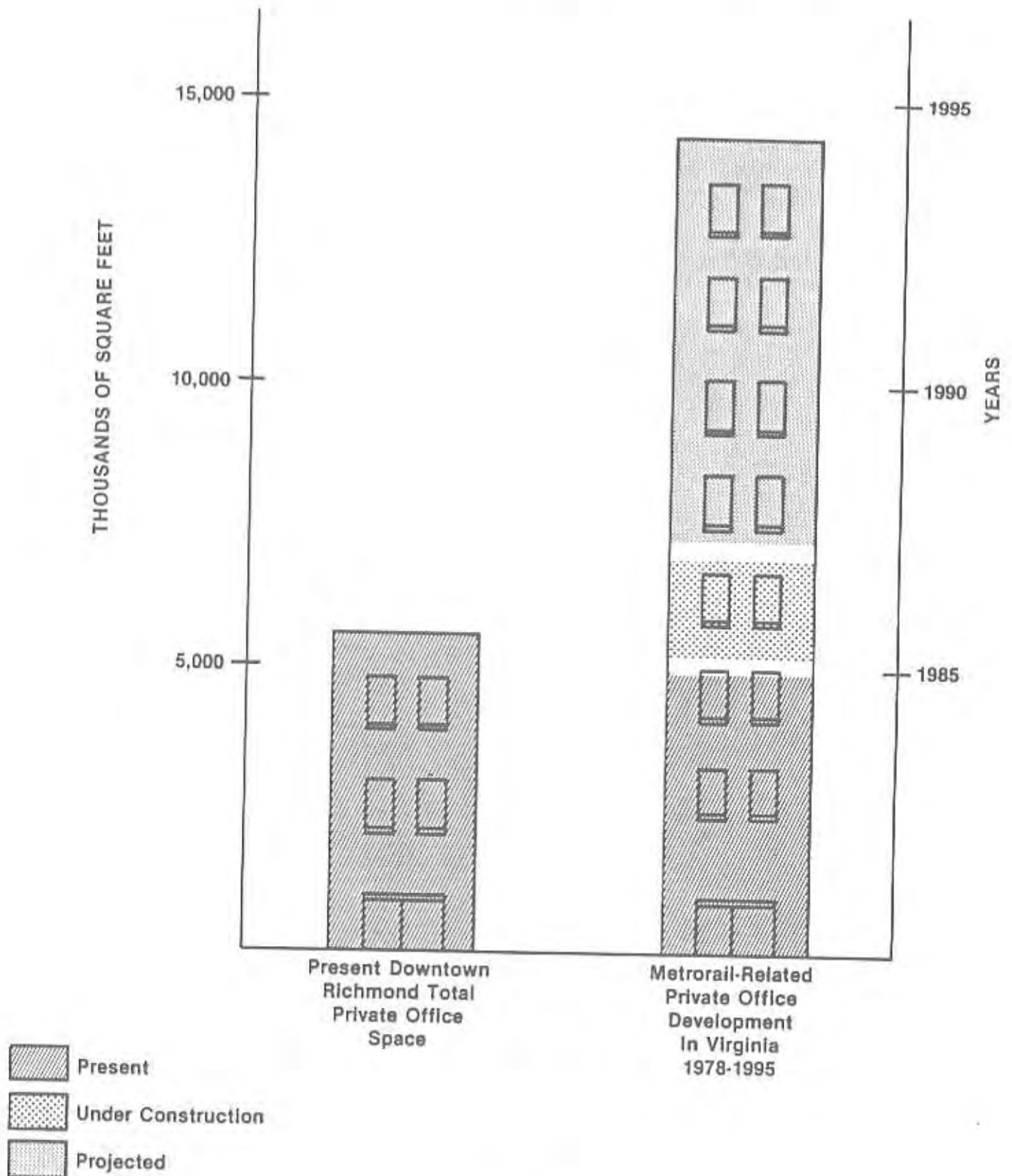
NET DEVELOPMENT ATTRIBUTABLE TO METRORAIL  
METRORAIL STATION AREAS

<u>Year</u>	<u>Office (Thousands of Square Feet)</u>	<u>Retail (Thousands of Square Feet)</u>	<u>Hotel (Rooms)</u>	<u>Residential (Units)</u>
1978	202.4	0	0	67
1979	85.9	0	0	367
1980	1,208.7	.6	0	0
1981	406.6	1.7	0	480
1982	921.6	140.2	888	0
1983	398.1	0	20	331
1984	226.4	0	0	0
1985	1,651.8	68.9	90	671
1986	1,815.9	788.0	323	2,182
1987-1995	7,275.7	931.7	1,111	5,228
Adjustments*	<u>0</u>	<u>(210.7)</u>	<u>(177)</u>	<u>(526)</u>
TOTAL	14,193.1	1,720.4	2,255	8,800

\* The negative numbers result from the methodology, not from the effects of Metrorail. The without-Metrorail projections were annualized over the projection period. Since actual development occurs in spurts, the net development in some years is negative, which is accounted for through adjustments on a one-time basis.

FIGURE 2

VIRGINIA METRORAIL-RELATED (1978-1975) AND  
PRESENT DOWNTOWN RICHMOND PRIVATE OFFICE SPACE



## VI. ESTIMATES OF TAX REVENUES

This section of the report presents estimates of tax revenues generated to the Commonwealth as a result of economic activity attributed to Metrorail.

### OVERVIEW OF ESTIMATING PROCEDURES

State taxes are generated from three principal activities associated with Metrorail. First, state taxes are generated from the wages created by Metrorail construction and operations and maintenance expenditures in Virginia. Second, state taxes are generated from the wages created by construction of office, retail, hotel, and residential space at Metrorail station areas. Third, state taxes are generated from the employment, sales, and residents at Metrorail station area developments.

The employment and incomes created in Virginia for non-Virginia residents were netted out since these incomes do not contribute to the Commonwealth's personal income tax revenues. Data from the U.S. Census were used to estimate the magnitude of this adjustment.

Projections of jobs were developed using employment conversion factors which relate square feet of space to number of workers.

Numbers of jobs were translated directly to tax revenues by multiplying the factored employment by the average income tax paid by workers living in Northern Virginia. The average income tax paid per worker in Northern Virginia was calculated by dividing employment in Alexandria, Arlington, and Fairfax into total income taxes paid by these jurisdictions. This accounts for wage differentials in Northern Virginia with respect to the Commonwealth as a whole.

Sales projections were developed on a site basis by relating retail sales per square foot to retail development. Sales projections at sites within the Metrorail impact areas were made using unit sales information developed by the Urban Land Institute.

Sales for hotels were projected by relating occupancy rates and average regional room rates to number of rooms. These data on occupancy rates and average room rates were derived from the survey of the Metropolitan Washington hotel industry conducted by Laventhol and Horwath.

Data on housing values were developed through the Northern Virginia Board of Realtors. Projections of Virginia residents who would live in Metrorail corridors but work outside the state were developed using data from the Northern Virginia Transportation Commission.

Construction (and operation and maintenance) of Metrorail generates direct, indirect, and induced economic impacts. These impacts are also generated from development activities that result in construction expenditures for the various development types:

- o office

- o commercial
- o residential
- o hotel

These impacts were estimated through input-output modeling by assigning construction expenditure to the following input-output sectors:

- o new railroad construction
- o new office buildings
- o new residential high-rise apartments
- o railroads and related services

The data on construction cost estimates are derived from development projections combined with cost data compiled by the Metropolitan Washington Council of Governments and interviews with area developers. Adjusting to current dollars was done using the Boeckl Index.

Impacts from Metrorail operations and maintenance costs were assessed using the input-output framework for railroads and related services. Data on Metrorail operations and maintenance costs were prepared by the Washington Metropolitan Area Transit Authority and allocated by the consultant to Virginia on the basis of route miles.

#### TAX REVENUES ATTRIBUTED TO METRORAIL

Tax revenues associated with Metrorail accrue to the Commonwealth of Virginia from economic activities related to real estate development and from direct expenditures for Metrorail construction and operations and maintenance allocated to Virginia. Types of taxes generated are:

- o individual income taxes
- o corporate income taxes
- o sales taxes
- o document recording fees

The following data show estimates of these tax revenues projected to 1995. The projections contrast the tax revenue estimates with Metrorail against estimates without Metrorail.

Estimated State Tax Revenues  
1978-1995

With Metrorail:

Development Related	\$915,000,000
Metrorail Construction, Operating, and Maintenance Related	<u>71,000,000</u>
Subtotal	\$986,000,000

Without Metrorail:

Development Related	326,000,000
Metrorail Construction, Operating, and Maintenance Related	<u>0</u>
Subtotal	\$326,000,000

Net Attributable to Metrorail \$660,000,000

The total net state tax revenues attributable to Metrorail in Virginia through 1995 are estimated as \$660,000,000. This estimated net tax revenue is composed of tax revenues generated by Metrorail-related development station sites, \$589,000,000, and tax revenues accruing from expenditures for Metrorail construction and operation and maintenance in Virginia, \$71,000,000.

Tax Revenues From Development

The net state tax revenues attributable to Metrorail development through 1995 are estimated as \$589,000,000. The composition of this total net state tax revenue attributable to Metrorail development is as follows:

- o individual income taxes--\$480,000,000
- o corporate income taxes--\$44,000,000
- o sales taxes--\$62,000,000
- o document recording fees--\$3,000,000

A series of detailed exhibits, contained in Appendix B (pages B.20 through B.51), shows estimates of tax revenues by tax type, by year, by jurisdiction, and by category of development. These detailed exhibits show tax revenues separately for projected development with Metrorail and without Metrorail.

Tax Revenues From Metrorail Construction, Operating, and Maintenance Expenditures

In addition to tax revenues generated by economic activity at Metrorail station areas, significant amounts of tax revenue accrue to the Commonwealth



of Virginia from expenditures for Metrorail construction as well as operations and maintenance. For the years 1972 projected through 1995, \$71,000,000 in tax revenues to the Commonwealth is generated through Metrorail construction and operations and maintenance expenditures. The tax revenues are estimated based on expenditures for Metrorail in Virginia.

Appendix B (pages B.52 through B.53), provides detailed estimates of tax revenues stemming from Metrorail construction, operation, and maintenance allocated to the Virginia segment of the Metrorail system.

#### RECURRING AND NON-RECURRING STATE TAX REVENUES

State tax revenues generated as a result of Metrorail in Virginia can be classified by whether the tax revenues are recurring or non-recurring. Tax revenues that recur from year to year are generated from:

- o Metrorail operations and maintenance expenditures in Virginia
- o office employment generated from development at Metrorail station area sites
- o retail sales and employment generated from development at Metrorail station area sites
- o hotel sales and employment generated from development at Metrorail station area sites
- o individuals who become Virginia residents through purchase of housing at Metrorail station area sites

State tax revenues which are generated on a non-recurring basis result from:

- o Metrorail construction activities
- o construction of development sites in Metrorail station areas
- o sales of housing units

Exhibit 19 summarizes in matrix form the state tax revenues generated as a result of Metrorail. The first column lists the sources and economic activities that result in state tax revenues. The entries in the matrix marked by the "X's" match the sources and economic activities to types of state tax revenues generated.

Exhibit 20 presents recurring and non-recurring state tax revenues from Metrorail construction and operations and Metrorail-related development. As is shown in the exhibit, recurring tax revenues of \$513,000,000 from Metrorail-related development account for the largest share (78 percent) of Metrorail-related state tax revenues from 1972-1995.

## EXHIBIT 19

## STATE TAX REVENUES RESULTING FROM METRORAIL

	<u>Sales Taxes</u>	<u>Individual Income Taxes</u>	<u>Corporate Income Taxes</u>	<u>Document Recording Fee</u>
Non-recurring				
Metrorail Construction	X	X		
Construction at Development Sites		X		
Sales of Housing Units				X
Recurring				
Metrorail Operations & Maintenance Expenditures	X	X		
Office		X	X	
Retail	X	X	X	
Hotel	X	X	X	
Residential		X		



EXHIBIT 20

STATE REVENUES ATTRIBUTABLE TO METRORAIL

Year	Metrorail Impacts		Metrorail-Related Development Impact		Total State Revenues
	State Revenues From Construction	Recurring State Revenues from Operations	State Revenues from Construction	Recurring State Revenues from Jobs Created	
1972	\$ 1,707,000	0	\$ 0	0	\$ 1,707,000
1973	1,707,000	0	0	0	1,707,000
1974	1,707,000	0	0	0	1,707,000
1975	1,707,000	0	0	0	1,707,000
1976	1,707,000	0	0	0	1,707,000
1977	1,707,000	0	0	0	1,707,000
1978	1,707,000	0	0	0	1,707,000
1979	1,707,000	356,000	401,485	12,843	2,477,328
1980	0	381,000	788,341	450,373	3,326,714
1981	0	625,000	2,590,028	636,764	3,851,792
1982	0	803,000	2,206,039	5,032,070	8,041,109
1983	5,673,000	898,000	4,732,949	8,435,329	14,066,277
1984	0	1,013,000	2,546,378	12,617,017	21,849,395
1985	0	1,463,000	180,137	13,604,570	15,247,707
1986	6,943,000	1,645,000	8,018,182	14,752,643	24,415,825
1987	753,000	1,683,000	13,455,179	22,318,214	44,399,394
1988	753,000	2,560,000	3,959,395	32,607,021	39,879,416
1989	753,000	2,846,000	5,821,720	36,539,377	45,960,097
1990	753,000	3,245,000	4,659,275	40,982,466	49,639,740
1991	753,000	3,629,000	4,695,744	44,405,667	53,483,411
1992	753,000	3,458,000	4,445,038	48,682,620	57,338,658
1993	753,000	3,395,000	4,618,346	52,007,618	60,773,964
1994	753,000	3,220,000	4,527,804	56,432,675	64,933,479
1995	753,000	3,224,000	4,357,182	59,653,394	67,987,576
TOTAL	\$33,049,000	\$38,052,000	\$75,894,410	\$512,570,106	\$659,565,516

## VII. RETURNS TO THE COMMONWEALTH OF VIRGINIA

### COMMONWEALTH CONTRIBUTIONS

The Commonwealth of Virginia has provided a stable source of funding for Metrorail for over ten years. Exhibit 21 lists historical and prospective state funding for Metrorail. As the exhibit shows, state funding has served various purposes. The column labeled I-66 expenditures refers to the state share of median work on I-66 to enable extension of the Orange Line to Vienna. The 10-year contract appropriations represent state funding for parking lots and access road improvements. Metrorail appropriations represent funding earmarked for Metrorail construction activities. WMATA appropriations for the years prior to 1983 are capital grants to Northern Virginia for transit; for the years 1983 and forward this appropriation is the total transit block grant for Northern Virginia.

As the data in Exhibit 21 show, total state funds for Metrorail projected to 1995 are \$376,000,000. This total represents the size of the investment upon which to base the returns to the state.

### STATE TAX REVENUES

Just as the state has made (and continues to make) a sizable investment in Metrorail, the returns to the state have been substantial and show recent significant growth, which is projected to continue. Exhibit 20 displays the estimated and projected returns to the state in the form of state tax revenues.

Tax revenues from Metrorail construction represent a non-recurring source of tax revenues generated by wages to construction workers and the attendant personal income taxes remitted to the state. Metrorail operations and maintenance in Virginia represent a recurring source of tax revenues generated by wages to the Metrorail workforce and the personal income taxes they pay yearly. Construction activities at Metrorail station area development sites generate non-recurring tax revenues tied to construction schedules and changing labor requirements.

Recurring state tax revenues of a significant magnitude are generated as a result of the incomes earned and sales generated at Metrorail station area office, retail, and hotel developments. Additional recurring tax revenues are derived from residents who choose a housing location at a Metrorail station area site.

As the final column in Exhibit 20 shows, the total state tax revenues attributable to Metrorail from 1972 to 1995 are projected as \$660,000,000. This is an estimate of net tax revenues, differentiating the projection of revenues without Metrorail from those with Metrorail projections. As such, the total represents the state's return on its historical and prospective funding of Metrorail. In financial terms, the total net tax revenues represent a return on investment.

EXHIBIT 21

STATE CONTRIBUTIONS TO NORTHERN VIRGINIA  
FOR THE WASHINGTON METROPOLITAN TRANSIT AUTHORITY

<u>Year</u>	<u>I-66 Expenditures</u>	<u>10-Year Contract Appropriations</u>	<u>Metrorail Appropriations</u>	<u>WMATA Appropriations</u>	<u>Total</u>
1973	0	\$ 3,500,000	0	\$ 1,250,000	\$ 4,750,000
1974	0	3,500,000	0	1,250,000	4,750,000
1975	0	3,500,000	0	7,500,000	11,000,000
1976	0	3,500,000	0	7,500,000	11,000,000
1977	\$1,416,667	3,500,000	\$ 5,000,000	1,300,000	11,216,667
1978	1,416,667	3,500,000	5,000,000	1,300,000	11,216,667
1979	1,416,667	3,500,000	5,000,000	3,500,000	13,416,667
1980	1,416,667	3,500,000	5,000,000	3,500,000	13,416,667
1981	1,416,667	3,500,000	5,000,000	3,500,000	13,416,667
1982	1,416,667	3,500,000	5,000,000	2,300,000	12,216,667
1983	0	0	5,000,000	2,074,500	11,991,167
1984	0	0	0	20,634,000	20,634,000
1985	0	0	0	21,106,000	21,106,000
1986	0	0	0	20,634,000	20,634,000
1987	0	0	0	21,106,000	21,106,000
1988	0	0	0	20,634,000	20,634,000
1989	0	0	0	21,106,000	21,106,000
1990	0	0	0	20,634,000	20,634,000
1991	0	0	0	21,106,000	21,106,000
1992	0	0	0	20,634,000	20,634,000
1993	0	0	0	21,106,000	21,106,000
1994	0	0	0	20,634,000	20,634,000
1995	0	0	0	21,106,000	21,106,000
				20,634,000	20,634,000
<b>Total</b>	<b>\$ 8,500,000</b>	<b>\$35,000,000</b>	<b>\$30,000,000</b>	<b>\$302,548,500</b>	<b>\$376,048,500</b>

### RATE OF RETURN FROM INVESTMENT IN METRORAIL

There are a number of ways to express the rate of return which the state derives from its investment in Metrorail. First, in terms of absolute dollar differences, the state has a prospective investment of \$376 million over the years 1972 through 1995. During this same time period state tax revenues attributable to Metrorail are projected as \$660 million. On a dollar-for-dollar basis this represents a net gain to the state of \$284 million.

Second, in terms of timing of the returns to the state, the investment in Metrorail is beginning to show positive returns. Data for 1985 show the state's contribution at \$20.6 million, with revenues attributable to Metrorail pegged at \$24.4 million. This generates a net gain for 1985 of \$3.8 million. Moreover, projecting state investment at approximately \$21 million per year shows a return of 3 to 1 on a yearly basis by 1991 and steadily increasing on this 3 to 1 yearly pay-back from 1991 to 1995 and beyond the projection period.

The conventional measure for assessing the performance of an investment is the internal rate of return. The calculation of the internal rate of return recognizes that money has time value; specifically, present money is more valuable than future money even if receipt of future money is assured. An internal rate of return is the interest rate earned on the investment.

By explicitly considering the timing of the state's investment in Metrorail and its return in terms of net state tax revenues on a yearly basis through factoring in an interest rate (discount rate), the internal rate of return is calculated. The excess of projected net state tax revenues attributable to Metrorail relative to the actual and prospective state investment in Metrorail represents a rate of return of 13 percent.

### EMPLOYMENT GENERATED IN THE STATE

The dollar comparisons and internal rate of return present evidence regarding the prudent nature of the state's investment decision by financial criteria. From a broader socioeconomic perspective, Metrorail generates recurring employment in office, retail, and hotel establishments.

The following provides estimates of cumulative net employment generated as a result of development sited at Metrorail station areas.

- o Office - - 29,000
- o Retail - - 3,000
- o Hotel - - 2,000

The above estimates represent employment in permanent jobs. Employment generated from construction activities averaged 2,400 a year from 1972 through 1995.



#### ITEMS NOT COUNTED IN ESTIMATING TAX REVENUES

While the returns to the Commonwealth are projected to be sizable, the analyses and attendant projections have taken a highly conservative approach. Following is a list of items that were not counted in projecting state tax revenues.

- o Projections of revenues are based on data from a recent point in time, for example, tax revenue projections use 1982 data. Revenue estimates are deflated for years prior to the base data but are not escalated for future years. This places tax revenue projections at an absolute minimum.
- o Space projections of build-out relied on highly conservative assumptions for station area development, that is, they relied on existing zoning. Final planning for selected station areas has not been completed; these final plans may allow denser development but that has not been counted in this report. Each additional 100,000 square feet of office development generates:
  - \$371,000 in recurring annual state tax revenues
  - 450 permanent office jobs
  - 155 construction jobs
- o Retail sales were estimated using average sales per square foot for the Southeastern United States. Therefore, retail sales do not reflect the higher wages and prices in the Washington, D.C., metropolitan area.
- o Development may occur at the East Falls Church, Van Dorn, and/or Franconia-Springfield station areas before 1995. No development was projected for these station areas; thus, tax revenues attributable to Metrorail are understated to the extent development occurs.
- o Development activities in station areas will spawn development on the fringes of station areas. This fringe development has not been projected; thus, tax revenues attributable to Metrorail are understated to the extent this type of development occurs.
- o Absorption of office and retail space was assumed to occur one year from date built and occupancy rates are assumed at 90 percent beginning one year from date built. These assumptions are conservative. Historically, Arlington County, in which most of the Metrorail-related office and retail development will occur, has had occupancy rates of higher than 95 percent.
- o Except for two residential developments, development occurring before station openings was not counted. Thus, development occurring in anticipation of Metrorail station openings was not attributed to Metrorail.

- o Development projections considered only new construction. Hundreds of units of condominium conversions have occurred. The tax revenues associated with conversion activities have not been counted.
- o Office workers, construction workers, and homeowners at Metrorail station area sites will spend some portion of income in Virginia outside of station areas. The resulting sales tax revenues have not been counted.
- o Developers derive profits from construction of office, retail, hotel, and residential space. The corporate taxes that would be paid on these profits have not been counted.

### VIII. CONCLUDING COMMENTS

The growth projected for Metrorail corridors in the city of Alexandria and Arlington and Fairfax counties also generates favorable local tax base impacts. These jurisdictions share directly in sales tax revenues, and land development enhances the base for property tax assessments.

These tax revenue benefits have not merely flowed to the local jurisdictions. The city of Alexandria and Arlington and Fairfax counties have made significant contributions toward development of the Metrorail system and transit in Virginia.

The following data show the dollar magnitude of contributions toward Metro made by local jurisdictions since 1972.

#### Local Contributions for Metro 1972-1985

Alexandria	\$ 79,887,000
Arlington County	150,471,000
Fairfax County	129,059,000
Falls Church and Fairfax City	8,141,000
Local Gas Tax	<u>46,700,000</u>
TOTAL	\$414,258,000

To date, the local jurisdictions have paid Metro two-and-one-half times the amount the Commonwealth has.

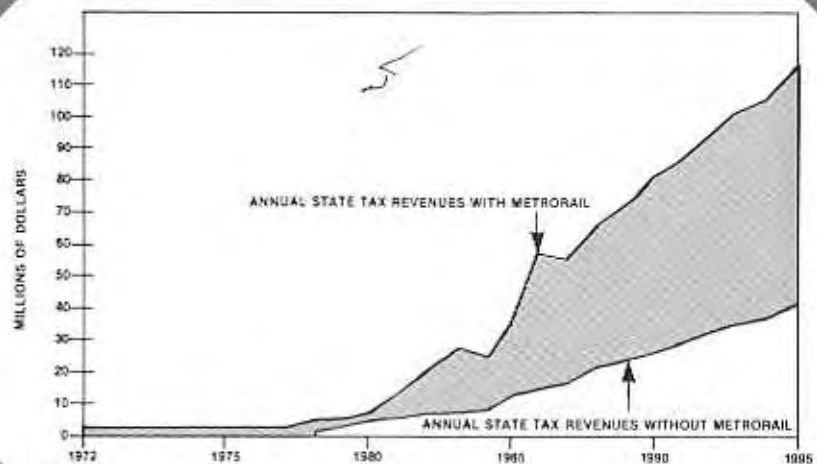


## Executive Summary

# Fiscal Impact of Metrorail on The Commonwealth of Virginia

Prepared by  
Peat, Marwick, Mitchell & Co.

November 1985



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## STUDY PURPOSE

The development of the Metrorail system in Virginia is based on a partnership of the federal government, the Commonwealth of Virginia, local jurisdictions, and fare-paying passengers. The purpose of this study is to assess the benefits of Metrorail that accrue to the Commonwealth of Virginia. These benefits are in the tangible form of development, which creates jobs, incomes, and sales that generate tax revenues to the Commonwealth.

