# Market and Fiscal Impact Analysis of the Phase 2 Metrorail Extension to Loudoun County

## Loudoun County | April 15, 2011

ROBERT CHARLES LESSER & CO. 7200 WISCONSIN AVENUE, 7TH FLOOR, BETHESDA, MD 20814 P 240 644 1300 F 240 644 1311 W WWW.RCLCO.COM

## Contents

# I. Key Conclusions

- RCLCO (Robert Charles Lesser & Co.) forecasted residential, office, flex, retail, and hotel development in Loudoun County from 2011 through 2040 under two scenarios:
  - The Dulles Rail Phase 1 extension of Metrorail to Wiehle Avenue in Reston (currently under construction)—the "baseline" scenario.
  - The Dulles Rail Phase 2 extension of Metrorail to Route 772 in Loudoun County—the "Phase 2 Extension" scenario.
- Loudoun County is in the prime corridor of growth in the Washington, D.C., region, and it will experience substantial demand for all types of development under both scenarios.
- New Metro stations do not add to the total amount of development in the region, but they can have a significant impact on specific locations and characteristics of development within an economic submarket.
  - This can result in some transfer of potential demand from one county to another, although the predominant impact is to transfer demand from one location within a county to another.
  - Specifically, new stations can make it more likely that a county can accommodate the preferences of a broader range of businesses and residents, which can increase capture of development relative to nearby counties.
  - Metro stations can also result in higher-value development that garners higher tax revenues per square foot, per residential unit, or per hotel room.

***Residential***

- Constraints on residential development capacity in Loudoun County mean that the primary impact of the Phase 2 Extension on total housing development in the county by 2040 will be as a result of higher residential densities permitted near Metro stations. Total residential development in Loudoun County through 2040 is forecasted to be 9% greater (4,800 units) under the Phase 2 Extension scenario than under the baseline scenario.
  - In addition, the Phase 2 Extension will result in somewhat more rapid housing development until the years that capacity is essentially exhausted for particular housing types in eastern Loudoun County.
  - The Phase 2 Extension will also result in somewhat higher housing values in the proximity of the new Metro stations, which will also increase County revenues from housing development. It will also attract households with fewer school children, which will decrease County expenditures.
- Substantial additional residential development will occur in the Route 772 and Route 28 station areas under the Phase 2 Extension scenario.

### *Office*

- Total office development in Loudoun County through 2040 is forecasted to be 6% (1,039,000 square feet) greater under the Phase 2 Extension scenario than under the baseline scenario.
- Office development at the station areas under the Phase 2 Extension scenario is forecast to be 65% greater than under the baseline scenario—between 49% and 96%, depending on the station area.
- Office development in the station areas will have somewhat higher average assessed values and rents, which will also increase County revenues from office development.

### *Flex Space*

- The Phase 2 Extension will have no discernible impact on flex development in Loudoun County as a whole or in the station areas.

### *Retail*

- Total retail development in Loudoun County through 2040 is forecasted to be 8% greater (647,000 square feet) under the Phase 2 Extension scenario than under the baseline scenario, due to the increase in residential units and resultant increased demand for retail. Retail demand will also be realized somewhat earlier than under the baseline scenario because of the anticipated more rapid development of residential due to Metro.
- Retail development at the station areas under the Phase 2 Extension scenario is forecast to be 45% greater than under the baseline scenario—between 21% and 102%, depending on the station area.
- Retail development in mixed-use environments, including residential, in station areas will be more likely to be destination retail, resulting in higher average assessed values, rents, and sales. This will also increase County revenues from retail development.

### *Hotel*

- Total hotel development in Loudoun County through 2040 is forecasted to be 5% greater (219 rooms) under the Phase 2 Extension scenario than under the baseline scenario.
- Hotel development at the station areas under the Phase 2 Extension scenario is forecast to be 55% greater than under the baseline scenario—between 44% and 63%, depending on the station area.
- Hotel development in the station areas will have somewhat higher average assessed values and average daily rates, which will also increase County revenues from hotel development.

### *Fiscal Impact Analysis Under Baseline and Phase 2 Extension Scenarios*

- The net fiscal impact of development in the station areas is forecast to be $290,083,000 higher under the Phase 2 Extension scenario than under the baseline scenario, through 2040.
- Countywide, the net fiscal impact of the Phase 2 Extension scenario is forecast to be $234,577,000 higher than under the baseline scenario.
- The analysis has been conducted in constant 2010 dollars, so it does not take account of inflation. Fiscal impact in future dollars will be substantially higher, given likely inflation over the next 30 years.

## II. Introduction

RCLCO was retained by Loudoun County through a competitive process to analyze the projected economic impact of the completion of Phase 2 of the Dulles Rail Extension through 2040. In order to do so, RCLCO was asked to complete several component analyses based on two scenarios: construction of the Phase 2 Extension and no construction of the Phase 2 Extension. The component pieces included:

- Analysis of commercial and residential development at the countywide, subcounty, and rail station area levels;
- Development forecasts within an identified impact radius of the Route 606, Route 772, Route 28, and Dulles International Airport stations; and
- Forecast of changes to Business, Professional and Occupational License Tax.
- Use of the data from these forecasts to update the Dulles Rail Fiscal Impact Model created in 2002 when the Board of Supervisors approved the Moorefield Station Plan.

The report begins with a discussion of key concepts before describing economic conditions and forecasts.

The report then discusses RCLCO's forecasts for amounts of development, with and without the Phase 2 Extension, for housing, office, flex, retail, and hotel. In each of these sections, we provide forecasts of development for Loudoun County as a whole, the relevant planning subareas (in the case of housing and retail) or corridors (in the case of office, flex, and hotel), and the station areas.

The final section of the report discusses the fiscal impact analysis of the anticipated development, with and without the Phase 2 Extension, within each of the station areas and countywide, based on an update of the Dulles Rail Fiscal Impact Model created when the Board of Supervisors approved the Moorefield Station Plan.

Key tables and figures are inserted directly into the report. The report is followed by exhibits that provide more detailed information, and the report includes references to exhibits where appropriate. Exhibits are organized as follows:

- Section I: Household forecast and housing exhibits;
- Section II: Employment forecast and office and flex exhibits;
- Section III: Retail exhibits;
- Section IV: Hotel exhibits;
- Section V: Fiscal impact summary and property valuation backup exhibits; and
- Appendix: Fiscal impact model outputs.

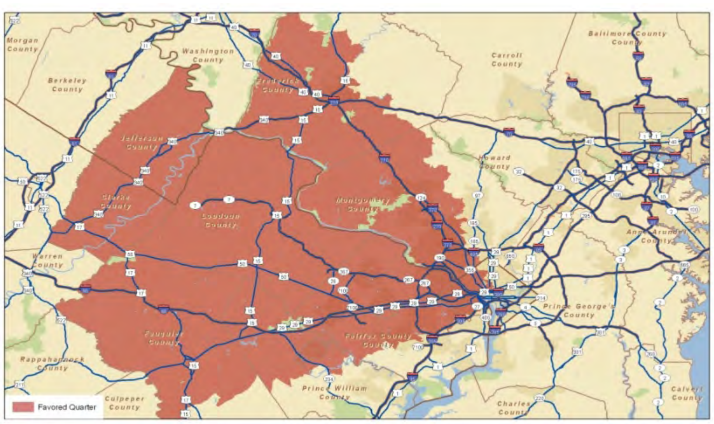
# III. Conceptual Framework

RCLCO has developed its own perspective on how regions grow and what the likely impact of transit is, based on its many years of experience serving a wide variety of clients in different metro areas, and a review of the research literature. A high-level exposition of these perspectives that underlie the forecast methodologies employed by this analysis is set forth below.

### *The Favored Quarter*

The "Favored Quarter" denotes a concept in metropolitan growth trends analysis that RCLCO pioneered in the 1980s. The Favored Quarter refers to the portion of a metropolitan area, often contained within a 90-degree arc emanating from the central city downtown, in which a large share of the executive housing and high-wage employment is located. The concentrated presence of high-income households makes the Favored Quarter a desired location for new real estate developments and, as a result, it typically experiences strong demand for growth. As shown in the figure below, in the Washington, D.C., region the Favored Quarter extends west-northwest from Downtown D.C., with the Dulles Access Road and Dulles Greenway in the dead center of the Favored Quarter.

**The Favored Quarter (Exhibit I-1)**



### *As Regions Expand, Suburbs Become Increasingly Urban*

Unless there are physical or regulatory barriers to expansion, metropolitan regions will expand outward as they add new households and employees. New development on greenfield sites is usually easier and less costly than redevelopment in urban cores. Even if it were not, urban redevelopment cannot satisfy the historical preference of many families for large single-family detached homes. As a result, jurisdictions with substantial amounts of vacant land in the Favored Quarter and good access to jobs will experience rapid growth. For this reason, Fairfax County experienced rapid growth in the 1960s and 1970s and Loudoun County experienced rapid growth from 1990 through 2010.

Nonetheless, as the popularity of a jurisdiction grows and land becomes scarcer, land prices rise. Job growth often follows household growth, and as job cores develop, they generate even more demand for nearby housing. As a result, the pressure to build at higher densities increases.

The history of Northern Virginia's development illustrates these trends. Arlington, Alexandria, and Fairfax County used to serve as suburban communities with primarily single-family housing units that housed commuters to D.C. Since then, they have experienced a substantial amount of office and multifamily housing development that has concentrated along transportation corridors. Their character has become slowly more urban and denser. Though they remain the home location for many commuters to D.C. and elsewhere, they have also become the destination for workers who live even further away.

Each jurisdiction in Northern Virginia lies at a different point along this path of development, and each will experience it differently due to its unique zoning regimes, transportation infrastructure, and the national economic situation, among many other variables. Nonetheless, RCLCO anticipates that the same broad trends that have influenced Northern Virginia and other metropolitan areas in the past will also apply to Loudoun County's future development.

### *The Impact of Rail Transit*

Numerous studies on the impact of rail transit have concluded that it increases the value of nearby properties. The amount of the value increase and the distance to which the impact extends, however, are influenced by many variables, such as the design of the station area, the surrounding land uses, the ridership of the transit system, frequency of service, etc. In general, however, the closer to transit a property is, the greater the value increase, and most of the value increases are likely to occur within a ½ mile walking distance of the station entrance.

Moreover, because of the increased property values and rents associated with proximity to transit, all else being equal properties in close proximity to Metro are more attractive to prospective developers than properties far away. As a result, they may experience faster and/or more intense development. Nonetheless, RCLCO has not found any credible evidence to indicate that the extension of rail transit brings new development to an entire region. This is in part because it is very difficult for any researcher to establish how a region would have developed with different infrastructure than what it has. As a result, RCLCO has assumed that if transit spurs faster or more intense development on one property then it must necessarily mean slower or less intense development on another in the region.

For purposes of this forecast, it should be noted that the Dulles Airport station was not projected to have any fiscal impact on Loudoun County. This is because we understand, based on discussions with a representative of the Metropolitan Washington Airports Authority, that no development will be allowed around this station. Furthermore, MWAA is not projecting any total increase in passenger traffic to the airport as a result of the Phase 2 Extension, but rather a shift in the mode of transportation to the airport.[1] Therefore, there would be no change in County revenues or expenditures as a result of the Dulles Airport station.

# IV. Economic Conditions and Forecasts

### *Regional Forecasts*

The Washington, D.C., Metropolitan Statistical Area (MSA), which includes Loudoun County, has experienced a prolonged period of household and employment growth over the last several decades, a trend that forecasters anticipate will continue through the next 30 years. This growth can be quantified by examining the Metropolitan Washington Council of Governments (COG) data on household and job growth shown in the table below.

**Household Growth and Employment Growth in the Washington, DC MSA**

| | 1990 - 2000 | 2000 - 2010 |
|---|---|---|
| Average Annual Household Growth | 25,139 | 25,750 |
| Average Annual Job Growth | 30,656 | 27,038 |

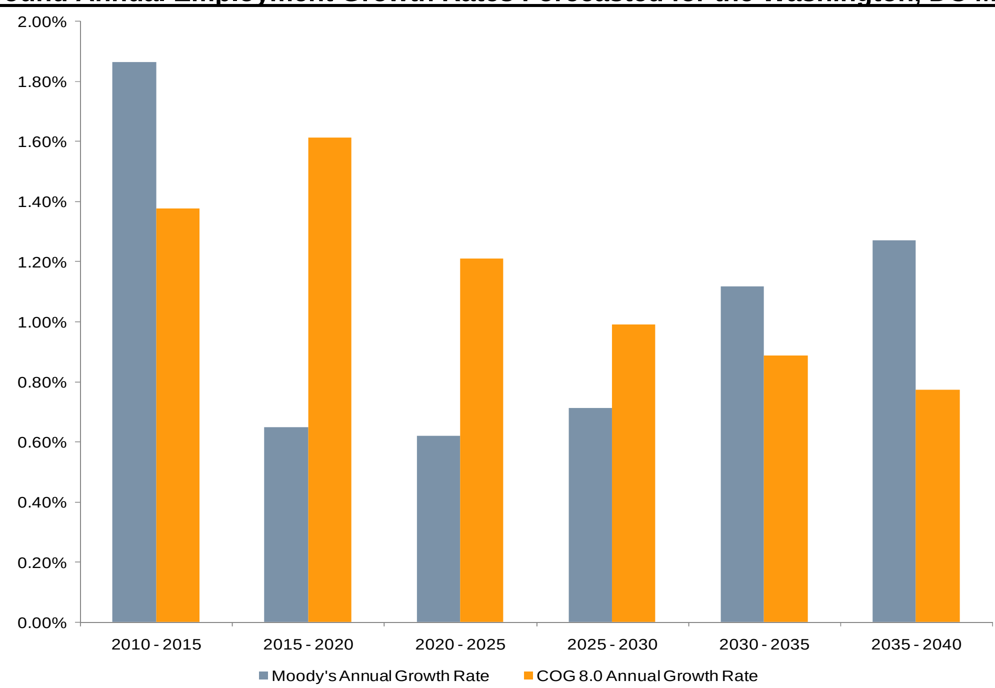
According to COG, between 2000 and 2010 the MSA[2] added an annual average of 25,750 households, bringing the total number of households to 1,967,800. During the same period, the MSA added an average of 27,038 jobs per year, bringing that total to 3,214,700. (Exhibits I-5 and II-3.)

[1] Based on a discussion with Frank Holly, Vice President for Engineering, MWAA, on November 30, 2010.
[2] Based on the 1983 definition, which is different than the region as defined by Moody's. Note that there are various definitions of the region or metro area, as well as various definitions of employment and office-using employment, all of which complicate comparisons among different forecasters.

This overall growth took place during a decade during which there were two economic downturns, the latter of which was especially pronounced. Notably, during this decade Loudoun County grew at a faster rate than even the region as a whole–-capturing an average of 16% of the MSA household growth and 20% of regional employment growth. Loudoun County's number of households increased by 71%–-growing from 59,900 households in 2000 to 102,331 households in 2010. During this same period, the county added 53,200 jobs and ended the decade with total employment of 143,700–-a 59% increase. (Exhibits I-5 and II-3.)

This rapid pace of growth-–both regionally and within Loudoun County-–is anticipated to continue through the next three decades, despite the recent slowdown. According to COG, the Washington, D.C., MSA is projected to add 1,266,700 jobs and 676,400 households between 2010 and 2040. (The COG regional forecasts are based on forecasts by member jurisdictions. As part of the COG Round 8.0 forecast development process, regional growth forecasted by IHS Global Insight, a leading private economic forecasting company, was also examined.) Forecasts from other private forecasters, including Moody's Analytics (Economy.com), are largely consistent with the COG forecasts at the metro area level. For example, Moody's forecasts an employment compound annual growth rate (CAGR) of 1.04% during this period, versus COG's rate of 1.14%. Similarly, Moody's forecasts a household CAGR of 0.92%, versus COG's 1.06%. Although the rate over the forecast period is fairly similar, the forecasts differ significantly during the near-term forecast period, a post-recessionary period during which there is considerable disagreement about the likely pace of economic recovery.

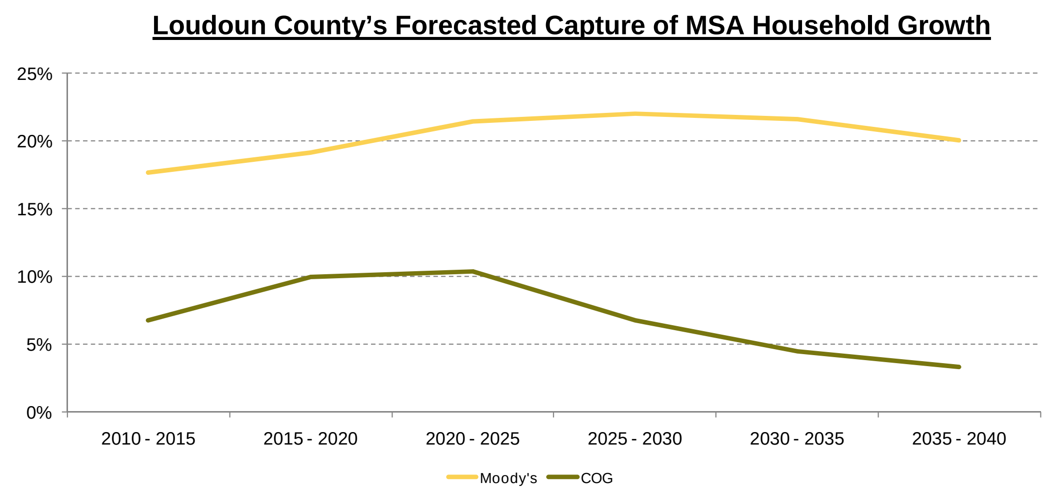
**<u>Compound Annual Employment Growth Rates Forecasted for the Washington, DC MSA</u>**



As noted below, RCLCO has elected to use the COG regional forecasts for this analysis.

### *County Forecasts*

While forecasts at the regional level are fairly consistent among data sources, there are more significant variations in the allocation of growth within the region. The variations in growth forecasts at the regional level are especially pronounced with respect to Loudoun County. COG forecasts for Loudoun County for 2010-2040 estimate an additional 55,968 households and 141,700 jobs, while Moody's forecasts estimate an additional 131,020 households and 191,407 jobs during the same period. Moody's predicts that Loudoun County will increase its share of metropolitan area household growth during the forecast period and grow from an 18% capture rate in 2010-2015 to a 22% rate by 2030-2035 before retrenching to 20% by 2035-2040. COG forecasts, however, would result in a decrease in the capture rate of regional growth that Loudoun achieves in the long term-–Loudoun's capture rate of regional household growth would decline from 14% between 2000 and 2010 to 3% by 2035-2040, presumably largely because of anticipated constraints on supply of land planned for housing at densities that serve most households in the region. (Exhibit I-2.)




As the COG forecasts take into account inputs from local governments, they reflect perspectives on current and anticipated future physical planning and policy constraints, such as planning, zoning, overall growth policies, infrastructure development, and land availability, while the Moody's forecasts are not sensitive to these constraints and instead tend to forecast the overall potential economic and demographic growth that could be expected absent these inputs. Policies regarding planning and zoning can change over time, and the extent and direction of such changes will affect which of these forecasts may ultimately come to fruition.

### *RCLCO's Approach to Regional Growth Forecasting*

Regardless of which trajectory is viewed as more accurate today, what is certain is that Loudoun County is in the path of growth and has the potential to gain jobs and households at rates faster than the region as a whole throughout the forecast period. The central portion of the Favored Quarter, in which Loudoun County is located, has historically outperformed even the remainder of the Favored Quarter in terms of level and quality of economic activity, as epitomized by the Rosslyn-Ballston Corridor, Tysons Corner, Reston-Herndon, Ashburn, and Dulles (the Route 28 corridor). Although COG does not specifically use the Favored Quarter concept, COG forecasts call for the Favored Quarter to absorb 44% of regional household growth and 48% of regional job growth over the next 20 years. (Exhibit I-1.) Exhibit I-2 shows COG and Moody's forecasts for household growth in Loudoun and Fairfax counties vis-à-vis regional growth over the next 30 years.

Over the forecast period, then, it is one of the key conclusions and assumptions of this study that Loudoun County will remain in the path of regional growth and will continue to experience substantial demand for residential and non-residential development during this time. The extent to which this growth actually manifests in household and employment increases will depend to a large degree on the extent to which there is land available to accommodate development (referred to as "capacity" in this report). Capacity will in turn be dependent to a substantial extent on planning and zoning policies and decisions, which play the role of "gatekeeper" to Loudoun County. In our analysis, we have used the same capacity constraints that Loudoun County assumed in its COG 8.0 forecast inputs[3] other than taking account of the Loudoun County Board of Supervisors' approval of the Route 28 Comprehensive Plan Amendment and Dulles World Center development, which occurred after the COG Round 8.0 forecast was completed. The capacity assumptions used in this analysis take account of these approvals.) Our analysis of potential "structural demand"[4] indicates that total potential residential growth in Loudoun County could be substantially higher than COG forecasts if capacity constraints were changed. These demand forces, whether accommodated or not, will be at play in shaping the demand for development sites in Loudoun County through the forecast period.

After carefully considering the forecasts discussed above and taking account of our understanding of likely regional growth in future decades, RCLCO decided to use the COG forecasts for regional employment and household growth. RCLCO elected to use its own forecasting methodology, taking account of COG forecasts, to predict county, subcounty, and

[3] The COG 8.0 forecast assumes densities available when Metro construction is completed, except at Route 28 where densities associated with Metro were approved after completion of the forecast.
[4] Structural demand in this report refers to demand that would likely occur in the absence of capacity constraints.

station area growth, within the capacity constraints discussed in the previous paragraph. This methodology takes into account the fact that jurisdictions within the metro area grow and decline at different rates, and that there is a typical pattern of growth in particular corridors over time as closer-in areas mature.

RCLCO therefore employed a "Regional Share Index" (RSI) methodology to measure and forecast growth of counties as components of regional growth. This index is calculated by dividing a given county's percentage of regional employment and/or household growth over a given time period by that county's share of total employment and/or households at the beginning of the period. An index of between 0 and 1 reflects an area that is growing at a relatively slower pace than the region as a whole, and usually is associated with either established areas with a large employment and/or household base but relatively little new growth (due to lack of remaining developable land, for instance), or fringe areas with a small base of existing employment and/or households but even slower growth. An index over 1 reflects an area that is experiencing strong growth relative to the region as a whole, taking account of its existing base of employment and/or households. The highest index numbers (over 2) reflect rapidly changing and growing suburban areas. An index of 1 reflects an area that is attracting its "fair share" of growth relative to the region as a whole. Over time, the RSIs in these rapid growth areas decline, as the existing base of employment and/or households increases and employment and/or household growth begins to slow as some job and household growth heads for the next emerging growth areas.

The RSI compares the amount of growth in any one time period in a county against the amount of growth in the region during the same time period, and benchmarks counties against each other and the region as a whole. The RSI, which is applicable to both jobs and households, reflects county growth rates vis-à-vis MSA growth, and allows for trend analysis of higher/lower rates of growth within counties. Moreover, the RSI allows for direct comparison of different geographies at different time periods with relative consistency, and especially when attempting to draw comparisons among areas at different periods in their development life cycles.

As noted above, as a county experiences rapid growth, its RSI will generally exhibit a value greater than 1.0. For example, as shown in Exhibit I-5 and summarized in the table below, Fairfax County had a household RSI of 2.19 between 1980 and 1990, meaning that it displayed household growth rates more than double that of the region during the same time period. As Fairfax County peaked in overall development rate and as much of the easily-developed or appealing sites became developed, and as other areas in the region became equally compelling destinations for household growth, its household RSI decreased to 1.13 (between 1990 and 2000) and to well below 1.00 (0.68) from 2000 to 2010. The RSI not only measures the rate of growth of Fairfax County, but also reflects the extent to which Fairfax County can and did compete for regional growth during different periods in its growth life cycle.

**Total Household Growth Regional Share Indexes**

| | 1980 - 1990 | 1990- 2000 | 2000 - 2010 |
|---|---|---|---|
| **MSA Growth** | 227,740 | 251,390 | 257,500 |
| **Fairfax County Growth** | 87,603 | 59,234 | 37,066 |
| **Fairfax County RSI** | 2.19 | 1.13 | 0.68 |
| **Loudoun County Growth** | 12,090 | 29,040 | 42,431 |
| **Loudoun County RSI** | 3.48 | 5.46 | 4.70 |

The summary table and Exhibit I-5 also show that Loudoun County has exhibited high household RSIs throughout the past three decades–-substantially above RSIs in Fairfax, Prince William, Arlington, Montgomery, and Prince George's counties and the District of Columbia.

**Single-Family and Multifamily Regional Share Indexes in Fairfax and Loudoun Counties**

| | 1981 - 1985 | 1986 - 1990 | 1991 - 1995 | 1996 - 2000 | 2001 - 2005 | 2006 – 2009 |
|---|---|---|---|---|---|---|
| **Fairfax County** | | | | | | |
| Single-Family RSI | 1.49 | 1.03 | 0.86 | 0.72 | 0.48 | 0.40 |
| Multifamily RSI | 2.55 | 2.10 | 1.93 | 2.14 | 1.53 | 0.33 |
| | | | | | | |
| **Loudoun County** | | | | | | |
| Single-Family RSI | 2.48 | 5.92 | 3.09 | 4.23 | 3.64 | 2.68 |
| Multifamily RSI | 6.56 | 26.18 | 6.26 | 10.06 | 6.32 | 3.40 |

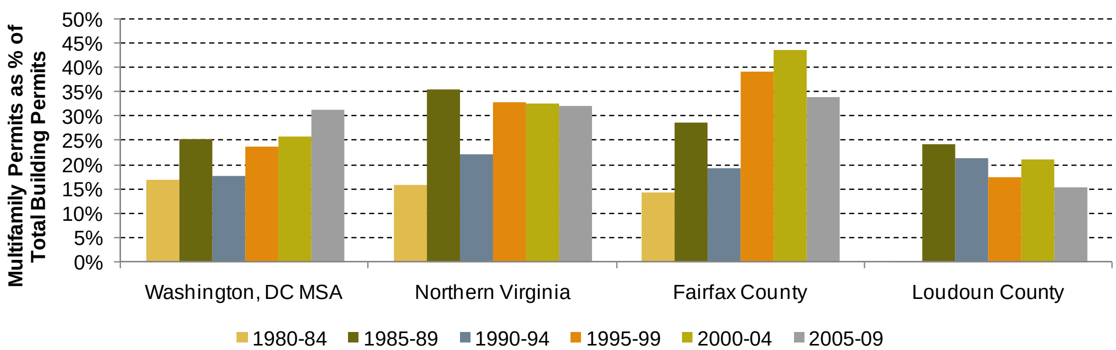
Translating this household growth into housing units, both in Loudoun County and in nearby Fairfax County, yields some interesting findings. Fairfax County's single-family and multifamily RSIs have declined since the 1980s and 1990s. Its single-family RSI, however, has declined faster than its multifamily RSI. (Summary table above and Exhibit I-6.) Based on a linear regression trend line, its single-family RSI has fallen by 4.9% per year, while its multifamily RSI fell by 3.1% per year through 2005. Given the dramatic economic downturn beginning in 2008 and the low number of multifamily permits issued throughout the region, the low multifamily RSI for Fairfax County from 2006-2009 was considered to be an anomaly and not included in the trend line calculation. (Exhibit I-7.) These trajectories provide some basis for forecasting future growth in Loudoun County.

The table above, detailed in Exhibit I-6, shows Fairfax's RSIs for both single-family and multifamily units—reflecting its historical periods of rapid growth through the 1980s and 1990s.

Through the period 1980 to 2010, the Fairfax single-family RSI steadily declined, reflecting the county's decline from its "peak growth" period of the 1980s. Meanwhile, as the county became an increasingly desirable residential destination through this period, prices increased and desirable lots and homesites were not able to keep pace with demand. Households desiring a Fairfax residence sought out multifamily units; Fairfax County maintained a high multifamily RSI through 2005, which declined only during the condominium bust years of 2006-2009.

Further examination of single-family and multifamily trends in Fairfax County provides additional insight into bases for forecasting future growth in Loudoun County. The graph below shows the multifamily share of total permitting activity increased in both the MSA and in Northern Virginia during the period 1980 to 2009, with five-year averages increasing from 16.8% to 31.3% in the MSA and from 15.8% to 32.1% in Northern Virginia.

**Multifamily Constituting an Increasing Share of New Construction (Exhibit I-8B)**




As shown in Exhibit I-13, multifamily activity in the region as a whole, measured as its share of total permitting activity, has increased at a rate of approximately 2% per year over the period 1980-2009. This trend was slightly more pronounced in Fairfax County, where multifamily share five-year averages increased from 14.2% to 33.8% during the same time period. As the region has grown, areas which have experienced high rates of growth and high RSIs, such as Fairfax County, also generally display patterns of increasing proportions of multifamily development. In Loudoun County, the multifamily share of total permits has actually fallen since the 1985-1989 period. However, as land planned for single-family housing becomes more expensive and scarcer, we anticipate that multifamily will indeed constitute an increasing share of residential construction, following the pattern of closer-in areas such as Fairfax County (Exhibit I-8B.)

### *Employment Dynamics*

Over the past 20 years, the Washington, D.C., MSA added an average of 30,656 jobs per year, approximately 20,816 of which were office-using in nature. During that period, Loudoun County added an average of 5,200 jobs per year, of which an average of 2,100 per year were office-using in nature. (Exhibits II-3 and II-4.) This robust growth, which makes the area one of the strongest regional economies in the nation, is anticipated to continue through the forecast period. During the forecast period, the Washington, D.C., MSA is projected by COG (and RCLCO) to add 1,266,700 jobs. During the same period, RCLCO forecasts that Loudoun County will add 168,908 jobs, not assuming any effects of the Phase 2 Extension (Exhibit II-11).

Loudoun County has demonstrated employment RSIs of well above 1.0 since 1990. During the 1990-1995 period, the county had an employment RSI of 12.11, and for the entire period 1990-2010, the county had an average employment RSI of 11.11. (Exhibit II-3.) Clearly, the county has dramatically exceeded its "fair share" of regional employment growth through the prior two decades. In terms of regional share of total employment, Loudoun County is projected to continue to exceed its "fair share" of regional growth and exhibit a high RSI, albeit at declining rates through the forecast period. This means it will continue to add jobs at a rate higher than the MSA through at least 2040. The table below projects employment growth in Loudoun County through 2040 based on this methodology. As noted above, we project that Loudoun County will add approximately 168,908 jobs between 2010 and 2040. Based on this analysis, we predict that in the short term Loudoun County will capture 17% of regional employment growth, with that capture rate decreasing to 8% by 2040.

**Employment Growth Forecast for Loudoun County (Exhibit II-11)**

| | Loudoun County Regional Share Index | Loudoun County Employment | Loudoun County Avg. Annual Growth | Capture of MSA Annual Growth |
|---|---|---|---|---|
| 2010 | 4.00 | 143,736 | | |
| 2011 | 3.84 | 143,736 | 7,678 | 17% |
| 2012 | 3.69 | 151,414 | 7,270 | 16% |
| 2013 | 3.54 | 158,684 | 7,252 | 16% |
| 2014 | 3.40 | 165,937 | 7,199 | 16% |
| 2015 | 3.26 | 173,136 | 7,725 | 16% |
| 2016 | 3.13 | 180,861 | 8,215 | 16% |
| 2017 | 3.01 | 189,076 | 8,694 | 16% |
| 2018 | 2.89 | 197,770 | 8,588 | 15% |
| 2019 | 2.77 | 206,357 | 8,490 | 15% |
| 2020 | 2.66 | 214,847 | 7,848 | 15% |
| 2021 | 2.55 | 222,695 | 7,214 | 15% |
| 2022 | 2.45 | 229,910 | 6,576 | 15% |
| 2023 | 2.35 | 236,486 | 6,440 | 14% |
| 2024 | 2.26 | 242,926 | 6,284 | 14% |
| 2025 | 2.17 | 249,210 | 5,828 | 14% |
| 2026 | 2.08 | 255,038 | 5,387 | 13% |

| | Loudoun County Regional Share Index | Loudoun County Employment | Loudoun County Avg. Annual Growth | Capture of MSA Annual Growth |
|---|---|---|---|---|
| 2027 | 2.00 | 260,425 | 4,957 | 13% |
| 2028 | 1.92 | 265,382 | 4,812 | 12% |
| 2029 | 1.84 | 270,195 | 4,663 | 12% |
| 2030 | 1.77 | 274,857 | 4,402 | 12% |
| 2031 | 1.70 | 279,259 | 4,150 | 11% |
| 2032 | 1.63 | 283,410 | 3,907 | 11% |
| 2033 | 1.56 | 287,317 | 3,774 | 11% |
| 2034 | 1.50 | 291,091 | 3,642 | 10% |
| 2035 | 1.44 | 294,733 | 3,414 | 10% |
| 2036 | 1.38 | 298,147 | 3,197 | 9% |
| 2037 | 1.33 | 301,344 | 2,988 | 9% |
| 2038 | 1.28 | 304,332 | 2,878 | 9% |
| 2039 | 1.22 | 307,210 | 2,770 | 8% |
| 2040 | 1.18 | 309,980 | 2,664 | 8% |
| **Total Growth** | | | **168,908** | **13%** |

We anticipate that employment growth in Loudoun will over time be increasingly driven by office jobs, in large part because retail development is predominantly a function of households, and constraints on residential development will limit the demand for net new retail space in the county. We forecast that office jobs will constitute a growing share of annual job growth—from 41% in 2010–2011 to 73% by 2040. Over the forecast period, this translates into 87,523 new office jobs in Loudoun County, 52% of the total employment increase in the county. (Exhibits II-11 and II-14.) While office-using employment has been a strong component of growth in the county over the past 10 to 20 years, there is reason to believe that there will be increasing demand potential for office jobs emanating from smaller companies as well as continued demand from large employers. By nature, smaller companies tend to be more attracted to multitenant office space than to large corporate campuses. Moreover, as the 2009 Fulton Research Office Market Study of the Route 28 Corridor indicated, mixed-use environments with rich retail and restaurant offerings are becoming increasingly attractive to office tenants. Loudoun will have the opportunity to add this type of office space to its portfolio of office options, and if successful in adding this space can capture some or all of this employment potential.

### *Demographic Trends*

The Washington, D.C., MSA as a whole is adding households, and is anticipated by COG (and RCLCO) to add an additional 660,800 by 2040. (Exhibit I-30.) Loudoun County has experienced rapid household growth over the past decades, with an increase of 71,471 households between 1990 and 2010. According to COG estimates, this represents 14.0% of total growth in the MSA (1983 definition). (Exhibit I-5.) As discussed above, COG forecasts that future growth in Loudoun County will amount to 8.5% of the MSA total (1983 definition) over the forecast period, while as shown on Exhibit I-2 Moody's forecasts suggest that the share could be much higher (20.1% based on the Moody's definition of the MSA). (Exhibits I-2 and I-30.)

Over the past two decades, the MSA (1983 definition) has added 508,890 households (Exhibit I-5), and an increasing proportion of that household growth was comprised of smaller, one- and two-person households. As shown in the table below, between 1990 and 2000 these households comprised 62% of total regional net household growth, and between 2000 and 2009 they comprised 86% of all regional net household growth. High-growth jurisdictions within the Favored Quarter, such as Fairfax County, exhibited similar patterns during this period, suggesting that as jurisdictions experience rapid growth in the D.C. region, a large component of that growth is comprised of one- and two-person households. As shown in the same table, despite Loudoun County's image as a predominantly family-oriented county, the county has historically attracted a large component of one- and two-person households; they accounted for about one-half of total net household growth in the county between 1990 and 2009.

**Household Growth by Household Size (Exhibit I-14)**

| | 1990 | 2000 | 2009 |
|---|---|---|---|
| **DC MSA Households** | 1,459,358 | 1,848,064 | 1,986,757 |
| Total 1 and 2 Person Households | 816,512 | 1,058,491 | 1,177,318 |
| Growth | | 241,979 | 118,827 |
| **% of MSA Growth** | | **62%** | **86%** |
| **Fairfax County Households** | 292,345 | 350,714 | 371,129 |
| Growth | | 58,369 | 20,415 |
| Total 1 and 2 Person Households | 150,598 | 189,350 | 206,669 |
| Growth | | 38,752 | 17,319 |
| **% of County Growth** | | **66%** | **85%** |
| **Loudoun County Households** | 30,490 | 59,900 | 100,638 |
| Total 1 and 2 Person Households | 15,035 | 29,904 | 49,448 |
| Growth | | 14,869 | 19,544 |
| **% of County Growth** | | **51%** | **48%** |

Because of its location within the Favored Quarter as well as its increasing strength as an employment destination, we anticipate that future growth in Loudoun County will exhibit patterns more in line with the region and nearby Fairfax County going forward, meaning that it will absorb growth via an increasing number of one- and two-person households. Already, approximately 60% of single-family attached and 37% of single-family detached housing demand in Loudoun County and the surrounding area has been driven by 1 and 2 person households (Exhibit I-16). Especially to the extent that these smaller households are also younger households (those with householders under 35 years of age) or seniors (65 and over), there may be increased demand for multifamily and other higher-density product types as land for single-family product becomes scarce and prices increase. As Exhibit I-17 shows, even if scarcity and price were not issues, and product type preferences within age groups remained the same, the forecasted increase by 2040 in older population groups with relatively high preferences for multifamily is projected to result in a somewhat higher demand for that product.

# V. Housing Forecast

### *Baseline Scenario*

- *RCLCO forecasts demand for 20,840 SFD, 11,628 SFA, and 23,422 MF units in Loudoun County from 2011 through 2040. (Exhibit I-29.)*
- *This forecast assumes the same capacity constraints that Loudoun County assumed in its COG 8.0 forecast inputs.*

RCLCO constructed demand forecasts that reflect a "baseline" condition for Loudoun County through 2040. This baseline condition assumes the Dulles Rail Phase 1 Extension to Wiehle Avenue, but that there would be no extension beyond this station. Hence, demand for housing in Loudoun County would not be subject to a "Metro effect" beyond access to these Phase 1 stations but would rather be based on the structural demand emanating from household growth and its relationship to overall growth patterns within the Washington, D.C., MSA, subject to capacity constraints. The table below from Exhibit I-29 provides a summary of the outputs of this baseline forecast. (More details are provided in Exhibits I-29 to Exhibit I-44.)

| Baseline Model (Dulles Rail Phase 1 Extension to Wiehle Avenue) | | | | | | | |
|---|---|---|---|---|---|---|---|
| | **2011 - 2015** | **2016 - 2020** | **2021 - 2025** | **2026 - 2030** | **2031 - 2035** | **2036 - 2040** | **Total** |
| New SFD Units | 8,982 | 6,978 | 4,004 | 580 | 179 | 117 | 20,840 |
| New SFA Units | 6,180 | 4,972 | 476 | 0 | 0 | 0 | 11,628 |
| New MF Units | 3,715 | 4,897 | 5,426 | 5,007 | 4,058 | 319 | 23,422 |
| Total | 18,877 | 16,847 | 9,906 | 5,587 | 4,237 | 436 | 55,890 |

RCLCO began by forecasting structural demand for housing in the MSA, Fairfax County, and Loudoun County, without yet taking account of the impact of capacity constraints as a result of planning decisions in Loudoun County, or of the Phase 2 Extension. (See Exhibit I-30.)

We first took account of likely vacancy and obsolescence over time by multiplying forecasted households by a factor of 1.06. (This factor varies from year to year with changes in vacancy rates and overbuilding, but we believe it is a reasonable factor to use over an extended period of time.)

We then took account of the fact that the distribution of housing by product type has not remained constant in the region and is not likely to be constant in the future. Specifically, as the region has added more households, it has added an increasing number of multifamily units per household and a decreasing number of single-family units per household. What this means is that as the region adds households, it is adding a greater share of multifamily units as a percentage of all housing units. (Exhibits I-8B, I-13.) The demographic trends detailed in the above section in part drive this shift, as do conditions of limited land availability in preferred places within the region, which force some households to choose denser products than their predecessors of the same age and life stage did and could. This shift has not yet occurred in Loudoun County, but we anticipate that it will in the future, as discussed earlier in the Conceptual Framework section of this report.

In modeling forward the anticipated relationship between household growth forecasts and eventual housing demand forecasts by product type, RCLCO took into consideration historical and current growth dynamics in nearby Fairfax County. This is because, for a variety of reasons, household and housing trends in Fairfax are worth examining for the potential precedent they set for Loudoun. Like Loudoun, Fairfax lies within the Favored Quarter of growth, and both are in the prime path of growth within the Favored Quarter. Moreover, Fairfax and Loudoun are physically connected to paths of growth-–they share primary arterial, highway connections, and now proposed rail connections–-meaning that growth in Fairfax will likely exert some level of growth pressure in Loudoun County. Finally, it is important to note that Loudoun's rapid growth in the 1980s onward is not without precedent. Fairfax experienced similarly significant growth beginning in the 1960s, and if anything its current rate of slower growth represents simply a maturation of its growth lifecycle. It is logical to draw relationships between Fairfax's capture of regional growth through the latter half of the last century, its current trajectory towards build-out in that direction of growth, and the extent to which growth will exhibit tendencies to continue beyond jurisdictional boundaries and accelerate into Loudoun County as a result.

For this study, then, RCLCO explored the following lens of comparison: given the path of growth and history of growth in the Favored Quarter and in Fairfax in particular, what can we expect in Loudoun? Specifically, what trends can we discern in Fairfax's pattern of residential development that, for a variety of reasons, might be expected to manifest in Loudoun in the coming decades?

Fairfax County's original rapid growth included large amounts of single-family housing development, which once comprised the bulk of total housing development in that county. However, even as early as the 1980s, multifamily development began to comprise greater shares of overall development activity. As shown on the table below, multifamily development in Fairfax County has grown from an average of 14.2% of overall permitting activity in the period 1980-1984 to 33.8% of total permitting activity in the period 2005-2009. Multifamily growth in Fairfax County, which shows signs of having peaked in 2000-2004, is still capturing significant shares of regional multifamily development. However, Fairfax's capture of regional single-family demand has steadily declined over the period 1980 to 2009 as its land supply has dwindled and land prices have risen, forcing developers to build more expensive housing that appeals to a smaller segment of the regional market. This decline in single-family development means that Fairfax's evolved regional competitiveness for multifamily demand will outstrip its competitiveness for capturing regional single-family demand going forward.

**Building Permit Trends (Exhibit I-8B)**

| LOCATION | | Average Annual 1980-84 | 1985-89 | 1990-94 | 1995-99 | 2000-04 | 2005-09 |
|---|---|---|---|---|---|---|---|
| ***WASHINGTON DC MSA*** | | | | | | | |
| | Single-Family | 22,378 | 31,819 | 21,968 | 24,457 | 27,803 | 15,564 |
| | Multifamily | 4,522 | 10,697 | 4,710 | 7,609 | 9,721 | 7,087 |
| | % Multifamily | 16.8% | 25.2% | 17.7% | 23.7% | 25.9% | 31.3% |
| | | | | | | | |
| ***FAIRFAX COUNTY*** | | | | | | | |
| | Single-Family | 7,322 | 7,852 | 4,582 | 4,503 | 3,356 | 1,364 |
| | Multifamily | 1,214 | 3,147 | 1,094 | 2,879 | 2,569 | 697 |
| | % Multifamily | 14.2% | 28.6% | 19.3% | 39.0% | 43.4% | 33.8% |
| | | | | | | | |
| | ***CAPTURE OF MSA*** | | | | | | |
| | Single-Family | 32.7% | 24.7% | 20.9% | 18.4% | 12.1% | 8.8% |
| | Multifamily | 26.8% | 29.4% | 23.2% | 37.8% | 26.4% | 9.8% |
| | | | | | | | |
| ***LOUDOUN COUNTY*** | | | | | | | |
| | Single-Family | 796 | 1,574 | 2,002 | 3,364 | 4,801 | 2,610 |
| | Multifamily | 2 | 500 | 544 | 715 | 1,293 | 472 |
| | % Multifamily | 0.3% | 24.1% | 21.4% | 17.5% | 21.2% | 15.3% |
| | | | | | | | |
| | ***CAPTURE OF MSA*** | | | | | | |
| | Single-Family | 4% | 5% | 9% | 14% | 17% | 17% |
| | Multifamily | 0% | 5% | 12% | 9% | 13% | 7% |

Loudoun County will likely show similar housing development trends, albeit 10 to 15 years after Fairfax. Growth in the Washington region has not shown signs of changing direction from its trajectory to the west-northwest, and in fact has increased in pace, as evidenced by the rapid growth in Loudoun County during the last housing boom. Growth that was once concentrated in eastern Fairfax County spilled into western Fairfax County and then into Loudoun County, and that demand for housing is only expected to intensify with the redevelopment of Tysons Corner and additional development along the Dulles Corridor and in Reston and Herndon. This development trajectory will create significant demand for development in the county as the economy and housing market recover.

Like Fairfax 40 years ago, Loudoun has captured ever-increasing shares of the regional single-family development market. Loudoun has not likely "peaked" in its single-family development, but it has already established an edge in capture of the regional single-family market vis-à-vis Fairfax County–-an edge that will likely continue as long as there is capacity to build single-family homes in density ranges that serve most of the region's households. Meanwhile, structural demand drivers are resulting in increasing shares of regional multifamily activity. Should permitting and zoning allow it, these demand drivers and regional capture rates show similarities to Fairfax County and could allow Loudoun to similarly overtake Fairfax County in terms of share of regional multifamily permitting activity by 2036, as shown in Exhibit I-30.

RCLCO's demand model takes into account the above factors, as shown in Exhibit I-30. The baseline structural demand forecast uses the Regional Share Index (RSI) approach, informed by past and anticipated future development pattern changes in the region, to forecast structural demand for single-family and multifamily units in Fairfax County and Loudoun County. (As noted earlier, structural demand does not take account of development capacity constraints.) In deriving the likely trajectory of RSIs, we took account of the mix in each county between single-family and multifamily and the share of each type of demand that would be captured by each of the two counties that would result from various RSI trajectories. In the absence of Loudoun County supply constraints, Loudoun would be projected to capture an increasing share of the total single-family demand in the two counties, beginning with 70% of this structural demand in 2010 and increasing to 78% by 2040. (Exhibit I-30.) Note that this high rate of capture would be during a period of lower overall captures of regional single-family activity within both Loudoun and Fairfax counties, which decrease from 9% to 2% in Fairfax and 20% to 5% in Loudoun over the forecast period, due to declining single-family land supply in both counties. Meanwhile, Loudoun County's potential capture of the total multifamily activity in the two counties is forecasted to increase at a rate consistent with the prior 10 years, beginning at 38% in 2010 and peaking at 53% by 2040–-a slightly higher share of multifamily demand at that time than Fairfax County.

Because the baseline scenario assumes completion of Dulles Rail Phase 1 Extension but not beyond, RCLCO explored the impact of this partial extension on potential demand for housing in Loudoun County. (The impact of rail stations on residential demand locations is discussed further in the following section.)  As shown in Exhibit I–31, RCLCO demand models take into account a certain proportion of increased overall multifamily demand in Fairfax County as a result of the Phase 1 Extension to Wiehle Avenue.  Because this increased demand is not additive to the regional total, it must be captured from other jurisdictions.  Based on competitive analysis and likely options for households during the forecast period, RCLCO modeled the amount of this additional single-family and multifamily demand that would be captured from Loudoun County assuming that there was no Phase 2 Extension to Loudoun.  This scenario results in an overall downward adjustment of nearly 700 housing units over the 2011–2040 forecast period to what would have been the potential housing demand in Loudoun County in the absence of the Phase 1 Extension.

Furthermore, one of the factors involved in forecasting the timing of growth pressures on Loudoun County is the extent to which western Fairfax County is built out.  Until 10 years ago, this build-out might be expected to occur sometime before 2015.  However, over that time period there have been planning and zoning initiatives that will potentially result in massive amounts of planned development–-both buildings and infrastructure and specifically Metrorail–-in Tysons Corner and western Fairfax County.  This in effect adds additional absorption capacity to the direct path of growth in the region and within a jurisdiction that is already competing strongly for that growth and which may affect this structural forecast of demand shifting, particularly in the relatively near term.

Specifically, the introduction of new Metro stations in concert with the redevelopment of Tysons Corner may enable Fairfax County to more effectively compete for regional multifamily demand, particularly in the near term (through 2020), and in effect reduce the rates at which its regional share index and capture rate of metropolitan demand are declining.  As western Fairfax County's development initiatives may increase its capacity to capture regional multifamily growth, this may dampen the aforementioned structural demand drivers for Loudoun County multifamily development in the near term (5-10 years).  However, multifamily in Tysons Corner and perhaps in Reston and Herndon will have to be very expensive to support land values, tax district charges, and anticipated high-rise construction, which will price many potential residents out of the market and will probably result in less actual development than currently anticipated.  In the medium term (10-20 years), as the most desirable sites in Fairfax County station areas begin to build out, proximity to them (for example, living in nearby Loudoun but enjoying the amenities of the Dulles corridor or Tysons Corner) will become even more attractive to segments of the multifamily market.  These growth factors are taken into account in the residential forecasts discussed above.

We then proceeded to take account of the fact that based on current planning policies and decisions and our demand forecasts, Loudoun County is likely to run out of capacity for single-family detached and attached development at typical densities of 4 to 6 units per acre for detached and 12 to 14 units per acre for attached houses that meet the needs of most households by approximately 2022. Based on the same factors, the county is likely to run out of capacity for multifamily development by approximately 2036. (Exhibits I-34 to I-36.) Exhibit I-33 shows how these capacity constraints have been taken into account. We first estimated the potential shift in demand by some households from single-family detached and attached to multifamily, which we expect to happen to a limited extent by one- and two-person households as discussed earlier. We have estimated that 5% of single-family demand and 10% of single-family attached demand would shift to multifamily when it is no longer possible to purchase a new home on a moderate size lot in Loudoun County.

We then specifically took account of capacity constraints by allocating demand for each type of housing by planning subarea. This distribution is driven by the historical capture rates of each type of housing by planning subarea. As our forecasts showed a particular planning subarea running out of capacity for a particular type of housing, that demand was reallocated to other planning subareas,[5] based on historical capture rates of all planning subareas with remaining capacity as of that year.

We based Metro station area demand forecasts in the absence of a Metro extension on their estimated capture of planning subarea demand. These estimates were based on considerations of the station area's "fair shares" of the planning subarea's remaining development capacity.

### *Phase 2 Extension Scenario*

- *RCLCO forecasts demand for 20,881 SFD, 12,356 SFA, and 27,450 MF units in Loudoun County through 2040. (Exhibit I-29.)*

This forecast assumes the same capacity constraints that Loudoun County assumed in its COG 8.0 forecast inputs, other than for the Route 28 area, where the approval of the Dulles World Center, which occurred after COG Round 8.0 was finalized, is taken into account. The table below from Exhibit I-29 provides a summary of the outputs of this scenario. (More details are provided in Exhibits I-29 to I-44).

[5] Excluding the Southwest, Route 7 West (including the Towns), and Northwest planning subareas because these areas allow primarily for development of expensive homes on very large lots. We expect this market to function independently of capacity elsewhere in the county.

| Dulles Rail Phase 2 Extension Model | | | | | | | |
|---|---|---|---|---|---|---|---|
| | **2011 - 2015** | **2016 - 2020** | **2021 - 2025** | **2026 - 2030** | **2031 - 2035** | **2036 - 2040** | **Total** |
| SFD Units | 8,982 | 7,091 | 3,957 | 547 | 185 | 120 | 20,881 |
| SFA Units | 6,184 | 5,352 | 821 | 0 | 0 | 0 | 12,356 |
| MF Units | 3,715 | 5,420 | 6,138 | 5,953 | 4,846 | 1,380 | 27,450 |
| Total | | | | | | | 60,688 |

There is much current discussion regarding the impact that transit investments–-particularly fixed-rail investments–-can have on overall development activity within a region. There are numerous examples across the nation in which significant amounts of development occur in and around station areas or along rail alignments in the period after station or alignment announcement, leading some to suggest that the rail investments in fact catalyze economic and real estate activity that otherwise would never have happened in the region.

Inspection of these case study examples does not, however, support this conclusion. Instead, rail introduction into new areas can have the effect of concentrating development at station areas or along alignments, while leaving the total amount of regional development activity more or less the same. In effect, then, fixed rail transit investments have the effect of concentrating relatively fixed amounts of overall economic activity at higher overall densities and may in fact capture potential demand from nearby jurisdictions. Also, land that would have otherwise been developed at lower, non-transit densities, remains available for other uses, some of which may be fiscally positive in nature or have other economic benefits (such as universities, hospitals, etc.). However, data does not exist that substantiates claims that fixed rail transit in fact elevates the overall amount of development that occurs in an economic region.

RCLCO explored the above conclusion within the Washington, D.C., region for areas in which Metro was either introduced or extended over the period 1976 to the present. Inspection of available information suggests that with proper planning/zoning, Metro likely enables jurisdictions to capture demand from nearby jurisdictions, especially when these jurisdictions are located within or adjacent to the Favored Quarter, and when they plan for development sites that can truly take advantage of proximity to a Metro station.

Fairfax County is actively seeking to modify the planning and zoning around these stations as well as to ensure that future station areas in the Wiehle Avenue extension, and the Fairfax County stations in the extension to Loudoun County, will have the proper planning and zoning to absorb Metro-related development. As shown in the table below, 2008 forecasts for Tysons Corner Metro station areas call for the addition of 10,200 to 22,700 households over the forecast period 2010-2040.

**Tysons Corner Household Growth Forecast (Exhibit I-20)**

| Tysons Corner | | | | | | |
|---|---|---|---|---|---|---|
| | | 2010 | 2020 | 2030 | 2040 | Annual Growth Rate |
| **Households** | | | | | | |
| | Low | 9,300 | 13,900 | 15,700 | 19,500 | 2% |
| | Int. | 9,300 | 14,800 | 18,800 | 25,300 | 3% |
| | High | 9,300 | 15,700 | 22,200 | 32,000 | 4% |

The impact of these planning, zoning, and development initiatives on potential demand for real estate–-especially multifamily housing–-in Loudoun County is not insignificant. As Metro is introduced to western Fairfax, historical evidence suggests that these station areas will begin to compete with and capture Metro-oriented demand from Arlington County (and to some extent the District). They may also capture some housing demand (especially multifamily) that otherwise may have gone to Loudoun County, but which may be lured into Fairfax County by the opportunity to locate at or near Metro, as discussed in the previous section. According to the 2007 American Housing Survey, approximately 5% of households in the Washington, D.C., MSA who had moved during the sampling period had chosen their new location because of public transportation, and undoubtedly many other households considered the availability of public transportation—particularly in deciding among different locations in a particular subarea of the region. As shown in Exhibit I–18, these figures are lower for those who had moved into single-family homes and higher for those who had moved into multifamily housing, except for 1-person households.

RCLCO modeled the impact that Metro would most likely have on overall demand after its introduction into Loudoun County. The sum of this impact is as follows–-the introduction of Metro to Loudoun County will likely have the effect of "recapturing" demand that had been previously captured by Fairfax County as the extension to Wiehle Avenue was completed and as its initial station areas became developed. Furthermore, we anticipate that the extension of Metro to Loudoun County will level the playing field to some extent, enabling Loudoun to capture some of the demand (primarily multifamily) that would otherwise have gone to Fairfax. Because the most desirable Metro sites available for multifamily development in Fairfax will become scarcer over time, and Loudoun sites will become increasingly convenient to employment concentrations, we have estimated that Loudoun's additional multifamily demand due to Metro will increase from 15% in 2018 to 23% in 2040. We have also estimated that Metro will have a modest impact on demand for single-family units—a 3% increase once the Metro extension opens. This scenario is modeled in Exhibit I-31, Phase 2 Extension.

This differential in anticipated impact between multifamily and single-family reflects the fact that some product types are more sensitive to Metro-influenced demand shifting than others. Because of their demand drivers, which include the types of environments around the station areas themselves in addition to a higher degree of inelasticity with regard to proximity to the Metro as a means of commuting, higher density products are subject to more demand shifting than lower density products. Furthermore, there will be limited opportunities for development of new single-family housing within a walking distance of ½ mile from Metro stations in Loudoun County.

Moreover, the extent to which Loudoun County is able to recapture demand from Fairfax (and the degree to which demand is captured originally) will in part depend on the proposed pricing of the residential units. There is some wisdom in assuming that market-clearing pricing for residential units in western Fairfax will be at or above top of market for the submarket and the region, especially given land prices, tax district charges, and construction costs. To the extent that Loudoun County station areas provide a locational proximity and price alternative that is more appealing to a less affluent renter/buyer, its loss may be less in the early years, and its recapture or net capture may be greater. In any case, RCLCO does conclude that should Loudoun County introduce Metro into the county and continue to plan and zone surrounding areas for higher-density uses, the longer term effect of the Metro extension will be to enhance the demand prospects for multifamily development in "connected" station areas in the county.

Based on RCLCO's understanding and assessment of likely locational impacts of the new Metro stations, RCLCO distributed the overall multifamily demand among planning subareas using the same methodology and assumptions employed in the baseline scenario except that planning subareas with Metro stations were given a bonus to their capture rates, reflecting redistribution from non-Metro planning subareas, when Metro operation begins. Similarly, RCLCO estimated that station area capture rates of their respective corridor's projected residential demand would increase with the arrival of Metro.

After taking account of these redistribution dynamics and Loudoun County's capture of demand that would have gone to other jurisdictions in the absence of the Phase 2 Extension, total residential development in the county over the next 30 years is projected to increase by 4,798 units, or 9%, from 2011 through 2040, as a result of the Phase 2 Extension. Because our forecasts indicate that with or without the Metro extension to Loudoun County the county's multifamily capacity will be fully developed before 2040, this increase is due to the higher allowed residential densities with Metro at the Route 772 and Route 28 stations. Therefore, virtually all of the increased residential development will occur in these two station areas (3,485 units at Route 772, and 1,265 units at Route 28.)

**Housing Unit Forecast, 2011-2040 (Exhibits I-34 to I-36, I-42)**

| | Baseline | Phase 2 | Difference |
|---|---|---|---|
| Ashburn | 15,731 | 19,195 | 22% |
| Rt. 606 Station | 0 | 0 | 0% |
| Rt. 772 Station | 5,303 | 8,788 | 66% |
| Dulles | 19,354 | 19,376 | 0% |
| Leesburg | 4,562 | 4,567 | 0% |
| Northwest | 1,698 | 1,728 | 2% |
| Potomac | 627 | 628 | 0% |
| Route 15 North | 1,957 | 1,957 | 0% |
| Route 15 South | 1,442 | 1,442 | 0% |
| Route 7 West | 3,760 | 3,761 | 0% |
| Southwest | 718 | 730 | 2% |
| Sterling | 6,041 | 7,304 | 21% |
| Route 28 Station | 0 | 1,265 | N/A |
| **Countywide** | **55,890** | **60,688** | **9%** |
| **Station Areas** | **5,303** | **10,053** | **90%** |

## VI. Office Forecast

### *Baseline Scenario*

- *RCLCO forecasts demand for 18,323,000 SF (net rentable area) of new office in Loudoun County through 2040. (Exhibit II-16.)*

Over the past 20 years, Loudoun County averaged 5,200 new jobs per year and maintained an average regional share index (RSI) of 11.1. No other jurisdiction save Fairfax County added more jobs during this time period, and no jurisdiction had a higher RSI during the same period. Of the jobs added to Loudoun County during that period, Loudoun averaged 2,100 (40% of total) jobs per year that were office-using. (Exhibits II-3 and II-4.)

RCLCO employed a regional share index model to forecast future employment growth, as well as to review and assess the existing forecasts provided by COG and Moody's. As shown in Exhibit II–12, all three forecasts yield fairly similar results through 2030, at which point both RCLCO and COG forecasts show employment growth that is slightly less robust than the Moody's forecast does.

Over the period 2010 to 2040, the RCLCO modeling estimates that Loudoun County will add 168,098 jobs, as shown in Exhibit II–11. Based on the percentage of employment that is office-using assumed by COG in its forecasts for Loudoun, RCLCO estimates that 87,523 (52%) of these jobs will be office-using in nature, as shown in Exhibit II-14. This represents a share that is higher than historical norms, but in line with the rate of growth of office jobs as a component of total job growth in Loudoun County over the prior 20 years. RCLCO forecasts that Loudoun County will continue to capture employment at a rate higher than the region as a whole throughout the forecast period, and that the overall capture of the regional employment market will remain robust, but that Loudoun's overall capture will decrease from 17% to 8% for all employment and from 13% to 10% for office employment. (Exhibits II-11 and II-14.) Note that Loudoun County will reach a point at which it will maintain greater market share of regional office-using employment growth than its regional share for all employment together. Through the forecast period, RCLCO modeling suggests that Loudoun gradually increases its share of total office delivery capture vis-à-vis- Fairfax.

RCLCO's baseline model, which estimates the potential office demand in Loudoun County in the absence of the Phase 2 Extension, forecasts demand for 18,323,230 SF of office countywide through the forecast period. The projection of office demand was derived by multiplying the projected office employment by the estimated 225 SF of office absorption per employee derived from a Route 28 corridor office study conducted for Loudoun County.[6] (Exhibit II-16.) This ratio of square feet per employee is in line with RCLCO's typical assumptions. The forecasted distribution of office demand by corridor is shown in the table below.

**Office Demand (Square Feet) Forecast by Corridor (Exhibit II-19)[7]**

| | 2011 - 2015 | 2016 - 2020 | 2021 -2025 | 2026 - 2030 | 2031 - 2035 | 2036 - 2040 | Total |
|---|---|---|---|---|---|---|---|
| Route 7 | 648,000 | 1,182,000 | 896,000 | 654,000 | 492,000 | 362,000 | 4,234,000 |
| Route 28 | 532,000 | 1,081,000 | 938,000 | 784,000 | 676,000 | 571,000 | 4,582,000 |
| Route 50 | 64,000 | 130,000 | 113,000 | 94,000 | 81,000 | 68,000 | 550,000 |
| Route 267 | 275,000 | 635,000 | 623,000 | 575,000 | 537,000 | 484,000 | 3,129,000 |
| Route 606 | 105,000 | 289,000 | 323,000 | 324,000 | 321,000 | 302,000 | 1,664,000 |
| Route 625 | 300,000 | 595,000 | 501,000 | 406,000 | 339,000 | 277,000 | 2,418,000 |
| Other | 203,000 | 412,000 | 358,000 | 299,000 | 258,000 | 217,000 | 1,747,000 |
| Total | 2,127,000 | 4,324,000 | 3,752,000 | 3,136,000 | 2,704,000 | 2,281,000 | 18,324,000 |

This distribution is driven in part by the historical rates of capture of office space within the commercial corridors, as shown in Exhibit II–8, but also takes into account RCLCO's judgment about the future desirability of the corridors for office development.

[6] *Route 28 Corridor Analysis of Development Potential for Class A Office Space*, prepared for Loudoun County by Fulton Research, Inc., August 27, 2009 ("Route 28 Corridor Office Study").
[7] Note that numbers on certain summary exhibits and tables do not always precisely match numbers presented elsewhere in the report due to rounding.

Station area office demand forecasts are based on their estimated capture rate of corridor level demand. These estimates are based on considerations of the station area's "fair shares" of the corridor's remaining development capacity and their desirability as office development sites relative to other locations within the corridor. As the station areas occupy prime locations for commercial development near the major roadways and/or intersections in their respective corridors, they are anticipated to capture a substantial amount of corridor demand even without access to Metro, as shown on the table below.