## SUMMARY OF BENEFITS

### THROUGH 1995 IN VIRGINIA

Metrorail will generate:

- \$660 Million in Additional State Tax Revenues
  - Development Projects Totaling
    - 14,000,000 additional square feet office space
    - 1,700,000 additional square feet retail space
    - 2,300 additional hotel rooms
    - 8,800 additional residential units
  - Permanent Employment in the State Totaling
    - 29,000 additional office jobs
    - 3,000 additional retailing jobs
    - 2,000 additional hotel jobs
  - Construction Jobs Averaging 2,400 a Year
  - \$284 Million in Excess of State Contributions
  - By 1995, Annual Additional State Tax Revenues Amounting to Three Times the Annual State Contribution
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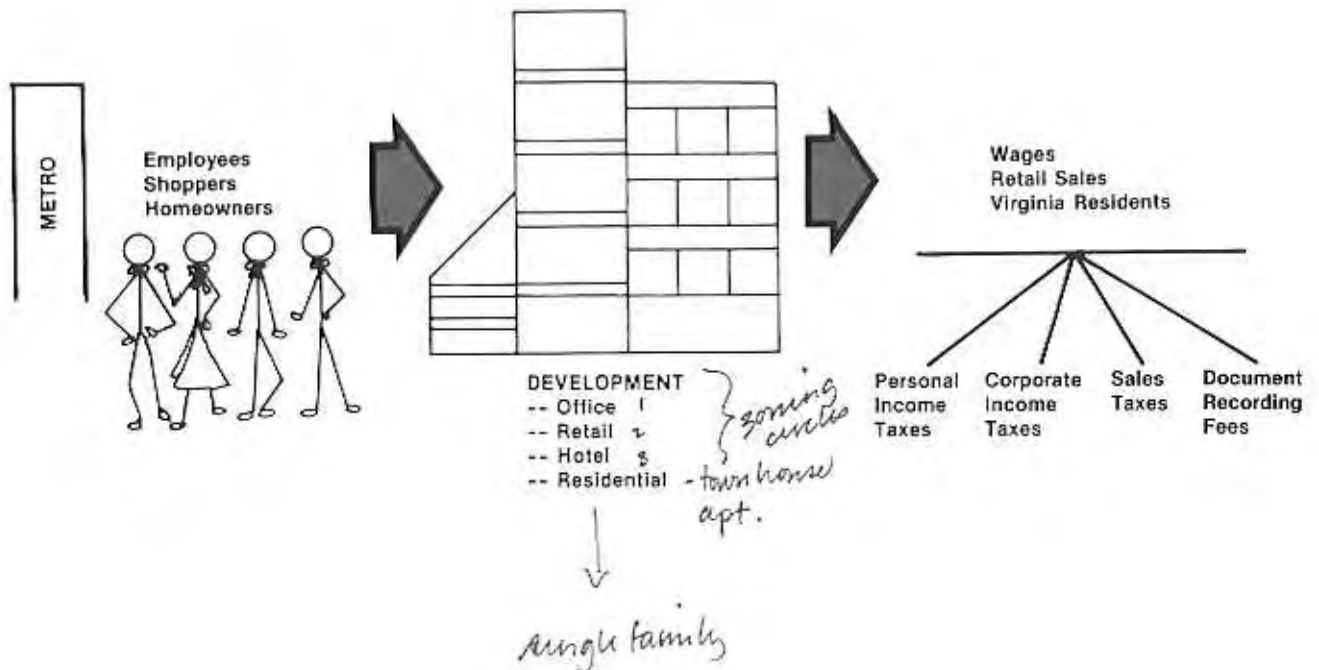
## WHY METRORAIL SPURS DEVELOPMENT

Would development have occurred anyway? Certainly development would have occurred in Virginia, but it would have been on a much smaller scale and of lower quality. Without Metrorail, the region loses an important attraction; fixed-route, rapid, and reasonably priced transportation.

*bringing close to freeways*

The capacity of land to support development is a function of the public and private services available. Transportation accessibility is one of the most critical elements of development capacity. The provision of Metrorail service to Virginia represents the creation of additional development potential beyond that which previously existed. Metrorail station areas are major nodes of economic activity. Without Metrorail service, these areas would not be attractive to high density development, nor would they be able to accommodate it.

The presence of Metrorail service in Virginia has caused the refocusing of metropolitan economic growth forces. Rather than having high density development confined to downtown Washington, this type of development is attracted to Virginia station sites. High density development results in more efficient land use patterns. By supporting development of new employment and commercial centers, jobs that would have located downtown without Metrorail access are attracted to and captured by Virginia, bringing substantial tax revenues to the Commonwealth.



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## WHAT THE BUSINESS COMMUNITY SAYS ABOUT THE IMPORTANCE OF METRORAIL

PENTAGON CITY



MCI is a \$2 billion provider of long distance and other telecommunications services, serving more than 220,000 commercial and residential customers in Virginia.

*"The Metro system was the primary reason that we purchased a large office building and had a second one built for us in Virginia. We have about 2,000 employees in those buildings in Virginia. During the next 15 months, we expect to increase the number of employees in Virginia to about 4,000 people and add three additional office buildings. Metro is the key to the relocation of a large number of our functions from the District of Columbia into Virginia."*

**V. Orville Wright**  
Vice Chairman of the Board  
MCI Communications Corporation

*"Metrorail has been at the very heart of many of IDI's projects. The Rosslyn Center office complex, the Montebello and Belvedere condominium projects, and an IDI-planned Ballston mixed-use development were dependent upon the presence of the rail system. For example, we would not have developed the Montebello community of over 1,000 units on Route 1 without the Huntington Metrorail station being adjacent to it."*

**Giuseppe Cecchi, President**  
International Developers, Inc. (IDI)



IDI has developed projects valued at \$685,000,000 in the metropolitan area. Current Virginia projects include Ballston Metro Center, Montebello, and The Belvedere.



The Oliver T. Carr Co. is a major developer in the Washington metropolitan area. Carr has developed over six million square feet of mixed-use projects in the last ten years.

*"Our suburban development strategy has been driven to a great extent by Metrorail. Were it not for Metro, we would not have ventured out of our traditional District of Columbia market and into the King Street and Ballston areas. Together, these two Carr projects will eventually represent 3,000,000 or more square feet of urban scale, mixed-use development."*

**Oliver T. Carr, Jr., President**  
The Oliver T. Carr Co.

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## WHAT THE BUSINESS COMMUNITY SAYS ABOUT THE IMPORTANCE OF METRORAIL

*"The Charles E. Smith Companies' development of mixed-use projects, specifically Crystal City and Rosslyn Plaza, has been keyed to the parallel development of Metrorail. In the absence of such a superb mass transit system, development in Northern Virginia would have been generally slower. Projects such as ours would have been more speculative."*

**Robert H. Smith, President**  
The Charles E. Smith Companies



The Charles E. Smith organization is the major developer of the Crystal City station area. Smith has 37 buildings completed or under construction.



Mobil Land engages primarily in the development of mixed-use projects. Major properties in Virginia include Colonial Village and Reston.

*"Colonial Place, our 760,000 square foot mixed-use project being built adjacent to the Courthouse Metro station, combines the advantages of high quality urban design and suburban location. The proximity to downtown business and government facilities, direct underground access to Metrorail, the commitment of the Commonwealth of Virginia and the local governments to Metro, and the existence of nearby residential neighborhoods were major factors supporting our decision to build this project. The Metrorail system has made it possible for suburban localities in this area to compete effectively in the national and international development marketplace."*

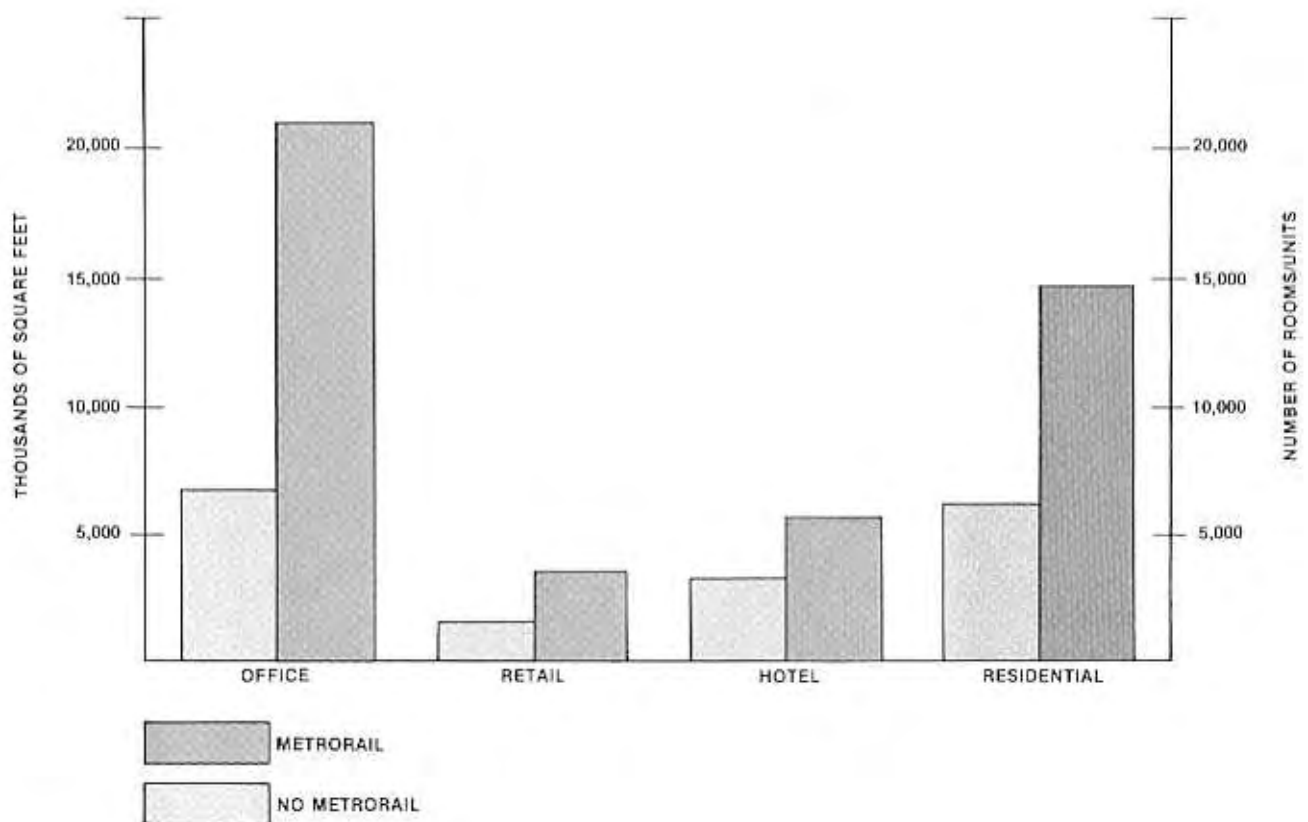
**James C. Cleveland, President**  
Mobil Land Development Corp./VA  
A Subsidiary of Mobil Oil Corporation

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## PROJECTIONS OF DEVELOPMENT

The accompanying bar graph compares projections of development in Metrorail station areas by type of use with and without Metrorail for 1978 through 1995.



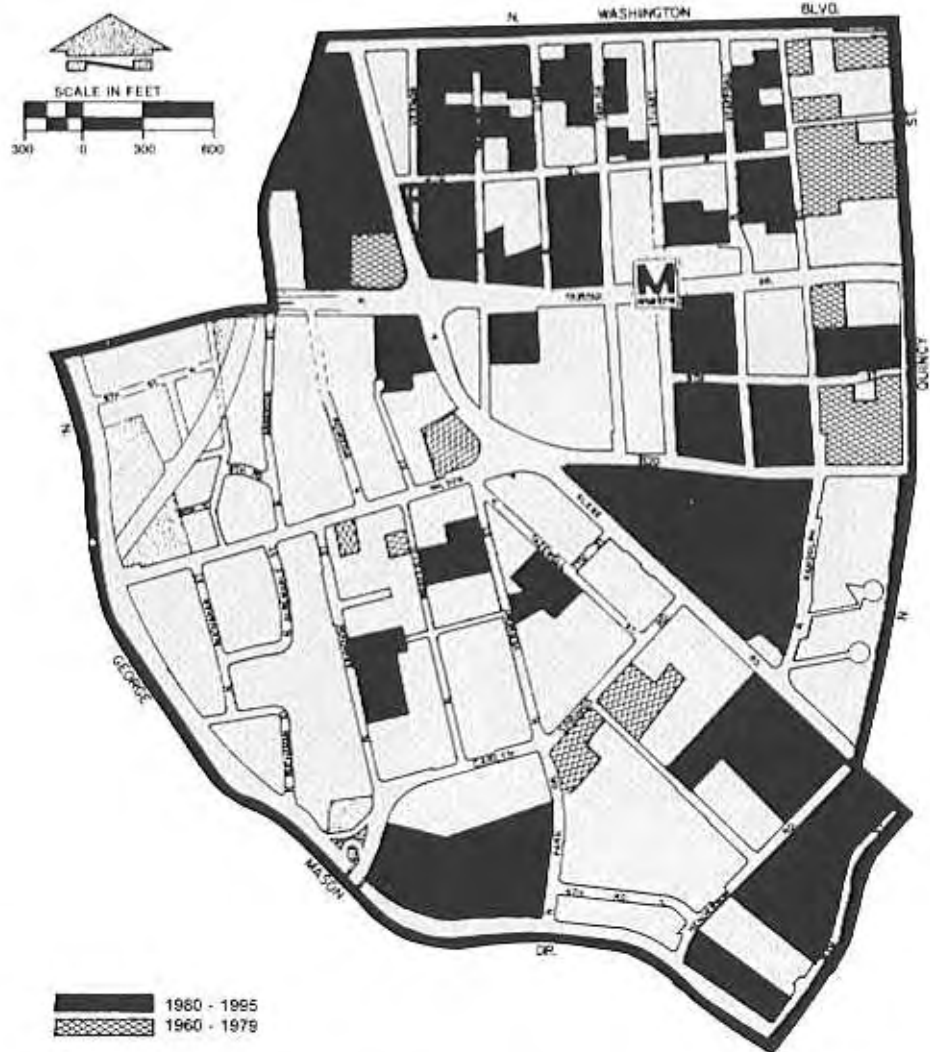
The net development attributed to Metrorail is:

- 14,000,000 additional square feet - office
  - 1,700,000 additional square feet - retail
  - 2,300 additional hotel rooms
  - 8,800 additional residential units
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## AN EXAMPLE OF DEVELOPMENT

The development of the Ballston station area in central Arlington demonstrates the impact of Metrorail. Metrorail service to Ballston began in December, 1979. The map shows development of parcels for 1960 through 1979 contrasted to development completed, in progress, and formally initiated for 1980 to 1995.



Development totals for the two time periods are:

	<u>1960-1979</u>	<u>1980-1995</u>
OFFICE (sq.ft.)	985,900	3,973,500
RETAIL (sq.ft.)	33,600	882,600
HOTEL (rooms)	0	461
RESIDENTIAL (units)	379	2,982

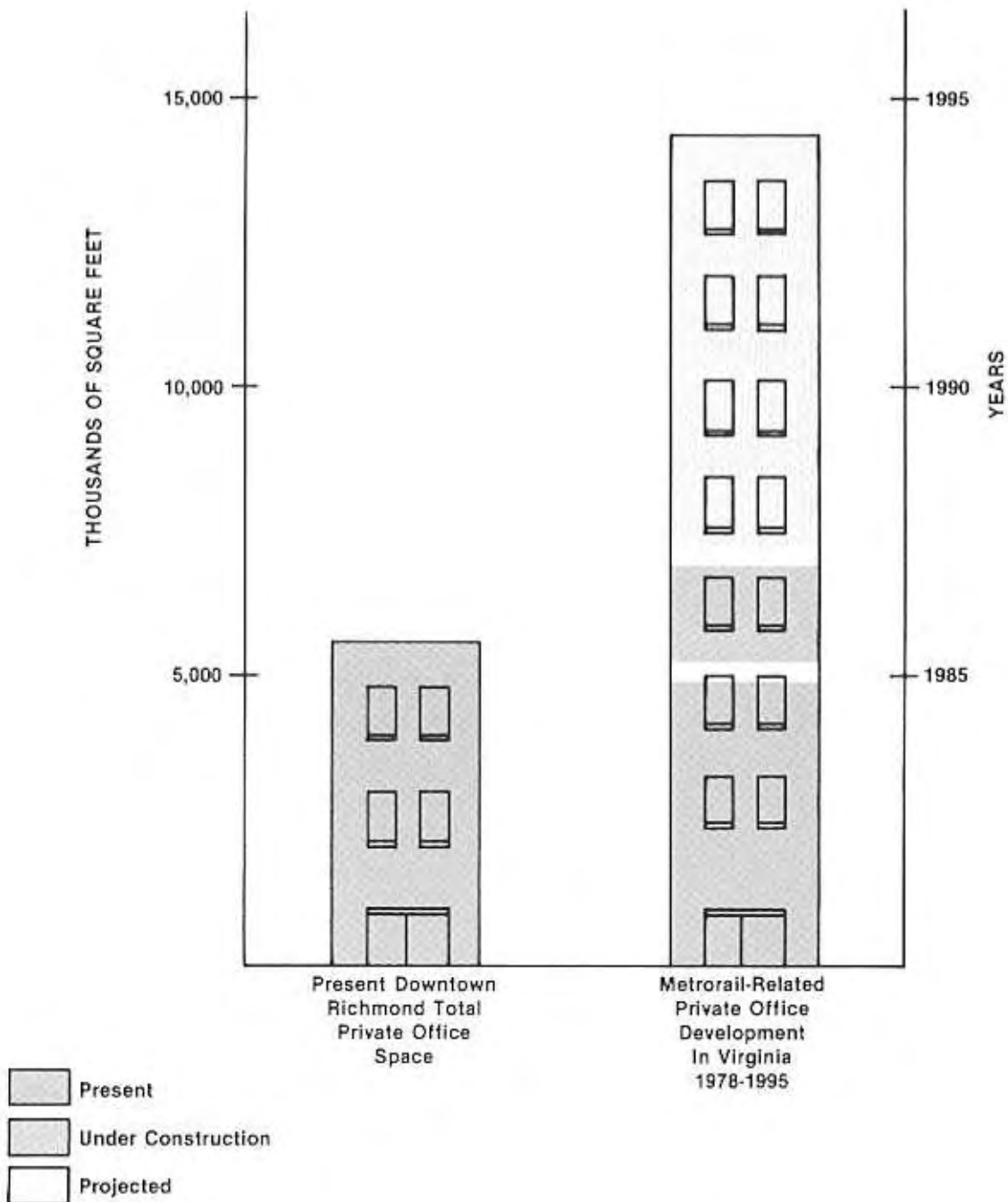


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### DEVELOPMENT IN PERSPECTIVE

To place the scale of Metrorail-related office development in perspective, the graph below compares the 14 million square feet of projected Metrorail-related office development in Virginia (1978-1995) with total private office space in Spring, 1985, in downtown Richmond.



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## ESTIMATES OF STATE TAX REVENUES

State tax revenues associated with Metrorail in Virginia can be classified by type of tax and whether the tax revenues are recurring or non-recurring.

The types of state tax revenues generated are:

- sales taxes
- individual income taxes
- corporate income taxes
- document recording fees

State tax revenues which recur annually are associated with:

- Metrorail operations and maintenance expenditures in Virginia
- office employment generated from development in Metrorail station areas
- hotel sales and employment generated from development in Metrorail station areas
- individuals who become Virginia residents through purchase of housing in Metrorail station areas

State tax revenues associated with Metrorail on a non-recurring basis result from:

- Metrorail construction activities
- construction at development sites in Metrorail station areas
- sales of housing units in Metrorail station areas

*See Annex  
B-1  
Page 12*

## STATE TAX REVENUES ASSOCIATED WITH METRORAIL THROUGH 1995

With Metrorail:

Development-Related	\$915,000,000
Metrorail Construction, Operations, and Maintenance-Related	<u>71,000,000</u>
Subtotal	\$986,000,000

Without Metrorail:

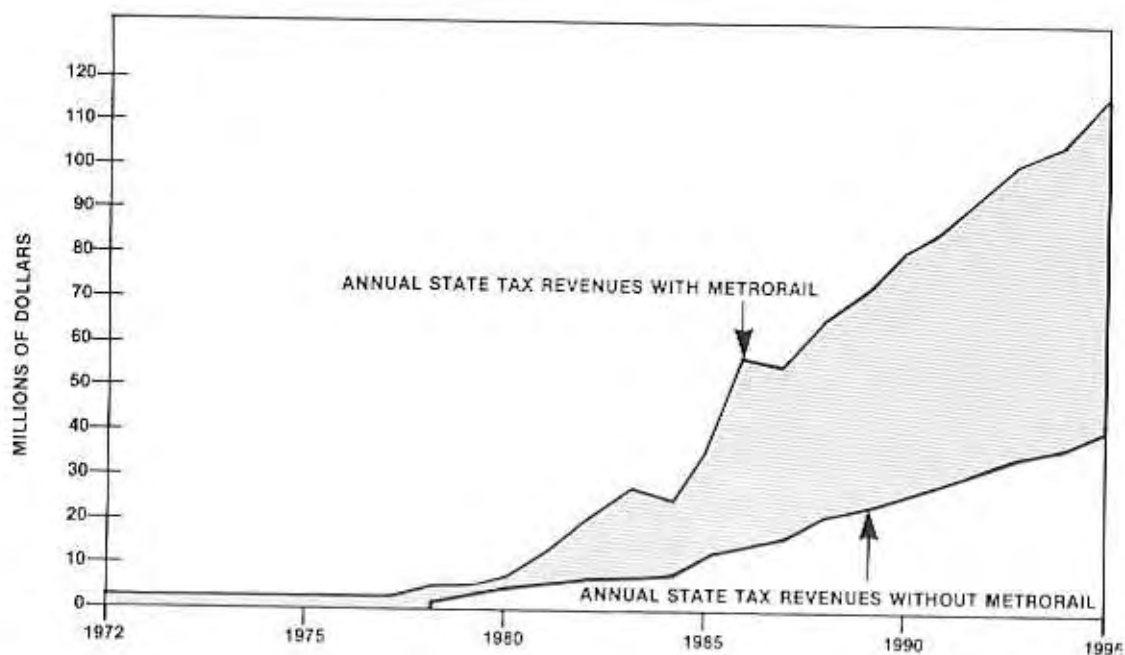
Development-Related	\$326,000,000
Metrorail Construction, Operations, and Maintenance-Related	<u>0</u>
Subtotal	\$326,000,000

Attributable to Metrorail \$660,000,000

The composition of the \$660 million in state tax revenues related to Metrorail is:

• individual income taxes	\$536,000,000
• corporate income taxes	44,000,000
• sales taxes	77,000,000
• transfer taxes	<u>3,000,000</u>
	\$660,000,000

By 1995, annually recurring state tax revenues attributable to Metrorail will exceed \$70 million.



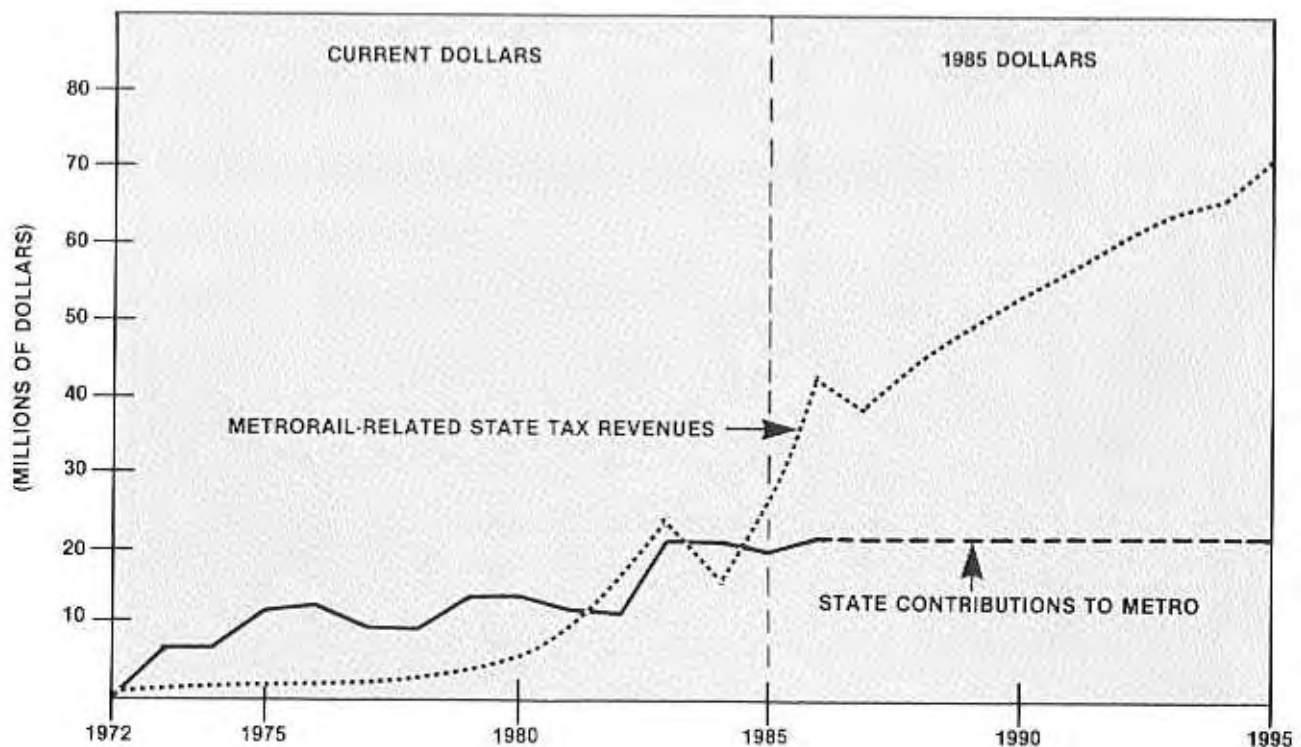
## RETURNS TO THE COMMONWEALTH OF VIRGINIA

The Commonwealth of Virginia has provided and continues to provide significant support to Metro. State support projected at current levels totals \$376 million through 1995 in unescalated dollars. This dollar figure is used to assess the performance of the Commonwealth's investment.

Projections 1972 to 1995

State Tax Revenues Related to Metrorail	\$660,000,000
State Investments in Metro	(\$376,000,000)
Excess of Revenues Over Investments	\$284,000,000

The Commonwealth will achieve significant returns on its investment in Metrorail. The \$284 million, over the period of 1972 to 1995, represents an internal rate of return of 13 percent on the Commonwealth's investment. In 1985, Metrorail-related State tax revenues exceed the State's contribution by \$3.8 million.

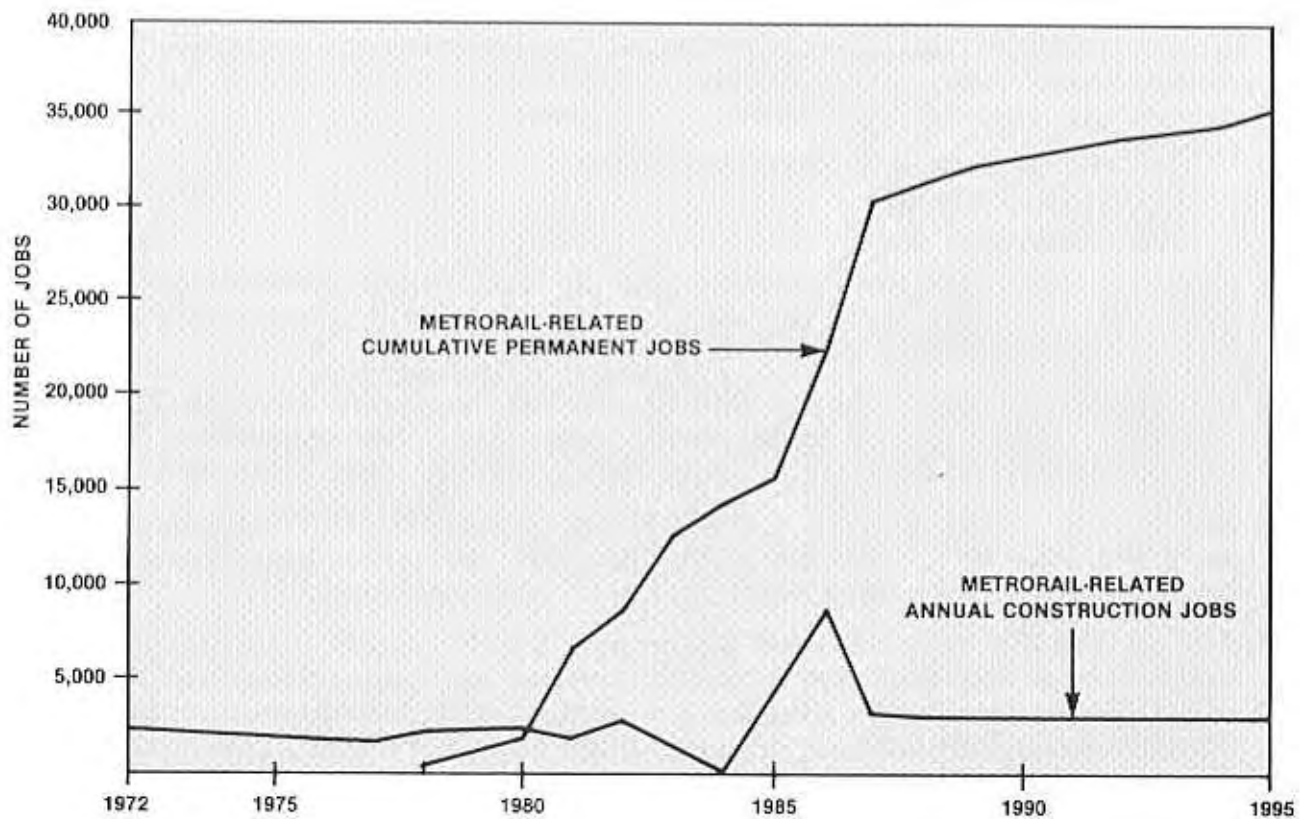


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## METRORAIL-RELATED EMPLOYMENT

Looking beyond financial measures of returns to the Commonwealth, the employment created at Metrorail station sites and from construction activities has been significant.



## THE METRORAIL PARTNERSHIP

The development of the Metrorail system resulted from a partnership which includes the federal, state, and local governments. Each is an important contributor to the development and operation of the Metrorail system in Virginia. To date, the local jurisdictions have paid Metro two and one half times the amount (\$414 million) the Commonwealth has (\$167 million).

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## CONCLUDING COMMENTS

While the returns to the Commonwealth are projected to be sizable, the analyses and attendant projections have taken a highly conservative approach. Following is a list of items that were not counted in projecting state tax revenues.

- Projections of revenues are based on data from a recent point in time, for example, tax revenue projections use 1982 data. Revenue estimates are deflated for years prior to the base data but are not escalated for future years. This places tax revenue projections at an absolute minimum.
  - Space projections of build-out relied on highly conservative assumptions for station area development, that is, they relied on existing zoning. Final planning for selected station areas has not been completed; these final plans may allow denser development that has not been counted in this report. Each additional 100,000 square feet of office development generates:
    - \$371,000 in recurring annual state tax revenues
    - 450 permanent office jobs
    - 155 construction jobs
  - Retail sales were estimated using average sales per square foot for the Southeastern United States. Therefore, retail sales do not reflect the higher wages and prices in the Washington, D.C., metropolitan area.
  - Development may occur at the East Falls Church, Van Dorn, and/or Franconia-Springfield station areas before 1995. No development was projected for these station areas; thus, tax revenues attributable to Metrorail are understated to the extent development occurs.
  - Development activities in station areas will spawn development on the fringes of station areas. This fringe development has not been projected; thus, tax revenues attributable to Metrorail are understated to the extent this type of development occurs.
  - Absorption of office and retail space was assumed to occur one year from date built and occupancy rates were assumed at 90 percent beginning one year from date built. These assumptions are conservative. Historically, Arlington County, in which most of the Metrorail-related office and retail development will occur, has had occupancy rates of higher than 95 percent.
  - Except for two residential developments, development occurring before station openings was not counted. Thus, development occurring in anticipation of Metrorail station openings was not attributed to Metrorail.
  - Development projections considered only new construction. Hundreds of units of condominium conversions have occurred. The tax revenues associated with conversion activities have not been counted.
  - Office workers, construction workers, and homeowners at Metrorail station area sites will spend some portion of income in Virginia outside of station areas. The resulting sales tax revenues have not been counted.
  - Developers derive profits from construction of office, retail, hotel, and residential space. The corporate taxes that will be paid on these profits have not been counted.
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This study was funded and supported by members of the business community of Virginia.

The material in this Executive Summary is based on a comprehensive technical report that may be reviewed upon request.

APPENDIX A  
METHODOLOGY



## APPENDIX A

### METHODOLOGY

This appendix describes methodologies that were used to estimate the economic impact of Metrorail construction, operations, and maintenance expenditures in Virginia; to project development attributable to siting Metrorail stations; and to relate this development to measures of economic activity to project tax revenues that will accrue to the Commonwealth of Virginia.

This appendix is organized into two major sections. The first section describes methods for projecting development and the related jobs, incomes, and sales generated as a result of development. The second section describes the application of input-output modeling procedures to estimate 1) the direct, indirect, and induced economic impacts of Metrorail construction, operations, and maintenance expenditures and 2) the impacts stemming from construction activities to develop office, retail, residential, and hotel space at Metrorail station sites.

#### PROJECTIONS OF DEVELOPMENT AND ESTIMATES OF STATE TAX REVENUES

The projections of build-out and the attendant employment, sales, and tax revenues were done on an IBM PC using Lotus 1-2-3 software. Separate exhibits were developed for these types of development:

- o office
- o retail
- o hotel
- o residential

The documentation for the exhibits is provided by a series of formulas which apply to specific types of development. The formulas are keyed to each column of the exhibits that appear in Appendix B (pages B.20 through B.51). When reviewing the exhibits, note that Lotus 1-2-3 calculates values to the number of decimal places entered while the user specifies a display format. The displayed numbers are rounded and are not the exact numbers used for the calculations.

The columns are identified by capital letters (A, B, C, etc.). The letters correspond to the position of the column in the exhibits (A refers to the first column, B refers to the second column). The letter convention is used to avoid confusion since the formulas contain numerical data.

#### Office

Column A - Year construction completed.

Column B - Projections of build-out of office space.

Column C = Column B<sub>t-1</sub> \* .90.

Column C is the prior year's build-out absorbed at 90 percent occupancy.

Column D = Column C ÷ 200.

Column D assigns one office employee per 200 square feet of space occupied.

Column E = Column  $\sum_{t=1}^i$  D

Column E accumulates employment by adding employment for each space occupied.

Column F = Column E \* .868

Column F states employment by state of residence. It nets out jobs in Virginia for residents of Maryland and Washington, D.C., using data from the 1980 Census.

Column G = Column F \* .87 \* \$982

Column G converts employment in Virginia by Virginia residents to tax revenues to the state from the personal income tax. For 1982, 2,138,155 returns were filed and Virginia had employment of 2,447,000. This converts to a returns-to-employment ratio of .87. Taxes per return for Arlington, Alexandria, Fairfax (including Fairfax City and Falls Church) were \$982 for 1982. This provides an estimate of \$854 in Virginia personal income taxes for each unit of employment ( $\$982 * .87$ ). In effect, this procedure accounts for joint returns.

To estimate personal income taxes in current dollars for years before 1982 the following formula adjustments were developed from Table 1.8: Statewide Individual Income Taxes - Taxable Years 1973-1982 of the Department of Taxation Annual Report.

1979 (F \* .87 \* \$982 \* .70)

1980 (F \* .87 \* \$982 \* .81)

1981 (F \* .87 \* \$982 \* .92)

Column H = Column E \* \$82

Column H converts employment in Virginia to tax revenues to the state from the corporate income tax. For 1982, \$199,522,079 was collected and Virginia had employment of 2,447,000. This converts to a corporate tax revenue per unit of employment of \$82. (Source: Table 2.2: Number of Corporate Returns, Taxable Income, and Tax Assessed, Department of Taxation Annual Report 1983-1984.)

To adjust corporate income taxes to current dollars for years before 1982 the following formula adjustments were developed from Table 2.2 and employment data from the Bureau of Labor Statistics.

1979 (E \* \$82 \* .85)

1980 (E \* \$82 \* .89)

1981 (E \* \$82 \* 1.09)

Column I - Column B \* \$130 \* .74 \* .0322

Column I converts construction into an estimate of total earnings in Virginia by Virginia residents and personal income tax revenues. Construction costs are stated as \$130 per square foot. The source for the construction cost figure was Commercial Construction Indicators in the Washington Region - First Quarter of 1985, published by the Metropolitan Washington Council of Governments. The earnings multiplier for sector 110202 New Office Construction is .7448, (rounded to .74). The source of the earnings multiplier is the RIMS II model developed by the Bureau of Economic Analysis. The effective tax rate on adjusted gross income is .0322 for 1982. (Source: Department of Taxation Annual Report 1983-1984.)

To estimate personal income taxes generated by construction activity for years before 1984 the following formula adjustments were developed using the Boeckl Index for construction costs of office, hotel and high-rise apartment buildings.

1978 (B \* \$130 \* .64 \* .74 \* .0322)  
1979 (B \* \$130 \* .69 \* .74 \* .0322)  
1980 (B \* \$130 \* .75 \* .74 \* .0322)  
1981 (B \* \$130 \* .83 \* .74 \* .0322)  
1982 (B \* \$130 \* .90 \* .74 \* .0322)  
1983 (B \* \$130 \* .96 \* .74 \* .0322)

Column J = Columns G + H + I

Column J states total tax revenues. Columns G and H are in 1982 dollars because employment and taxes per unit of employment are based on 1982 data. Column I uses construction cost data in 1984 dollars taxed at a 1982 rate.

This convention of deflating but not escalating dollars is followed throughout the analyses to arrive at the most conservative estimate of state tax revenues associated with Metrorail.

#### Retail

Column A = Year construction completed.

Column B = Projections of build-out of retail space.

Column C = Columns  $B_{t-1}$  \* .90.

Column C is the prior years build-out absorbed at 90 percent occupancy.

Column D =  $\sum_{t=1}^t C$

Column D accumulates space occupied over the years of the projections.

Column E = Column C ÷ 500

Column E assigns one retail employee per 500 square feet of space occupied.

Column F = Column  $\sum_{t=1}^t$  E

Column F accumulates employment adding employment for each space occupied.

Column G = Column F \* .868

Column G states employment by state of residence. It nets out jobs in Virginia for residents of Maryland and Washington, D.C., using data from the 1980 Census.

Column H = D \* \$124

Column H estimates yearly sales on the basis of \$124 per square foot of retail space.

The data on sales per square foot were taken from the Urban Land Institute's 1984 survey. To deflate values prior to 1984 to current dollars, the Consumer Price Index was used and the formula adjustments appear below.

1979 (D \* \$124 \* .71)

1980 (D \* \$124 \* .80)

1981 (D \* \$124 \* .89)

1982 (D \* \$124 \* .94)

1983 (D \* \$124 \* .97)

Column I = G \* \$14,895 \* .0322

Column I converts employment in Virginia by Virginia residents to tax revenues to the state from the personal income tax. The average retail wage (nationally) for the latest period (1983) was \$14,895. (Source: Statistical Abstract of the United States, 1985, Table 693: Average Annual Total Compensation and Wages and Salaries Per Full-Time Equivalent Employee, by Industry.) This is multiplied by the effective tax rate of .0322. (Source: Department of Taxation Annual Report 1983-1984.)

To estimate personal income taxes from employment in retail trade for years before 1983 the following formula adjustments were developed from Table 693.

1979 (G \* \$11,742 \* .0322)

1980 (G \* \$12,459 \* .0322)

1981 (G \* \$13,321 \* .0322)

1982 (G \* \$14,182 \* .0322)

Column J = H \* .03

Column J converts retail sales to state sales tax revenues through imposition of the 3 percent tax rate.

Column K = Column F \* \$82

Column K converts employment in Virginia to tax revenues to the state from the corporate income tax. For 1982, \$199,522,079 was collected and Virginia had employment of 2,447,000. This converts to a corporate tax revenue per unit of employment of \$82. (Source: Table 2.2: Number of Corporate Returns, Taxable Income, and Tax Assessed, Department of Taxation Annual Report 1983 - 1984.)

To adjust corporate income taxes to current dollars the following formula adjustments were developed from Table 2.2 and employment data from the Bureau of Labor Statistics.

1979 (F \* \$82 \* .85)

1980 (F \* \$82 \* .89)

1981 (F \* \$82 \* 1.09)

Column L = Column B \* \$130 \* .74 \* .0322

Column L converts construction into an estimate of total earnings in Virginia by Virginia residents and personal income tax revenues. Construction costs are stated as \$130 per square foot. The source of the construction cost figure was Commercial Construction Indicators in the Washington Region - First Quarter of 1985, published by the Metropolitan Washington Council of Governments. The earnings multiplier for sector 110202 New Office Construction is .7448, (rounded to .74). The source of the earnings multiplier was the RIMS II model developed by the Bureau of Economic Analysis. The effective tax rate on adjusted gross income is .0322 for 1982. (Source: Department of Taxation Annual Report 1983-1984.)

To estimate personal income taxes generated by construction activity for years before 1984 the following formula adjustments were developed using the Boeckl Index for construction costs of office, hotel, and high-rise apartment buildings.

1978 (B \* \$130 \* .64 \* .74 \* .0322)

1979 (B \* \$130 \* .69 \* .74 \* .0322)

1980 (B \* \$130 \* .75 \* .74 \* .0322)

1981 (B \* \$130 \* .83 \* .74 \* .0322)

1982 (B \* \$130 \* .90 \* .74 \* .0322)

1983 (B \* \$130 \* .96 \* .74 \* .0322)

Column M = Columns I + J + K + L

Column M states total tax revenues that accrue to the state as a result of retail development.



Hotel

Column A - Year construction completed.

Column B - Projections of build-out by number of hotel rooms.

Column C -  $\sum_{t=1}^t B$

Column C runs a cumulative total of hotel rooms added through the years.

Column D -  $B * 1$

Column D assigns one hotel employee per room.

Column E -  $\sum_{t=1}^t D$

Column E accumulates employment as hotel rooms are added through the years.

Column F -  $Column E * .868$

Column F states employment by state of residence. It nets out jobs in Virginia for residents of Maryland and Washington, D.C., using data from the 1980 Census.

Column G -  $C * 365 * .741 * \$159$

Column G states hotel sales by multiplying number of rooms by room days (365), occupancy rates for the area (74.1 percent), and average hotel sales per room (\$159).

The data on occupancy rates and sales per room were taken from Laventhol & Horwath's 1985 survey. To deflate values prior to 1985 to current dollars, the Consumer Price Index-Other Goods and Services was used and the formula adjustments appear below.

1979 ( $C * 365 * .741 * \$159 * .62$ )  
1980 ( $C * 365 * .741 * \$159 * .67$ )  
1981 ( $C * 365 * .741 * \$159 * .73$ )  
1982 ( $C * 365 * .741 * \$159 * .81$ )  
1983 ( $C * 365 * .741 * \$159 * .90$ )  
1984 ( $C * 365 * .741 * \$159 * .96$ )

Column H -  $F * \$19,843 * .0322$

Column H converts employment in Virginia by Virginia residents to tax revenues to the state from the personal income tax. The average service industry wage (nationally) for the latest period (1983) was \$19,843. (Source: Table 693: Average Annual Total Compensation and Wages and Salaries Per Full-Time Equivalent Employee, by Industry, Statistical Abstract of the United States 1985.) This is multiplied by the effective tax rate of .0322.

To estimate personal income taxes from employment in service industry for years before 1983 the following formula adjustments were developed from Table 693.

$$1980 (F * \$15,246 * .0322)$$

$$1981 (F * \$16,914 * .0322)$$

$$1982 (F * \$18,581 * .0322)$$

$$\text{Column I} - G * .03$$

Column I converts hotel sales to state sales tax revenues through imposition of the 3 percent tax rate.

$$\text{Column J} - \text{Column E} * \$82$$

Column J converts employment in Virginia to tax revenues to the State from the corporate income tax. For 1982, \$199,522,079 was collected and Virginia had employment of 2,447,000. This converts to a corporate tax revenue per unit of employment of \$82. (Source: Table 2.2: Number of Corporate Returns, Taxable Income, and Tax Assessed, Department of Taxation Annual Report 1983-1984.)

To adjust corporate income taxes to current dollars the following formula adjustments were developed from Table 2.2 and employment data from the Bureau of Labor Statistics.

$$1979 (E * \$82 * .85)$$

$$1980 (E * \$82 * .89)$$

$$1981 (E * \$82 * 1.09)$$

$$\text{Column K} - B * 952 * \$130 * .74 * .0322$$

Column K converts construction into an estimate of total earnings in Virginia by Virginia residents and personal income tax revenues. An estimate of the square feet per room, 952, was obtained from 6 high-rise hotels built in Crystal City since 1978. Construction costs are stated as \$130 per square foot. The source of the construction cost figure is the cost of high-rise office construction reported in Metropolitan Washington Council of Government Commercial Construction Indicators in the Washington Region - First Quarter of 1985. The earnings multiplier for sector 110202, New High-rise Construction, is .7448 (rounded to .74). The source of the earnings multiplier was the RIMS II model developed by the Bureau of Economic Analysis. The effective tax rate on adjusted gross income is .0322 for 1982. (Source: Department of Taxation Annual Report 1983-1984.)

To estimate personal income taxes generated by construction activity for years before 1984 the following formula adjustments were developed using the Boeckl Index for construction costs of office, hotel, and high-rise apartment buildings.

$$1978 (B * 952 * \$130 * .64 * .74 * .0322)$$

$$1979 (B * 952 * \$130 * .69 * .74 * .0322)$$



1980 (B \* 952 \* \$130 \* .75 \* .74 \* .0322)  
 1981 (B \* 952 \* \$130 \* .83 \* .74 \* .0322)  
 1982 (B \* 952 \* \$130 \* .90 \* .74 \* .0322)  
 1983 (B \* 952 \* \$130 \* .96 \* .74 \* .0322)

Column L = Columns H + I + J + K

Column L states total tax revenues that accrue to the State as a result of hotel development.

Residential

Column A - Year construction completed.

Column B - Projections of build-out by number of dwelling units.

Column C =  $\sum_{t=1}^t B$

Column C runs a cumulative total of dwelling units added through the year.

Column D = B \* \$110,000

Column D places a value of construction on dwelling units using the average price of houses provided by the Northern Virginia Board of Realtors for the six-month period January 1985 through June 1985 in Northern Virginia.

The values for prior years, also provided by the Northern Virginia Board of Realtors, formed the basis for the following formula adjustments regarding residential housing values.

1978 (B \* \$71,639)  
 1979 (B \* \$79,838)  
 1980 (B \* \$90,744)  
 1981 (B \* \$100,050)  
 1982 (B \* \$103,631)  
 1983 (B \* \$105,388)  
 1984 (B \* \$108,049)

Column E = C \* \$982 \* .32

Column E converts residence to personal income tax revenues by applying average personal income tax returns for each Northern Virginia return (\$982) to each residence. (Source: Department of Taxation Annual Report 1983-1984.) This produces a conservative estimate, i.e., two or more unrelated individuals sharing a residence are counted for only one return.

The .32 factor accounts for the percentage of Northern Virginia residents working outside the state but paying state taxes. It represents the percentage of Virginians living in Metrorail station areas who work in downtown Washington. The source of the data is the 1980 census data compiled for the Northern Virginia Transportation Commission. The factor was applied so that the analysis would not double count tax revenues from individuals who work and live in Metrorail station areas.

To deflate personal income taxes to current dollars the following formula adjustments were developed from Table 1.8: Statewide Individual Income Taxes - Taxable Years 1973-1982, of the Department of Taxation Annual Report 1983-1984.

1978 (C \* \$982 \* .61 \* .32)  
1979 (C \* \$982 \* .70 \* .32)  
1980 (C \* \$982 \* .81 \* .32)  
1981 (C \* \$982 \* .92 \* .32)

F = D \* .65 \* .0322

Column F converts construction into an estimate of total earnings in Virginia by Virginia residents and personal income tax revenues. The earnings multiplier for sector 11.0104 new residential high-rise construction is .6499, (rounded to .65). The source of the earnings multiplier is the RIMS II model developed by the Bureau of Economic Analysis. The effective tax rate on adjusted gross income is .0322 for 1982. (Source: Department of Taxation Annual Report 1983-1984.)

Column G = D \* .0032

Column G applies the deed recording fee of 15¢/\$100, state share of transfer tax at 5¢/100, and deed of trust or mortgage recording fee of 15¢/\$100 applied at 80 percent of housing value.

Column H = E + F + G

Column H states total tax revenues that accrue to the state as a result of residential development.

#### INPUT-OUTPUT MODELING OF CONSTRUCTION AND OPERATIONS AND MAINTENANCE EXPENDITURES

This section documents the methodology employed using the input-output (I-O) model.

##### Economic Impact Analysis

The direct economic impacts resulting from establishing Metrorail service in Northern Virginia include:

- o Employment in the construction, operation, and maintenance of the Metrorail system.
- o Employment resulting from construction expenditures for development of office, commercial, residential, and hotel space.

The extent of the economic impacts will change over time. The initial impacts are due to the direct expenditures associated with construction of Metrorail and the employment and income generated for residents of the state. These direct and immediate effects will also provide additional

stimulation of economic impacts through a multiplier effect that results from spending income earned from construction activities for Metrorail projects.

Second, economic impacts will result from the direct operation and maintenance of Metrorail after its initial construction. This, in turn, will also have a multiplier effect on the economy. Third, Metrorail will be associated with development activities at Metrorail station sites. The expenditures in the form of construction costs will also have a multiplier effect on the economy.

#### Scope of Analysis

The economic impact analysis is presented in terms of the following assumptions:

- o The impact region is the Commonwealth of Virginia.
- o The overall Metrorail capital and operating and maintenance cost estimates have been provided by WMATA and are based on its most recently adopted construction schedule.
- o Construction expenditures for development of office, commercial, and hotel space were applied at \$130 per square foot. Housing construction is valued at \$110,000 per unit.
- o Estimates of employment were provided in full-time equivalent years by applying I-O direct labor coefficients factored by average wages.
- o Direct coefficients and earnings multipliers were applied from the latest Bureau of Economic Analysis (BEA) input-output tables for the State of Virginia.
- o The relevant industry sectors for the I-O analysis were:
  - 11.0302 New Railroads
  - 11.0202 New Office Buildings
  - 11.0104 New Residential High-rise Apartments
  - 65.0100 Railroads and Related Services
- o All expenditure and wage data were deflated to reflect current dollars.