**Baseline Office Forecast by Station Area**

| | 2011 - 2015 | 2016 - 2020 | 2021 - 2025 | 2026 - 2030 | 2031 - 2035 | 2036 - 2040 | Total |
|---|---|---|---|---|---|---|---|
| Route 28 Corridor | 532,000 | 1,081,000 | 938,000 | 784,000 | 676,000 | 571,000 | 4,582,000 |
| Route 28 Station Area | 213,000 | 432,000 | 375,000 | 314,000 | 270,000 | 228,000 | 1,832,000 |
| Station Area Capture | 40% | 40% | 40% | 40% | 40% | 40% | |
| Route 606 Corridor | 105,000 | 289,000 | 323,000 | 324,000 | 321,000 | 302,000 | 1,664,000 |
| Route 606 Station Area | 68,000 | 188,000 | 210,000 | 211,000 | 209,000 | 196,000 | 1,082,000 |
| Station Area Capture | 65% | 65% | 65% | 65% | 65% | 65% | |
| Route 267 Corridor | 275,000 | 635,000 | 623,000 | 575,000 | 537,000 | 484,000 | 3,129,000 |
| Route 772 Station Area | 110,000 | 254,000 | 249,000 | 230,000 | 215,000 | 194,000 | 1,252,000 |
| Station Area Capture | 40% | 40% | 40% | 40% | 40% | 40% | |

In developing its employment forecast for Loudoun County, RCLCO considered the ratio of jobs to households. Exhibit II-13 presents the annual ratios under the COG Round 8.0 forecast, as well as the RCLCO baseline and Phase 2 Extension scenarios. In all scenarios, the jobs to household ratio increases over the next 30 years. By 2040, the ratio reaches 1.80 under COG's forecast, 1.97 under RCLCO's baseline forecast, and 1.88 under RCLCO's Phase 2 Extension scenario.

RCLCO believes the higher jobs to households ratio is supportable for a variety of reasons. First, Washington, D.C., area residents are well known for their willingness to commute even long distances to their jobs. Even in the absence of new housing opportunities in Loudoun County, employers in Loudoun will be able to draw from a large population base in the surrounding counties. Second, the slightly higher jobs to households ratio forecast by RCLCO is less the consequence of an aggressive job growth forecast than a conservative household growth forecast informed by the limited capacity for new residential development in the county. Given an increase in capacity, RCLCO would fully expect higher household growth numbers and therefore a lower jobs to household ratio. Finally, Loudoun County's proximity to Dulles Airport and favorable position within a growing regional economy suggest that it will remain a desirable location for future businesses even if lower percentages of their workers can live in the county.

### *Phase 2 Extension Scenario*

- *RCLCO forecasts demand for 19,362,000 SF (net rentable area) of new office in Loudoun County through 2040. (Exhibit II-17.)*

The office market in the D.C. region shows signs that indicate that Metro has some effect on site selection and/or the growth of office environments. The table below shows the historical delivery of office space in Montgomery County and Fairfax County before and after Metro as a function of net new office employment in the metro area.

**<u>Office Deliveries per New Office Employee in Montgomery and Fairfax Counties, Before and After Metro Service (Exhibit II-5)</u>**

| | MSA Office Employment Growth[1] | Montgomery County Office Deliveries (SF)[2] | Deliveries Per New Employee in the MSA | Fairfax County Office Deliveries (SF)[2] | Deliveries Per New Employee in the MSA | Fairfax County Office Deliveries (SF)[2] | Deliveries Per New Employee in the MSA |
|---|---|---|---|---|---|---|---|
| 1971 - 1975 | 33,460 | 2,029,894 | 61 | 1,750,774 | 52 | 289,664 | 9 |
| 1975 - 1980 | 86,770 | 2,794,833 | 32 | 4,654,149 | 54 | 121,842 | 1 |
| 1981 - 1985 | 116,420 | 5,680,292 | 49 | 10,833,328 | 93 | 419,239 | 4 |
| 1986 - 1990 | 122,170 | 10,016,108 | 82 | 22,685,652 | 186 | 2,137,708 | 17 |
| 1991 - 1995 | 35,930 | 2,964,643 | 83 | 2,618,426 | 73 | 1,038,592 | 29 |
| 1996 - 2000 | 207,390 | 3,320,218 | 16 | 15,293,267 | 74 | 4,476,710 | 22 |
| 2001 - 2005 | 74,810 | 6,449,148 | 86 | 11,738,700 | 157 | 3,416,584 | 46 |
| 2006 - 2008 | 20,450 | 2,147,498 | 105 | 8,399,933 | 411 | 3,580,060 | 175 |
| **Before Line Metro to Montgomery County** | | | | | | | |
| 1971 - 1982 | 142,430 | 6,105,809 | 43 | | | | |
| **After Red Line to Montgomery County** | | | | | | | |
| 1983 - 2009 | 532,250 | 30,510,666 | 57 | | | | |
| **% Increase** | | | **34%** | | | | |
| **Before Orange Line to Fairfax County** | | | | | | | |
| 1971 - 1985 | 236,650 | | | 17,238,251 | 73 | | |
| **After Orange Line to Fairfax County** | | | | | | | |
| 1986 - 2009 | 438,030 | | | 61,953,339 | 141 | | |
| **% Increase** | | | | | **94%** | | |

By this measure, Montgomery County experienced a 34% increase in the ratio of overall office deliveries to MSA employment growth in a post-Metro environment, and Fairfax County enjoyed a 94% increase in this ratio during its post-Metro period. However, planning and zoning are extremely important in this regard, and without planning and zoning that take advantage of this momentum, it may not manifest. The table below summarizes the experience of jurisdictions with and without TOD-type zoning (zoning that encourages higher densities at or near Metro stations) vis-à-vis their office deliveries over the past 20 years. Arlington County, which has one of the most aggressive TOD policies in the region and in the nation, absorbed 73% of its total office deliveries within ½ mile of its Metro stations, and Alexandria followed suit with 67%. Together, these two jurisdictions experienced more office deliveries than Loudoun County during the same time period, despite the fact that Loudoun County added more jobs and at a faster rate and with higher regional shares during that period.

**Percentage of Office Space Deliveries in Proximity of Metro Stations (Exhibit II-6)**

| | % of Total Delivered Office Space Within 1/2 Mile of a Metro Station | | | | |
|---|---|---|---|---|---|
| **Jurisdiction** | **1990 - 1994** | **1995 - 1999** | **2000 - 2004** | **2005 - 2009** | **Total** |
| Alexandria | 96% | 58% | 89% | 27% | 67% |
| Arlington County | 59% | 94% | 81% | 42% | 73% |
| Fairfax County[1] | 1% | 1% | 2% | 0% | 1% |
| Loudoun County | 0% | 0% | 0% | 0% | 0% |
| Prince William County[2] | 0% | 0% | 0% | 0% | 0% |
| **Northern Virginia** | **30%** | **12%** | **23%** | **5%** | **15%** |
| Montgomery County | 31% | 31% | 35% | 28% | 32% |
| Prince George's County | 53% | 34% | 63% | 7% | 44% |
| Total | 33% | 14% | 27% | 7% | 18% |

RCLCO concurs in the findings of the Route 28 Corridor Office Study, which suggest that there is a growing class of office users in the MSA that exhibit site selection preferences for Metro-accessible locations. These users prefer a different type of office space than those that historically have preferred corporate campuses or “keynote employment sites”–-opting for smaller office spaces in multitenant speculative buildings that are concomitant with their firm size and overall revenues. Jurisdictions that provide Metro in general do a better job of capturing this regional office demand that desires Metro access. Additionally, recent changes in federal leasing regulations give priority consideration to Metro-accessible office space.

With this as a backdrop, it should be noted that according to Loudoun County’s 2008 *Annual Growth Summary*, 97% of Loudoun businesses have fewer than 100 employees. These smaller companies are precisely the types of enterprises that exhibit some of the strongest tendencies to locate in speculative multitenant space–-exactly the type of space that tends to cluster at or near Metro stations when planning and zoning considerations allow. It should also be noted that since Metro will not open in Loudoun County until about 2017, Tysons Corner and Wiehle Avenue in Fairfax County will have a competitive advantage over sites in Loudoun County for this class of office user until that time.

Two immediate impacts of the Phase 2 Extension to Loudoun County become readily apparent. First, station areas become created that are connected by fixed rail transit to station areas that are expected to grow as major regional job cores, such as Tysons Corner, and as a result the Loudoun station areas develop at an accelerated pace. Second, Loudoun County station areas may become attractive development sites for office developers seeking to provide multitenant speculative office space that would otherwise choose sites that are Metro oriented elsewhere in the region. This may be especially true in competing for demand that would otherwise consider locations in western Fairfax, including the Reston and Herndon submarkets.

To determine Loudoun County’s additional demand potential resulting from Metro access, RCLCO projected office demand in the Reston and Herndon submarkets and then estimated the percentage of this demand that may reasonably switch to Loudoun County after Metro service in the county begins. Note that the projection of office demand for Reston and Herndon itself assumes that the Phase 1 Metro Extension will also boost office demand in those areas somewhat.

Based on RCLCO projections, total office development will increase from 18.3 million square feet to 19.4 million—an increase of approximately 6%—in Loudoun County as a result of the Phase II Extension. (Exhibits II-16 and II-17.) On a corridor and station area level, the impact of Metro is projected to be more dramatic due to redistribution of demand within the county. Most office tenants, and, by extension, office developers who choose to locate in Loudoun County, will not do so because of public transit but because of other factors, such as proximity to markets served, proximity to the residences of business leaders, availability of workforce, tax rates and business climate, etc. Once Loudoun County is chosen as a general location, however, secondary considerations, such as proximity to public transit, will have a strong influence on the selection of a particular site or building.

**Office Demand (Square Feet) Forecast by Corridor (Exhibits II-20 and II-22)**

| | 2011 - 2015 | 2016 - 2020 | 2021 -2025 | 2026 - 2030 | 2031 - 2035 | 2036 - 2040 | Total |
|---|---|---|---|---|---|---|---|
| Route 7 | 648,000 | 985,000 | 615,000 | 419,000 | 289,000 | 191,000 | 3,147,000 |
| Route 28 | 532,000 | 1,229,000 | 1,140,000 | 949,000 | 817,000 | 691,000 | 5,358,000 |
| Route 50 | 64,000 | 130,000 | 113,000 | 94,000 | 81,000 | 68,000 | 550,000 |
| Route 267 | 275,000 | 849,000 | 920,000 | 819,000 | 746,000 | 661,000 | 4,270,000 |
| Route 606 | 105,000 | 396,000 | 472,000 | 447,000 | 425,000 | 390,000 | 2,235,000 |
| Route 625 | 300,000 | 529,000 | 407,000 | 327,000 | 271,000 | 220,000 | 2,054,000 |
| Other | 203,000 | 412,000 | 358,000 | 299,000 | 257,000 | 217,000 | 1,746,000 |
| Total | 2,127,000 | 4,530,000 | 4,025,000 | 3,354,000 | 2,886,000 | 2,438,000 | 19,360,000 |

**Phase 2 Extension Office Forecast by Station Area (Exhibits II-20 and II-22)**

| | 2011 - 2015 | 2016 - 2020 | 2021 - 2025 | 2026 - 2030 | 2031 - 2035 | 2036 - 2040 | Total |
|---|---|---|---|---|---|---|---|
| Route 28 Corridor | 532,000 | 1,229,000 | 1,140,000 | 949,000 | 817,000 | 691,000 | 5,358,000 |
| Route 28 Station Area | 213,000 | 613,000 | 625,000 | 519,000 | 446,000 | 377,000 | 2,793,000 |
| Station Area Capture | 40% | 50% | 55% | 55% | 55% | 55% | 52% |
| Route 606 Corridor | 105,000 | 396,000 | 472,000 | 447,000 | 425,000 | 390,000 | 2,235,000 |
| Route 606 Station Area | 68,000 | 284,000 | 346,000 | 326,000 | 309,000 | 283,000 | 1,616,000 |
| Station Area Capture | 65% | 72% | 73% | 73% | 73% | 73% | 72% |
| Route 267 Corridor | 275,000 | 849,000 | 920,000 | 819,000 | 746,000 | 661,000 | 4,270,000 |
| Route 772 Station Area | 110,000 | 468,000 | 555,000 | 490,000 | 444,000 | 392,000 | 2,459,000 |
| Station Area Capture | 40% | 55% | 60% | 60% | 60% | 59% | 58% |
| Total Station Area | 391,000 | 1,365,000 | 1,526,000 | 1,335,000 | 1,199,000 | 1,052,000 | 6,868,000 |

RCLCO distributed the overall forecasted office demand among corridors using the same methodology and assumptions employed in the baseline scenario, except that corridors with Metro stations were given a bonus to their capture rates at the expense of non-Metro corridors when Metro operation begins, based on RCLCO's understanding and assessment of likely locational impacts of the new Metro stations. Similarly, RCLCO estimated the extent to which station area capture rates of their respective corridor's projected office demand would increase with the arrival of Metro. After taking account of these redistribution dynamics and Loudoun County's capture of demand that would have gone to Reston or Herndon in the absence of Metro, total office development at the station areas over the next 30 years is projected to be 49% to 96% higher than under the baseline scenario, depending on the station area. (Exhibits II-19 to II-22.)

**Office Development Forecast (SF), 2011-2040**

| | Baseline | Phase 2 | Difference |
|---|---|---|---|
| Route 7 | 4,235,000 | 3,147,000 | -26% |
| Route 28 | 4,581,000 | 5,359,000 | 17% |
| Station Area | 1,832,000 | 2,792,000 | 52% |
| Route 50 | 550,000 | 550,000 | 0% |
| Route 267 | 3,130,000 | 4,270,000 | 36% |
| Route 772 Station Area | 1,252,000 | 2,459,000 | 96% |
| Route 606 | 1,664,000 | 2,234,000 | 34% |
| Station Area | 1,081,000 | 1,616,000 | 49% |
| Route 625 | 2,418,000 | 2,055,000 | -15% |
| Other | 1,745,000 | 1,747,000 | 0% |
| | | | |
| **County Total** | **18,323,000** | **19,362,000** | **6%** |
| **Station Areas Total** | **4,165,000** | **6,867,000** | **65%** |

# VII. Flex Forecast

Loudoun County has historically been a desirable location for the development of flex space, which typically denotes warehouse space usable for light industrial and/or low-rent office applications, due to its wide availability of relatively inexpensive development sites and proximity to Dulles Airport. RCLCO anticipates the demand for flex space to continue but decline slowly as new development spreads outward in the Favored Quarter, driving up the price of land and making low-rent flex operations less feasible or, at a minimum, less desirable to landowners and developers who see greater potential profit in the development of office space.

Though transportation access is a concern of flex developers, the low typical rents of flex space generally dictate that it must be developed on inexpensive land in order to be feasible. Given the desirability of the station areas, they are unlikely sites for significant flex space development regardless of Metro access.

RCLCO based its projection of countywide flex space demand on its projections of total employment in the county discussed above. The historical average demand for flex space per new employee (Exhibit II-24) served as the starting point for translating employment into flex space demand. Given the projected decrease in the county's desirability as a location for flex space for the reasons described above, the absorption per new employee was projected to decrease in future years. Countywide flex demand is projected to total approximately 16.5 million square feet over the next 30 years. The distribution of demand by corridor is based on considerations of each corridor's capacity and desirability for flex space use. The Phase 2 Extension to Loudoun County is not anticipated to have any significant effect on the total amount or distribution of flex space development. (Exhibit II-25.)

**Flex Space Development Forecast (Square Feet), 2011 – 2040**

| | Baseline | Phase 2 | Difference |
|---|---|---|---|
| Route 7 | 4,124,000 | 4,124,000 | 0% |
| Route 28 | 3,299,000 | 3,299,000 | 0% |
| Station Area | 0 | 0 | |
| Route 50 | 2,474,000 | 2,474,000 | 0% |
| Route 267 | 1,650,000 | 1,650,000 | 0% |
| Station Area | 0 | 0 | |
| Route 606 | 3,299,000 | 3,299,000 | 0% |
| Station Area | 0 | 0 | |
| Route 625 | 1,650,000 | 1,650,000 | 0% |
| **County Total** | **16,496,000** | **16,496,000** | **0%** |
| **Station Area Total** | **0** | **0** | **0%** |

# VIII. Retail Forecast

## *Baseline Scenario*

- *RCLCO forecasts demand for 7,854,000 SF (gross leasable area) of new retail in Loudoun County through 2040. (Exhibit III-4.)*
- *The amount of market-supportable retail that Loudoun County can absorb is directly related to overall household growth.*

The number of households and their incomes are the primary determinants of demand for retail development. Therefore, RCLCO analyzed the historical relationship between household growth and retail space absorption in Loudoun County. From 1999–2008, each new household was associated with an average of 156 square feet of net retail space absorption. (Exhibit III-1.) To evaluate this estimate, RCLCO also reviewed data on household spending by store category and arrived at a very similar conclusion of 154 square feet of demand per household. Note, however, that in Fairfax County demand using the latter methodology is estimated to only equal 121 square feet per household, which likely is a result of somewhat lower incomes and smaller average household sizes than in Loudoun County. (Exhibit III-3.)

To estimate demand for retail space, RCLCO multiplied its projection of household growth by the projected demand for retail space per household. The demand for retail space per household was assumed to decrease from the historical average of approximately 155 square feet in 2010 to 133 by 2040 to account for two factors. (Exhibit III-4.) First, households living in multifamily units, which will constitute an increasing proportion of Loudoun County's total households, typically have somewhat lower incomes and fewer people per unit and therefore spend less than households living in single-family units. Second, retail sales per square foot in constant dollars will likely increase over time in Loudoun County, so less space will be required to accommodate the same level of sales increase. Existing stores will accommodate some of the increase in demand and experience higher sales per square foot.

As retail demand is tied most strongly to households, the forecasted distribution of household growth among planning subareas heavily influenced the forecasted distribution of retail space among planning subareas. Other considerations, such as the presence of major roadways and historical capture rates of retail development, were also taken into account. The table below shows the distribution of retail space by planning subarea under the baseline scenario.

**Baseline Capture of Retail Demand by Planning Subarea (Exhibit III-6)**

| | Projected Retail Demand (SF) | | | | | | |
|---|---|---|---|---|---|---|---|
| | 2011 - 2015 | 2016 - 2020 | 2021 - 2025 | 2026 - 2030 | 2031 - 2035 | 2036 - 2040 | Total |
| Ashburn | 821,100 | 596,250 | 410,100 | 300,400 | 222,800 | 19,950 | 2,370,600 |
| Dulles | 821,100 | 954,000 | 492,120 | 157,710 | 116,970 | 14,820 | 2,556,720 |
| Leesburg | 328,440 | 166,950 | 68,350 | 37,550 | 27,850 | 2,850 | 631,990 |
| Northwest | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Potomac | 27,370 | 23,850 | 13,670 | 7,510 | 5,570 | 570 | 78,540 |
| Route 15 North | 27,370 | 23,850 | 13,670 | 7,510 | 5,570 | 570 | 78,540 |
| Route 15 South | 27,370 | 23,850 | 13,670 | 7,510 | 5,570 | 570 | 78,540 |
| Route 7 West | 136,850 | 119,250 | 13,670 | 7,510 | 5,570 | 570 | 283,420 |
| Southwest | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sterling | 547,400 | 477,000 | 341,750 | 225,300 | 167,100 | 17,100 | 1,775,650 |
| Total | 2,737,000 | 2,385,000 | 1,367,000 | 751,000 | 557,000 | 57,000 | 7,854,000 |

Much of the forecasted retail demand will be for auto-related or "big box" style retail that is unlikely to locate in mixed-use or urban settings. RCLCO estimates, based on the retail spending by store category data in Exhibit III-3, that approximately 20% of total retail demand will contribute to demand for "town center" retail environments. The station areas are projected to capture significant percentages of the town center retail demand within their planning subareas because few other sites in the relevant planning subareas with access to major roadways are anticipated to offer town center environments (Kincora and One Loudoun Center are the most notable exceptions, which we have taken account of in our analysis).

### *Phase 2 Extension Scenario*

- *RCLCO forecasts demand for 8,501,000 SF (gross leasable area) of new retail in Loudoun County through 2040. (Exhibit III-4.)*

Retail demand under the Phase 2 Extension scenario is projected to be higher than under the baseline scenario, in proportion to the difference in the number of projected households between the two scenarios. As residential development capacity is largely exhausted during the 30-year analysis period under both the baseline and Phase 2 Extension scenarios, the total difference in the number of households and therefore total retail demand is due primarily to the density bonuses associated with Metro service. The table below illustrates these factors.

**Countywide Retail Demand (Square Feet) Forecast (Exhibit III-4)**

| | 2011 - 2015 | 2016 - 2020 | 2021 - 2025 | 2026 - 2030 | 2031 -2035 | 2036- 2040 | Total |
|---|---|---|---|---|---|---|---|
| Baseline Households | 17,933 | 16,005 | 9,411 | 5,308 | 4,025 | 414 | 53,096 |
| Phase 2 Households | 17,936 | 16,969 | 10,370 | 6,175 | 4,779 | 1,425 | 57,653 |
| | | | | | | | |
| Baseline Retail SF | 2,737,000 | 2,385,000 | 1,367,000 | 751,000 | 557,000 | 57,000 | 7,854,000 |
| Phase 2 Retail SF | 2,738,000 | 2,528,000 | 1,508,000 | 874,000 | 660,000 | 193,000 | 8,501,000 |

Minor adjustments were made to baseline planning subarea capture rates of overall retail demand to account for changes in the distribution of household growth among planning subareas caused by the Phase 2 Extension. Station area capture rates of town center retail forecasted for their planning subareas were increased due to the more enticing town center environments likely to be achievable in conjunction with Metro stations.

## Phase 2 Extension Capture of Retail Demand by Planning Subarea (Exhibit III-7)

| | Projected Retail Demand (SF) | | | | | | |
|---|---|---|---|---|---|---|---|
| | 2011 - 2015 | 2016 - 2020 | 2021 - 2025 | 2026 - 2030 | 2031 - 2035 | 2036 - 2040 | Total |
| Ashburn | 821,400 | 758,400 | 527,800 | 305,900 | 264,000 | 69,480 | 2,746,980 |
| Dulles | 821,400 | 884,800 | 467,480 | 218,500 | 165,000 | 57,900 | 2,615,080 |
| Leesburg | 328,560 | 176,960 | 75,400 | 52,440 | 33,000 | 9,650 | 676,010 |
| Northwest | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Potomac | 27,380 | 25,280 | 15,080 | 8,740 | 6,600 | 1,930 | 85,010 |
| Route 15 North | 27,380 | 25,280 | 15,080 | 8,740 | 6,600 | 1,930 | 85,010 |
| Route 15 South | 27,380 | 25,280 | 15,080 | 8,740 | 6,600 | 1,930 | 85,010 |
| Route 7 West | 136,900 | 126,400 | 15,080 | 8,740 | 6,600 | 1,930 | 295,650 |
| Southwest | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sterling | 547,600 | 505,600 | 377,000 | 262,200 | 171,600 | 48,250 | 1,912,250 |
| Total | 2,738,000 | 2,528,000 | 1,508,000 | 874,000 | 660,000 | 193,000 | 8,501,000 |

Ultimately, the Phase 2 Extension is forecasted to increase total retail development in the county by 8% (from 7,854,000 SF to 8,501,000 SF) during the period from 2011 through 2040. The Phase 2 Extension is forecasted to increase station area retail development by 74% at Route 606, 102% at Route 772, and 21% in the Loudoun County portion of the Route 28 station area. Exhibit III-8 presents the retail development forecast at each station area.

## Total Retail Development Forecast (Square Feet), 2011 – 2040 (Exhibits III-6 to III-8)

| | Baseline | Phase 2 | Difference |
|---|---|---|---|
| Ashburn | 2,370,600 | 2,746,980 | 16% |
| Route 606 Station Area | 47,000 | 82,000 | 74% |
| Route 772 Station Area | 95,000 | 192,000 | 102% |
| Dulles | 2,556,720 | 2,615,080 | 2% |
| Leesburg | 631,990 | 676,010 | 7% |
| Northwest | 0 | 0 | 0% |
| Potomac | 78,540 | 85,010 | 8% |
| Route 15 North | 78,540 | 85,010 | 8% |
| Route 15 South | 78,540 | 85,010 | 8% |
| Route 7 West | 283,420 | 295,650 | 4% |
| Southwest | 0 | 0 | 0% |
| Sterling | 1,775,650 | 1,912,250 | 8% |
| Route 28 Station Area | 284,000 | 344,000 | 21% |
| **County Total** | **7,854,000** | **8,501,000** | **8%** |
| **Station Area Total** | **426,000** | **618,000** | **45%** |

# IX. Hotel Forecast

### *Baseline Scenario*

- *RCLCO forecasts demand for 4,501 new hotel rooms in Loudoun County through 2040. (Exhibit IV-3.)*
- *Demand tied to office space development and Dulles Airport passenger count.*

The primary source of hotel demand in Loudoun County is likely to be business travelers. One method of estimating the depth of the business travel market and its influence on hotel development is to compare office and hotel development trends in a given market. HVS, a hospitality consulting firm, analyzed the relationship between the total rentable area of office space in the Washington, D.C., MSA, and the hotel inventory. Each year, from 2000–2008, they found a stable ratio, ranging from 0.21 to 0.23, of hotel rooms per 1,000 square feet of office space.

In Loudoun County, this ratio has ranged from approximately 0.27 to 0.32 over the past 10 years. This higher level of hotel demand is likely due to the presence of Dulles Airport in Loudoun County. Business and other travelers may choose to stay near the airport, even if the actual destination is some distance away; and the airport generates direct demand from pilots, flight attendants, and passengers who stay overnight in transit or because of flight cancellations. RCLCO assumed that the average difference between the Loudoun County ratio of hotel rooms to office space and the MSA ratio could be tied to the number of passengers traveling through Dulles Airport. Based on an analysis of historical passenger count data, RCLCO projects that for each 20,000 passengers that travel through Dulles Airport, one room of hotel demand in Loudoun County is generated. (Exhibit IV-2.)

Countywide hotel projections were based on RCLCO's projections of office space deliveries and the Metropolitan Washington Airport Authority's forecast of future air passenger traffic growth of 1.5% per year. (Exhibit IV-3.) The distribution of hotel demand by corridor is based in part on the projected distribution of office demand, as well as RCLCO's judgment regarding the desirability of each corridor for hotel development. Station area capture rates of demand within each corridor vary according to RCLCO judgments of their desirability and likely competition from other development sites, but are assumed to be substantial given the prime location of each area near major roadways and intersections. (Exhibit IV-6.)

### *Phase 2 Extension Scenario*

- *RCLCO forecasts demand for 4,720 new hotel rooms in Loudoun County through 2040. (Exhibit IV-3.)*
- *Demand tied to office space development and Dulles Airport passenger count.*

Countywide demand for hotel rooms is projected to be 5% higher under the Phase 2 Extension scenario than under the baseline scenario (4,720 vs. 4,501). This is due entirely to the increased demand for office under the latter scenario.

Since the Phase 2 Extension is projected to alter the distribution of office space growth, the primary driver of hotel demand, the distribution of hotel development among corridors was modified correspondingly. In addition, RCLCO estimated that station areas would capture additional demand within corridors due to the Metro service and the likelihood that proximity to Metro stations will lead to more enticing town center environments that will be appealing to travelers. As such, the final station area forecasts of hotel development presented on Exhibits IV-6 and IV-7 reflect not only the increase in countywide demand but also an increased capture of demand within Loudoun County. Total station area hotel development is projected to increase by 44% at Route 28, 63% at Route 606, and 61% at Route 772 as a result of the Phase 2 Extension. (Exhibit IV-6.)

**Total Hotel Development Forecast (Rooms), 2011 - 2040**

| | Baseline | Phase 2 | Difference |
|---|---|---|---|
| Route 7 | 450 | 472 | 5% |
| Route 28 | 1,801 | 1,416 | -21% |
| Station Area | 540 | 779 | 44% |
| Route 50 | 225 | 236 | 5% |
| Route 267 | 675 | 944 | 40% |
| Route 772 Station Area | 439 | 708 | 61% |
| Route 606 | 675 | 944 | 40% |
| Station Area | 405 | 661 | 63% |
| Route 625 | 225 | 236 | 5% |
| Other | 450 | 472 | 5% |
| **County Total** | **4,501** | **4,720** | **5%** |
| **Station Areas** | **1,384** | **2,147** | **55%** |

# X. Fiscal Impact Analysis

RCLCO has conducted a detailed fiscal impact analysis of the station area and countywide development projections forecasted in the market analysis section of this report. This analysis does not include capital costs, so none of the results in this report reflect the effects of capital costs or of proffers. The analysis also does not take account of Phase 2 Extension operating costs. The analysis has been conducted in constant 2010 dollars, so it does not take account of inflation. Value increases over and above inflation that may occur because of the Phase 2 Extension have, however, been included. We considered whether it would be reasonable to assume that housing prices will increase at a faster rate than inflation, but based on housing price forecasts by Moody's Economy.com we decided to assume that prices will go up only at the rate of inflation, other than the effect of the Phase 2 Extension.

The fiscal impact analysis is based directly upon the market analysis conducted by RCLCO to estimate the likely absorption pace for residential, office, retail, and hotel land uses at the station areas and countywide through the year 2040. Two scenarios were analyzed. The baseline scenario assumes the Phase I Extension of Metrorail service to Wiehle Avenue in Fairfax County only. Under this scenario, the Loudoun County station areas are not served by Metro. The Phase 2 Extension scenario assumes construction of the Dulles Rail Phase 2 Extension and that each station area has fully operational Metro service by 2018.

For each scenario, we have analyzed the fiscal impact in the station areas and countywide on a year-by-year basis through 2040.

### *Results*

The total net fiscal impact of the station area development through 2040 is projected to be positive for every station area in both scenarios. The introduction of Metro service and the associated changes in supportable development quantities and types, absorption pace, property values, and household sizes result in an increased projected net fiscal impact at each station area. The impact at each station area varies widely depending on the mix and quantity of development forecasted. In total, Metrorail service is projected to result in a 81% ($290,083,000) increase in positive net fiscal impact across all three station areas over the entire projection period. The results of the station area fiscal impact analysis are summarized in the table below and in Exhibits V-1 through V-3. More detail on individual station area results is contained in Appendixes A through F.

**Projected Fiscal Impact of Station Area Development Due to the Phase 2 Extension**

| Station Area | Baseline Scenario Net Fiscal Impact | Phase 2 Extension Scenario Net Fiscal Impact | Difference | % Difference |
|---|---|---|---|---|
| Route 28 | $136,297,000 | $195,394,000 | $59,097,000 | 43% |
| Route 606 | $80,885,000 | $115,295,000 | $34,410,000 | 43% |
| Route 772 | $141,752,000 | $338,328,000 | $196,576,000 | 139% |
| **Total** | **$358,934,000** | **$649,017,000** | **$290,083,000** | **81%** |

The table above summarizes the results of a detailed model that forecasts revenue and expenses by major tax and expenditure categories. As the Phase 2 Extension is projected to accelerate the pace of development and increase the total quantity of development, the model naturally projects both revenues and expenditures to rise relative to the baseline scenario. For example, at the Route 772 station area, total revenues over the next 30 years are projected to increase from $650,094,000 under the baseline scenario to $1,128,241,000 if the Phase 2 Extension is completed. The increase in revenues is somewhat offset, however, by expenditures that increase from $508,342,000 to $789,913,000. (Exhibit V-3.)

An additional issue to consider when interpreting the above numbers is that they summarize the impact at the station areas but do not represent the net impact on the County. This is because, although the Phase 2 Extension will spur development near the station areas, not all of the station area development will be net new development to the county. In some cases, the Phase 2 Extension concentrates development around station areas that would have occurred in Loudoun County in the absence of the Phase 2 Extension. At the same time, the Phase 2 Extension does confer fiscal benefit even on redistributed development because proximity to a Metro station and location within mixed-use developments that are attracted by Metro stations tend to increase property values, retail sales, rents, and hotel average daily rates. These factors were also included in the calculation of the countywide fiscal impact results described below.

Exhibit V-5 shows the estimated difference by revenue and expenditure category between the baseline and Phase 2 Extension scenarios for the entire county. The total countywide net fiscal impact of the Phase 2 Extension is projected to be $234,577,000 from 2011 to 2040. Real property taxes, total receipts of which are projected to increase by $340,163,000 with the Phase 2 Extension, account for more than 60% of the total projected increase in revenues. BPOL tax revenues are projected to increase by $24,777,000 over the analysis period. Education expenditures, which are projected to increase by $169,532,000, account for more than half of the total projected expenditure increases. The table below summarizes the total countywide difference between the baseline and Phase 2 Extension scenarios by major line item.

## Countywide Difference between Baseline and Phase 2 Extension Scenarios by Revenue and Expenditure Line Item

| Countywide Delta | 2011 - 2015 | 2016 - 2020 | 2021 -2025 | 2026 - 2030 | 2031 - 2035 | 2036 - 2040 | Total |
|---|---|---|---|---|---|---|---|
| **Development Forecast** | | | | | | | |
| Residential Units | 4 | 972 | 1,019 | 895 | 770 | 1,138 | 4,797 |
| Office Space | 0 | 204,648 | 273,097 | 218,582 | 185,571 | 157,106 | 1,039,003 |
| Retail Space | 1,000 | 143,000 | 141,000 | 123,000 | 103,000 | 136,000 | 647,000 |
| Hotel Rooms | 0 | 56 | 55 | 44 | 38 | 26 | 218 |
| **Revenues** | | | | | | | |
| Real Property Tax | $7,789,000 | $20,066,000 | $52,816,000 | $68,622,000 | $84,754,000 | $106,116,000 | $340,163,000 |
| Personal Property Tax | $4,000 | $1,895,000 | $6,943,000 | $10,051,000 | $13,080,000 | $16,664,000 | $48,637,000 |
| Sales Tax | $11,000 | $2,020,000 | $4,697,000 | $6,824,000 | $8,738,000 | $11,072,000 | $33,362,000 |
| BPOL | $1,000 | $618,000 | $3,138,000 | $5,228,000 | $7,055,000 | $8,737,000 | $24,777,000 |
| Hotel/Motel Tax | $0 | $114,000 | $313,000 | $471,000 | $605,000 | $716,000 | $2,219,000 |
| Development-Related Permits | $24,000 | $1,235,000 | $1,266,000 | $1,097,000 | $948,000 | $1,250,000 | $5,820,000 |
| Other | $4,000 | $1,266,000 | $4,225,000 | $5,596,000 | $7,106,000 | $9,031,000 | $27,228,000 |
| Revenues from the Commonwealth | $5,000 | $1,966,000 | $8,529,000 | $9,724,000 | $11,532,000 | $14,323,000 | $46,079,000 |
| Revenues from the Federal Govt. | $1,000 | $218,000 | $961,000 | $1,135,000 | $1,372,000 | $1,737,000 | $5,424,000 |
| Construction-Related Revenues | $26,000 | $1,907,000 | $2,067,000 | $1,672,000 | $1,450,000 | $1,857,000 | $8,979,000 |
| **Total Revenues** | $7,865,000 | $31,305,000 | $84,955,000 | $110,420,000 | $136,640,000 | $171,503,000 | $542,688,000 |
| **Expenditures** | | | | | | | |
| Law Enforcement | $2,000 | $701,000 | $2,981,000 | $4,183,000 | $5,361,000 | $6,780,000 | $20,008,000 |
| Fire/Rescue Services | $2,000 | $753,000 | $3,201,000 | $4,491,000 | $5,756,000 | $7,279,000 | $21,482,000 |
| Education | $20,000 | $7,382,000 | $31,991,000 | $35,839,000 | $42,152,000 | $52,148,000 | $169,532,000 |
| All Other Governmental Expenditures | $8,000 | $3,391,000 | $14,695,000 | $20,048,000 | $25,533,000 | $32,544,000 | $96,219,000 |
| Comprehensive Services Act | $0 | $38,000 | $164,000 | $184,000 | $216,000 | $268,000 | $870,000 |
| **Total** | $32,000 | $12,265,000 | $53,032,000 | $64,745,000 | $79,018,000 | $99,019,000 | $308,111,000 |
| **NET FISCAL IMPACT** | **$7,833,000** | **$19,040,000** | **$31,923,000** | **$45,675,000** | **$57,622,000** | **$72,484,000** | **$234,577,000** |
| **Annual Avg.** | **$1,566,600** | **$3,808,000** | **$6,384,600** | **$9,135,000** | **$11,524,400** | **$14,496,800** | |

NOTE: The difference in countywide property tax revenues in the 2011 - 2015 period is due to the increased value of unimproved land associated with higher residential densities. The difference in the countywide number of housing units and retail space in the 2011 - 2015 period is due to rounding error in the forecast models.

### *Methodology*

This section describes the methodologies used in the fiscal impact model to calculate the figures found on the summary exhibits and discussed in the previous section.

### *Development Program*

The development programs for each station area under each scenario are drawn from the RCLCO projections for each land use described in the market analysis section of this report. For purposes of the fiscal impact analysis, RCLCO distributed the projected development between the core station area, defined as the area within a ½ mile of the planned Metro station, and the transit supported area (TSA), defined as the area outside of a ½ mile radius of the station but still within the parcels identified in the market analysis section as "station area" parcels. The distribution is relevant insofar as value increases attributable to the Metro are assumed to have greater impact in the core station area than outside it and that multifamily residential units in the core station area are associated with fewer school children per unit than those outside based on RCLCO and County assumptions used for the fiscal impact analysis of the Moorefield Station development. Under the baseline scenario, the distribution of development between core areas and TSA areas makes no difference to the result. RCLCO estimated the likely distribution of residential units and non-residential square footage between the areas based on considerations of capacity and feasible densities where appropriate, but we recognize that the actual distribution of development will depend in part on decisions by developers, which cannot be predicted with any certainty. Similarly, the multifamily residential projections contained in the market analysis do not distinguish between for-rent and for-sale units. Based on a demand analysis derived from demographic data and recent sales data (Exhibits V-25 and V-26), RCLCO has projected that rental units will constitute 60% of all future multifamily demand around the station areas and that condominiums will account for the remainder. Nonetheless, the actual future distribution may vary widely from year to year and from one station area to another depending on market conditions and developer preferences.

To be conservative, RCLCO did not assume any redevelopment of the few built-out parcels within a ½ mile of the Metro stations. While redevelopment potential exists, especially around the Route 772 station, it would not likely occur for at least 20 years given the current supply of more easily developable vacant land. The long timeframe and the unique site-specific factors typically involved in determining whether a property is to be redeveloped make it difficult to credibly predict when and if redevelopment will occur.

### *Impact Radii*

The selection of a ½ mile distance as the dividing line between core areas and TSA areas is based on RCLCO's review of the research literature and the limitations inherent in predicting the location of future development over a 30-year time period at three different station areas at any finer grain. To be sure, most of the research literature suggests that premiums associated with transit increase as distance from the station decreases, particularly for commercial properties, but the impact occurs along a continuum. Even within a ¼ mile distance, premiums are likely to vary based on distance to the station, and transit will likely confer at least some premium on properties well outside of a ½ or even 1 mile distance from the station. For example, a 1996 study of apartments in Washington, D.C., found that they decrease by 2.4% to 2.6% for every tenth of a mile in distance from a Metro Station.[8] Therefore, it is difficult, if not impossible, to identify a distance beyond which impacts do not occur, or a distance within which the impacts are likely to be exactly consistent. The selection of an impact radius becomes necessarily a question of judgment.

Nonetheless, most studies have assessed impacts at ½ mile or smaller distances from station areas, since ½ mile is often considered the maximum reasonable walking distance. Though impacts are stronger within ¼ mile, value premiums have been shown by multiple research papers to extend to the distance of ½ mile. Moreover, contemporary developers have now seen many successful examples of transit-oriented development and will seek to maximize the value of their proximity to Metro by making pleasant connections to the station, which may in effect extend the reach of the transit premium.

RCLCO chose to apply value premiums that extend to a ½ mile distance from the station. Nonetheless, the value premiums assumed by this analysis for the core areas of between 5% and 15%, depending on product type and station area, represent RCLCO's estimate of the *average* premium that properties in the ITOD are likely to experience. Had a smaller, ¼ mile distance been chosen, a higher premium would have been applied but it would have affected fewer properties.

### *Demographic Data*

The projected population in the station areas is based on the number of residents per occupied household. Each housing unit type has a household size associated with it, taken from the 2009 Fiscal Impact Committee Guidelines. For the core area, multifamily household sizes have been adjusted downwards based on research conducted for Moorefield Station, which indicated that modern TOD areas tend to have more one-person households and a lower average household size than multifamily buildings in other areas. Based on the same research, the average number of school-age children per household in the core area was assumed to be 40% less than the countywide average in the Phase 2 Extension scenario. In practice, the lower quantity of persons and children per unit would likely extend to some extent beyond the ½ mile radius to the TSA portions of the station area sites, but to be conservative, RCLCO only applied the reduced factors to units within ½ mile of the planned stations.

Employment is calculated by applying a factor of 225 occupied square feet per employee for office space, 450 occupied square feet per employee for retail space, and 0.3 employees per

[8] John D. Benjamin and G. Stacy Sirmin (1996), "Mass Transportation, Apartment Rent and Property Values," *The Journal of Real Estate Research,* Vol. 12, No.1

hotel room. These factors are based on existing ratios in Loudoun County, to the extent they are determinable with available data, and RCLCO's professional judgment and experience.

### *Revenues*

Real property taxes are generated based on the tax rate and the assessed value of the property. Since RCLCO assumes that station area land will be rezoned to at least the densities provided for in the Comprehensive Plan under both the baseline (Phase 1) and Phase 2 Extension scenarios, the unimproved land values assumed in the fiscal impact analysis are somewhat higher than the current assessed values of the station area parcels. In addition, Loudoun County's planning rules allow for increased development capacity around station areas when the Metro arrives. In valuing unimproved land, RCLCO took into account the increased residential density permitted by the arrival of Metro. RCLCO did not, however, assume that increased commercial densities would affect land values because, unlike the case for residential, the existing capacity for commercial development is more than sufficient to accommodate demand for the next 30 years of development. The acquisition of additional density entitlements is unlikely to dramatically affect land values in such an environment. Though current values may already reflect, to some extent, the expected arrival of the Metro, they would almost certainly decrease if it were announced that the Metro will not be constructed. Therefore, it is warranted to assume a difference in unimproved land values between the scenarios.

Improved values are based primarily on RCLCO's analysis of the assessed values of comparable properties; see Exhibits V-10 through V-17. As the assessments will be based upon determinations of fair market value, we have estimated for-sale housing assessments based on anticipated sales prices for for-sale housing.

Personal property tax for businesses is calculated on a per square foot basis, based on 2010 assessments, excluding personal property of types not likely to be associated with the station areas. This per square foot rate is applied to all occupied square feet.

Personal property generated by residential uses is calculated based on several factors. First, the average personal property tax per household was calculated based on 2010 assessments. This figure was then modified for each household in the station areas based on vehicular expenditures for each income bracket, based on Bureau of Labor Statistics (BLS) data. Household income is calculated as a percentage of annual housing expenditures, which were derived from estimated sales prices and rents as determined in the market analysis.

Sales taxes will be generated by retail and hotels in the station areas as well as by residents who purchase taxable items elsewhere in the county, with adjustment to avoid double counting. Retail sales tax is calculated as a function of sales per square foot, and hotel sales taxes are calculated as a function of room rates and additional expenditures subject to taxation. Sales tax per household is based on household income bracket. RCLCO used the taxable expenditures within each income bracket in the BLS high income tables multiplied by the sales tax rate to determine sales tax revenues generated by each household. These expenditure figures have been applied to household income for each property type to calculate sales tax revenues generated by residents.

BPOL taxes are generated from receipts based on occupied square feet for each non-residential use. In addition, BPOL taxes are generated by leasing and renting space as well as from builders and developers who construct new buildings. BPOL rates were blended based on category of receipts. Categories of receipts have been distinguished by occupant type, lessor type, and builder/developer type. Receipts are calculated based on employees per square foot, effective lease rate per square foot, or construction costs, as applicable to each building type.

The Transient Occupancy Tax (TOT) is based on occupancy and average daily rate for each hotel room, with the average daily rate based on Smith Travel Research data provided by Loudoun County.

Development-related permits are generated by new construction at the subject site. Residential permits are generated in the year the unit is brought on-line, while non-residential permits are credited in the previous year.

Other revenue sources include utility taxes, which have been allocated on a per employee and per resident basis, as well as various fees and charges for services that have been allocated on a per employee and per resident basis, with the exception of various social services that have been allocated solely to residents on a per capita basis.

State education aid is based on the sales tax for education, basic education aid, and other state education aid on a per student basis. Other state revenues are based on non-categorical aid allocated per employee and per resident, and categorical aid and state shared expenses allocated per resident. Federal aid for education is allocated per student while all other Federal aid is allocated per resident.

Revenues related to construction activities comprise recordation taxes, sales taxes, permits, and BPOL taxes derived directly from construction. The sales tax is generated by calculating the cost of materials used in construction and applying a percentage of the total cost that reflects the amount of material estimated to be purchased within the county. The BPOL taxes reflect the developer receipts component of the BPOL taxes. Recordation taxes have been applied to for-sale residential units at the County's current rate based on an assumed average down payment of 15% of the sales price.

The restricted TOT fund is calculated like the standard TOT but based on a 3% tax rate.

### *Expenditures and Net Fiscal Impact*

Most expenditures are allocated on a per resident and per employee basis. Per employee and per resident expenditures were calculated based on 2010 estimated population and employment in the county and allocated on a per capita basis, with the exceptions of health and welfare and parks and recreation, which were skewed towards residents. Education expenditures are allocated entirely to residents (for community colleges) and students (for public schools). The portion of the Comprehensive Services Act (CSA) expenditures funded by local government is also included in the expenditures line. CSA expenditures are calculated based on students generated, with the local share of the cost applied at a rate of 50% of the total cost per student.

The net fiscal impact is a calculation of revenues less expenditures.

## Exhibit Package Table of Contents

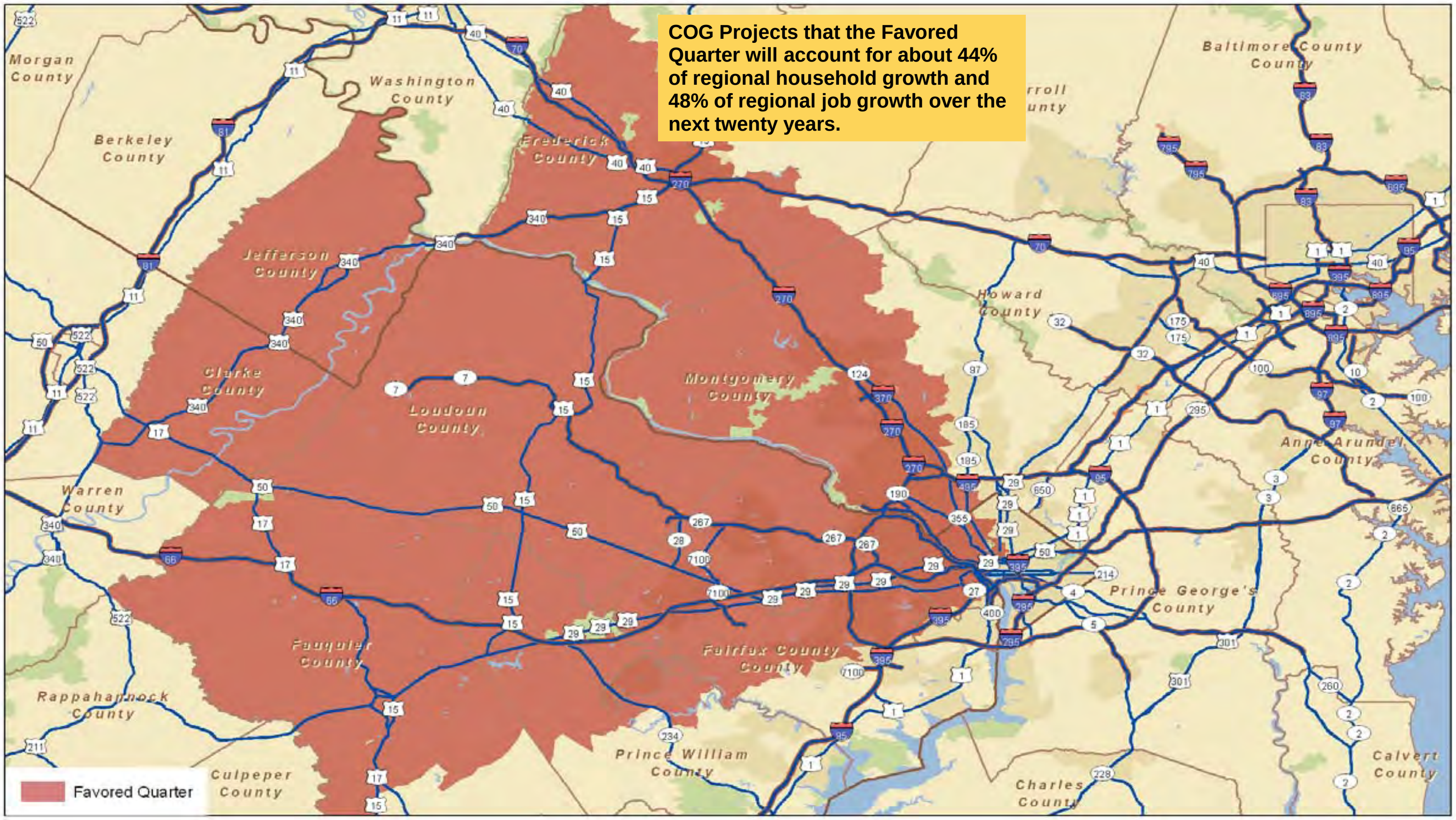
### Section I – Residential

**Section II – Office/Flex**

**Appendix – Fiscal Impact Model Outputs**

**Exhibit I-1**

**FAVORED QUARTER**
**WASHINGTON, DC REGION**
**2010**




SOURCE: RCLCO

## Exhibit I-2

## COMPARISON OF HOUSEHOLD FORECASTS
## WASHINGTON DC MSA, FAIRFAX COUNTY, LOUDOUN COUNTY
## 2010 - 2040

**Washington DC MSA**

| | Moody's Total Households | Avg. Annual Growth | COG 8.0 Total Households[1] | Avg. Annual Growth | Variance in Annual Growth |
|---|---|---|---|---|---|
| 2010 | 2,062,650 | | 2,072,700 | | |
| 2015 | 2,203,145 | 28,099 | 2,226,021 | 30,664 | 9% |
| 2020 | 2,327,434 | 24,858 | 2,374,308 | 29,657 | 19% |
| 2025 | 2,427,161 | 19,945 | 2,513,938 | 27,926 | 40% |
| 2030 | 2,517,697 | 18,107 | 2,636,957 | 24,604 | 36% |
| 2035 | 2,608,610 | 18,182 | 2,744,473 | 21,503 | 18% |
| 2040 | 2,715,996 | 21,477 | 2,843,794 | 19,864 | -8% |

**Fairfax County[2]**

| | Moody's Total Households | Avg. Annual Growth | Capture of Moody's MSA Growth | COG 8.0 Total Households | Avg. Annual Growth | Capture of COG MSA Growth | Variance in Annual Growth |
|---|---|---|---|---|---|---|---|
| 2010 | 389,471 | | | 400,200 | | | |
| 2015 | 412,567 | 4,619 | 16% | 418,800 | 3,720 | 12% | -19% |
| 2020 | 432,166 | 3,920 | 16% | 442,300 | 4,700 | 16% | 20% |
| 2025 | 445,851 | 2,737 | 14% | 463,600 | 4,260 | 15% | 56% |
| 2030 | 456,834 | 2,197 | 12% | 479,800 | 3,240 | 13% | 48% |
| 2035 | 467,939 | 2,221 | 12% | 493,900 | 2,820 | 13% | 27% |
| 2040 | 483,387 | 3,090 | 14% | 502,100 | 1,640 | 8% | -47% |

**Loudoun County**

| | Moody's Total Households | Avg. Annual Growth | Capture of Moody's MSA Growth | COG 8.0 Total Households | Avg. Annual Growth | Capture of COG MSA Growth | Variance in Annual Growth |
|---|---|---|---|---|---|---|---|
| 2010 | 110,942 | | | 102,331 | | | |
| 2015 | 135,801 | 4,972 | 18% | 112,669 | 2,068 | 7% | -58% |
| 2020 | 159,541 | 4,748 | 19% | 127,409 | 2,948 | 10% | -38% |
| 2025 | 180,921 | 4,276 | 21% | 141,848 | 2,888 | 10% | -32% |
| 2030 | 200,845 | 3,985 | 22% | 150,209 | 1,672 | 7% | -58% |
| 2035 | 220,458 | 3,923 | 22% | 154,978 | 954 | 4% | -76% |
| 2040 | 241,962 | 4,301 | 20% | 158,299 | 664 | 3% | -85% |

1/COG 8.0 projections were adjusted to match the geography used by Moody's Analytics for purposes of this comparison only.
COG Numbers quoted in the report and used elsewhere in this analysis refer to the 1983 defintion of the MSA,
an area smaller than both the total COG region and the current MSA definititon used by Moody's.
2/Includes Fairfax City and Falls Church
3/Moody's Analytics is a third-party source of economic forecasts. Unlike the Metropolitan Washington Council of Governments (COG)
its forecasts do not take account of local zoning and capacity constraints on growth.

**Exhibit I-3**

**COMPARISON OF HOUSEHOLD FORECASTS[1]**
**WASHINGTON, DC MSA**
**2010 - 2040**


1/COG 8.0 Projections were adjusted to match the geography used by Moody's Analytics for purposes of this comparison only
COG Numbers quoted in the report and used elsewhere in this analysis refer to the 1983 defintion of the MSA,
an area smaller than both the total COG region and the current MSA definititon used by Moody's.

**Exhibit I-4**

**COMPARISON OF AVERAGE ANNUAL HOUSEHOLD GROWTH FORECASTS**
**LOUDOUN COUNTY**
**2010 - 2040**

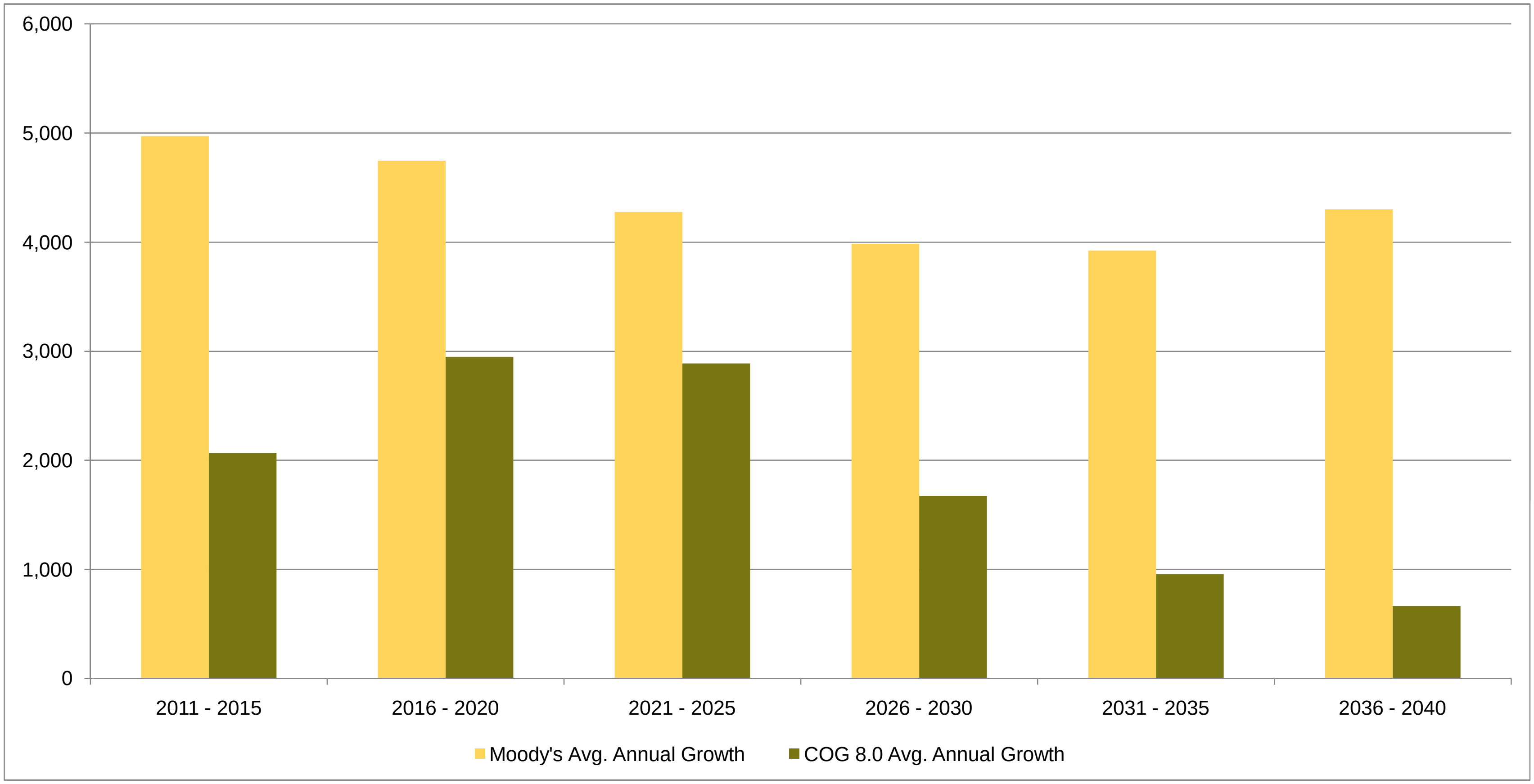


**Exhibit I-5**

## HISTORICAL HOUSEHOLD GROWTH TRENDS AND REGIONAL SHARE INDEXES
## WASHINGTON, DC MSA, SELECTED COUNTIES, AND LOUDOUN COUNTY PLANNING AREAS
## 1980 - 2010

| | 1980 | 1990 | 2000 | 2010 |
|---|---|---|---|---|
| **MSA**[1] | | | | |
| Households | 1,231,170 | 1,458,910 | 1,710,300 | 1,967,800 |
| Household Growth | | 227,740 | 251,390 | 257,500 |
| Average Annual Growth | | 22,774 | 25,139 | 25,750 |
| Annual Growth Rate | | 1.7% | 1.6% | 1.4% |
| | | | | |
| **Fairfax County**[2] | | | | |
| Households | 216,297 | 303,900 | 363,134 | 400,200 |
| Household Growth | | 87,603 | 59,234 | 37,066 |
| Average Annual Growth | | 8,760 | 5,923 | 3,707 |
| Annual Growth Rate | | 3.5% | 1.8% | 1.0% |
| Capture of MSA | | 38.5% | 23.6% | 14.4% |
| **Regional Share Index** | | **2.19** | **1.13** | **0.68** |
| | | | | |
| **Loudoun County** | | | | |
| Households | 18,770 | 30,860 | 59,900 | 102,331 |
| Household Growth | | 12,090 | 29,040 | 42,431 |
| Average Annual Growth | | 1,209 | 2,904 | 4,243 |
| Annual Growth Rate | | 5.1% | 6.9% | 5.5% |
| Capture of MSA | | 5.3% | 11.6% | 16.5% |
| **Regional Share Index** | | **3.48** | **5.46** | **4.70** |
| | | | | |
| **Prince William County**[3] | | | | |
| Households | 50,696 | 81,372 | 109,581 | 133,300 |
| Household Growth | | 30,676 | 28,209 | 23,719 |
| Average Annual Growth | | 3,068 | 2,821 | 2,372 |
| Annual Growth Rate | | 4.8% | 3.0% | 2.0% |
| Capture of MSA | | 13.5% | 11.2% | 9.2% |
| **Regional Share Index** | | **3.27** | **2.01** | **1.44** |
| | | | | |
| **Arlington County** | | | | |
| Households | 71,615 | 78,520 | 86,352 | 100,500 |
| Household Growth | | 6,905 | 7,832 | 14,148 |
| Average Annual Growth | | 691 | 783 | 1,415 |
| Annual Growth Rate | | 0.9% | 1.0% | 1.5% |
| Capture of MSA | | 3.0% | 3.1% | 5.5% |
| **Regional Share Index** | | **0.52** | **0.58** | **1.09** |

## Exhibit I-5

## HISTORICAL HOUSEHOLD GROWTH TRENDS AND REGIONAL SHARE INDEXES
## WASHINGTON, DC MSA, SELECTED COUNTIES, AND LOUDOUN COUNTY PLANNING AREAS
## 1980 - 2010

| | 1980 | 1990 | 2000 | 2010 |
|---|---|---|---|---|
| **Montgomery County** | | | | |
| Households | 207,195 | 282,228 | 324,565 | 360,500 |
| Household Growth | | 75,033 | 42,337 | 35,935 |
| Average Annual Growth | | 7,503 | 4,234 | 3,594 |
| Annual Growth Rate | | 3.1% | 1.4% | 1.1% |
| Capture of MSA | | 32.9% | 16.8% | 14.0% |
| **Regional Share Index** | | **1.96** | **0.87** | **0.74** |
| | | | | |
| **Prince George's County** | | | | |
| Households | 224,789 | 258,011 | 286,610 | 306,000 |
| Household Growth | | 33,222 | 28,599 | 19,390 |
| Average Annual Growth | | 3,322 | 2,860 | 1,939 |
| Annual Growth Rate | | 1.4% | 1.1% | 0.7% |
| Capture of MSA | | 14.6% | 11.4% | 7.5% |
| **Regional Share Index** | | **0.80** | **0.64** | **0.45** |
| | | | | |
| **Washington DC** | | | | |
| Households | 253,143 | 249,634 | 248,338 | 265,200 |
| Household Growth | | -3,509 | -1,296 | 16,862 |
| Average Annual Growth | | -351 | -130 | 1,686 |
| Annual Growth Rate | | -0.1% | -0.1% | 0.7% |
| Capture of MSA | | -1.5% | -4.5% | 39.7% |
| **Regional Share Index** | | **-0.07** | **-0.03** | **0.45** |

SOURCE: Metropolitan Washington Council of Governments; Moody's Economy.com, US Census
1/1983 MSA Definition
2/Includes Fairfax City and Falls Church
3 Includes Prince William County, Manassas City and Manassas Park City