#### The Use of Input-Output Analysis

The major advantage of using I-O techniques is that they allow estimation of both the direct and indirect economic effects of changes in demand for particular goods and services. For example, the construction of Metrorail requires an increase in the output of the construction industry. The increase in construction requires, among other things, higher steel production, which in turn requires more chemicals, iron ore, limestone,

etc. Another input to construction will be gravel, and the gravel industry will in turn require inputs of its own. I-O tables trace these input chains back through the economy in order to arrive at the total requirements needed to support a given increase in the final demand for Metrorail construction. The multiplier effects include both the direct inputs needed to build the line and the indirect inputs from supply industries needed to support the direct inputs.

These direct inputs and multiplier effects are further stated in terms of a wage bill which accrues to the benefit of resident Virginia workers. Use of direct coefficients and earnings multipliers allows estimates of total wages which are generated from all types of construction (and Metrorail operations and maintenance) expenditures.

Regional I-O tables that give multiplier effects relevant to the study areas have recently been developed by BEA, using its Regional Input-Output Modeling System (RIMS).

As a regional or state economy does not produce the same composition of goods and services that a national economy does, it is likely that, for a given change in final demand, the region or state will have to import some of the input needed to meet the demand change. Such imports represent "leakages" from the regional economy since their impacts occur outside the region.

The I-O model accounts for region leakages through the RIMS model development and the region specified by the user. In this case, the region consists of the Commonwealth of Virginia and leakages occur to the benefit of the national economy to the extent that the Commonwealth of Virginia is not self-sufficient across all input sectors.

The impacts resulting from the increased earnings of workers in the construction and other supply industries are estimated through earnings multipliers. Workers will spend a portion of their increased earnings on additional goods and services, and these consumer demands will generate further multiplier effects in the same way that the increase in Metrorail construction did. The RIMS I-O tables take the impacts of these "induced" earnings into account by treating households as a separate "sector" of the economy.

#### Metrorail Construction and Operation Impacts

The RIMS analysis divides the regional economy into 39 input and 531 output sectors. Thus, impacts due to construction and operations can be estimated by assigning the relevant expenditures to detailed output categories. For example, construction expenditures (excluding rolling stock) were assigned to I-O Sector 11.0302--New Railroad Construction. Each dollar of final demand for new railroad construction generates \$.4323 to households in Virginia resident income.

The regional I-O tables account for the induced impacts of increased earnings of workers. To include these effects, the RIMS model must incorporate specific estimates of the proportion of each dollar spent in



each industry on labor. These estimates are based on aggregated historical data and thus may differ from the actual labor expenditures by WMATA and the various developers. For Sector 11.302, New Railroad Construction, the earnings multiplier is .7871. This may be interpreted in two ways. First, a dollar of new railroad construction generates a total of \$.7871 to households in Virginia resident income. Second, \$.4323 in direct household income has a multiplier of 1.82 (.7871 divided by .4323).

#### Impacts From Development

Construction (and operations and maintenance) of Metrorail generates direct, indirect, and induced economic impacts. These impacts are also generated from development activities that result in construction expenditures for the various types of development:

- o office
- o commercial
- o residential
- o hotel

These impacts can be estimated through I-O modeling by assigning construction expenditures to the following I-O sectors:

- o new office buildings (which accounts for retail and hotel)
- o new residential high-rise apartments
- o new stores and restaurants

The data on construction cost estimates are derived from development projections combined with cost data compiled by the Washington Council of Governments and interviews with area developers.

APPENDIX B  
DETAILED PROJECTIONS OF DEVELOPMENT

ACTUAL AND PROJECTED DEVELOPMENT  
ROSSLYN STATION AREA\*

<u>Year</u>	<u>Office (Thousands of Square Feet)</u>	<u>Retail (Thousands of Square Feet)</u>	<u>Hotel (Rooms)</u>	<u>Residential (Units)</u>
1978	0	0	0	0
1979	0	12.6	0	20
1980	918.0	65.7	0	19
1981	280.0	0	0	42
1982	438.0	202.7	0	0
1983	268.0	13.0	0	10
1984	0	0	0	18
1985	457.9	61.0	0	357
1986	161.8	0	0	712
1987-1995	<u>283.4</u>	<u>31.2</u>	<u>532</u>	<u>366</u>
TOTAL	2,807.1	386.2	532	1,544

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\* Metrorail service to Rosslyn began July 1977.



ACTUAL AND PROJECTED DEVELOPMENT  
COURT HOUSE STATION AREA\*

<u>Year</u>	<u>Office (Thousands of Square Feet)</u>	<u>Retail (Thousands of Square Feet)</u>	<u>Hotel (Rooms)</u>	<u>Residential (Units)</u>
1980	0	0	0	4
1981	0	0	0	14
1982	46.1	0	0	0
1983	367.7	0	0	240
1984	0	0	0	16
1985	194.7	0	0	52
1986	343.5	11.5	0	0
1987-1995	<u>1,287.3</u>	<u>140.9</u>	<u>324</u>	<u>1,797</u>
TOTAL	2,239.3	152.4	324	2,123

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\* Metrorail service to Court House began December 1979.

PROJECTED DEVELOPMENT  
CLARENDON STATION AREA\*

<u>Year</u>	<u>Office</u> <u>(Thousands of</u> <u>Square Feet)</u>	<u>Retail</u> <u>(Thousands of</u> <u>Square Feet)</u>	<u>Hotel</u> <u>(Rooms)</u>	<u>Residential</u> <u>(Units)</u>
1986	213.0	45.1	0	0
1987-1995	<u>170.0</u>	<u>0</u>	<u>0</u>	<u>0</u>
TOTAL	383.0	45.1	0	0

---

\* Metrorail service to Clarendon began December 1979.

ACTUAL AND PROJECTED DEVELOPMENT  
 VIRGINIA SQUARE STATION AREA\*

<u>Year</u>	<u>Office (Thousands of Square Feet)</u>	<u>Retail (Thousands of Square Feet)</u>	<u>Hotel (Rooms)</u>	<u>Residential (Units)</u>
1980	0	0	0	6
1981	0	0	0	0
1982	0	0	0	0
1983	0	0	0	12
1984	0	0	0	0
1985	0	0	0	0
1986	42.6	0	0	0
1987-1995	<u>441.7</u>	<u>0</u>	<u>0</u>	<u>0</u>
TOTAL	484.3	0	0	18

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\* Metrorail service to Virginia Square began December 1979.

ACTUAL AND PROJECTED DEVELOPMENT  
BALLSTON STATION AREA\*

Year	Office (Thousands of Square Feet)	Retail (Thousands of Square Feet)	Hotel (Rooms)	Residential (Units)
1980	60.5	0	0	96
1981	0	0	0	130
1982	0	0	0	0
1983	0	0	0	74
1984	0	0	0	14
1985	59.7	0	0	325
1986	649.0	765.7	0	557
1987-1995	<u>3,204.3</u>	<u>116.9</u>	<u>461</u>	<u>1,786</u>
TOTAL	3,973.5	882.6	461	2,982

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\* Metrorail service to Ballston began December 1979.

ACTUAL AND PROJECTED DEVELOPMENT  
 PENTAGON CITY STATION AREA\*

<u>Year</u>	<u>Office (Thousands of Square Feet)</u>	<u>Retail (Thousands of Square Feet)</u>	<u>Hotel (Rooms)</u>	<u>Residential (Units)</u>
1978	0	0	0	240
1979	0	0	0	522
1980	0	0	0	0
1981	0	0	0	0
1982	253.5	0	0	0
1983	0	0	0	0
1984	309.6	0	0	0
1985	0	0	0	0
1986	0	0	0	0
1987-1995	<u>686.9</u>	<u>1,019.3</u>	<u>450</u>	<u>624</u>
TOTAL	1,250.0	1,019.3	450	1,386

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\* Metrorail service to Pentagon City began July 1977.

ACTUAL AND PROJECTED DEVELOPMENT  
CRYSTAL CITY STATION AREA\*

<u>Year</u>	<u>Office</u> <u>(Thousands of</u> <u>Square Feet)</u>	<u>Retail</u> <u>(Thousands of</u> <u>Square Feet)</u>	<u>Hotel</u> <u>(Rooms)</u>	<u>Residential</u> <u>(Units)</u>
1978	342.6	0	0	0
1979	231.1	0	0	0
1980	445.0	0	0	0
1981	349.0	69.0	0	522
1982	414.0	7.0	1,065	0
1983	0	0	197	135
1984	0	0	0	0
1985	792.0	13.4	267	181
1986	444.5	4.9	500	409
1987-1995	<u>1,819.3</u>	<u>41.7</u>	<u>1,080</u>	<u>1,127</u>
TOTAL	4,837.5	136.0	3,109	2,374

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\* Metrorail service to Crystal City began July 1977.

ACTUAL AND PROJECTED DEVELOPMENT  
BRADDOCK ROAD STATION AREA\*

<u>Year</u>	<u>Office</u> <u>(Thousands of</u> <u>Square Feet)</u>	<u>Retail</u> <u>(Thousands of</u> <u>Square Feet)</u>	<u>Hotel</u> <u>(Rooms)</u>	<u>Residential</u> <u>(Units)</u>
1984	0	0	0	0
1985	0	0	0	0
1986	281.1	49.6	0	0
1987-1995	<u>145.9</u>	<u>25.7</u>	<u>0</u>	<u>291</u>
TOTAL	427.0	75.3	0	291

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\* Metrorail service to Braddock Road began December 1983.



ACTUAL AND PROJECTED DEVELOPMENT  
KING STREET STATION AREA\*

<u>Year</u>	<u>Office (Thousands of Square Feet)</u>	<u>Retail (Thousands of Square Feet)</u>	<u>Hotel (Rooms)</u>	<u>Residential (Units)</u>
1984	222.3	39.2	0	96**
1985	345.9	61.0	0	0
1986	35.9	6.3	0	0
1987-1995	<u>977.6</u>	<u>172.5</u>	<u>250</u>	<u>110</u>
TOTAL	1,581.7	279.0	250	206

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\* Metrorail service to King Street began December 1983.

\*\* Completed 1983.

ACTUAL AND PROJECTED DEVELOPMENT  
EISENHOWER AVENUE STATION AREA\*

<u>Year</u>	<u>Office</u> (Thousands of Square Feet)	<u>Retail</u> (Thousands of Square Feet)	<u>Hotel</u> (Rooms)	<u>Residential</u> (Units)
1984	24.7	4.4	0	0
1985	144.5	25.5	0	0
1986	0	0	0	0
1987-1995	<u>731.0</u>	<u>129.0</u>	<u>136</u>	<u>0</u>
TOTAL	900.2	158.9	136	0

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\* Metrorail service to Eisenhower Avenue began December 1983.

PROJECTED DEVELOPMENT  
WEST FALLS CHURCH STATION AREA\*

<u>Year</u>	<u>Office</u> <u>(Thousands of</u> <u>Square Feet)</u>	<u>Retail</u> <u>(Thousands of</u> <u>Square Feet)</u>	<u>Hotel</u> <u>(Rooms)</u>	<u>Residential</u> <u>(Units)</u>
1986-1990	289.9	0	0	300
1991-1995	<u>0</u>	<u>0</u>	<u>0</u>	<u>300</u>
TOTAL	289.9	0	0	600

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\* Metrorail service to West Falls Church will begin mid-1986.

Source: Fairfax County Office of Comprehensive Planning.

PROJECTED DEVELOPMENT  
DUNN LORING STATION AREA\*

<u>Year</u>	<u>Office (Thousands of Square Feet)</u>	<u>Retail (Thousands of Square Feet)</u>	<u>Hotel (Rooms)</u>	<u>Residential (Units)</u>
1986-1990	200	25	0	50
1991-1995	<u>350</u>	<u>45</u>	<u>0</u>	<u>80</u>
TOTAL	550	70	0	130

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\* Metrorail service to Dunn Loring will begin mid-1986.

Source: Fairfax County Office of Comprehensive Planning.

PROJECTED DEVELOPMENT  
VIENNA STATION AREA\*

<u>Year</u>	<u>Office</u> (Thousands of Square Feet)	<u>Retail</u> (Thousands of Square Feet)	<u>Hotel</u> (Rooms)	<u>Residential</u> (Units)
1986-1990	400	65	0	200
1991-1995	<u>700</u>	<u>115</u>	<u>200</u>	<u>300</u>
TOTAL	1,100	180	200	500

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\* Metrorail service to Vienna will begin mid-1986.

Source: Fairfax County Office of Comprehensive Planning.

ACTUAL AND PROJECTED DEVELOPMENT  
HUNTINGTON STATION AREA\*

<u>Year</u>	<u>Office (Thousands of Square Feet)</u>	<u>Retail (Thousands of Square Feet)</u>	<u>Hotel (Rooms)</u>	<u>Residential (Units)</u>
1983	0	0	0	254
1984	0	0	0	254
1985	0	0	0	254
1986-1990	50	10	0	1,154
1991-1995	<u>130</u>	<u>20</u>	<u>0</u>	<u>900</u>
TOTAL	180	30	200	2,816

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\* Metrorail service to Huntington began December 1983.

Source: Fairfax County Office of Comprehensive Planning and International  
Developers, Inc.

NET OFFICE DEVELOPMENT ATTRIBUTABLE TO METRORAIL  
 METRORAIL STATION AREAS BY JURISDICTION

(Thousands of Square Feet)

<u>Year</u>	<u>Arlington</u>	<u>Alexandria</u>	<u>Fairfax</u>
1978	202.4	0	0
1979	85.9	0	0
1980	1,208.7	0	0
1981	406.6	0	0
1982	921.6	0	0
1983	398.1	0	0
1984	64.4	162.0	0
1985	1,251.5	400.3	0
1986	1,594.1	221.8	0
1987-1995	<u>5,207.6</u>	<u>768.2</u>	<u>1,299.9</u>
TOTAL	11,340.9	1,552.3	1,299.9



NET HOTEL DEVELOPMENT ATTRIBUTABLE TO METRORAIL\*  
 METRORAIL STATION AREAS BY JURISDICTION

(Number of Rooms)

Year	<u>Arlington</u>	<u>Alexandria</u>	<u>Fairfax</u>
1978	0	0	0
1979	0	0	0
1980	0	0	0
1981	0	0	0
1982	888	0	0
1983	20	0	0
1984	(177)	0	0
1985	90	0	0
1986	323	0	0
1987-1995	<u>525</u>	<u>386</u>	<u>200</u>
TOTAL	1,669	386	200

\* The negative numbers result from the methodology, not from the effects of Metrorail. The without-Metrorail projections were annualized over the analysis period. Since actual development occurs in spurts, the net development in some years is negative.

NET RETAIL DEVELOPMENT ATTRIBUTABLE TO METRORAIL\*  
STATION AREAS BY JURISDICTION

(Thousands of Square Feet)

Year	<u>Arlington</u>	<u>Alexandria</u>	<u>Fairfax</u>
1978	(58.6)	0	0
1979	(48.1)	0	0
1980	.6	0	0
1981	1.7	0	0
1982	140.2	0	0
1983	(58.7)	0	0
1984	(73.9)	28.6	0
1985	(1.7)	70.6	0
1986	748.9	39.1	0
1987-1995	<u>546.2</u>	<u>135.5</u>	<u>250</u>
TOTAL	1,196.6	273.8	250

\* The negative numbers result from the methodology, not from the effects of Metrorail. The without-Metrorail projections were annualized over the analysis period. Since actual development occurs in spurts, the net development in some years is negative.

NET RESIDENTIAL DEVELOPMENT ATTRIBUTABLE TO METRORAIL\*  
 METRORAIL STATION AREAS BY JURISDICTION

(Number of Units)

<u>Year</u>	<u>Arlington</u>	<u>Alexandria</u>	<u>Fairfax</u>
1978	67	0	0
1979	367	0	0
1980	(100)	0	0
1981	480	0	0
1982	(233)	0	0
1983	235	96	0
1984	(193)	0	0
1985	671	0	0
1986	1,429	0	753
1987-1995	<u>3,266</u>	<u>401</u>	<u>1,561</u>
TOTAL	5,989	497	2,314

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\* The negative numbers result from the methodology, not from the effects of Metrorail. The without-Metrorail projections were annualized over the analysis period. Since actual development occurs in spurts, the net development in some years is negative.

ACTUAL AND PROJECTED OFFICE DEVELOPMENT  
ARLINGTON STATION AREAS  
ROSSLYN - BALLSTON CORRIDOR

YEAR	SPACE PROJECTION (SQUARE FEET IN 000'S)	SPACE OCCUPIED (SQUARE FEET IN 000'S)	EMPLOYMENT PER YEAR	EMPLOYMENT CUMULATIVE	VIRGINIA RESIDENT EMPLOYMENT CUMULATIVE	REVENUE FROM			OFFICE CONSTRUCTION IMPACT -		TOTAL STATE TAX REVENUES
						INDIVIDUAL INCOME TAXES	CORPORATE INCOME TAXES	REVENUE FROM INDIVIDUAL INCOME TAXES	REVENUE FROM CORPORATE INCOME TAXES		
1978	0.0	0.0	0	0	0	\$0	\$0	\$0	\$0	\$0	\$0
1979	0.0	0.0	0	0	0	\$0	\$0	\$0	\$0	\$0	\$0
1980	578.5	0.0	0	0	0	\$0	\$0	\$0	\$0	\$0	\$0
1981	280.0	880.7	4,403	4,403	3,822	\$3,004,081	\$0	\$2,273,281	\$0	\$2,273,281	\$2,273,281
1982	484.1	252.0	1,260	5,663	6,916	\$4,199,680	\$393,562	\$719,892	\$0	\$719,892	\$4,919,572
1983	635.7	415.7	2,178	7,841	6,807	\$5,815,147	\$464,387	\$1,349,611	\$0	\$1,349,611	\$7,269,158
1984	0.0	572.1	2,661	10,502	9,290	\$7,936,511	\$677,593	\$1,890,403	\$0	\$1,890,403	\$9,426,914
1985	712.3	0.0	0	10,702	9,290	\$7,534,511	\$877,593	\$0	\$0	\$877,593	\$8,412,104
1986	1,409.9	641.1	3,205	13,908	12,072	\$10,313,493	\$1,146,431	\$2,206,449	\$0	\$2,206,449	\$12,519,942
1987	528.5	1,268.9	6,345	20,252	17,577	\$15,018,403	\$1,660,465	\$4,367,163	\$0	\$4,367,163	\$19,885,566
1988	528.5	538.7	2,693	22,846	19,917	\$17,015,628	\$1,881,531	\$1,853,938	\$0	\$1,853,938	\$19,869,566
1989	528.5	538.7	2,693	25,439	22,354	\$19,012,854	\$2,102,378	\$1,853,938	\$0	\$1,853,938	\$21,726,792
1990	528.5	538.7	2,693	28,132	24,592	\$21,010,030	\$2,323,224	\$1,853,938	\$0	\$1,853,938	\$22,867,968
1991	528.5	538.7	2,693	31,025	26,730	\$23,007,305	\$2,548,071	\$1,853,938	\$0	\$1,853,938	\$25,665,271
1992	528.5	538.7	2,693	33,719	29,268	\$25,004,531	\$2,784,917	\$1,853,938	\$0	\$1,853,938	\$27,643,476
1993	528.5	538.7	2,693	36,412	31,605	\$27,001,757	\$2,985,764	\$1,853,938	\$0	\$1,853,938	\$29,841,478
1994	528.5	538.7	2,693	39,105	33,943	\$28,998,982	\$3,206,610	\$1,853,938	\$0	\$1,853,938	\$31,052,920
1995	528.5	528.7	2,693	41,798	36,281	\$30,996,202	\$3,427,457	\$1,853,938	\$0	\$1,853,938	\$33,277,602
TOTAL	9,887.0	8,359.7	41,798	41,798	36,281	\$246,271,170	\$17,393,120	\$29,492,435	\$0	\$29,492,435	\$301,056,825

ACTUAL AND PROJECTED RETAIL DEVELOPMENT  
ARLINGTON STATION AREAS  
ROSSLYN - BALLSTON CORRIDOR

YEAR	SPACE PROJECTION (SQUARE FEET IN 000'S)		SPACE OCCUPIED (SQUARE FEET IN 000'S)		SPACE CUMULATIVE (SQUARE FEET IN 000'S)		EMPLOYMENT PER YEAR	EMPLOYMENT CUMULATIVE	VIRGINIA RESIDENT EMPLOYMENT CUMULATIVE	SALES	REVENUE FROM			REVENUE FROM			REVENUE FROM		
	INDIVIDUAL INCOME TAXES	CORPORATE INCOME TAXES	TOTAL STATE TAI REVENUES	INDIVIDUAL INCOME TAXES	CORPORATE INCOME TAXES	TOTAL STATE TAI REVENUES					INDIVIDUAL INCOME TAXES	CORPORATE INCOME TAXES	TOTAL STATE TAI REVENUES	INDIVIDUAL INCOME TAXES	CORPORATE INCOME TAXES	TOTAL STATE TAI REVENUES	INDIVIDUAL INCOME TAXES	CORPORATE INCOME TAXES	TOTAL STATE TAI REVENUES
1978	0.0	0.0	0.0	0.0	0.0	0.0	0	0	0	50	50	50	50	50	50	50	50	50	50
1979	12.4	11.3	11.3	11.3	11.3	11.3	23	23	20	61,124,924	63,748	67,898	69,931	69,931	69,931	69,931	69,931	69,931	69,931
1980	45.7	59.1	59.1	70.5	70.5	70.5	118	141	122	67,777,869	123,312	152,474	152,474	152,474	152,474	152,474	152,474	152,474	152,474
1981	0.0	0.0	0.0	70.5	70.5	70.5	0	141	122	88,213,783	126,418	155,844	155,844	155,844	155,844	155,844	155,844	155,844	155,844
1982	202.7	182.4	182.4	252.7	252.7	252.7	365	506	431	136,418,812	1912,544	2216,549	2216,549	2216,549	2216,549	2216,549	2216,549	2216,549	2216,549
1983	13.0	11.7	11.7	264.4	264.4	264.4	23	529	459	132,816,480	1984,312	2328,311	2328,311	2328,311	2328,311	2328,311	2328,311	2328,311	2328,311
1984	0.0	0.0	0.0	264.4	264.4	264.4	0	529	459	132,816,480	1984,312	2328,311	2328,311	2328,311	2328,311	2328,311	2328,311	2328,311	2328,311
1985	41.0	54.9	54.9	319.3	319.3	319.3	110	639	555	139,618,080	2046,822	2466,822	2466,822	2466,822	2466,822	2466,822	2466,822	2466,822	2466,822
1986	822.3	740.1	740.1	1,059.4	1,059.4	1,059.4	1,400	2,119	1,831	1,131,284,480	1882,218	2266,218	2266,218	2266,218	2266,218	2266,218	2266,218	2266,218	2266,218
1987	32.1	38.9	38.9	1,088.3	1,088.3	1,088.3	58	2,177	1,890	1,134,949,840	1986,272	2370,274	2370,274	2370,274	2370,274	2370,274	2370,274	2370,274	2370,274
1988	32.1	28.9	28.9	1,117.4	1,117.4	1,117.4	58	2,235	1,960	1,136,551,480	1986,272	2370,274	2370,274	2370,274	2370,274	2370,274	2370,274	2370,274	2370,274
1989	32.1	28.9	28.9	1,146.2	1,146.2	1,146.2	58	2,292	1,990	1,142,133,740	1986,272	2370,274	2370,274	2370,274	2370,274	2370,274	2370,274	2370,274	2370,274
1990	32.1	28.9	28.9	1,175.1	1,175.1	1,175.1	58	2,350	2,040	1,145,716,128	1986,272	2370,274	2370,274	2370,274	2370,274	2370,274	2370,274	2370,274	2370,274
1991	32.1	28.9	28.9	1,204.0	1,204.0	1,204.0	58	2,408	2,090	1,149,298,480	1986,272	2370,274	2370,274	2370,274	2370,274	2370,274	2370,274	2370,274	2370,274
1992	32.1	28.9	28.9	1,232.9	1,232.9	1,232.9	58	2,466	2,140	1,152,880,840	1986,272	2370,274	2370,274	2370,274	2370,274	2370,274	2370,274	2370,274	2370,274
1993	32.1	28.9	28.9	1,261.8	1,261.8	1,261.8	58	2,514	2,190	1,156,463,200	1986,272	2370,274	2370,274	2370,274	2370,274	2370,274	2370,274	2370,274	2370,274
1994	32.1	28.9	28.9	1,290.7	1,290.7	1,290.7	58	2,581	2,261	1,160,045,540	1986,272	2370,274	2370,274	2370,274	2370,274	2370,274	2370,274	2370,274	2370,274
1995	32.1	28.9	28.9	1,319.6	1,319.6	1,319.6	58	2,649	2,329	1,163,627,880	1986,272	2370,274	2370,274	2370,274	2370,274	2370,274	2370,274	2370,274	2370,274
TOTAL	1,464.2	1,256.7	1,256.7	1,290.7	1,290.7	1,290.7	2,581	2,581	2,261	11,464,218,472	183,924,540	219,837,346	219,837,346	219,837,346	219,837,346	219,837,346	219,837,346	219,837,346	219,837,346

ACTUAL AND PROJECTED HOTEL DEVELOPMENT  
ARLINGTON STATION AREAS  
ROSSLYN - BALLSTON CORRIDOR

YEAR	NUMBER OF ROOMS	NUMBER OF ROOMS CUMULATIVE	EMPLOYMENT PER YEAR	EMPLOYMENT CUMULATIVE	VIRGINIA RESIDENT EMPLOYMENT CUMULATIVE	SALES	REVENUE FROM			REVENUE FROM			CONSTRUCTION IMPACTS -		
							INDIVIDUAL INCOME TAXES	SALES TAXES	CORPORATE INCOME TAXES	INDIVIDUAL INCOME TAXES	REVENUE FROM CORPORATE INCOME TAXES	REVENUE FROM INDIVIDUAL INCOME TAXES	TOTAL STATE TAX REVENUES		
1978	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1979	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1980	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1981	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1982	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1983	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1984	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1985	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1986	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1987	121	121	121	121	185	\$5,202,674	\$67,107	\$154,188	\$0	\$0	\$0	\$0	\$0	\$0	\$0
1988	362	483	362	483	402	\$17,810,822	\$234,782	\$587,325	\$7,922	\$37,866	\$1,008,542	\$534,873	\$589,957	\$1,930,414	\$1,930,414
1989	122	585	122	585	588	\$25,157,302	\$324,663	\$754,719	\$47,870	\$47,870	\$359,772	\$359,772	\$1,486,905	\$1,486,905	\$1,486,905
1990	122	707	122	707	614	\$36,403,782	\$382,185	\$912,113	\$57,874	\$57,874	\$359,772	\$359,772	\$1,721,962	\$1,721,962	\$1,721,962
1991	122	819	122	829	720	\$35,458,242	\$459,747	\$1,049,508	\$47,878	\$47,878	\$359,772	\$359,772	\$1,957,015	\$1,957,015	\$1,957,015
1992	122	951	122	951	825	\$40,894,742	\$527,428	\$1,224,882	\$77,882	\$77,882	\$359,772	\$359,772	\$2,192,085	\$2,192,085	\$2,192,085
1993	122	1,073	122	1,073	931	\$46,143,222	\$595,898	\$1,384,377	\$87,884	\$87,884	\$359,772	\$359,772	\$2,427,145	\$2,427,145	\$2,427,145
1994	122	1,195	122	1,195	1,037	\$51,389,702	\$662,752	\$1,541,491	\$97,890	\$97,890	\$359,772	\$359,772	\$2,662,205	\$2,662,205	\$2,662,205
1995	122	1,317	122	1,317	1,143	\$56,634,182	\$730,613	\$1,699,885	\$107,894	\$107,894	\$359,772	\$359,772	\$2,897,245	\$2,897,245	\$2,897,245
TOTAL	1,317	1,317	1,317	1,317	1,163	\$311,391,493	\$4,815,887	\$9,241,745	\$593,742	\$593,742	\$3,883,771	\$3,883,771	\$17,835,145	\$17,835,145	\$17,835,145

ACTUAL AND PROJECTED RESIDENTIAL DEVELOPMENT  
ARLINGTON STATION AREAS  
ROSSLYN - BALLSTON CORRIDOR

YEAR	NUMBER OF NEW UNITS	NUMBER OF NEW UNITS CUMULATIVE	VALUE OF HOUSING	REVENUE FROM INDIVIDUAL INCOME TAXES	RESIDENTIAL CONSTRUCTION IMPACT - REVENUE FROM INDIVIDUAL INCOME TAXES	RECORDING FEES	DOCUMENT FEES	TOTAL STATE TAX REVENUES
1978	0	0	\$0	\$0	\$0	\$0	\$0	\$0
1979	20	20	\$1,600,000	\$4,399	\$33,488	\$5,120	\$43,007	
1980	125	145	\$11,375,000	\$36,907	\$238,079	\$36,400	\$311,386	
1981	186	331	\$18,600,000	\$95,692	\$389,298	\$59,520	\$544,510	
1982	0	331	\$0	\$104,013	\$0	\$0	\$104,013	
1983	134	667	\$35,280,000	\$209,598	\$738,410	\$112,894	\$1,060,904	
1984	88	755	\$5,184,000	\$224,682	\$107,501	\$16,587	\$347,772	
1985	714	1,469	\$80,740,000	\$475,334	\$1,687,808	\$258,368	\$2,403,590	
1986	406	2,718	\$139,550,000	\$854,104	\$2,921,619	\$446,588	\$4,222,411	
1987	628	3,822	\$44,670,000	\$981,684	\$934,734	\$142,912	\$2,059,332	
1988	406	4,228	\$76,780,000	\$1,201,025	\$1,607,007	\$245,696	\$3,053,727	
1989	406	4,634	\$94,640,000	\$1,326,607	\$934,734	\$142,912	\$2,406,253	
1990	406	5,040	\$94,660,000	\$1,456,188	\$934,734	\$142,912	\$2,533,834	
1991	406	5,446	\$44,550,000	\$1,582,770	\$934,734	\$142,912	\$2,661,415	
1992	406	5,852	\$44,660,000	\$1,711,351	\$934,734	\$142,912	\$2,788,997	
1993	406	6,258	\$44,560,000	\$1,838,932	\$934,734	\$142,912	\$2,916,578	
1994	406	6,664	\$44,660,000	\$1,966,514	\$934,734	\$142,912	\$3,044,160	
1995	406	7,070	\$44,660,000	\$2,094,095	\$934,734	\$142,912	\$3,171,741	
TOTAL	6,664	6,664	\$726,429,000	\$16,146,899	\$15,204,159	\$2,324,570	\$33,675,631	



ACTUAL AND PROJECTED OFFICE DEVELOPMENT  
ARLINGTON STATION AREAS  
JEFFERSON DAVIS CORRIDOR

YEAR	SPACE PROJECTION		EMPLOYMENT PER YEAR	EMPLOYMENT CUMULATIVE	VIRGINIA RESIDENT EMPLOYMENT CUMULATIVE		REVENUE FROM INDIVIDUAL INCOME TAXES	REVENUE FROM CORPORATE INCOME TAXES	OFFICE CONSTRUCTION IMPACT - REVENUE FROM INDIVIDUAL INCOME TAXES		TOTAL STATE TAX REVENUES
	SPACE FEET (IN 000'S)	SPACE OCCUPIED (SQUARE FEET (IN 000'S))			REVENUE FROM INDIVIDUAL INCOME TAXES	REVENUE FROM CORPORATE INCOME TAXES					
1979	112.5										
1979	271.1	308.7	1,542	1,542	1,339	1802,271	\$107,454	\$107,454	\$679,201	\$679,201	\$679,201
1980	347.0	208.0	1,040	2,582	2,241	\$1,550,718	\$188,409	\$188,409	\$893,797	\$1,401,695	\$1,401,695
1981	349.0	100.5	2,003	4,584	3,979	\$3,117,499	\$407,731	\$407,731	\$1,033,837	\$2,772,944	\$2,772,944
1982	647.5	311.1	1,571	6,155	5,342	\$4,568,084	\$504,681	\$504,681	\$897,293	\$4,434,523	\$4,434,523
1983	0.0	600.9	3,004	9,159	7,917	\$6,791,568	\$750,789	\$750,789	\$1,860,907	\$6,929,675	\$6,929,675
1984	309.8	0.0	0	9,159	7,919	\$6,791,568	\$750,789	\$750,789	\$0	\$7,542,557	\$7,542,557
1985	792.0	278.6	1,393	10,552	9,159	\$7,024,723	\$845,231	\$845,231	\$959,029	\$8,501,586	\$8,501,586
1986	341.5	712.8	3,544	14,116	12,252	\$10,467,665	\$1,157,479	\$1,157,479	\$2,453,331	\$11,143,162	\$11,143,162
1987	278.5	400.1	2,000	16,116	15,989	\$11,250,984	\$1,321,500	\$1,321,500	\$1,376,901	\$13,002,045	\$13,002,045
1988	278.5	350.7	1,253	17,369	15,074	\$12,830,353	\$1,424,266	\$1,424,266	\$862,693	\$14,135,177	\$14,135,177
1989	278.5	453.7	1,253	18,622	16,164	\$13,807,722	\$1,527,023	\$1,527,023	\$862,693	\$15,167,312	\$15,167,312
1990	278.5	250.7	1,253	19,875	17,252	\$14,739,091	\$1,639,799	\$1,639,799	\$862,693	\$16,199,448	\$16,199,448
1991	278.5	250.7	1,253	21,129	18,340	\$15,688,460	\$1,732,566	\$1,732,566	\$862,693	\$17,231,583	\$17,231,583
1992	278.5	250.7	1,253	22,382	19,428	\$16,597,829	\$1,835,332	\$1,835,332	\$862,693	\$18,263,719	\$18,263,719
1993	278.5	250.7	1,253	23,635	20,515	\$17,527,193	\$1,938,099	\$1,938,099	\$862,693	\$19,295,854	\$19,295,854
1994	278.5	250.7	1,253	24,889	21,603	\$18,456,557	\$2,040,865	\$2,040,865	\$862,693	\$20,327,990	\$20,327,990
1995	278.5	250.7	1,253	26,142	22,691	\$19,385,921	\$2,143,632	\$2,143,632	\$862,693	\$21,360,125	\$21,360,125
TOTAL	4,007.8	5,238.4	26,142	26,142	22,691	\$182,924,260	\$20,328,037	\$20,328,037	\$17,518,681	\$220,780,998	\$220,780,998

ACTUAL AND PROJECTED RETAIL DEVELOPMENT  
ARLINGTON STATION AREAS  
JEFFERSON DAVIS CORRIDOR

YEAR	SPACE PROJECTION (SQ. FEET IN 000'S)	SPACE OCCUPIED (SQ. FEET IN 000'S)	SPACE CUMULATIVE (SQ. FEET IN 000'S)	EMPLOYMENT PER YEAR	EMPLOYMENT CUMULATIVE	VIRGINIA RESIDENT EMPLOYMENT CUMULATIVE	SALES	REVENUE FROM			RETAIL CONSTRUCTION IMPACT -			
								INDIVIDUAL INCOME TAXES	SALES TAXES	CORPORATE INCOME TAXES	REVENUE FROM INDIVIDUAL INCOME TAXES	REVENUE FROM CORPORATE INCOME TAXES	TOTAL STATE TAX REVENUES	
1978	0.0													
1977	0.0	0.0	0.0	0	0	0	10	10	10	10	10	10	10	50
1980	0.0	0.0	0.0	0	0	0	10	10	10	10	10	10	10	50
1981	69.0	0.0	0.0	0	0	0	10	10	10	10	10	10	10	50
1982	7.0	62.1	62.1	124	124	108	17,238,374	1,117,151	1,117,151	1,117,151	1,117,402	1,117,402	1,117,402	1,177,402
1983	0.0	63.1	68.4	13	137	119	18,317,152	1,546,951	1,546,951	1,546,951	1,546,951	1,546,951	1,546,951	53,4,782
1984	0.0	63.1	68.4	0	137	119	18,481,400	1,554,951	1,554,951	1,554,951	1,554,951	1,554,951	1,554,951	53,222,417
1985	13.4	63.1	68.4	0	137	119	18,481,400	1,554,951	1,554,951	1,554,951	1,554,951	1,554,951	1,554,951	53,222,417
1986	4.9	12.1	80.5	24	161	140	19,977,040	1,664,951	1,664,951	1,664,951	1,664,951	1,664,951	1,664,951	53,222,417
1987	117.9	4.4	84.9	9	170	147	110,533,880	1,704,444	1,704,444	1,704,444	1,704,444	1,704,444	1,704,444	1,704,444
1988	117.8	104.1	191.0	212	382	332	123,481,520	1,159,010	1,159,010	1,159,010	1,159,010	1,159,010	1,159,010	1,159,010
1989	117.9	184.1	297.1	212	594	516	126,829,140	1,267,362	1,267,362	1,267,362	1,267,362	1,267,362	1,267,362	1,267,362
1990	117.9	184.1	403.1	202	804	700	149,994,000	1,335,712	1,335,712	1,335,712	1,335,712	1,335,712	1,335,712	1,335,712
1991	117.9	184.1	509.1	212	1,019	884	142,154,440	1,424,041	1,424,041	1,424,041	1,424,041	1,424,041	1,424,041	1,424,041
1992	117.9	184.1	615.4	212	1,231	1,068	178,312,000	1,512,410	1,512,410	1,512,410	1,512,410	1,512,410	1,512,410	1,512,410
1993	117.9	184.1	721.5	212	1,443	1,253	189,449,720	1,600,759	1,600,759	1,600,759	1,600,759	1,600,759	1,600,759	1,600,759
1994	117.9	184.1	827.4	212	1,655	1,437	192,437,340	1,689,108	1,689,108	1,689,108	1,689,108	1,689,108	1,689,108	1,689,108
1995	117.9	184.1	933.8	213	1,868	1,621	195,785,000	1,777,458	1,777,458	1,777,458	1,777,458	1,777,458	1,777,458	1,777,458
TOTAL	1,155.4	933.8	933.8	1,848	1,868	1,621	1,610,795,720	14,103,425	14,103,425	14,103,425	14,103,425	14,103,425	14,103,425	14,103,425

ACTUAL AND PROJECTED HOTEL DEVELOPMENT  
ARLINGTON STATION AREAS  
JEFFERSON DAVIS CORRIDOR

YEAR	NUMBER OF ROOMS	NUMBER OF ROOMS CUMULATIVE	EMPLOYMENT PER YEAR	EMPLOYMENT CUMULATIVE	VIRGINIA			CONSTRUCTION IMPACTS -			TOTAL STATE TAX REVENUES	
					RESIDENT EMPLOYMENT CUMULATIVE	SALES	REVENUE FROM INDIVIDUAL INCOME TAXES	REVENUE FROM SALES TAXES	REVENUE FROM CORPORATE INCOME TAXES	REVENUE FROM INDIVIDUAL INCOME TAXES		
1978	0	0	0	0	0	0	0	0	0	0	0	0
1979	0	0	0	0	0	0	0	0	0	0	0	0
1980	0	0	0	0	0	0	0	0	0	0	0	0
1981	0	0	0	0	0	0	0	0	0	0	0	0
1982	1,043	1,043	1845	1,065	924	627,877,345	6532,888	61,112,928	687,328	61,824,572	61,824,572	61,824,572
1983	197	1,242	197	1,262	1,095	148,893,849	6699,718	61,645,214	6103,484	6557,704	6557,704	61,579,910
1984	0	1,242	0	1,262	1,095	652,180,127	6699,910	61,563,804	6102,484	6557,704	6557,704	62,816,414
1985	247	1,519	267	1,317	1,317	665,753,017	6847,989	61,973,598	6173,378	6787,371	6787,371	62,366,398
1986	500	2,029	500	1,741	1,741	687,256,984	61,125,291	62,417,438	6164,378	6164,378	6164,378	62,733,318
1987	170	2,199	170	1,909	1,909	694,545,453	61,219,574	62,836,378	6188,318	6188,318	6188,318	62,883,794
1988	170	2,349	170	2,054	2,054	6181,876,322	61,313,857	63,056,290	6194,198	6194,198	6194,198	63,045,714
1989	170	2,539	170	2,204	2,204	6189,186,991	61,488,139	63,275,410	6288,198	6288,198	6288,198	63,273,249
1990	170	2,709	170	2,351	2,351	6116,497,648	61,502,422	63,494,930	6322,138	6322,138	6322,138	63,494,930
1991	170	2,879	170	2,497	2,497	6123,808,319	61,596,785	63,716,258	6324,878	6324,878	6324,878	63,716,258
1992	170	3,049	170	2,647	2,647	6131,118,898	61,698,987	63,933,570	6358,918	6358,918	6358,918	63,933,570
1993	170	3,219	170	2,794	2,794	6128,421,447	61,785,170	64,152,898	6213,958	6213,958	6213,958	64,152,898
1994	170	3,389	170	2,942	2,942	6145,740,356	61,879,553	64,372,210	6277,898	6277,898	6277,898	64,372,210
1995	170	3,559	170	3,089	3,089	6153,051,005	61,973,835	64,591,520	6291,838	6291,838	6291,838	64,591,520
TOTAL	3,559	3,559	3,559	3,559	3,089	61,485,324,202	618,394,531	647,159,719	61,710,754	61,710,754	61,710,754	672,311,040

ACTUAL AND PROJECTED RESIDENTIAL DEVELOPMENT  
 ARLINGTON STATION AREAS  
 JEFFERSON DAVIS CORRIDOR

YEAR	NUMBER OF NEW UNITS	NUMBER OF NEW UNITS CUMULATIVE	VALUE OF HOUSING	REVENUE FROM INDIVIDUAL INCOME TAXES	RESIDENTIAL CONSTRUCTION IMPACT - REVENUE FROM INDIVIDUAL INCOME TAXES	DOCUMENT RECORDING FEES	TOTAL STATE TAX REVENUES
1978	240	240	\$17,280,000	\$46,005	\$361,670	\$55,296	\$462,971
1979	522	762	\$41,760,000	\$167,616	\$574,037	\$133,632	\$1,175,284
1980	0	762	\$0	\$193,955	\$0	\$0	\$193,955
1981	522	1,284	\$52,200,000	\$371,205	\$1,092,546	\$167,040	\$1,630,791
1982	0	1,284	\$0	\$403,484	\$0	\$0	\$403,484
1983	135	1,419	\$14,175,000	\$445,907	\$296,683	\$45,360	\$787,949
1984	0	1,419	\$0	\$445,907	\$0	\$0	\$445,907
1985	181	1,600	\$19,910,000	\$502,784	\$416,716	\$63,712	\$983,212
1986	409	2,009	\$44,990,000	\$631,308	\$941,641	\$143,968	\$1,716,917
1987	195	2,204	\$21,450,000	\$692,585	\$448,949	\$68,640	\$1,210,173
1988	195	2,399	\$21,450,000	\$753,862	\$448,749	\$68,640	\$1,271,450
1989	195	2,594	\$21,450,000	\$815,139	\$448,749	\$68,640	\$1,332,727
1990	195	2,789	\$21,450,000	\$876,415	\$448,749	\$68,640	\$1,394,004
1991	195	2,984	\$21,450,000	\$937,692	\$448,949	\$68,640	\$1,455,281
1992	195	3,179	\$21,450,000	\$998,969	\$448,949	\$68,640	\$1,516,577
1993	195	3,374	\$21,450,000	\$1,060,246	\$448,949	\$68,640	\$1,577,834
1994	195	3,569	\$21,450,000	\$1,121,523	\$448,749	\$68,640	\$1,639,111
1995	195	3,764	\$21,450,000	\$1,182,799	\$448,949	\$68,640	\$1,700,388
TOTAL	3,764	3,764	\$383,365,000	\$11,647,400	\$8,023,829	\$1,226,768	\$20,897,957

ACTUAL AND PROJECTED OFFICE DEVELOPMENT  
ALEXANDRIA STATION AREAS

YEAR	COMBINED SPACE PROJECTION IN 000'S	OFFICE SPACE PROJECTION IN 000'S	RETAIL SPACE PROJECTION IN 000'S	OFFICE SPACE OCCUPIED IN 000'S	EMPLOYMENT PER YEAR	EMPLOYMENT CUMULATIVE	VIRGINIA RESIDENT EMPLOYMENT CUMULATIVE	REVENUE FROM			OFFICE CONSTRUCTION IMPACT -			TOTAL STATE INCOME TAXES
								INDIVIDUAL INCOME TAXES	CORPORATE INCOME TAXES	REVENUE FROM INDIVIDUAL INCOME TAXES	REVENUE FROM CORPORATE INCOME TAXES	INDIVIDUAL INCOME TAXES	REVENUE FROM INDIVIDUAL INCOME TAXES	
1984	270.3	246.9	43.4	222.2	1,111	1,111	944	8854,802	171,115	5744,495	91,318,974	5744,495	9744,885	5744,885
1985	276.9	270.6	86.3	441.3	3,207	2,318	2,860	12,640,375	672,640	1981,853	83,718,279	1981,853	12,640,375	12,640,375
1986	322.7	317.0	55.8	441.3	1,424	4,744	4,118	17,518,104	1,289,020	4,228,843	18,235,945	4,228,843	17,518,104	17,518,104
1987	344.9	342.3	42.7	485.5	678	5,422	4,796	18,872,382	1,428,195	4,752,143	19,252,717	4,752,143	18,872,382	18,872,382
1988	339.9	327.4	32.5	217.9	1,096	6,518	5,878	16,480,879	517,554	3,194,484	16,515,719	3,194,484	16,480,879	16,480,879
1989	324.9	276.2	48.7	147.7	573	7,091	6,451	15,135,670	454,578	1,855,740	15,315,719	1,855,740	15,135,670	15,135,670
1990	366.9	323.2	21.7	248.5	1,243	8,334	7,655	16,027,267	748,475	3,081,321	16,275,242	3,081,321	16,027,267	16,027,267
1991	349.5	297.8	52.5	110.8	556	8,890	7,936	15,658,275	571,923	1,921,285	15,871,082	1,921,285	15,658,275	15,658,275
1992	339.9	327.4	22.5	247.7	1,358	10,248	8,898	17,430,744	321,689	1,194,484	17,447,119	1,194,484	17,430,744	17,430,744
1993	354.9	359.7	45.3	214.7	573	10,821	9,195	17,555,954	484,485	1,803,800	17,527,339	1,803,800	17,555,954	17,555,954
1994	374.9	348.7	24.2	223.2	1,144	11,965	10,208	18,270,802	574,317	1,440,511	18,145,429	1,440,511	18,270,802	18,270,802
TOTAL	3,343.4	2,743.0	487.4	2,352.0	11,740	11,740	10,208	854,874,112	16,295,593	48,555,451	871,735,346	48,555,451	871,735,346	871,735,346

ACTUAL AND PROJECTED RETAIL DEVELOPMENT  
ALEXANDRIA STATION AREAS

YEAR	COMBINED SPACE PROJECTION (SQUARE FEET IN 000'S)	OFFICE SPACE PROJECTION (SQUARE FEET IN 000'S)	RETAIL SPACE PROJECTION (SQUARE FEET IN 000'S)	RETAIL SPACE OCCUPIED (SQUARE FEET IN 000'S)	RETAIL SPACE CUMULATIVE (SQUARE FEET IN 000'S)	EMPLOYMENT PER YEAR	EMPLOYMENT CUMULATIVE	VIRGINIA RESIDENT EMPLOYMENT CUMULATIVE	SALES	REVENUE FROM		REVENUE FROM		REVENUE FROM		TOTAL STATE TAX REVENUES
										INDIVIDUAL INCOME TAXES	SALES TAXES	CORPORATE INCOME TAXES	CONSTRUCTION IMPACT - REVENUE FROM INDIVIDUAL INCOME TAXES	RETAIL		
1984	290.5	246.7	43.4	39.2	39.2	78	78	68	14,847,776	132,453	1145,889	66,472	9,194,980	6,116,936		
1985	574.9	490.4	84.5	77.9	117.1	126	204	203	314,528,274	877,479	1,625,408	119,204	1,218,624	1,821,028		
1986	372.7	317.0	55.7	50.3	167.4	181	325	291	328,742,412	819,414	1,122,877	117,410	1,173,154	1,725,373		
1987	384.3	342.2	42.1	34.9	184.3	24	349	320	327,152,648	1,153,423	1,685,603	117,410	1,58,234	1,887,782		
1988	349.9	317.4	32.5	38.5	222.8	77	461	387	327,432,474	1,189,477	1,629,488	119,204	1,321,378	1,901,482		
1989	324.9	274.2	48.7	20.2	243.0	40	484	422	336,122,888	1,281,224	1,993,948	119,204	1,412,034	1,913,348		
1990	146.9	133.2	13.7	43.9	286.9	88	574	488	335,378,824	1,138,144	1,847,125	117,410	1,530,743	1,947,102		
1991	349.9	297.4	52.5	19.4	304.4	29	613	522	337,194,452	1,255,133	1,739,814	117,410	1,647,347	1,966,347		
1992	149.9	117.4	32.5	47.2	353.7	94	787	616	342,852,724	1,284,443	1,815,412	119,204	1,766,621	1,985,825		
1993	384.9	219.2	45.7	20.2	373.9	40	748	649	344,342,166	1,311,313	1,732,493	119,204	1,851,517	1,995,172		
1994	174.9	148.7	26.2	41.2	415.1	82	836	721	351,447,120	1,345,545	1,744,314	119,204	1,970,749	2,015,893		
TOTAL	3,249.4	2,742.0	487.4	415.1	415.1	830	830	721	3,334,005,288	12,256,163	17,282,136	1,194,396	17,079,811	21,350,514		