## Exhibit I-6

## SINGLE-FAMILY AND MULTIFAMILY HISTORICAL REGIONAL SHARE INDEXES
## WASHINGTON, DC MSA, AND SELECTED COUNTIES
## 1980 - 2009

| | 1980 | 1985 | 1990 | 1995 | 2000 | 2005 | 2009 |
|---|---|---|---|---|---|---|---|
| **MSA** | | | | | | | |
| Single-Family Housing Units | 705,561 | 831,563 | 975,180 | 1,107,167 | 1,235,969 | 1,372,392 | 1,424,137 |
| Growth | | 126,002 | 143,617 | 131,987 | 128,802 | 136,423 | 51,745 |
| Multifamily Housing Units | 464,168 | 488,512 | 545,507 | 574,957 | 616,284 | 665,872 | 690,605 |
| Growth | | 24,344 | 56,995 | 29,450 | 41,327 | 49,588 | 24,733 |
| | | | | | | | |
| **Montgomery County** | | | | | | | |
| Single-Family Housing Units | 128,671 | 162,099 | 186,494 | 199,996 | 214,983 | 227,662 | 232,186 |
| Growth | | 33,428 | 24,395 | 13,502 | 14,987 | 12,679 | 4,524 |
| Multifamily Housing Units | 76,030 | 81,775 | 89,563 | 93,235 | 99,510 | 108,933 | 113,237 |
| Growth | | 5,745 | 7,788 | 3,672 | 6,275 | 9,423 | 4,304 |
| **Single-Family Regional Share Index** | | **1.45** | **0.87** | **0.53** | **0.64** | **0.53** | **0.53** |
| **Multifamily Regional Share Index** | | **1.44** | **0.82** | **0.76** | **0.94** | **1.18** | **1.06** |
| | | | | | | | |
| **Fairfax County** | | | | | | | |
| Single-Family Housing Units | 158,269 | 200,337 | 236,129 | 263,557 | 285,538 | 300,661 | 305,151 |
| Growth | | 42,068 | 35,792 | 27,428 | 21,981 | 15,123 | 4,490 |
| Multifamily Housing Units | 56,453 | 63,998 | 79,646 | 87,957 | 101,509 | 113,992 | 115,401 |
| Growth | | 7,545 | 15,648 | 8,311 | 13,552 | 12,483 | 1,409 |
| **Single-Family Regional Share Index** | | **1.49** | **1.03** | **0.86** | **0.72** | **0.48** | **0.40** |
| **Multifamily Regional Share Index** | | **2.55** | **2.10** | **1.93** | **2.14** | **1.53** | **0.33** |
| | | | | | | | |
| **Loudoun County** | | | | | | | |
| Single-Family Housing Units | 8,584 | 13,748 | 27,809 | 39,431 | 58,857 | 82,516 | 90,859 |
| Growth | | 5,164 | 14,061 | 11,622 | 19,426 | 23,659 | 8,343 |
| Multifamily Housing Units | 757 | 1,125 | 4,561 | 6,103 | 10,517 | 15,864 | 17,867 |
| Growth | | 368 | 3,436 | 1,542 | 4,414 | 5,347 | 2,003 |
| **Single-Family Regional Share Index** | | **3.37** | **5.92** | **3.09** | **4.23** | **3.64** | **2.68** |
| **Multifamily Regional Share Index** | | **9.27** | **26.18** | **6.26** | **10.06** | **6.32** | **3.40** |
| | | | | | | | |
| **Arlington County** | | | | | | | |
| Single-Family Housing Units | 33,438 | 35,274 | 36,505 | 37,363 | 38,308 | 39,342 | 40,047 |
| Growth | | 1,836 | 1,231 | 858 | 945 | 1,034 | 705 |
| Multifamily Housing Units | 38,633 | 41,243 | 47,608 | 49,436 | 54,269 | 62,469 | 67,520 |
| Growth | | 2,610 | 6,365 | 1,828 | 4,833 | 8,200 | 5,051 |
| **Single-Family Regional Share Index** | | **0.31** | **0.20** | **0.17** | **0.22** | **0.24** | **0.48** |
| **Multifamily Regional Share Index** | | **1.29** | **1.32** | **0.71** | **1.36** | **1.88** | **2.18** |

## Exhibit I-6

### SINGLE-FAMILY AND MULTIFAMILY HISTORICAL REGIONAL SHARE INDEXES
### WASHINGTON, DC MSA, AND SELECTED COUNTIES
### 1980 - 2009

| | 1980 | 1985 | 1990 | 1995 | 2000 | 2005 | 2009 |
|---|---|---|---|---|---|---|---|
| **Prince William County** | | | | | | | |
| Single-Family Housing Units | 44,323 | 55,272 | 70098 | 79,736 | 95,169 | 120,635 | 130,231 |
| Growth | | 10,949 | 14,826 | 9,638 | 15,433 | 25,466 | 9,596 |
| Multifamily Housing Units | 4,889 | 6,869 | 14,978 | 17,004 | 20,041 | 24,223 | 25,266 |
| Growth | | 1,980 | 8,109 | 2,026 | 3,037 | 4,182 | 1,043 |
| **Single-Family Regional Share Index** | | **1.38** | **1.55** | **1.02** | **1.66** | **2.42** | **2.11** |
| **Multifamily Regional Share Index** | | **7.72** | **10.12** | **2.51** | **2.48** | **2.59** | **1.16** |
| | | | | | | | |
| **Prince George's County** | | | | | | | |
| Single-Family Housing Units | 130,631 | 143,807 | 166788 | 186,005 | 200,614 | 214,088 | 223,830 |
| Growth | | 13,176 | 22,981 | 19,217 | 14,609 | 13,474 | 9,742 |
| Multifamily Housing Units | 96,532 | 97,427 | 100,340 | 102,163 | 104,523 | 104,972 | 106,436 |
| Growth | | 895 | 2,913 | 1,823 | 2,360 | 449 | 1,464 |
| **Single-Family Regional Share Index** | | **0.56** | **0.93** | **0.85** | **0.68** | **0.61** | **1.21** |
| **Multifamily Regional Share Index** | | **0.18** | **0.26** | **0.34** | **0.32** | **0.05** | **0.38** |
| | | | | | | | |
| **Washington DC** | | | | | | | |
| Single-Family Housing Units | 113,037 | 113,530 | 114,596 | 115,029 | 115,817 | 116,950 | 118,165 |
| Growth | | 493 | 1,066 | 433 | 788 | 1,133 | 1,215 |
| Multifamily Housing Units | 156,627 | 158,694 | 161,096 | 161,678 | 162,823 | 170,400 | 174,862 |
| Growth | | 2,067 | 2,402 | 582 | 1,145 | 7,577 | 4,462 |
| **Single-Family Regional Share Index** | | **0.02** | **0.05** | **0.03** | **0.06** | **0.09** | **0.28** |
| **Multifamily Regional Share Index** | | **0.25** | **0.13** | **0.07** | **0.10** | **0.58** | **0.70** |

NOTES:
1990 housing unit estimates are based on US Census data
Housing unit estimates in following and previous years are based on 1990 data plus or minus permits issued and may vary from actual count of housing units.
SOURCES: HUD State of the Cities Data System; Arlington County Economic Development; 2009 Loudoun County Fiscal Impact Committee Guidelines

**Exhibit I-7**

**SINGLE-FAMILY AND MULTIFAMILY HISTORICAL REGIONAL SHARE INDEXES**
**FAIRFAX COUNTY**
**1980 - 2009**

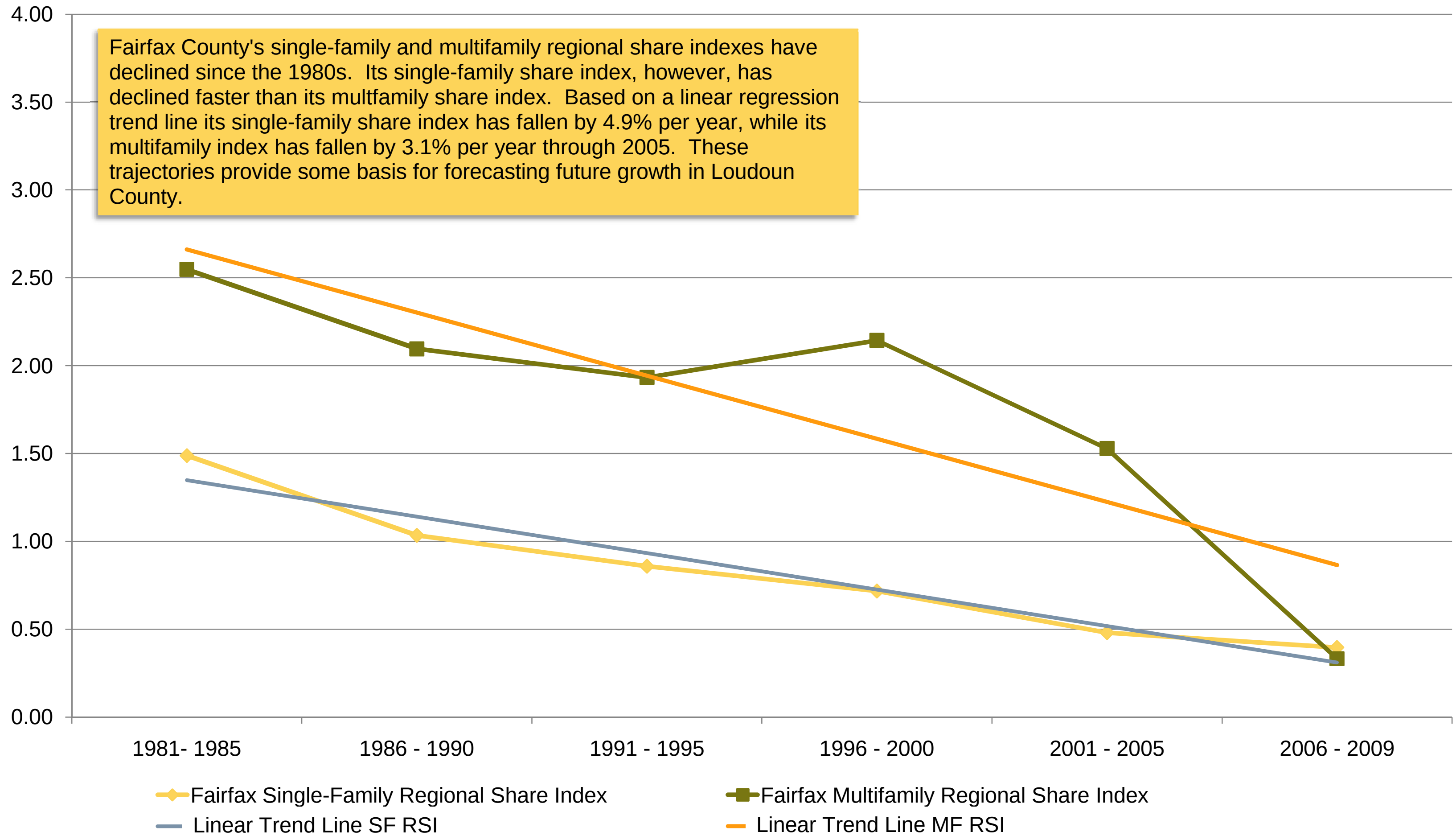


*Exhibit I-8A*

## RESIDENTIAL BUILDING PERMIT AUTHORIZATION TRENDS BY JURISDICTION
## LOUDOUN COUNTY, VA
## 1990-2009

| LOCATION | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ***WASHINGTON DC MSA*** | | | | | | | | | | | | | | | | | | | | |
| Single-Family | 18,258 | 16,916 | 22,944 | 26,140 | 25,582 | 22,147 | 22,342 | 22,671 | 27,753 | 27,372 | 28,664 | 27,242 | 28,145 | 28,014 | 26,948 | 26,074 | 18,507 | 14,603 | 9,437 | 9,198 |
| Multifamily | 8,671 | 3,022 | 2,910 | 3,799 | 5,146 | 5,902 | 7,541 | 6,871 | 8,546 | 9,184 | 9,185 | 9,556 | 10,421 | 7,833 | 11,076 | 10,702 | 9,451 | 7,856 | 4,295 | 3,131 |
| % Multifamily | 32.2% | 15.2% | 11.3% | 12.7% | 16.7% | 21.0% | 25.2% | 23.3% | 23.5% | 25.1% | 24.3% | 26.0% | 27.0% | 21.9% | 29.1% | 29.1% | 33.8% | 35.0% | 31.3% | 25.4% |
| ***Northern Virginia(NoVA)*** | | | | | | | | | | | | | | | | | | | | |
| Single-Family | 5,017 | 5,765 | 9,028 | 11,347 | 11,632 | 9,742 | 9,971 | 11,191 | 12,419 | 13,166 | 13,892 | 11,772 | 12,953 | 14,073 | 14,582 | 12,784 | 7,890 | 6,616 | 4,532 | 4,551 |
| Multifamily | 4,469 | 1,089 | 1,602 | 1,677 | 3,366 | 4,117 | 6,353 | 5,220 | 4,920 | 6,911 | 5,762 | 6,678 | 6,125 | 3,681 | 7,197 | 4,881 | 4,867 | 2,885 | 3,172 | 1,387 |
| % Multifamily | 47.1% | 15.9% | 15.1% | 12.9% | 22.4% | 29.7% | 38.9% | 31.8% | 28.4% | 34.4% | 29.3% | 36.2% | 32.1% | 20.7% | 33.0% | 27.6% | 38.2% | 30.4% | 41.2% | 23.4% |
| ***CAPTURE OF MSA*** | | | | | | | | | | | | | | | | | | | | |
| Single-Family | 27.5% | 34.1% | 39.3% | 43.4% | 45.5% | 44.0% | 44.6% | 49.4% | 44.7% | 48.1% | 48.5% | 43.2% | 46.0% | 50.2% | 54.1% | 49.0% | 42.6% | 45.3% | 48.0% | 49.5% |
| Multifamily | 51.5% | 36.0% | 55.1% | 44.1% | 65.4% | 69.8% | 84.2% | 76.0% | 57.6% | 75.3% | 62.7% | 69.9% | 58.8% | 47.0% | 65.0% | 45.6% | 51.5% | 36.7% | 73.9% | 44.3% |
| ***FAIRFAX COUNTY*** | | | | | | | | | | | | | | | | | | | | |
| Single-Family | 2,790 | 3,447 | 4,807 | 6,083 | 5,782 | 4,519 | 4,539 | 4,658 | 4,496 | 4,303 | 3,985 | 3,595 | 3,017 | 3,159 | 3,024 | 2,328 | 1,469 | 1,312 | 914 | 783 |
| Multifamily | 1,453 | 376 | 643 | 890 | 2,107 | 2,842 | 3,462 | 2,112 | 2,708 | 3,272 | 1,998 | 2,719 | 2,991 | 880 | 3,816 | 2,077 | 666 | 250 | 493 | 0 |
| % Multifamily | 34.2% | 9.8% | 11.8% | 12.8% | 26.7% | 38.6% | 43.3% | 31.2% | 37.6% | 43.2% | 33.4% | 43.1% | 49.8% | 21.8% | 55.8% | 47.2% | 31.2% | 16.0% | 35.0% | 0.0% |
| ***CAPTURE OF MSA*** | | | | | | | | | | | | | | | | | | | | |
| Single-Family | 15.3% | 20.4% | 21.0% | 23.3% | 22.6% | 20.4% | 20.3% | 20.5% | 16.2% | 15.7% | 13.9% | 13.2% | 10.7% | 11.3% | 11.2% | 8.9% | 7.9% | 9.0% | 9.7% | 8.6% |
| Multifamily | 16.8% | 12.4% | 22.1% | 23.4% | 40.9% | 48.2% | 45.9% | 30.7% | 31.7% | 35.6% | 21.8% | 28.5% | 28.7% | 11.2% | 34.5% | 19.4% | 7.0% | 3.2% | 11.5% | 0.0% |
| ***LOUDOUN COUNTY*** | | | | | | | | | | | | | | | | | | | | |
| Single-Family | 833 | 1,016 | 2,312 | 2,786 | 3,062 | 2,449 | 2,712 | 3,183 | 3,911 | 4,563 | 5,057 | 3,405 | 4,482 | 5,563 | 5,499 | 4,709 | 2,757 | 2,439 | 1,510 | 1,638 |
| Multifamily | 1,416 | 84 | 115 | 319 | 786 | 238 | 345 | 323 | 1,363 | 1,306 | 1,077 | 1,307 | 1,494 | 1,094 | 1,095 | 357 | 305 | 301 | 881 | 516 |
| % Multifamily | 63.0% | 7.6% | 4.7% | 10.3% | 20.4% | 8.9% | 11.3% | 9.2% | 25.8% | 22.3% | 17.6% | 27.7% | 25.0% | 16.4% | 16.6% | 7.0% | 10.0% | 11.0% | 36.8% | 24.0% |
| ***CAPTURE OF MSA*** | | | | | | | | | | | | | | | | | | | | |
| Single-Family | 5% | 6% | 10% | 11% | 12% | 11% | 12% | 14% | 14% | 17% | 18% | 13% | 16% | 20% | 20% | 18% | 15% | 17% | 16% | 18% |
| Multifamily | 16% | 3% | 4% | 8% | 15% | 4% | 5% | 5% | 16% | 14% | 12% | 14% | 14% | 14% | 10% | 3% | 3% | 4% | 21% | 16% |

SOURCE: RCLCO based on data supplied by Loudoun County and HUD State of the Cities Data System

*Exhibit I-8B*

**RESIDENTIAL BUILDING PERMIT AUTHORIZATION TRENDS**
**LOUDOUN COUNTY, VA**
**1980-2009**

| LOCATION | Average Annual 1980-84 | 1985-89 | 1990-94 | 1995-99 | 2000-04 | 2005-09 |
|---|---|---|---|---|---|---|
| ***WASHINGTON DC MSA*** | | | | | | |
| Single-Family | 22,378 | 31,819 | 21,968 | 24,457 | 27,803 | 15,564 |
| Multifamily | 4,522 | 10,697 | 4,710 | 7,609 | 9,721 | 7,087 |
| % Multifamily | 16.8% | 25.2% | 17.7% | 23.7% | 25.9% | 31.3% |
| ***Northern Virginia(NoVA)*** | | | | | | |
| Single-Family | 10,529 | 13,069 | 8,558 | 11,298 | 12,872 | 7,275 |
| Multifamily | 1,983 | 7,206 | 2,441 | 5,504 | 6,188 | 3,438 |
| % Multifamily | 15.8% | 35.5% | 22.2% | 32.8% | 32.5% | 32.1% |
| ***CAPTURE OF MSA*** | | | | | | |
| Single-Family | 47.0% | 41.1% | 39.0% | 46.2% | 46.3% | 46.7% |
| Multifamily | 43.8% | 67.4% | 51.8% | 72.3% | 63.7% | 48.5% |
| ***FAIRFAX COUNTY*** | | | | | | |
| Single-Family | 7,322 | 7,852 | 4,582 | 4,503 | 3,356 | 1,364 |
| Multifamily | 1,214 | 3,147 | 1,094 | 2,879 | 2,569 | 697 |
| % Multifamily | 14.2% | 28.6% | 19.3% | 39.0% | 43.4% | 33.8% |
| ***CAPTURE OF MSA*** | | | | | | |
| Single-Family | 32.7% | 24.7% | 20.9% | 18.4% | 12.1% | 8.8% |
| Multifamily | 26.8% | 29.4% | 23.2% | 37.8% | 26.4% | 9.8% |
| ***LOUDOUN COUNTY*** | | | | | | |
| Single-Family | 796 | 1,574 | 2,002 | 3,364 | 4,801 | 2,610 |
| Multifamily | 2 | 500 | 544 | 715 | 1,293 | 472 |
| % Multifamily | 0.3% | 24.1% | 21.4% | 17.5% | 21.2% | 15.3% |
| ***CAPTURE OF MSA*** | | | | | | |
| Single-Family | 4% | 5% | 9% | 14% | 17% | 17% |
| Multifamily | 0% | 5% | 12% | 9% | 13% | 7% |

SOURCE: RCLCO based on data supplied by Loudoun County and HUD State of the Cities Data System

*Exhibit I-9*

**PERMIT TRENDS BY PRODUCT TYPE**

**LOUDOUN COUNTY**

**2000-2010**

| | Loudoun County Permits by Type | | | | | | | | | | | | | | | | | | | Average Annual Growth | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 1990-94 | 1995-99 | 2000-04 | 2005-08 |
| **SFD** | 389 | 523 | 1,369 | 1,610 | 1,723 | 1,382 | 1,646 | 1,904 | 2,384 | 2,746 | 2,680 | 1,827 | 2,874 | 3,316 | 3,498 | 3,151 | 1,886 | 1,442 | 804 | 1,123 | 2,012 | 2,839 | 1,821 |
| **% of Total** | 17% | 48% | 56% | 52% | 45% | 51% | 54% | 54% | 45% | 47% | 44% | 39% | 48% | 50% | 53% | 62% | 62% | 53% | 34% | 44% | 49% | 47% | 55% |
| **SFA** | 444 | 493 | 942 | 1,175 | 1,339 | 1,066 | 1,065 | 1,278 | 1,527 | 1,817 | 2,377 | 1,578 | 1,608 | 2,247 | 2,000 | 1,557 | 870 | 996 | 706 | 879 | 1,351 | 1,962 | 1,032 |
| **% of Total** | 20% | 45% | 39% | 38% | 35% | 40% | 35% | 36% | 29% | 31% | 39% | 33% | 27% | 34% | 30% | 31% | 28% | 36% | 30% | 35% | 33% | 33% | 31% |
| **MF** | 1,416 | 84 | 115 | 319 | 786 | 238 | 345 | 323 | 1,363 | 1,306 | 1,077 | 1,307 | 1,494 | 1,094 | 1,095 | 357 | 305 | 301 | 881 | 544 | 715 | 1,213 | 461 |
| **% of Total** | 63% | 8% | 5% | 10% | 20% | 9% | 11% | 9% | 26% | 22% | 18% | 28% | 25% | 16% | 17% | 7% | 10% | 11% | 37% | 21% | 18% | 20% | 14% |
| **TOTALS** | 2,249 | 1,100 | 2,426 | 3,104 | 3,848 | 2,686 | 3,056 | 3,505 | 5,274 | 5,869 | 6,134 | 4,712 | 5,976 | 6,657 | 6,593 | 5,065 | 3,061 | 2,739 | 2,391 | 2,545 | 4,078 | 6,014 | 3,314 |
| **SFA as % of Total SF Demand** | **53%** | **49%** | **41%** | **42%** | **44%** | **44%** | **39%** | **40%** | **39%** | **40%** | **47%** | **46%** | **36%** | **40%** | **36%** | **33%** | **32%** | **41%** | **47%** | **44%** | **40%** | **41%** | **36%** |

SOURCE: 2009 Loudoun County Fiscal Impact Committee Guidelines; Dept. of Housing and Urban Development State of the Cities Data System

## *Exhibit I-10*

## SINGLE-FAMILY DETACHED HOUSING UNIT TRENDS BY PLANNING SUBAREA
## LOUDOUN COUNTY
## 2000-2008

| Planning Subarea | CENSUS ACTUAL 2000 | ESTIMATE 2005 | CAPTURE OF GROWTH 2000-2005 | ESTIMATE 2008 | CAPTURE OF GROWTH 2006 - 2008 | CAPTURE OF GROWTH 2000 - 2008 |
|---|---|---|---|---|---|---|
| Ashburn | 5,540 | 10,470 | 35% | 12,746 | 35% | 35% |
| Dulles | 1,800 | 4,583 | 20% | 6,280 | 26% | 22% |
| Leesburg | 5,966 | 8,960 | 21% | 9,517 | 9% | 17% |
| Northwest | 2,333 | 2,944 | 4% | 3,371 | 7% | 5% |
| Potomac | 7,299 | 7,736 | 3% | 7,746 | 0% | 2% |
| Route 15 North | 933 | 1,207 | 2% | 1,531 | 5% | 3% |
| Route 15 South | 891 | 1,016 | 1% | 1,213 | 3% | 2% |
| Route 7 West | 3,860 | 5,507 | 12% | 6,330 | 13% | 12% |
| Southwest | 2,450 | 2,738 | 2% | 2,859 | 2% | 2% |
| Sterling | 4,857 | 4,963 | 1% | 5,010 | 1% | 1% |
| | 35,929 | 50,124 | 100% | 56,603 | 100% | 100% |

SOURCE: 2008 Loudoun County Annual Growth Summary

## *Exhibit I-11*

## SINGLE-FAMILY ATTACHED HOUSING UNIT TRENDS BY PLANNING SUBAREA
## LOUDOUN COUNTY
## 2000-2008

| Planning Subarea | CENSUS ACTUAL 2000 | ESTIMATE 2005 | CAPTURE OF GROWTH 2000-2005 | ESTIMATE 2008 | CAPTURE OF GROWTH 2006 - 2008 | CAPTURE OF GROWTH 2000 - 2008 |
|---|---|---|---|---|---|---|
| Ashburn | 4,341 | 8,396 | 41% | 9,517 | 33% | 39% |
| Dulles | 938 | 3,156 | 23% | 4,885 | 51% | 30% |
| Leesburg | 2,980 | 5,122 | 22% | 5,461 | 10% | 19% |
| Northwest | 88 | 88 | 0% | 104 | 0% | 0% |
| Potomac | 4,928 | 5,535 | 6% | 5,683 | 4% | 6% |
| Route 15 North | 13 | 13 | 0% | 37 | 1% | 0% |
| Route 15 South | 23 | 23 | 0% | 28 | 0% | 0% |
| Route 7 West | 433 | 721 | 3% | 741 | 1% | 2% |
| Southwest | 128 | 142 | 0% | 157 | 0% | 0% |
| Sterling | 3,517 | 4,003 | 5% | 4,009 | 0% | 4% |
| | 17,389 | 27,199 | 100% | 30,622 | 100% | 100% |

SOURCE: 2008 Loudoun County Annual Growth Summary

*Exhibit I-12*

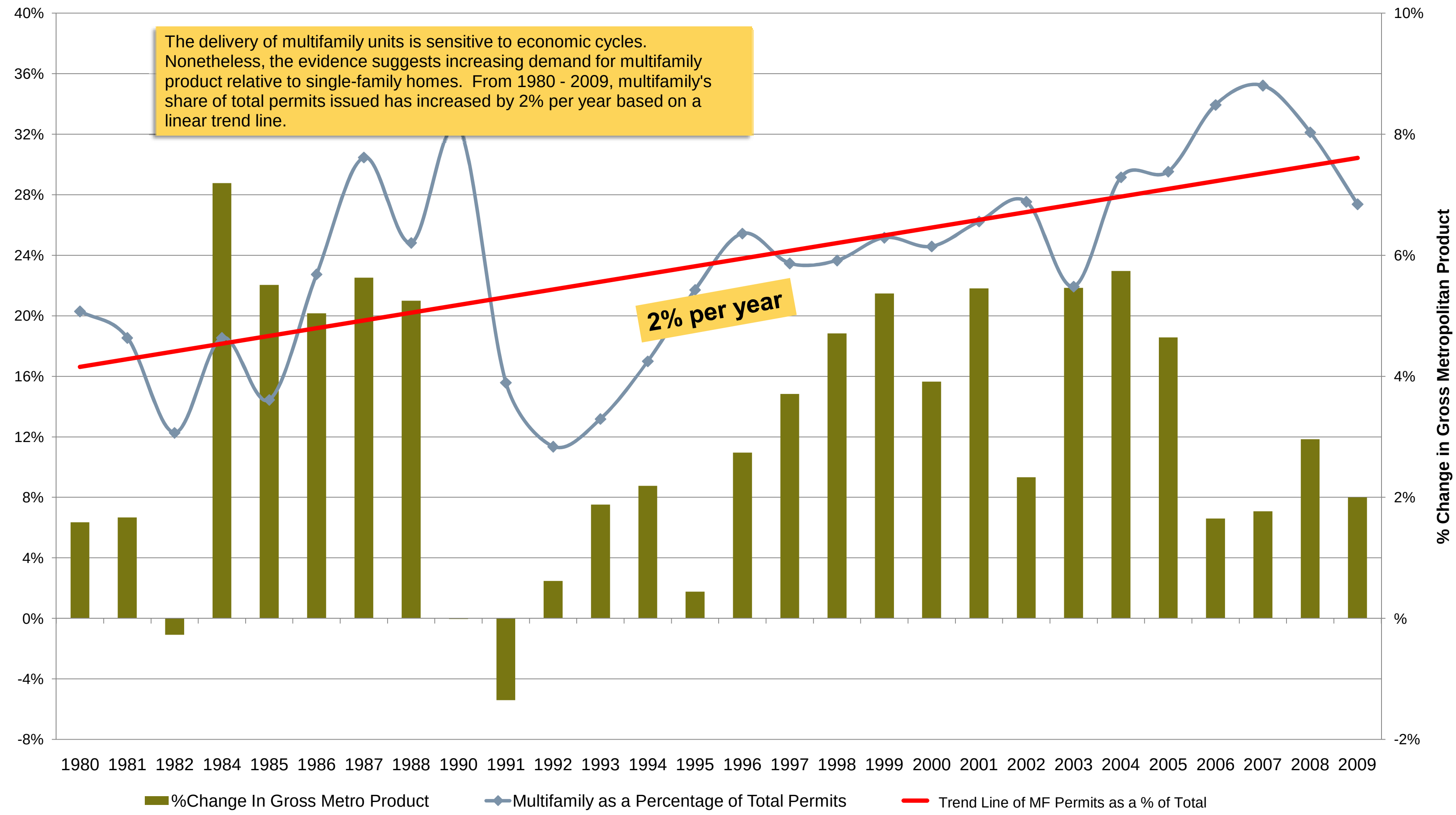
**MULTIFAMILY HOUSING UNIT TRENDS BY PLANNING SUBAREA**
**LOUDOUN COUNTY**
**2000-2010**

| Planning Subarea | CENSUS ACTUAL 2000 | ESTIMATE 2005 | CAPTURE OF GROWTH 2000-2005 | ESTIMATE 2008 | CAPTURE OF GROWTH 2005 - 2008 | CAPTURE OF GROWTH 2000 - 2008 |
|---|---|---|---|---|---|---|
| Ashburn | 2,126 | 6,009 | 62% | 6,948 | 53% | 60% |
| Dulles | 268 | 891 | 10% | 966 | 4% | 9% |
| Leesburg | 2,994 | 3,476 | 8% | 3,662 | 10% | 8% |
| Northwest | 11 | 12 | 0% | 13 | 0% | 0% |
| Potomac | 1,497 | 1,933 | 7% | 2,096 | 9% | 7% |
| Route 15 North | 18 | 18 | 0% | 18 | 0% | 0% |
| Route 15 South | 24 | 24 | 0% | 24 | 0% | 0% |
| Route 7 West | 175 | 337 | 3% | 337 | 0% | 2% |
| Southwest | 120 | 121 | 0% | 141 | 1% | 0% |
| Sterling | 1,609 | 2,299 | 11% | 2,692 | 22% | 13% |
| | 8,842 | 15,120 | 100% | 16,897 | 100% | 100% |

SOURCE: 2008 Loudoun County Annual Growth Summary

*Exhibit I-13*

**SINGLE-FAMILY AND MULTIFAMILY BUILDING PERMIT TRENDS**
**WASHINGTON, DC MSA**
**1980-2010**



## Exhibit I-14

### HOUSEHOLDS BY SIZE AND TENURE
### WASHINGTON, DC MSA, FAIRFAX, AND LOUDOUN COUNTIES
### 1990 - 2009

| | 1990 | 2000 | 2009 |
|---|---|---|---|
| **DC MSA Households** | 1,459,358 | 1,848,064 | 1,986,757 |
| Growth | | 388,706 | 138,693 |
| | | | |
| 1-Person Households | 368,495 | 488,000 | 559,886 |
| Growth | | 119,505 | 71,886 |
| % of MSA Growth | | 31% | 52% |
| | | | |
| 2-Person Households | 448,017 | 570,491 | 617,432 |
| Growth | | 122,474 | 46,941 |
| % of MSA Growth | | 32% | 34% |
| | | | |
| Total 1 and 2 Person Households | 816,512 | 1,058,491 | 1,177,318 |
| Growth | | 241,979 | 118,827 |
| % of MSA Growth | | 62% | 86% |

| | 1990 | 2000 | 2009 |
|---|---|---|---|
| **Loudoun County Households** | 30,490 | 59,900 | 100,638 |
| Growth | | 29,410 | 40,738 |
| | | | |
| 1-Person Households | 5,109 | 11,026 | 18,928 |
| Growth | | 5,917 | 7,902 |
| % of County Growth | | 20% | 19% |
| | | | |
| 2-Person Households | 9,926 | 18,878 | 30,520 |
| Growth | | 8,952 | 11,642 |
| % of County Growth | | 30% | 29% |
| | | | |
| Total 1 and 2 Person Households | 15,035 | 29,904 | 49,448 |
| Growth | | 14,869 | 19,544 |
| % of County Growth | | 51% | 48% |

| | 1990 | 2000 | 2009 |
|---|---|---|---|
| **Fairfax County Households**[1] | 292,345 | 350,714 | 371,129 |
| Growth | | 58,369 | 20,415 |
| Total 1 and 2 Person Households | 150,598 | 189,350 | 206,669 |
| Growth | | 38,752 | 17,319 |
| % of County Growth | | 66% | 85% |

1- and 2-person households are constituting an increasing share of total household growth in the MSA and Fairfax County.  Assuming these trends continue, there is a strong demographic basis for increasing multifamily demand.

Loudoun County has not experienced this trend so far but it likely will in the future as employment increases and it becomes more attractive to young professionals working in the area.

SOURCE: US Census Bureau
1/Does not include Fairfax City and Falls Church

# Exhibit I-15

## POPULATION AND HOUSEHOLD GROWTH FORECASTS
## WASHINGTON, DC MSA
## 2010 - 2040

| Washington, DC MSA[1] | Age 15 - 19 | Age 20 - 24 | Age 25 - 29 | Age 30 - 34 | Age 35 - 39 | Age 40 - 44 | Age 45 - 49 | Age 50 - 54 | Age 55 - 59 | Age 60 - 64 | Age 65+ | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **2000** | 308,294 | 304,371 | 364,275 | 408,360 | 442,452 | 415,977 | 369,647 | 333,310 | 241,628 | 168,422 | 435,144 | 3,483,586 |
| **2010** | 363,456 | 374,277 | 414,823 | 407,057 | 404,490 | 421,070 | 438,059 | 402,798 | 340,814 | 282,166 | 563,179 | 4,048,732 |
| **2015** | 346,672 | 392,682 | 462,370 | 447,648 | 424,738 | 400,354 | 405,258 | 419,436 | 377,934 | 305,652 | 663,766 | 4,299,837 |
| **2020** | 380,870 | 370,901 | 479,168 | 496,622 | 466,635 | 417,960 | 383,774 | 387,911 | 392,540 | 338,204 | 768,935 | 4,502,649 |
| **2025** | 406,793 | 402,796 | 456,174 | 512,110 | 517,143 | 460,234 | 400,488 | 368,490 | 363,910 | 351,730 | 886,959 | 4,720,035 |
| **2030** | 434,582 | 426,887 | 490,906 | 488,922 | 532,224 | 509,646 | 441,220 | 384,838 | 346,315 | 326,017 | 997,188 | 4,944,163 |
| **2035** | 459,320 | 454,357 | 524,569 | 490,849 | 496,495 | 570,755 | 458,077 | 446,964 | 304,724 | 325,605 | 1,091,269 | 5,163,663 |
| **2040** | 484,943 | 482,968 | 559,723 | 491,549 | 456,184 | 635,654 | 475,123 | 513,327 | 258,576 | 324,230 | 1,190,584 | 5,387,916 |

| Headship Rates[2] | Age 15 - 19 | Age 20 - 24 | Age 25 - 29 | Age 30 - 34 | Age 35 - 39 | Age 40 - 44 | Age 45 - 49 | Age 50 - 54 | Age 55 - 59 | Age 60 - 64 | Age 65+ |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **2000** | 0.03 | 0.29 | 0.459 | 0.459 | 0.538 | 0.538 | 0.574 | 0.574 | 0.599 | 0.599 | 0.616 |
| **2010** | 0.03 | 0.29 | 0.441 | 0.441 | 0.532 | 0.532 | 0.567 | 0.567 | 0.584 | 0.584 | 0.595 |
| **2015** | 0.03 | 0.29 | 0.441 | 0.441 | 0.532 | 0.532 | 0.567 | 0.567 | 0.584 | 0.584 | 0.595 |
| **2020** | 0.03 | 0.29 | 0.441 | 0.441 | 0.532 | 0.532 | 0.567 | 0.567 | 0.584 | 0.584 | 0.595 |
| **2025** | 0.03 | 0.29 | 0.441 | 0.441 | 0.532 | 0.532 | 0.567 | 0.567 | 0.584 | 0.584 | 0.595 |
| **2030** | 0.03 | 0.29 | 0.441 | 0.441 | 0.532 | 0.532 | 0.567 | 0.567 | 0.584 | 0.584 | 0.595 |
| **2035** | 0.03 | 0.29 | 0.441 | 0.441 | 0.532 | 0.532 | 0.567 | 0.567 | 0.584 | 0.584 | 0.595 |
| **2040** | 0.03 | 0.29 | 0.441 | 0.441 | 0.532 | 0.532 | 0.567 | 0.567 | 0.584 | 0.584 | 0.595 |

| Households | Age 15 - 19 | Age 20 - 24 | Age 25 - 29 | Age 30 - 34 | Age 35 - 39 | Age 40 - 44 | Age 45 - 49 | Age 50 - 54 | Age 55 - 59 | Age 60 - 64 | Age 65+ |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **2000** | 9,249 | 88,268 | 167,199 | 187,433 | 237,889 | 223,655 | 212,328 | 191,456 | 144,687 | 100,851 | 268,236 |
| **2010** | 10,904 | 108,540 | 182,937 | 179,512 | 215,189 | 224,009 | 248,379 | 228,386 | 199,035 | 164,785 | 335,092 |
| **2015** | 10,400 | 113,878 | 203,905 | 197,413 | 225,960 | 212,988 | 229,781 | 237,820 | 220,713 | 178,501 | 394,941 |
| **2020** | 11,426 | 107,561 | 211,313 | 219,010 | 248,250 | 222,355 | 217,600 | 219,946 | 229,243 | 197,511 | 457,516 |
| **2025** | 12,204 | 116,811 | 201,173 | 225,840 | 275,120 | 244,845 | 227,077 | 208,934 | 212,524 | 205,410 | 527,741 |
| **2030** | 13,037 | 123,797 | 216,490 | 215,615 | 283,143 | 271,132 | 250,172 | 218,203 | 202,248 | 190,394 | 593,327 |
| **2035** | 13,780 | 131,763 | 231,335 | 216,464 | 264,136 | 303,641 | 259,730 | 253,429 | 177,959 | 190,153 | 649,305 |
| **2040** | 14,548 | 140,061 | 246,838 | 216,773 | 242,690 | 338,168 | 269,395 | 291,056 | 151,009 | 189,350 | 708,397 |

1/Moody's Analytics
2/U.S. Census Bureau, Washington, DC MSA; 2000 Census and 2006-2008 American Community Survey for Years 2010 and beyond

## Exhibit I-16

## CONTRIBUTION OF 1 AND 2 PERSON HOUSEHOLDS TO SINGLE-FAMILY HOUSING DEMAND
## WESTERN FAIRFAX, LOUDOUN, FAUQUIER, CLARKE, AND WARREN COUNTIES[1]
## 2006 - 2008

| | Households That Moved Within Prior 9 Years | Households That Moved Within Prior 4 Years | Households That Moved Within Prior 2 Years |
|---|---|---|---|
| **Single-Family Detached** | | | |
| % Occupied by 1 -person HHs | 12% | 13% | 14% |
| % Occupied by 2-person HHs | 24% | 24% | 28% |
| Total | 36% | 37% | 42% |
| | | | |
| **Single-Family Attached** | | | |
| % Occupied by 1 -person HHs | 28% | 27% | 29% |
| % Occupied by 2-person HHs | 30% | 32% | 37% |
| Total | 58% | 59% | 66% |

1/Public Use Microdata Areas 00600, 00304, and 00305
SOURCE: American Community Survey 2006 -2008 Public Use Microdata

## Exhibit I-17

## LONG-TERM DEMOGRAPHIC CHANGE AND HOUSING PREFERENCES FORECAST
## WASHINGTON, DC MSA
## 2010 - 2040

| Age of Householder | 2010 Households | Turnover Rate[1] | % Prefer SFD[1] | % Prefer SFA[1] | % Prefer MF[1] | SFD Demand | SFA Demand | MF Demand |
|---|---|---|---|---|---|---|---|---|
| Under 25 | 119,444 | 60% | 18% | 12% | 67% | 12,673 | 8,918 | 47,584 |
| Age 25 - 34 | 362,449 | 33% | 33% | 21% | 44% | 38,839 | 24,698 | 51,967 |
| Age 35 - 44 | 439,198 | 16% | 51% | 20% | 27% | 35,587 | 13,678 | 18,496 |
| Age 45 - 54 | 476,766 | 10% | 55% | 17% | 26% | 25,914 | 8,219 | 12,139 |
| Age 55 - 64 | 363,820 | 7% | 49% | 16% | 32% | 11,878 | 3,856 | 7,596 |
| Age 65+ | 335,092 | 4% | 34% | 11% | 51% | 5,086 | 1,667 | 7,520 |
| Total | 2,096,768 | 16% | 44% | 17% | 36% | 129,977 | 61,037 | 145,303 |
| **% of Total Annual Housing Demand** | | | | | | **37.6%** | **17.7%** | **42.1%** |

| Age of Householder | 2040 Households | Turnover Rate[1] | % Prefer SFD[1] | % Prefer SFA[1] | % Prefer MF[1] | SFD Demand | SFA Demand | MF Demand |
|---|---|---|---|---|---|---|---|---|
| Under 25 | 154,609 | 60% | 18% | 12% | 67% | 16,405 | 11,543 | 61,593 |
| Age 25 - 34 | 463,611 | 33% | 33% | 21% | 44% | 49,679 | 31,591 | 66,472 |
| Age 35 - 44 | 580,858 | 16% | 51% | 20% | 27% | 47,065 | 18,090 | 24,462 |
| Age 45 - 54 | 560,451 | 10% | 55% | 17% | 26% | 30,463 | 9,662 | 14,270 |
| Age 55 - 64 | 340,359 | 7% | 49% | 16% | 32% | 11,112 | 3,608 | 7,106 |
| Age 65+ | 708,397 | 4% | 34% | 11% | 51% | 10,752 | 3,525 | 15,897 |
| Total | 2,808,284 | 16% | 43% | 16% | 38% | 165,476 | 78,019 | 189,800 |
| **% of Total Annual Housing Demand** | | | | | | **37.2%** | **17.5%** | **42.6%** |

SOURCE: Moody's Analytics; RCLCO
1/US Census Bureau American Community Survey 2006 - 2008 PUMS

## Exhibit I-18

### % OF RECENT MOVERS CHOOSING NEIGHBORHOOD BECAUSE OF PUBLIC TRANSPORTATION
### WASHINGTON, DC MSA
### 2007

| HH Size | Currently in Single-Family Homes | Currently in Multifamily Homes | All Unit Types |
|---|---|---|---|
| 1 | 9.7% | 7.1% | 7.6% |
| 2 | 3.2% | 6.2% | 4.8% |
| 3+ | 1.0% | 7.1% | 4.4% |
| Total | 3.0% | 6.8% | 5.0% |

SOURCE: 2007 American Housing Survey Microdata

*Exhibit I-19*

## NET DENSITY COMPLETED BY DECADE
## ARLINGTON METRO STATION AREAS
## 1960 - 2005

| Metro Station Area | Acres | Office (SF) | Retail (SF) | Other (SF) | Residential Units | Hotel Rooms |
|---|---|---|---|---|---|---|
| **Pre Metro Era (1960 - 1969)** | | | | | | |
| Rosslyn | 298 | 2,616,672 | 216,109 | 9,440 | 616 | 643 |
| Court House | 236 | 235,977 | 16,120 | 97,152 | 221 | 391 |
| Clarendon | 213 | 56,680 | 6,504 | 23,230 | 31 | - |
| Virginia Square | 190 | 105,309 | 36,456 | - | 54 | 45 |
| Ballston | 330 | 793,602 | 58,046 | 3,450 | 392 | - |
| ***Rosslyn-Ballston Corridor Subtotals*** | ***1,267*** | ***3,808,240*** | ***333,235*** | ***133,272*** | ***1,314*** | ***1,079*** |
| Pentagon City | 236 | - | - | - | 1,333 | - |
| Crystal City | 388 | 2,544,107 | 247,744 | - | 2,280 | 657 |
| ***Jefferson Davis Corridor Subtotals*** | ***624*** | ***2,544,107*** | ***247,744*** | ***-*** | ***3,613*** | ***657*** |
| **Totals** | **1,891** | **6,352,347** | **580,979** | **133,272** | **4,927** | **1,736** |
| **Metro Conception Era (1970 - 1979)** | | | | | | |
| Rosslyn | 298 | 1,047,166 | 92,262 | - | 94 | 872 |
| Court House | 236 | - | 3,750 | - | - | - |
| Clarendon | 213 | 12,217 | - | 11,376 | 23 | - |
| Virginia Square | 190 | 10,880 | 12,778 | 132,000 | 252 | - |
| Ballston | 330 | - | 22,625 | 5,232 | 9 | - |
| ***Rosslyn-Ballston Corridor Subtotals*** | ***1,267*** | ***1,070,263*** | ***131,415*** | ***148,608*** | ***378*** | ***872*** |
| Pentagon City | 236 | - | 1,800 | - | 1,347 | - |
| Crystal City | 388 | 3,064,442 | 361,269 | - | 820 | 1,639 |
| ***Jefferson Davis Corridor Subtotals*** | ***624*** | ***3,064,442*** | ***363,069*** | ***-*** | ***2,167*** | ***1,639*** |
| **Totals** | **1,891** | **4,134,705** | **494,484** | **148,608** | **2,545** | **2,511** |
| **Metro Operation Era (1980 - 1989)** | | | | | | |
| Rosslyn | 298 | 3,603,411 | 345,594 | - | 3,705 | 141 |
| Court House | 236 | 1,984,774 | 114,966 | - | 1,818 | - |
| Clarendon | 213 | 415,415 | 57,638 | - | - | - |
| Virginia Square | 190 | 272,292 | 15,681 | - | 84 | - |
| Ballston | 330 | 2,209,796 | 629,403 | - | 2,971 | 431 |
| ***Rosslyn-Ballston Corridor Subtotals*** | ***1,267*** | ***8,485,688*** | ***1,163,282*** | ***-*** | ***8,578*** | ***572*** |
| Pentagon City | 236 | 1,216,872 | - | - | 198 | - |
| Crystal City | 388 | 4,519,217 | 191,933 | - | 1,816 | 1,872 |
| ***Jefferson Davis Corridor Subtotals*** | ***624*** | ***5,736,089*** | ***191,933*** | ***-*** | ***2,014*** | ***1,872*** |
| **Totals** | **1,891** | **14,221,777** | **1,355,215** | **-** | **10,592** | **2,444** |

*Exhibit I-19*

# NET DENSITY COMPLETED BY DECADE
# ARLINGTON METRO STATION AREAS
# 1960 - 2005

| Metro Station Area | Acres | Office (SF) | Retail (SF) | Other (SF) | Residential Units | Hotel Rooms |
|---|---|---|---|---|---|---|
| **Metro Operation Era (1990 - 1999)** | | | | | | |
| Rosslyn | 298 | 231,473 | - | - | 114 | 458 |
| Court House | 236 | 906,946 | 7,290 | 231,355 | 2,819 | - |
| Clarendon | 213 | 107,712 | 63,822 | 97,900 | 27 | - |
| Virginia Square | 190 | 369,872 | 45,123 | 167,500 | 741 | - |
| Ballston | 330 | 1,845,968 | 217,966 | - | 2,478 | - |
| ***Rosslyn-Ballston Corridor Subtotals*** | ***1,267*** | ***3,461,971*** | ***334,201*** | ***496,755*** | ***6,179*** | ***458*** |
| Pentagon City | 236 | - | 1,391,200 | - | 299 | 644 |
| Crystal City | 388 | 438,928 | 4,545 | - | 385 | 272 |
| ***Jefferson Davis Corridor Subtotals*** | ***624*** | ***438,928*** | ***1,395,745*** | ***-*** | ***684*** | ***916*** |
| **Totals** | **1,891** | **3,900,899** | **1,729,946** | **496,755** | **6,863** | **1,374** |
| **Metro Operation Era (2000 - 2005)** | | | | | | |
| Rosslyn | 298 | 347,295 | 664,798 | 17,000 | 4,988 | 2,114 |
| Court House | 236 | 286,093 | 38,374 | - | 499 | 189 |
| Clarendon | 213 | 208,760 | 334,990 | 108,126 | 1,462 | - |
| Virginia Square | 190 | 508,590 | 75,865 | 45,108 | 1,403 | - |
| Ballston | 330 | 1,251,701 | 45,517 | 25,200 | 602 | - |
| ***Rosslyn-Ballston Corridor Subtotals*** | ***1,267*** | ***2,602,439*** | ***1,159,544*** | ***195,434*** | ***8,954*** | ***2,303*** |
| Pentagon City | 236 | - | 300,000 | - | 1,147 | - |
| Crystal City | 388 | 7,100 | 75,569 | - | 532 | 161 |
| ***Jefferson Davis Corridor Subtotals*** | ***624*** | ***7,100*** | ***375,569*** | ***-*** | ***1,679*** | ***161*** |
| **Totals** | **1,891** | **2,609,539** | **1,535,113** | **195,434** | **10,633** | **2,464** |

SOURCE: Arlington County; RCLCO

*Exhibit I-20*

## FUTURE PLANNED METRORAIL RESIDENTIAL FORECASTS
## FAIRFAX COUNTY, VA
## 2010 - 2040

| Tysons Corner | | 2010 | 2020 | 2030 | 2040 | Annual Growth Rate |
|---|---|---|---|---|---|---|
| **Households** | | | | | | |
| | Low | 9,300 | 13,900 | 15,700 | 19,500 | 2% |
| | Int. | 9,300 | 14,800 | 18,800 | 25,300 | 3% |
| | High | 9,300 | 15,700 | 22,200 | 32,000 | 4% |
| **New Residential Sq Ft** | | | | | | |
| | Low | 11,160,000 | 16,680,000 | 18,840,000 | 23,400,000 | 2% |
| | Int. | 11,160,000 | 17,760,000 | 22,560,000 | 30,360,000 | 3% |
| | High | 11,160,000 | 18,840,000 | 26,640,000 | 38,400,000 | 4% |

| Reston/Dulles Station Areas | 2005 | 2030 | Annual Growth Rate |
|---|---|---|---|
| **Households** | 33,109 | 50,276 | 2% |

Source: "Forecasts for Tysons Corner to 2050." Stephen Fuller, Sept 17, 2008.
FCDOT Study Area Land Use. October 26, 2010.

*Exhibit I-21*

**ESTIMATED REMAINING RESIDENTIAL DEVELOPMENT CAPACITY**
**LOUDOUN COUNTY**
**2005 - 2040**

| RESIDENTIAL DEVELOPMENT POTENTIAL | | | | | | | |
|---|---|---|---|---|---|---|---|
| Planning Subarea | SFD | SFA | MF | Total | SFD Fair Share Capture | SFA Fair Share Capture | MF Fair Share Capture |
| Ashburn | 2,038 | 4,576 | 13,555 | 20,169 | 8% | 34% | 51% |
| Dulles | 8,488 | 6,192 | 5,635 | 20,315 | 35% | 46% | 21% |
| Leesburg | 2,019 | 932 | 1,990 | 4,941 | 8% | 7% | 7% |
| Northwest | 3,536 | 52 | 0 | 3,588 | 14% | 0% | 0% |
| Potomac | 25 | 438 | 248 | 711 | 0% | 3% | 1% |
| Route 15 North | 2,054 | 3 | 0 | 2,057 | 8% | 0% | 0% |
| Route 15 South | 1,490 | 21 | 0 | 1,511 | 6% | 0% | 0% |
| Route 7 West | 3,425 | 552 | 0 | 3,977 | 14% | 4% | 0% |
| Southwest | 1,109 | 12 | 49 | 1,170 | 5% | 0% | 0% |
| Sterling | 412 | 596 | 5,181 | 6,189 | 2% | 4% | 19% |
| **Total Capacity** | **24,596** | **13,374** | **26,658** | **64,628** | **100%** | **100%** | **100%** |

SOURCE: Loudoun County

NOTE: Capacity numbers include density bonuses associated with rail transit for applicable projects

## Exhibit I-22

### PLANNING AREA CAPTURE RATES
### LOUDOUN COUNTY
### 2010 - 2040

| | SFD Fair Share Capture | SFD Capture 00-05 | SFD Capture 06-08 | Average 00-08 | Average Relative to Fair Share Capture |
|---|---|---|---|---|---|
| Ashburn | 8% | 35% | 35% | 35% | 27% |
| Dulles | 35% | 20% | 26% | 22% | -8% |
| Leesburg | 8% | 21% | 9% | 17% | 0% |
| Northwest | 14% | 4% | 7% | 5% | -8% |
| Potomac | 0% | 3% | 0% | 2% | 0% |
| Route 15 North | 8% | 2% | 5% | 3% | -3% |
| Route 15 South | 6% | 1% | 3% | 2% | -3% |
| Route 7 West | 14% | 12% | 13% | 12% | -1% |
| Southwest | 5% | 2% | 2% | 2% | -3% |
| Sterling | 2% | 1% | 1% | 1% | -1% |

| | SFA Fair Share Capture | SFA Capture 00- 05 | SFA Capture 06-08 | Average 00-08 | Average Relative to Fair Share Capture |
|---|---|---|---|---|---|
| Ashburn | 34% | 41% | 33% | 39% | 5% |
| Dulles | 46% | 23% | 51% | 30% | -16% |
| Leesburg | 7% | 22% | 10% | 19% | 12% |
| Northwest | 0% | 0% | 0% | 0% | 0% |
| Potomac | 3% | 6% | 4% | 6% | 2% |
| Route 15 North | 0% | 0% | 1% | 0% | 0% |
| Route 15 South | 0% | 0% | 0% | 0% | 0% |
| Route 7 West | 4% | 3% | 1% | 2% | -2% |
| Southwest | 0% | 0% | 0% | 0% | 0% |
| Sterling | 4% | 5% | 0% | 4% | -1% |

| | MF Fair Share Capture | MF Capture 00- 05 | MF Capture 06-08 | Average 00-08 | Average Relative to Fair Share Capture |
|---|---|---|---|---|---|
| Ashburn | 51% | 62% | 53% | 60% | 9% |
| Dulles | 21% | 10% | 4% | 9% | -12% |
| Leesburg | 7% | 8% | 10% | 8% | 1% |
| Northwest | 0% | 0% | 0% | 0% | 0% |
| Potomac | 1% | 7% | 9% | 7% | 7% |
| Route 15 North | 0% | 0% | 0% | 0% | 0% |
| Route 15 South | 0% | 0% | 0% | 0% | 0% |
| Route 7 West | 0% | 3% | 0% | 2% | 2% |
| Southwest | 0% | 0% | 1% | 0% | 0% |
| Sterling | 19% | 11% | 22% | 13% | -6% |

SOURCE: See Exhibits I-11 through I-13 and Exhibit I-22

**Exhibit I-23**

**DEVELOPMENT CAPACITY**
**ROUTE 28 METRO STATION AREA**
**2010**


RCLCO



Route 28 Station Area Map
04-8824.05
Printed: 4/15/2011

## Exhibit I-24

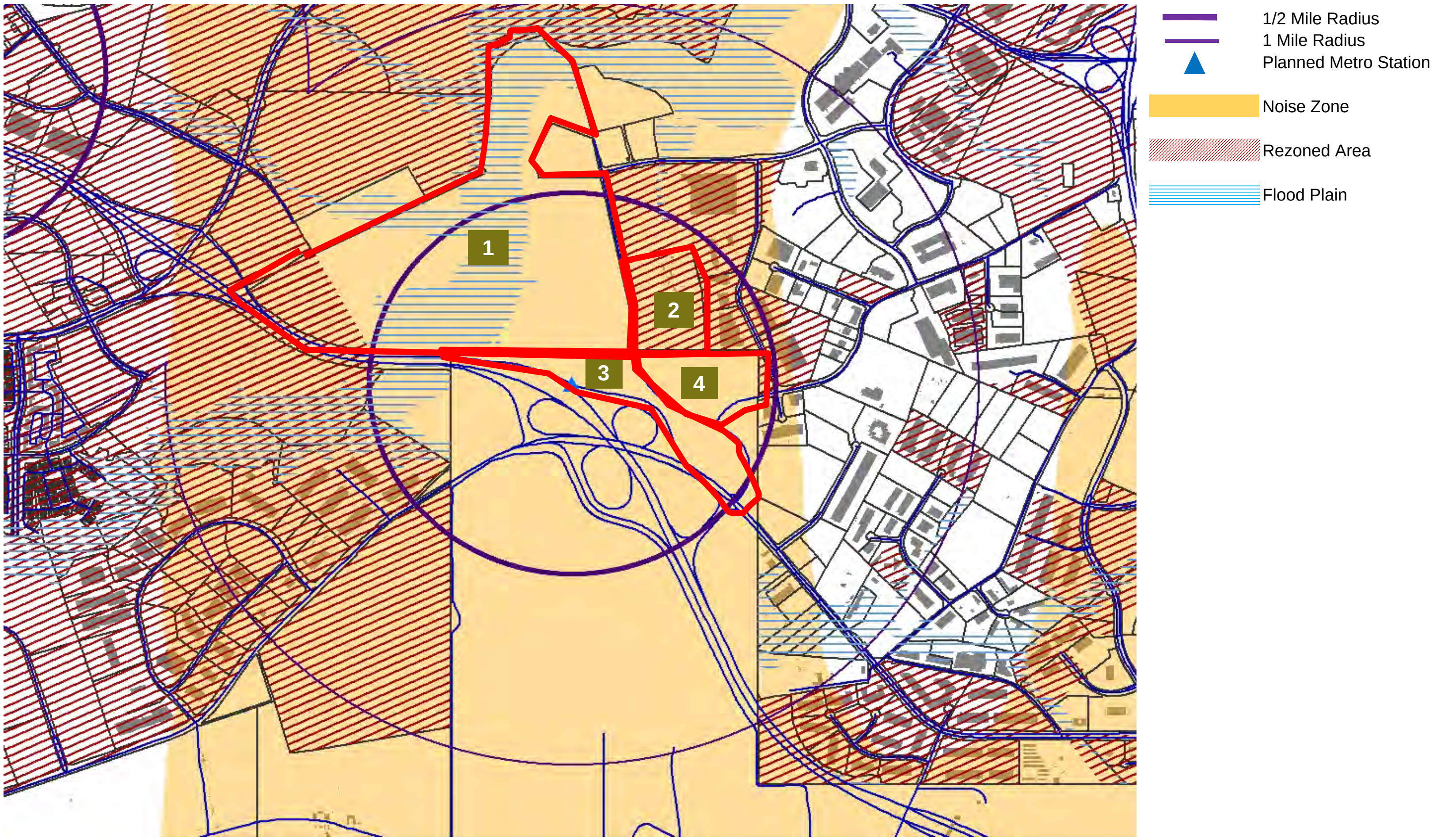
### DEVELOPMENT CAPACITY
### PLANNED ROUTE 28 METRO STATION
### NOVEMBER 2010

| Map Key | Parcel Area | Area within 1/2 Mile of Planned Metro | % Within 1/2 Mile of Metro | Current Land Use | Current Zoning | Planned Land Use | Max. Residential Capacity No Metro | Max. Office Capacity No Metro | Max. Commercial/Retail Capacity No Metro | Max. Residential Capacity With Metro | Max. Office Capacity With Metro | Max. Commercial/Retail Capacity With Metro |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 3,846,633 | 573,379 | 15% | Vacant | Rezoned | BUS | 0 | 1,408,400 | 457,000 | 1,265 | 3,279,500 | 700,000 |
| 2 | 1,230,922 | 226,574 | 18% | Vacant | R-1 | BUS | 0 | 1,107,830 | 123,092 | 0 | 1,107,830 | 123,092 |
| **Total** | **5,077,555** | **799,953** | **16%** | | | | **0** | **2,516,230** | **580,092** | **1,265** | **4,387,330** | **823,092** |

NOTE: 350,000 SF of hotel planned for Dulles World Center (Map Key 1) included in commercial/retail square footage

**Exhibit I-25**

**DEVELOPMENT CAPACITY**
**ROUTE 606 STATION AREA**
**NOVEMBER 2010**



## Exhibit I-26

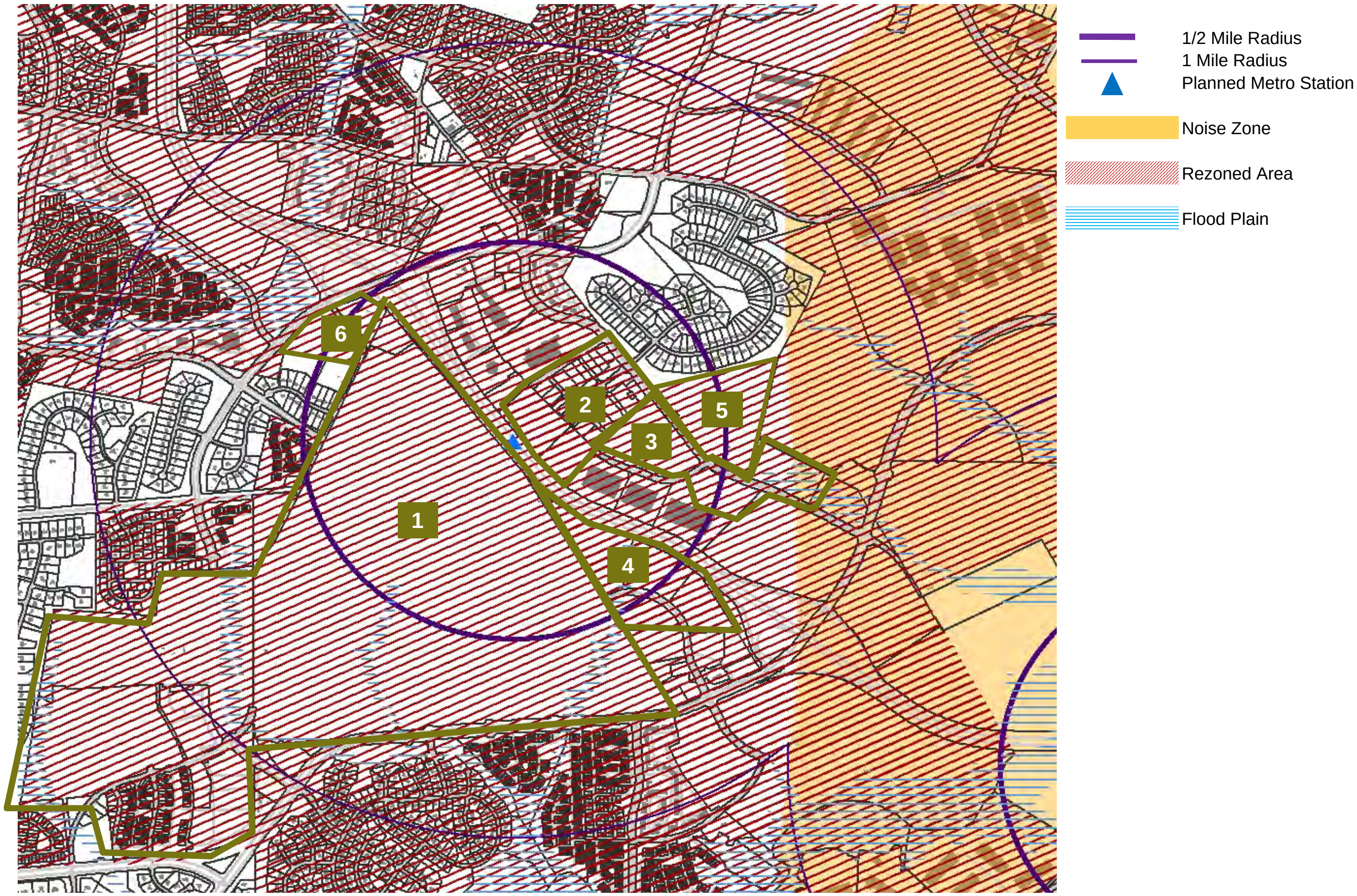
### DEVELOPMENT CAPACITY
### PLANNED ROUTE 606 METRO STATION
### NOVEMBER 2010

| Map Key | Parcel Area (SF) | Area (SF) within 1/2 Mile Radius[1] | % Within 1/2 Mile | Current Zoning | Planned Land Use | Max. Residential Capacity[2] | Office Capacity with Roads[3] | Commercial/ Retail Capacity with Roads[3] | Office Capacity with Rail[4] | Commercial/ Retail Capacity with Rail[4] |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 6,428,235 | 3,220,404 | 50% | PDOP | KEYNOTE - TREC (1/2 Mile) | 0 | 5,785,412 | 321,412 | 8,683,775 | 482,432 |
| 2 | 1,260,450 | 1,204,869 | 100% | Rezoned | KEYNOTE - TREC (1/2 Mile) | 0 | 1,134,405 | 63,023 | 2,218,787 | 123,266 |
| 3 | 1,276,308 | 1,276,308 | 100% | IAD | N/A | 0 | 1,148,677 | 63,815 | 2,297,354 | 127,631 |
| 4 | 1,119,492 | 1,119,492 | 100% | IAD | N/A | 0 | 1,007,543 | 55,975 | 2,015,086 | 111,949 |
| **Total** | **10,084,485** | **6,821,073** | | | | **0** | **9,076,037** | **504,224** | **15,215,002** | **845,278** |

1/Based on Loudoun County GIS data; Net of area in flood plain
2/Noise ordinance due to Dulles Airport prohibits residential development in these parcels
3/Assumes that 90% of land area is developed as office and 5% of land area is developed as retail at a 1 FAR
4/Assumes that 90% of land area is developed as office and 5% of land area is developed as retail at a 2 FAR

## Exhibit I-27

## DEVELOPMENT CAPACITY
## ROUTE 772 METRO STATION AREA
## NOVEMBER 2010



## Exhibit I-28

### DEVELOPMENT CAPACITY
### PLANNED ROUTE 772 STATION
### NOVEMBER 2010

| Map Key | Title | Parcel Area | Area within 1/2 Mile of Planned Metro | % Within 1/2 Mile of Metro | Current Zoning | Planned Land Use | Residential Capacity No Metro | Office Capacity No Metro | Commercial/ Retail Capacity No Metro | Residential Capacity With Metro | Office Capacity With Metro | Commercial/ Retail Capacity With Metro |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Moorefield Station | 26,248,460 | 8,859,034 | 34% | Rezoned | BUS/RHD - 1/2 MILE TOD | 3,486 | 6,300,000 | 700,000 | 5,686 | 8,775,000 | 975,000 |
| 2 | Loudoun Station | 1,884,379 | 1,884,379 | 100% | Rezoned | KEYNOTE - 1/2 MILE TOD | 969 | 260,000 | 190,000 | 1,514 | 753,752 | 376,876 |
| 3 | Dulles Parkway Center | 1,616,254 | 963,005 | 60% | Rezoned | KEYNOTE - 1/2 MILE TOD | 265 | 847,935 | 94,215 | 553 | 1,454,629 | 161,625 |
| 4 | Dulles Parkway Center II | 1,753,290 | 991,938 | 57% | Rezoned | KEYNOTE - 1/2 MILE TOD | 624 | 560,000 | 40,000 | 975 | 1,577,961 | 175,329 |
| 5 | Greenway Corporate Center | 1,434,866 | 442,000 | 31% | Rezoned | KEYNOTE | 0 | 1,291,379 | 143,487 | 0 | 1,291,379 | 143,487 |
| 6 | Old Ryan Rd. and Mooreview | 655,733 | 360,000 | 55% | Rezoned | KEYNOTE - 1/2 MILE TOD | 99 | 363,360 | 40,373 | 207 | 590,160 | 65,573 |
| **Total** | | **32,937,249** | **13,500,356** | **41%** | | | **5,443** | **9,622,675** | **1,208,075** | **8,934** | **14,442,880** | **1,897,890** |

NOTES:
Zoning approvals offer some flexibility as to the distribution of space between residential and non-residential uses. Based on market demand, RCLCO has assume developers would maximize residential capacity.
The Greenway Corporate Center, while technically within a 1/2 mile radius of the planned station does not benefit from TOD zoning because the TOD zone is limited at Shellhorn Road.
RCLCO has assumed that 6.25% of residential units will be Affordable Dwelling Units unless otherwise stated in an approved rezoning application.