ACTUAL AND PROJECTED HOTEL DEVELOPMENT  
ALEXANDRIA STATION AREAS

YEAR	NUMBER OF ROOMS	NUMBER OF ROOMS CUMULATIVE	EMPLOYMENT PER YEAR	EMPLOYMENT CUMULATIVE	VIRGINIA RESIDENT EMPLOYMENT CUMULATIVE		SALES	REVENUE FROM INDIVIDUAL INCOME TAXES		REVENUE FROM SALES TAXES	REVENUE FROM CORPORATE INCOME TAXES		CONSTRUCTION IMPACTS - REVENUE FROM INDIVIDUAL INCOME TAXES		TOTAL STATE TAX REVENUES
					1985	1986		1987	1988		1989	1990	1991	1992	
1985	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1986	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1987	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1988	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1989	150	150	150	150	150	150	118,730,984	6138,451	6138,451	6322,530	130,500	1737,235	0	0	0
1990	0	150	0	150	150	150	118,730,984	6138,451	6138,451	6322,530	130,500	1737,235	0	0	0
1991	134	284	134	284	284	284	114,599,519	6214,877	6214,877	6497,984	131,452	1481,480	0	0	0
1992	0	284	0	284	284	284	114,599,519	6214,877	6214,877	6497,984	131,452	1481,480	0	0	0
1993	0	284	0	284	284	284	114,599,519	6214,877	6214,877	6497,984	131,452	1481,480	0	0	0
1994	0	284	0	284	284	284	114,599,519	6214,877	6214,877	6497,984	131,452	1481,480	0	0	0
1995	0	284	0	284	284	284	114,599,519	6214,877	6214,877	6497,984	131,452	1481,480	0	0	0
TOTAL	384	384	384	384	384	384	6104,497,562	31,287,488	31,287,488	33,134,987	5199,240	11,138,294	0	0	15,810,130



ACTUAL AND PROJECTED RESIDENTIAL DEVELOPMENT  
ALEXANDRIA STATION AREAS

YEAR	NUMBER OF NEW UNITS	NUMBER OF NEW UNITS CUMULATIVE	VALUE OF HOUSING	REVENUE FROM INDIVIDUAL INCOME TAXES	RESIDENTIAL CONSTRUCTION IMPACT - REVENUE FROM INDIVIDUAL INCOME TAXES	DOCUMENT RECORDING FEES	TOTAL STATE TAX REVENUES
1983	96	96	\$10,080,000	\$30,167	\$210,974	\$32,256	\$273,397
1984	0	96	50	\$30,167	50	50	\$30,167
1985	0	96	50	\$30,167	50	50	\$30,167
1986	0	96	50	\$30,167	50	50	\$30,167
1987	32	128	\$3,520,000	\$30,223	\$73,674	\$11,264	\$125,160
1988	32	160	\$3,520,000	\$50,278	\$73,674	\$11,264	\$135,216
1989	32	192	\$3,520,000	160,334	\$73,674	\$11,264	\$145,272
1990	142	334	\$15,620,000	\$104,956	\$326,927	\$49,984	\$481,867
1991	32	366	\$3,520,000	\$115,012	\$73,674	\$11,264	\$199,949
1992	32	398	\$3,520,000	\$125,068	\$73,674	\$11,264	\$210,005
1993	32	430	\$3,520,000	\$135,123	\$73,674	\$11,264	\$220,061
1994	32	462	\$3,520,000	\$145,179	\$73,674	\$11,264	\$230,116
1995	32	494	\$3,520,000	\$155,235	\$73,674	\$11,264	\$240,172
TOTAL	494	494	\$53,860,000	\$1,052,076	\$1,127,590	\$172,352	\$2,351,717

PROJECTED OFFICE DEVELOPMENT WITH METRO RAIL  
FAIRFAX STATION AREAS

YEAR	SPACE PROJECTION (SQUARE FEET IN 000'S)	SPACE OCCUPIED (SQUARE FEET IN 000'S)	EMPLOYMENT PER YEAR	EMPLOYMENT CUMULATIVE	VIRGINIA		REVENUE FROM		REVENUE FROM		OFFICE	
					RESIDENT EMPLOYMENT CUMULATIVE	0	INDIVIDUAL INCOME TAXES	CORPORATE INCOME TAXES	CONSTRUCTION IMPACT - REVENUE FROM INDIVIDUAL INCOME TAXES	TOTAL STATE TAX REVENUES		
1986	0 0	0 0	0	0	0	0	0	0	0	0	0	0
1987	235 0	235 0	1 058	1 058	918	\$784,207	\$84,715	\$727,945	\$727,945	\$727,945	\$727,945	\$727,945
1988	235 0	211 5	1 058	2 115	1 834	\$1,548,514	\$173,410	\$727,945	\$727,945	\$1,598,868	\$1,598,868	\$1,598,868
1989	235 0	211 5	1 058	3 173	2 759	\$2,252,622	\$240,145	\$727,945	\$727,945	\$2,469,790	\$2,469,790	\$2,469,790
1990	236 0	211 5	1 058	4 230	3 822	\$3,134,819	\$344,840	\$727,945	\$727,945	\$3,540,712	\$3,540,712	\$3,540,712
1991	236 0	212 4	1 062	5 292	4 793	\$3,924,373	\$433,944	\$731,043	\$731,043	\$4,214,732	\$4,214,732	\$4,214,732
1992	236 0	212 4	1 062	6 354	5 715	\$4,711,717	\$521,028	\$731,043	\$731,043	\$5,089,360	\$5,089,360	\$5,089,360
1993	236 0	212 4	1 062	7 415	6 837	\$5,499,462	\$608,112	\$731,043	\$731,043	\$5,963,989	\$5,963,989	\$5,963,989
1994	236 0	212 4	1 062	8 478	7 959	\$6,287,004	\$695,196	\$731,043	\$731,043	\$6,638,617	\$6,638,617	\$6,638,617
1995	236 0	212 4	1 062	9 540	9 021	\$7,074,546	\$782,290	\$731,043	\$731,043	\$7,537,879	\$7,537,879	\$7,537,879
TOTAL	2,120 0	1,695 6	8,478 0	8,478	7,359	\$28,264,831	\$3,125,430	\$6,566,997	\$6,566,997	\$37,957,258	\$37,957,258	\$37,957,258

PROJECTED RETAIL DEVELOPMENT WITH METRO RAIL  
FAIRFAX STATION AREAS

YEAR	SPACE PROJECTION (SQUARE FEET IN 000'S)	SPACE OCCUPIED (SQUARE FEET IN 000'S)	SPACE CUMULATIVE (SQUARE FEET IN 000'S)	EMPLOYMENT PER YEAR	EMPLOYMENT CUMULATIVE	VIRGINIA RESIDENT EMPLOYMENT CUMULATIVE	REVENUE FROM SALES			REVENUE FROM INCOME TAXES			REVENUE FROM IMPACT - INDIVIDUAL INCOME TAXES			TOTAL STATE TAX REVENUES
							SALES	INDIVIDUAL INCOME TAXES	SALES TAXES	CORPORATE INCOME TAXES	REVENUE FROM CORPORATE INCOME TAXES	REVENUE FROM INDIVIDUAL INCOME TAXES	REVENUE FROM IMPACT - INDIVIDUAL INCOME TAXES			
1984	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0
1987	25.0	22.5	22.5	45	45	39	52,718,000	118,734	183,700	63,490	577,441	577,441	577,441	577,441	577,441	1,771,441
1988	25.0	22.5	45.0	45	90	78	65,588,000	137,468	316,700	17,280	577,441	577,441	577,441	577,441	577,441	1,771,441
1989	25.0	22.5	67.5	45	135	117	88,378,000	154,202	425,100	111,078	577,441	577,441	577,441	577,441	577,441	1,771,441
1990	26.0	22.5	90.0	45	180	156	111,148,000	174,434	524,800	114,740	577,441	577,441	577,441	577,441	577,441	1,771,441
1991	26.0	22.4	112.4	45	245	202	115,177,000	181,713	655,318	120,074	577,441	577,441	577,441	577,441	577,441	1,771,441
1992	26.0	22.4	134.8	45	310	249	119,195,200	198,889	875,456	130,387	577,441	577,441	577,441	577,441	577,441	1,771,441
1993	26.0	22.4	167.2	45	374	295	123,212,000	215,814	1,094,344	130,781	577,441	577,441	577,441	577,441	577,441	1,771,441
1994	26.0	22.4	189.6	45	439	341	127,238,000	232,843	1,211,912	134,014	577,441	577,441	577,441	577,441	577,441	1,771,441
1995	26.0	219.4	219.4	439	439	381	132,216,000	254,850	1,331,400	149,074	577,441	577,441	577,441	577,441	577,441	1,771,441
TOTAL	280.0	219.4	219.4	439	439	381	1,112,716,000	2,754,850	13,381,400	1,149,074	5,847,339	5,847,339	5,847,339	5,847,339	5,847,339	18,154,745

PROJECTED HOTEL DEVELOPMENT WITH METRORAIL  
FAIRFAX STATION AREAS

YEAR	NUMBER OF ROOMS	NUMBER OF ROOMS CUMULATIVE	EMPLOYMENT PER YEAR	EMPLOYMENT CUMULATIVE	VIRGINIA RESIDENT EMPLOYMENT CUMULATIVE	SALES	REVENUE FROM INDIVIDUAL INCOME TAXES		REVENUE FROM SALES TAXES	REVENUE FROM CORPORATE INCOME TAXES		CONSTRUCTION IMPACTS - REVENUE FROM INDIVIDUAL INCOME TAXES		TOTAL STATE TAX REVENUES
							INDIVIDUAL INCOME TAXES	INDIVIDUAL INCOME TAXES		REVENUE FROM SALES TAXES	REVENUE FROM CORPORATE INCOME TAXES	REVENUE FROM INDIVIDUAL INCOME TAXES	REVENUE FROM CORPORATE INCOME TAXES	
1985	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1986	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1987	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1988	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1989	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1990	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1991	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1992	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1993	200	200	200	200	174	68,400,787	118,921	118,921	628,824	114,400	10	628,824	628,824	628,824
1994	0	200	0	200	174	68,400,787	118,921	118,921	628,824	114,400	10	628,824	628,824	628,824
1995	0	200	0	200	174	68,400,787	118,921	118,921	628,824	114,400	10	628,824	628,824	628,824
TOTAL	200	200	200	200	174	65,602,361	332,762	332,762	1774,871	349,200	20	1774,871	1774,871	1774,871

ACTUAL AND PROJECTED RESIDENTIAL DEVELOPMENT  
FAIRFAX STATION AREAS

YEAR	NUMBER OF NEW UNITS	NUMBER OF NEW UNITS CUMULATIVE	VALUE OF HOUSING	REVENUE FROM INDIVIDUAL INCOME TAXES	RESIDENTIAL CONSTRUCTION IMPACT - REVENUE FROM INDIVIDUAL INCOME TAXES	DOCUMENT RECORDING FEES	TOTAL STATE TAX REVENUES
1981	254	254	\$26,670,000	\$79,817	\$558,203	\$85,344	\$723,364
1984	254	508	\$26,670,000	\$155,634	\$558,203	\$85,344	\$803,181
1985	254	762	\$26,670,000	\$239,451	\$558,203	\$85,344	\$882,998
1986	254	1,016	\$26,670,000	\$319,268	\$558,203	\$85,344	\$962,815
1987	362	1,378	\$38,010,000	\$433,023	\$795,549	\$121,632	\$1,350,204
1988	362	1,740	\$38,010,000	\$546,778	\$795,549	\$121,632	\$1,463,959
1989	363	2,103	\$38,115,000	\$660,847	\$797,747	\$121,968	\$1,580,562
1990	363	2,466	\$38,115,000	\$774,916	\$797,747	\$121,968	\$1,694,631
1991	316	2,782	\$33,180,000	\$874,216	\$694,457	\$106,176	\$1,674,849
1992	316	3,098	\$33,180,000	\$973,516	\$694,457	\$106,176	\$1,774,149
1993	316	3,414	\$33,180,000	\$1,072,815	\$694,457	\$106,176	\$1,873,449
1994	316	3,730	\$33,180,000	\$1,172,115	\$694,457	\$106,176	\$1,972,749
1995	316	4,046	\$33,180,000	\$1,271,415	\$694,457	\$106,176	\$2,072,048
TOTAL	4,046	4,046	\$424,830,000	\$8,577,809	\$8,691,692	\$1,359,456	\$18,828,957

PROJECTED OFFICE DEVELOPMENT WITHOUT METRO RAIL  
 ARLINGTON STATION AREAS  
 ROSSLYN - BALLSTON CORRIDOR

YEAR	SPACE PROJECTION (SQUARE FEET IN 000'S)	SPACE OCCUPIED (SQUARE FEET IN 000'S)	EMPLOYMENT PER YEAR	EMPLOYMENT CUMULATIVE	VIRGINIA RESIDENT EMPLOYMENT CUMULATIVE	REVENUE FROM INDIVIDUAL INCOME TAXES	REVENUE FROM CORPORATE INCOME TAXES	CONSTRUCTION IMPACT - REVENUE FROM INDIVIDUAL INCOME TAXES	TOTAL STATE TAX REVENUES
1978	0.0	0.0	0	0	0	\$0	\$0	\$0	\$0
1979	0.0	0.0	0	0	0	\$0	\$0	\$150,081	\$150,081
1980	61.6	0.0	0	0	0	\$0	\$0	\$172,748	\$322,829
1981	67.2	58.1	291	291	252	\$198,328	\$25,983	\$194,311	\$517,140
1982	69.8	60.5	302	593	515	\$339,790	\$48,631	\$388,421	\$905,561
1983	72.4	62.8	314	907	787	\$672,650	\$74,379	\$747,029	\$1,652,590
1984	75.0	65.1	326	1,233	1,076	\$918,152	\$101,084	\$1,019,236	\$2,671,826
1985	77.8	67.5	337	1,570	1,343	\$1,164,297	\$128,744	\$1,293,041	\$3,964,867
1986	80.1	69.8	349	1,919	1,666	\$1,423,086	\$177,360	\$1,600,446	\$5,565,313
1987	82.7	72.1	361	2,280	1,979	\$1,690,517	\$186,931	\$1,877,448	\$7,442,761
1988	85.2	74.5	372	2,652	2,302	\$1,966,592	\$217,459	\$2,184,051	\$9,626,812
1989	87.9	76.8	384	3,036	2,685	\$2,251,207	\$248,742	\$2,499,949	\$12,126,761
1990	90.5	79.1	395	3,431	2,979	\$2,544,649	\$281,351	\$2,826,000	\$15,052,761
1991	93.1	81.5	407	3,839	3,322	\$2,846,672	\$314,775	\$3,161,447	\$18,214,208
1992	95.7	83.8	419	4,258	3,696	\$3,157,318	\$347,124	\$3,504,442	\$21,718,650
1993	98.3	86.1	431	4,689	4,067	\$3,476,608	\$381,132	\$3,857,740	\$25,576,390
1994	100.9	88.4	442	5,130	4,453	\$3,808,540	\$423,693	\$4,232,233	\$29,808,623
1995	103.5	90.8	454	5,584	4,847	\$4,141,115	\$457,911	\$4,599,026	\$34,407,649
TOTAL	1,301.5	1,116.9	5,584	5,584	4,857	\$50,691,460	\$5,387,831	\$56,079,291	\$299,086,940

PROJECTED RETAIL DEVELOPMENT WITHOUT METROGAIL  
 ARLINGTON STATION AREAS  
 ROSSLYN - BALLSTON CORRIDOR

YEAR	SPACE PROJECTION (SQUARE FEET IN '000'S)	SPACE OCCUPIED (SQUARE FEET IN '000'S)	SPACE CUMULATIVE (SQUARE FEET IN '000'S)	EMPLOYMENT PER YEAR	EMPLOYMENT CUMULATIVE	VIRGINIA RESIDENT EMPLOYMENT CUMULATIVE	SALES	REVENUE FROM INDIVIDUAL INCOME TAXES		REVENUE FROM CORPORATE INCOME TAXES	RETAIL CONSTRUCTION IMPACT - REVENUE FROM INDIVIDUAL INCOME TAXES		TOTAL STATE TAX REVENUES
								SALES TAXES	INDIVIDUAL INCOME TAXES		INDIVIDUAL INCOME TAXES	INDIVIDUAL INCOME TAXES	
1974	0.3		0.0	0	0	0	10	10		10	10	10	60
1975	0.3	0.1	0.0	0	0	0	10	10		10	10	10	60
1980	2.3	0.6	0.0	0	0	0	10	10		10	10	10	60
1981	2.4	2.1	2.1	4	4	4	128,645	11,541	54,853	1378	55,363	55,363	15,341
1982	2.5	2.2	4.2	4	8	7	513,049	43,352	114,791	1696	54,173	54,173	514,735
1983	2.4	2.3	6.5	5	13	11	979,414	55,395	123,382	11,063	54,978	54,978	625,808
1984	2.7	2.3	9.2	10	23	15	11,093,480	97,344	132,810	11,466	57,232	57,232	137,572
1985	2.8	2.4	11.9	5	28	20	31,895,000	19,247	141,859	11,845	58,384	58,384	149,944
1986	2.7	2.5	13.6	5	33	25	11,767,489	117,445	141,324	11,845	58,672	58,672	161,725
1987	2.0	2.6	16.4	5	38	30	12,031,120	115,438	140,974	12,238	58,963	58,963	173,931
1988	2.1	2.7	19.1	5	43	35	12,245,910	115,886	139,978	12,484	59,253	59,253	184,551
1989	2.2	2.6	21.9	4	47	39	12,711,480	118,207	139,978	12,729	59,543	59,543	194,594
1990	2.3	2.9	24.8	4	51	43	13,069,000	120,407	139,978	13,017	59,832	59,832	204,637
1991	2.4	3.0	27.7	4	55	47	13,427,280	122,607	139,978	13,266	60,121	60,121	214,680
1992	2.5	3.1	30.6	4	59	51	13,785,560	124,807	139,978	13,515	60,410	60,410	224,723
1993	2.6	3.2	33.9	4	63	55	14,143,840	127,007	139,978	13,764	60,700	60,700	234,766
1994	2.7	3.2	37.2	4	67	59	14,502,120	129,207	139,978	14,013	61,000	61,000	244,809
1995	2.8	3.3	40.5	7	74	65	14,860,400	131,407	139,978	14,262	61,300	61,300	254,852
TOTAL	49.3	40.5	59.1	81	81	70	436,847,288	318,456	11,209,812	549,334	1147,602	1147,602	31,553,514



PROJECTED HOTEL DEVELOPMENT WITHOUT METRO RAIL  
 ARLINGTON STATION AREAS  
 ROSSLEN - BALLSTON CORRIDOR

YEAR	NUMBER OF ROOMS	NUMBER OF ROOMS CUMULATIVE	EMPLOYMENT PER YEAR	EMPLOYMENT CUMULATIVE	VIRGINIA RESIDENT EMPLOYMENT CUMULATIVE	REVENUE FROM INDIVIDUAL INCOME TAXES		REVENUE FROM CORPORATE INCOME TAXES		REVENUE FROM SALES TAXES		CONSTRUCTION IMPACTS - REVENUE FROM INDIVIDUAL INCOME TAXES		TOTAL STATE TAXI REVENUES	
						SALES	INCOME TAXES	INCOME TAXES	SALES TAXES	REVENUE FROM INDIVIDUAL INCOME TAXES	REVENUE FROM CORPORATE INCOME TAXES				
1978	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1979	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1980	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1981	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1982	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1983	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1984	3	3	0	0	0	0	0	0	0	0	0	0	0	0	
1985	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1986	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1987	81	81	81	81	70	52,683,319	188,922	504,300	54,462	838,863	138,863	138,863	138,863	138,863	138,863
1988	81	162	162	162	141	54,946,637	589,856	528,899	613,284	828,862	138,863	138,863	138,863	138,863	138,863
1989	81	243	243	243	211	516,447,954	1,124,749	523,499	119,724	838,863	138,863	138,863	138,863	138,863	138,863
1990	81	324	324	324	291	613,933,275	1,179,672	547,798	124,268	838,863	138,863	138,863	138,863	138,863	138,863
1991	81	405	405	405	372	517,614,594	1,224,415	552,498	131,210	838,863	138,863	138,863	138,863	138,863	138,863
1992	81	486	486	486	422	525,899,712	1,247,538	548,977	137,852	838,863	138,863	138,863	138,863	138,863	138,863
1993	81	567	567	567	492	524,383,231	1,254,488	521,477	144,494	838,863	138,863	138,863	138,863	138,863	138,863
1994	81	648	648	648	542	527,844,550	1,259,382	525,194	153,134	838,863	138,863	138,863	138,863	138,863	138,863
1995	81	729	729	729	633	531,329,869	1,264,284	528,474	157,778	838,863	138,863	138,863	138,863	138,863	138,863
TOTAL	729	729	729	729	633	5,154,747,247	51,810,531	18,792,480	628,892	12,149,787	12,149,787	12,149,787	12,149,787	12,149,787	12,149,787

PROJECTED RESIDENTIAL DEVELOPMENT WITHOUT METRO RAIL  
 ARLINGTON STATION AREAS  
 ROSSLYN - BALLSTON CORRIDOR

YEAR	NUMBER OF NEW UNITS	NUMBER OF NEW UNITS CUMULATIVE	VALUE OF HOUSING	REVENUE FROM		RESIDENTIAL CONSTRUCTION IMPACT -		DOCUMENT RECORDING FEES	TOTAL STATE TAX REVENUES
				INDIVIDUAL INCOME TAXES	INDIVIDUAL INCOME TAXES	REVENUE FROM INDIVIDUAL INCOME TAXES	REVENUE FROM INDIVIDUAL INCOME TAXES		
1978	0	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
1979	0	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
1980	47	47	\$4,277,000	111,963	580,518	\$13,686	\$115,167	\$13,686	\$115,167
1981	48	95	\$4,841,000	527,583	\$101,322	\$15,491	\$144,396	\$15,491	\$144,396
1982	50	145	\$5,185,679	345,650	\$108,536	\$16,594	\$170,781	\$16,594	\$170,781
1983	51	197	\$5,392,608	561,789	\$112,867	\$17,256	\$191,913	\$17,256	\$191,913
1984	53	250	\$5,713,083	\$78,412	\$119,575	\$18,282	\$216,269	\$18,282	\$216,269
1985	54	304	\$5,993,447	\$95,534	\$125,443	\$19,179	\$240,156	\$19,179	\$240,156
1986	56	360	\$6,173,250	\$113,169	\$129,206	\$19,754	\$262,130	\$19,754	\$262,130
1987	58	418	\$6,358,448	\$131,333	\$133,082	\$20,347	\$284,763	\$20,347	\$284,763
1988	60	477	\$6,549,201	\$150,043	\$137,075	\$20,957	\$308,075	\$20,957	\$308,075
1989	61	539	\$6,745,677	\$169,313	\$141,187	\$21,586	\$332,086	\$21,586	\$332,086
1990	63	602	\$6,948,048	\$189,142	\$145,423	\$22,234	\$356,818	\$22,234	\$356,818
1991	65	667	\$7,156,489	\$209,606	\$149,785	\$22,901	\$382,292	\$22,901	\$382,292
1992	67	734	\$7,371,184	\$230,664	\$154,277	\$23,588	\$408,530	\$23,588	\$408,530
1993	69	803	\$7,592,319	\$252,253	\$158,907	\$24,295	\$435,555	\$24,295	\$435,555
1994	71	874	\$7,820,089	\$274,693	\$163,674	\$25,024	\$463,391	\$25,024	\$463,391
1995	73	947	\$8,054,692	\$297,703	\$168,585	\$25,775	\$492,062	\$25,775	\$492,062
TOTAL	947	947	\$102,172,214	\$2,308,949	\$2,138,464	\$326,951	\$4,804,385	\$326,951	\$4,804,385

PROJECTED OFFICE DEVELOPMENT WITHOUT METROPOLIS  
ARLINGTON STATION AREAS  
JEFFERSON DAVIS CORRIDOR

YEAR	SPACE PROJECTION (SQUARE FEET IN 000'S)		EMPLOYMENT PER YEAR	EMPLOYMENT CUMULATIVE	VIRGINIA RESIDENT EMPLOYMENT CUMULATIVE	REVENUE FROM			OFFICE CONSTRUCTION IMPACT -			TOTAL STATE TAX REVENUES
	IN 000'S	OCCUPIED (SQUARE FEET IN 000'S)				INDIVIDUAL INCOME TAXES	CORPORATE INCOME TAXES	REVENUE FROM INDIVIDUAL INCOME TAXES	REVENUE FROM CORPORATE INCOME TAXES	REVENUE FROM INDIVIDUAL INCOME TAXES	REVENUE FROM CORPORATE INCOME TAXES	
1979	140	126	631	631	538	1,327,499	143,774	5,277,945	5,277,945	143,774	1,327,499	5,277,945
1979	145	130	653	1,284	1,115	1,371,540	149,728	5,310,386	5,310,386	149,728	1,371,540	5,310,386
1980	150	135	676	1,960	1,701	1,417,530	155,720	5,343,106	5,343,106	155,720	1,417,530	5,343,106
1981	155	140	698	2,658	2,308	1,463,520	161,712	5,375,826	5,375,826	161,712	1,463,520	5,375,826
1982	160	144	721	3,379	2,933	1,509,510	167,704	5,408,546	5,408,546	167,704	1,509,510	5,408,546
1983	165	148	743	4,122	3,579	1,555,500	173,696	5,441,266	5,441,266	173,696	1,555,500	5,441,266
1984	170	153	766	4,888	4,243	1,601,490	179,688	5,473,986	5,473,986	179,688	1,601,490	5,473,986
1985	175	157	788	5,676	5,228	1,647,480	185,680	5,506,706	5,506,706	185,680	1,647,480	5,506,706
1986	180	162	811	6,487	5,728	1,693,470	191,672	5,539,426	5,539,426	191,672	1,693,470	5,539,426
1987	185	166	833	7,320	6,332	1,739,460	197,664	5,572,146	5,572,146	197,664	1,739,460	5,572,146
1988	190	171	856	8,176	6,955	1,785,450	203,656	5,604,866	5,604,866	203,656	1,785,450	5,604,866
1989	195	175	878	9,054	7,598	1,831,440	209,648	5,637,586	5,637,586	209,648	1,831,440	5,637,586
1990	200	180	901	9,955	8,260	1,877,430	215,640	5,670,306	5,670,306	215,640	1,877,430	5,670,306
1991	205	184	923	10,878	8,842	1,923,420	221,632	5,703,026	5,703,026	221,632	1,923,420	5,703,026
1992	210	189	946	11,824	9,445	1,969,410	227,624	5,735,746	5,735,746	227,624	1,969,410	5,735,746
1993	215	193	968	12,792	10,048	2,015,400	233,616	5,768,466	5,768,466	233,616	2,015,400	5,768,466
1994	220	198	991	13,783	10,660	2,061,390	239,608	5,801,186	5,801,186	239,608	2,061,390	5,801,186
1995	225	203	1,013	14,796	11,285	2,107,380	245,600	5,833,906	5,833,906	245,600	2,107,380	5,833,906
TOTAL	1,832	1,657	13,785	13,785	11,966	168,798,340	17,413,913	59,624,645	59,624,645	17,413,913	168,798,340	59,624,645