## Exhibit I-29

# RESIDENTIAL FORECAST MODEL ASSUMPTIONS AND SUMMARY OUTPUTS
# FAIRFAX AND LOUDOUN COUNTIES
# 2011 - 2040

| Structural (No Metro) Assumptions | | Source |
|---|---|---|
| Vacancy/Obsolescence Factor | 1.06 | RCLCO |
| Starting Multifamily as % of Total | 28% | Exhibit I-13 |
| Multifamily % of Total Escalator | 2% | Exhibit I-13 |
| 2010 - 2012 Demand Reduction Factor | -40% | RCLCO |
| Starting Fairfax SF Regional Share Index | 0.4 | Exhibit I-6 |
| Starting Fairfax MF Regional Share Index | 1.0 | Exhibit I-6 |
| Annual Rate of Decline in Fairfax SF Regional Share Index | -4.9% | Exhibit I-7 |
| Annual Rate of Decline in Fairfax MF Regional Share Index | -3.1% | Exhibit I-7 |
| Starting Loudoun SF Regional Share Index | 3.0 | Exhibit I-6 |
| Starting Loudoun MF Regional Share Index | 3.7 | Exhibit I-6 |
| Annual Rate of Decline in Loudoun SF Regional Share Index | -4.9% | RCLCO |
| Annual Rate of Decline in Loudoun MF Regional Share Index | -2.6% | RCLCO |
| Starting % of Fairfax Single-Family Demand Spilling into Loudoun | 10% | RCLCO |
| Start Year for Spillover | 2020 | RCLCO |
| Spillover Escalator | 3% | RCLCO |
| Single-Family Attached Demand as % of Total Single-Family Demand | 40% | Exhibit I-9 |
| % of SFA Demand Willing to Switch to MF Demand Due to Supply Constraint | 10% | RCLCO |
| % of SFD Demand Willing to Switch to MF Demand Due to Supply Constraint | 5% | RCLCO |

| Baseline Model (Phase 1 Extension to Wiehle Avenue) | | |
|---|---|---|
| Starting Increase in Fairfax Multifamily Demand Due to Metro | 10% | RCLCO |
| Annual Change in Increase Due to Metro | 0% | RCLCO |
| % of MF Demand Due to Metro Taken from Loudoun | 20% | RCLCO |

| Dulles Rail Phase 2 Extension | | |
|---|---|---|
| Starting Increase in Fairfax Multifamily Demand Due to Metro | 10% | RCLCO |
| Annual Change in Increase in MF Demand Due to Metro | 0% | RCLCO |
| % of MF Demand Due to Metro Taken from Loudoun (2013 - 2017) | 20% | RCLCO |
| Starting Increase in Loudoun Multifamily Demand Due to Metro | 15% | RCLCO |
| Annual Change in Increase in MF Demand Due to Metro | 2% | RCLCO |

| Baseline Model (Dulles Rail Phase 1 Extension to Wiehle Avenue) | | | | | | | |
|---|---|---|---|---|---|---|---|
| | 2011 - 2015 | 2016 - 2020 | 2021 - 2025 | 2026 - 2030 | 2031 - 2035 | 2036 - 2040 | Total |
| New SFD Units | 8,982 | 6,978 | 4,004 | 580 | 179 | 117 | 20,840 |
| New SFA Units | 6,180 | 4,972 | 476 | 0 | 0 | 0 | 11,628 |
| New MF Units | 3,715 | 4,897 | 5,426 | 5,007 | 4,058 | 319 | 23,422 |
| Total | 18,877 | 16,847 | 9,906 | 5,587 | 4,237 | 436 | 55,890 |
| SFD Ann. Grth. | 1,796 | 1,396 | 801 | 116 | 36 | 23 | |
| SFA Ann. Grth. | 1,236 | 994 | 95 | 0 | 0 | 0 | |
| MF Ann. Grth. | 743 | 979 | 1,085 | 1,001 | 812 | 64 | |
| Total | 3,775 | 3,369 | 1,981 | 1,117 | 847 | 87 | |

| Dulles Rail Phase 2 Extension Model | | | | | | | |
|---|---|---|---|---|---|---|---|
| | 2011 - 2015 | 2016 - 2020 | 2021 - 2025 | 2026 - 2030 | 2031 - 2035 | 2036 - 2040 | Total |
| SFD Units | 8,982 | 7,091 | 3,957 | 547 | 185 | 120 | 20,881 |
| SFA Units | 6,184 | 5,352 | 821 | 0 | 0 | 0 | 12,356 |
| MF Units | 3,715 | 5,420 | 6,138 | 5,953 | 4,846 | 1,380 | 27,450 |
| Total | | | | | | | 60,688 |
| SFD Ann. Grth. | 1,796 | 1,418 | 791 | 109 | 37 | 24 | |
| SFA Ann. Grth. | 1,237 | 1,070 | 164 | 0 | 0 | 0 | |
| MF Ann. Grth. | 743 | 1,084 | 1,228 | 1,191 | 969 | 276 | |
| Total | 3,776 | 3,572 | 2,183 | 1,300 | 1,006 | 300 | |

## Exhibit I-30

## BASELINE (PHASE I EXTENSION) STRUCTURAL DEMAND FORECAST
## MSA, FAIRFAX COUNTY & LOUDOUN COUNTY
## 2010 - 2040

| | Average 01 - 05 | Average 06 - 09[2] | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DC MSA Households[1] | | | 1,967,800 | 1,995,000 | 2,022,200 | 2,049,400 | 2,076,600 | 2,103,800 | 2,130,220 | 2,156,640 | 2,183,060 | 2,209,480 | 2,235,900 | 2,260,300 | 2,284,700 | 2,309,100 | 2,333,500 |
| DC MSA Household Growth | 33,300 | 20,097 | 27,200 | 27,200 | 27,200 | 27,200 | 27,200 | 26,420 | 26,420 | 26,420 | 26,420 | 26,420 | 24,400 | 24,400 | 24,400 | 24,400 | 24,400 |
| Vacancy/Obsolescence Factor | | | 0.64 | 0.64 | 0.64 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 |
| DC MSA Permits | 37,202 | 19,120 | 17,299 | 17,299 | 17,299 | 28,832 | 28,832 | 28,005 | 28,005 | 28,005 | 28,005 | 28,005 | 25,864 | 25,864 | 25,864 | 25,864 | 25,864 |
| % Single-Family | 74.3% | 68.7% | 72.0% | 71.4% | 70.9% | 70.3% | 69.7% | 69.1% | 68.5% | 67.8% | 67.2% | 66.5% | 65.9% | 65.2% | 64.5% | 63.8% | 63.1% |
| % Multifamily | 25.7% | 31.3% | 28.0% | 28.6% | 29.1% | 29.7% | 30.3% | 30.9% | 31.5% | 32.2% | 32.8% | 33.5% | 34.1% | 34.8% | 35.5% | 36.2% | 36.9% |
| Single-Family Demand | 24,744 | 13,809 | 12,455 | 12,359 | 12,260 | 20,265 | 20,094 | 19,348 | 19,174 | 18,998 | 18,818 | 18,634 | 17,036 | 16,860 | 16,679 | 16,496 | 16,308 |
| Multifamily Demand | 8,556 | 6,288 | 4,844 | 4,941 | 5,039 | 8,567 | 8,738 | 8,658 | 8,831 | 9,007 | 9,188 | 9,371 | 8,828 | 9,004 | 9,185 | 9,368 | 9,556 |
| Single-Family Households | | 1,303,014 | 1,315,469 | 1,327,828 | 1,340,087 | 1,360,352 | 1,380,446 | 1,399,793 | 1,418,968 | 1,437,966 | 1,456,783 | 1,475,417 | 1,492,453 | 1,509,313 | 1,525,993 | 1,542,488 | 1,558,797 |
| Multifamily Households | | 644,690 | 649,534 | 654,474 | 659,514 | 668,081 | 676,819 | 685,477 | 694,308 | 703,315 | 712,502 | 721,874 | 730,702 | 739,706 | 748,891 | 758,259 | 767,814 |
| **Fairfax County Structural Demand** | | | | | | | | | | | | | | | | | |
| Single-Family Regional Share Index | 0.48 | 0.40 | 0.40 | 0.38 | 0.36 | 0.34 | 0.33 | 0.31 | 0.30 | 0.28 | 0.27 | 0.25 | 0.24 | 0.23 | 0.22 | 0.21 | 0.20 |
| Multifamily Regional Share Index | 1.53 | 0.33 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.97 | 0.94 | 0.91 | 0.88 | 0.85 |
| Single-Family Housing Units | | 290,429 | 291,539 | 292,581 | 293,559 | 295,086 | 296,512 | 297,805 | 299,012 | 300,139 | 301,190 | 302,170 | 303,015 | 303,802 | 304,537 | 305,223 | 305,861 |
| Single-Family Annual Demand | 3,356 | 1,364 | 1,110 | 1,042 | 977 | 1,527 | 1,426 | 1,293 | 1,207 | 1,127 | 1,051 | 980 | 844 | 788 | 735 | 685 | 639 |
| Capture of MSA Demand | | | 9% | 8% | 8% | 8% | 7% | 7% | 6% | 6% | 6% | 5% | 5% | 5% | 4% | 4% | 4% |
| Multifamily Housing Units | | 104,127 | 104,909 | 105,707 | 106,521 | 107,905 | 109,316 | 110,715 | 112,141 | 113,596 | 115,080 | 116,593 | 117,975 | 119,340 | 120,688 | 122,019 | 123,333 |
| Multifamily Annual Demand | 2,569 | 544 | 782 | 798 | 814 | 1,384 | 1,411 | 1,398 | 1,426 | 1,455 | 1,484 | 1,514 | 1,382 | 1,365 | 1,348 | 1,331 | 1,314 |
| Capture of MSA Demand | | | 16% | 16% | 16% | 16% | 16% | 16% | 16% | 16% | 16% | 16% | 16% | 15% | 15% | 14% | 14% |
| Total Demand | 5,925 | 1,907 | 1,893 | 1,840 | 1,791 | 2,911 | 2,837 | 2,691 | 2,633 | 2,581 | 2,535 | 2,494 | 2,226 | 2,153 | 2,083 | 2,016 | 1,953 |
| % Single-Family | 57% | 71% | 59% | 57% | 55% | 52% | 50% | 48% | 46% | 44% | 41% | 39% | 38% | 37% | 35% | 34% | 33% |
| % Multifamily | 43% | 29% | 41% | 43% | 45% | 48% | 50% | 52% | 54% | 56% | 59% | 61% | 62% | 63% | 65% | 66% | 67% |
| **Loudoun County Structural Demand** | | | | | | | | | | | | | | | | | |
| Single-Family Regional Share Index | 3.64 | 2.68 | 3.00 | 2.85 | 2.71 | 2.58 | 2.45 | 2.33 | 2.22 | 2.11 | 2.01 | 1.91 | 1.82 | 1.73 | 1.64 | 1.56 | 1.48 |
| Multifamily Regional Share Index | 6.32 | 3.40 | 3.70 | 3.70 | 3.70 | 3.70 | 3.70 | 3.60 | 3.51 | 3.42 | 3.33 | 3.24 | 3.16 | 3.08 | 3.00 | 2.92 | 2.84 |
| Single-Family Housing Units | | 88,735 | 91,280 | 93,726 | 96,074 | 99,823 | 103,441 | 106,824 | 110,071 | 113,182 | 116,154 | 118,990 | 121,484 | 123,853 | 126,100 | 128,229 | 130,241 |
| Single-Family Annual Demand | 4,801 | 2,610 | 2,545 | 2,447 | 2,348 | 3,749 | 3,618 | 3,383 | 3,247 | 3,110 | 2,973 | 2,836 | 2,494 | 2,369 | 2,247 | 2,128 | 2,013 |
| Capture of MSA Demand | 17% | 17% | 20% | 20% | 19% | 18% | 18% | 17% | 17% | 16% | 16% | 15% | 15% | 14% | 13% | 13% | 12% |
| Multifamily Housing Units | | 17,178 | 17,656 | 18,152 | 18,670 | 19,567 | 20,514 | 21,460 | 22,430 | 23,425 | 24,444 | 25,486 | 26,471 | 27,475 | 28,497 | 29,538 | 30,596 |
| Multifamily Annual Demand | 1,293 | 485 | 478 | 497 | 517 | 897 | 947 | 946 | 970 | 995 | 1,019 | 1,043 | 985 | 1,004 | 1,022 | 1,041 | 1,058 |
| Capture of MSA Demand | 13% | 7% | 10% | 10% | 10% | 10% | 11% | 11% | 11% | 11% | 11% | 11% | 11% | 11% | 11% | 11% | 11% |
| Total Demand | 6,094 | 3,095 | 3,022 | 2,943 | 2,865 | 4,646 | 4,565 | 4,329 | 4,218 | 4,105 | 3,992 | 3,879 | 3,479 | 3,373 | 3,269 | 3,169 | 3,071 |
| % Single-Family | 79% | 84% | 84% | 83% | 82% | 81% | 79% | 78% | 77% | 76% | 74% | 73% | 72% | 70% | 69% | 67% | 66% |
| % Multifamily | 21% | 16% | 16% | 17% | 18% | 19% | 21% | 22% | 23% | 24% | 26% | 27% | 28% | 30% | 31% | 33% | 34% |
| **Cumulative Total Demand (Beg. 2011)** | | | | **2,943** | **5,809** | **10,455** | **15,020** | **19,348** | **23,566** | **27,671** | **31,663** | **35,542** | **39,020** | **42,393** | **45,662** | **48,831** | **51,902** |
| **Total Loudoun and Fairfax SF Demand** | **8,157** | **3,974** | **3,655** | **3,488** | **3,325** | **5,276** | **5,044** | **4,676** | **4,454** | **4,237** | **4,024** | **3,816** | **3,338** | **3,157** | **2,982** | **2,813** | **2,652** |
| Fairfax County's Capture | 41% | 34% | 30% | 30% | 29% | 29% | 28% | 28% | 27% | 27% | 26% | 26% | 25% | 25% | 25% | 24% | 24% |
| Loudoun County's Capture | 59% | 66% | 70% | 70% | 71% | 71% | 72% | 72% | 73% | 73% | 74% | 74% | 75% | 75% | 75% | 76% | 76% |
| **Total Loudoun and Fairfax MF Demand** | **3,862** | **1,029** | **1,260** | **1,295** | **1,331** | **2,281** | **2,358** | **2,344** | **2,397** | **2,450** | **2,503** | **2,556** | **2,366** | **2,369** | **2,371** | **2,372** | **2,372** |
| Fairfax County's Capture | 67% | 53% | 62% | 62% | 61% | 61% | 60% | 60% | 60% | 59% | 59% | 59% | 58% | 58% | 57% | 56% | 55% |
| Loudoun County's Capture | 33% | 47% | 38% | 38% | 39% | 39% | 40% | 40% | 40% | 41% | 41% | 41% | 42% | 42% | 43% | 44% | 45% |

| | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 | 2037 | 2038 | 2039 | 2040 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DC MSA Households[1] | 2,357,900 | 2,378,880 | 2,399,860 | 2,420,840 | 2,441,820 | 2,462,800 | 2,480,360 | 2,497,920 | 2,515,480 | 2,533,040 | 2,550,600 | 2,566,200 | 2,581,800 | 2,597,400 | 2,613,000 | 2,628,600 |
| DC MSA Household Growth | 20,980 | 20,980 | 20,980 | 20,980 | 20,980 | 17,560 | 17,560 | 17,560 | 17,560 | 17,560 | 15,600 | 15,600 | 15,600 | 15,600 | 15,600 | 15,600 |
| Vacancy/Obsolescence Factor | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 |
| DC MSA Permits | 22,239 | 22,239 | 22,239 | 22,239 | 22,239 | 18,614 | 18,614 | 18,614 | 18,614 | 18,614 | 16,536 | 16,536 | 16,536 | 16,536 | 16,536 | 16,536 |
| % Single-Family | 62.3% | 61.6% | 60.8% | 60.0% | 59.2% | 58.4% | 57.6% | 56.7% | 55.8% | 55.0% | 54.1% | 53.1% | 52.2% | 51.3% | 50.3% | 49.3% |
| % Multifamily | 37.7% | 38.4% | 39.2% | 40.0% | 40.8% | 41.6% | 42.4% | 43.3% | 44.2% | 45.0% | 45.9% | 46.9% | 47.8% | 48.7% | 49.7% | 50.7% |
| Single-Family Demand | 13,858 | 13,691 | 13,520 | 13,345 | 13,167 | 10,869 | 10,714 | 10,556 | 10,395 | 10,231 | 8,940 | 8,788 | 8,633 | 8,475 | 8,314 | 8,149 |
| Multifamily Demand | 8,381 | 8,548 | 8,719 | 8,893 | 9,071 | 7,744 | 7,899 | 8,057 | 8,218 | 8,383 | 7,596 | 7,748 | 7,903 | 8,061 | 8,222 | 8,387 |
| Single-Family Households | 1,572,655 | 1,586,346 | 1,599,865 | 1,613,211 | 1,626,378 | 1,637,247 | 1,647,961 | 1,658,518 | 1,668,913 | 1,679,144 | 1,688,083 | 1,696,871 | 1,705,504 | 1,713,979 | 1,722,293 | 1,730,442 |
| Multifamily Households | 776,195 | 784,743 | 793,462 | 802,356 | 811,427 | 819,171 | 827,071 | 835,128 | 843,347 | 851,730 | 859,326 | 867,074 | 874,977 | 883,038 | 891,260 | 899,647 |
| **Fairfax County Structural Demand** | | | | | | | | | | | | | | | | |
| Single-Family Regional Share Index | 0.19 | 0.18 | 0.17 | 0.16 | 0.15 | 0.15 | 0.14 | 0.13 | 0.13 | 0.12 | 0.11 | 0.11 | 0.10 | 0.10 | 0.09 | 0.09 |
| Multifamily Regional Share Index | 0.83 | 0.80 | 0.78 | 0.75 | 0.73 | 0.71 | 0.69 | 0.66 | 0.64 | 0.62 | 0.60 | 0.59 | 0.57 | 0.55 | 0.53 | 0.52 |
| Single-Family Housing Units | 306,373 | 306,851 | 307,296 | 307,711 | 308,098 | 308,400 | 308,681 | 308,942 | 309,186 | 309,413 | 309,601 | 309,776 | 309,938 | 310,089 | 310,229 | 310,359 |
| Single-Family Annual Demand | 512 | 478 | 445 | 415 | 387 | 302 | 281 | 262 | 244 | 227 | 188 | 175 | 162 | 151 | 140 | 130 |
| Capture of MSA Demand | 4% | 3% | 3% | 3% | 3% | 3% | 3% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% |
| Multifamily Housing Units | 124,447 | 125,547 | 126,631 | 127,700 | 128,754 | 129,623 | 130,480 | 131,324 | 132,155 | 132,974 | 133,691 | 134,397 | 135,092 | 135,776 | 136,449 | 137,112 |
| Multifamily Annual Demand | 1,114 | 1,099 | 1,084 | 1,069 | 1,054 | 869 | 857 | 844 | 832 | 819 | 717 | 706 | 695 | 684 | 673 | 663 |
| Capture of MSA Demand | 13% | 13% | 12% | 12% | 12% | 11% | 11% | 10% | 10% | 10% | 9% | 9% | 9% | 8% | 8% | 8% |
| Total Demand | 1,626 | 1,577 | 1,530 | 1,484 | 1,441 | 1,171 | 1,138 | 1,106 | 1,075 | 1,046 | 904 | 880 | 857 | 835 | 814 | 793 |
| % Single-Family | 31% | 30% | 29% | 28% | 27% | 26% | 25% | 24% | 23% | 22% | 21% | 20% | 19% | 18% | 17% | 16% |
| % Multifamily | 69% | 70% | 71% | 72% | 73% | 74% | 75% | 76% | 77% | 78% | 79% | 80% | 81% | 82% | 83% | 84% |
| **Loudoun County Structural Demand** | | | | | | | | | | | | | | | | |
| Single-Family Regional Share Index | 1.41 | 1.34 | 1.28 | 1.21 | 1.15 | 1.10 | 1.04 | 0.99 | 0.94 | 0.90 | 0.85 | 0.81 | 0.77 | 0.73 | 0.70 | 0.66 |
| Multifamily Regional Share Index | 2.77 | 2.70 | 2.63 | 2.56 | 2.49 | 2.43 | 2.36 | 2.30 | 2.24 | 2.18 | 2.13 | 2.07 | 2.02 | 1.97 | 1.92 | 1.87 |
| Single-Family Housing Units | 131,876 | 133,418 | 134,870 | 136,236 | 137,520 | 138,530 | 139,477 | 140,364 | 141,195 | 141,973 | 142,619 | 143,222 | 143,785 | 144,310 | 144,799 | 145,254 |
| Single-Family Annual Demand | 1,635 | 1,542 | 1,452 | 1,366 | 1,284 | 1,009 | 947 | 887 | 831 | 778 | 646 | 603 | 563 | 525 | 489 | 455 |
| Capture of MSA Demand | 12% | 11% | 11% | 10% | 10% | 9% | 9% | 8% | 8% | 8% | 7% | 7% | 7% | 6% | 6% | 6% |
| Multifamily Housing Units | 31,521 | 32,457 | 33,404 | 34,362 | 35,331 | 36,149 | 36,973 | 37,803 | 38,637 | 39,476 | 40,225 | 40,977 | 41,731 | 42,487 | 43,245 | 44,004 |
| Multifamily Annual Demand | 925 | 936 | 947 | 958 | 968 | 819 | 824 | 829 | 834 | 839 | 749 | 752 | 754 | 756 | 758 | 759 |
| Capture of MSA Demand | 11% | 11% | 11% | 11% | 11% | 11% | 10% | 10% | 10% | 10% | 10% | 10% | 10% | 9% | 9% | 9% |
| Total Demand | 2,560 | 2,478 | 2,399 | 2,324 | 2,252 | 1,828 | 1,771 | 1,717 | 1,665 | 1,617 | 1,395 | 1,355 | 1,317 | 1,281 | 1,247 | 1,214 |
| % Single-Family | 64% | 62% | 61% | 59% | 57% | 55% | 53% | 52% | 50% | 48% | 46% | 45% | 43% | 41% | 39% | 37% |
| % Multifamily | 36% | 38% | 39% | 41% | 43% | 45% | 47% | 48% | 50% | 52% | 54% | 55% | 57% | 59% | 61% | 63% |
| **Cumulative Total Demand (Beg. 2011)** | **54,462** | **56,940** | **59,339** | **61,663** | **63,916** | **65,744** | **67,515** | **69,232** | **70,897** | **72,514** | **73,909** | **75,264** | **76,581** | **77,862** | **79,109** | **80,323** |
| **Total Loudoun and Fairfax SF Demand** | **2,147** | **2,019** | **1,897** | **1,781** | **1,671** | **1,311** | **1,228** | **1,149** | **1,075** | **1,005** | **833** | **778** | **725** | **676** | **629** | **585** |
| Fairfax County's Capture | 24% | 24% | 23% | 23% | 23% | 23% | 23% | 23% | 23% | 23% | 23% | 22% | 22% | 22% | 22% | 22% |
| Loudoun County's Capture | 76% | 76% | 77% | 77% | 77% | 77% | 77% | 77% | 77% | 77% | 77% | 78% | 78% | 78% | 78% | 78% |
| **Total Loudoun and Fairfax MF Demand** | **2,039** | **2,036** | **2,032** | **2,027** | **2,022** | **1,688** | **1,681** | **1,674** | **1,666** | **1,658** | **1,466** | **1,457** | **1,449** | **1,440** | **1,431** | **1,422** |
| Fairfax County's Capture | 55% | 54% | 53% | 53% | 52% | 51% | 51% | 50% | 50% | 49% | 49% | 48% | 48% | 48% | 47% | 47% |
| Loudoun County's Capture | 45% | 46% | 47% | 47% | 48% | 49% | 49% | 50% | 50% | 51% | 51% | 52% | 52% | 52% | 53% | 53% |

1/1983 MSA Definition as forecasted by COG 8.0
2/In some cases data may represent 06 - 08, or 06 - 10 estimates depending on data availability

NOTE: Demand forecast on this exhibit represents structural demand, meaning potential demand without taking consideration of capacity constraints.

## Exhibit I-31

### STRUCTURAL DEMAND MODEL ADJUSTMENTS ACCOUNTING FOR PHASE 2 RAIL EXTENSION
### MSA, FAIRFAX COUNTY & LOUDOUN COUNTY
### 2010 - 2040

| | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 | 2037 | 2038 | 2039 | 2040 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MSA Single-Family Demand | 12,455 | 12,359 | 12,260 | 20,265 | 20,094 | 19,348 | 19,174 | 18,998 | 18,818 | 18,634 | 17,036 | 16,860 | 16,679 | 16,496 | 16,308 | 13,858 | 13,691 | 13,520 | 13,345 | 13,167 | 10,869 | 10,714 | 10,556 | 10,395 | 10,231 | 8,940 | 8,788 | 8,633 | 8,475 | 8,314 | 8,149 |
| MSA Multifamily Demand | 4,844 | 4,941 | 5,039 | 8,567 | 8,738 | 8,658 | 8,831 | 9,007 | 9,188 | 9,371 | 8,828 | 9,004 | 9,185 | 9,368 | 9,556 | 8,381 | 8,548 | 8,719 | 8,893 | 9,071 | 7,744 | 7,899 | 8,057 | 8,218 | 8,383 | 7,596 | 7,748 | 7,903 | 8,061 | 8,222 | 8,387 |
| Total MSA Demand | 17,299 | 17,299 | 17,299 | 28,832 | 28,832 | 28,005 | 28,005 | 28,005 | 28,005 | 28,005 | 25,864 | 25,864 | 25,864 | 25,864 | 25,864 | 22,239 | 22,239 | 22,239 | 22,239 | 22,239 | 18,614 | 18,614 | 18,614 | 18,614 | 18,614 | 16,536 | 16,536 | 16,536 | 16,536 | 16,536 | 16,536 |
| **No Metro Extension Scenario** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Fairfax County** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Single-Family Demand | 1,110 | 1,042 | 977 | 1,527 | 1,426 | 1,293 | 1,207 | 1,127 | 1,051 | 980 | 844 | 788 | 735 | 685 | 639 | 512 | 478 | 445 | 415 | 387 | 302 | 281 | 262 | 244 | 227 | 188 | 175 | 162 | 151 | 140 | 130 |
| Capture of MSA | 9% | 8% | 8% | 8% | 7% | 7% | 6% | 6% | 6% | 5% | 5% | 5% | 4% | 4% | 4% | 4% | 3% | 3% | 3% | 3% | 3% | 3% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% |
| Multifamily Demand | 782 | 798 | 814 | 1,384 | 1,411 | 1,398 | 1,426 | 1,455 | 1,484 | 1,514 | 1,382 | 1,365 | 1,348 | 1,331 | 1,314 | 1,114 | 1,099 | 1,084 | 1,069 | 1,054 | 869 | 857 | 844 | 832 | 819 | 717 | 706 | 695 | 684 | 673 | 663 |
| Capture of MSA | 16% | 16% | 16% | 16% | 16% | 16% | 16% | 16% | 16% | 16% | 16% | 15% | 15% | 14% | 14% | 13% | 13% | 12% | 12% | 12% | 11% | 11% | 10% | 10% | 10% | 9% | 9% | 9% | 8% | 8% | 8% |
| Total Demand | 1,893 | 1,840 | 1,791 | 2,911 | 2,838 | 2,691 | 2,633 | 2,581 | 2,535 | 2,494 | 2,226 | 2,153 | 2,083 | 2,016 | 1,953 | 1,626 | 1,577 | 1,530 | 1,484 | 1,441 | 1,171 | 1,138 | 1,106 | 1,076 | 1,046 | 904 | 880 | 857 | 835 | 814 | 793 |
| **Loudoun County** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Single-Family Demand | 2,545 | 2,447 | 2,348 | 3,749 | 3,618 | 3,383 | 3,247 | 3,110 | 2,973 | 2,836 | 2,494 | 2,369 | 2,247 | 2,128 | 2,013 | 1,635 | 1,542 | 1,452 | 1,366 | 1,284 | 1,009 | 947 | 887 | 831 | 778 | 646 | 603 | 563 | 525 | 489 | 455 |
| Spillover Single-Family Demand from Fairfax County | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 10% | 10% | 11% | 11% | 11% | 12% | 12% | 12% | 13% | 13% | 13% | 14% | 14% | 15% | 15% | 16% | 16% | 17% | 17% | 18% | 18% |
| Spillover Single-Family Demand from Fairfax County | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 84 | 81 | 78 | 75 | 72 | 59 | 57 | 55 | 53 | 50 | 41 | 39 | 37 | 36 | 34 | 29 | 28 | 27 | 26 | 25 | 23 |
| Total Single-Family Demand | 2,545 | 2,447 | 2,348 | 3,749 | 3,618 | 3,383 | 3,247 | 3,110 | 2,973 | 2,836 | 2,578 | 2,450 | 2,325 | 2,203 | 2,085 | 1,694 | 1,599 | 1,507 | 1,419 | 1,335 | 1,050 | 986 | 925 | 867 | 812 | 675 | 631 | 590 | 551 | 514 | 479 |
| Capture of MSA | 20% | 20% | 19% | 18% | 18% | 17% | 17% | 16% | 16% | 15% | 15% | 15% | 14% | 13% | 13% | 12% | 12% | 11% | 11% | 10% | 10% | 9% | 9% | 8% | 8% | 8% | 7% | 7% | 6% | 6% | 6% |
| Multifamily Demand | 478 | 497 | 517 | 897 | 947 | 946 | 970 | 995 | 1,019 | 1,043 | 985 | 1,004 | 1,022 | 1,041 | 1,058 | 925 | 936 | 947 | 958 | 968 | 819 | 824 | 829 | 834 | 839 | 749 | 752 | 754 | 756 | 758 | 759 |
| Capture of MSA | 10% | 10% | 10% | 10% | 11% | 11% | 11% | 11% | 11% | 11% | 11% | 11% | 11% | 11% | 11% | 11% | 11% | 11% | 11% | 11% | 11% | 10% | 10% | 10% | 10% | 10% | 10% | 10% | 9% | 9% | 9% |
| Total Demand | 5,567 | 5,390 | 5,213 | 8,395 | 8,183 | 7,712 | 7,465 | 7,215 | 6,965 | 6,715 | 6,142 | 5,904 | 5,672 | 5,447 | 5,228 | 4,314 | 4,134 | 3,961 | 3,796 | 3,638 | 2,919 | 2,796 | 2,679 | 2,568 | 2,463 | 2,099 | 2,014 | 1,934 | 1,858 | 1,785 | 1,717 |
| **Baseline (Phase 1 Extension to Wiehle Avenue)** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Fairfax County** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Increase in Single-Family Demand Due to Metro | 0% | 0% | 0% | 3% | 3% | 3% | 3% | 3% | 3% | 3% | 3% | 3% | 3% | 3% | 3% | 3% | 3% | 3% | 3% | 3% | 3% | 3% | 3% | 3% | 3% | 3% | 3% | 3% | 3% | 3% | 3% |
| Increase in Multifamily Demand Due to Metro | 0% | 0% | 0% | 10% | 10% | 10% | 10% | 10% | 10% | 10% | 10% | 10% | 10% | 10% | 10% | 10% | 10% | 10% | 10% | 10% | 10% | 10% | 10% | 10% | 10% | 10% | 10% | 10% | 10% | 10% | 10% |
| Additional Single-Family Demand Due to Metro | 0 | 0 | 0 | 46 | 43 | 39 | 36 | 34 | 32 | 29 | 25 | 24 | 22 | 21 | 19 | 15 | 14 | 13 | 12 | 12 | 9 | 8 | 8 | 7 | 7 | 6 | 5 | 5 | 5 | 4 | 4 |
| Additional Multifamily Demand Due to Metro | 0 | 0 | 0 | 138 | 141 | 140 | 143 | 145 | 148 | 151 | 138 | 137 | 135 | 133 | 131 | 111 | 110 | 108 | 107 | 105 | 87 | 86 | 84 | 83 | 82 | 72 | 71 | 69 | 68 | 67 | 66 |
| % of Additional Single-Family Demand from Loudoun | 0% | 0% | 0% | 10% | 10% | 10% | 10% | 10% | 10% | 10% | 10% | 10% | 10% | 10% | 10% | 10% | 10% | 10% | 10% | 10% | 10% | 10% | 10% | 10% | 10% | 10% | 10% | 10% | 10% | 10% | 10% |
| % of Additional Multifamily Demand from Loudoun | 0% | 0% | 0% | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% |
| Additional Single-Family Demand Taken from Loudoun | 0 | 0 | 0 | 5 | 4 | 4 | 4 | 3 | 3 | 3 | 3 | 2 | 2 | 2 | 2 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 |
| Additional Multifamily Demand Taken from Loudoun | 0 | 0 | 0 | 28 | 28 | 28 | 29 | 29 | 30 | 30 | 28 | 27 | 27 | 27 | 26 | 22 | 22 | 22 | 21 | 21 | 17 | 17 | 17 | 17 | 16 | 14 | 14 | 14 | 14 | 13 | 13 |
| **Loudoun County** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Adjusted Loudoun County Single-Family Demand** | **2,545** | **2,447** | **2,348** | **3,744** | **3,614** | **3,379** | **3,244** | **3,107** | **2,970** | **2,833** | **2,576** | **2,448** | **2,323** | **2,201** | **2,083** | **1,693** | **1,597** | **1,505** | **1,418** | **1,334** | **1,049** | **985** | **924** | **866** | **811** | **674** | **631** | **589** | **550** | **513** | **478** |
| Capture of MSA | 20% | 20% | 19% | 18% | 18% | 17% | 17% | 16% | 16% | 15% | 15% | 15% | 14% | 13% | 13% | 12% | 12% | 11% | 11% | 10% | 10% | 9% | 9% | 8% | 8% | 8% | 7% | 7% | 6% | 6% | 6% |
| **Adjusted Loudoun County Multifamily Demand** | **478** | **497** | **517** | **869** | **919** | **918** | **941** | **966** | **989** | **1,013** | **957** | **977** | **995** | **1,014** | **1,032** | **903** | **914** | **925** | **937** | **947** | **802** | **807** | **812** | **817** | **823** | **735** | **738** | **740** | **742** | **745** | **746** |
| Capture of MSA | 10% | 10% | 10% | 10% | 11% | 11% | 11% | 11% | 11% | 11% | 11% | 11% | 11% | 11% | 11% | 11% | 11% | 11% | 11% | 10% | 10% | 10% | 10% | 10% | 10% | 10% | 10% | 9% | 9% | 9% | 9% |
| **Cumulative Total (Beg. 2011)** | | **2,943** | **5,809** | **10,422** | **14,955** | **19,252** | **23,437** | **27,510** | **31,468** | **35,314** | **38,846** | **42,271** | **45,589** | **48,803** | **51,919** | **54,514** | **57,026** | **59,456** | **61,811** | **64,092** | **65,942** | **67,735** | **69,471** | **71,155** | **72,789** | **74,199** | **75,567** | **76,896** | **78,188** | **79,446** | **80,671** |
| **Phase 2 Extension** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Fairfax County** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Increase in Single-Family Demand Due to Metro | 0% | 0% | 0% | 3% | 3% | 3% | 3% | 3% | 3% | 3% | 3% | 3% | 3% | 3% | 3% | 3% | 3% | 3% | 3% | 3% | 3% | 3% | 3% | 3% | 3% | 3% | 3% | 3% | 3% | 3% | 3% |
| Increase in Multifamily Demand Due to Metro | 0% | 0% | 0% | 10% | 10% | 10% | 10% | 10% | 10% | 10% | 10% | 10% | 10% | 10% | 10% | 10% | 10% | 10% | 10% | 10% | 10% | 10% | 10% | 10% | 10% | 10% | 10% | 10% | 10% | 10% | 10% |
| Additional Single-Family Demand Due to Metro | 0 | 0 | 0 | 46 | 43 | 39 | 36 | 34 | 32 | 29 | 25 | 24 | 22 | 21 | 19 | 15 | 14 | 13 | 12 | 12 | 9 | 8 | 8 | 7 | 7 | 6 | 5 | 5 | 5 | 4 | 4 |
| Additional Multifamily Demand Due to Metro | 0 | 0 | 0 | 138 | 141 | 140 | 143 | 145 | 148 | 151 | 138 | 137 | 135 | 133 | 131 | 111 | 110 | 108 | 107 | 105 | 87 | 86 | 84 | 83 | 82 | 72 | 71 | 69 | 68 | 67 | 66 |
| % of Additional Single-Family Demand from Loudoun | 0% | 0% | 0% | 10% | 10% | 10% | 10% | 10% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| % of Additional Multifamily Demand from Loudoun | 0% | 0% | 0% | 20% | 20% | 20% | 20% | 20% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| Additional Single-Family Demand Taken from Loudoun | 0 | 0 | 0 | 5 | 4 | 4 | 4 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Additional Multifamily Demand Taken from Loudoun | 0 | 0 | 0 | 28 | 28 | 28 | 29 | 29 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Loudoun County** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Increase in Single-Family Demand Due to Metro | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 3% | 3% | 3% | 3% | 3% | 3% | 3% | 3% | 3% | 3% | 3% | 3% | 3% | 3% | 3% | 3% | 3% | 3% | 3% | 3% | 3% | 3% | 3% |
| Increase in Multifamily Demand Due to Metro | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 15% | 15% | 16% | 16% | 16% | 17% | 17% | 17% | 18% | 18% | 18% | 19% | 19% | 19% | 20% | 20% | 21% | 21% | 21% | 22% | 22% | 23% | 23% |
| Additional Single-Family Demand Due to Metro | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 89 | 85 | 75 | 71 | 67 | 64 | 60 | 49 | 46 | 44 | 41 | 39 | 30 | 28 | 27 | 25 | 23 | 19 | 18 | 17 | 16 | 15 | 14 |
| Additional Multifamily Demand Due to Metro | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 153 | 160 | 154 | 160 | 166 | 172 | 179 | 159 | 165 | 170 | 175 | 181 | 156 | 160 | 164 | 168 | 173 | 157 | 161 | 165 | 168 | 172 | 176 |
| **Adjusted Loudoun County Single-Family Demand** | **2,545** | **2,447** | **2,348** | **3,744** | **3,614** | **3,379** | **3,244** | **3,107** | **3,062** | **2,921** | **2,653** | **2,521** | **2,392** | **2,267** | **2,145** | **1,743** | **1,645** | **1,550** | **1,460** | **1,373** | **1,080** | **1,014** | **951** | **892** | **835** | **694** | **649** | **607** | **566** | **528** | **492** |
| Capture of MSA | 20% | 20% | 19% | 18% | 18% | 17% | 17% | 16% | 16% | 16% | 16% | 15% | 14% | 14% | 13% | 13% | 12% | 11% | 11% | 10% | 10% | 9% | 9% | 9% | 8% | 8% | 7% | 7% | 7% | 6% | 6% |
| **Adjusted Loudoun County Multifamily Demand** | 478 | 497 | 517 | 869 | 919 | 918 | 941 | 966 | 1,172 | 1,202 | 1,138 | 1,163 | 1,188 | 1,213 | 1,237 | 1,084 | 1,101 | 1,117 | 1,133 | 1,149 | 974 | 984 | 994 | 1,003 | 1,012 | 906 | 913 | 919 | 924 | 930 | 935 |
| Capture of MSA | 10% | 10% | 10% | 10% | 11% | 11% | 11% | 11% | 13% | 13% | 13% | 13% | 13% | 13% | 13% | 13% | 13% | 13% | 13% | 13% | 13% | 12% | 12% | 12% | 12% | 12% | 12% | 12% | 11% | 11% | 11% |
| **Adjusted Total Loudoun County Demand** | **3,022** | **2,943** | **2,865** | **4,613** | **4,533** | **4,297** | **4,185** | **4,073** | **4,234** | **4,123** | **3,792** | **3,685** | **3,581** | **3,480** | **3,382** | **2,827** | **2,746** | **2,668** | **2,593** | **2,522** | **2,054** | **1,998** | **1,945** | **1,895** | **1,847** | **1,601** | **1,562** | **1,525** | **1,491** | **1,458** | **1,428** |
| % Single-Family | 84% | 83% | 82% | 81% | 80% | 79% | 78% | 76% | 72% | 71% | 70% | 68% | 67% | 65% | 63% | 62% | 60% | 58% | 56% | 54% | 53% | 51% | 49% | 47% | 45% | 43% | 42% | 40% | 38% | 36% | 34% |
| % Multifamily | 16% | 17% | 18% | 19% | 20% | 21% | 22% | 24% | 28% | 29% | 30% | 32% | 33% | 35% | 37% | 38% | 40% | 42% | 44% | 46% | 47% | 49% | 51% | 53% | 55% | 57% | 58% | 60% | 62% | 64% | 66% |
| **Cumulative Total Loudoun Demand (Beg. 2011)** | | **2,943** | **5,809** | **10,422** | **14,955** | **19,252** | **23,437** | **27,510** | **31,743** | **35,867** | **39,658** | **43,343** | **46,923** | **50,403** | **53,786** | **56,613** | **59,359** | **62,026** | **64,619** | **67,141** | **69,196** | **71,194** | **73,139** | **75,034** | **76,881** | **78,482** | **80,044** | **81,569** | **83,060** | **84,518** | **85,946** |

NOTE: Demand forecast on this exhibit represents structural demand, meaning potential demand without taking account of capacity constraints.

## Exhibit I-32

## HOUSING UNIT FORECAST BY PLANNING AREA (PHASE 1 EXTENSION)
## LOUDOUN COUNTY AND PLANNING AREAS
## 2010 - 2040

| | | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 | 2037 | 2038 | 2039 | 2040 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Loudoun County Single-Family Demand | | **2,545** | **2,447** | **2,348** | **3,744** | **3,614** | **3,379** | **3,244** | **3,107** | **2,970** | **2,833** | **2,576** | **2,448** | **2,323** | **2,201** | **2,083** | **1,693** | **1,597** | **1,505** | **1,418** | **1,334** | **1,049** | **985** | **924** | **866** | **811** | **674** | **631** | **589** | **550** | **513** | **478** |
| Loudoun County SFD Demand | | 1,527 | 1,468 | 1,409 | 2,246 | 2,168 | 2,028 | 1,946 | 1,864 | 1,782 | 1,700 | 1,546 | 1,469 | 1,394 | 1,321 | 1,250 | 1,016 | 958 | 903 | 851 | 800 | 629 | 591 | 554 | 520 | 487 | 405 | 378 | 354 | 330 | 308 | 287 |
| Loudoun County SFA Demand | 40% | 1,018 | 979 | 939 | 1,498 | 1,446 | 1,352 | 1,298 | 1,243 | 1,188 | 1,133 | 1,030 | 979 | 929 | 880 | 833 | 677 | 639 | 602 | 567 | 533 | 420 | 394 | 370 | 346 | 324 | 270 | 252 | 236 | 220 | 205 | 191 |
| Loudoun County MF Demand | | 478 | 497 | 517 | 869 | 919 | 918 | 941 | 966 | 989 | 1,013 | 957 | 977 | 995 | 1,014 | 1,032 | 903 | 914 | 925 | 937 | 947 | 802 | 807 | 812 | 817 | 823 | 735 | 738 | 740 | 742 | 745 | 746 |
| SFD Demand Shift to MF | | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 5% | 5% | 5% | 5% | 5% | 5% | 5% | 5% | 5% | 5% | 5% | 5% | 5% | 5% | 5% | 5% | 5% |
| SFA Demand Shift to MF | | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 10% | 10% | 10% | 10% | 10% | 10% | 10% | 10% | 10% | 10% | 10% | 10% | 10% | 10% | 10% | 10% | 10% | 10% | 10% | 10% |
| Adjusted MF Demand | | 478 | 497 | 517 | 869 | 919 | 918 | 941 | 966 | 989 | 1,013 | 957 | 1,075 | 1,088 | 1,102 | 1,178 | 1,021 | 1,026 | 1,031 | 1,036 | 1,041 | 875 | 876 | 877 | 878 | 880 | 782 | 782 | 781 | 780 | 781 | 780 |
| Additional MF Demand due to Metro | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total MF Demand | | 478 | 497 | 517 | 869 | 919 | 918 | 941 | 966 | 989 | 1,013 | 957 | 1,075 | 1,088 | 1,102 | 1,178 | 1,021 | 1,026 | 1,031 | 1,036 | 1,041 | 875 | 876 | 877 | 878 | 880 | 782 | 782 | 781 | 780 | 781 | 780 |
| | **Current Supply** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Loudoun County SFD Supply | 24,596 | 23,069 | 21,609 | 20,215 | 17,992 | 15,847 | 14,029 | 12,443 | 10,923 | 9,471 | 8,226 | 7,099 | 6,028 | 5,011 | 4,048 | 3,298 | 3,105 | 2,923 | 2,751 | 2,626 | 2,570 | 2,526 | 2,485 | 2,446 | 2,409 | 2,375 | 2,347 | 2,320 | 2,296 | 2,273 | 2,251 | 2,231 |
| Loudoun County SFA Supply | 12,646 | 11,628 | 10,650 | 9,710 | 8,214 | 6,770 | 5,419 | 4,194 | 3,071 | 2,012 | 1,071 | 370 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Loudoun County MF Supply | 23,895 | 23,422 | 22,928 | 22,412 | 21,544 | 20,626 | 19,708 | 18,767 | 17,801 | 16,812 | 15,800 | 14,843 | 13,768 | 12,680 | 11,579 | 10,401 | 9,379 | 8,353 | 7,322 | 6,286 | 5,246 | 4,371 | 3,495 | 2,617 | 1,739 | 859 | 77 | 0 | 0 | 0 | 0 | 0 |
| **Ashburn** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| % Capture of SFD Demand | 35% | 22% | 22% | 21% | 21% | 20% | 9% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| SFD Demand | | 342 | 322 | 301 | 467 | 425 | 181 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SFD Supply | 2,038 | 1,696 | 1,374 | 1,073 | 606 | 181 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Adjusted Demand | | 342 | 322 | 301 | 467 | 425 | 181 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| % Capture of SFA Demand | 39% | 35% | 35% | 34% | 34% | 34% | 33% | 32% | 31% | 29% | 21% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| SFA Demand | | 354 | 338 | 323 | 511 | 487 | 448 | 420 | 386 | 345 | 236 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SFA Supply | 3,848 | 3,494 | 3,156 | 2,833 | 2,321 | 1,835 | 1,387 | 967 | 581 | 236 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Adjusted Demand | | 354 | 338 | 323 | 511 | 487 | 448 | 420 | 386 | 345 | 236 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Route 772 Station Area Capture of Ashburn SFA Demand | 15% | 15% | 15% | 15% | 15% | 15% | 15% | 15% | 15% | 15% | 15% | 15% | 15% | 15% | 15% | 15% | 15% | 15% | 15% | 15% | 15% | 15% | 15% | 15% | 15% | 15% | 15% | 15% | 15% | 15% | 15% | 15% |
| Route 772 Station Area SFA Demand | | 53 | 50 | 48 | 76 | 72 | 67 | 62 | 57 | 51 | 35 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Route 772 SFA Supply | 572 | 519 | 469 | 421 | 345 | 273 | 206 | 144 | 86 | 35 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| % Capture of MF Demand | 60% | 53% | 49% | 47% | 46% | 45% | 45% | 45% | 45% | 45% | 45% | 45% | 45% | 45% | 45% | 45% | 45% | 45% | 45% | 45% | 45% | 45% | 45% | 45% | 45% | 45% | 45% | 5% | 0% | 0% | 0% | 0% |
| MF Demand | | 251 | 242 | 242 | 399 | 417 | 414 | 423 | 433 | 443 | 454 | 428 | 481 | 487 | 493 | 528 | 457 | 459 | 462 | 464 | 466 | 392 | 392 | 393 | 393 | 394 | 350 | 37 | 0 | 0 | 0 | 0 |
| MF Supply | 10,792 | 10,541 | 10,299 | 10,057 | 9,658 | 9,242 | 8,828 | 8,405 | 7,972 | 7,528 | 7,075 | 6,646 | 6,165 | 5,678 | 5,184 | 4,657 | 4,200 | 3,740 | 3,279 | 2,815 | 2,349 | 1,957 | 1,565 | 1,172 | 779 | 385 | 35 | 0 | 0 | 0 | 0 | 0 |
| Adjusted Demand | | 251 | 242 | 242 | 399 | 417 | 414 | 423 | 433 | 443 | 454 | 428 | 481 | 487 | 493 | 528 | 457 | 459 | 462 | 464 | 466 | 392 | 392 | 393 | 393 | 394 | 350 | 35 | 0 | 0 | 0 | 0 |
| Route 606 Station Area Capture of Ashburn MF Demand | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| Route 606 Station Area Capture of MF Demand | 0% | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Route 606 Station Area Capture of MF Demand Due to Metro | | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| Route 606 Station Area Capture of MF Demand Due to Metro | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Route 606 MF Demand | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Route 606 MF Supply (Assuming No Metro Service) | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Route 606 Adjusted MF Demand | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Route 772 Station Area Capture of Ashburn MF Demand | 0% | 35% | 45% | 45% | 45% | 45% | 45% | 45% | 45% | 45% | 45% | 45% | 45% | 45% | 45% | 45% | 45% | 45% | 45% | 45% | 45% | 45% | 45% | 45% | 45% | 45% | 45% | 45% | 0% | 0% | 0% | 0% |
| Route 772 Station Area Capture of MF Demand | | 88 | 110 | 110 | 181 | 189 | 188 | 192 | 197 | 201 | 206 | 194 | 218 | 221 | 224 | 239 | 208 | 208 | 209 | 211 | 211 | 178 | 178 | 178 | 178 | 179 | 159 | 16 | 0 | 0 | 0 | 0 |
| Route 772 Station Area Capture of MF Demand Due to Metro | 50% | 50% | 50% | 50% | 50% | 50% | 50% | 50% | 50% | 50% | 50% | 50% | 50% | 50% | 50% | 50% | 50% | 50% | 50% | 50% | 50% | 50% | 50% | 50% | 50% | 50% | 50% | 50% | 50% | 50% | 50% | 50% |
| Route 772 Station Area Capture of MF Demand Due to Metro | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Route 772 MF Demand | | 88 | 110 | 110 | 181 | 189 | 188 | 192 | 197 | 201 | 206 | 194 | 218 | 221 | 224 | 239 | 208 | 208 | 209 | 211 | 211 | 178 | 178 | 178 | 178 | 179 | 159 | 16 | 0 | 0 | 0 | 0 |
| Route 772 MF Supply (Assuming No Metro Service) | 4,871 | 4,784 | 4,674 | 4,564 | 4,383 | 4,194 | 4,006 | 3,814 | 3,618 | 3,416 | 3,211 | 3,016 | 2,798 | 2,577 | 2,353 | 2,113 | 1,906 | 1,697 | 1,488 | 1,277 | 1,066 | 888 | 710 | 532 | 353 | 175 | 16 | 0 | 0 | 0 | 0 | 0 |
| Route 772 Adjusted MF Demand | | 88 | 110 | 110 | 181 | 189 | 188 | 192 | 197 | 201 | 206 | 194 | 218 | 221 | 224 | 239 | 208 | 208 | 209 | 211 | 211 | 178 | 178 | 178 | 178 | 179 | 159 | 16 | 0 | 0 | 0 | 0 |
| **Dulles** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| % Capture of SFD Demand | 22% | 32% | 32% | 32% | 33% | 34% | 35% | 36% | 36% | 36% | 37% | 36% | 36% | 35% | 34% | 20% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| SFD Demand | | 483 | 470 | 457 | 739 | 732 | 707 | 692 | 669 | 646 | 624 | 561 | 526 | 488 | 445 | 247 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SFD Supply | 8,488 | 8,005 | 7,535 | 7,077 | 6,338 | 5,605 | 4,899 | 4,206 | 3,538 | 2,892 | 2,268 | 1,706 | 1,180 | 692 | 247 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Adjusted Demand | | 483 | 470 | 457 | 739 | 732 | 707 | 692 | 669 | 646 | 624 | 561 | 526 | 488 | 445 | 247 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| % Capture of SFA Demand | 30% | 39% | 40% | 40% | 41% | 42% | 43% | 45% | 46% | 49% | 52% | 57% | 32% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| SFA Demand | | 401 | 390 | 378 | 611 | 604 | 582 | 580 | 577 | 577 | 589 | 588 | 315 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SFA Supply | 6,192 | 5,791 | 5,401 | 5,023 | 4,412 | 3,809 | 3,227 | 2,647 | 2,070 | 1,492 | 903 | 315 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Adjusted Demand | | 401 | 390 | 378 | 611 | 604 | 582 | 580 | 577 | 577 | 589 | 588 | 315 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| % Capture of MF Demand | 9% | 16% | 20% | 22% | 23% | 23% | 24% | 24% | 24% | 24% | 24% | 24% | 24% | 24% | 24% | 24% | 24% | 24% | 24% | 24% | 24% | 24% | 24% | 24% | 24% | 24% | 24% | 3% | 0% | 0% | 0% | 0% |
| MF Demand | | 77 | 99 | 113 | 199 | 215 | 217 | 224 | 230 | 236 | 242 | 229 | 257 | 261 | 264 | 282 | 245 | 246 | 247 | 248 | 249 | 209 | 210 | 210 | 210 | 211 | 187 | 20 | 0 | 0 | 0 | 0 |
| MF Supply | 5,635 | 5,558 | 5,459 | 5,346 | 5,147 | 4,932 | 4,715 | 4,491 | 4,261 | 4,025 | 3,782 | 3,554 | 3,296 | 3,036 | 2,772 | 2,490 | 2,246 | 2,000 | 1,753 | 1,505 | 1,256 | 1,046 | 837 | 627 | 416 | 206 | 18 | 0 | 0 | 0 | 0 | 0 |
| Adjusted Demand | | 77 | 99 | 113 | 199 | 215 | 217 | 224 | 230 | 236 | 242 | 229 | 257 | 261 | 264 | 282 | 245 | 246 | 247 | 248 | 249 | 209 | 210 | 210 | 210 | 211 | 187 | 18 | 0 | 0 | 0 | 0 |

**Exhibit I-32**

**HOUSING UNIT FORECAST BY PLANNING AREA (PHASE 1 EXTENSION)**
**LOUDOUN COUNTY AND PLANNING AREAS**
**2010 - 2040**

| | | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 | 2037 | 2038 | 2039 | 2040 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Loudoun County Single-Family Demand | | **2,545** | **2,447** | **2,348** | **3,744** | **3,614** | **3,379** | **3,244** | **3,107** | **2,970** | **2,833** | **2,576** | **2,448** | **2,323** | **2,201** | **2,083** | **1,693** | **1,597** | **1,505** | **1,418** | **1,334** | **1,049** | **985** | **924** | **866** | **811** | **674** | **631** | **589** | **550** | **513** | **478** |
| Loudoun County SFD Demand | | 1,527 | 1,468 | 1,409 | 2,246 | 2,168 | 2,028 | 1,946 | 1,864 | 1,782 | 1,700 | 1,546 | 1,469 | 1,394 | 1,321 | 1,250 | 1,016 | 958 | 903 | 851 | 800 | 629 | 591 | 554 | 520 | 487 | 405 | 378 | 354 | 330 | 308 | 287 |
| Loudoun County SFA Demand | 40% | 1,018 | 979 | 939 | 1,498 | 1,446 | 1,352 | 1,298 | 1,243 | 1,188 | 1,133 | 1,030 | 979 | 929 | 880 | 833 | 677 | 639 | 602 | 567 | 533 | 420 | 394 | 370 | 346 | 324 | 270 | 252 | 236 | 220 | 205 | 191 |
| Loudoun County MF Demand | | 478 | 497 | 517 | 869 | 919 | 918 | 941 | 966 | 989 | 1,013 | 957 | 977 | 995 | 1,014 | 1,032 | 903 | 914 | 925 | 937 | 947 | 802 | 807 | 812 | 817 | 823 | 735 | 738 | 740 | 742 | 745 | 746 |
| SFD Demand Shift to MF | | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 5% | 5% | 5% | 5% | 5% | 5% | 5% | 5% | 5% | 5% | 5% | 5% | 5% | 5% | 5% | 5% | 5% |
| SFA Demand Shift to MF | | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 10% | 10% | 10% | 10% | 10% | 10% | 10% | 10% | 10% | 10% | 10% | 10% | 10% | 10% | 10% | 10% | 10% | 10% | 10% | 10% |
| Adjusted MF Demand | | 478 | 497 | 517 | 869 | 919 | 918 | 941 | 966 | 989 | 1,013 | 957 | 1,075 | 1,088 | 1,102 | 1,178 | 1,021 | 1,026 | 1,031 | 1,036 | 1,041 | 875 | 876 | 877 | 878 | 880 | 782 | 782 | 781 | 780 | 781 | 780 |
| Additional MF Demand due to Metro | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total MF Demand | | 478 | 497 | 517 | 869 | 919 | 918 | 941 | 966 | 989 | 1,013 | 957 | 1,075 | 1,088 | 1,102 | 1,178 | 1,021 | 1,026 | 1,031 | 1,036 | 1,041 | 875 | 876 | 877 | 878 | 880 | 782 | 782 | 781 | 780 | 781 | 780 |
| | **Current Supply** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Loudoun County SFD Supply | 24,596 | 23,069 | 21,609 | 20,215 | 17,992 | 15,847 | 14,029 | 12,443 | 10,923 | 9,471 | 8,226 | 7,099 | 6,028 | 5,011 | 4,048 | 3,298 | 3,105 | 2,923 | 2,751 | 2,626 | 2,570 | 2,526 | 2,485 | 2,446 | 2,409 | 2,375 | 2,347 | 2,320 | 2,296 | 2,273 | 2,251 | 2,231 |
| Loudoun County SFA Supply | 12,646 | 11,628 | 10,650 | 9,710 | 8,214 | 6,770 | 5,419 | 4,194 | 3,071 | 2,012 | 1,071 | 370 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Loudoun County MF Supply | 23,895 | 23,422 | 22,928 | 22,412 | 21,544 | 20,626 | 19,708 | 18,767 | 17,801 | 16,812 | 15,800 | 14,843 | 13,768 | 12,680 | 11,579 | 10,401 | 9,379 | 8,353 | 7,322 | 6,286 | 5,246 | 4,371 | 3,495 | 2,617 | 1,739 | 859 | 77 | 0 | 0 | 0 | 0 | 0 |
| **Leesburg** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| % Capture of SFD Demand | 17% | 14% | 13% | 13% | 13% | 13% | 12% | 12% | 11% | 10% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| SFD Demand | | 207 | 197 | 186 | 293 | 275 | 249 | 227 | 203 | 176 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SFD Supply | 2,019 | 1,812 | 1,616 | 1,429 | 1,136 | 861 | 612 | 385 | 182 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Adjusted Demand | | 207 | 197 | 186 | 293 | 275 | 249 | 227 | 203 | 176 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| % Capture of SFA Demand | 19% | 13% | 13% | 13% | 12% | 12% | 11% | 4% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| SFA Demand | | 133 | 125 | 118 | 183 | 168 | 147 | 57 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SFA Supply | 932 | 799 | 674 | 556 | 373 | 204 | 57 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Adjusted Demand | | 133 | 125 | 118 | 183 | 168 | 147 | 57 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| % Capture of MF Demand | 8% | 8% | 8% | 8% | 8% | 8% | 8% | 8% | 8% | 8% | 8% | 8% | 8% | 8% | 8% | 8% | 8% | 8% | 8% | 8% | 8% | 8% | 8% | 8% | 8% | 8% | 8% | 1% | 0% | 0% | 0% | 0% |
| MF Demand | | 40 | 41 | 43 | 72 | 76 | 76 | 78 | 80 | 82 | 84 | 80 | 89 | 91 | 92 | 98 | 85 | 85 | 86 | 86 | 87 | 73 | 73 | 73 | 73 | 73 | 65 | 7 | 0 | 0 | 0 | 0 |
| MF Supply | 1,990 | 1,950 | 1,909 | 1,866 | 1,794 | 1,717 | 1,641 | 1,562 | 1,482 | 1,400 | 1,315 | 1,236 | 1,146 | 1,056 | 964 | 866 | 781 | 695 | 610 | 523 | 437 | 364 | 291 | 218 | 145 | 72 | 6 | 0 | 0 | 0 | 0 | 0 |
| Adjusted Demand | | 40 | 41 | 43 | 72 | 76 | 76 | 78 | 80 | 82 | 84 | 80 | 89 | 91 | 92 | 98 | 85 | 85 | 86 | 86 | 87 | 73 | 73 | 73 | 73 | 73 | 65 | 6 | 0 | 0 | 0 | 0 |
| **Northwest** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| % Capture of SFD Demand | 5% | 5% | 5% | 5% | 5% | 5% | 5% | 5% | 5% | 5% | 5% | 5% | 5% | 5% | 5% | 5% | 5% | 5% | 5% | 5% | 5% | 5% | 5% | 5% | 5% | 5% | 5% | 5% | 5% | 5% | 5% | 5% |
| SFD Demand | | 76 | 73 | 70 | 112 | 108 | 101 | 97 | 93 | 89 | 85 | 77 | 73 | 70 | 66 | 62 | 51 | 48 | 45 | 43 | 40 | 31 | 30 | 28 | 26 | 24 | 20 | 19 | 18 | 17 | 15 | 14 |
| SFD Supply | 3,536 | 3,460 | 3,386 | 3,316 | 3,204 | 3,095 | 2,994 | 2,896 | 2,803 | 2,714 | 2,629 | 2,552 | 2,478 | 2,409 | 2,343 | 2,280 | 2,229 | 2,182 | 2,136 | 2,094 | 2,054 | 2,022 | 1,993 | 1,965 | 1,939 | 1,915 | 1,895 | 1,876 | 1,858 | 1,841 | 1,826 | 1,812 |
| Adjusted Demand | | 76 | 73 | 70 | 112 | 108 | 101 | 97 | 93 | 89 | 85 | 77 | 73 | 70 | 66 | 62 | 51 | 48 | 45 | 43 | 40 | 31 | 30 | 28 | 26 | 24 | 20 | 19 | 18 | 17 | 15 | 14 |
| % Capture of SFA Demand | 0.12% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 1% | 1% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| SFA Demand | | 3 | 3 | 3 | 4 | 4 | 4 | 4 | 5 | 5 | 5 | 6 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SFA Supply | 52 | 49 | 47 | 44 | 40 | 35 | 31 | 26 | 22 | 17 | 11 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Adjusted Demand | | 3 | 3 | 3 | 4 | 4 | 4 | 4 | 5 | 5 | 5 | 6 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| % Capture of MF Demand | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| MF Demand | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MF Supply | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Adjusted Demand | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Potomac** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| % Capture of SFD Demand | 2% | 1% | 1% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| SFD Demand | | 17 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SFD Supply | 25 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Adjusted Demand | | 17 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| % Capture of SFA Demand | 6% | 5% | 5% | 4% | 4% | 4% | 4% | 4% | 4% | 2% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| SFA Demand | | 47 | 44 | 42 | 66 | 62 | 56 | 51 | 46 | 23 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SFA Supply | 438 | 391 | 347 | 305 | 239 | 176 | 120 | 69 | 23 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Adjusted Demand | | 47 | 44 | 42 | 66 | 62 | 56 | 51 | 46 | 23 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| % Capture of MF Demand | 7% | 4% | 3% | 2% | 1% | 1% | 1% | 1% | 1% | 1% | 1% | 1% | 1% | 1% | 1% | 1% | 1% | 1% | 1% | 1% | 1% | 1% | 1% | 1% | 1% | 1% | 1% | 0% | 0% | 0% | 0% | 0% |
| MF Demand | | 20 | 13 | 9 | 12 | 10 | 9 | 9 | 9 | 9 | 9 | 8 | 9 | 10 | 10 | 10 | 9 | 9 | 9 | 9 | 9 | 8 | 8 | 8 | 8 | 8 | 7 | 1 | 0 | 0 | 0 | 0 |
| MF Supply | 248 | 228 | 215 | 206 | 194 | 184 | 174 | 166 | 157 | 148 | 139 | 130 | 121 | 111 | 102 | 91 | 82 | 73 | 64 | 55 | 46 | 38 | 31 | 23 | 15 | 8 | 1 | 0 | 0 | 0 | 0 | 0 |
| Adjusted Demand | | 20 | 13 | 9 | 12 | 10 | 9 | 9 | 9 | 9 | 9 | 8 | 9 | 10 | 10 | 10 | 9 | 9 | 9 | 9 | 9 | 8 | 8 | 8 | 8 | 8 | 7 | 1 | 0 | 0 | 0 | 0 |
| **Route 15 North** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| % Capture of SFD Demand | 3% | 6% | 7% | 7% | 7% | 7% | 8% | 8% | 8% | 9% | 9% | 9% | 9% | 10% | 10% | 11% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| SFD Demand | | 99 | 97 | 96 | 156 | 157 | 155 | 155 | 153 | 152 | 151 | 141 | 137 | 135 | 136 | 132 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SFD Supply | 2,054 | 1,955 | 1,858 | 1,762 | 1,606 | 1,449 | 1,294 | 1,138 | 985 | 833 | 682 | 541 | 404 | 268 | 132 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Adjusted Demand | | 99 | 97 | 96 | 156 | 157 | 155 | 155 | 153 | 152 | 151 | 141 | 137 | 135 | 136 | 132 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| % Capture of SFA Demand | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| SFA Demand | | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SFA Supply | 3 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Adjusted Demand | | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| % Capture of MF Demand | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| MF Demand | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MF Supply | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Adjusted Demand | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

**Exhibit I-32**

## HOUSING UNIT FORECAST BY PLANNING AREA (PHASE 1 EXTENSION)
## LOUDOUN COUNTY AND PLANNING AREAS
## 2010 - 2040

| | | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 | 2037 | 2038 | 2039 | 2040 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Loudoun County Single-Family Demand | | **2,545** | **2,447** | **2,348** | **3,744** | **3,614** | **3,379** | **3,244** | **3,107** | **2,970** | **2,833** | **2,576** | **2,448** | **2,323** | **2,201** | **2,083** | **1,693** | **1,597** | **1,505** | **1,418** | **1,334** | **1,049** | **985** | **924** | **866** | **811** | **674** | **631** | **589** | **550** | **513** | **478** |
| Loudoun County SFD Demand | | 1,527 | 1,468 | 1,409 | 2,246 | 2,168 | 2,028 | 1,946 | 1,864 | 1,782 | 1,700 | 1,546 | 1,469 | 1,394 | 1,321 | 1,250 | 1,016 | 958 | 903 | 851 | 800 | 629 | 591 | 554 | 520 | 487 | 405 | 378 | 354 | 330 | 308 | 287 |
| Loudoun County SFA Demand | 40% | 1,018 | 979 | 939 | 1,498 | 1,446 | 1,352 | 1,298 | 1,243 | 1,188 | 1,133 | 1,030 | 979 | 929 | 880 | 833 | 677 | 639 | 602 | 567 | 533 | 420 | 394 | 370 | 346 | 324 | 270 | 252 | 236 | 220 | 205 | 191 |
| Loudoun County MF Demand | | 478 | 497 | 517 | 869 | 919 | 918 | 941 | 966 | 989 | 1,013 | 957 | 977 | 995 | 1,014 | 1,032 | 903 | 914 | 925 | 937 | 947 | 802 | 807 | 812 | 817 | 823 | 735 | 738 | 740 | 742 | 745 | 746 |
| SFD Demand Shift to MF | | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 5% | 5% | 5% | 5% | 5% | 5% | 5% | 5% | 5% | 5% | 5% | 5% | 5% | 5% | 5% | 5% | 5% |
| SFA Demand Shift to MF | | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 10% | 10% | 10% | 10% | 10% | 10% | 10% | 10% | 10% | 10% | 10% | 10% | 10% | 10% | 10% | 10% | 10% | 10% | 10% | 10% |
| Adjusted MF Demand | | 478 | 497 | 517 | 869 | 919 | 918 | 941 | 966 | 989 | 1,013 | 957 | 1,075 | 1,088 | 1,102 | 1,178 | 1,021 | 1,026 | 1,031 | 1,036 | 1,041 | 875 | 876 | 877 | 878 | 880 | 782 | 782 | 781 | 780 | 781 | 780 |
| Additional MF Demand due to Metro | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total MF Demand | | 478 | 497 | 517 | 869 | 919 | 918 | 941 | 966 | 989 | 1,013 | 957 | 1,075 | 1,088 | 1,102 | 1,178 | 1,021 | 1,026 | 1,031 | 1,036 | 1,041 | 875 | 876 | 877 | 878 | 880 | 782 | 782 | 781 | 780 | 781 | 780 |
| | **Current Supply** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Loudoun County SFD Supply | 24,596 | 23,069 | 21,609 | 20,215 | 17,992 | 15,847 | 14,029 | 12,443 | 10,923 | 9,471 | 8,226 | 7,099 | 6,028 | 5,011 | 4,048 | 3,298 | 3,105 | 2,923 | 2,751 | 2,626 | 2,570 | 2,526 | 2,485 | 2,446 | 2,409 | 2,375 | 2,347 | 2,320 | 2,296 | 2,273 | 2,251 | 2,231 |
| Loudoun County SFA Supply | 12,646 | 11,628 | 10,650 | 9,710 | 8,214 | 6,770 | 5,419 | 4,194 | 3,071 | 2,012 | 1,071 | 370 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Loudoun County MF Supply | 23,895 | 23,422 | 22,928 | 22,412 | 21,544 | 20,626 | 19,708 | 18,767 | 17,801 | 16,812 | 15,800 | 14,843 | 13,768 | 12,680 | 11,579 | 10,401 | 9,379 | 8,353 | 7,322 | 6,286 | 5,246 | 4,371 | 3,495 | 2,617 | 1,739 | 859 | 77 | 0 | 0 | 0 | 0 | 0 |
| **Route 15 South** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| % Capture of SFD Demand | 2% | 4% | 5% | 5% | 5% | 5% | 5% | 6% | 6% | 6% | 6% | 7% | 7% | 7% | 8% | 9% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| SFD Demand | | 68 | 67 | 66 | 108 | 110 | 109 | 110 | 109 | 109 | 110 | 103 | 102 | 102 | 105 | 112 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SFD Supply | 1,490 | 1,422 | 1,356 | 1,290 | 1,182 | 1,072 | 963 | 853 | 744 | 635 | 525 | 422 | 320 | 218 | 112 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Adjusted Demand | | 68 | 67 | 66 | 108 | 110 | 109 | 110 | 109 | 109 | 110 | 103 | 102 | 102 | 105 | 112 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| % Capture of SFA Demand | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| SFA Demand | | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 3 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SFA Supply | 21 | 20 | 19 | 18 | 16 | 15 | 13 | 11 | 9 | 7 | 5 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Adjusted Demand | | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 3 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| % Capture of MF Demand | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| MF Demand | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MF Supply | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Adjusted Demand | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Route 7 West** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| % Capture of SFD Demand | 12% | 12% | 12% | 12% | 12% | 12% | 12% | 12% | 12% | 12% | 12% | 12% | 12% | 12% | 12% | 12% | 12% | 12% | 12% | 12% | 12% | 12% | 12% | 12% | 12% | 12% | 12% | 12% | 12% | 12% | 12% | 12% |
| SFD Demand | | 183 | 176 | 169 | 270 | 260 | 243 | 234 | 224 | 214 | 204 | 185 | 176 | 167 | 158 | 150 | 122 | 115 | 108 | 102 | 96 | 76 | 71 | 67 | 62 | 58 | 49 | 45 | 42 | 40 | 37 | 34 |
| SFD Supply | 3,425 | 3,242 | 3,066 | 2,897 | 2,627 | 2,367 | 2,124 | 1,890 | 1,666 | 1,452 | 1,248 | 1,063 | 887 | 720 | 561 | 411 | 289 | 174 | 66 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Adjusted Demand | | 183 | 176 | 169 | 270 | 260 | 243 | 234 | 224 | 214 | 204 | 185 | 176 | 167 | 158 | 150 | 122 | 115 | 108 | 66 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| % Capture of SFA Demand | 2% | 3% | 3% | 3% | 3% | 4% | 4% | 4% | 4% | 4% | 5% | 5% | 4% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| SFA Demand | | 34 | 33 | 32 | 52 | 52 | 50 | 51 | 51 | 52 | 54 | 55 | 35 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SFA Supply | 552 | 518 | 485 | 452 | 400 | 348 | 298 | 247 | 196 | 144 | 90 | 35 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Adjusted Demand | | 34 | 33 | 32 | 52 | 52 | 50 | 51 | 51 | 52 | 54 | 55 | 35 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| % Capture of MF Demand | 2% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| MF Demand | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MF Supply | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Adjusted Demand | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

## Exhibit I-32

## HOUSING UNIT FORECAST BY PLANNING AREA (PHASE 1 EXTENSION)
## LOUDOUN COUNTY AND PLANNING AREAS
## 2010 - 2040

| | | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 | 2037 | 2038 | 2039 | 2040 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Loudoun County Single-Family Demand** | | **2,545** | **2,447** | **2,348** | **3,744** | **3,614** | **3,379** | **3,244** | **3,107** | **2,970** | **2,833** | **2,576** | **2,448** | **2,323** | **2,201** | **2,083** | **1,693** | **1,597** | **1,505** | **1,418** | **1,334** | **1,049** | **985** | **924** | **866** | **811** | **674** | **631** | **589** | **550** | **513** | **478** |
| Loudoun County SFD Demand | | 1,527 | 1,468 | 1,409 | 2,246 | 2,168 | 2,028 | 1,946 | 1,864 | 1,782 | 1,700 | 1,546 | 1,469 | 1,394 | 1,321 | 1,250 | 1,016 | 958 | 903 | 851 | 800 | 629 | 591 | 554 | 520 | 487 | 405 | 378 | 354 | 330 | 308 | 287 |
| Loudoun County SFA Demand | 40% | 1,018 | 979 | 939 | 1,498 | 1,446 | 1,352 | 1,298 | 1,243 | 1,188 | 1,133 | 1,030 | 979 | 929 | 880 | 833 | 677 | 639 | 602 | 567 | 533 | 420 | 394 | 370 | 346 | 324 | 270 | 252 | 236 | 220 | 205 | 191 |
| Loudoun County MF Demand | | 478 | 497 | 517 | 869 | 919 | 918 | 941 | 966 | 989 | 1,013 | 957 | 977 | 995 | 1,014 | 1,032 | 903 | 914 | 925 | 937 | 947 | 802 | 807 | 812 | 817 | 823 | 735 | 738 | 740 | 742 | 745 | 746 |
| SFD Demand Shift to MF | | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 5% | 5% | 5% | 5% | 5% | 5% | 5% | 5% | 5% | 5% | 5% | 5% | 5% | 5% | 5% | 5% | 5% |
| SFA Demand Shift to MF | | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 10% | 10% | 10% | 10% | 10% | 10% | 10% | 10% | 10% | 10% | 10% | 10% | 10% | 10% | 10% | 10% | 10% | 10% | 10% | 10% |
| Adjusted MF Demand | | 478 | 497 | 517 | 869 | 919 | 918 | 941 | 966 | 989 | 1,013 | 957 | 1,075 | 1,088 | 1,102 | 1,178 | 1,021 | 1,026 | 1,031 | 1,036 | 1,041 | 875 | 876 | 877 | 878 | 880 | 782 | 782 | 781 | 780 | 781 | 780 |
| Additional MF Demand due to Metro | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total MF Demand | | 478 | 497 | 517 | 869 | 919 | 918 | 941 | 966 | 989 | 1,013 | 957 | 1,075 | 1,088 | 1,102 | 1,178 | 1,021 | 1,026 | 1,031 | 1,036 | 1,041 | 875 | 876 | 877 | 878 | 880 | 782 | 782 | 781 | 780 | 781 | 780 |
| | **Current Supply** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Loudoun County SFD Supply | 24,596 | 23,069 | 21,609 | 20,215 | 17,992 | 15,847 | 14,029 | 12,443 | 10,923 | 9,471 | 8,226 | 7,099 | 6,028 | 5,011 | 4,048 | 3,298 | 3,105 | 2,923 | 2,751 | 2,626 | 2,570 | 2,526 | 2,485 | 2,446 | 2,409 | 2,375 | 2,347 | 2,320 | 2,296 | 2,273 | 2,251 | 2,231 |
| Loudoun County SFA Supply | 12,646 | 11,628 | 10,650 | 9,710 | 8,214 | 6,770 | 5,419 | 4,194 | 3,071 | 2,012 | 1,071 | 370 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Loudoun County MF Supply | 23,895 | 23,422 | 22,928 | 22,412 | 21,544 | 20,626 | 19,708 | 18,767 | 17,801 | 16,812 | 15,800 | 14,843 | 13,768 | 12,680 | 11,579 | 10,401 | 9,379 | 8,353 | 7,322 | 6,286 | 5,246 | 4,371 | 3,495 | 2,617 | 1,739 | 859 | 77 | 0 | 0 | 0 | 0 | 0 |
| **Southwest** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| % Capture of SFD Demand | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% |
| SFD Demand | | 31 | 29 | 28 | 45 | 43 | 41 | 39 | 37 | 36 | 34 | 31 | 29 | 28 | 26 | 25 | 20 | 19 | 18 | 17 | 16 | 13 | 12 | 11 | 10 | 10 | 8 | 8 | 7 | 7 | 6 | 6 |
| SFD Supply | 1,109 | 1,078 | 1,049 | 1,021 | 976 | 933 | 892 | 853 | 816 | 780 | 746 | 715 | 686 | 658 | 632 | 607 | 586 | 567 | 549 | 532 | 516 | 504 | 492 | 481 | 470 | 460 | 452 | 445 | 438 | 431 | 425 | 419 |
| Adjusted Demand | | 31 | 29 | 28 | 45 | 43 | 41 | 39 | 37 | 36 | 34 | 31 | 29 | 28 | 26 | 25 | 20 | 19 | 18 | 17 | 16 | 13 | 12 | 11 | 10 | 10 | 8 | 8 | 7 | 7 | 6 | 6 |
| % Capture of SFA Demand | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| SFA Demand | | 2 | 2 | 1 | 2 | 2 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SFA Supply | 12 | 10 | 9 | 7 | 5 | 3 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Adjusted Demand | | 2 | 2 | 1 | 2 | 2 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| % Capture of MF Demand | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| MF Demand | | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 0 | 0 | 0 | 0 | 0 |
| MF Supply | 49 | 48 | 47 | 46 | 44 | 42 | 40 | 38 | 36 | 34 | 32 | 30 | 28 | 26 | 24 | 21 | 19 | 17 | 15 | 13 | 11 | 9 | 7 | 5 | 4 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| Adjusted Demand | | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 0 | 0 | 0 | 0 | 0 |
| **Sterling** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| % Capture of SFD Demand | 1% | 1% | 1% | 1% | 1% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| SFD Demand | | 21 | 21 | 20 | 33 | 33 | 32 | 32 | 31 | 31 | 30 | 28 | 27 | 26 | 25 | 22 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SFD Supply | 412 | 391 | 370 | 350 | 317 | 284 | 252 | 220 | 189 | 158 | 128 | 100 | 73 | 47 | 22 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Adjusted Demand | | 21 | 21 | 20 | 33 | 33 | 32 | 32 | 31 | 31 | 30 | 28 | 27 | 26 | 25 | 22 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| % Capture of SFA Demand | 4% | 4% | 4% | 4% | 4% | 4% | 4% | 4% | 5% | 5% | 5% | 5% | 1% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| SFA Demand | | 43 | 41 | 40 | 64 | 63 | 60 | 58 | 57 | 55 | 54 | 49 | 13 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SFA Supply | 596 | 553 | 512 | 472 | 407 | 345 | 285 | 227 | 170 | 115 | 62 | 13 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Adjusted Demand | | 43 | 41 | 40 | 64 | 63 | 60 | 58 | 57 | 55 | 54 | 49 | 13 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| % Capture of MF Demand | 13% | 18% | 20% | 21% | 21% | 22% | 22% | 22% | 22% | 22% | 22% | 22% | 22% | 22% | 22% | 22% | 22% | 22% | 22% | 22% | 22% | 22% | 22% | 22% | 22% | 22% | 22% | 2% | 0% | 0% | 0% | 0% |
| MF Demand | | 84 | 98 | 107 | 185 | 198 | 199 | 205 | 211 | 216 | 221 | 209 | 235 | 238 | 241 | 258 | 223 | 224 | 225 | 227 | 228 | 191 | 192 | 192 | 192 | 192 | 171 | 18 | 0 | 0 | 0 | 0 |
| MF Supply | 5,181 | 5,097 | 4,999 | 4,892 | 4,707 | 4,509 | 4,310 | 4,105 | 3,894 | 3,678 | 3,456 | 3,247 | 3,012 | 2,774 | 2,533 | 2,275 | 2,052 | 1,827 | 1,602 | 1,375 | 1,148 | 956 | 764 | 573 | 380 | 188 | 17 | 0 | 0 | 0 | 0 | 0 |
| Adjusted Demand | | 84 | 98 | 107 | 185 | 198 | 199 | 205 | 211 | 216 | 221 | 209 | 235 | 238 | 241 | 258 | 223 | 224 | 225 | 227 | 228 | 191 | 192 | 192 | 192 | 192 | 171 | 17 | 0 | 0 | 0 | 0 |
| Route 28 Station Area Capture of Sterling MF Demand | | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| Route 28 Station Area Capture of MF Demand | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Route 28 Station Area Capture of MF Demand Due to Metro | 50% | 50% | 50% | 50% | 50% | 50% | 50% | 50% | 50% | 50% | 50% | 50% | 50% | 50% | 50% | 50% | 50% | 50% | 50% | 50% | 50% | 50% | 50% | 50% | 50% | 50% | 50% | 50% | 50% | 50% | 50% | 50% |
| Route 28 Station Area Capture of MF Demand Due to Metro | 0% | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Route 28 MF Demand | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Route 28 MF Supply (Assuming No Metro Service) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Route 28 Adjusted MF Demand | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total SFD Capture | 100% | 100% | 99% | 99% | 99% | 99% | 90% | 82% | 82% | 82% | 73% | 73% | 73% | 73% | 73% | 60% | 19% | 19% | 19% | 19% | 19% | 19% | 19% | 19% | 19% | 19% | 19% | 19% | 19% | 19% | 19% | 19% |
| Total SFA Capture | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 94% | 90% | 89% | 83% | 68% | 38% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| Total MF Capture | 100% | 99% | 99% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 10% | 0% | 0% | 0% | 0% |
| Total SFD Housing Units | | 1,527 | 1,460 | 1,394 | 2,223 | 2,145 | 1,818 | 1,587 | 1,520 | 1,452 | 1,244 | 1,127 | 1,071 | 1,016 | 963 | 750 | 193 | 182 | 172 | 125 | 56 | 44 | 41 | 39 | 36 | 34 | 28 | 26 | 25 | 23 | 22 | 20 |
| Total SFA Housing Units | | 1,018 | 979 | 939 | 1,496 | 1,444 | 1,350 | 1,225 | 1,124 | 1,059 | 940 | 701 | 370 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total MF Housing Units | | 473 | 494 | 516 | 868 | 918 | 917 | 941 | 966 | 989 | 1,013 | 957 | 1,075 | 1,088 | 1,102 | 1,178 | 1,021 | 1,026 | 1,031 | 1,036 | 1,041 | 875 | 876 | 877 | 878 | 880 | 782 | 77 | 0 | 0 | 0 | 0 |
| Total | | 3,018 | 2,933 | 2,849 | 4,587 | 4,508 | 4,086 | 3,753 | 3,609 | 3,500 | 3,198 | 2,785 | 2,516 | 2,105 | 2,065 | 1,929 | 1,214 | 1,208 | 1,202 | 1,162 | 1,097 | 919 | 917 | 916 | 914 | 914 | 811 | 104 | 25 | 23 | 22 | 20 |
| Cumulative Total (Beginning 2011) | | | 2,933 | 5,782 | 10,369 | 14,877 | 18,963 | 22,715 | 26,325 | 29,825 | 33,022 | 35,807 | 38,323 | 40,428 | 42,492 | 44,421 | 45,635 | 46,843 | 48,046 | 49,207 | 50,304 | 51,223 | 52,140 | 53,056 | 53,971 | 54,885 | 55,695 | 55,799 | 55,824 | 55,847 | 55,868 | 55,889 |

**Exhibit I-33**

## HOUSING UNIT FORECAST BY PLANNING AREA (PHASE 2 EXTENSION)
## LOUDOUN COUNTY AND PLANNING AREAS
## 2010 - 2040

| | | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 | 2037 | 2038 | 2039 | 2040 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Loudoun County Single-Family Demand | | **2,545** | **2,447** | **2,348** | **3,744** | **3,614** | **3,379** | **3,244** | **3,107** | **3,062** | **2,921** | **2,653** | **2,521** | **2,392** | **2,267** | **2,145** | **1,743** | **1,645** | **1,550** | **1,460** | **1,373** | **1,080** | **1,014** | **951** | **892** | **835** | **694** | **649** | **607** | **566** | **528** | **492** |
| Loudoun County SFD Demand | | 1,527 | 1,468 | 1,409 | 2,246 | 2,168 | 2,028 | 1,946 | 1,864 | 1,837 | 1,753 | 1,592 | 1,513 | 1,435 | 1,360 | 1,287 | 1,046 | 987 | 930 | 876 | 824 | 648 | 609 | 571 | 535 | 501 | 417 | 390 | 364 | 340 | 317 | 295 |
| Loudoun County SFA Demand | 40% | 1,018 | 979 | 939 | 1,498 | 1,446 | 1,352 | 1,298 | 1,243 | 1,225 | 1,168 | 1,061 | 1,009 | 957 | 907 | 858 | 697 | 658 | 620 | 584 | 549 | 432 | 406 | 381 | 357 | 334 | 278 | 260 | 243 | 227 | 211 | 197 |
| Loudoun County MF Demand | | 478 | 497 | 517 | 869 | 919 | 918 | 941 | 966 | 989 | 1,013 | 957 | 977 | 995 | 1,014 | 1,032 | 903 | 914 | 925 | 937 | 947 | 802 | 807 | 812 | 817 | 823 | 735 | 738 | 740 | 742 | 745 | 746 |
| SFD Demand Shift to MF | | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 5% | 5% | 5% | 5% | 5% | 5% | 5% | 5% | 5% | 5% | 5% | 5% | 5% | 5% | 5% |
| SFA Demand Shift to MF | | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 10% | 10% | 10% | 10% | 10% | 10% | 10% | 10% | 10% | 10% | 10% | 10% | 10% | 10% | 10% | 10% | 10% | 10% | 10% |
| Adjusted MF Demand | | 478 | 497 | 517 | 869 | 919 | 918 | 941 | 966 | 989 | 1,013 | 957 | 977 | 1,091 | 1,104 | 1,118 | 972 | 1,029 | 1,034 | 1,039 | 1,043 | 877 | 878 | 879 | 880 | 881 | 784 | 783 | 782 | 782 | 782 | 780 |
| Additional MF Demand due to Metro | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 183 | 190 | 182 | 187 | 193 | 199 | 205 | 181 | 187 | 192 | 196 | 202 | 173 | 177 | 181 | 185 | 189 | 171 | 175 | 179 | 182 | 185 | 189 |
| Total MF Demand | | 478 | 497 | 517 | 869 | 919 | 918 | 941 | 966 | 1,172 | 1,202 | 1,138 | 1,163 | 1,284 | 1,304 | 1,323 | 1,154 | 1,216 | 1,226 | 1,235 | 1,245 | 1,050 | 1,055 | 1,060 | 1,065 | 1,070 | 955 | 958 | 961 | 964 | 967 | 970 |
| | **Current Supply** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Loudoun County SFD Supply | 24,596 | 23,069 | 21,609 | 20,215 | 17,992 | 15,847 | 14,029 | 12,443 | 10,923 | 9,425 | 8,147 | 6,986 | 5,883 | 4,836 | 3,844 | 3,238 | 3,041 | 2,851 | 2,675 | 2,596 | 2,538 | 2,493 | 2,450 | 2,410 | 2,373 | 2,338 | 2,309 | 2,281 | 2,256 | 2,232 | 2,210 | 2,189 |
| Loudoun County SFA Supply | 13,374 | 12,356 | 11,378 | 10,438 | 8,942 | 7,498 | 6,147 | 4,911 | 3,787 | 2,689 | 1,665 | 753 | 73 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Loudoun County MF Supply | 27,923 | 27,450 | 26,956 | 26,440 | 25,572 | 24,654 | 23,736 | 22,795 | 21,829 | 20,657 | 19,455 | 18,317 | 17,153 | 15,869 | 14,566 | 13,345 | 12,191 | 10,976 | 9,750 | 8,514 | 7,269 | 6,220 | 5,165 | 4,104 | 3,132 | 2,156 | 1,372 | 589 | 0 | 0 | 0 | 0 |
| **Ashburn** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| % Capture of SFD Demand | 35% | 22% | 22% | 21% | 21% | 20% | 9% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| SFD Demand | | 342 | 322 | 301 | 467 | 425 | 181 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SFD Supply | 2,038 | 1,696 | 1,374 | 1,073 | 606 | 181 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Adjusted Demand | | 342 | 322 | 301 | 467 | 425 | 181 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| % Capture of SFA Demand | 39% | 37% | 37% | 36% | 36% | 36% | 36% | 35% | 35% | 34% | 32% | 26% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| SFA Demand | | 373 | 358 | 342 | 544 | 522 | 484 | 460 | 432 | 411 | 370 | 280 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SFA Supply | 4,576 | 4,203 | 3,845 | 3,503 | 2,958 | 2,437 | 1,953 | 1,493 | 1,061 | 650 | 280 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Adjusted Demand | | 373 | 358 | 342 | 544 | 522 | 484 | 460 | 432 | 411 | 370 | 280 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Route 772 Station Area Capture of Ashburn SFA Demand | 28% | 15% | 28% | 30% | 30% | 30% | 30% | 30% | 30% | 30% | 30% | 30% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| Route 772 Station Area SFA Demand | | 56 | 102 | 102 | 162 | 155 | 144 | 137 | 128 | 122 | 110 | 83 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Route 772 SFA Supply | 1,300 | 1,244 | 1,142 | 1,041 | 879 | 724 | 580 | 444 | 315 | 193 | 83 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| % Capture of MF Demand | 60% | 54% | 51% | 50% | 49% | 49% | 49% | 48% | 48% | 48% | 48% | 48% | 47% | 47% | 46% | 45% | 45% | 44% | 44% | 44% | 44% | 44% | 43% | 43% | 43% | 42% | 40% | 38% | 26% | 0% | 0% | 0% |
| MF Demand | | 259 | 255 | 258 | 427 | 448 | 445 | 456 | 467 | 478 | 487 | 456 | 461 | 509 | 509 | 507 | 436 | 457 | 457 | 457 | 457 | 382 | 381 | 379 | 377 | 369 | 312 | 299 | 203 | 0 | 0 | 0 |
| MF Supply | 13,555 | 13,296 | 13,041 | 12,783 | 12,357 | 11,909 | 11,464 | 11,008 | 10,541 | 9,880 | 9,204 | 8,566 | 7,918 | 7,216 | 6,507 | 5,898 | 5,371 | 4,821 | 4,268 | 3,713 | 3,155 | 2,687 | 2,217 | 1,747 | 1,277 | 814 | 502 | 203 | 0 | 0 | 0 | 0 |
| Adjusted Demand | | 259 | 255 | 258 | 427 | 448 | 445 | 456 | 467 | 478 | 487 | 456 | 461 | 509 | 509 | 507 | 436 | 457 | 457 | 457 | 457 | 382 | 381 | 379 | 377 | 369 | 312 | 299 | 203 | 0 | 0 | 0 |
| Adjusted Demand Including Additional Demand from Metro | | 259 | 255 | 258 | 427 | 448 | 445 | 456 | 467 | 661 | 676 | 638 | 648 | 702 | 708 | 610 | 526 | 551 | 553 | 555 | 558 | 469 | 470 | 470 | 470 | 463 | 312 | 299 | 203 | 0 | 0 | 0 |
| Route 606 Station Area Capture of Ashburn MF Demand | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| Route 606 Station Area Capture of MF Demand | 0% | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Route 606 Station Area Capture of MF Demand Due to Metro | | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| Route 606 Station Area Capture of MF Demand Due to Metro | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Route 606 MF Demand | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Route 606 MF Supply (Assuming No Metro Service) | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Route 606 Adjusted MF Demand | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Route 772 Station Area Capture of Ashburn MF Demand | 0% | 35% | 45% | 57% | 57% | 57% | 57% | 57% | 57% | 57% | 56% | 55% | 54% | 53% | 52% | 51% | 50% | 49% | 48% | 47% | 45% | 43% | 42% | 39% | 36% | 32% | 24% | 24% | 24% | 0% | 0% | 0% |
| Route 772 Station Area Capture of MF Demand | | 91 | 115 | 147 | 243 | 255 | 254 | 260 | 266 | 272 | 273 | 252 | 251 | 271 | 265 | 256 | 216 | 223 | 218 | 213 | 207 | 166 | 159 | 149 | 137 | 116 | 74 | 71 | 48 | 0 | 0 | 0 |
| Route 772 Station Area Capture of MF Demand Due to Metro | 50% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 50% | 50% | 50% | 50% | 50% | 50% | 50% | 50% | 50% | 50% | 50% | 0% | 0% | 0% | 0% | 0% | 0% |
| Route 772 Station Area Capture of MF Demand Due to Metro | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 183 | 190 | 182 | 187 | 193 | 199 | 102 | 91 | 93 | 96 | 98 | 101 | 86 | 88 | 91 | 93 | 94 | 0 | 0 | 0 | 0 | 0 | 0 |
| Route 772 MF Demand | | 91 | 115 | 147 | 243 | 255 | 254 | 260 | 266 | 455 | 463 | 434 | 437 | 464 | 464 | 359 | 307 | 316 | 314 | 311 | 307 | 253 | 247 | 240 | 229 | 211 | 74 | 71 | 48 | 0 | 0 | 0 |
| Route 772 MF Supply (Assuming Metro Service) | 7,634 | 7,544 | 7,429 | 7,282 | 7,039 | 6,784 | 6,530 | 6,271 | 6,005 | 5,550 | 5,087 | 4,653 | 4,216 | 3,751 | 3,288 | 2,929 | 2,622 | 2,305 | 1,991 | 1,680 | 1,372 | 1,120 | 872 | 632 | 403 | 192 | 119 | 48 | 0 | 0 | 0 | 0 |
| Route 772 Adjusted MF Demand | | 91 | 115 | 147 | 243 | 255 | 254 | 260 | 266 | 455 | 463 | 434 | 437 | 464 | 464 | 359 | 307 | 316 | 314 | 311 | 307 | 253 | 247 | 240 | 229 | 211 | 74 | 71 | 48 | 0 | 0 | 0 |
| **Dulles** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| % Capture of SFD Demand | 22% | 32% | 32% | 32% | 33% | 34% | 35% | 36% | 36% | 36% | 37% | 36% | 36% | 35% | 33% | 12% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| SFD Demand | | 483 | 470 | 457 | 739 | 732 | 707 | 692 | 669 | 666 | 644 | 578 | 540 | 501 | 454 | 155 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SFD Supply | 8,488 | 8,005 | 7,535 | 7,077 | 6,338 | 5,605 | 4,899 | 4,206 | 3,538 | 2,872 | 2,228 | 1,650 | 1,110 | 609 | 155 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Adjusted Demand | | 483 | 470 | 457 | 739 | 732 | 707 | 692 | 669 | 666 | 644 | 578 | 540 | 501 | 454 | 155 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| % Capture of SFA Demand | 30% | 38% | 38% | 39% | 39% | 40% | 41% | 42% | 43% | 45% | 47% | 50% | 57% | 6% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| SFA Demand | | 387 | 376 | 364 | 587 | 578 | 553 | 547 | 540 | 548 | 546 | 530 | 577 | 60 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SFA Supply | 6,192 | 5,805 | 5,429 | 5,065 | 4,478 | 3,900 | 3,347 | 2,800 | 2,261 | 1,713 | 1,166 | 636 | 60 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Adjusted Demand | | 387 | 376 | 364 | 587 | 578 | 553 | 547 | 540 | 548 | 546 | 530 | 577 | 60 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| % Capture of MF Demand | 9% | 14% | 17% | 19% | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 21% | 21% | 21% | 21% | 22% | 22% | 22% | 22% | 23% | 23% | 24% | 25% | 26% | 27% | 28% | 29% | 30% | 25% | 0% | 0% | 0% |
| MF Demand | | 69 | 86 | 97 | 170 | 184 | 185 | 191 | 197 | 202 | 207 | 197 | 203 | 230 | 235 | 241 | 212 | 227 | 232 | 237 | 244 | 210 | 217 | 224 | 234 | 244 | 228 | 237 | 193 | 0 | 0 | 0 |
| MF Supply | 5,635 | 5,566 | 5,480 | 5,382 | 5,212 | 5,028 | 4,843 | 4,652 | 4,455 | 4,254 | 4,046 | 3,849 | 3,645 | 3,416 | 3,181 | 2,940 | 2,728 | 2,501 | 2,269 | 2,031 | 1,787 | 1,577 | 1,361 | 1,136 | 902 | 658 | 430 | 193 | 0 | 0 | 0 | 0 |
| Adjusted Demand | | 69 | 86 | 97 | 170 | 184 | 185 | 191 | 197 | 202 | 207 | 197 | 203 | 230 | 235 | 241 | 212 | 227 | 232 | 237 | 244 | 210 | 217 | 224 | 234 | 244 | 228 | 237 | 193 | 0 | 0 | 0 |

## Exhibit I-33

## HOUSING UNIT FORECAST BY PLANNING AREA (PHASE 2 EXTENSION)

## LOUDOUN COUNTY AND PLANNING AREAS

## 2010 - 2040

| | | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 | 2037 | 2038 | 2039 | 2040 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Loudoun County Single-Family Demand | | **2,545** | **2,447** | **2,348** | **3,744** | **3,614** | **3,379** | **3,244** | **3,107** | **3,062** | **2,921** | **2,653** | **2,521** | **2,392** | **2,267** | **2,145** | **1,743** | **1,645** | **1,550** | **1,460** | **1,373** | **1,080** | **1,014** | **951** | **892** | **835** | **694** | **649** | **607** | **566** | **528** | **492** |
| Loudoun County SFD Demand | | 1,527 | 1,468 | 1,409 | 2,246 | 2,168 | 2,028 | 1,946 | 1,864 | 1,837 | 1,753 | 1,592 | 1,513 | 1,435 | 1,360 | 1,287 | 1,046 | 987 | 930 | 876 | 824 | 648 | 609 | 571 | 535 | 501 | 417 | 390 | 364 | 340 | 317 | 295 |
| Loudoun County SFA Demand | 40% | 1,018 | 979 | 939 | 1,498 | 1,446 | 1,352 | 1,298 | 1,243 | 1,225 | 1,168 | 1,061 | 1,009 | 957 | 907 | 858 | 697 | 658 | 620 | 584 | 549 | 432 | 406 | 381 | 357 | 334 | 278 | 260 | 243 | 227 | 211 | 197 |
| Loudoun County MF Demand | | 478 | 497 | 517 | 869 | 919 | 918 | 941 | 966 | 989 | 1,013 | 957 | 977 | 995 | 1,014 | 1,032 | 903 | 914 | 925 | 937 | 947 | 802 | 807 | 812 | 817 | 823 | 735 | 738 | 740 | 742 | 745 | 746 |
| SFD Demand Shift to MF | | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 5% | 5% | 5% | 5% | 5% | 5% | 5% | 5% | 5% | 5% | 5% | 5% | 5% | 5% | 5% |
| SFA Demand Shift to MF | | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 10% | 10% | 10% | 10% | 10% | 10% | 10% | 10% | 10% | 10% | 10% | 10% | 10% | 10% | 10% | 10% | 10% | 10% | 10% |
| Adjusted MF Demand | | 478 | 497 | 517 | 869 | 919 | 918 | 941 | 966 | 989 | 1,013 | 957 | 977 | 1,091 | 1,104 | 1,118 | 972 | 1,029 | 1,034 | 1,039 | 1,043 | 877 | 878 | 879 | 880 | 881 | 784 | 783 | 782 | 782 | 782 | 780 |
| Additional MF Demand due to Metro | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 183 | 190 | 182 | 187 | 193 | 199 | 205 | 181 | 187 | 192 | 196 | 202 | 173 | 177 | 181 | 185 | 189 | 171 | 175 | 179 | 182 | 185 | 189 |
| Total MF Demand | | 478 | 497 | 517 | 869 | 919 | 918 | 941 | 966 | 1,172 | 1,202 | 1,138 | 1,163 | 1,284 | 1,304 | 1,323 | 1,154 | 1,216 | 1,226 | 1,235 | 1,245 | 1,050 | 1,055 | 1,060 | 1,065 | 1,070 | 955 | 958 | 961 | 964 | 967 | 970 |
| | **Current Supply** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Loudoun County SFD Supply | 24,596 | 23,069 | 21,609 | 20,215 | 17,992 | 15,847 | 14,029 | 12,443 | 10,923 | 9,425 | 8,147 | 6,986 | 5,883 | 4,836 | 3,844 | 3,238 | 3,041 | 2,851 | 2,675 | 2,596 | 2,538 | 2,493 | 2,450 | 2,410 | 2,373 | 2,338 | 2,309 | 2,281 | 2,256 | 2,232 | 2,210 | 2,189 |
| Loudoun County SFA Supply | 13,374 | 12,356 | 11,378 | 10,438 | 8,942 | 7,498 | 6,147 | 4,911 | 3,787 | 2,689 | 1,665 | 753 | 73 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Loudoun County MF Supply | 27,923 | 27,450 | 26,956 | 26,440 | 25,572 | 24,654 | 23,736 | 22,795 | 21,829 | 20,657 | 19,455 | 18,317 | 17,153 | 15,869 | 14,566 | 13,345 | 12,191 | 10,976 | 9,750 | 8,514 | 7,269 | 6,220 | 5,165 | 4,104 | 3,132 | 2,156 | 1,372 | 589 | 0 | 0 | 0 | 0 |
| **Leesburg** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| % Capture of SFD Demand | 17% | 14% | 13% | 13% | 13% | 13% | 12% | 12% | 11% | 10% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| SFD Demand | | 207 | 197 | 186 | 293 | 275 | 249 | 227 | 203 | 182 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SFD Supply | 2,019 | 1,812 | 1,616 | 1,429 | 1,136 | 861 | 612 | 385 | 182 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Adjusted Demand | | 207 | 197 | 186 | 293 | 275 | 249 | 227 | 203 | 182 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| % Capture of SFA Demand | 19% | 13% | 13% | 12% | 12% | 12% | 11% | 5% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| SFA Demand | | 131 | 123 | 116 | 181 | 166 | 146 | 69 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SFA Supply | 932 | 801 | 678 | 562 | 381 | 215 | 69 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Adjusted Demand | | 131 | 123 | 116 | 181 | 166 | 146 | 69 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| % Capture of MF Demand | 8% | 8% | 7% | 7% | 7% | 7% | 7% | 7% | 7% | 7% | 7% | 7% | 7% | 7% | 7% | 7% | 8% | 8% | 8% | 8% | 8% | 8% | 9% | 9% | 9% | 10% | 10% | 11% | 9% | 0% | 0% | 0% |
| MF Demand | | 37 | 37 | 38 | 62 | 66 | 65 | 67 | 69 | 70 | 72 | 69 | 71 | 80 | 82 | 84 | 74 | 79 | 81 | 83 | 85 | 73 | 75 | 78 | 81 | 85 | 79 | 82 | 67 | 0 | 0 | 0 |
| MF Supply | 1,990 | 1,953 | 1,916 | 1,879 | 1,816 | 1,751 | 1,685 | 1,618 | 1,550 | 1,480 | 1,407 | 1,339 | 1,268 | 1,188 | 1,106 | 1,022 | 949 | 870 | 789 | 706 | 622 | 549 | 473 | 395 | 314 | 229 | 150 | 67 | 0 | 0 | 0 | 0 |
| Adjusted Demand | | 37 | 37 | 38 | 62 | 66 | 65 | 67 | 69 | 70 | 72 | 69 | 71 | 80 | 82 | 84 | 74 | 79 | 81 | 83 | 85 | 73 | 75 | 78 | 81 | 85 | 79 | 82 | 67 | 0 | 0 | 0 |
| **Northwest** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| % Capture of SFD Demand | 5% | 5% | 5% | 5% | 5% | 5% | 5% | 5% | 5% | 5% | 5% | 5% | 5% | 5% | 5% | 5% | 5% | 5% | 5% | 5% | 5% | 5% | 5% | 5% | 5% | 5% | 5% | 5% | 5% | 5% | 5% | 5% |
| SFD Demand | | 76 | 73 | 70 | 112 | 108 | 101 | 97 | 93 | 92 | 88 | 80 | 76 | 72 | 68 | 64 | 52 | 49 | 47 | 44 | 41 | 32 | 30 | 29 | 27 | 25 | 21 | 19 | 18 | 17 | 16 | 15 |
| SFD Supply | 3,536 | 3,460 | 3,386 | 3,316 | 3,204 | 3,095 | 2,994 | 2,896 | 2,803 | 2,711 | 2,624 | 2,544 | 2,468 | 2,397 | 2,329 | 2,264 | 2,212 | 2,163 | 2,116 | 2,072 | 2,031 | 1,999 | 1,968 | 1,940 | 1,913 | 1,888 | 1,867 | 1,848 | 1,829 | 1,812 | 1,797 | 1,782 |
| Adjusted Demand | | 76 | 73 | 70 | 112 | 108 | 101 | 97 | 93 | 92 | 88 | 80 | 76 | 72 | 68 | 64 | 52 | 49 | 47 | 44 | 41 | 32 | 30 | 29 | 27 | 25 | 21 | 19 | 18 | 17 | 16 | 15 |
| % Capture of SFA Demand | 0.12% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 1% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| SFA Demand | | 3 | 3 | 3 | 4 | 4 | 4 | 4 | 4 | 5 | 5 | 5 | 7 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SFA Supply | 52 | 49 | 47 | 44 | 40 | 36 | 32 | 28 | 24 | 19 | 14 | 9 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Adjusted Demand | | 3 | 3 | 3 | 4 | 4 | 4 | 4 | 4 | 5 | 5 | 5 | 7 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| % Capture of MF Demand | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| MF Demand | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MF Supply | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Adjusted Demand | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Potomac** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| % Capture of SFD Demand | 2% | 1% | 1% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| SFD Demand | | 17 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SFD Supply | 25 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Adjusted Demand | | 17 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| % Capture of SFA Demand | 6% | 4% | 4% | 4% | 4% | 4% | 4% | 4% | 4% | 3% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| SFA Demand | | 46 | 43 | 41 | 65 | 61 | 55 | 50 | 45 | 31 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SFA Supply | 438 | 392 | 349 | 308 | 243 | 182 | 127 | 77 | 31 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Adjusted Demand | | 46 | 43 | 41 | 65 | 61 | 55 | 50 | 45 | 31 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| % Capture of MF Demand | 7% | 4% | 2% | 2% | 1% | 1% | 1% | 1% | 1% | 1% | 1% | 1% | 1% | 1% | 1% | 1% | 1% | 1% | 1% | 1% | 1% | 1% | 1% | 1% | 1% | 1% | 1% | 1% | 1% | 0% | 0% | 0% |
| MF Demand | | 20 | 12 | 9 | 11 | 9 | 8 | 8 | 8 | 8 | 8 | 7 | 8 | 8 | 9 | 9 | 8 | 8 | 9 | 9 | 9 | 8 | 8 | 8 | 9 | 9 | 8 | 9 | 7 | 0 | 0 | 0 |
| MF Supply | 248 | 228 | 216 | 207 | 197 | 188 | 179 | 172 | 164 | 157 | 149 | 142 | 134 | 126 | 117 | 108 | 100 | 92 | 83 | 75 | 66 | 58 | 50 | 42 | 33 | 24 | 16 | 7 | 0 | 0 | 0 | 0 |
| Adjusted Demand | | 20 | 12 | 9 | 11 | 9 | 8 | 8 | 8 | 8 | 8 | 7 | 8 | 8 | 9 | 9 | 8 | 8 | 9 | 9 | 9 | 8 | 8 | 8 | 9 | 9 | 8 | 9 | 7 | 0 | 0 | 0 |
| **Route 15 North** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| % Capture of SFD Demand | 3% | 6% | 7% | 7% | 7% | 7% | 8% | 8% | 8% | 9% | 9% | 9% | 9% | 10% | 10% | 8% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| SFD Demand | | 99 | 97 | 96 | 156 | 157 | 155 | 155 | 153 | 157 | 156 | 145 | 142 | 140 | 143 | 102 | -3 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SFD Supply | 2,054 | 1,955 | 1,858 | 1,762 | 1,606 | 1,449 | 1,294 | 1,138 | 985 | 828 | 672 | 527 | 385 | 244 | 102 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Adjusted Demand | | 99 | 97 | 96 | 156 | 157 | 155 | 155 | 153 | 157 | 156 | 145 | 142 | 140 | 143 | 102 | -3 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| % Capture of SFA Demand | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| SFA Demand | | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SFA Supply | 3 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Adjusted Demand | | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| % Capture of MF Demand | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| MF Demand | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MF Supply | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Adjusted Demand | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

## Exhibit I-33

## HOUSING UNIT FORECAST BY PLANNING AREA (PHASE 2 EXTENSION)

## LOUDOUN COUNTY AND PLANNING AREAS

## 2010 - 2040

| | | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 | 2037 | 2038 | 2039 | 2040 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Loudoun County Single-Family Demand | | **2,545** | **2,447** | **2,348** | **3,744** | **3,614** | **3,379** | **3,244** | **3,107** | **3,062** | **2,921** | **2,653** | **2,521** | **2,392** | **2,267** | **2,145** | **1,743** | **1,645** | **1,550** | **1,460** | **1,373** | **1,080** | **1,014** | **951** | **892** | **835** | **694** | **649** | **607** | **566** | **528** | **492** |
| Loudoun County SFD Demand | | 1,527 | 1,468 | 1,409 | 2,246 | 2,168 | 2,028 | 1,946 | 1,864 | 1,837 | 1,753 | 1,592 | 1,513 | 1,435 | 1,360 | 1,287 | 1,046 | 987 | 930 | 876 | 824 | 648 | 609 | 571 | 535 | 501 | 417 | 390 | 364 | 340 | 317 | 295 |
| Loudoun County SFA Demand | 40% | 1,018 | 979 | 939 | 1,498 | 1,446 | 1,352 | 1,298 | 1,243 | 1,225 | 1,168 | 1,061 | 1,009 | 957 | 907 | 858 | 697 | 658 | 620 | 584 | 549 | 432 | 406 | 381 | 357 | 334 | 278 | 260 | 243 | 227 | 211 | 197 |
| Loudoun County MF Demand | | 478 | 497 | 517 | 869 | 919 | 918 | 941 | 966 | 989 | 1,013 | 957 | 977 | 995 | 1,014 | 1,032 | 903 | 914 | 925 | 937 | 947 | 802 | 807 | 812 | 817 | 823 | 735 | 738 | 740 | 742 | 745 | 746 |
| SFD Demand Shift to MF | | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 5% | 5% | 5% | 5% | 5% | 5% | 5% | 5% | 5% | 5% | 5% | 5% | 5% | 5% | 5% |
| SFA Demand Shift to MF | | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 10% | 10% | 10% | 10% | 10% | 10% | 10% | 10% | 10% | 10% | 10% | 10% | 10% | 10% | 10% | 10% | 10% | 10% | 10% |
| Adjusted MF Demand | | 478 | 497 | 517 | 869 | 919 | 918 | 941 | 966 | 989 | 1,013 | 957 | 977 | 1,091 | 1,104 | 1,118 | 972 | 1,029 | 1,034 | 1,039 | 1,043 | 877 | 878 | 879 | 880 | 881 | 784 | 783 | 782 | 782 | 782 | 780 |
| Additional MF Demand due to Metro | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 183 | 190 | 182 | 187 | 193 | 199 | 205 | 181 | 187 | 192 | 196 | 202 | 173 | 177 | 181 | 185 | 189 | 171 | 175 | 179 | 182 | 185 | 189 |
| Total MF Demand | | 478 | 497 | 517 | 869 | 919 | 918 | 941 | 966 | 1,172 | 1,202 | 1,138 | 1,163 | 1,284 | 1,304 | 1,323 | 1,154 | 1,216 | 1,226 | 1,235 | 1,245 | 1,050 | 1,055 | 1,060 | 1,065 | 1,070 | 955 | 958 | 961 | 964 | 967 | 970 |
| | **Current Supply** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Loudoun County SFD Supply | 24,596 | 23,069 | 21,609 | 20,215 | 17,992 | 15,847 | 14,029 | 12,443 | 10,923 | 9,425 | 8,147 | 6,986 | 5,883 | 4,836 | 3,844 | 3,238 | 3,041 | 2,851 | 2,675 | 2,596 | 2,538 | 2,493 | 2,450 | 2,410 | 2,373 | 2,338 | 2,309 | 2,281 | 2,256 | 2,232 | 2,210 | 2,189 |
| Loudoun County SFA Supply | 13,374 | 12,356 | 11,378 | 10,438 | 8,942 | 7,498 | 6,147 | 4,911 | 3,787 | 2,689 | 1,665 | 753 | 73 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Loudoun County MF Supply | 27,923 | 27,450 | 26,956 | 26,440 | 25,572 | 24,654 | 23,736 | 22,795 | 21,829 | 20,657 | 19,455 | 18,317 | 17,153 | 15,869 | 14,566 | 13,345 | 12,191 | 10,976 | 9,750 | 8,514 | 7,269 | 6,220 | 5,165 | 4,104 | 3,132 | 2,156 | 1,372 | 589 | 0 | 0 | 0 | 0 |
| **Route 15 South** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| % Capture of SFD Demand | 2% | 4% | 5% | 5% | 5% | 5% | 5% | 6% | 6% | 6% | 6% | 7% | 7% | 7% | 8% | 7% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| SFD Demand | | 68 | 67 | 66 | 108 | 110 | 109 | 110 | 109 | 113 | 114 | 107 | 106 | 106 | 111 | 89 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SFD Supply | 1,490 | 1,422 | 1,356 | 1,290 | 1,182 | 1,072 | 963 | 853 | 744 | 632 | 518 | 412 | 306 | 200 | 89 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Adjusted Demand | | 68 | 67 | 66 | 108 | 110 | 109 | 110 | 109 | 113 | 114 | 107 | 106 | 106 | 111 | 89 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| % Capture of SFA Demand | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| SFA Demand | | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 3 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SFA Supply | 21 | 20 | 19 | 18 | 16 | 15 | 13 | 12 | 10 | 8 | 6 | 4 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Adjusted Demand | | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 3 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| % Capture of MF Demand | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| MF Demand | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MF Supply | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Adjusted Demand | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Route 7 West** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| % Capture of SFD Demand | 12% | 12% | 12% | 12% | 12% | 12% | 12% | 12% | 12% | 12% | 12% | 12% | 12% | 12% | 12% | 12% | 12% | 12% | 12% | 12% | 12% | 12% | 12% | 12% | 12% | 12% | 12% | 12% | 12% | 12% | 12% | 12% |
| SFD Demand | | 183 | 176 | 169 | 270 | 260 | 243 | 234 | 224 | 220 | 210 | 191 | 182 | 172 | 163 | 154 | 126 | 118 | 112 | 105 | 99 | 78 | 73 | 69 | 64 | 60 | 50 | 47 | 44 | 41 | 38 | 35 |
| SFD Supply | 3,425 | 3,242 | 3,066 | 2,897 | 2,627 | 2,367 | 2,124 | 1,890 | 1,666 | 1,446 | 1,235 | 1,044 | 863 | 691 | 527 | 373 | 247 | 129 | 17 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Adjusted Demand | | 183 | 176 | 169 | 270 | 260 | 243 | 234 | 224 | 220 | 210 | 191 | 182 | 172 | 163 | 154 | 126 | 118 | 112 | 17 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| % Capture of SFA Demand | 2% | 3% | 3% | 3% | 3% | 3% | 4% | 4% | 4% | 4% | 4% | 5% | 6% | 1% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| SFA Demand | | 33 | 32 | 31 | 50 | 50 | 48 | 48 | 47 | 49 | 49 | 49 | 56 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SFA Supply | 552 | 519 | 487 | 456 | 406 | 356 | 309 | 261 | 213 | 165 | 115 | 66 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Adjusted Demand | | 33 | 32 | 31 | 50 | 50 | 48 | 48 | 47 | 49 | 49 | 49 | 56 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| % Capture of MF Demand | 2% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| MF Demand | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MF Supply | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Adjusted Demand | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