PROJECTED RETAIL DEVELOPMENT WITHOUT METRORAIL  
 ARLINGTON STATION AREAS  
 JEFFERSON DAVIS CORRIDOR

YEAR	SPACE PROJECTION (SQ. FEET IN '000'S)	SPACE OCCUPIED (SQ. FEET IN '000'S)	SPACE CUMULATIVE (SQ. FEET IN '000'S)	EMPLOYMENT PER YEAR	EMPLOYMENT CUMULATIVE	VIRGINIA RESIDENT EMPLOYMENT CUMULATIVE	SALES	REVENUE FROM			RETAIL CONSTRUCTION IMPACT -		TOTAL STATE TAX REVENUES
								INDIVIDUAL INCOME TAXES	REVENUE FROM SALES TAXES	REVENUE FROM CORPORATE INCOME TAXES	REVENUE FROM INDIVIDUAL INCOME TAXES	REVENUE FROM CORPORATE INCOME TAXES	
1974	58.5												
1979	60.7	52.7	52.7	185	185	92	54,463,219	934,617	5159,297	87,352	5114,174	5114,174	5114,174
1980	62.8	54.6	107.4	109	215	184	610,451,104	174,778	6317,333	615,672	5119,734	5311,004	5311,004
1981	64.9	54.5	163.9	113	328	285	618,884,958	5122,024	6542,627	639,297	5195,899	5555,881	5555,881
1982	67.0	54.4	222.3	117	465	384	625,911,289	4374,271	6797,336	634,457	5184,788	6166,403	6166,403
1983	69.1	54.3	282.6	121	545	371	633,991,114	4235,294	6917,794	644,314	5205,485	6174,815	6174,815
1984	71.2	54.2	344.8	124	670	519	642,753,942	4187,879	6992,619	654,548	5230,552	6186,795	6186,795
1985	73.3	54.1	408.9	128	818	710	650,499,880	4148,437	6992,619	654,548	5230,552	6186,795	6186,795
1986	75.4	54.0	474.8	132	950	814	658,884,140	4295,341	6992,619	654,548	5230,552	6186,795	6186,795
1987	77.5	53.9	542.7	136	1,085	942	667,294,880	4451,842	6992,619	654,548	5230,552	6186,795	6186,795
1988	79.6	53.7	612.5	139	1,225	1,043	675,943,878	4509,737	6992,619	654,548	5230,552	6186,795	6186,795
1989	81.7	53.6	684.1	143	1,368	1,188	684,827,164	4543,284	6992,619	654,548	5230,552	6186,795	6186,795
1990	83.8	53.5	757.6	147	1,515	1,346	693,944,880	4620,408	6992,619	654,548	5230,552	6186,795	6186,795
1991	85.9	53.4	833.0	151	1,664	1,494	703,294,943	4692,405	6992,619	654,548	5230,552	6186,795	6186,795
1992	88.0	53.3	910.3	155	1,821	1,650	712,881,420	4757,974	6992,619	654,548	5230,552	6186,795	6186,795
1993	90.1	53.2	989.5	158	1,979	1,718	722,704,200	4813,918	6992,619	654,548	5230,552	6186,795	6186,795
1994	92.2	53.1	1,070.5	162	2,141	1,859	732,758,368	4871,435	6992,619	654,548	5230,552	6186,795	6186,795
1995	94.4	53.0	1,157.6	164	2,307	2,003	742,849,880	4916,525	6992,619	654,548	5230,552	6186,795	6186,795
TOTAL	1,374.7	1,153.4	1,153.4	2,307	2,307	2,003	11,192,321,090	67,955,884	925,439,434	61,575,464	64,027,311	649,937,792	649,937,792

PROJECTED HOTEL DEVELOPMENT WITHOUT METRORAIL  
 ARLINGTON STATION AREA  
 JEFFERSON DAVIS CORRIDOR

YEAR	NUMBER OF ROOMS	NUMBER OF ROOMS CUMULATIVE	EMPLOYMENT PER YEAR	EMPLOYMENT CUMULATIVE	VIRGINIA RESIDENT EMPLOYMENT CUMULATIVE	SALES	REVENUE FROM INDIVIDUAL INCOME TAXES		REVENUE FROM CORPORATE INCOME TAXES	REVENUE FROM SALES TAXES	CONSTRUCTION IMPACTS - REVENUE FROM INDIVIDUAL INCOME TAXES		TOTAL STATE TAX REVENUES
							INDIVIDUAL INCOME TAXES	INDIVIDUAL INCOME TAXES					
1978	0	0	0	0	0	0	0	0	0	0	0	0	0
1979	0	0	0	0	0	0	0	0	0	0	0	0	0
1980	0	0	0	0	0	0	0	0	0	0	0	0	0
1981	0	0	0	0	0	0	0	0	0	0	0	0	0
1982	177	177	177	177	154	14,145,474	391,922	1,188,364	111,514	548,748	1741,148	1741,148	1741,148
1983	177	354	377	354	307	113,781,054	1,194,328	5,611,832	129,828	1,301,084	11,137,474	11,137,474	11,137,474
1984	177	531	377	531	461	921,921,484	4,294,472	15,572,451	143,542	1,517,945	11,517,452	11,517,452	11,517,452
1985	177	708	377	708	615	123,444,784	1,192,448	3,913,424	134,954	1,146,044	11,146,044	11,146,044	11,146,044
1986	177	885	377	885	745	134,828,482	1,498,824	4,498,824	172,578	1,227,114	11,227,114	11,227,114	11,227,114
1987	177	1,062	377	1,062	922	145,428,178	1,588,181	4,588,181	147,084	1,274,143	11,274,143	11,274,143	11,274,143
1988	177	1,239	377	1,239	1,075	153,241,875	1,687,154	4,687,154	147,578	1,321,143	11,321,143	11,321,143	11,321,143
1989	177	1,416	377	1,416	1,229	164,873,572	1,785,313	4,785,313	147,827	1,368,112	11,368,112	11,368,112	11,368,112
1990	177	1,593	377	1,593	1,383	176,505,268	1,883,484	4,883,484	147,827	1,415,143	11,415,143	11,415,143	11,415,143
1991	177	1,770	377	1,770	1,534	187,114,945	1,981,449	4,981,449	147,827	1,462,143	11,462,143	11,462,143	11,462,143
1992	177	1,947	377	1,947	1,688	197,728,641	2,077,414	5,077,414	147,827	1,509,143	11,509,143	11,509,143	11,509,143
1993	177	2,124	377	2,124	1,842	208,342,337	2,172,379	5,172,379	147,827	1,556,143	11,556,143	11,556,143	11,556,143
1994	177	2,301	377	2,301	1,996	218,956,034	2,267,344	5,267,344	147,827	1,603,143	11,603,143	11,603,143	11,603,143
1995	177	2,478	377	2,478	2,150	229,569,731	2,362,308	5,362,308	147,827	1,650,143	11,650,143	11,650,143	11,650,143
TOTAL	2,478	2,478	2,478	2,478	2,151	678,544,147	310,261,871	923,848,385	11,553,870	57,234,421	642,819,851	642,819,851	642,819,851

PROJECTED RESIDENTIAL DEVELOPMENT WITHOUT METRO RAIL  
 ARLINGTON STATION AREAS  
 JEFFERSON DAVIS CORRIDOR

YEAR	NUMBER OF NEW UNITS	NUMBER OF NEW UNITS CUMULATIVE	VALUE OF HOUSING	REVENUE FROM		RESIDENTIAL CONSTRUCTION IMPACT -		TOTAL STATE TAX REVENUES
				INDIVIDUAL INCOME TAXES	INDIVIDUAL INCOME TAXES	INDIVIDUAL INCOME TAXES	DOCUMENT RECORDING FEES	
1978	173	173	\$12,456,000	\$33,162	\$260,704	\$39,859	\$333,725	
1979	175	348	\$14,037,647	\$76,652	\$293,808	\$44,920	\$415,381	
1980	178	526	\$16,192,647	\$133,950	\$338,912	\$51,816	\$224,718	
1981	180	707	\$18,041,176	\$204,343	\$377,602	\$57,732	\$639,677	
1982	181	890	\$19,019,765	\$279,581	\$398,084	\$60,863	\$738,528	
1983	183	1,073	\$19,462,059	\$337,826	\$507,341	\$62,279	\$807,446	
1984	188	1,260	\$20,284,741	\$376,848	\$524,584	\$64,912	\$886,324	
1985	190	1,453	\$20,932,353	\$456,646	\$538,114	\$66,984	\$961,744	
1986	193	1,645	\$21,204,118	\$517,221	\$543,802	\$67,853	\$1,028,876	
1987	195	1,841	\$21,475,882	\$578,571	\$549,490	\$68,723	\$1,096,784	
1988	198	2,039	\$21,747,647	\$640,678	\$555,178	\$69,592	\$1,165,469	
1989	200	2,239	\$22,019,412	\$703,602	\$560,866	\$70,462	\$1,231,930	
1990	203	2,442	\$22,291,176	\$767,282	\$566,554	\$71,332	\$1,305,148	
1991	205	2,647	\$22,562,941	\$831,738	\$572,242	\$72,201	\$1,376,182	
1992	208	2,854	\$22,834,706	\$896,970	\$577,930	\$73,071	\$1,447,972	
1993	210	3,064	\$23,106,471	\$962,979	\$583,618	\$73,941	\$1,520,538	
1994	213	3,277	\$23,378,235	\$1,029,744	\$589,306	\$74,810	\$1,593,881	
1995	215	3,492	\$23,650,000	\$1,097,324	\$594,995	\$75,680	\$1,668,001	
TOTAL	3,492	3,492	\$364,697,176	\$9,945,201	\$7,633,112	\$1,167,031	\$18,745,344	

PROJECTED OFFICE DEVELOPMENT WITHOUT METRO-RAIL  
ALEXANDRIA STATION AREAS

YEAR	COMBINED SPACE PROJECTION (SQUARE FEET IN 000'S)		RETAIL SPACE PROJECTION (SQUARE FEET IN 000'S)		OFFICE SPACE OCCUPIED (SQUARE FEET IN 000'S)		EMPLOYMENT PER YEAR	EMPLOYMENT CUMULATIVE	VIRGINIA RESIDENT EMPLOYMENT CUMULATIVE	REVENUE FROM			OFFICE CONSTRUCTION IMPACT -		
	OFFICE	RETAIL	OFFICE	RETAIL	INDIVIDUAL INCOME TAXES	CORPORATE INCOME TAXES				REVENUE FROM INDIVIDUAL INCOME TAXES	REVENUE FROM CORPORATE INCOME TAXES	REVENUE FROM INDIVIDUAL INCOME TAXES	REVENUE FROM CORPORATE INCOME TAXES	TOTAL STATE TAX REVENUES	
1984	170.0	85.0	15.0	15.0	76.5	76.5	383	383	332	6283,449	631,343	6283,299	631,343	1303,299	
1985	106.0	90.1	15.9	15.9	81.1	81.1	403	786	484	5744,319	648,432	5271,977	629,865	1594,112	
1986	112.0	95.2	16.8	16.8	85.7	85.7	428	1,214	1,554	6702,085	677,741	6024,344	677,741	1943,855	
1987	118.0	100.3	17.7	17.7	90.3	90.3	451	1,665	1,444	6734,711	677,741	6057,000	677,741	1943,855	
1988	124.0	105.4	18.4	18.4	94.9	94.9	474	2,142	1,659	6758,437	677,741	6080,696	677,741	1943,855	
1989	130.0	110.5	19.3	19.3	99.5	99.5	497	2,639	2,241	6782,163	677,741	6104,422	677,741	1943,855	
1990	134.0	115.6	20.4	20.4	104.0	104.0	520	3,159	2,742	6805,889	677,741	6128,145	677,741	1943,855	
1991	142.0	120.7	21.3	21.3	108.6	108.6	543	3,702	3,283	6829,615	677,741	6151,868	677,741	1943,855	
1992	148.0	125.8	22.2	22.2	113.2	113.2	564	4,266	3,795	6850,341	677,741	6175,591	677,741	1943,855	
1993	154.0	130.9	23.1	23.1	117.8	117.8	589	4,855	4,388	6879,067	677,741	6200,317	677,741	1943,855	
1994	160.0	134.0	24.0	24.0	122.4	122.4	612	5,470	4,948	6907,793	677,741	6225,043	677,741	1943,855	
1995	164.0	141.1	24.9	24.9	127.0	127.0	635	6,105	5,586	6936,519	677,741	6250,769	677,741	1943,855	
TOTAL	1,594.0	1,354.6	239.4	239.4	1,094.0	1,094.0	5,470	5,470	4,748	122,465,034	62,468,109	66,206,925	62,468,109	128,675,034	



PROJECTED RETAIL DEVELOPMENT WITHOUT PETROBRIL  
ALEXANDRIA STATION AREAS

YEAR	COMBINED SPACE PROJECTION (SQUARE FEET IN 000'S)	OFFICE SPACE PROJECTION (SQUARE FEET IN 000'S)	RETAIL SPACE PROJECTION (SQUARE FEET IN 000'S)	RETAIL SPACE OCCUPIED (SQUARE FEET IN 000'S)	RETAIL SPACE CUMULATIVE (SQUARE FEET IN 000'S)	EMPLOYMENT PER YEAR	EMPLOYMENT CUMULATIVE	VIRGINIA RESIDENT EMPLOYMENT CUMULATIVE	SALES	REVENUE FROM INDIVIDUAL INCOME TAXES	REVENUE FROM SALES TAXES	REVENUE FROM CORPORATE INCOME TAXES	REVENUE FROM CONSTRUCTION IMPACT - INDIVIDUAL INCOME TAXES	TOTAL STATE TAX REVENUES
1984	100.0	85.0	15.0	13.5	13.5	27	27	23	\$1,674,888	\$11,248	\$58,210	\$2,214	\$44,465	\$46,465
1985	184.9	96.1	15.9	18.3	27.8	29	56	68	\$3,448,440	\$33,155	\$103,453	\$4,541	\$49,252	\$112,927
1986	112.0	95.2	16.8	15.3	42.9	30	86	75	\$5,232,220	\$35,744	\$159,788	\$7,801	\$52,049	\$193,210
1987	118.3	100.2	17.7	15.9	58.6	32	118	102	\$7,298,440	\$49,828	\$218,959	\$8,452	\$57,816	\$257,313
1988	118.0	110.5	19.5	16.7	75.4	33	151	121	\$9,274,400	\$62,746	\$318,232	\$12,278	\$60,404	\$335,234
1989	116.0	115.4	20.4	17.6	93.2	35	186	162	\$11,558,488	\$77,558	\$346,518	\$15,277	\$63,192	\$416,980
1990	192.0	120.7	21.3	18.4	111.5	37	223	194	\$13,827,248	\$92,845	\$414,817	\$18,243	\$65,980	\$502,345
1991	148.0	115.8	22.2	19.2	130.7	38	261	227	\$16,284,220	\$108,807	\$488,138	\$21,432	\$68,768	\$571,936
1992	154.0	120.9	23.1	20.0	150.7	40	301	262	\$18,481,148	\$125,642	\$546,455	\$24,788	\$71,553	\$645,135
1993	167.0	126.0	24.0	20.8	171.5	42	343	288	\$21,259,800	\$132,732	\$637,274	\$28,118	\$78,343	\$782,161
1994	144.0	141.1	24.9	21.6	193.1	43	386	325	\$23,924,260	\$140,737	\$718,144	\$31,460	\$87,131	\$883,808
TOTAL	1,596.0	1,356.6	237.6	193.1	193.1	386	386	335	\$137,598,800	\$899,226	\$3,177,424	\$175,249	\$741,575	\$5,788,584

PROJECTED HOTEL DEVELOPMENT WITHOUT METRO RAIL  
ALEXANDRIA STATION AREAS

YEAR	NUMBER OF ROOMS	NUMBER OF ROOMS CUMULATIVE	EMPLOYMENT PER YEAR	EMPLOYMENT CUMULATIVE	VIRGINIA RESIDENT EMPLOYMENT CUMULATIVE	REVENUE FROM			CONSTRUCTION IMPACTS -			
						SALES	INDIVIDUAL INCOME TAXES	REVENUE FROM CORPORATE INCOME TAXES	REVENUE FROM INDIVIDUAL INCOME TAXES	TOTAL STATE TAX REVENUES		
1985	0	0	0	0	0	0	0	0	0	0	0	0
1986	0	0	0	0	0	0	0	0	0	0	0	0
1987	0	0	0	0	0	0	0	0	0	0	0	0
1988	0	0	0	0	0	0	0	0	0	0	0	0
1989	0	0	0	0	0	0	0	0	0	0	0	0
1990	0	0	0	0	0	0	0	0	0	0	0	0
1991	0	0	0	0	0	0	0	0	0	0	0	0
1992	0	0	0	0	0	0	0	0	0	0	0	0
1993	0	0	0	0	0	0	0	0	0	0	0	0
1994	0	0	0	0	0	0	0	0	0	0	0	0
1995	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	0	0	0	0	0	0	0	0	0	0	0	0

PROJECTED RESIDENTIAL DEVELOPMENT WITHOUT METRO RAIL  
ALEXANDRIA STATION AREAS

YEAR	NUMBER OF NEW UNITS	NUMBER OF NEW UNITS CUMULATIVE	VALUE OF HOUSING	REVENUE FROM		RESIDENTIAL CONSTRUCTION IMPACT -		TOTAL STATE TAX REVENUES
				INDIVIDUAL INCOME TAXES	INDIVIDUAL INCOME TAXES	REVENUE FROM INDIVIDUAL INCOME TAXES	DOCUMENT RECORDING FEES	
1983	0	0	\$0	\$0	\$0	\$0	\$0	\$0
1984	0	0	\$0	\$0	\$0	\$0	\$0	\$0
1985	0	0	\$0	\$0	\$0	\$0	\$0	\$0
1986	0	0	\$0	\$0	\$0	\$0	\$0	\$0
1987	0	0	\$0	\$0	\$0	\$0	\$0	\$0
1988	0	0	\$0	\$0	\$0	\$0	\$0	\$0
1989	0	0	\$0	\$0	\$0	\$0	\$0	\$0
1990	0	0	\$0	\$0	\$0	\$0	\$0	\$0
1991	0	0	\$0	\$0	\$0	\$0	\$0	\$0
1992	0	0	\$0	\$0	\$0	\$0	\$0	\$0
1993	0	0	\$0	\$0	\$0	\$0	\$0	\$0
1994	0	0	\$0	\$0	\$0	\$0	\$0	\$0
1995	0	0	\$0	\$0	\$0	\$0	\$0	\$0
TOTAL	0	0	\$0	\$0	\$0	\$0	\$0	\$0

PROJECTED OFFICE DEVELOPMENT WITHOUT METRO RAIL  
FAIRFAX STATION AREAS

YEAR	SPACE PROJECTION SQUARE FEET (IN 000'S)	SPACE OCCUPIED (SQUARE FEET (IN 000'S))	EMPLOYMENT PER YEAR	EMPLOYMENT CUMULATIVE	VIRGINIA RESIDENT EMPLOYMENT CUMULATIVE	REVENUE FROM INDIVIDUAL INCOME TAXES	REVENUE FROM CORPORATE INCOME TAXES	CONSTRUCTION IMPACT - REVENUE FROM INDIVIDUAL INCOME TAXES	TOTAL STATE TAX REVENUES
1984	0.0	0.0	0	0	0	0	0	0	0
1987	92.5	9.9	416	416	761	\$206.67	\$32.133	\$286.532	\$286.532
1988	92.5	82.3	416	833	723	3817.355	508.265	\$286.532	\$629.342
1989	92.5	83.3	416	1,249	1,086	5926.012	\$101.398	\$286.532	1972.151
1990	90.0	81.3	416	1,665	1,445	\$1,231.705	\$132.570	\$286.532	\$1,314.961
1991	90.0	81.0	405	2,070	1,797	\$1,535.041	\$169.740	\$278.788	\$1,650.027
1992	90.0	81.0	405	2,475	2,148	\$1,835.379	\$202.950	\$278.788	\$1,991.572
1993	90.0	81.0	405	2,880	2,500	\$2,125.712	\$216.160	\$278.788	\$2,317.116
1994	90.0	81.0	405	3,285	2,851	\$2,426.048	\$259.370	\$278.788	\$2,650.661
1995	90.0	81.0	405	3,690	3,251	\$2,726.384	\$292.680	\$278.788	\$2,994.206
TOTAL	810.0	657.0	3,285.0	3,285	2,851	\$11,028,852	\$1,319,545	\$2,580,665	\$14,788,567

PROJECTED RETAIL DEVELOPMENT WITHOUT METROPAK  
FAIRFAX STATION AREAS

YEAR	SPACE PROJECTION (SQUARE FEET IN 000'S)	SPACE OCCUPIED (SQUARE FEET IN 000'S)	SPACE CUMULATIVE (SQUARE FEET IN 000'S)	EMPLOYMENT PER YEAR	EMPLOYMENT CUMULATIVE	VIRGINIA RESIDENT EMPLOYMENT CUMULATIVE	SALES	REVENUE FROM INDIVIDUAL INCOME TAXES		REVENUE FROM CORPORATE INCOME TAXES		REVENUE FROM SALES TAXES		RETAIL CONSTRUCTION IMPACT - REVENUE FROM INDIVIDUAL INCOME TAXES		TOTAL STATE TAX REVENUES
								INDIVIDUAL INCOME TAXES	INDIVIDUAL INCOME TAXES	CORPORATE INCOME TAXES	CORPORATE INCOME TAXES	SALES TAXES	SALES TAXES	INDIVIDUAL INCOME TAXES	INDIVIDUAL INCOME TAXES	
1984	0.0	0.0	0.0	0	0	0	10	10	10	10	10	10	10	10	10	10
1985	1.1	1.1	1.1	5	5	5	1239,000	11,873	11,873	18	18	18	18	18	18	18
1986	1.5	2.3	2.3	5	5	5	6528,000	53,747	53,747	5343	5343	18,379	18,379	18,379	18,379	18,379
1987	2.5	3.3	4.5	5	7	8	1037,000	55,428	55,428	1728	1728	11,758	11,758	11,758	11,758	11,758
1988	4.0	3.3	4.8	5	14	12	1116,000	17,694	17,694	11,187	11,187	125,110	125,110	125,110	125,110	125,110
1989	4.0	3.6	12.4	7	18	14	11,512,400	118,491	118,491	11,474	11,474	123,488	123,488	123,488	123,488	123,488
1990	4.0	3.6	14.2	7	25	21	12,028,800	112,488	112,488	12,044	12,044	146,872	146,872	146,872	146,872	146,872
1991	4.5	3.6	18.8	7	32	28	12,455,200	114,486	114,486	12,457	12,457	166,344	166,344	166,344	166,344	166,344
1992	4.0	3.6	23.4	7	40	34	12,401,400	119,482	119,482	12,497	12,497	173,454	173,454	173,454	173,454	173,454
TOTAL	30.0	31.4	33.4	47	47	41	611,718,000	678,482	678,482	615,488	615,488	6351,560	6351,560	6351,560	6351,560	6351,560

PROJECTED HOTEL DEVELOPMENT WITHOUT METROBATE  
FAIRFAX STATION AREAS

YEAR	NUMBER OF ROOMS	NUMBER OF ROOMS CUMULATIVE	EMPLOYMENT PER YEAR	EMPLOYMENT CUMULATIVE	VIRGINIA RESIDENT EMPLOYMENT CUMULATIVE	REVENUE FROM				CONSTRUCTION IMPACTS -		TOTAL STATE TAX REVENUES
						SALES	INDIVIDUAL INCOME TAXES	REVENUE FROM INDIVIDUAL INCOME TAXES	REVENUE FROM CORPORATE INCOME TAXES	REVENUE FROM INDIVIDUAL INCOME TAXES	REVENUE FROM CORPORATE INCOME TAXES	
1985	0	0	0	0	0	0	0	0	0	0	0	0
1986	0	0	0	0	0	0	0	0	0	0	0	0
1987	0	0	0	0	0	0	0	0	0	0	0	0
1988	0	0	0	0	0	0	0	0	0	0	0	0
1989	0	0	0	0	0	0	0	0	0	0	0	0
1990	0	0	0	0	0	0	0	0	0	0	0	0
1991	0	0	0	0	0	0	0	0	0	0	0	0
1992	0	0	0	0	0	0	0	0	0	0	0	0
1993	0	0	0	0	0	0	0	0	0	0	0	0
1994	0	0	0	0	0	0	0	0	0	0	0	0
1995	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	0	0	0	0	0	0	0	0	0	0	0	0

PROJECTED RESIDENTIAL DEVELOPMENT WITHOUT METRO RAIL  
FAIRFAX STATION AREAS

YEAR	NUMBER OF NEW UNITS	NUMBER OF NEW UNITS CUMULATIVE	VALUE OF HOUSING	REVENUE FROM INDIVIDUAL INCOME TAXES	RESIDENTIAL CONSTRUCTION IMPACT - REVENUE FROM INDIVIDUAL INCOME TAXES	DOCUMENT RECORDING FEES	TOTAL STATE TAX REVENUES
1983	0	0	\$0	\$0	\$0	\$0	\$0
1984	0	0	\$0	\$0	\$0	\$0	\$0
1985	0	0	\$0	\$0	\$0	\$0	\$0
1986	0	0	\$0	\$0	\$0	\$0	\$0
1987	263	263	\$28,930,000	\$82,645	\$605,505	\$92,576	\$780,724
1988	263	526	\$28,930,000	\$165,290	\$605,505	\$92,576	\$863,371
1989	263	789	\$28,930,000	\$247,935	\$605,505	\$92,576	\$946,016
1990	263	1,052	\$28,930,000	\$330,580	\$605,505	\$92,576	\$1,028,661
1991	136	1,188	\$14,960,000	\$173,317	\$313,113	\$47,872	\$734,302
1992	136	1,324	\$14,960,000	\$416,054	\$313,113	\$47,872	\$777,039
1993	136	1,460	\$14,960,000	\$458,790	\$313,113	\$47,872	\$819,775
1994	136	1,596	\$14,960,000	\$501,527	\$313,113	\$47,872	\$862,512
1995	136	1,732	\$14,960,000	\$544,264	\$313,113	\$47,872	\$905,248
TOTAL	1,732	1,732	\$190,520,000	\$3,120,403	\$3,987,504	\$609,664	\$7,717,651



VIRGINIA METRORAIL CONSTRUCTION COST IMPACTS  
(\$ million)

(1) Year	(2) Construction Costs*	(3) Direct Indirect Induced Wages**	(4) Revenue from Individual Income Taxes***	(5) Revenue From Sales Taxes****	(6) Total Tax Revenues*****
1972-1979	\$ 421.0	331.4	10.671	2.982	13.653
1980	0	0	0	0	0
1981	0	0	0	0	0
1982	0	0	0	0	0
1983	175.0	137.7	4.434	1.239	5.673
1984	0	0	0	0	0
1985	0	0	0	0	0
1986	214.1	168.5	5.426	1.517	6.943
1987-1995	<u>209.0</u>	<u>164.5</u>	<u>5.297</u>	<u>1.481</u>	<u>6.778</u>
Totals	\$ 1,019.1	802.1	25.828	7.219	33.047

\* Source: WMATA memo.