## Exhibit I-33

## HOUSING UNIT FORECAST BY PLANNING AREA (PHASE 2 EXTENSION)
## LOUDOUN COUNTY AND PLANNING AREAS
## 2010 - 2040

| | | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 | 2037 | 2038 | 2039 | 2040 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Loudoun County Single-Family Demand | | **2,545** | **2,447** | **2,348** | **3,744** | **3,614** | **3,379** | **3,244** | **3,107** | **3,062** | **2,921** | **2,653** | **2,521** | **2,392** | **2,267** | **2,145** | **1,743** | **1,645** | **1,550** | **1,460** | **1,373** | **1,080** | **1,014** | **951** | **892** | **835** | **694** | **649** | **607** | **566** | **528** | **492** |
| Loudoun County SFD Demand | | 1,527 | 1,468 | 1,409 | 2,246 | 2,168 | 2,028 | 1,946 | 1,864 | 1,837 | 1,753 | 1,592 | 1,513 | 1,435 | 1,360 | 1,287 | 1,046 | 987 | 930 | 876 | 824 | 648 | 609 | 571 | 535 | 501 | 417 | 390 | 364 | 340 | 317 | 295 |
| Loudoun County SFA Demand | 40% | 1,018 | 979 | 939 | 1,498 | 1,446 | 1,352 | 1,298 | 1,243 | 1,225 | 1,168 | 1,061 | 1,009 | 957 | 907 | 858 | 697 | 658 | 620 | 584 | 549 | 432 | 406 | 381 | 357 | 334 | 278 | 260 | 243 | 227 | 211 | 197 |
| Loudoun County MF Demand | | 478 | 497 | 517 | 869 | 919 | 918 | 941 | 966 | 989 | 1,013 | 957 | 977 | 995 | 1,014 | 1,032 | 903 | 914 | 925 | 937 | 947 | 802 | 807 | 812 | 817 | 823 | 735 | 738 | 740 | 742 | 745 | 746 |
| SFD Demand Shift to MF | | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 5% | 5% | 5% | 5% | 5% | 5% | 5% | 5% | 5% | 5% | 5% | 5% | 5% | 5% | 5% |
| SFA Demand Shift to MF | | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 10% | 10% | 10% | 10% | 10% | 10% | 10% | 10% | 10% | 10% | 10% | 10% | 10% | 10% | 10% | 10% | 10% | 10% | 10% |
| Adjusted MF Demand | | 478 | 497 | 517 | 869 | 919 | 918 | 941 | 966 | 989 | 1,013 | 957 | 977 | 1,091 | 1,104 | 1,118 | 972 | 1,029 | 1,034 | 1,039 | 1,043 | 877 | 878 | 879 | 880 | 881 | 784 | 783 | 782 | 782 | 782 | 780 |
| Additional MF Demand due to Metro | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 183 | 190 | 182 | 187 | 193 | 199 | 205 | 181 | 187 | 192 | 196 | 202 | 173 | 177 | 181 | 185 | 189 | 171 | 175 | 179 | 182 | 185 | 189 |
| Total MF Demand | | 478 | 497 | 517 | 869 | 919 | 918 | 941 | 966 | 1,172 | 1,202 | 1,138 | 1,163 | 1,284 | 1,304 | 1,323 | 1,154 | 1,216 | 1,226 | 1,235 | 1,245 | 1,050 | 1,055 | 1,060 | 1,065 | 1,070 | 955 | 958 | 961 | 964 | 967 | 970 |
| | **Current Supply** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Loudoun County SFD Supply | 24,596 | 23,069 | 21,609 | 20,215 | 17,992 | 15,847 | 14,029 | 12,443 | 10,923 | 9,425 | 8,147 | 6,986 | 5,883 | 4,836 | 3,844 | 3,238 | 3,041 | 2,851 | 2,675 | 2,596 | 2,538 | 2,493 | 2,450 | 2,410 | 2,373 | 2,338 | 2,309 | 2,281 | 2,256 | 2,232 | 2,210 | 2,189 |
| Loudoun County SFA Supply | 13,374 | 12,356 | 11,378 | 10,438 | 8,942 | 7,498 | 6,147 | 4,911 | 3,787 | 2,689 | 1,665 | 753 | 73 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Loudoun County MF Supply | 27,923 | 27,450 | 26,956 | 26,440 | 25,572 | 24,654 | 23,736 | 22,795 | 21,829 | 20,657 | 19,455 | 18,317 | 17,153 | 15,869 | 14,566 | 13,345 | 12,191 | 10,976 | 9,750 | 8,514 | 7,269 | 6,220 | 5,165 | 4,104 | 3,132 | 2,156 | 1,372 | 589 | 0 | 0 | 0 | 0 |
| **Southwest** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| % Capture of SFD Demand | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% |
| SFD Demand | | 31 | 29 | 28 | 45 | 43 | 41 | 39 | 37 | 37 | 35 | 32 | 30 | 29 | 27 | 26 | 21 | 20 | 19 | 18 | 16 | 13 | 12 | 11 | 11 | 10 | 8 | 8 | 7 | 7 | 6 | 6 |
| SFD Supply | 1,109 | 1,078 | 1,049 | 1,021 | 976 | 933 | 892 | 853 | 816 | 779 | 744 | 712 | 682 | 653 | 626 | 600 | 579 | 560 | 541 | 524 | 507 | 494 | 482 | 471 | 460 | 450 | 441 | 434 | 426 | 420 | 413 | 407 |
| Adjusted Demand | | 31 | 29 | 28 | 45 | 43 | 41 | 39 | 37 | 37 | 35 | 32 | 30 | 29 | 27 | 26 | 21 | 20 | 19 | 18 | 16 | 13 | 12 | 11 | 11 | 10 | 8 | 8 | 7 | 7 | 6 | 6 |
| % Capture of SFA Demand | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| SFA Demand | | 2 | 1 | 1 | 2 | 2 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SFA Supply | 12 | 10 | 9 | 8 | 5 | 3 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Adjusted Demand | | 2 | 1 | 1 | 2 | 2 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| % Capture of MF Demand | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| MF Demand | | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 0 | 0 | 0 |
| MF Supply | 49 | 48 | 47 | 46 | 44 | 43 | 41 | 40 | 38 | 36 | 34 | 33 | 31 | 29 | 27 | 25 | 23 | 21 | 19 | 17 | 15 | 13 | 12 | 10 | 8 | 6 | 4 | 2 | 0 | 0 | 0 | 0 |
| Adjusted Demand | | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 0 | 0 | 0 |
| **Sterling** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| % Capture of SFD Demand | 1% | 1% | 1% | 1% | 1% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 1% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| SFD Demand | | 21 | 21 | 20 | 33 | 33 | 32 | 32 | 31 | 32 | 31 | 29 | 28 | 27 | 26 | 16 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SFD Supply | 412 | 391 | 370 | 350 | 317 | 284 | 252 | 220 | 189 | 157 | 126 | 97 | 69 | 42 | 16 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Adjusted Demand | | 21 | 21 | 20 | 33 | 33 | 32 | 32 | 31 | 32 | 31 | 29 | 28 | 27 | 26 | 16 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| % Capture of SFA Demand | 4% | 4% | 4% | 4% | 4% | 4% | 4% | 4% | 4% | 4% | 4% | 4% | 4% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| SFA Demand | | 42 | 40 | 39 | 62 | 60 | 57 | 55 | 54 | 53 | 51 | 46 | 37 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SFA Supply | 596 | 554 | 514 | 476 | 414 | 353 | 296 | 241 | 187 | 134 | 83 | 37 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Adjusted Demand | | 42 | 40 | 39 | 62 | 60 | 57 | 55 | 54 | 53 | 51 | 46 | 37 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| % Capture of MF Demand | 13% | 18% | 21% | 22% | 23% | 23% | 23% | 23% | 23% | 23% | 23% | 24% | 24% | 24% | 24% | 25% | 25% | 25% | 25% | 24% | 24% | 23% | 22% | 21% | 20% | 20% | 20% | 20% | 15% | 0% | 0% | 0% |
| MF Demand | | 87 | 103 | 114 | 196 | 211 | 212 | 218 | 224 | 230 | 237 | 225 | 232 | 262 | 268 | 275 | 242 | 255 | 254 | 251 | 247 | 202 | 195 | 187 | 177 | 173 | 154 | 154 | 117 | 0 | 0 | 0 |
| MF Supply | 6,446 | 6,359 | 6,256 | 6,142 | 5,946 | 5,735 | 5,523 | 5,305 | 5,081 | 4,851 | 4,614 | 4,389 | 4,157 | 3,895 | 3,627 | 3,352 | 3,020 | 2,671 | 2,321 | 1,972 | 1,624 | 1,336 | 1,052 | 774 | 597 | 425 | 271 | 117 | 0 | 0 | 0 | 0 |
| Adjusted Demand | | 87 | 103 | 114 | 196 | 211 | 212 | 218 | 224 | 230 | 237 | 225 | 232 | 262 | 268 | 275 | 242 | 255 | 254 | 251 | 247 | 202 | 195 | 187 | 177 | 173 | 154 | 154 | 117 | 0 | 0 | 0 |
| Adjusted Demand Including Additional Demand from Metro | | 87 | 103 | 114 | 196 | 211 | 212 | 218 | 224 | 230 | 237 | 225 | 232 | 262 | 268 | 275 | 332 | 349 | 350 | 349 | 348 | 288 | 284 | 278 | 177 | 173 | 154 | 154 | 117 | 0 | 0 | 0 |
| Route 28 Station Area Capture of Sterling MF Demand | | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 38% | 36% | 34% | 31% | 27% | 23% | 18% | 11% | 1% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| Route 28 Station Area Capture of MF Demand | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 91 | 92 | 85 | 78 | 68 | 46 | 35 | 21 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Route 28 Station Area Capture of MF Demand Due to Metro | 50% | 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% | 50% | 50% | 50% | 50% | 50% | 50% |
| Route 28 Station Area Capture of MF Demand Due to Metro | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 91 | 93 | 96 | 98 | 101 | 86 | 88 | 91 | 93 | 94 | 86 | 88 | 89 | 91 | 93 | 95 |
| Route 28 MF Demand | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 182 | 185 | 181 | 176 | 169 | 133 | 124 | 111 | 98 | 94 | 86 | 88 | 89 | 91 | 93 | 95 |
| Route 28 MF Supply (Assuming Metro Service) | 1,265 | 1,265 | 1,265 | 1,265 | 1,265 | 1,265 | 1,265 | 1,265 | 1,265 | 1,265 | 1,265 | 1,265 | 1,265 | 1,265 | 1,265 | 1,265 | 1,083 | 898 | 717 | 541 | 373 | 240 | 116 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Route 28 Adjusted MF Demand | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 182 | 185 | 181 | 176 | 169 | 133 | 124 | 111 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total SFD Capture | 100% | 100% | 99% | 99% | 99% | 99% | 90% | 82% | 82% | 82% | 73% | 73% | 73% | 73% | 73% | 47% | 19% | 19% | 19% | 19% | 19% | 19% | 19% | 19% | 19% | 19% | 19% | 19% | 19% | 19% | 19% | 19% |
| Total SFA Capture | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 95% | 90% | 90% | 88% | 86% | 67% | 8% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| Total MF Capture | 100% | 99% | 99% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 75% | 0% | 0% | 0% |
| Total SFD Housing Units | | 1,527 | 1,460 | 1,394 | 2,223 | 2,145 | 1,818 | 1,587 | 1,520 | 1,498 | 1,278 | 1,161 | 1,103 | 1,047 | 992 | 606 | 196 | 190 | 177 | 79 | 58 | 45 | 43 | 40 | 37 | 35 | 29 | 27 | 25 | 24 | 22 | 21 |
| Total SFA Housing Units | | 1,018 | 979 | 939 | 1,496 | 1,444 | 1,350 | 1,236 | 1,124 | 1,099 | 1,023 | 913 | 679 | 73 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total MF Housing Units | | 473 | 494 | 516 | 868 | 918 | 917 | 941 | 966 | 1,172 | 1,202 | 1,138 | 1,163 | 1,284 | 1,304 | 1,220 | 1,154 | 1,216 | 1,226 | 1,235 | 1,245 | 1,050 | 1,055 | 1,060 | 973 | 976 | 784 | 783 | 589 | 0 | 0 | 0 |
| Total | | 3,018 | 2,933 | 2,849 | 4,587 | 4,508 | 4,086 | 3,764 | 3,609 | 3,768 | 3,504 | 3,212 | 2,946 | 2,404 | 2,296 | 1,827 | 1,350 | 1,406 | 1,402 | 1,314 | 1,303 | 1,095 | 1,098 | 1,100 | 1,010 | 1,011 | 813 | 810 | 614 | 24 | 22 | 21 |
| Cumulative Total (Beginning 2011) | | | 2,933 | 5,782 | 10,369 | 14,877 | 18,963 | 22,727 | 26,336 | 30,104 | 33,608 | 36,820 | 39,766 | 42,170 | 44,465 | 46,292 | 47,642 | 49,048 | 50,451 | 51,765 | 53,068 | 54,163 | 55,260 | 56,361 | 57,371 | 58,382 | 59,195 | 60,005 | 60,619 | 60,643 | 60,665 | 60,686 |

## Exhibit I-34

## SINGLE-FAMILY DETACHED HOUSING DEMAND PROJECTION
## LOUDOUN COUNTY AND PLANNING AREAS
## 2011 - 2040

**Baseline Planning Area Forecast (Phase 1 Rail Extension)**

| | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 | 2037 | 2038 | 2039 | 2040 | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Ashburn** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SFD Demand | 322 | 363 | 398 | 358 | 202 | 53 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1,696 |
| SFD Supply | 1,374 | 1,011 | 613 | 255 | 53 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| **Dulles** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SFD Demand | 470 | 556 | 643 | 726 | 710 | 689 | 669 | 646 | 611 | 570 | 525 | 486 | 393 | 231 | 78 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8,005 |
| SFD Supply | 7,535 | 6,979 | 6,336 | 5,610 | 4,899 | 4,210 | 3,541 | 2,895 | 2,284 | 1,714 | 1,189 | 702 | 309 | 78 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| **Leesburg** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SFD Demand | 197 | 225 | 252 | 272 | 251 | 226 | 202 | 128 | 59 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1,812 |
| SFD Supply | 1,616 | 1,390 | 1,139 | 866 | 616 | 390 | 187 | 59 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| **Northwest** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SFD Demand | 73 | 85 | 97 | 107 | 102 | 97 | 93 | 89 | 84 | 79 | 73 | 70 | 66 | 60 | 54 | 48 | 45 | 43 | 38 | 34 | 30 | 28 | 26 | 24 | 21 | 19 | 18 | 17 | 15 | 15 | 1,649 |
| SFD Supply | 3,386 | 3,301 | 3,204 | 3,096 | 2,994 | 2,897 | 2,804 | 2,714 | 2,631 | 2,552 | 2,479 | 2,409 | 2,343 | 2,283 | 2,229 | 2,181 | 2,136 | 2,094 | 2,056 | 2,022 | 1,992 | 1,965 | 1,939 | 1,915 | 1,894 | 1,875 | 1,857 | 1,841 | 1,825 | 1,810 | |
| **Potomac** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SFD Demand | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 |
| SFD Supply | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| **Route 15 North** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SFD Demand | 97 | 116 | 136 | 156 | 156 | 155 | 153 | 152 | 148 | 143 | 138 | 136 | 135 | 89 | 43 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1,955 |
| SFD Supply | 1,858 | 1,742 | 1,605 | 1,449 | 1,293 | 1,138 | 985 | 833 | 685 | 542 | 404 | 267 | 133 | 43 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| **Route 15 South** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SFD Demand | 67 | 80 | 94 | 109 | 109 | 109 | 109 | 109 | 107 | 105 | 103 | 103 | 107 | 73 | 37 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1,422 |
| SFD Supply | 1,356 | 1,275 | 1,181 | 1,072 | 963 | 853 | 744 | 635 | 527 | 422 | 320 | 216 | 110 | 37 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| **Route 7 West** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SFD Demand | 176 | 205 | 233 | 258 | 246 | 234 | 224 | 214 | 201 | 189 | 176 | 167 | 159 | 143 | 129 | 115 | 96 | 58 | 20 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3,242 |
| SFD Supply | 3,066 | 2,861 | 2,628 | 2,370 | 2,124 | 1,891 | 1,667 | 1,453 | 1,252 | 1,064 | 887 | 720 | 562 | 418 | 289 | 174 | 78 | 20 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| **Southwest** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SFD Demand | 29 | 34 | 39 | 43 | 41 | 39 | 37 | 36 | 34 | 31 | 29 | 28 | 26 | 24 | 21 | 19 | 18 | 17 | 15 | 13 | 12 | 11 | 10 | 9 | 8 | 8 | 7 | 7 | 6 | 6 | 660 |
| SFD Supply | 1,049 | 1,015 | 976 | 933 | 892 | 853 | 816 | 780 | 747 | 715 | 686 | 658 | 632 | 608 | 586 | 567 | 549 | 532 | 517 | 503 | 492 | 480 | 470 | 461 | 452 | 445 | 438 | 431 | 425 | 419 | |
| **Sterling** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SFD Demand | 21 | 25 | 29 | 33 | 32 | 32 | 31 | 31 | 30 | 28 | 27 | 26 | 24 | 16 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 391 |
| SFD Supply | 370 | 346 | 317 | 284 | 252 | 220 | 189 | 158 | 128 | 100 | 73 | 47 | 23 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Total SFD Demand | 1,460 | 1,690 | 1,921 | 2,062 | 1,850 | 1,634 | 1,520 | 1,405 | 1,273 | 1,146 | 1,072 | 1,017 | 910 | 635 | 370 | 182 | 160 | 118 | 73 | 47 | 41 | 39 | 36 | 33 | 30 | 27 | 25 | 23 | 22 | 21 | 20,840 |
| Cumulative SFD Demand | 1,460 | 3,149 | 5,070 | 7,132 | 8,982 | 10,616 | 12,136 | 13,541 | 14,814 | 15,960 | 17,032 | 18,049 | 18,958 | 19,594 | 19,964 | 20,146 | 20,306 | 20,423 | 20,496 | 20,543 | 20,585 | 20,624 | 20,660 | 20,693 | 20,723 | 20,749 | 20,774 | 20,797 | 20,819 | 20,840 | |
| Total SFD Supply | 21,609 | 19,920 | 17,999 | 15,937 | 14,087 | 12,453 | 10,933 | 9,528 | 8,254 | 7,109 | 6,037 | 5,020 | 4,110 | 3,475 | 3,105 | 2,923 | 2,763 | 2,645 | 2,573 | 2,525 | 2,484 | 2,445 | 2,409 | 2,376 | 2,346 | 2,320 | 2,295 | 2,272 | 2,250 | 2,229 | |

Note: Housing unit forecasts shown here are 3 year averages of the forecasts presented on Exhibits I-32 and I-33.

## Exhibit I-34

## SINGLE-FAMILY DETACHED HOUSING DEMAND PROJECTION
## LOUDOUN COUNTY AND PLANNING AREAS
## 2011 - 2040

| | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 | 2037 | 2038 | 2039 | 2040 | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Phase 2 Rail Extension | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Ashburn** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SFD Demand | 322 | 363 | 398 | 358 | 202 | 53 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1,696 |
| SFD Supply | 1,374 | 1,011 | 613 | 255 | 53 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| **Dulles** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SFD Demand | 470 | 556 | 643 | 726 | 710 | 689 | 676 | 660 | 629 | 587 | 540 | 498 | 370 | 203 | 48 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8,005 |
| SFD Supply | 7,535 | 6,979 | 6,336 | 5,610 | 4,899 | 4,210 | 3,534 | 2,875 | 2,246 | 1,658 | 1,119 | 620 | 251 | 48 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| **Leesburg** | | | | | 249 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SFD Demand | 197 | 225 | 252 | 272 | 251 | 226 | 204 | 128 | 57 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1,812 |
| SFD Supply | 1,616 | 1,390 | 1,139 | 866 | 616 | 390 | 186 | 57 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| **Northwest** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SFD Demand | 73 | 85 | 97 | 107 | 102 | 97 | 94 | 91 | 86 | 81 | 76 | 72 | 68 | 62 | 55 | 49 | 47 | 44 | 39 | 35 | 30 | 29 | 27 | 24 | 22 | 20 | 18 | 17 | 16 | 15 | 1,679 |
| SFD Supply | 3,386 | 3,301 | 3,204 | 3,096 | 2,994 | 2,897 | 2,803 | 2,712 | 2,625 | 2,544 | 2,469 | 2,397 | 2,329 | 2,267 | 2,212 | 2,163 | 2,116 | 2,072 | 2,033 | 1,998 | 1,968 | 1,939 | 1,913 | 1,888 | 1,867 | 1,847 | 1,829 | 1,812 | 1,796 | 1,781 | |
| **Potomac** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SFD Demand | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 |
| SFD Supply | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| **Route 15 North** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SFD Demand | 97 | 116 | 136 | 156 | 156 | 155 | 155 | 155 | 153 | 148 | 143 | 142 | 128 | 81 | 34 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1,955 |
| SFD Supply | 1,858 | 1,742 | 1,605 | 1,449 | 1,293 | 1,138 | 983 | 828 | 675 | 527 | 385 | 243 | 115 | 34 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| **Route 15 South** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SFD Demand | 67 | 80 | 94 | 109 | 109 | 109 | 111 | 112 | 111 | 109 | 106 | 108 | 102 | 67 | 29 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1,422 |
| SFD Supply | 1,356 | 1,275 | 1,181 | 1,072 | 963 | 853 | 743 | 631 | 520 | 412 | 305 | 198 | 96 | 29 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| **Route 7 West** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SFD Demand | 176 | 205 | 233 | 258 | 246 | 234 | 226 | 218 | 207 | 194 | 182 | 172 | 163 | 148 | 133 | 119 | 82 | 43 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3,242 |
| SFD Supply | 3,066 | 2,861 | 2,628 | 2,370 | 2,124 | 1,891 | 1,665 | 1,447 | 1,240 | 1,045 | 864 | 691 | 528 | 380 | 247 | 129 | 46 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| **Southwest** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SFD Demand | 29 | 34 | 39 | 43 | 41 | 39 | 38 | 36 | 35 | 32 | 30 | 29 | 27 | 25 | 22 | 20 | 19 | 18 | 16 | 14 | 12 | 11 | 11 | 10 | 9 | 8 | 7 | 7 | 6 | 6 | 672 |
| SFD Supply | 1,049 | 1,015 | 976 | 933 | 892 | 853 | 816 | 779 | 745 | 712 | 682 | 653 | 626 | 602 | 579 | 560 | 541 | 524 | 508 | 494 | 482 | 470 | 460 | 450 | 441 | 433 | 426 | 419 | 413 | 407 | |
| **Sterling** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SFD Demand | 21 | 25 | 29 | 33 | 32 | 32 | 32 | 31 | 31 | 29 | 28 | 27 | 23 | 14 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 391 |
| SFD Supply | 370 | 346 | 317 | 284 | 252 | 220 | 189 | 157 | 126 | 97 | 69 | 42 | 19 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Total SFD Demand | 1,460 | 1,690 | 1,921 | 2,062 | 1,850 | 1,634 | 1,535 | 1,432 | 1,309 | 1,181 | 1,104 | 1,047 | 882 | 598 | 326 | 188 | 148 | 104 | 58 | 49 | 43 | 40 | 37 | 34 | 31 | 27 | 26 | 24 | 22 | 21 | 20,881 |
| Cumulative SFD Demand | 1,460 | 3,149 | 5,070 | 7,132 | 8,982 | 10,616 | 12,151 | 13,583 | 14,892 | 16,072 | 17,176 | 18,223 | 19,105 | 19,703 | 20,030 | 20,217 | 20,365 | 20,470 | 20,528 | 20,576 | 20,619 | 20,659 | 20,697 | 20,730 | 20,761 | 20,788 | 20,814 | 20,838 | 20,860 | 20,881 | |
| Total SFD Supply | 21,609 | 19,920 | 17,999 | 15,937 | 14,087 | 12,453 | 10,918 | 9,486 | 8,177 | 6,996 | 5,893 | 4,845 | 3,964 | 3,365 | 3,039 | 2,852 | 2,704 | 2,599 | 2,541 | 2,492 | 2,450 | 2,410 | 2,372 | 2,338 | 2,308 | 2,281 | 2,255 | 2,231 | 2,209 | 2,188 | |

Note: Housing unit forecasts shown here are 3 year averages of the forecasts presented on Exhibits I-32 and I-33.

## Exhibit I-35

### SINGLE-FAMILY ATTACHED HOUSING DEMAND PROJECTION BY PLANNING AREA
### LOUDOUN COUNTY AND PLANNING AREAS
### 2011 - 2040

**Baseline Planning Area Forecast (Phase 1 Rail Extension)**

| | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 | 2037 | 2038 | 2039 | 2040 | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Ashburn** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SFA Demand | 338 | 391 | 440 | 482 | 451 | 418 | 384 | 322 | 194 | 74 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3,494 |
| SFA Supply | 3,156 | 2,765 | 2,324 | 1,842 | 1,391 | 973 | 590 | 267 | 74 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| **Dulles** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SFA Demand | 390 | 460 | 531 | 599 | 588 | 580 | 578 | 581 | 585 | 497 | 301 | 101 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5,791 |
| SFA Supply | 5,401 | 4,942 | 4,411 | 3,812 | 3,224 | 2,644 | 2,066 | 1,484 | 900 | 402 | 101 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| **Leesburg** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SFA Demand | 125 | 142 | 156 | 166 | 124 | 68 | 17 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 799 |
| SFA Supply | 674 | 532 | 375 | 209 | 85 | 17 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| **Northwest** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SFA Demand | 3 | 3 | 4 | 4 | 4 | 5 | 5 | 5 | 6 | 6 | 4 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 49 |
| SFA Supply | 47 | 43 | 40 | 35 | 31 | 26 | 22 | 17 | 11 | 6 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| **Potomac** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SFA Demand | 44 | 51 | 57 | 62 | 57 | 51 | 40 | 23 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 391 |
| SFA Supply | 347 | 296 | 239 | 178 | 121 | 70 | 30 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| **Route 15 North** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SFA Demand | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| SFA Supply | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| **Route 15 South** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SFA Demand | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 20 |
| SFA Supply | 19 | 18 | 16 | 15 | 13 | 11 | 9 | 7 | 5 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| **Route 7 West** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SFA Demand | 33 | 39 | 46 | 52 | 51 | 51 | 51 | 52 | 54 | 48 | 30 | 11 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 518 |
| SFA Supply | 485 | 445 | 400 | 348 | 297 | 246 | 195 | 143 | 90 | 41 | 11 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| **Southwest** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SFA Demand | 2 | 2 | 2 | 2 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10 |
| SFA Supply | 9 | 7 | 5 | 3 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| **Sterling** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SFA Demand | 41 | 49 | 56 | 62 | 60 | 58 | 57 | 55 | 52 | 38 | 21 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 553 |
| SFA Supply | 512 | 463 | 407 | 345 | 285 | 227 | 170 | 115 | 63 | 24 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Total SFA Demand | 979 | 1,138 | 1,293 | 1,430 | 1,340 | 1,233 | 1,133 | 1,041 | 899 | 665 | 357 | 119 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 11,628 |
| Cumulative SFA Demand | 979 | 2,117 | 3,410 | 4,840 | 6,180 | 7,413 | 8,546 | 9,587 | 10,487 | 11,152 | 11,509 | 11,628 | 11,628 | 11,628 | 11,628 | 11,628 | 11,628 | 11,628 | 11,628 | 11,628 | 11,628 | 11,628 | 11,628 | 11,628 | 11,628 | 11,628 | 11,628 | 11,628 | 11,628 | 11,628 | |
| Total SFA Supply | 10,650 | 9,512 | 8,218 | 6,788 | 5,448 | 4,215 | 3,082 | 2,041 | 1,141 | 476 | 119 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |

Note: Housing unit forecasts shown here are 3 year averages of the forecasts presented on Exhibits I-32 and I-33.

## Exhibit I-35

## SINGLE-FAMILY ATTACHED HOUSING DEMAND PROJECTION BY PLANNING AREA
## LOUDOUN COUNTY AND PLANNING AREAS
## 2011 - 2040

**Phase 2 Rail Extension**

| | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Ashburn** | | | | | | | | | | | | | | | |
| SFA Demand | 358 | 415 | 469 | 517 | 489 | 459 | 434 | 404 | 354 | 217 | 88 | 0 | 0 | 0 | 0 |
| SFA Supply | 3,845 | 3,430 | 2,961 | 2,444 | 1,956 | 1,497 | 1,063 | 658 | 305 | 88 | 0 | 0 | 0 | 0 | 0 |
| **Dulles** | | | | | | | | | | | | | | | |
| SFA Demand | 376 | 442 | 509 | 572 | 559 | 547 | 545 | 545 | 541 | 551 | 389 | 212 | 16 | 0 | 0 |
| SFA Supply | 5,429 | 4,987 | 4,477 | 3,905 | 3,346 | 2,799 | 2,254 | 1,709 | 1,168 | 617 | 228 | 16 | 0 | 0 | 0 |
| **Leesburg** | | | | | 146 | | | | | | | | | | |
| SFA Demand | 123 | 140 | 154 | 164 | 127 | 72 | 20 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SFA Supply | 678 | 538 | 383 | 219 | 92 | 20 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Northwest** | | | | | | | | | | | | | | | |
| SFA Demand | 3 | 3 | 4 | 4 | 4 | 4 | 4 | 5 | 5 | 6 | 5 | 3 | 1 | 0 | 0 |
| SFA Supply | 47 | 44 | 40 | 36 | 32 | 28 | 24 | 19 | 14 | 9 | 4 | 1 | 0 | 0 | 0 |
| **Potomac** | | | | | | | | | | | | | | | |
| SFA Demand | 43 | 50 | 56 | 60 | 55 | 50 | 42 | 26 | 10 | 0 | 0 | 0 | 0 | 0 | 0 |
| SFA Supply | 349 | 299 | 243 | 183 | 128 | 78 | 35 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Route 15 North** | | | | | | | | | | | | | | | |
| SFA Demand | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SFA Supply | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Route 15 South** | | | | | | | | | | | | | | | |
| SFA Demand | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 1 | 0 | 0 | 0 |
| SFA Supply | 19 | 18 | 16 | 15 | 13 | 12 | 10 | 8 | 6 | 4 | 2 | 0 | 0 | 0 | 0 |
| **Route 7 West** | | | | | | | | | | | | | | | |
| SFA Demand | 32 | 38 | 44 | 49 | 48 | 48 | 48 | 49 | 49 | 52 | 38 | 22 | 3 | 0 | 0 |
| SFA Supply | 487 | 449 | 406 | 357 | 308 | 261 | 213 | 164 | 115 | 64 | 25 | 3 | 0 | 0 | 0 |
| **Southwest** | | | | | | | | | | | | | | | |
| SFA Demand | 1 | 2 | 2 | 2 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SFA Supply | 9 | 7 | 5 | 3 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Sterling** | | | | | | | | | | | | | | | |
| SFA Demand | 40 | 47 | 54 | 60 | 58 | 55 | 54 | 53 | 50 | 45 | 28 | 12 | 0 | 0 | 0 |
| SFA Supply | 514 | 467 | 414 | 354 | 296 | 241 | 187 | 135 | 84 | 40 | 12 | 0 | 0 | 0 | 0 |
| Total SFA Demand | 979 | 1,138 | 1,293 | 1,430 | 1,344 | 1,237 | 1,150 | 1,082 | 1,011 | 872 | 550 | 250 | 20 | 0 | 0 |
| Cumulative SFA Demand | 979 | 2,117 | 3,410 | 4,840 | 6,184 | 7,421 | 8,571 | 9,653 | 10,664 | 11,536 | 12,086 | 12,336 | 12,356 | 12,356 | 12,356 |
| Total SFA Supply | 11,378 | 10,240 | 8,946 | 7,516 | 6,172 | 4,936 | 3,785 | 2,703 | 1,692 | 821 | 271 | 20 | 0 | 0 | 0 |

| | 2026 | 2027 | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 | 2037 | 2038 | 2039 | 2040 | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Ashburn** | | | | | | | | | | | | | | | | |
| SFA Demand | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4,203 |
| SFA Supply | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| **Dulles** | | | | | | | | | | | | | | | | |
| SFA Demand | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5,805 |
| SFA Supply | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| **Leesburg** | | | | | | | | | | | | | | | | |
| SFA Demand | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 801 |
| SFA Supply | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| **Northwest** | | | | | | | | | | | | | | | | |
| SFA Demand | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 49 |
| SFA Supply | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| **Potomac** | | | | | | | | | | | | | | | | |
| SFA Demand | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 392 |
| SFA Supply | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| **Route 15 North** | | | | | | | | | | | | | | | | |
| SFA Demand | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| SFA Supply | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| **Route 15 South** | | | | | | | | | | | | | | | | |
| SFA Demand | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 20 |
| SFA Supply | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| **Route 7 West** | | | | | | | | | | | | | | | | |
| SFA Demand | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 519 |
| SFA Supply | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| **Southwest** | | | | | | | | | | | | | | | | |
| SFA Demand | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10 |
| SFA Supply | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| **Sterling** | | | | | | | | | | | | | | | | |
| SFA Demand | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 554 |
| SFA Supply | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Total SFA Demand | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12,356 |
| Cumulative SFA Demand | 12,356 | 12,356 | 12,356 | 12,356 | 12,356 | 12,356 | 12,356 | 12,356 | 12,356 | 12,356 | 12,356 | 12,356 | 12,356 | 12,356 | 12,356 | |
| Total SFA Supply | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |

Note: Housing unit forecasts shown here are 3 year averages of the forecasts presented on Exhibits I-32 and I-33.

## Exhibit I-36

## MULTIFAMILY HOUSING DEMAND PROJECTION BY PLANNING AREA
## LOUDOUN COUNTY AND PLANNING AREAS
## 2011 - 2040

| | Baseline Planning Area Forecast (Phase 1 Rail Extension) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 | 2037 | 2038 | 2039 | 2040 | Total |
| **Ashburn** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MF Demand | 245 | 294 | 353 | 410 | 418 | 423 | 433 | 443 | 442 | 454 | 466 | 487 | 503 | 493 | 481 | 459 | 462 | 464 | 441 | 417 | 392 | 393 | 393 | 379 | 260 | 128 | 9 | 0 | 0 | 0 | 10,541 |
| MF Supply | 10,296 | 10,002 | 9,649 | 9,240 | 8,822 | 8,399 | 7,965 | 7,522 | 7,080 | 6,626 | 6,160 | 5,673 | 5,170 | 4,677 | 4,196 | 3,737 | 3,275 | 2,811 | 2,371 | 1,954 | 1,562 | 1,169 | 776 | 397 | 137 | 9 | 0 | 0 | 0 | 0 | |
| **Dulles** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MF Demand | 96 | 137 | 176 | 210 | 219 | 224 | 230 | 236 | 236 | 243 | 249 | 260 | 269 | 263 | 257 | 246 | 247 | 248 | 236 | 223 | 210 | 210 | 210 | 203 | 139 | 69 | 13 | 0 | 0 | 0 | 5,558 |
| MF Supply | 5,462 | 5,325 | 5,149 | 4,939 | 4,720 | 4,497 | 4,266 | 4,030 | 3,794 | 3,551 | 3,303 | 3,042 | 2,773 | 2,510 | 2,253 | 2,007 | 1,760 | 1,512 | 1,276 | 1,054 | 844 | 634 | 424 | 221 | 82 | 13 | 0 | 0 | 0 | 0 | |
| **Leesburg** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MF Demand | 41 | 52 | 64 | 75 | 77 | 78 | 80 | 82 | 82 | 84 | 87 | 91 | 93 | 92 | 90 | 85 | 86 | 86 | 82 | 77 | 73 | 73 | 73 | 70 | 48 | 24 | 3 | 0 | 0 | 0 | 1,950 |
| MF Supply | 1,909 | 1,857 | 1,793 | 1,718 | 1,641 | 1,562 | 1,482 | 1,399 | 1,317 | 1,233 | 1,146 | 1,056 | 962 | 871 | 781 | 696 | 610 | 524 | 442 | 364 | 291 | 218 | 145 | 75 | 27 | 3 | 0 | 0 | 0 | 0 | |
| **Northwest** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MF Demand | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MF Supply | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| **Potomac** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MF Demand | 14 | 11 | 10 | 10 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 10 | 10 | 10 | 9 | 9 | 9 | 9 | 9 | 8 | 8 | 8 | 8 | 7 | 5 | 0 | 0 | 0 | 0 | 0 | 228 |
| MF Supply | 214 | 202 | 192 | 182 | 172 | 163 | 154 | 145 | 137 | 128 | 118 | 109 | 99 | 89 | 80 | 71 | 62 | 53 | 44 | 36 | 28 | 21 | 13 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | |
| **Route 15 North** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MF Demand | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MF Supply | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| **Route 15 South** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MF Demand | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MF Supply | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| **Route 7 West** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MF Demand | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MF Supply | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| **Southwest** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MF Demand | 1 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 1 | 1 | 0 | 0 | 0 | 0 | 48 |
| MF Supply | 47 | 45 | 44 | 42 | 40 | 38 | 36 | 34 | 32 | 30 | 28 | 26 | 24 | 21 | 19 | 17 | 15 | 13 | 11 | 9 | 7 | 5 | 4 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | |
| **Sterling** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MF Demand | 96 | 130 | 163 | 194 | 201 | 205 | 211 | 216 | 216 | 222 | 227 | 238 | 246 | 241 | 235 | 224 | 226 | 227 | 215 | 204 | 192 | 192 | 192 | 185 | 127 | 63 | 10 | 0 | 0 | 0 | 5,097 |
| MF Supply | 5,001 | 4,871 | 4,707 | 4,513 | 4,312 | 4,107 | 3,897 | 3,681 | 3,465 | 3,243 | 3,016 | 2,778 | 2,532 | 2,291 | 2,056 | 1,832 | 1,606 | 1,379 | 1,164 | 961 | 769 | 577 | 385 | 200 | 73 | 10 | 0 | 0 | 0 | 0 | |
| Total MF Demand | 494 | 626 | 767 | 901 | 926 | 941 | 965 | 989 | 986 | 1,015 | 1,040 | 1,088 | 1,123 | 1,100 | 1,075 | 1,026 | 1,031 | 1,036 | 984 | 931 | 876 | 877 | 878 | 847 | 580 | 284 | 35 | 0 | 0 | 0 | 23,422 |
| Cumulative MF Demand | 494 | 1,120 | 1,888 | 2,789 | 3,715 | 4,656 | 5,622 | 6,611 | 7,597 | 8,611 | 9,651 | 10,739 | 11,862 | 12,962 | 14,038 | 15,064 | 16,095 | 17,131 | 18,114 | 19,045 | 19,921 | 20,798 | 21,677 | 22,523 | 23,103 | 23,387 | 23,422 | 23,422 | 23,422 | 23,422 | |
| Total MF Supply | 22,928 | 22,302 | 21,535 | 20,633 | 19,708 | 18,766 | 17,801 | 16,812 | 15,826 | 14,811 | 13,771 | 12,683 | 11,560 | 10,460 | 9,385 | 8,359 | 7,328 | 6,292 | 5,308 | 4,377 | 3,501 | 2,624 | 1,746 | 899 | 319 | 35 | 0 | 0 | 0 | 0 | |

Note: Housing unit forecasts shown here are 3 year averages of the forecasts presented on Exhibits I-32 and I-33.

## Exhibit I-36

### MULTIFAMILY HOUSING DEMAND PROJECTION BY PLANNING AREA
### LOUDOUN COUNTY AND PLANNING AREAS
### 2011 - 2040

**Phase 2 Rail Extension**

| | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 | 2037 | 2038 | 2039 | 2040 | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Ashburn** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MF Demand | 257 | 313 | 377 | 440 | 449 | 456 | 528 | 601 | 658 | 654 | 663 | 686 | 673 | 615 | 562 | 543 | 553 | 555 | 527 | 499 | 469 | 470 | 468 | 415 | 358 | 271 | 167 | 66 | 0 | 0 | 13,296 |
| MF Supply | 13,039 | 12,726 | 12,348 | 11,908 | 11,459 | 11,003 | 10,475 | 9,874 | 9,216 | 8,562 | 7,899 | 7,212 | 6,539 | 5,924 | 5,362 | 4,819 | 4,266 | 3,711 | 3,184 | 2,685 | 2,216 | 1,746 | 1,278 | 863 | 505 | 234 | 66 | 0 | 0 | 0 | |
| **Dulles** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MF Demand | 84 | 118 | 151 | 180 | 187 | 191 | 196 | 202 | 202 | 203 | 210 | 223 | 235 | 229 | 227 | 224 | 232 | 238 | 230 | 224 | 217 | 225 | 234 | 235 | 236 | 219 | 143 | 70 | 0 | 0 | 5,566 |
| MF Supply | 5,482 | 5,364 | 5,213 | 5,034 | 4,847 | 4,656 | 4,460 | 4,258 | 4,055 | 3,853 | 3,643 | 3,420 | 3,185 | 2,955 | 2,729 | 2,505 | 2,273 | 2,035 | 1,804 | 1,581 | 1,364 | 1,139 | 905 | 669 | 433 | 214 | 70 | 0 | 0 | 0 | |
| **Leesburg** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MF Demand | 37 | 46 | 55 | 64 | 66 | 67 | 69 | 70 | 70 | 71 | 73 | 77 | 82 | 80 | 79 | 78 | 81 | 83 | 80 | 78 | 75 | 78 | 81 | 82 | 82 | 76 | 50 | 22 | 0 | 0 | 1,953 |
| MF Supply | 1,916 | 1,871 | 1,815 | 1,751 | 1,685 | 1,618 | 1,549 | 1,479 | 1,408 | 1,338 | 1,265 | 1,187 | 1,106 | 1,026 | 947 | 869 | 788 | 706 | 626 | 548 | 472 | 394 | 313 | 231 | 149 | 72 | 22 | 0 | 0 | 0 | |
| **Northwest** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MF Demand | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MF Supply | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| **Potomac** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MF Demand | 14 | 11 | 9 | 9 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 9 | 8 | 8 | 8 | 9 | 9 | 8 | 8 | 8 | 8 | 9 | 9 | 9 | 8 | 5 | 0 | 0 | 0 | 228 |
| MF Supply | 215 | 204 | 195 | 185 | 177 | 169 | 162 | 154 | 147 | 139 | 131 | 123 | 114 | 106 | 98 | 89 | 81 | 72 | 64 | 55 | 47 | 39 | 31 | 22 | 13 | 5 | 0 | 0 | 0 | 0 | |
| **Route 15 North** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MF Demand | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MF Supply | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| **Route 15 South** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MF Demand | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MF Supply | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| **Route 7 West** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MF Demand | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MF Supply | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| **Southwest** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MF Demand | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 1 | 1 | 0 | 0 | 48 |
| MF Supply | 47 | 46 | 44 | 43 | 41 | 40 | 38 | 36 | 34 | 33 | 31 | 29 | 27 | 25 | 23 | 21 | 19 | 17 | 15 | 13 | 12 | 10 | 8 | 6 | 4 | 2 | 1 | 0 | 0 | 0 | |
| **Sterling** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MF Demand | 101 | 138 | 174 | 206 | 214 | 218 | 224 | 230 | 231 | 231 | 240 | 254 | 268 | 292 | 319 | 344 | 349 | 349 | 328 | 307 | 283 | 246 | 209 | 168 | 160 | 142 | 90 | 44 | 0 | 0 | 6,359 |
| MF Supply | 6,258 | 6,120 | 5,946 | 5,740 | 5,526 | 5,308 | 5,084 | 4,854 | 4,623 | 4,392 | 4,152 | 3,898 | 3,630 | 3,338 | 3,020 | 2,676 | 2,327 | 1,978 | 1,649 | 1,342 | 1,059 | 813 | 604 | 436 | 276 | 134 | 44 | 0 | 0 | 0 | |
| Total MF Demand | 494 | 626 | 767 | 901 | 926 | 941 | 1,026 | 1,113 | 1,171 | 1,168 | 1,195 | 1,250 | 1,269 | 1,226 | 1,197 | 1,199 | 1,226 | 1,235 | 1,177 | 1,117 | 1,055 | 1,029 | 1,003 | 911 | 848 | 719 | 457 | 204 | 0 | 0 | 27,450 |
| Cumulative MF Demand | 494 | 1,120 | 1,888 | 2,789 | 3,715 | 4,656 | 5,683 | 6,796 | 7,967 | 9,135 | 10,330 | 11,580 | 12,850 | 14,076 | 15,272 | 16,471 | 17,697 | 18,932 | 20,109 | 21,225 | 22,280 | 23,310 | 24,313 | 25,223 | 26,071 | 26,789 | 27,247 | 27,450 | 27,450 | 27,450 | |
| Total MF Supply | 26,956 | 26,330 | 25,562 | 24,661 | 23,735 | 22,794 | 21,768 | 20,654 | 19,484 | 18,316 | 17,120 | 15,870 | 14,601 | 13,375 | 12,178 | 10,979 | 9,754 | 8,518 | 7,342 | 6,225 | 5,170 | 4,141 | 3,138 | 2,227 | 1,380 | 661 | 204 | 0 | 0 | 0 | |

Note: Housing unit forecasts shown here are 3 year averages of the forecasts presented on Exhibits I-32 and I-33.

## Exhibit I-37

### TOTAL ANNUAL PROJECTED NEW HOUSING UNITS BY PLANNING AREA
### LOUDOUN COUNTY
### 2010 - 2040

**Baseline Planning Area Forecast (Phase 1 Rail Extension)**

| | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 | 2037 | 2038 | 2039 | 2040 | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ashburn | 905 | 1,048 | 1,191 | 1,249 | 1,071 | 895 | 817 | 766 | 635 | 528 | 466 | 487 | 503 | 493 | 481 | 459 | 462 | 464 | 441 | 417 | 392 | 393 | 393 | 379 | 260 | 128 | 9 | 0 | 0 | 0 | 15,731 |
| Dulles | 956 | 1,152 | 1,350 | 1,535 | 1,518 | 1,493 | 1,477 | 1,464 | 1,431 | 1,311 | 1,075 | 848 | 662 | 494 | 336 | 246 | 247 | 248 | 236 | 223 | 210 | 210 | 210 | 203 | 139 | 69 | 13 | 0 | 0 | 0 | 19,354 |
| Leesburg | 363 | 420 | 472 | 514 | 452 | 373 | 299 | 211 | 141 | 84 | 87 | 91 | 93 | 92 | 90 | 85 | 86 | 86 | 82 | 77 | 73 | 73 | 73 | 70 | 48 | 24 | 3 | 0 | 0 | 0 | 4,562 |
| Northwest | 76 | 89 | 101 | 112 | 107 | 102 | 98 | 94 | 89 | 84 | 77 | 71 | 66 | 60 | 54 | 48 | 45 | 43 | 38 | 34 | 30 | 28 | 26 | 24 | 21 | 19 | 18 | 17 | 15 | 15 | 1,698 |
| Potomac | 66 | 62 | 67 | 72 | 66 | 60 | 49 | 32 | 16 | 9 | 9 | 10 | 10 | 10 | 9 | 9 | 9 | 9 | 9 | 8 | 8 | 8 | 8 | 7 | 5 | 0 | 0 | 0 | 0 | 0 | 627 |
| Route 15 North | 98 | 117 | 137 | 156 | 156 | 155 | 153 | 152 | 148 | 143 | 138 | 136 | 135 | 89 | 43 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1,957 |
| Route 15 South | 68 | 81 | 96 | 111 | 111 | 111 | 111 | 111 | 110 | 107 | 104 | 104 | 107 | 73 | 37 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1,442 |
| Route 7 West | 209 | 244 | 278 | 309 | 297 | 284 | 275 | 266 | 255 | 237 | 206 | 179 | 159 | 143 | 129 | 115 | 96 | 58 | 20 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3,760 |
| Southwest | 32 | 37 | 42 | 47 | 45 | 42 | 40 | 38 | 36 | 33 | 32 | 30 | 29 | 26 | 24 | 21 | 20 | 19 | 17 | 15 | 14 | 13 | 12 | 11 | 10 | 8 | 7 | 7 | 6 | 6 | 718 |
| Sterling | 158 | 203 | 248 | 289 | 293 | 295 | 299 | 302 | 298 | 289 | 275 | 268 | 270 | 256 | 242 | 224 | 226 | 227 | 215 | 204 | 192 | 192 | 192 | 185 | 127 | 63 | 10 | 0 | 0 | 0 | 6,041 |
| Total | 2,932 | 3,454 | 3,981 | 4,394 | 4,115 | 3,809 | 3,618 | 3,436 | 3,159 | 2,826 | 2,468 | 2,224 | 2,033 | 1,736 | 1,445 | 1,208 | 1,191 | 1,154 | 1,057 | 978 | 917 | 916 | 915 | 880 | 609 | 311 | 60 | 23 | 22 | 21 | 55,890 |
| Cumulative | 2,932 | 6,386 | 10,368 | 14,761 | 18,877 | 22,686 | 26,304 | 29,739 | 32,898 | 35,724 | 38,192 | 40,416 | 42,449 | 44,185 | 45,630 | 46,838 | 48,029 | 49,182 | 50,239 | 51,217 | 52,134 | 53,050 | 53,965 | 54,844 | 55,454 | 55,765 | 55,825 | 55,848 | 55,869 | 55,890 | |

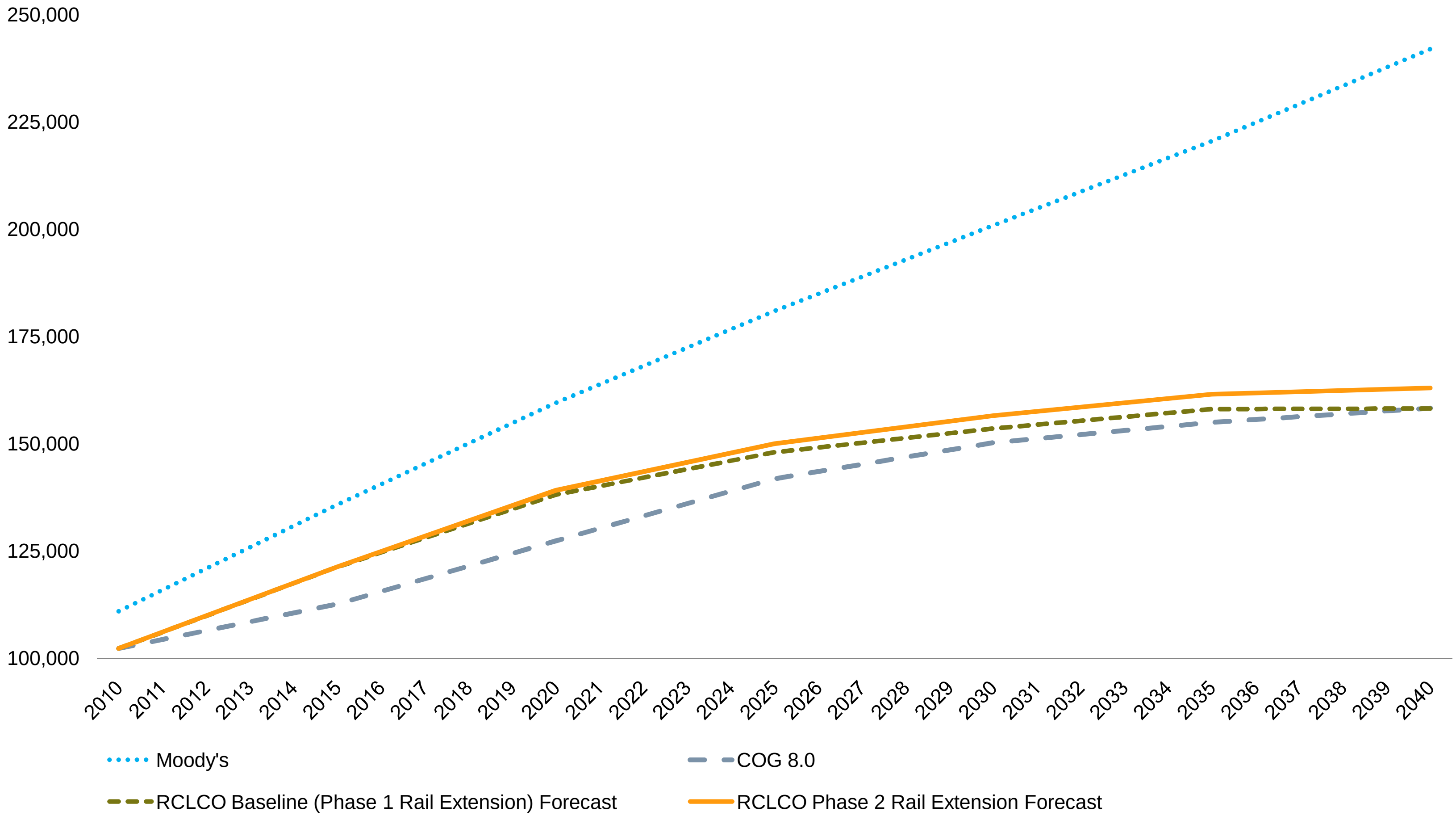
**Phase 2 Rail Extension**

| | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 | 2037 | 2038 | 2039 | 2040 | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ashburn | 937 | 1,091 | 1,245 | 1,314 | 1,140 | 968 | 962 | 1,006 | 1,012 | 871 | 751 | 686 | 673 | 615 | 562 | 543 | 553 | 555 | 527 | 499 | 469 | 470 | 468 | 415 | 358 | 271 | 167 | 66 | 0 | 0 | 19,195 |
| Dulles | 930 | 1,116 | 1,303 | 1,478 | 1,456 | 1,427 | 1,417 | 1,406 | 1,373 | 1,341 | 1,138 | 933 | 621 | 432 | 274 | 224 | 232 | 238 | 230 | 224 | 217 | 225 | 234 | 235 | 236 | 219 | 143 | 70 | 0 | 0 | 19,376 |
| Leesburg | 357 | 411 | 461 | 501 | 444 | 365 | 293 | 199 | 128 | 71 | 73 | 77 | 82 | 80 | 79 | 78 | 81 | 83 | 80 | 78 | 75 | 78 | 81 | 82 | 82 | 76 | 50 | 22 | 0 | 0 | 4,567 |
| Northwest | 76 | 88 | 101 | 111 | 106 | 101 | 98 | 95 | 91 | 87 | 80 | 75 | 69 | 62 | 55 | 49 | 47 | 44 | 39 | 35 | 30 | 29 | 27 | 24 | 22 | 20 | 18 | 17 | 16 | 15 | 1,728 |
| Potomac | 65 | 60 | 65 | 69 | 64 | 58 | 50 | 33 | 17 | 8 | 8 | 8 | 9 | 8 | 8 | 8 | 9 | 9 | 8 | 8 | 8 | 8 | 9 | 9 | 9 | 8 | 5 | 0 | 0 | 0 | 628 |
| Route 15 North | 98 | 117 | 137 | 156 | 156 | 155 | 155 | 155 | 153 | 148 | 143 | 142 | 128 | 81 | 34 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1,957 |
| Route 15 South | 68 | 81 | 96 | 110 | 111 | 111 | 112 | 114 | 113 | 111 | 108 | 109 | 102 | 67 | 29 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1,442 |
| Route 7 West | 208 | 243 | 277 | 307 | 294 | 281 | 274 | 267 | 256 | 246 | 220 | 194 | 166 | 148 | 133 | 119 | 82 | 43 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3,761 |
| Southwest | 32 | 37 | 42 | 47 | 44 | 42 | 40 | 38 | 36 | 34 | 32 | 31 | 29 | 27 | 24 | 22 | 21 | 20 | 18 | 16 | 14 | 13 | 13 | 12 | 11 | 10 | 9 | 7 | 6 | 6 | 730 |
| Sterling | 162 | 209 | 256 | 299 | 304 | 305 | 310 | 314 | 311 | 305 | 295 | 293 | 291 | 306 | 324 | 344 | 349 | 349 | 328 | 307 | 283 | 246 | 209 | 168 | 160 | 142 | 90 | 44 | 0 | 0 | 7,304 |
| Total | 2,932 | 3,454 | 3,981 | 4,394 | 4,119 | 3,813 | 3,711 | 3,627 | 3,491 | 3,221 | 2,849 | 2,548 | 2,171 | 1,824 | 1,523 | 1,386 | 1,374 | 1,340 | 1,235 | 1,165 | 1,098 | 1,069 | 1,040 | 945 | 878 | 746 | 483 | 227 | 22 | 21 | 60,688 |
| Cumulative | 2,932 | 6,386 | 10,368 | 14,761 | 18,880 | 22,693 | 26,404 | 30,031 | 33,522 | 36,743 | 39,591 | 42,140 | 44,311 | 46,135 | 47,658 | 49,044 | 50,418 | 51,758 | 52,993 | 54,158 | 55,255 | 56,325 | 57,365 | 58,310 | 59,188 | 59,934 | 60,417 | 60,644 | 60,666 | 60,688 | |

Note: Housing unit forecasts shown here are 3 year averages of the forecasts presented on Exhibits I-32 and I-33.

*Exhibit I-38*

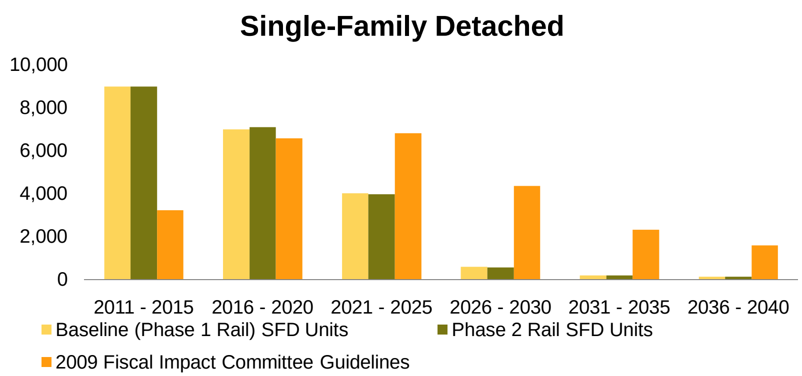
**HOUSEHOLD GROWTH FORECAST**
**LOUDOUN COUNTY**
**2010 - 2040**

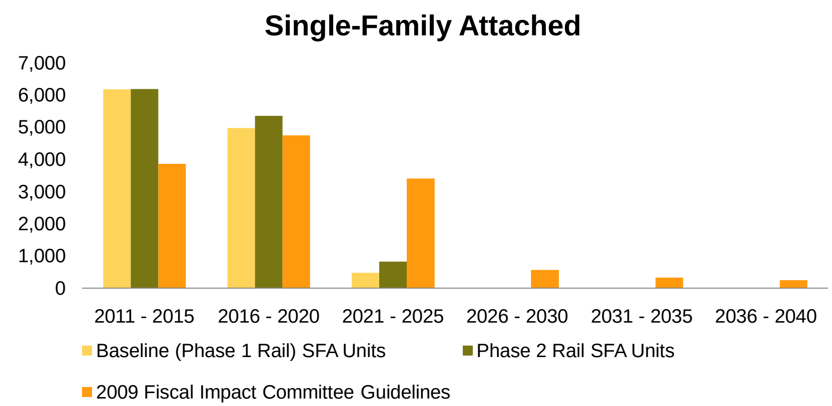



Summary Graph
04-8824.05
Printed: 4/15/2011

*Exhibit I-39*

**HOUSEHOLD GROWTH FORECAST**
**LOUDOUN COUNTY**
**2010 - 2040**



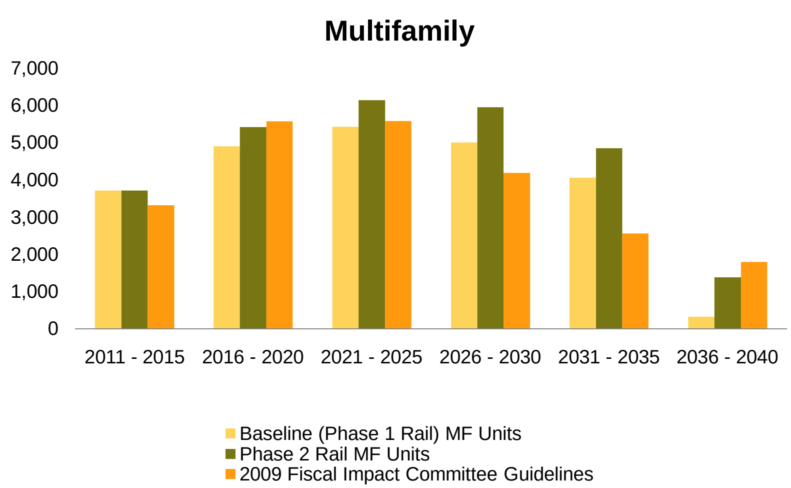



*Exhibit I-40*

**COUNTYWIDE HOUSEHOLD GROWTH FORECAST UNDER BASELINE AND PHASE 2 EXTENSION SCENARIOS**
**LOUDOUN COUNTY**
**2011 - 2040**

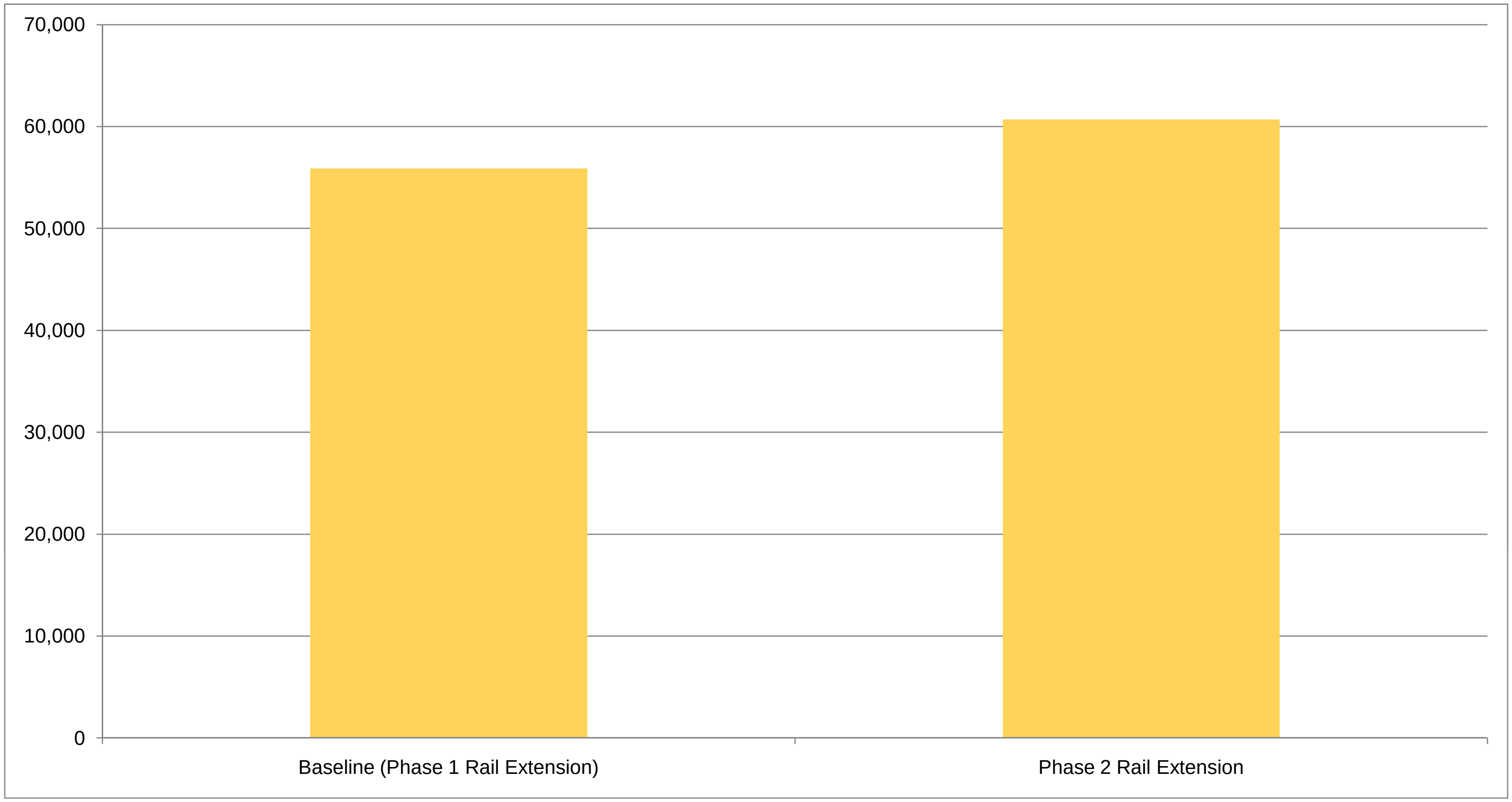


*Exhibit I-41*

**REMAINING LAND SUPPLY**
**LOUDOUN COUNTY**
**2010 - 2040**

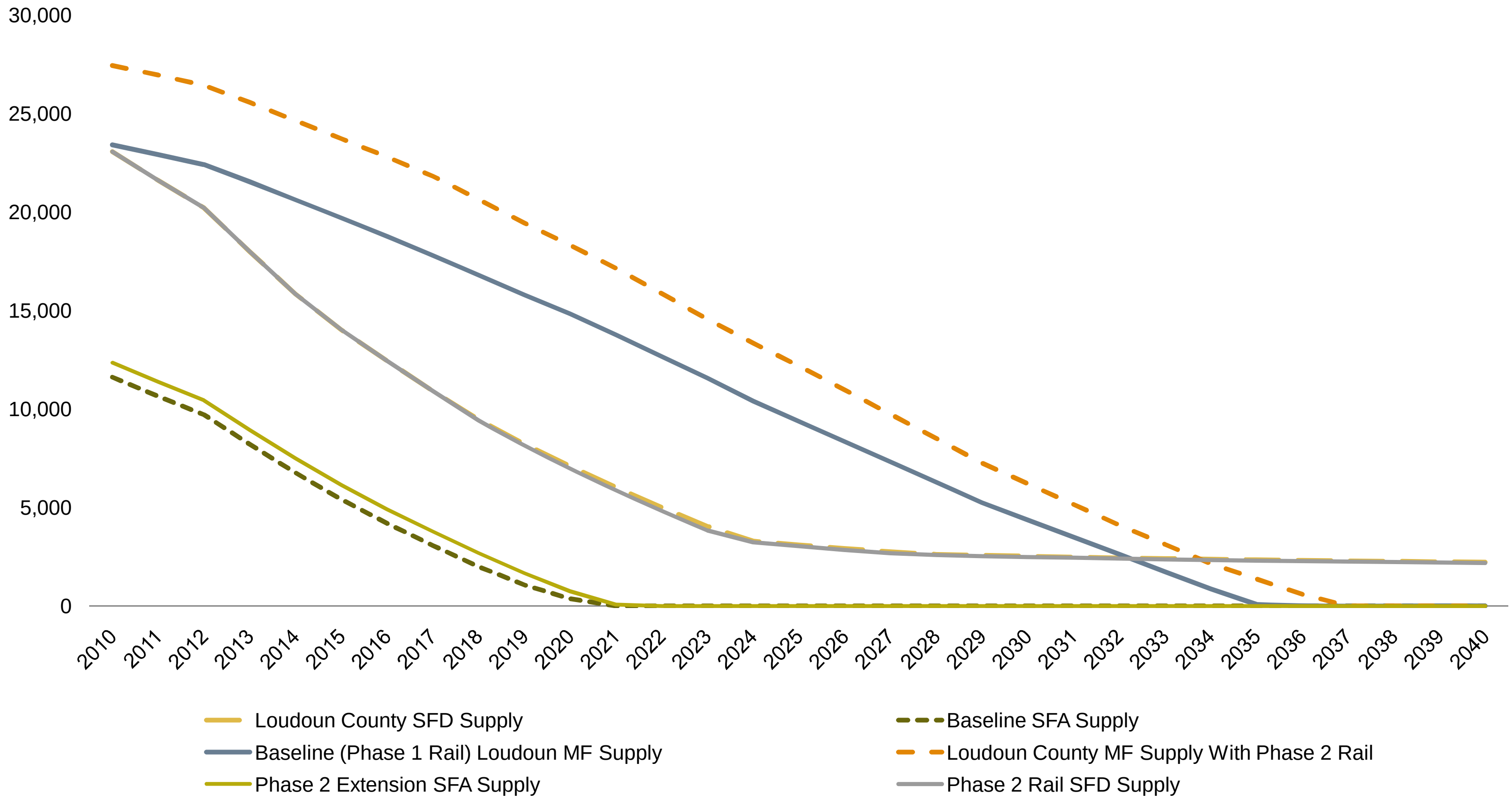


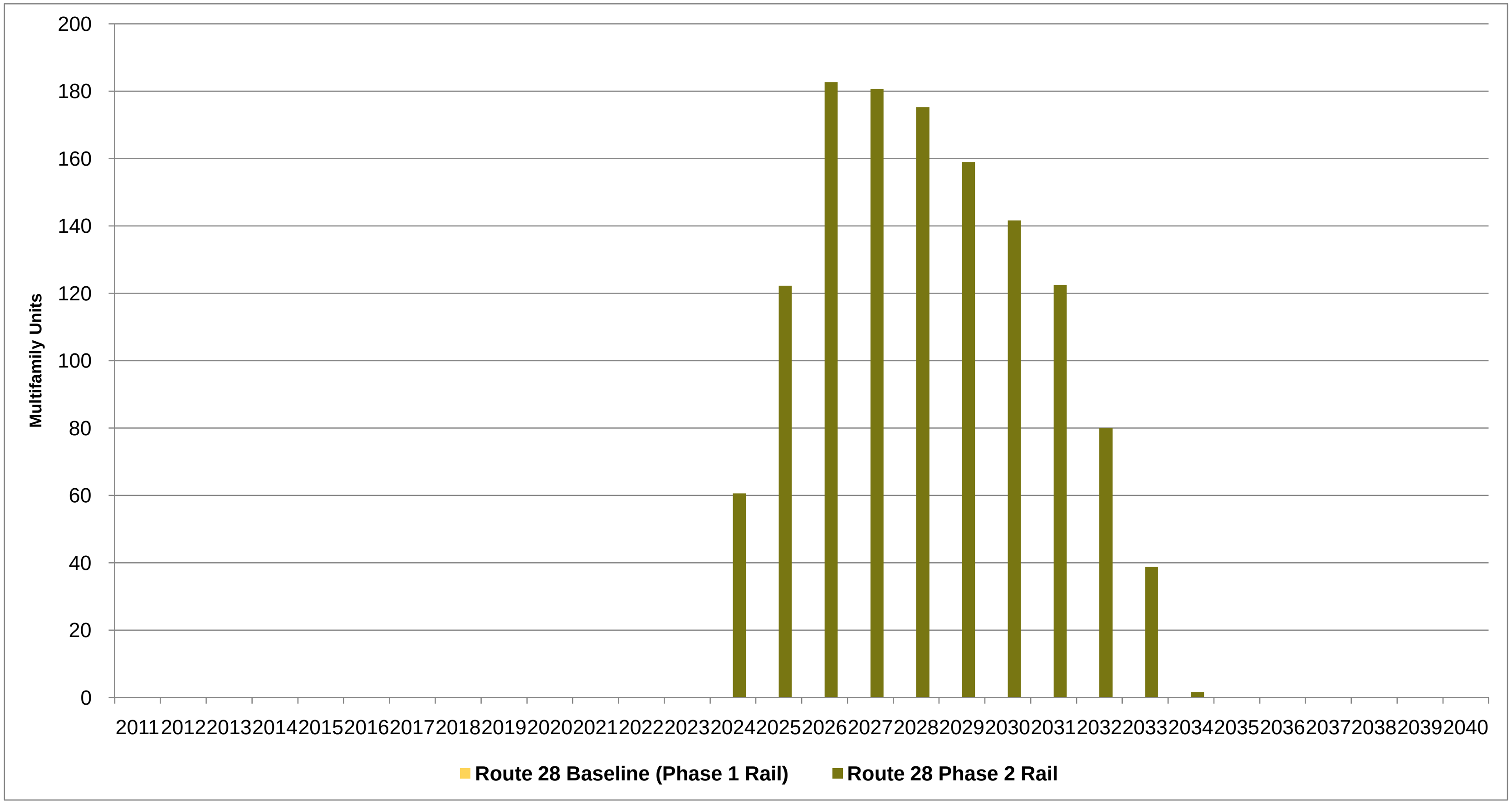
*Exhibit I-42*

**STATION AREA RESIDENTIAL DEVELOPMENT FORECASTS**
**ROUTE 28 AND ROUTE 772 STATIONS**
**2010 - 2040**

| | Route 28 | | | | Route 772 | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Baseline (Phase 1 Rail) | | Phase 2 Rail | | Baseline (Phase 1 Rail) | | Phase 2 Rail | | Baseline (Phase 1 Rail) | | Phase 2 Rail | |
| | MF Demand | Capacity | MF Demand | Capacity | MF Demand | Capacity | MF Demand | Capacity | SFA Demand | Capacity | SFA Demand | Capacity |
| 2009 | | 0 | | 1,265 | | 4,871 | | 7,634 | | 572 | | 1,300 |
| 2010 | 0 | 0 | 0 | 1,265 | 88 | 4,784 | 91 | 7,544 | 53 | 519 | 56 | 1,244 |
| 2011 | 0 | 0 | 0 | 1,265 | 103 | 4,681 | 117 | 7,426 | 50 | 469 | 86 | 1,158 |
| 2012 | 0 | 0 | 0 | 1,265 | 134 | 4,548 | 168 | 7,258 | 58 | 411 | 122 | 1,036 |
| 2013 | 0 | 0 | 0 | 1,265 | 160 | 4,388 | 215 | 7,043 | 65 | 346 | 139 | 896 |
| 2014 | 0 | 0 | 0 | 1,265 | 186 | 4,202 | 251 | 6,792 | 72 | 274 | 154 | 743 |
| 2015 | 0 | 0 | 0 | 1,265 | 190 | 4,012 | 256 | 6,536 | 67 | 207 | 145 | 598 |
| 2016 | 0 | 0 | 0 | 1,265 | 192 | 3,820 | 260 | 6,277 | 62 | 145 | 136 | 462 |
| 2017 | 0 | 0 | 0 | 1,265 | 197 | 3,623 | 327 | 5,950 | 57 | 88 | 129 | 332 |
| 2018 | 0 | 0 | 0 | 1,265 | 201 | 3,422 | 395 | 5,555 | 48 | 40 | 120 | 212 |
| 2019 | 0 | 0 | 0 | 1,265 | 200 | 3,222 | 451 | 5,105 | 29 | 11 | 105 | 107 |
| 2020 | 0 | 0 | 0 | 1,265 | 206 | 3,015 | 445 | 4,660 | 11 | 0 | 64 | 43 |
| 2021 | 0 | 0 | 0 | 1,265 | 211 | 2,804 | 445 | 4,215 | 0 | 0 | 43 | 0 |
| 2022 | 0 | 0 | 0 | 1,265 | 221 | 2,583 | 455 | 3,760 | 0 | 0 | 0 | 0 |
| 2023 | 0 | 0 | 0 | 1,265 | 228 | 2,355 | 429 | 3,331 | 0 | 0 | 0 | 0 |
| 2024 | 0 | 0 | 61 | 1,204 | 224 | 2,131 | 377 | 2,954 | 0 | 0 | 0 | 0 |
| 2025 | 0 | 0 | 122 | 1,082 | 218 | 1,913 | 327 | 2,627 | 0 | 0 | 0 | 0 |
| 2026 | 0 | 0 | 183 | 899 | 208 | 1,704 | 313 | 2,314 | 0 | 0 | 0 | 0 |
| 2027 | 0 | 0 | 181 | 719 | 209 | 1,495 | 314 | 2,000 | 0 | 0 | 0 | 0 |
| 2028 | 0 | 0 | 175 | 544 | 210 | 1,284 | 311 | 1,689 | 0 | 0 | 0 | 0 |
| 2029 | 0 | 0 | 159 | 385 | 200 | 1,084 | 290 | 1,399 | 0 | 0 | 0 | 0 |
| 2030 | 0 | 0 | 142 | 243 | 189 | 895 | 269 | 1,129 | 0 | 0 | 0 | 0 |
| 2031 | 0 | 0 | 123 | 120 | 178 | 717 | 247 | 883 | 0 | 0 | 0 | 0 |
| 2032 | 0 | 0 | 80 | 40 | 178 | 539 | 239 | 644 | 0 | 0 | 0 | 0 |
| 2033 | 0 | 0 | 39 | 2 | 178 | 361 | 227 | 417 | 0 | 0 | 0 | 0 |
| 2034 | 0 | 0 | 2 | 0 | 172 | 189 | 171 | 246 | 0 | 0 | 0 | 0 |
| 2035 | 0 | 0 | 0 | 0 | 118 | 71 | 118 | 128 | 0 | 0 | 0 | 0 |
| 2036 | 0 | 0 | 0 | 0 | 58 | 13 | 64 | 64 | 0 | 0 | 0 | 0 |
| 2037 | 0 | 0 | 0 | 0 | 13 | 0 | 40 | 24 | 0 | 0 | 0 | 0 |
| 2038 | 0 | 0 | 0 | 0 | 0 | 0 | 16 | 8 | 0 | 0 | 0 | 0 |
| 2039 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 0 | 0 | 0 | 0 | 0 |
| 2040 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Total (2011-2040)** | **0** | | **1,265** | | **4,784** | | **7,544** | | **519** | | **1,244** | |

*Exhibit I-43*

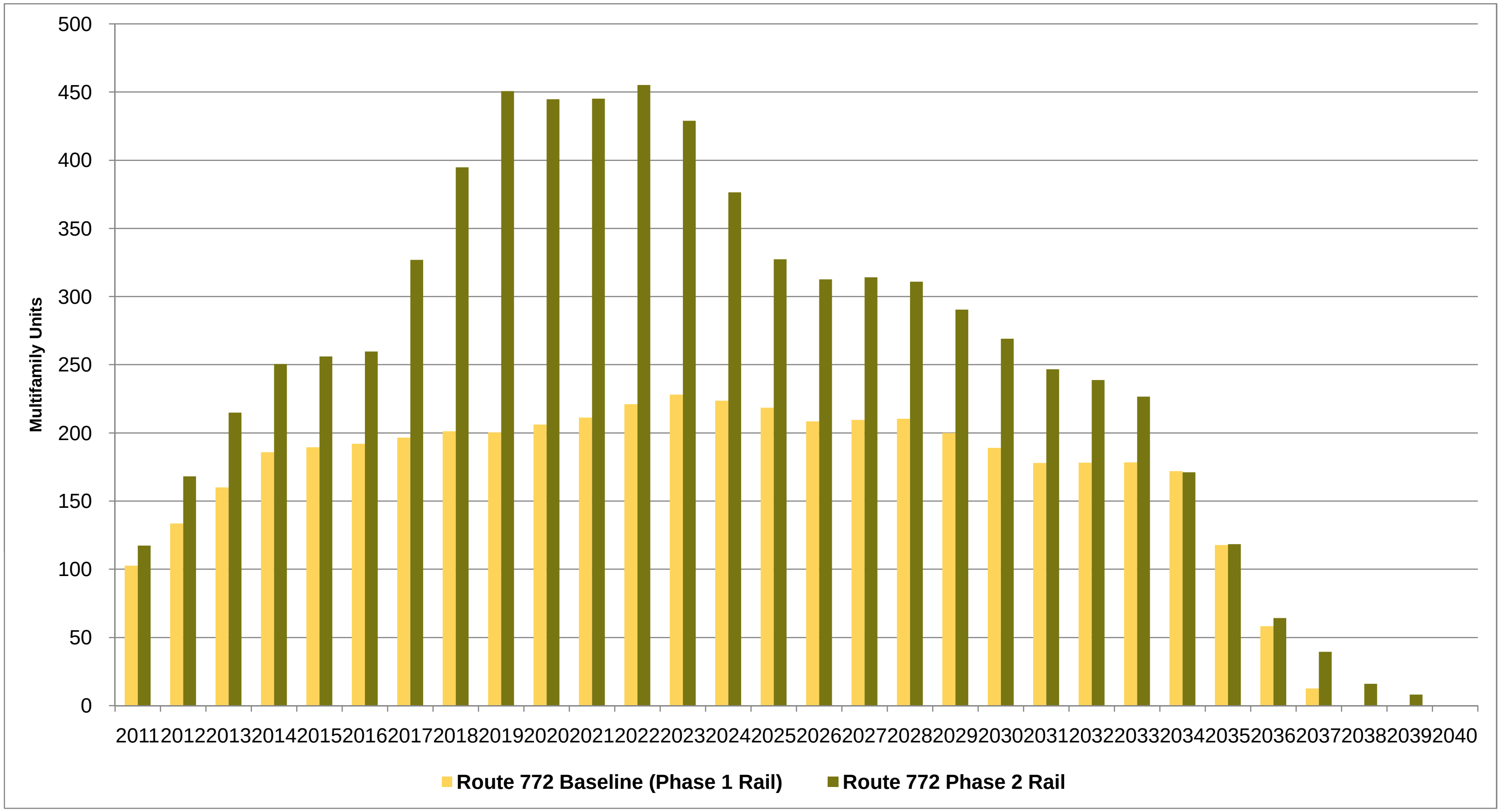
**STATION AREA RESIDENTIAL DEVELOPMENT FORECASTS**
**ROUTE 28 STATION**
**2011 - 2040**




Route 28 Forecast
04-8824.05
Printed: 4/15/2011

*Exhibit I-44*

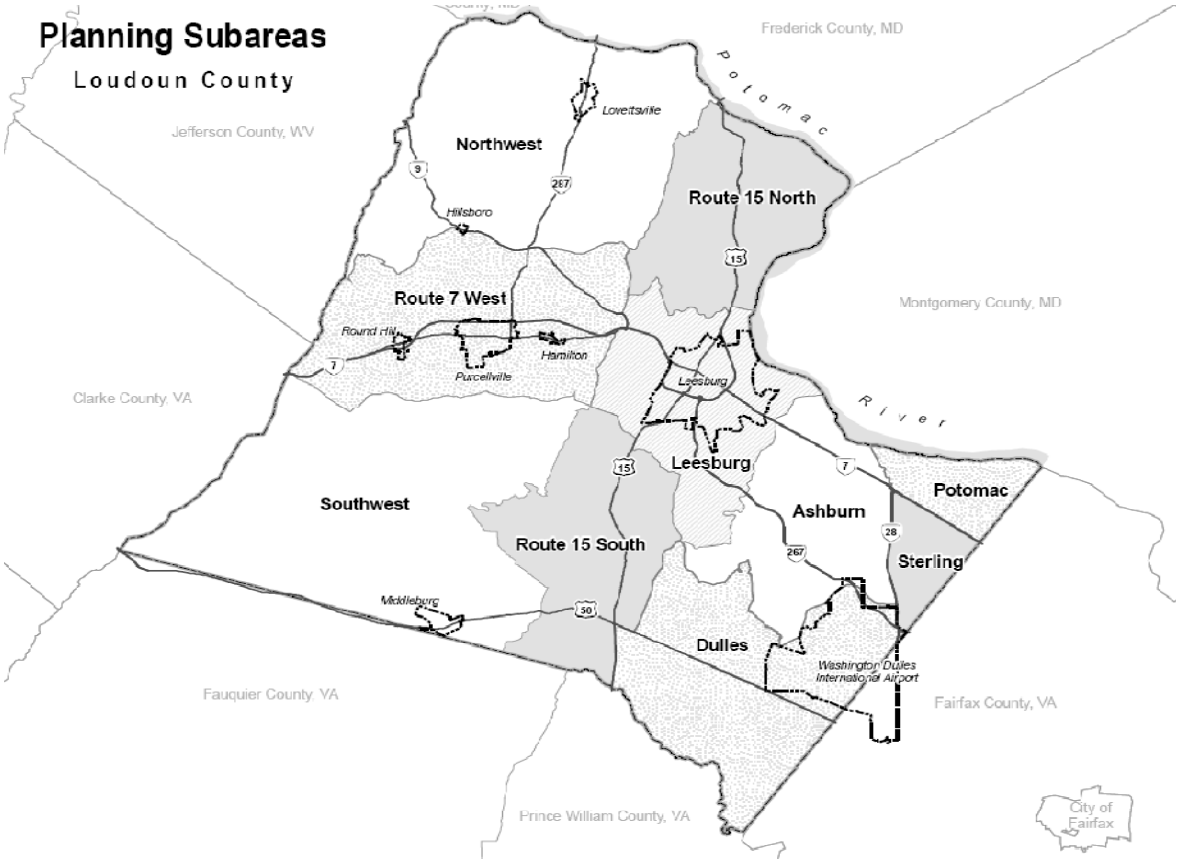
**STATION AREA RESIDENTIAL DEVELOPMENT FORECASTS**
**ROUTE 772 STATION**
**2011 - 2040**




Route 772 Forecast
04-8824.05
Printed: 4/15/2011

*Exhibit I-45*

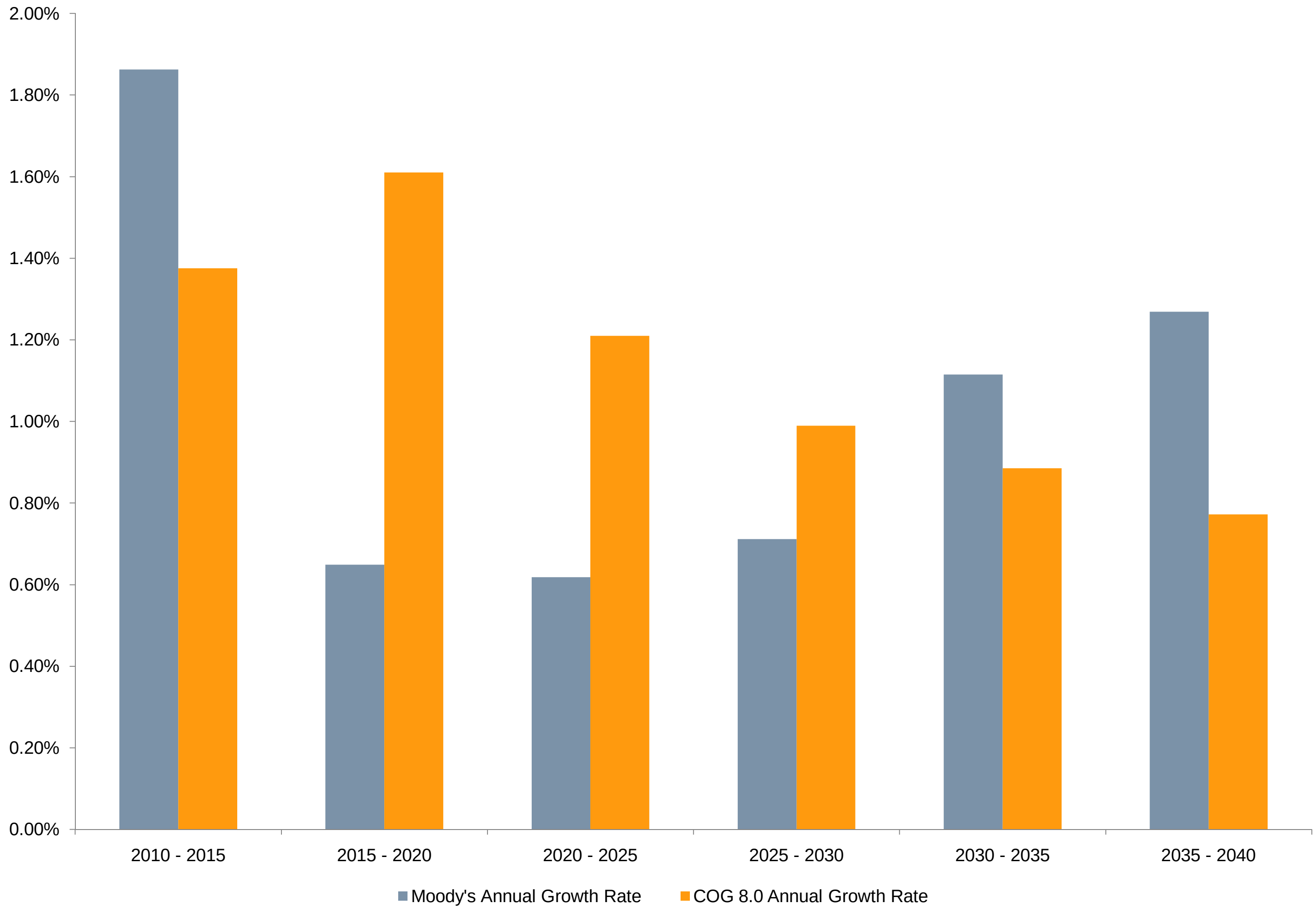
**PLANNING SUBAREAS**
**LOUDOUN COUNTY**
**2010**




Planning Areas
04-8824.05
Printed: 4/15/2011

## Exhibit II-1

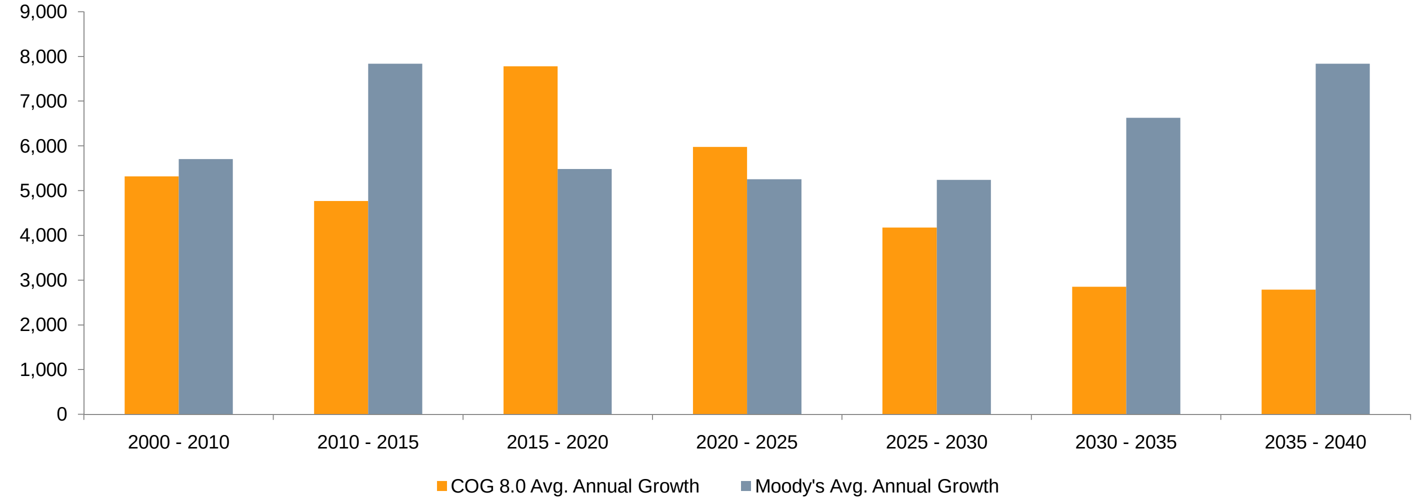
### COMPARISON OF EMPLOYMENT ANNUAL GROWTH RATES
### LOUDOUN COUNTY
### 2010 - 2040

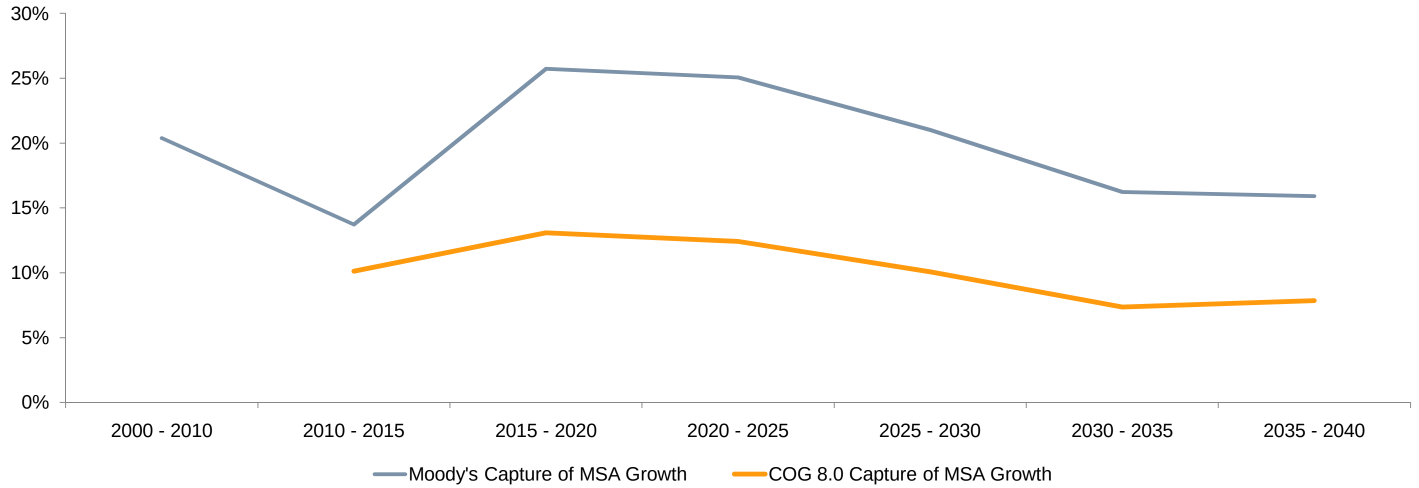



SOURCE: Moody's Analytics; Metropolitan Washington Council of Governments Round 8.0 Forecast

## Exhibit II-2

### COMPARISON OF EMPLOYMENT GROWTH FORECASTS
### LOUDOUN COUNTY
### 2010 - 2040




SOURCE: Moody's Analytics; Metropolitan Washington Council of Governments Round 8.0 Forecast

***Exhibit II-3***

## HISTORICAL REGIONAL SHARE INDEX COMPARISON BASED ON TOTAL EMPLOYMENT
## LOUDOUN COUNTY
## 1990 - 2010

| | MSA Employment | MSA Employment Avg. Annual Growth | District of Columbia Employment | District of Columbia Avg Annual Growth | Capture of MSA Annual Growth | Regional Share Index | Fairfax County Employment | Fairfax County Avg Annual Growth | Capture of MSA Annual Growth | Regional Share Index | Loudoun County Employment | Loudoun County Avg Annual Growth | Capture of MSA Annual Growth | Regional Share Index |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1990 | 2,601,586 | | 747,316 | | | | 443,821 | | | | 39,706 | | | |
| 1995 | 2,674,617 | 14,606 | 701,902 | -9,083 | -62% | N/A | 487,680 | 8,772 | 60% | 3.52 | 53,208 | 2,700 | 18% | 12.11 |
| 2000 | 2,944,322 | 53,941 | 743,600 | 8,340 | 15% | 0.59 | 577,000 | 17,864 | 33% | 1.82 | 90,500 | 7,458 | 14% | 6.95 |
| 2005 | 3,052,100 | 21,556 | 750,200 | 1,320 | 6% | 0.24 | 639,300 | 12,460 | 58% | 2.95 | 125,600 | 7,020 | 33% | 10.60 |
| 2010 | 3,214,700 | 32,520 | 786,000 | 7,160 | 22% | 0.90 | 684,825 | 9,105 | 28% | 1.34 | 143,700 | 3,620 | 11% | 2.70 |
| **Totals** | | **122,623** | | **7,737** | | | | **241,004** | | | | **20,799** | | |
| **Average 1990 - 2010** | | **30,656** | | **1,934** | | **0.22** | | **12,050** | | **11.52** | | **5,200** | | **11.11** |
| **Average 2000 - 2010** | | **27,038** | | **4,240** | | | | **10,783** | | | | **5,320** | | |

| | Arlington County Employment | Arlington County Avg Annual Growth | Capture of MSA Annual Growth | Regional Share Index | Montgomery County Employment | Montgomery County Avg Annual Growth | Capture of MSA Annual Growth | Regional Share Index | Prince George's County Employment | Prince George's County Avg Annual Growth | Capture of MSA Annual Growth | Regional Share Index |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1990 | 183,127 | | | | 465,972 | | | | 310,352 | | | |
| 1995 | 195,793 | 2,533 | 17% | 2.46 | 462,490 | -696 | -5% | N/A | 301,351 | -1,800 | -12% | N/A |
| 2000 | 182,600 | -2,639 | -5% | N/A | 474,300 | 2,362 | 4% | 0.25 | 338,300 | 7,390 | 14% | 1.22 |
| 2005 | 195,200 | 2,520 | 12% | 1.89 | 500,000 | 5,140 | 24% | 1.48 | 347,900 | 1,920 | 9% | 0.78 |
| 2010 | 205,200 | 2,000 | 6% | 0.96 | 506,000 | 1,200 | 4% | 0.23 | 358,400 | 2,100 | 6% | 0.57 |
| **Totals** | | **4,415** | | | | **8,006** | | | | **9,610** | | |
| **Average 1990 - 2010** | | **1,104** | | **0.51** | | **2,001** | | **0.36** | | **2,402** | | **0.66** |
| **Average 2000 - 2010** | | **2,260** | | | | **3,170** | | | | **2,010** | | |

Note: Fairfax County includes Fairfax County, Fairfax City, and Falls Church
Source: Metropolitan Washington Council of Governments; RCLCO

*Exhibit II-4*

## OFFICE EMPLOYMENT HISTORY
## DC MSA, FAIRFAX, & LOUDOUN COUNTIES
## 1990 - 2010

| | MSA Office Employment | MSA Office Employment Avg. Annual Growth | Fairfax County Office Employment | Fairfax County Avg. Annual Growth | Capture of MSA Annual Growth | Regional Share Index | Loudoun County Office Employment | Loudoun County Avg. Annual Growth | Capture of MSA Annual Growth | Regional Share Index |
|---|---|---|---|---|---|---|---|---|---|---|
| 1990 | 1,223,174 | | 199,626 | | | | 6,679 | | | |
| 1995 | 1,311,182 | 17,602 | 306,518 | 21,378 | 121% | 7.44 | 10,311 | 726 | 4% | 7.56 |
| 2000 | 1,441,870 | 26,138 | 414,026 | 21,502 | 82% | 3.52 | 25,831 | 3,104 | 12% | 15.10 |
| 2005 | 1,537,545 | 19,135 | 412,510 | -303 | -2% | -0.06 | 40,774 | 2,989 | 16% | 8.72 |
| 2010 | 1,639,497 | 20,390 | 443,395 | 6,177 | 30% | 1.13 | 48,687 | 1,583 | 8% | 2.93 |
| 1990 - 2010 | | 416,323 | | 243,769 | | 3.59 | | 42,008 | | 18.48 |
| | **Averages** | **20,816** | | **12,188** | | | | **2,100** | | |

Note 1: Fairfax County includes Fairfax County, Fairfax City, and Falls Church
Source: Metropolitan Washington Council of Governments; RCLCO

## Exhibit II-5

### OFFICE DELIVERIES PER EMPLOYEE PRE AND POST METRO
### SELECTED COUNTIES IN THE WASHINGTON, DC MSA
### 1971- 2008

| | MSA Office Employment Growth[1] | Montgomery County Office Deliveries (SF)[2] | Deliveries Per New Employee in the MSA | Fairfax County Office Deliveries (SF)[2] | Deliveries Per New Employee in the MSA | Fairfax County Office Deliveries (SF)[2] | Deliveries Per New Employee in the MSA |
|---|---|---|---|---|---|---|---|
| 1971 - 1975 | 33,460 | 2,029,894 | 61 | 1,750,774 | 52 | 289,664 | 9 |
| 1975 - 1980 | 86,770 | 2,794,833 | 32 | 4,654,149 | 54 | 121,842 | 1 |
| 1981 - 1985 | 116,420 | 5,680,292 | 49 | 10,833,328 | 93 | 419,239 | 4 |
| 1986 - 1990 | 122,170 | 10,016,108 | 82 | 22,685,652 | 186 | 2,137,708 | 17 |
| 1991 - 1995 | 35,930 | 2,964,643 | 83 | 2,618,426 | 73 | 1,038,592 | 29 |
| 1996 - 2000 | 207,390 | 3,320,218 | 16 | 15,293,267 | 74 | 4,476,710 | 22 |
| 2001 - 2005 | 74,810 | 6,449,148 | 86 | 11,738,700 | 157 | 3,416,584 | 46 |
| 2006 - 2008 | 20,450 | 2,147,498 | 105 | 8,399,933 | 411 | 3,580,060 | 175 |
| **Before Line Metro to Montgomery County** | | | | | | | |
| 1971 - 1982 | 142,430 | 6,105,809 | 43 | | | | |
| **After Red Line to Montgomery County** | | | | | | | |
| 1983 - 2009 | 532,250 | 30,510,666 | 57 | | | | |
| **% Increase** | | | **34%** | | | | |
| **Before Orange Line to Fairfax County** | | | | | | | |
| 1971 - 1985 | 236,650 | | | 17,238,251 | 73 | | |
| **After Orange Line to Fairfax County** | | | | | | | |
| 1986 - 2009 | 438,030 | | | 61,953,339 | 141 | | |
| **% Increase** | | | | | **94%** | | |

1/Moody's Analytics
2/CoStar

## Exhibit II-6

# OFFICE SPACE DELIVERY
# SELECTED JURISDICTIONS IN THE WASHINGTON METROPOLITAN AREA
# 1990 - 2009

| | Office Space Deliveries (SF) within 1/2 Mile of a Metro Station | | | | |
|---|---|---|---|---|---|
| **Jurisdiction** | **1990 - 1994** | **1995 - 1999** | **2000 - 2004** | **2005 - 2009** | **Total** |
| Alexandria | 866,622 | 1,152,903 | 4,425,762 | 777,884 | 7,223,171 |
| Arlington County | 1,594,000 | 2,149,826 | 2,928,374 | 487,360 | 7,159,560 |
| Fairfax County[1] | 44,000 | 235,500 | 311,585 | 0 | 591,085 |
| Loudoun County | 0 | 0 | 0 | 0 | 0 |
| Prince William County[2] | 0 | 0 | 0 | 0 | 0 |
| Northern Virginia | 2,504,622 | 3,538,229 | 7,665,721 | 1,265,244 | 14,973,816 |
| Montgomery County | 722,767 | 1,464,028 | 3,180,999 | 1,452,950 | 6,820,744 |
| Prince George's County | 1,562,000 | 780,000 | 2,931,416 | 170,000 | 5,443,416 |
| Total | 7,294,011 | 9,320,486 | 21,443,857 | 4,153,438 | 42,211,792 |

| | Office Space Deliveries (SF) Outside of 1/2 Mile of a Metro Station | | | | |
|---|---|---|---|---|---|
| **Jurisdiction** | **1990 - 1994** | **1995 - 1999** | **2000 - 2004** | **2005 - 2009** | **Total** |
| Alexandria | 36,100 | 848,688 | 573,000 | 2,124,411 | 3,582,199 |
| Arlington County | 1,122,227 | 137,500 | 667,000 | 664,672 | 2,591,399 |
| Fairfax County[1] | 3,486,872 | 17,712,361 | 14,330,829 | 14,539,689 | 50,069,751 |
| Loudoun County | 872,282 | 6,633,984 | 7,145,390 | 3,773,936 | 18,425,592 |
| Prince William County[2] | 329,343 | 1,586,796 | 2,723,770 | 4,257,936 | 8,897,845 |
| Northern Virginia | 5,846,824 | 26,919,329 | 25,439,989 | 25,360,644 | 83,566,786 |
| Montgomery County | 1,614,845 | 3,258,018 | 5,971,916 | 3,735,425 | 14,580,204 |
| Prince George's County | 1,405,653 | 1,517,570 | 1,702,351 | 2,322,449 | 6,948,023 |
| Total | 14,714,146 | 58,614,246 | 58,554,245 | 56,779,162 | 188,661,799 |

| | % of Total Delivered Office Space Within 1/2 Mile of a Metro Station | | | | |
|---|---|---|---|---|---|
| **Jurisdiction** | **1990 - 1994** | **1995 - 1999** | **2000 - 2004** | **2005 - 2009** | **Total** |
| Alexandria | 96% | 58% | 89% | 27% | 67% |
| Arlington County | 59% | 94% | 81% | 42% | 73% |
| Fairfax County[1] | 1% | 1% | 2% | 0% | 1% |
| Loudoun County | 0% | 0% | 0% | 0% | 0% |
| Prince William County[2] | 0% | 0% | 0% | 0% | 0% |
| **Northern Virginia** | **30%** | **12%** | **23%** | **5%** | **15%** |
| Montgomery County | 31% | 31% | 35% | 28% | 32% |
| Prince George's County | 53% | 34% | 63% | 7% | 44% |
| Total | 33% | 14% | 27% | 7% | 18% |

1/Includes Fairfax City and Falls Church
2/Includes Manassas City and Manassas Park
SOURCE: Metropolitan Washington Council of Governments; RCLCO

## Exhibit II-7

## OFFICE DELIVERIES HISTORY
## RESTON AND HERNDON AREA SUBMARKETS
## 2001 - 2010

| | Reston Deliveries[1] | Herndon Deliveries[1] | Total | Fairfax County[2] | Reston/Herndon % of Fairfax County |
|---|---|---|---|---|---|
| 2001 | 847,315 | 1,331,693 | 2,179,008 | 4,039,155 | 54% |
| 2002 | 1,017,373 | 0 | 1,017,373 | 3,309,439 | 31% |
| 2003 | 0 | 0 | 0 | 595,038 | 0% |
| 2004 | 221,326 | 257,400 | 478,726 | 610,312 | 78% |
| 2005 | 60,800 | 0 | 60,800 | 1,402,949 | 4% |
| 2006 | 182,424 | 193,138 | 375,562 | 1,534,155 | 24% |
| 2007 | 984,828 | 850,061 | 1,834,889 | 2,177,849 | 84% |
| 2008 | 401,154 | 588,493 | 989,647 | 3,956,651 | 25% |
| 2009 | 235,436 | 0 | 235,436 | 1,367,401 | 17% |
| Total | 3,950,656 | 3,220,785 | 7,171,441 | 18,992,949 | 38% |
| Annual Avg. | 438,962 | 357,865 | 796,827 | 2,110,328 | 38% |

1/Costar
2/Fairfax County Economic Development Authority

## Exhibit II-8

# HISTORICAL OFFICE DELIVERIES BY CORRIDOR
# LOUDOUN COUNTY
# 2000 - 2009

| Corridor | Total Square Feet | Capture Rate |
|---|---|---|
| Route 267 | 1,162,029 | 11% |
| Route 28 | 2,586,432 | 24% |
| Route 50 | 277,142 | 3% |
| Route 606 | 354,050 | 3% |
| Route 625 | 1,579,869 | 14% |
| Route 7 | 3,687,262 | 34% |
| Other | 1,272,542 | 12% |
| Grand Total | 10,919,326 | 100% |

SOURCE: RCLCO analysis of data provided by the Metropolitan Washington Council of Governments

# Exhibit II-9

## STATION AREA FAIR SHARE OFFICE CAPTURE RATE CALCULATIONS
## LOUDOUN COUNTY
## 2010

**Without Metro Service**

| | Maximum Capacity[1] | % Devoted to Flex Space[2] | Remaining Office Capacity | Station Area Capacity[3] | Fair Share Capture Rate |
|---|---|---|---|---|---|
| Route 28 Corridor | 17,652,299 | 35% | 11,473,994 | 2,516,230 | 22% |
| Route 606 Corridor | 14,102,463 | 30% | 9,871,724 | 9,076,037 | 92% |
| Route 267/Greenway Corridor | 23,526,224 | 45% | 12,939,423 | 9,622,675 | 74% |

**With Metro Service**

| | Maximum Capacity | % Devoted to Flex Space[2] | Remaining Office Capacity | Station Area Capacity[3] | Fair Share Capture Rate |
|---|---|---|---|---|---|
| Route 28 Corridor | 19,523,399 | 32% | 13,345,094 | 4,387,330 | 33% |
| Route 606 Corridor | 20,241,429 | 21% | 16,010,690 | 15,215,002 | 95% |
| Route 267/Greenway Corridor | 28,346,430 | 37% | 17,759,629 | 14,442,880 | 81% |

1/December 2009 Economic Development Market Analysis of Loudoun County Office and Industrial Land
2/RCLCO estimate based on a comparison of future projected demand for office space and flex space in Loudoun County
3/See Exhibits I-24 through I-29

*Exhibit II-10*

## OFFICE AND FLEX SPACE DEMAND FORECAST MODEL KEY ASSUMPTIONS
## FAIRFAX AND LOUDOUN COUNTIES
## 2010 - 2040

| Baseline (Phase 1 Rail) Assumptions | | Assumption |
|---|---|---|
| Starting Fairfax Regional Share Index - Total Employment | | 1.40 |
| Starting Loudoun Regional Share Index - Total Employment | | 4.00 |
| Starting Fairfax Regional Share Index - Office Employment | | 1.70 |
| Starting Loudoun Regional Share Index - Office Employment | | 4.50 |
| | | |
| Annual Rate of Decline in Fairfax Regional Share Index - Total Employment | | -2.0% |
| Annual Rate of Decline in Loudoun Regional Share Index - Total Employment | | -4.0% |
| Annual Rate of Decline in Fairfax Regional Share Index - Office Employment | | -2.0% |
| Annual Rate of Decline in Loudoun Regional Share Index - Office Employment | | -3.0% |
| | | |
| Loudoun County | Office Absorption per Office Employee | 225 |
| Loudoun County | Starting Flex Space Absorption per Employee (Total Employment) | 125 |
| | | |
| Fairfax County | Percent Increase in Demand Due to Metro | 15% |
| Fairfax County | Percent of Additional Demand Taken from Loudoun County | 0% |
| **Phase 2 Rail Extension Model** | | **Assumption** |
| Loudoun County | Capture of Reston/Herndon Area Office Demand | 7.5% |
| | | |
| Loudoun County | Impact of Metro on Corridor Capture Rates of Office Space Demand | |
| | Route 7 | -7.5% |
| | Route 28 (Planned metro station) | 2.5% |
| | Route 50 | 0.0% |
| | Route 267 (Planned metro station) | 5.0% |
| | Route 606 (Planned metro station) | 2.5% |
| | Route 625 | -2.5% |

### *Exhibit II-11*

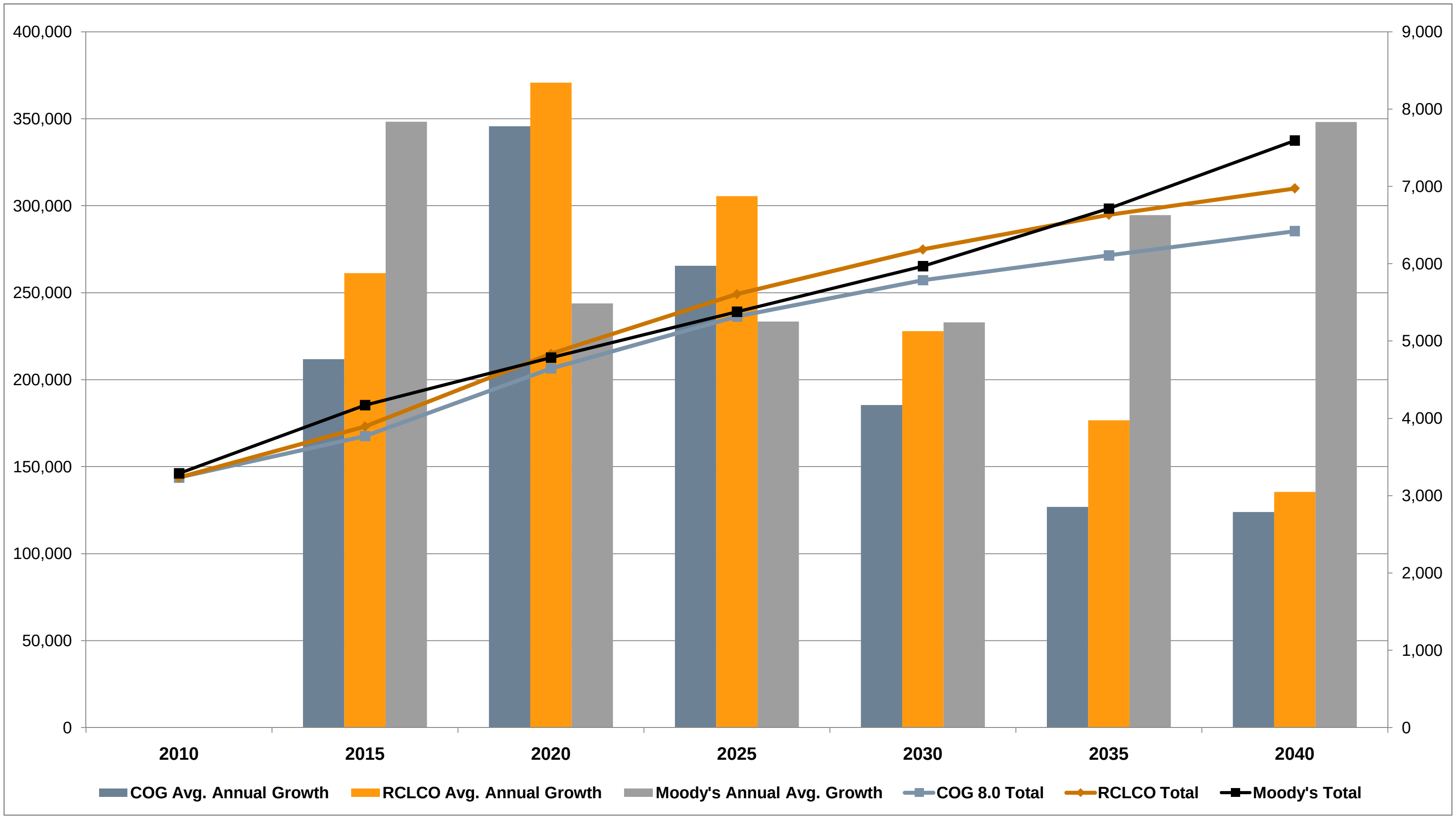
## TOTAL EMPLOYMENT FORECAST
## DC MSA, FAIRFAX, & LOUDOUN COUNTIES
## 2010 - 2040

| | MSA Employment[1] | MSA Employment Annual Growth[2] | Fairfax County Regional Share Index | Fairfax County Employment | Fairfax County Avg Annual Growth | Capture of MSA Annual Growth | Loudoun County Regional Share Index | Loudoun County Employment | Loudoun County Avg Annual Growth | Capture of MSA Annual Growth |
|---|---|---|---|---|---|---|---|---|---|---|
| 2011 | 3,259,420 | 44,720 | 1.40 | 680,000 | 13,243 | 30% | 3.84 | 143,736 | 7,678 | 17% |
| 2012 | 3,304,140 | 44,720 | 1.40 | 693,243 | 13,062 | 29% | 3.69 | 151,414 | 7,270 | 16% |
| 2013 | 3,348,860 | 44,720 | 1.40 | 706,305 | 13,136 | 29% | 3.54 | 158,684 | 7,252 | 16% |
| 2014 | 3,393,580 | 44,720 | 1.40 | 719,441 | 13,205 | 30% | 3.40 | 165,937 | 7,199 | 16% |
| 2015 | 3,442,020 | 48,440 | 1.40 | 732,645 | 14,377 | 30% | 3.26 | 173,136 | 7,725 | 16% |
| 2016 | 3,494,180 | 52,160 | 1.40 | 747,022 | 15,543 | 30% | 3.13 | 180,861 | 8,215 | 16% |
| 2017 | 3,550,060 | 55,880 | 1.40 | 762,566 | 16,725 | 30% | 3.01 | 189,076 | 8,694 | 16% |
| 2018 | 3,605,940 | 55,880 | 1.40 | 779,291 | 16,805 | 30% | 2.89 | 197,770 | 8,588 | 15% |
| 2019 | 3,661,820 | 55,880 | 1.40 | 796,096 | 16,907 | 30% | 2.77 | 206,357 | 8,490 | 15% |
| 2020 | 3,714,187 | 52,367 | 1.40 | 813,003 | 15,939 | 30% | 2.66 | 214,847 | 7,848 | 15% |
| 2021 | 3,763,040 | 48,853 | 1.37 | 828,941 | 14,672 | 30% | 2.55 | 222,695 | 7,214 | 15% |
| 2022 | 3,808,380 | 45,340 | 1.34 | 843,613 | 13,429 | 30% | 2.45 | 229,910 | 6,576 | 15% |
| 2023 | 3,853,720 | 45,340 | 1.32 | 857,042 | 13,234 | 29% | 2.35 | 236,486 | 6,440 | 14% |
| 2024 | 3,899,060 | 45,340 | 1.29 | 870,276 | 13,021 | 29% | 2.26 | 242,926 | 6,284 | 14% |
| 2025 | 3,942,200 | 43,140 | 1.27 | 883,297 | 12,185 | 28% | 2.17 | 249,210 | 5,828 | 14% |
| 2026 | 3,983,140 | 40,940 | 1.24 | 895,482 | 11,376 | 28% | 2.08 | 255,038 | 5,387 | 13% |
| 2027 | 4,021,880 | 38,740 | 1.22 | 906,858 | 10,585 | 27% | 2.00 | 260,425 | 4,957 | 13% |
| 2028 | 4,060,620 | 38,740 | 1.19 | 917,443 | 10,404 | 27% | 1.92 | 265,382 | 4,812 | 12% |
| 2029 | 4,099,360 | 38,740 | 1.17 | 927,848 | 10,217 | 26% | 1.84 | 270,195 | 4,663 | 12% |
| 2030 | 4,137,133 | 37,773 | 1.14 | 938,064 | 9,780 | 26% | 1.77 | 274,857 | 4,402 | 12% |
| 2031 | 4,173,940 | 36,807 | 1.12 | 947,844 | 9,356 | 25% | 1.70 | 279,259 | 4,150 | 11% |
| 2032 | 4,209,780 | 35,840 | 1.10 | 957,200 | 8,941 | 25% | 1.63 | 283,410 | 3,907 | 11% |
| 2033 | 4,245,620 | 35,840 | 1.08 | 966,141 | 8,774 | 24% | 1.56 | 287,317 | 3,774 | 11% |
| 2034 | 4,281,460 | 35,840 | 1.06 | 974,915 | 8,605 | 24% | 1.50 | 291,091 | 3,642 | 10% |
| 2035 | 4,316,293 | 34,833 | 1.03 | 983,520 | 8,201 | 24% | 1.44 | 294,733 | 3,414 | 10% |
| 2036 | 4,350,120 | 33,827 | 1.01 | 991,721 | 7,810 | 23% | 1.38 | 298,147 | 3,197 | 9% |
| 2037 | 4,382,940 | 32,820 | 0.99 | 999,532 | 7,430 | 23% | 1.33 | 301,344 | 2,988 | 9% |
| 2038 | 4,415,760 | 32,820 | 0.97 | 1,006,962 | 7,284 | 22% | 1.28 | 304,332 | 2,878 | 9% |
| 2039 | 4,448,580 | 32,820 | 0.95 | 1,014,246 | 7,138 | 22% | 1.22 | 307,210 | 2,770 | 8% |
| 2040 | 4,481,400 | 32,820 | 0.93 | 1,021,384 | 6,994 | 21% | 1.18 | 309,980 | 2,664 | 8% |
| | **Totals** | **1,266,700** | | | **348,378** | | | | **168,908** | |
| | **Averages** | **42,223** | | | **11,613** | | | | **5,630** | |

Note: Fairfax County includes Fairfax County, Fairfax City, and Falls Church
1/Metropolitan Washington Council of Governments Round 8.0
2/Annual growth rates based on COG forecasts and "smoothed" by RCLCO

*Exhibit II-12*

**COG & RCLCO TOTAL EMPLOYMENT GROWTH FORECAST COMPARISON**
**LOUDOUN COUNTY**
**2010 - 2040**




Source: COG & Moody's Analytics

*Exhibit II-13*

**JOBS TO HOUSEHOLD RATIOS**
**LOUDOUN COUNTY**
**2010 - 2040**

| | COG 8.0 Households | COG 8.0 Employment | Jobs to Household Ratio | Baseline (Phase 1 Rail) RCLCO Households | Baseline (Phase 1 Rail) RCLCO Employment | Jobs to Household Ratio | Phase 2 Rail Extension RCLCO Households | Phase 2 Rail Extension RCLCO Employment | Jobs to Household Ratio |
|---|---|---|---|---|---|---|---|---|---|
| 2010 | 102,331 | 143,736 | 1.40 | 102,331 | 143,736 | 1.40 | 102,331 | 143,736 | 1.40 |
| 2011 | 104,399 | 148,503 | 1.42 | 105,251 | 143,736 | 1.37 | 105,251 | 143,736 | 1.37 |
| 2012 | 106,466 | 153,270 | 1.44 | 108,693 | 151,414 | 1.39 | 108,695 | 151,414 | 1.39 |
| 2013 | 108,534 | 158,036 | 1.46 | 112,643 | 158,684 | 1.41 | 112,647 | 158,684 | 1.41 |
| 2014 | 110,601 | 162,803 | 1.47 | 117,045 | 165,937 | 1.42 | 117,053 | 165,937 | 1.42 |
| 2015 | 112,669 | 167,570 | 1.49 | 121,290 | 173,136 | 1.43 | 121,302 | 173,136 | 1.43 |
| 2016 | 115,617 | 175,348 | 1.52 | 125,369 | 180,861 | 1.44 | 125,385 | 180,861 | 1.44 |
| 2017 | 118,565 | 183,125 | 1.54 | 129,319 | 189,076 | 1.46 | 129,427 | 189,076 | 1.46 |
| 2018 | 121,513 | 190,903 | 1.57 | 133,138 | 197,770 | 1.49 | 133,425 | 198,082 | 1.48 |
| 2019 | 124,461 | 198,680 | 1.60 | 136,569 | 206,357 | 1.51 | 137,255 | 206,667 | 1.51 |
| 2020 | 127,409 | 206,458 | 1.62 | 139,706 | 214,847 | 1.54 | 140,720 | 215,135 | 1.53 |
| 2021 | 130,297 | 212,432 | 1.63 | 142,245 | 222,695 | 1.57 | 143,454 | 222,961 | 1.55 |
| 2022 | 133,185 | 218,406 | 1.64 | 144,342 | 229,910 | 1.59 | 145,570 | 230,154 | 1.58 |
| 2023 | 136,072 | 224,379 | 1.65 | 145,942 | 236,486 | 1.62 | 147,244 | 236,727 | 1.61 |
| 2024 | 138,960 | 230,353 | 1.66 | 147,298 | 242,926 | 1.65 | 148,798 | 243,164 | 1.63 |
| 2025 | 141,848 | 236,327 | 1.67 | 148,561 | 249,210 | 1.68 | 150,279 | 249,434 | 1.66 |
| 2026 | 143,520 | 240,501 | 1.68 | 149,750 | 255,038 | 1.70 | 151,688 | 255,248 | 1.68 |
| 2027 | 145,192 | 244,674 | 1.69 | 150,947 | 260,425 | 1.73 | 153,099 | 260,622 | 1.70 |
| 2028 | 146,865 | 248,848 | 1.69 | 152,142 | 265,382 | 1.74 | 154,474 | 265,575 | 1.72 |
| 2029 | 148,537 | 253,021 | 1.70 | 153,269 | 270,195 | 1.76 | 155,721 | 270,385 | 1.74 |
| 2030 | 150,209 | 257,195 | 1.71 | 154,308 | 274,857 | 1.78 | 156,840 | 275,040 | 1.75 |
| 2031 | 151,163 | 260,048 | 1.72 | 155,258 | 279,259 | 1.80 | 157,880 | 279,434 | 1.77 |
| 2032 | 152,117 | 262,902 | 1.73 | 156,106 | 283,410 | 1.82 | 158,920 | 283,578 | 1.78 |
| 2033 | 153,070 | 265,755 | 1.74 | 156,650 | 287,317 | 1.83 | 159,964 | 287,482 | 1.80 |
| 2034 | 154,024 | 268,609 | 1.74 | 156,888 | 291,091 | 1.86 | 160,972 | 291,253 | 1.81 |
| 2035 | 154,978 | 271,462 | 1.75 | 156,914 | 294,733 | 1.88 | 161,945 | 294,888 | 1.82 |
| 2036 | 155,642 | 274,253 | 1.76 | 156,936 | 298,147 | 1.90 | 162,851 | 298,295 | 1.83 |
| 2037 | 156,306 | 277,043 | 1.77 | 156,957 | 301,344 | 1.92 | 163,660 | 301,485 | 1.84 |
| 2038 | 156,971 | 279,834 | 1.78 | 156,977 | 304,332 | 1.94 | 164,438 | 304,471 | 1.85 |
| 2039 | 157,635 | 282,624 | 1.79 | 156,995 | 307,210 | 1.96 | 164,969 | 307,346 | 1.86 |
| 2040 | 158,299 | 285,415 | 1.80 | 157,013 | 309,980 | 1.97 | 165,317 | 310,113 | 1.88 |

## *Exhibit II-14*

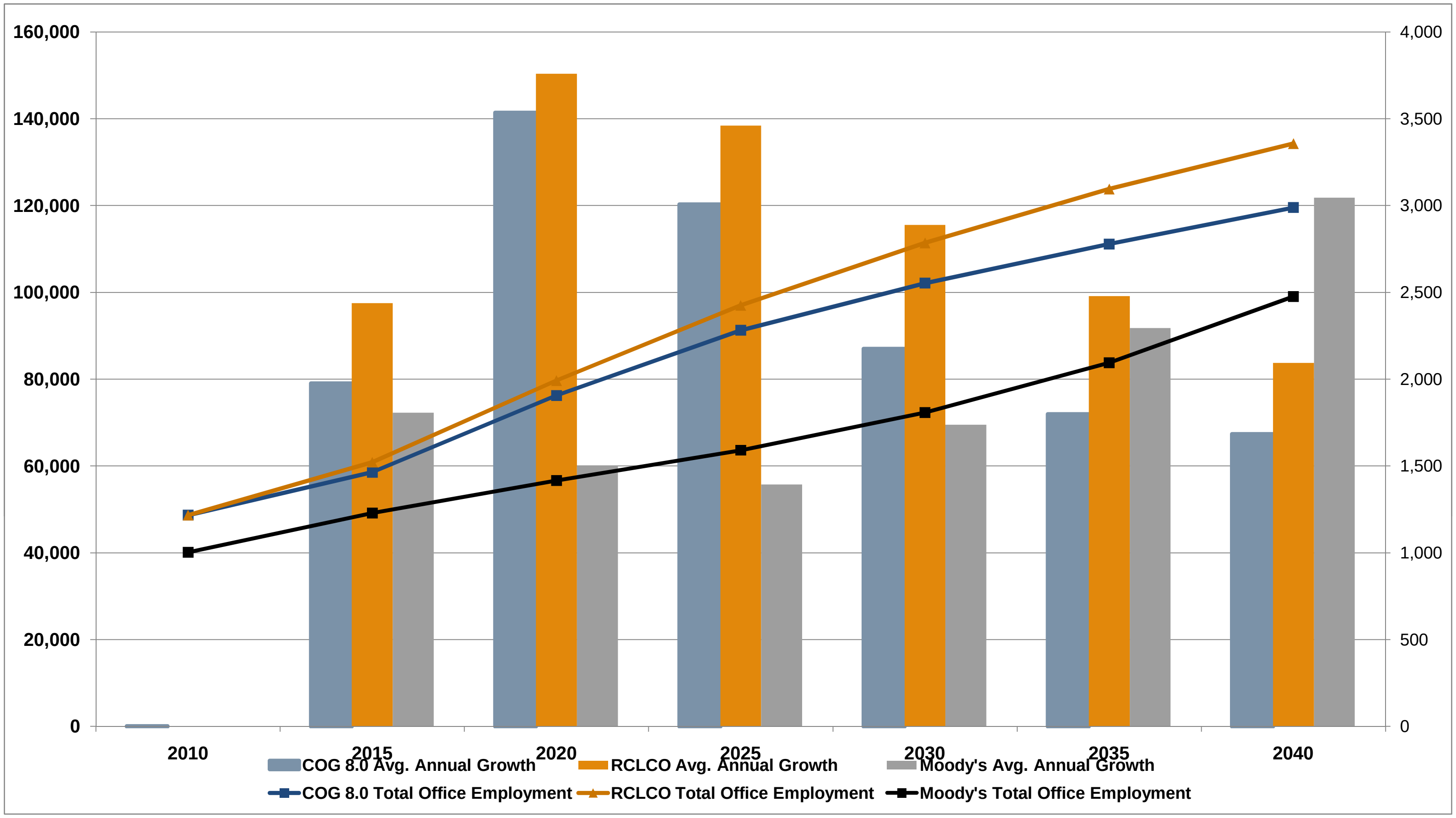
## OFFICE EMPLOYMENT FORECAST
## DC MSA, FAIRFAX, & LOUDOUN COUNTIES
## 2010 - 2040

| | MSA Total Employment[1] | MSA Total Employment Annual Growth | % of Total Employment Growth that is Office-Using[2] | MSA Office Employment | MSA Office Employment Annual Growth | Fairfax County Regional Share Index | Fairfax County Office Employment | Fairfax County Annual Growth | Capture of MSA Annual Growth | Loudoun County Regional Share Index | Loudoun County Office Employment | Loudoun County Annual Growth | Capture of MSA Annual Growth |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2011 | 3,259,420 | 44,720 | 51.0% | 1,663,487 | 23,990 | 1.67 | 443,395 | 10,809 | 45% | 4.37 | 48,687 | 3,110 | 13% |
| 2012 | 3,304,140 | 44,720 | 51.1% | 1,687,510 | 24,023 | 1.63 | 454,204 | 10,455 | 44% | 4.23 | 51,796 | 2,977 | 12% |
| 2013 | 3,348,860 | 44,720 | 51.1% | 1,711,567 | 24,057 | 1.60 | 464,659 | 10,360 | 43% | 4.11 | 54,773 | 3,033 | 13% |
| 2014 | 3,393,580 | 44,720 | 51.1% | 1,735,657 | 24,090 | 1.57 | 475,019 | 10,255 | 43% | 3.98 | 57,806 | 3,071 | 13% |
| 2015 | 3,442,020 | 48,440 | 51.2% | 1,761,685 | 26,027 | 1.54 | 485,274 | 10,946 | 42% | 3.86 | 60,877 | 3,350 | 13% |
| 2016 | 3,494,180 | 52,160 | 51.2% | 1,789,654 | 27,969 | 1.51 | 496,220 | 11,602 | 41% | 3.75 | 64,227 | 3,623 | 13% |
| 2017 | 3,550,060 | 55,880 | 51.3% | 1,819,568 | 29,915 | 1.48 | 507,822 | 12,241 | 41% | 3.64 | 67,850 | 3,903 | 13% |
| 2018 | 3,605,940 | 55,880 | 51.3% | 1,849,524 | 29,956 | 1.45 | 520,063 | 12,092 | 40% | 3.53 | 71,753 | 3,940 | 13% |
| 2019 | 3,661,820 | 55,880 | 51.3% | 1,879,522 | 29,998 | 1.42 | 532,155 | 11,956 | 40% | 3.42 | 75,693 | 3,981 | 13% |
| 2020 | 3,714,187 | 52,367 | 51.4% | 1,907,757 | 28,235 | 1.39 | 544,110 | 11,104 | 39% | 3.32 | 79,674 | 3,773 | 13% |
| 2021 | 3,763,040 | 48,853 | 51.4% | 1,934,226 | 26,468 | 1.36 | 555,214 | 10,276 | 39% | 3.22 | 83,448 | 3,558 | 13% |
| 2022 | 3,808,380 | 45,340 | 51.4% | 1,958,923 | 24,698 | 1.33 | 565,491 | 9,457 | 38% | 3.12 | 87,006 | 3,327 | 13% |
| 2023 | 3,853,720 | 45,340 | 51.5% | 1,983,656 | 24,732 | 1.31 | 574,948 | 9,334 | 38% | 3.03 | 90,333 | 3,327 | 13% |
| 2024 | 3,899,060 | 45,340 | 51.5% | 2,008,422 | 24,766 | 1.28 | 584,282 | 9,197 | 37% | 2.94 | 93,660 | 3,313 | 13% |
| 2025 | 3,942,200 | 43,140 | 51.5% | 2,032,088 | 23,667 | 1.26 | 593,479 | 8,645 | 37% | 2.85 | 96,973 | 3,145 | 13% |
| 2026 | 3,983,140 | 40,940 | 51.6% | 2,054,653 | 22,564 | 1.23 | 602,123 | 8,109 | 36% | 2.76 | 100,118 | 2,976 | 13% |
| 2027 | 4,021,880 | 38,740 | 51.6% | 2,076,113 | 21,460 | 1.21 | 610,232 | 7,583 | 35% | 2.68 | 103,094 | 2,804 | 13% |
| 2028 | 4,060,620 | 38,740 | 51.7% | 2,097,602 | 21,489 | 1.18 | 617,815 | 7,464 | 35% | 2.60 | 105,898 | 2,775 | 13% |
| 2029 | 4,099,360 | 38,740 | 51.7% | 2,119,121 | 21,519 | 1.16 | 625,279 | 7,340 | 34% | 2.52 | 108,673 | 2,741 | 13% |
| 2030 | 4,137,133 | 37,773 | 51.7% | 2,140,169 | 21,048 | 1.13 | 632,619 | 7,049 | 33% | 2.45 | 111,414 | 2,641 | 13% |
| 2031 | 4,173,940 | 36,807 | 51.8% | 2,160,746 | 20,577 | 1.11 | 639,668 | 6,765 | 33% | 2.37 | 114,055 | 2,543 | 12% |
| 2032 | 4,209,780 | 35,840 | 51.8% | 2,180,850 | 20,104 | 1.09 | 646,433 | 6,487 | 32% | 2.30 | 116,598 | 2,443 | 12% |
| 2033 | 4,245,620 | 35,840 | 51.8% | 2,200,982 | 20,132 | 1.07 | 652,920 | 6,374 | 32% | 2.23 | 119,041 | 2,404 | 12% |
| 2034 | 4,281,460 | 35,840 | 51.9% | 2,221,141 | 20,159 | 1.05 | 659,295 | 6,260 | 31% | 2.17 | 121,445 | 2,362 | 12% |
| 2035 | 4,316,293 | 34,833 | 51.9% | 2,240,805 | 19,664 | 1.03 | 665,555 | 5,988 | 30% | 2.10 | 123,807 | 2,259 | 11% |
| 2036 | 4,350,120 | 33,827 | 52.0% | 2,259,973 | 19,168 | 1.01 | 671,543 | 5,724 | 30% | 2.04 | 126,067 | 2,159 | 11% |
| 2037 | 4,382,940 | 32,820 | 52.0% | 2,278,644 | 18,671 | 0.99 | 677,267 | 5,466 | 29% | 1.98 | 128,225 | 2,059 | 11% |
| 2038 | 4,415,760 | 32,820 | 52.0% | 2,297,340 | 18,696 | 0.97 | 682,733 | 5,366 | 29% | 1.92 | 130,285 | 2,018 | 11% |
| 2039 | 4,448,580 | 32,820 | 52.1% | 2,316,062 | 18,722 | 0.95 | 688,099 | 5,265 | 28% | 1.86 | 132,302 | 1,975 | 11% |
| 2040 | 4,481,400 | 32,820 | 52.1% | 2,334,809 | 18,747 | 0.93 | 693,363 | 5,165 | 28% | 1.80 | 134,278 | 1,932 | 10% |
| | **Totals** | **1,266,700** | | | **695,312** | | | **255,133** | | | | **87,523** | |
| | **Averages** | **42,223** | | | **23,177** | | | **8,504** | | ` | | **2,917** | |