\*\* Earnings multiplier of .7871 applied to operating and maintenance costs to account for incomes earned by Virginia residents.

\*\*\* Column (3) \* .0322 = income times "effective personal income tax rate."

\*\*\*\* Column (3) \* .30 \* .03 = incomes times average propensity to consume times sales tax rate.

\*\*\*\*\* Sum of columns (4) and (5).

COST IMPACTS  
 VIRGINIA METRORAIL OPERATIONS AND MAINTENANCE  
 (\$ millions)

(1) Year	(2) Operations & Maintenance Costs*	(3) Direct Indirect Induced Wages**	(4) Revenue from Individual Income Taxes***	(5) Revenue From Sales Taxes****	(6) Total Tax Revenues*****
1978	10.2	8.6	0.278	0.078	0.356
1979	10.9	9.2	0.298	0.083	0.381
1980	17.9	15.2	0.489	0.137	0.625
1981	23.0	19.5	0.628	0.175	0.803
1982	25.7	21.8	0.702	0.196	0.898
1983	29.0	24.6	0.792	0.221	1.013
1984	41.9	35.5	1.144	0.320	1.463
1985	47.1	39.9	1.286	0.359	1.645
1986	48.2	40.9	1.316	0.368	1.683
1987	73.3	62.1	2.001	0.559	2.560
1988	81.5	69.1	2.225	0.622	2.846
1989	92.9	78.8	2.536	0.709	3.245
1990	103.9	88.1	2.836	0.793	3.629
1991	99.0	83.9	2.702	0.755	3.458
1992	97.2	82.4	2.653	0.742	3.395
1993	92.2	78.2	2.517	0.703	3.220
1994	92.3	78.2	2.519	0.704	3.224
1995	<u>103.3</u>	<u>87.6</u>	<u>2.820</u>	<u>0.788</u>	<u>3.608</u>
Totals	1,089.5	923.6	29.739	8.312	38.051

\* Source: WMATA memo.

\*\* Earnings multiplier of .8477 applied to operating and maintenance costs to account for incomes earned by Virginia residents.

\*\*\* Column (3) \* .0322 = income times "effective personal income tax rate."

\*\*\*\* Column (3) \* .30 \* .03 = incomes times average propensity to consume times sales tax rate.

\*\*\*\*\* Sum of columns (4) and (5).

APPENDIX C

SITE-PLAN-APPROVED AND  
PROPOSED PROJECTS  
BY STATION AREA

ROSSLYN STATION AREA  
ACTUAL AND PROJECTED OFFICE DEVELOPMENT

<u>Year</u>	<u>Project</u>	<u>Gross Floor Area (Thousands of Square Feet)</u>
1978	-	0
1979	-	0
1980	Rosslyn Center 1700 North Moore Street	375.0
	Kodak Building 1555 Wilson Boulevard	169.0
	Noland Building 1300 North 17th Street	374.0
1981	AMS Building 1801 North Kent Street	280.0
1982	Arland Towers East Tower 1101 - 1144 Wilson Boulevard	438.0
1983	Park Place 1655 Fort Myer Drive	145.0
	1550 Wilson Boulevard	123.0
1984	-	0
1985	Arland Towers West Tower 1101 - 1144 Wilson Boulevard	457.9
1986	1560 Wilson Boulevard	142.2
	American Chiropractic 1617 - 1705 North 17th Street	19.6
1987-1995	Safeway 1525 Wilson Boulevard	283.4

ROSSLYN STATION AREA  
ACTUAL AND PROJECTED RETAIL DEVELOPMENT

<u>Year</u>	<u>Project</u>	<u>Gross Floor Area (Thousands of Square Feet)</u>
1978	-	0
1979	McDonalds 1823 North Moore Street	12.6
1980	Rosslyn Center 1700 North Moore Street	47.0
	Noland Building 1300 17th Street North	18.7
1981	-	0
1982	River Place 1101 Arlington Boulevard	139.0
	Arland Towers East Tower 1101 - 1144 Wilson Boulevard	63.7
1983	Park Place 1655 Fort Myer Drive	13.0
1984	-	0
1985	Arland Towers 1101 - 1144 Wilson Boulevard West Tower	61.0
1986	-	0
1987-1995	Safeway 1525 Wilson Boulevard	31.2

ROSSLYN STATION AREA  
ACTUAL AND PROJECTED HOTEL DEVELOPMENT

<u>Year</u>	<u>Project</u>	<u>Rooms</u>
1978-1986	-	0
1987-1995	1560 Wilson Boulevard	127
	Iwo Jima Motel 1425 & 1501 Arlington Boulevard	80
	Arland Tower West	325

ROSSLYN STATION AREA  
ACTUAL AND PROJECTED RESIDENTIAL DEVELOPMENT

<u>Year</u>	<u>Project</u>	<u>Units</u>
1978	-	0
1979	Overlook Townhouses 1211 - 1241 Nash Street	15
	Prospect Place 1424 12th Street	5
1980	Rosslyn Mews 1810 - 1834 North Ode Street	13
	Key Mews 1604 - 1614 Key Boulevard	6
1981	The Weslie 1401 North Oak Street	42
1982	-	0
1983	Federal Ridge 1509 - 1525 Key Boulevard	10
1984	Lisa Court 1610 - 1620 Arlington Boulevard	6
	Radnor Heights 1408 - 1418 North 12th Street	12
1985	The Atrium 1538 Key Boulevard	357
1986	The Belvedere 1407 - 1425 North Fairfax Drive	527
	Quad of Arlington	185
1987-1995	Colonial Village 1800 Block North Quinn Street	366

COURT HOUSE STATION AREA  
ACTUAL AND PROJECTED OFFICE DEVELOPMENT

<u>Year</u>	<u>Project</u>	<u>Gross Floor Area (Thousands of Square Feet)</u>
1980	-	0
1981	-	0
1982	National Milk Producers 1840 Wilson Blvd.	46.1
1983	Bell Atlantic Plaza 1320 N. Courthouse Rd.	367.7
1984	-	0
1985	Arlington Plaza 2000 15th St. North	194.7
1986	Colonial Place #1 Wilson at N. Veitch	248.0
	Weisberg Development 2530 Wilson Blvd.	95.5
1987-1995	Courthouse Park 2000 - 2016 N. 14th St.	118.8
	Colonial Place (2&3) Wilson at N. Veitch	512.0
	DeRand Corporation 2200 Wilson Blvd.	56.5
	Courthouse Plaza	600.0



COURT HOUSE STATION AREA  
PROJECTED RETAIL DEVELOPMENT

<u>Year</u>	<u>Project</u>	<u>Gross Floor Area (Thousands of Square Feet)</u>
1986	Weisberg Development 2530 Wilson Blvd.	11.5
1987-1995	DeRand Corporation 2200 Wilson Blvd.	5.0
	Courtlands 1227 - 1317 N. Barton St. 1207 - 1319 N. Adams St.	75.0
	Courthouse Plaza	60.9

COURT HOUSE STATION AREA  
PROJECTED HOTEL DEVELOPMENT

<u>Year</u>	<u>Project</u>	<u>Rooms</u>
1987-1995	DeRand Corporation 2200 Wilson Blvd.	48
	Courthouse Plaza	276

COURT HOUSE STATION AREA  
ACTUAL AND PROJECTED RESIDENTIAL DEVELOPMENT

<u>Year</u>	<u>Project</u>	<u>Units</u>
1980	1201 N. Danville	4
1981	Summer Hill 1504 - 1508 N. Rolfe St.	14
1982	-	0
1983	Woodbury Heights 1301 N. Courthouse Rd. 1314 - 1322 N. Troy St.	170
	Colonial Village 1700 blk. N. Uhle St.	70
1984	Courthouse Park 2609 - 2613 N. 10th St. 1022 N. Cleveland St. 1017 N. Danville	16
1985	Barton Place 1210 N. Barton St. 1201 - 1223 N. Cleveland St.	52
1986	-	0
1987-1995	Chelsea Landing/Astoria 2028 - 2120 Lee Hwy. 2100 - 2112 19th St., N.	268
	Jefferson House 1310 - 1406 N. Barton St. 1307 - 1405 N. Cleveland	180
	Courtlands 1227 - 1317 N. Barton St. 1207 - 1319 N. Adams St.	954
	Courthouse Plaza	395

CLARENDON STATION AREA  
PROJECTED DEVELOPMENT

Office

<u>Year</u>	<u>Project</u>	<u>Gross Floor Area (Thousands of Square Feet)</u>
1986	Olmsted Building 1114 - 1130 North Highland	213.0
1987-1995	Clarendon Square Wilson at North Highland	170.0

Retail

<u>Year</u>	<u>Project</u>	<u>Gross Floor Area (Thousands of Square Feet)</u>
1986	Olmsted Building 1114 - 1130 North Highland	45.1

VIRGINIA SQUARE STATION AREA  
ACTUAL AND PROJECTED DEVELOPMENT

Office

<u>Year</u>	<u>Project</u>	<u>Gross Floor Area (Thousands of Square Feet)</u>
1986	Clarendon Office Building 3300 N. Fairfax Dr. 933 N. Kenmore St.	42.6
1987-1995	Virginia Square Plaza 3801 N. Fairfax Dr.	407.5
	Warner Office 3330 Washington Blvd.	34.2

Residential

<u>Year</u>	<u>Project</u>	<u>Units</u>
1980	Ashton Square 3901 6th St., N.	6
1981-1982	-	0
1983	Woodside 822 - 906 N. Jackson St.	12

BALLSTON STATION AREA  
ACTUAL AND PROJECTED OFFICE DEVELOPMENT

<u>Year</u>	<u>Project</u>	<u>Gross Floor Area (Thousands of Square Feet)</u>
1980	United Services Life Insurance Building	60.5
1981-1984	-	0
1985	Fairmont Building 4420 Fairfax Drive	59.7
1986	Ballston Common #1	250.0
	Ballston One 4601 N. Fairfax Drive	249.0
	Ballston Plaza 1100 Block, N. Glebe Road	150.0
1987-1995	Ballston Quadrangle 600 N. Glebe Rd.	341.2
	Ballston Station Association 1008 - 1042 N. Taylor St. 1019 - 1037 N. Utah St.	284.3
	Ballston Plaza 1100 blk. N. Glebe Rd.	540.0
	Ballston Common	625.0
	Ballston Office Center Glebe & Fairfax Dr.	334.5
	Arlington Square 4400 blk. Fairfax Dr.	134.3
	Stafford Place*	720.0
	Ballston Metro Center*	225.0

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\* Not site-plan approved as of 9-4-85.

BALLSTON STATION AREA  
PROJECTED RETAIL DEVELOPMENT

<u>Year</u>	<u>Project</u>	<u>Gross Floor Area (Thousands of Square Feet)</u>
1986	Randolph Towers 900 - 926 N. Quincy St. 901 - 911 N. Randolph St.	15.7
	Ballston Common	750.0
1987-1995	Ballston Quadrangle 600 N. Glebe Rd.	13.9
	Ballston Metro Center*	30.0
	Ballston Plaza	55.0
	Ballston Office Center Glebe & Fairfax Dr.	13.0
	Arlington Square 4400 blk. Fairfax Dr.	5.0

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\* Not site-plan approved as of 9-4-85.

BALLSTON STATION AREA  
PROJECTED HOTEL DEVELOPMENT

<u>Year</u>	<u>Project</u>	<u>Rooms</u>
1987-1995	Arlington-Ballston Inn (Holiday Inn)	221
	Ballston Metro Center*	240

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\* Not site-plan approved as of 9-4-85. Assumed open for occupancy in 1988.



BALLSTON STATION AREA  
ACTUAL AND PROJECTED RESIDENTIAL DEVELOPMENT

<u>Year</u>	<u>Project</u>	<u>Units</u>
1980	Cathcart Springs 440 N. Park Dr.	76
	Olde St. Ballston Square 11th St. & N. Stuart St.	20
1981	Rocky Gorge 724-734 N. Vermont St.	23
	Ballston Commons 1136-1146 N. Utah St. 1137-1145 N. Vermont St.	25
	Olde Ballston Towne 1118-1124 N. Taylor St.	18
	Olde Ballston Towne II 1132-1144 N. Taylor St.	16
	Randolph Square 1020-1040 N. Randolph St. 1025-1041 N. Strafford St.	48
1982	-	0
1983	Victoria at Ballston 1102-1112 N. Utah	14
	Carlín Ridge 617 N. Abingdon St.	19
	Rocky Gorge II 723-729 N. Wakefield St.	11
	Ballston Place 632-710 N. Tazewell St. 705 N. Vermont St.	30
1984	Old Ballston Towne III 1125-1133 N. Taylor St.	14
1985	Vermont Place 1100-1110 Vermont Avenue	11
	Stafford Square II 1103-1131 N. Stafford St. 1108-1112 N. Randolph St. 1124-1132 N. Randolph St.	60

BALLSTON STATION AREA (Continued)  
ACTUAL AND PROJECTED RESIDENTIAL DEVELOPMENT

<u>Year</u>	<u>Project</u>	<u>Units</u>
1985	Olde Ballston Towne V 1107-1111 N. Taylor St. 1102 N. Stuart St.	13
	Ballston Towne 1122 N. Utah St. 1123-1127 N. Vermont St.	18
	Summerwalk 1023-1035 N. Stuart St. 1016-1022 N. Stafford St.	179
	Olde Ballston Towne IV 1133-1141 N. Utah St.	13
	Vernon Corner 1111 N. Vernon St.	15
	Ballston Towne West 1125 N. Vernon St. 1120 N. Vermont St.	16
	1986	Randolph Towers 900-926 N. Quincy St. 901-911 N. Randolph St.
Vernon Square 1132-1147 N. Vernon St. 1133-1147 N. Vernon St. 4510 Washington Boulevard		34
1987-1995	Ballston Station Association 1008-1042 N. Taylor St. 1019-1037 N. Utah St. 4305-4317 N. Fairfax Dr.	248
	Ballston Plaza 1100 blk. N. Glebe Rd.	344
	Rivero 703 N. Abingdon St.	4
	Amick Development 1106-1110 N. Taylor St.	11
	Arlington Square 4400 blk. Fairfax Dr.	131

BALLSTON STATION AREA (Continued)  
ACTUAL AND PROJECTED RESIDENTIAL DEVELOPMENT

<u>Year</u>	<u>Project</u>	<u>Units</u>
1987-1995	Ballson Metro Center*	292
	Stafford Place*	621
	Arlington Square*	135

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\* Not site-plan approved as of 9-4-85. Assumed open for occupancy in 1988.

PENTAGON CITY STATION AREA  
ACTUAL AND PROJECTED DEVELOPMENT

Office

<u>Year</u>	<u>Project</u>	<u>Gross Floor Area (Thousands of Square Feet)</u>
1978-1981	-	0
1982	Pentagon City Office Bldg. 1 701 12th Str. S.	253.5
1983	-	0
1984	Pentagon City Office Bldg. 2 601 12th St. S.	309.6
1985-1986	-	0
1987-1995	Pentagon City Shopping Mall 1000-1400 S. Hayes St.	172.0
	Lincoln Place Army-Navy Dr.	514.9

Retail

<u>Year</u>	<u>Project</u>	<u>Gross Floor Area (Thousands of Square Feet)</u>
1987-1995	Pentagon City Shopping Mall 1000-1400 S. Hayes St.	1019.3

PENTAGON CITY STATION AREA  
ACTUAL AND PROJECTED DEVELOPMENT

Hotel

<u>Year</u>	<u>Project</u>	<u>Rooms</u>
1978-1986		0
1987-1995	Pentagon City Shopping Mall 1000-1400 S. Hayes St.	450

Residential

<u>Year</u>	<u>Project</u>	<u>Units</u>
1978	Carriage Hill 1785 S. Hayes St.	240
1979	South Hampton S. Hayes St. and 15th St.	220
	Claridge House 1500 S. Fern St.	302
1980-1986	-	0
1987-1995	Pentagon City Housing I 801 15th St. S.	624

CRYSTAL CITY STATION AREA  
ACTUAL AND PROJECTED OFFICE DEVELOPMENT

<u>Year</u>	<u>Project</u>	<u>Gross Floor Area (Thousands of Square Feet)</u>
1978	Crystal Square #4 1745 Jefferson Davis Hwy.	342.6
1979	Crystal Square #3 1735 Jefferson Davis Hwy.	231.1
1980	Crystal Square #2 1725 Jefferson Davis Hwy.	445.0
1981	Crystal Gateway #1 1235 Jefferson Davis Hwy.	349.0
1982	Airport Plaza Office #1 2797 Jefferson Davis Hwy.	136.0
	Crystal Gateway #2 1225 Jefferson Davis Hwy.	278.0
1983-1984	-	0
1985	Crystal Park #1 South Crystal Drive	406.0
	Crystal Gateway #4 1203 Jefferson Davis Hwy.	184.0
	Airport Plaza II 2765 Jefferson Davis Hwy.	202.0
1986	Crystal Park #2 South Crystal Drive	444.5
1987-1995	Crystal Station 2809 Jefferson Davis Hwy.	169.7
	Crystal Park (remainder) 1200-2500 S. Ball St.	1360.5
	Crystal Gateway North	289.1

CRYSTAL CITY STATION AREA  
ACTUAL AND PROJECTED RETAIL DEVELOPMENT

<u>Year</u>	<u>Project</u>	<u>Gross Floor Area (Thousands of Square Feet)</u>
1978-1980	-	0
1981	Crystal Gateway	69.0
1982	Airport Plaza I 2797 Jefferson Davis Hwy.	7.0
1983-1984	-	0
1985	Airport Plaza II 2765 Jefferson Davis Hwy.	10.0
	Crystal Park #1 South Crystal Dr.	3.4
1986	Crystal Park #2 South Crystal Dr.	4.9
1987-1995	Crystal Park (remainder) South Crystal Dr.	41.7

CRYSTAL CITY STATION AREA  
ACTUAL AND PROJECTED HOTEL DEVELOPMENT

<u>Year</u>	<u>Project</u>	<u>Rooms</u>
1978-1981	-	0
1982	Hyatt Hotel 2787 Jefferson Davis Hwy.	615
	Marriott 1500 S. Eads St.	450
1983	Sheraton Crystal City 1800 Jefferson Davis Hwy.	197
1984	-	0
1985	Embassy Suites 1401 S. Eads St.	267
1986	Marriott (Phase 2) 1500 S. Eads St.	248
	Pentagon City Quality Inn	252
1987-1995	Airport Plaza II 2765 Jefferson Davis Hwy.	630
	Crystal Station 2809 Jefferson Davis Hwy.	450



CRYSTAL CITY STATION AREA  
ACTUAL AND PROJECTED RESIDENTIAL DEVELOPMENT

<u>Year</u>	<u>Project</u>	<u>Units</u>
1978-1980	-	0
1981	Bennington Apts. 1201 S. Eads St.	348
	Crystal Gateway South 1201 Jefferson Davis Hwy.	174
1982	-	0
1983	Hampton House 1425 S. Eads St.	135
1984	-	0
1985	Crystal Park I	181
1986	Crystal Park II	180
	Crystal Gateway North	68
	Crystal Gateway Marriott (addition)	161
1987-1995	Crystal City Condominium 1211 S. Eads St.	556
	Crystal Park (remainder)	363
	Crystal Station 2809 Jefferson Davis Hwy.	208

BRADDOCK ROAD STATION AREA  
PROJECTED DEVELOPMENT

Office/Commercial

<u>Year</u>	<u>Project</u>	<u>Gross Floor Area (Thousands of Square Feet)</u>
1986	Braddock Place	330.7
1987-1995	Colecroft	152.6
	West Street Office Building	19.0

Residential

<u>Year</u>	<u>Project</u>	<u>Units</u>
1987-1995	Braddock Place Townhouses	160
	Colecroft Townhouses	131

KING STREET STATION AREA  
ACTUAL AND PROJECTED OFFICE/COMMERCIAL DEVELOPMENT

<u>Year</u>	<u>Project</u>	<u>Gross Floor Area (Thousands of Square Feet)</u>
1984	King Street Station I	124.5
	DIP Block 4 Townhouse Offices	21.6
	Duke Street Metro Center	36.8
	Duke Street Square Phase I	42.6
	American Association of Motor Vehicles	14.4
	Prince Street School	21.6
	1985	Duke Street Square Phase II
	Metro Square Offices	34.4
	1011 King Street	192.0
	National Association of Professional Engineers	51.8
	1500 King Street	22.4
1986	1410 King Street	23.6
	1501 Duke Street	18.6
1987-1995	King Street Station Developments	885.0
	Standard Floors	30.0
	1605 King Street	13.1
	Station Center	112.9
	1423 Prince Street	70.0
	Clipper Office Building	13.8
	1527 King Street	25.3

KING STREET STATION AREA  
ACTUAL AND PROJECTED HOTEL AND RESIDENTIAL DEVELOPMENT

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<u>Year</u>	<u>Project</u>	<u>Rooms</u>
1989	King Street Station Hotel	250

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<u>Year</u>	<u>Project</u>	<u>Units</u>
1983	Prince Street Condominiums	96
1990	King Street Station Condominiums	110

Library  
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EISENHOWER AVENUE  
ACTUAL AND PROJECTED DEVELOPMENT

Office/Commercial

<u>Year</u>	<u>Project</u>	<u>Gross Floor Area (Thousands of Square Feet)</u>
1984	Tavern Square II	29.0
1985	American Trucking Association	170.0
1986	-	0
1987-1995	Gateway Metro Center	460.0
	Alexandria Technical Center	400.0

Hotel

<u>Year</u>	<u>Project</u>	<u>Rooms</u>
1987-1995	Gateway Metro Center	136