1/See Exhibit II-11
2/Estimate based on COG 7.1 forecast

*Exhibit II-15*

**COG & RCLCO OFFICE EMPLOYMENT FORECAST COMPARISON**
**LOUDOUN COUNTY**
**2010 - 2040**




Source: COG & Moody's Analytics
NOTE: Data for growth between 2005 and 2010 is not depicted on this chart

## *Exhibit II-16*

## BASELINE SCENARIO (PHASE 1 RAIL EXTENSION)
## LOUDOUN COUNTY
## 2011 - 2040

| | Fairfax County | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Office-Using Employment Growth | Absorption Per Employee | Projected New Office Space Demand | Increase in Demand Due to Metro | Additional Demand | Reston/ Herndon Area Capture of Fairfax Demand | Reston/ Herndon Area Capture of Additional Demand | Reston/ Herndon Area Office Demand | Percent of Additional Demand from Loudoun County | Demand Taken From Loudoun County | Adjusted Projected Office Space Demand |
| 2011 | 10,809 | 225 | 2,432,028 | 0% | - | 38% | 30% | 924,171 | 0% | - | 2,432,028 |
| 2012 | 10,455 | 225 | 2,352,277 | 0% | - | 38% | 30% | 893,865 | 0% | - | 2,352,277 |
| 2013 | 10,360 | 225 | 2,331,042 | 15% | 349,656 | 38% | 30% | 990,693 | 0% | - | 2,680,698 |
| 2014 | 10,255 | 225 | 2,307,352 | 15% | 346,103 | 38% | 30% | 980,625 | 0% | - | 2,653,455 |
| 2015 | 10,946 | 225 | 2,462,863 | 15% | 369,429 | 38% | 30% | 1,046,717 | 0% | - | 2,832,292 |
| 2016 | 11,602 | 225 | 2,610,491 | 15% | 391,574 | 38% | 30% | 1,109,459 | 0% | - | 3,002,065 |
| 2017 | 12,241 | 225 | 2,754,234 | 15% | 413,135 | 38% | 30% | 1,170,550 | 0% | - | 3,167,369 |
| 2018 | 12,092 | 225 | 2,720,630 | 15% | 408,095 | 38% | 30% | 1,156,268 | 0% | - | 3,128,725 |
| 2019 | 11,956 | 225 | 2,690,002 | 15% | 403,500 | 38% | 30% | 1,143,251 | 0% | - | 3,093,502 |
| 2020 | 11,104 | 225 | 2,498,453 | 15% | 374,768 | 38% | 30% | 1,061,842 | 0% | - | 2,873,221 |
| 2021 | 10,276 | 225 | 2,312,117 | 15% | 346,818 | 38% | 30% | 982,650 | 0% | - | 2,658,934 |
| 2022 | 9,457 | 225 | 2,127,937 | 15% | 319,191 | 38% | 30% | 904,373 | 0% | - | 2,447,128 |
| 2023 | 9,334 | 225 | 2,100,098 | 15% | 315,015 | 38% | 30% | 892,542 | 0% | - | 2,415,112 |
| 2024 | 9,197 | 225 | 2,069,285 | 15% | 310,393 | 38% | 30% | 879,446 | 0% | - | 2,379,677 |
| 2025 | 8,645 | 225 | 1,945,022 | 15% | 291,753 | 38% | 30% | 826,634 | 0% | - | 2,236,775 |
| 2026 | 8,109 | 225 | 1,824,458 | 15% | 273,669 | 38% | 30% | 775,395 | 0% | - | 2,098,127 |
| 2027 | 7,583 | 225 | 1,706,266 | 15% | 255,940 | 38% | 30% | 725,163 | 0% | - | 1,962,206 |
| 2028 | 7,464 | 225 | 1,679,448 | 15% | 251,917 | 38% | 30% | 713,765 | 0% | - | 1,931,365 |
| 2029 | 7,340 | 225 | 1,651,508 | 15% | 247,726 | 38% | 30% | 701,891 | 0% | - | 1,899,234 |
| 2030 | 7,049 | 225 | 1,585,947 | 15% | 237,892 | 38% | 30% | 674,027 | 0% | - | 1,823,839 |
| 2031 | 6,765 | 225 | 1,522,126 | 15% | 228,319 | 38% | 30% | 646,904 | 0% | - | 1,750,445 |
| 2032 | 6,487 | 225 | 1,459,630 | 15% | 218,945 | 38% | 30% | 620,343 | 0% | - | 1,678,575 |
| 2033 | 6,374 | 225 | 1,434,200 | 15% | 215,130 | 38% | 30% | 609,535 | 0% | - | 1,649,330 |
| 2034 | 6,260 | 225 | 1,408,561 | 15% | 211,284 | 38% | 30% | 598,638 | 0% | - | 1,619,845 |
| 2035 | 5,988 | 225 | 1,347,297 | 15% | 202,095 | 38% | 30% | 572,601 | 0% | - | 1,549,392 |
| 2036 | 5,724 | 225 | 1,287,859 | 15% | 193,179 | 38% | 30% | 547,340 | 0% | - | 1,481,037 |
| 2037 | 5,466 | 225 | 1,229,903 | 15% | 184,485 | 38% | 30% | 522,709 | 0% | - | 1,414,388 |
| 2038 | 5,366 | 225 | 1,207,260 | 15% | 181,089 | 38% | 30% | 513,085 | 0% | - | 1,388,349 |
| 2039 | 5,265 | 225 | 1,184,568 | 15% | 177,685 | 38% | 30% | 503,441 | 0% | - | 1,362,253 |
| 2040 | 5,165 | 225 | 1,162,122 | 15% | 174,318 | 38% | 30% | 493,902 | 0% | - | 1,336,440 |
| **Totals** | **255,133** | | **57,404,983** | | **7,893,102** | | | | | - | **65,298,085** |

Note: Fairfax County includes Fairfax County, Fairfax City, and Falls Church

*Exhibit II-16*

**BASELINE SCENARIO (PHASE 1 RAIL EXTENSION)**
**LOUDOUN COUNTY**
**2011 - 2040**

| | Loudoun County | | | | | | |
|---|---|---|---|---|---|---|---|
| | Office-Using Employment Growth | Absorption Per Employee | Projected New Office Space Demand | Adjusted Loudoun Demand | Total of Loudoun & Fairfax | Fairfax Percent of Total | Loudoun Percent of Total |
| 2011 | 3,110 | 225 | - | - | 2,432,028 | 100.0% | 0.0% |
| 2012 | 2,977 | 225 | - | - | 2,352,277 | 100.0% | 0.0% |
| 2013 | 3,033 | 225 | 682,339 | 682,339 | 3,363,037 | 79.7% | 20.3% |
| 2014 | 3,071 | 225 | 691,029 | 691,029 | 3,344,485 | 79.3% | 20.7% |
| 2015 | 3,350 | 225 | 753,694 | 753,694 | 3,585,986 | 79.0% | 21.0% |
| 2016 | 3,623 | 225 | 815,134 | 815,134 | 3,817,198 | 78.6% | 21.4% |
| 2017 | 3,903 | 225 | 878,271 | 878,271 | 4,045,640 | 78.3% | 21.7% |
| 2018 | 3,940 | 225 | 886,413 | 886,413 | 4,015,138 | 77.9% | 22.1% |
| 2019 | 3,981 | 225 | 895,805 | 895,805 | 3,989,307 | 77.5% | 22.5% |
| 2020 | 3,773 | 225 | 849,002 | 849,002 | 3,722,223 | 77.2% | 22.8% |
| 2021 | 3,558 | 225 | 800,584 | 800,584 | 3,459,519 | 76.9% | 23.1% |
| 2022 | 3,327 | 225 | 748,555 | 748,555 | 3,195,683 | 76.6% | 23.4% |
| 2023 | 3,327 | 225 | 748,548 | 748,548 | 3,163,660 | 76.3% | 23.7% |
| 2024 | 3,313 | 225 | 745,486 | 745,486 | 3,125,164 | 76.1% | 23.9% |
| 2025 | 3,145 | 225 | 707,624 | 707,624 | 2,944,399 | 76.0% | 24.0% |
| 2026 | 2,976 | 225 | 669,689 | 669,689 | 2,767,816 | 75.8% | 24.2% |
| 2027 | 2,804 | 225 | 630,831 | 630,831 | 2,593,037 | 75.7% | 24.3% |
| 2028 | 2,775 | 225 | 624,441 | 624,441 | 2,555,807 | 75.6% | 24.4% |
| 2029 | 2,741 | 225 | 616,653 | 616,653 | 2,515,887 | 75.5% | 24.5% |
| 2030 | 2,641 | 225 | 594,311 | 594,311 | 2,418,150 | 75.4% | 24.6% |
| 2031 | 2,543 | 225 | 572,098 | 572,098 | 2,322,543 | 75.4% | 24.6% |
| 2032 | 2,443 | 225 | 549,758 | 549,758 | 2,228,333 | 75.3% | 24.7% |
| 2033 | 2,404 | 225 | 540,867 | 540,867 | 2,190,197 | 75.3% | 24.7% |
| 2034 | 2,362 | 225 | 531,462 | 531,462 | 2,151,307 | 75.3% | 24.7% |
| 2035 | 2,259 | 225 | 508,358 | 508,358 | 2,057,750 | 75.3% | 24.7% |
| 2036 | 2,159 | 225 | 485,715 | 485,715 | 1,966,752 | 75.3% | 24.7% |
| 2037 | 2,059 | 225 | 463,333 | 463,333 | 1,877,722 | 75.3% | 24.7% |
| 2038 | 2,018 | 225 | 454,001 | 454,001 | 1,842,350 | 75.4% | 24.6% |
| 2039 | 1,975 | 225 | 444,416 | 444,416 | 1,806,669 | 75.4% | 24.6% |
| 2040 | 1,932 | 225 | 434,812 | 434,812 | 1,771,252 | 75.5% | 24.5% |
| | **87,523** | | **18,323,230** | **18,323,230** | **83,621,314** | | |

NOTE: New office demand in 2011 and 2012 zeroed to account for current vacancy; Approximately 1.2M SF of demand is necessary to return market to healthy levels.

*Exhibit II-17*

**PHASE 2 RAIL EXTENSION OFFICE DEMAND FORECAST**
**LOUDOUN COUNTY AND FAIRFAX COUNTY**
**2011 - 2040**

| | Fairfax County | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Office-Using Employment Growth | Absorption Per Employee | Projected New Office Space Demand | Increase in Demand Due to Metro | Additional Demand | Reston/ Herndon Area Capture of Fairfax Demand | Reston/ Herndon Area Capture of Additional Demand | Reston/ Herndon Area Office Demand | Percent of Additional Demand from Loudoun County | Demand Taken From Loudoun County | Adjusted Projected Office Space Demand |
| 2011 | 10,809 | 225 | 2,432,028 | 0% | - | 36% | 30% | 875,530 | 0% | - | 2,432,028 |
| 2012 | 10,455 | 225 | 2,352,277 | 0% | - | 34% | 30% | 799,774 | 0% | - | 2,352,277 |
| 2013 | 10,360 | 225 | 2,331,042 | 15% | 349,656 | 32% | 30% | 850,830 | 0% | - | 2,680,698 |
| 2014 | 10,255 | 225 | 2,307,352 | 15% | 346,103 | 30% | 30% | 796,037 | 0% | - | 2,653,455 |
| 2015 | 10,946 | 225 | 2,462,863 | 15% | 369,429 | 30% | 30% | 849,688 | 0% | - | 2,832,292 |
| 2016 | 11,602 | 225 | 2,610,491 | 15% | 391,574 | 30% | 30% | 900,619 | 0% | - | 3,002,065 |
| 2017 | 12,241 | 225 | 2,754,234 | 15% | 413,135 | 30% | 30% | 950,211 | 0% | - | 3,167,369 |
| 2018 | 12,092 | 225 | 2,720,630 | 15% | 408,095 | 30% | 30% | 938,617 | 0% | - | 3,128,725 |
| 2019 | 11,956 | 225 | 2,690,002 | 15% | 403,500 | 30% | 30% | 928,051 | 0% | - | 3,093,502 |
| 2020 | 11,104 | 225 | 2,498,453 | 15% | 374,768 | 30% | 30% | 861,966 | 0% | - | 2,873,221 |
| 2021 | 10,276 | 225 | 2,312,117 | 15% | 346,818 | 30% | 30% | 797,680 | 0% | - | 2,658,934 |
| 2022 | 9,457 | 225 | 2,127,937 | 15% | 319,191 | 30% | 30% | 734,138 | 0% | - | 2,447,128 |
| 2023 | 9,334 | 225 | 2,100,098 | 15% | 315,015 | 30% | 30% | 724,534 | 0% | - | 2,415,112 |
| 2024 | 9,197 | 225 | 2,069,285 | 15% | 310,393 | 30% | 30% | 713,903 | 0% | - | 2,379,677 |
| 2025 | 8,645 | 225 | 1,945,022 | 15% | 291,753 | 30% | 30% | 671,032 | 0% | - | 2,236,775 |
| 2026 | 8,109 | 225 | 1,824,458 | 15% | 273,669 | 30% | 30% | 629,438 | 0% | - | 2,098,127 |
| 2027 | 7,583 | 225 | 1,706,266 | 15% | 255,940 | 30% | 30% | 588,662 | 0% | - | 1,962,206 |
| 2028 | 7,464 | 225 | 1,679,448 | 15% | 251,917 | 30% | 30% | 579,410 | 0% | - | 1,931,365 |
| 2029 | 7,340 | 225 | 1,651,508 | 15% | 247,726 | 30% | 30% | 569,770 | 0% | - | 1,899,234 |
| 2030 | 7,049 | 225 | 1,585,947 | 15% | 237,892 | 30% | 30% | 547,152 | 0% | - | 1,823,839 |
| 2031 | 6,765 | 225 | 1,522,126 | 15% | 228,319 | 30% | 30% | 525,134 | 0% | - | 1,750,445 |
| 2032 | 6,487 | 225 | 1,459,630 | 15% | 218,945 | 30% | 30% | 503,572 | 0% | - | 1,678,575 |
| 2033 | 6,374 | 225 | 1,434,200 | 15% | 215,130 | 30% | 30% | 494,799 | 0% | - | 1,649,330 |
| 2034 | 6,260 | 225 | 1,408,561 | 15% | 211,284 | 30% | 30% | 485,953 | 0% | - | 1,619,845 |
| 2035 | 5,988 | 225 | 1,347,297 | 15% | 202,095 | 30% | 30% | 464,818 | 0% | - | 1,549,392 |
| 2036 | 5,724 | 225 | 1,287,859 | 15% | 193,179 | 30% | 30% | 444,311 | 0% | - | 1,481,037 |
| 2037 | 5,466 | 225 | 1,229,903 | 15% | 184,485 | 30% | 30% | 424,317 | 0% | - | 1,414,388 |
| 2038 | 5,366 | 225 | 1,207,260 | 15% | 181,089 | 30% | 30% | 416,505 | 0% | - | 1,388,349 |
| 2039 | 5,265 | 225 | 1,184,568 | 15% | 177,685 | 30% | 30% | 408,676 | 0% | - | 1,362,253 |
| 2040 | 5,165 | 225 | 1,162,122 | 15% | 174,318 | 30% | 30% | 400,932 | 0% | - | 1,336,440 |
| **Totals** | **255,133** | | **57,404,983** | | **7,893,102** | | | | | - | **65,298,085** |

Note: Fairfax County includes Fairfax County, Fairfax City, and Falls Church

*Exhibit II-17*

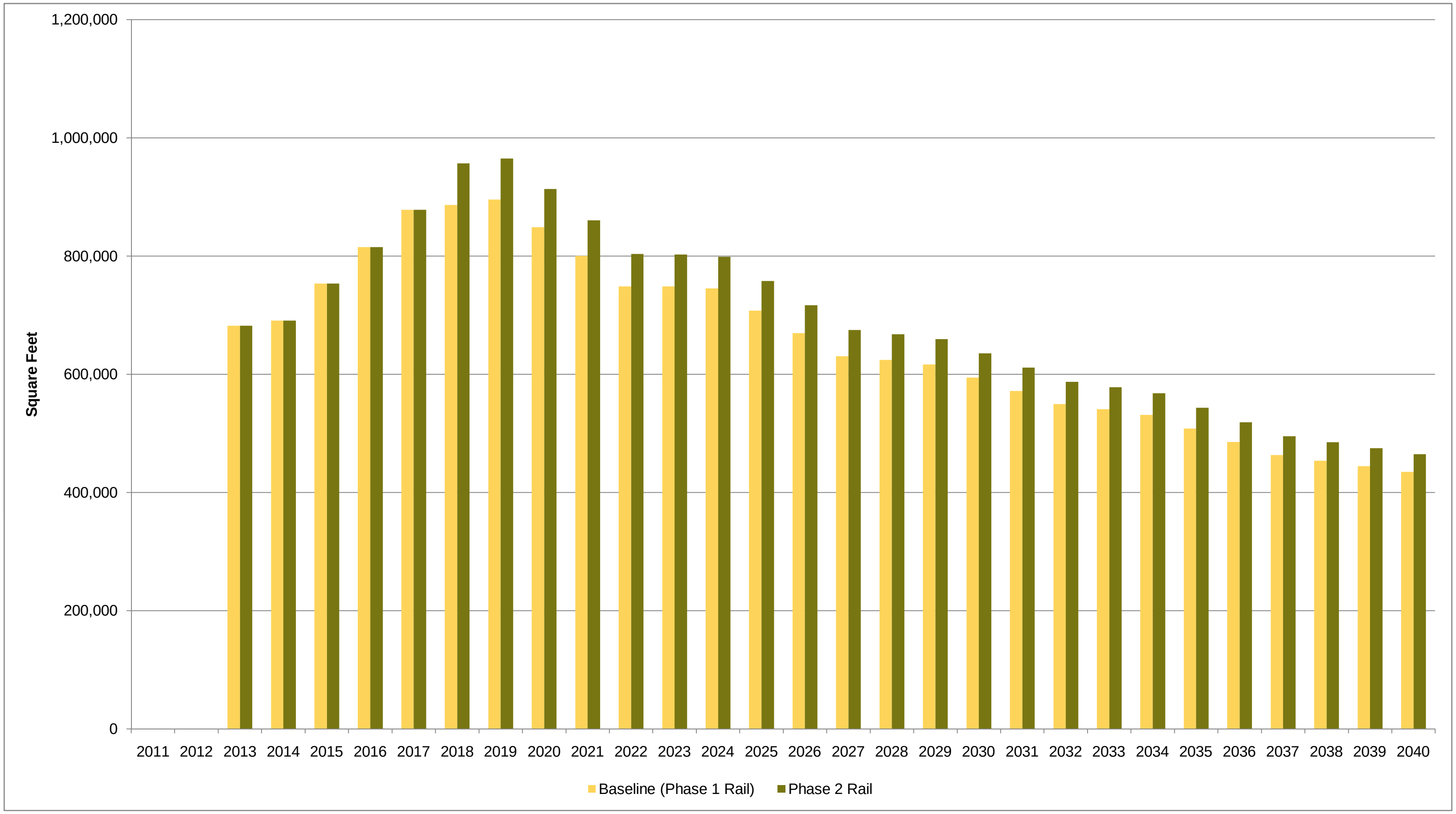
## PHASE 2 RAIL EXTENSION OFFICE DEMAND FORECAST
## LOUDOUN COUNTY AND FAIRFAX COUNTY
## 2011 - 2040

| | Loudoun County | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Office-Using Employment Growth | Absorption Per Employee | Projected New Office Space Demand | Capture of Reston/ Herndon Area Demand due to Metro | Additional Demand from Metro (as a % of Reston/ Herndon Area Demand) | Adjusted Loudoun Demand | Total of Loudoun & Fairfax Office Demand | Fairfax Percent of Total | Loudoun Percent of Total |
| 2011 | 3,110 | 225 | - | | - | - | 2,432,028 | 100.0% | 0.0% |
| 2012 | 2,977 | 225 | - | | - | - | 2,352,277 | 100.0% | 0.0% |
| 2013 | 3,033 | 225 | 682,339 | | - | 682,339 | 3,363,037 | 79.7% | 20.3% |
| 2014 | 3,071 | 225 | 691,029 | | - | 691,029 | 3,344,485 | 79.3% | 20.7% |
| 2015 | 3,350 | 225 | 753,694 | | - | 753,694 | 3,585,986 | 79.0% | 21.0% |
| 2016 | 3,623 | 225 | 815,134 | | - | 815,134 | 3,817,198 | 78.6% | 21.4% |
| 2017 | 3,903 | 225 | 878,271 | | - | 878,271 | 4,045,640 | 78.3% | 21.7% |
| 2018 | 3,940 | 225 | 886,413 | 7.5% | 70,396 | 956,810 | 4,085,534 | 76.6% | 23.4% |
| 2019 | 3,981 | 225 | 895,805 | 7.5% | 69,604 | 965,409 | 4,058,911 | 76.2% | 23.8% |
| 2020 | 3,773 | 225 | 849,002 | 7.5% | 64,647 | 913,650 | 3,786,870 | 75.9% | 24.1% |
| 2021 | 3,558 | 225 | 800,584 | 7.5% | 59,826 | 860,410 | 3,519,345 | 75.6% | 24.4% |
| 2022 | 3,327 | 225 | 748,555 | 7.5% | 55,060 | 803,615 | 3,250,743 | 75.3% | 24.7% |
| 2023 | 3,327 | 225 | 748,548 | 7.5% | 54,340 | 802,888 | 3,218,000 | 75.1% | 24.9% |
| 2024 | 3,313 | 225 | 745,486 | 7.5% | 53,543 | 799,029 | 3,178,706 | 74.9% | 25.1% |
| 2025 | 3,145 | 225 | 707,624 | 7.5% | 50,327 | 757,952 | 2,994,727 | 74.7% | 25.3% |
| 2026 | 2,976 | 225 | 669,689 | 7.5% | 47,208 | 716,897 | 2,815,023 | 74.5% | 25.5% |
| 2027 | 2,804 | 225 | 630,831 | 7.5% | 44,150 | 674,980 | 2,637,187 | 74.4% | 25.6% |
| 2028 | 2,775 | 225 | 624,441 | 7.5% | 43,456 | 667,897 | 2,599,262 | 74.3% | 25.7% |
| 2029 | 2,741 | 225 | 616,653 | 7.5% | 42,733 | 659,386 | 2,558,620 | 74.2% | 25.8% |
| 2030 | 2,641 | 225 | 594,311 | 7.5% | 41,036 | 635,347 | 2,459,186 | 74.2% | 25.8% |
| 2031 | 2,543 | 225 | 572,098 | 7.5% | 39,385 | 611,483 | 2,361,928 | 74.1% | 25.9% |
| 2032 | 2,443 | 225 | 549,758 | 7.5% | 37,768 | 587,526 | 2,266,101 | 74.1% | 25.9% |
| 2033 | 2,404 | 225 | 540,867 | 7.5% | 37,110 | 577,977 | 2,227,307 | 74.1% | 25.9% |
| 2034 | 2,362 | 225 | 531,462 | 7.5% | 36,447 | 567,909 | 2,187,754 | 74.0% | 26.0% |
| 2035 | 2,259 | 225 | 508,358 | 7.5% | 34,861 | 543,219 | 2,092,611 | 74.0% | 26.0% |
| 2036 | 2,159 | 225 | 485,715 | 7.5% | 33,323 | 519,038 | 2,000,075 | 74.0% | 26.0% |
| 2037 | 2,059 | 225 | 463,333 | 7.5% | 31,824 | 495,157 | 1,909,545 | 74.1% | 25.9% |
| 2038 | 2,018 | 225 | 454,001 | 7.5% | 31,238 | 485,239 | 1,873,588 | 74.1% | 25.9% |
| 2039 | 1,975 | 225 | 444,416 | 7.5% | 30,651 | 475,067 | 1,837,320 | 74.1% | 25.9% |
| 2040 | 1,932 | 225 | 434,812 | 7.5% | 30,070 | 464,882 | 1,801,322 | 74.2% | 25.8% |
| | **87,523** | | **18,323,230** | | **1,039,003** | **19,362,233** | | | |

NOTE: New office demand in 2011 and 2012 zeroed to account for current vacancy; Approximately 1.2M SF of demand is necessary to return market to healthy levels.

*Exhibit II-18*

**COUNTYWIDE OFFICE DEMAND FORECAST**
**LOUDOUN COUNTY**
**2011 - 2040**



### *Exhibit II-19*

## BASELINE OFFICE DEMAND FORECAST (PHASE 1 RAIL EXTENSION) BY CORRIDOR
## LOUDOUN COUNTY
## 2011 - 2040

| | | Route 7 | | | Route 28 | | | Route 50 | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Projected Office Space Demand[1] | Estimated Capture of Office Demand[2] | Capture of New Office Space Demand | Cumulative Demand | Estimated Capture of Office Demand[2] | Capture of New Office Space Demand | Cumulative Demand | Estimated Capture of Office Demand[2] | Capture of New Office Space Demand | Cumulative Demand |
| 2011 | - | 33.1% | - | - | 25.0% | - | - | 3.0% | - | - |
| 2012 | - | 32.2% | - | - | 25.0% | - | - | 3.0% | - | - |
| 2013 | 682,339 | 31.3% | 213,767 | 213,767 | 25.0% | 170,585 | 170,585 | 3.0% | 20,470 | 20,470 |
| 2014 | 691,029 | 30.5% | 210,664 | 424,431 | 25.0% | 172,757 | 343,342 | 3.0% | 20,731 | 41,201 |
| 2015 | 753,694 | 29.7% | 223,585 | 648,016 | 25.0% | 188,424 | 531,766 | 3.0% | 22,611 | 63,812 |
| 2016 | 815,134 | 28.9% | 235,304 | 883,320 | 25.0% | 203,783 | 735,549 | 3.0% | 24,454 | 88,266 |
| 2017 | 878,271 | 28.1% | 246,708 | 1,130,028 | 25.0% | 219,568 | 955,117 | 3.0% | 26,348 | 114,614 |
| 2018 | 886,413 | 27.3% | 242,295 | 1,372,324 | 25.0% | 221,603 | 1,176,720 | 3.0% | 26,592 | 141,206 |
| 2019 | 895,805 | 26.6% | 238,274 | 1,610,597 | 25.0% | 223,951 | 1,400,671 | 3.0% | 26,874 | 168,081 |
| 2020 | 849,002 | 25.9% | 219,748 | 1,830,346 | 25.0% | 212,251 | 1,612,922 | 3.0% | 25,470 | 193,551 |
| 2021 | 800,584 | 25.2% | 201,640 | 2,031,986 | 25.0% | 200,146 | 1,813,068 | 3.0% | 24,018 | 217,568 |
| 2022 | 748,555 | 24.5% | 183,463 | 2,215,448 | 25.0% | 187,139 | 2,000,206 | 3.0% | 22,457 | 240,025 |
| 2023 | 748,548 | 23.8% | 178,524 | 2,393,973 | 25.0% | 187,137 | 2,187,343 | 3.0% | 22,456 | 262,481 |
| 2024 | 745,486 | 23.2% | 173,010 | 2,566,982 | 25.0% | 186,372 | 2,373,715 | 3.0% | 22,365 | 284,846 |
| 2025 | 707,624 | 22.6% | 159,804 | 2,726,787 | 25.0% | 176,906 | 2,550,621 | 3.0% | 21,229 | 306,075 |
| 2026 | 669,689 | 22.0% | 147,168 | 2,873,954 | 25.0% | 167,422 | 2,718,043 | 3.0% | 20,091 | 326,165 |
| 2027 | 630,831 | 21.4% | 134,898 | 3,008,852 | 25.0% | 157,708 | 2,875,751 | 3.0% | 18,925 | 345,090 |
| 2028 | 624,441 | 20.8% | 129,939 | 3,138,791 | 25.0% | 156,110 | 3,031,861 | 3.0% | 18,733 | 363,823 |
| 2029 | 616,653 | 20.2% | 124,865 | 3,263,656 | 25.0% | 154,163 | 3,186,025 | 3.0% | 18,500 | 382,323 |
| 2030 | 594,311 | 19.7% | 117,103 | 3,380,759 | 25.0% | 148,578 | 3,334,602 | 3.0% | 17,829 | 400,152 |
| 2031 | 572,098 | 19.2% | 109,693 | 3,490,451 | 25.0% | 143,024 | 3,477,627 | 3.0% | 17,163 | 417,315 |
| 2032 | 549,758 | 18.7% | 102,573 | 3,593,024 | 25.0% | 137,440 | 3,615,066 | 3.0% | 16,493 | 433,808 |
| 2033 | 540,867 | 18.2% | 98,199 | 3,691,223 | 25.0% | 135,217 | 3,750,283 | 3.0% | 16,226 | 450,034 |
| 2034 | 531,462 | 17.7% | 93,895 | 3,785,118 | 25.0% | 132,866 | 3,883,149 | 3.0% | 15,944 | 465,978 |
| 2035 | 508,358 | 17.2% | 87,396 | 3,872,514 | 25.0% | 127,089 | 4,010,238 | 3.0% | 15,251 | 481,229 |
| 2036 | 485,715 | 16.7% | 81,256 | 3,953,770 | 25.0% | 121,429 | 4,131,667 | 3.0% | 14,571 | 495,800 |
| 2037 | 463,333 | 16.3% | 75,426 | 4,029,197 | 25.0% | 115,833 | 4,247,500 | 3.0% | 13,900 | 509,700 |
| 2038 | 454,001 | 15.8% | 71,919 | 4,101,115 | 25.0% | 113,500 | 4,361,000 | 3.0% | 13,620 | 523,320 |
| 2039 | 444,416 | 15.4% | 68,506 | 4,169,621 | 25.0% | 111,104 | 4,472,104 | 3.0% | 13,332 | 536,653 |
| 2040 | 434,812 | 15.0% | 65,222 | 4,234,843 | 25.0% | 108,703 | 4,580,807 | 3.0% | 13,044 | 549,697 |

*Exhibit II-19*

## BASELINE OFFICE DEMAND FORECAST (PHASE 1 RAIL EXTENSION) BY CORRIDOR
## LOUDOUN COUNTY
## 2011 - 2040

| | | Route 267 | | | Route 606 | | | Route 625 | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Projected Office Space Demand | Estimated Capture of Office Demand[2] | Capture of New Office Space Demand | Cumulative Demand | Estimated Capture of Office Demand[2] | Capture of New Office Space Demand | Cumulative Demand | Estimated Capture of Office Demand[2] | Capture of New Office Space Demand | Cumulative Demand |
| 2011 | - | 11.5% | - | - | 3.5% | - | - | 14.4% | - | - |
| 2012 | - | 12.0% | - | - | 4.0% | - | - | 14.3% | - | - |
| 2013 | 682,339 | 12.5% | 85,086 | 85,086 | 4.5% | 30,499 | 30,499 | 14.2% | 96,895 | 96,895 |
| 2014 | 691,029 | 12.9% | 89,388 | 174,474 | 4.9% | 34,105 | 64,605 | 14.1% | 97,519 | 194,414 |
| 2015 | 753,694 | 13.4% | 100,916 | 275,390 | 5.4% | 40,620 | 105,225 | 14.0% | 105,701 | 300,115 |
| 2016 | 815,134 | 13.8% | 112,751 | 388,140 | 5.8% | 47,540 | 152,765 | 13.9% | 113,607 | 413,722 |
| 2017 | 878,271 | 14.3% | 125,275 | 513,416 | 6.3% | 55,014 | 207,778 | 13.9% | 121,646 | 535,368 |
| 2018 | 886,413 | 14.7% | 130,168 | 643,584 | 6.7% | 59,255 | 267,034 | 13.8% | 122,010 | 657,378 |
| 2019 | 895,805 | 15.1% | 135,225 | 778,809 | 7.1% | 63,561 | 330,595 | 13.7% | 122,536 | 779,914 |
| 2020 | 849,002 | 15.5% | 131,560 | 910,369 | 7.5% | 63,639 | 394,234 | 13.6% | 115,412 | 895,327 |
| 2021 | 800,584 | 15.9% | 127,183 | 1,037,552 | 7.9% | 63,136 | 457,370 | 13.5% | 108,154 | 1,003,481 |
| 2022 | 748,555 | 16.3% | 121,768 | 1,159,320 | 8.3% | 61,884 | 519,254 | 13.4% | 100,497 | 1,103,978 |
| 2023 | 748,548 | 16.6% | 124,548 | 1,283,868 | 8.6% | 64,664 | 583,918 | 13.3% | 99,871 | 1,203,849 |
| 2024 | 745,486 | 17.0% | 126,740 | 1,410,608 | 9.0% | 67,101 | 651,019 | 13.3% | 98,844 | 1,302,693 |
| 2025 | 707,624 | 17.4% | 122,804 | 1,533,412 | 9.4% | 66,194 | 717,213 | 13.2% | 93,241 | 1,395,934 |
| 2026 | 669,689 | 17.7% | 118,529 | 1,651,941 | 9.7% | 64,954 | 782,167 | 13.1% | 87,694 | 1,483,627 |
| 2027 | 630,831 | 18.0% | 113,774 | 1,765,715 | 10.0% | 63,307 | 845,475 | 13.0% | 82,092 | 1,565,719 |
| 2028 | 624,441 | 18.4% | 114,671 | 1,880,386 | 10.4% | 64,715 | 910,190 | 12.9% | 80,755 | 1,646,474 |
| 2029 | 616,653 | 18.7% | 115,215 | 1,995,600 | 10.7% | 65,882 | 976,072 | 12.9% | 79,252 | 1,725,726 |
| 2030 | 594,311 | 19.0% | 112,897 | 2,108,497 | 11.0% | 65,352 | 1,041,424 | 12.8% | 75,906 | 1,801,632 |
| 2031 | 572,098 | 19.3% | 110,421 | 2,218,918 | 11.3% | 64,653 | 1,106,077 | 12.7% | 72,615 | 1,874,247 |
| 2032 | 549,758 | 19.6% | 107,744 | 2,326,662 | 11.6% | 63,763 | 1,169,840 | 12.6% | 69,345 | 1,943,593 |
| 2033 | 540,867 | 19.9% | 107,571 | 2,434,233 | 11.9% | 64,302 | 1,234,143 | 12.5% | 67,800 | 2,011,393 |
| 2034 | 531,462 | 20.2% | 107,206 | 2,541,439 | 12.2% | 64,689 | 1,298,832 | 12.5% | 66,207 | 2,077,599 |
| 2035 | 508,358 | 20.4% | 103,951 | 2,645,390 | 12.4% | 63,282 | 1,362,114 | 12.4% | 62,935 | 2,140,534 |
| 2036 | 485,715 | 20.7% | 100,631 | 2,746,021 | 12.7% | 61,774 | 1,423,887 | 12.3% | 59,758 | 2,200,292 |
| 2037 | 463,333 | 21.0% | 97,214 | 2,843,235 | 13.0% | 60,147 | 1,484,035 | 12.2% | 56,650 | 2,256,942 |
| 2038 | 454,001 | 21.2% | 96,423 | 2,939,658 | 13.2% | 60,103 | 1,544,138 | 12.2% | 55,164 | 2,312,106 |
| 2039 | 444,416 | 21.5% | 95,502 | 3,035,160 | 13.5% | 59,949 | 1,604,086 | 12.1% | 53,664 | 2,365,769 |
| 2040 | 434,812 | 21.7% | 94,503 | 3,129,663 | 13.7% | 59,718 | 1,663,805 | 12.0% | 52,177 | 2,417,947 |

1/See Exhibit II -15
2/RCLCO estimate based in part on historical capture rates of office demand; See Exhibit II-8

### *Exhibit II-20*

## OFFICE DEMAND FORECAST (PHASE 2 RAIL EXTENSION) BY CORRIDOR
## LOUDOUN COUNTY
## 2011 - 2040

| | | Route 7 | | | Route 28 | | | Route 50 | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Projected Office Space Demand[1] | Estimated Capture of Office Demand[2] | Capture of New Office Space Demand | Cumulative Demand | Estimated Capture of Office Demand[2] | Capture of New Office Space Demand | Cumulative Demand | Estimated Capture of Office Demand[2] | Capture of New Office Space Demand | Cumulative Demand |
| 2011 | - | 33.1% | - | - | 25.0% | - | - | 3.0% | - | - |
| 2012 | - | 32.2% | - | - | 25.0% | - | - | 3.0% | - | - |
| 2013 | 682,339 | 31.3% | 213,767 | 213,767 | 25.0% | 170,585 | 170,585 | 3.0% | 20,470 | 20,470 |
| 2014 | 691,029 | 30.5% | 210,664 | 424,431 | 25.0% | 172,757 | 343,342 | 3.0% | 20,731 | 41,201 |
| 2015 | 753,694 | 29.7% | 223,585 | 648,016 | 25.0% | 188,424 | 531,766 | 3.0% | 22,611 | 63,812 |
| 2016 | 815,134 | 28.9% | 235,304 | 883,320 | 25.0% | 203,783 | 735,549 | 3.0% | 24,454 | 88,266 |
| 2017 | 878,271 | 28.1% | 246,708 | 1,130,028 | 25.0% | 219,568 | 955,117 | 3.0% | 26,348 | 114,614 |
| 2018 | 886,413 | 19.8% | 175,814 | 1,305,843 | 27.5% | 243,764 | 1,198,880 | 3.0% | 26,592 | 141,206 |
| 2019 | 895,805 | 19.1% | 171,088 | 1,476,931 | 27.5% | 246,346 | 1,445,227 | 3.0% | 26,874 | 168,081 |
| 2020 | 849,002 | 18.4% | 156,073 | 1,633,004 | 27.5% | 233,476 | 1,678,702 | 3.0% | 25,470 | 193,551 |
| 2021 | 800,584 | 17.7% | 141,596 | 1,774,600 | 27.5% | 220,161 | 1,898,863 | 3.0% | 24,018 | 217,568 |
| 2022 | 748,555 | 17.0% | 127,321 | 1,901,921 | 27.5% | 205,853 | 2,104,715 | 3.0% | 22,457 | 240,025 |
| 2023 | 748,548 | 16.3% | 122,383 | 2,024,305 | 27.5% | 205,851 | 2,310,566 | 3.0% | 22,456 | 262,481 |
| 2024 | 745,486 | 15.7% | 117,098 | 2,141,403 | 27.5% | 205,009 | 2,515,575 | 3.0% | 22,365 | 284,846 |
| 2025 | 707,624 | 15.1% | 106,732 | 2,248,135 | 27.5% | 194,597 | 2,710,172 | 3.0% | 21,229 | 306,075 |
| 2026 | 669,689 | 14.5% | 96,941 | 2,345,076 | 27.5% | 184,164 | 2,894,336 | 3.0% | 20,091 | 326,165 |
| 2027 | 630,831 | 13.9% | 87,586 | 2,432,662 | 27.5% | 173,478 | 3,067,814 | 3.0% | 18,925 | 345,090 |
| 2028 | 624,441 | 13.3% | 83,105 | 2,515,767 | 27.5% | 171,721 | 3,239,536 | 3.0% | 18,733 | 363,823 |
| 2029 | 616,653 | 12.7% | 78,616 | 2,594,383 | 27.5% | 169,580 | 3,409,115 | 3.0% | 18,500 | 382,323 |
| 2030 | 594,311 | 12.2% | 72,530 | 2,666,913 | 27.5% | 163,436 | 3,572,551 | 3.0% | 17,829 | 400,152 |
| 2031 | 572,098 | 11.7% | 66,785 | 2,733,698 | 27.5% | 157,327 | 3,729,878 | 3.0% | 17,163 | 417,315 |
| 2032 | 549,758 | 11.2% | 61,341 | 2,795,039 | 27.5% | 151,183 | 3,881,061 | 3.0% | 16,493 | 433,808 |
| 2033 | 540,867 | 10.7% | 57,634 | 2,852,673 | 27.5% | 148,739 | 4,029,800 | 3.0% | 16,226 | 450,034 |
| 2034 | 531,462 | 10.2% | 54,035 | 2,906,708 | 27.5% | 146,152 | 4,175,952 | 3.0% | 15,944 | 465,978 |
| 2035 | 508,358 | 9.7% | 49,269 | 2,955,977 | 27.5% | 139,798 | 4,315,750 | 3.0% | 15,251 | 481,229 |
| 2036 | 485,715 | 9.2% | 44,828 | 3,000,805 | 27.5% | 133,571 | 4,449,322 | 3.0% | 14,571 | 495,800 |
| 2037 | 463,333 | 8.8% | 40,676 | 3,041,482 | 27.5% | 127,417 | 4,576,738 | 3.0% | 13,900 | 509,700 |
| 2038 | 454,001 | 8.3% | 37,868 | 3,079,350 | 27.5% | 124,850 | 4,701,589 | 3.0% | 13,620 | 523,320 |
| 2039 | 444,416 | 7.9% | 35,175 | 3,114,525 | 27.5% | 122,214 | 4,823,803 | 3.0% | 13,332 | 536,653 |
| 2040 | 434,812 | 7.5% | 32,611 | 3,147,135 | 27.5% | 119,573 | 4,943,377 | 3.0% | 13,044 | 549,697 |

## *Exhibit II-20*

## OFFICE DEMAND FORECAST (PHASE 2 RAIL EXTENSION) BY CORRIDOR
## LOUDOUN COUNTY
## 2011 - 2040

| | | Route 267 | | | Route 606 | | | Route 625 | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Projected Office Space Demand | Estimated Capture of Office Demand[2] | Capture of New Office Space Demand | Cumulative Demand | Estimated Capture of Office Demand[2] | Capture of New Office Space Demand | Cumulative Demand | Estimated Capture of Office Demand[2] | Capture of New Office Space Demand | Cumulative Demand |
| 2011 | - | 11.5% | - | - | 3.5% | - | - | 14.4% | - | - |
| 2012 | - | 12.0% | - | - | 4.0% | - | - | 14.3% | - | - |
| 2013 | 682,339 | 12.5% | 85,086 | 85,086 | 4.5% | 30,499 | 30,499 | 14.2% | 96,895 | 96,895 |
| 2014 | 691,029 | 12.9% | 89,388 | 174,474 | 4.9% | 34,105 | 64,605 | 14.1% | 97,519 | 194,414 |
| 2015 | 753,694 | 13.4% | 100,916 | 275,390 | 5.4% | 40,620 | 105,225 | 14.0% | 105,701 | 300,115 |
| 2016 | 815,134 | 13.8% | 112,751 | 388,140 | 5.8% | 47,540 | 152,765 | 13.9% | 113,607 | 413,722 |
| 2017 | 878,271 | 14.3% | 125,275 | 513,416 | 6.3% | 55,014 | 207,778 | 13.9% | 121,646 | 535,368 |
| 2018 | 886,413 | 19.7% | 174,489 | 687,905 | 9.2% | 81,416 | 289,194 | 11.3% | 99,850 | 635,218 |
| 2019 | 895,805 | 20.1% | 180,016 | 867,920 | 9.6% | 85,956 | 375,150 | 11.2% | 100,141 | 735,359 |
| 2020 | 849,002 | 20.5% | 174,010 | 1,041,930 | 10.0% | 84,864 | 460,015 | 11.1% | 94,187 | 829,546 |
| 2021 | 800,584 | 20.9% | 167,212 | 1,209,142 | 10.4% | 83,151 | 543,165 | 11.0% | 88,139 | 917,686 |
| 2022 | 748,555 | 21.3% | 159,196 | 1,368,338 | 10.8% | 80,598 | 623,763 | 10.9% | 81,783 | 999,469 |
| 2023 | 748,548 | 21.6% | 161,975 | 1,530,314 | 11.1% | 83,378 | 707,141 | 10.8% | 81,157 | 1,080,626 |
| 2024 | 745,486 | 22.0% | 164,014 | 1,694,327 | 11.5% | 85,738 | 792,879 | 10.8% | 80,207 | 1,160,833 |
| 2025 | 707,624 | 22.4% | 158,185 | 1,852,513 | 11.9% | 83,885 | 876,763 | 10.7% | 75,550 | 1,236,383 |
| 2026 | 669,689 | 22.7% | 152,014 | 2,004,527 | 12.2% | 81,697 | 958,460 | 10.6% | 70,951 | 1,307,335 |
| 2027 | 630,831 | 23.0% | 145,315 | 2,149,842 | 12.5% | 79,078 | 1,037,538 | 10.5% | 66,321 | 1,373,656 |
| 2028 | 624,441 | 23.4% | 145,893 | 2,295,734 | 12.9% | 80,326 | 1,117,864 | 10.4% | 65,144 | 1,438,800 |
| 2029 | 616,653 | 23.7% | 146,047 | 2,441,782 | 13.2% | 81,299 | 1,199,163 | 10.4% | 63,836 | 1,502,636 |
| 2030 | 594,311 | 24.0% | 142,612 | 2,584,394 | 13.5% | 80,210 | 1,279,373 | 10.3% | 61,048 | 1,563,684 |
| 2031 | 572,098 | 24.3% | 139,026 | 2,723,420 | 13.8% | 78,955 | 1,358,328 | 10.2% | 58,312 | 1,621,996 |
| 2032 | 549,758 | 24.6% | 135,232 | 2,858,652 | 14.1% | 77,507 | 1,435,835 | 10.1% | 55,602 | 1,677,598 |
| 2033 | 540,867 | 24.9% | 134,615 | 2,993,266 | 14.4% | 77,824 | 1,513,659 | 10.0% | 54,278 | 1,731,876 |
| 2034 | 531,462 | 25.2% | 133,779 | 3,127,046 | 14.7% | 77,976 | 1,591,635 | 10.0% | 52,920 | 1,784,796 |
| 2035 | 508,358 | 25.4% | 129,369 | 3,256,414 | 14.9% | 75,991 | 1,667,626 | 9.9% | 50,226 | 1,835,022 |
| 2036 | 485,715 | 25.7% | 124,917 | 3,381,331 | 15.2% | 73,917 | 1,741,543 | 9.8% | 47,615 | 1,882,637 |
| 2037 | 463,333 | 26.0% | 120,381 | 3,501,712 | 15.5% | 71,731 | 1,813,273 | 9.7% | 45,067 | 1,927,704 |
| 2038 | 454,001 | 26.2% | 119,123 | 3,620,834 | 15.7% | 71,453 | 1,884,726 | 9.7% | 43,814 | 1,971,517 |
| 2039 | 444,416 | 26.5% | 117,723 | 3,738,557 | 16.0% | 71,059 | 1,955,785 | 9.6% | 42,553 | 2,014,070 |
| 2040 | 434,812 | 26.7% | 116,244 | 3,854,801 | 16.2% | 70,589 | 2,026,374 | 9.5% | 41,307 | 2,055,378 |

1/See Exhibit II -16 ; Does not include additional demand due to Metro, which is applied in Exhibit II - 20
2/RCLCO estimate based in part on historical capture rates of office demand; See Exhibit II-8

## Exhibit II-21

## BASELINE (PHASE 1 RAIL EXTENSION) STATION AREA OFFICE DEMAND AND SUPPLY FORECAST
## PLANNED METRO STATIONS IN LOUDOUN COUNTY
## 2011 - 2040

| Year | Baseline Route 28 Demand | Route 28 Station Area Capture | Route 28 Station Area Demand | Route 28 Station Area Capacity | Baseline Route 606 Demand | Route 606 Station Area Capture | Route 606 Station Area Demand | Route 606 Station Area Capacity | Baseline Route 267 Demand | Route 772 Station Area Capture | Route 772 Station Area Demand | Route 772 Station Area Capacity |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2011 | 0 | 40% | 0 | 2,516,230 | 0 | 65% | 0 | 9,076,037 | 0 | 40% | 0 | 9,622,675 |
| 2012 | 0 | 40% | 0 | 2,516,230 | 0 | 65% | 0 | 9,076,037 | 0 | 40% | 0 | 9,622,675 |
| 2013 | 170,585 | 40% | 68,234 | 2,516,230 | 30,499 | 65% | 19,824 | 9,076,037 | 85,086 | 40% | 34,035 | 9,622,675 |
| 2014 | 172,757 | 40% | 69,103 | 2,447,996 | 34,105 | 65% | 22,168 | 9,056,212 | 89,388 | 40% | 35,755 | 9,588,640 |
| 2015 | 188,424 | 40% | 75,369 | 2,378,893 | 40,620 | 65% | 26,403 | 9,034,044 | 100,916 | 40% | 40,366 | 9,552,885 |
| 2016 | 203,783 | 40% | 81,513 | 2,303,524 | 47,540 | 65% | 30,901 | 9,007,641 | 112,751 | 40% | 45,100 | 9,512,519 |
| 2017 | 219,568 | 40% | 87,827 | 2,222,010 | 55,014 | 65% | 35,759 | 8,976,740 | 125,275 | 40% | 50,110 | 9,467,418 |
| 2018 | 221,603 | 40% | 88,641 | 2,134,183 | 59,255 | 65% | 38,516 | 8,940,981 | 130,168 | 40% | 52,067 | 9,417,308 |
| 2019 | 223,951 | 40% | 89,580 | 2,045,542 | 63,561 | 65% | 41,315 | 8,902,465 | 135,225 | 40% | 54,090 | 9,365,241 |
| 2020 | 212,251 | 40% | 84,900 | 1,955,961 | 63,639 | 65% | 41,366 | 8,861,150 | 131,560 | 40% | 52,624 | 9,311,151 |
| 2021 | 200,146 | 40% | 80,058 | 1,871,061 | 63,136 | 65% | 41,039 | 8,819,784 | 127,183 | 40% | 50,873 | 9,258,527 |
| 2022 | 187,139 | 40% | 74,855 | 1,791,003 | 61,884 | 65% | 40,225 | 8,778,746 | 121,768 | 40% | 48,707 | 9,207,654 |
| 2023 | 187,137 | 40% | 74,855 | 1,716,147 | 64,664 | 65% | 42,032 | 8,738,521 | 124,548 | 40% | 49,819 | 9,158,946 |
| 2024 | 186,372 | 40% | 74,549 | 1,641,292 | 67,101 | 65% | 43,615 | 8,696,490 | 126,740 | 40% | 50,696 | 9,109,127 |
| 2025 | 176,906 | 40% | 70,762 | 1,566,744 | 66,194 | 65% | 43,026 | 8,652,874 | 122,804 | 40% | 49,122 | 9,058,431 |
| 2026 | 167,422 | 40% | 66,969 | 1,495,981 | 64,954 | 65% | 42,220 | 8,609,848 | 118,529 | 40% | 47,412 | 9,009,310 |
| 2027 | 157,708 | 40% | 63,083 | 1,429,012 | 63,307 | 65% | 41,150 | 8,567,628 | 113,774 | 40% | 45,510 | 8,961,898 |
| 2028 | 156,110 | 40% | 62,444 | 1,365,929 | 64,715 | 65% | 42,065 | 8,526,478 | 114,671 | 40% | 45,868 | 8,916,389 |
| 2029 | 154,163 | 40% | 61,665 | 1,303,485 | 65,882 | 65% | 42,824 | 8,484,413 | 115,215 | 40% | 46,086 | 8,870,520 |
| 2030 | 148,578 | 40% | 59,431 | 1,241,820 | 65,352 | 65% | 42,479 | 8,441,590 | 112,897 | 40% | 45,159 | 8,824,435 |
| 2031 | 143,024 | 40% | 57,210 | 1,182,389 | 64,653 | 65% | 42,024 | 8,399,111 | 110,421 | 40% | 44,168 | 8,779,276 |
| 2032 | 137,440 | 40% | 54,976 | 1,125,179 | 63,763 | 65% | 41,446 | 8,357,086 | 107,744 | 40% | 43,098 | 8,735,108 |
| 2033 | 135,217 | 40% | 54,087 | 1,070,203 | 64,302 | 65% | 41,796 | 8,315,640 | 107,571 | 40% | 43,029 | 8,692,010 |
| 2034 | 132,866 | 40% | 53,146 | 1,016,117 | 64,689 | 65% | 42,048 | 8,273,844 | 107,206 | 40% | 42,882 | 8,648,981 |
| 2035 | 127,089 | 40% | 50,836 | 962,970 | 63,282 | 65% | 41,133 | 8,231,796 | 103,951 | 40% | 41,580 | 8,606,099 |
| 2036 | 121,429 | 40% | 48,571 | 912,135 | 61,774 | 65% | 40,153 | 8,190,663 | 100,631 | 40% | 40,252 | 8,564,519 |
| 2037 | 115,833 | 40% | 46,333 | 863,563 | 60,147 | 65% | 39,096 | 8,150,510 | 97,214 | 40% | 38,886 | 8,524,266 |
| 2038 | 113,500 | 40% | 45,400 | 817,230 | 60,103 | 65% | 39,067 | 8,111,414 | 96,423 | 40% | 38,569 | 8,485,381 |
| 2039 | 111,104 | 40% | 44,442 | 771,830 | 59,949 | 65% | 38,967 | 8,072,347 | 95,502 | 40% | 38,201 | 8,446,811 |
| 2040 | 108,703 | 40% | 43,481 | 727,388 | 59,718 | 65% | 38,817 | 8,033,380 | 94,503 | 40% | 37,801 | 8,408,611 |
| **Totals** | **4,580,807** | | **1,832,323** | | **1,663,805** | | **1,081,473** | | **3,129,663** | | **1,251,865** | |

## Exhibit II-22

## PHASE 2 RAIL EXTENSION STATION AREA OFFICE DEMAND AND SUPPLY FORECAST
## PLANNED METRO STATIONS IN LOUDOUN COUNTY
## 2011 - 2040

| Year | Additional Demand Due to Metro | Route 28 Corridor Demand | Route 28 Station Area Capture of Corridor Demand | Route 28 Station Area Demand | Route 28 Station Capture of Additional Demand Due to Metro | Route 28 Capture of Additional Demand Due to Metro | Total Route 28 Station Area Office Demand | Route 28 Station Area Capacity |
|---|---|---|---|---|---|---|---|---|
| 2011 | 0 | 0 | 40% | 0 | 40% | 0 | 0 | 4,141,145 |
| 2012 | 0 | 0 | 40% | 0 | 40% | 0 | 0 | 4,141,145 |
| 2013 | 0 | 170,585 | 40% | 68,234 | 40% | 0 | 68,234 | 4,072,911 |
| 2014 | 0 | 172,757 | 40% | 69,103 | 40% | 0 | 69,103 | 4,003,808 |
| 2015 | 0 | 188,424 | 40% | 75,369 | 40% | 0 | 75,369 | 3,928,439 |
| 2016 | 0 | 203,783 | 40% | 81,513 | 40% | 0 | 81,513 | 3,846,925 |
| 2017 | 0 | 219,568 | 40% | 87,827 | 40% | 0 | 87,827 | 3,759,098 |
| 2018 | 70,396 | 243,764 | 50% | 121,882 | 40% | 28,159 | 150,040 | 3,609,058 |
| 2019 | 69,604 | 246,346 | 50% | 123,173 | 40% | 27,842 | 151,015 | 3,458,043 |
| 2020 | 64,647 | 233,476 | 50% | 116,738 | 40% | 25,859 | 142,597 | 3,315,447 |
| 2021 | 59,826 | 220,161 | 50% | 110,080 | 40% | 23,930 | 134,011 | 3,181,436 |
| 2022 | 55,060 | 205,853 | 50% | 102,926 | 40% | 22,024 | 124,950 | 3,056,485 |
| 2023 | 54,340 | 205,851 | 50% | 102,925 | 40% | 21,736 | 124,661 | 2,931,824 |
| 2024 | 53,543 | 205,009 | 50% | 102,504 | 40% | 21,417 | 123,921 | 2,807,903 |
| 2025 | 50,327 | 194,597 | 50% | 97,298 | 40% | 20,131 | 117,429 | 2,690,473 |
| 2026 | 47,208 | 184,164 | 50% | 92,082 | 40% | 18,883 | 110,965 | 2,579,508 |
| 2027 | 44,150 | 173,478 | 50% | 86,739 | 40% | 17,660 | 104,399 | 2,475,109 |
| 2028 | 43,456 | 171,721 | 50% | 85,861 | 40% | 17,382 | 103,243 | 2,371,866 |
| 2029 | 42,733 | 169,580 | 50% | 84,790 | 40% | 17,093 | 101,883 | 2,269,983 |
| 2030 | 41,036 | 163,436 | 50% | 81,718 | 40% | 16,415 | 98,132 | 2,171,851 |
| 2031 | 39,385 | 157,327 | 50% | 78,663 | 40% | 15,754 | 94,417 | 2,077,433 |
| 2032 | 37,768 | 151,183 | 50% | 75,592 | 40% | 15,107 | 90,699 | 1,986,734 |
| 2033 | 37,110 | 148,739 | 50% | 74,369 | 40% | 14,844 | 89,213 | 1,897,521 |
| 2034 | 36,447 | 146,152 | 50% | 73,076 | 40% | 14,579 | 87,655 | 1,809,866 |
| 2035 | 34,861 | 139,798 | 50% | 69,899 | 40% | 13,945 | 83,844 | 1,726,023 |
| 2036 | 33,323 | 133,571 | 50% | 66,786 | 40% | 13,329 | 80,115 | 1,645,908 |
| 2037 | 31,824 | 127,417 | 50% | 63,708 | 40% | 12,729 | 76,438 | 1,569,470 |
| 2038 | 31,238 | 124,850 | 50% | 62,425 | 40% | 12,495 | 74,920 | 1,494,549 |
| 2039 | 30,651 | 122,214 | 50% | 61,107 | 40% | 12,260 | 73,368 | 1,421,182 |
| 2040 | 30,070 | 119,573 | 50% | 59,787 | 40% | 12,028 | 71,815 | 1,349,367 |
| **Totals** | **1,039,003** | **4,943,377** | | **2,376,177** | | **415,601** | **2,791,778** | |

## Exhibit II-22

### PHASE 2 RAIL EXTENSION STATION AREA OFFICE DEMAND AND SUPPLY FORECAST
### PLANNED METRO STATIONS IN LOUDOUN COUNTY
### 2011 - 2040

| Year | Additional Demand Due to Metro | Route 606 Corridor Demand | Route 606 Station Area Capture of Corridor Demand | Route 606 Station Area Capture | Route 606 Station Capture of Additional Demand Due to Metro | Route 606 Capture of Additional Demand Due to Metro | Total Route 606 Station Area Office Demand | Route 606 Station Area Capacity |
|---|---|---|---|---|---|---|---|---|
| 2011 | 0 | 0 | 65% | 0 | 20% | 0 | 0 | 15,215,002 |
| 2012 | 0 | 0 | 65% | 0 | 20% | 0 | 0 | 15,215,002 |
| 2013 | 0 | 30,499 | 65% | 19,824 | 20% | 0 | 19,824 | 15,215,002 |
| 2014 | 0 | 34,105 | 65% | 22,168 | 20% | 0 | 22,168 | 15,195,178 |
| 2015 | 0 | 40,620 | 65% | 26,403 | 20% | 0 | 26,403 | 15,173,009 |
| 2016 | 0 | 47,540 | 65% | 30,901 | 20% | 0 | 30,901 | 15,146,606 |
| 2017 | 0 | 55,014 | 65% | 35,759 | 20% | 0 | 35,759 | 15,115,705 |
| 2018 | 70,396 | 81,416 | 70% | 56,991 | 20% | 14,079 | 71,070 | 15,079,946 |
| 2019 | 69,604 | 85,956 | 70% | 60,169 | 20% | 13,921 | 74,090 | 15,008,876 |
| 2020 | 64,647 | 84,864 | 70% | 59,405 | 20% | 12,929 | 72,335 | 14,934,786 |
| 2021 | 59,826 | 83,151 | 70% | 58,206 | 20% | 11,965 | 70,171 | 14,862,451 |
| 2022 | 55,060 | 80,598 | 70% | 56,418 | 20% | 11,012 | 67,431 | 14,792,281 |
| 2023 | 54,340 | 83,378 | 70% | 58,364 | 20% | 10,868 | 69,232 | 14,724,850 |
| 2024 | 53,543 | 85,738 | 70% | 60,017 | 20% | 10,709 | 70,725 | 14,655,618 |
| 2025 | 50,327 | 83,885 | 70% | 58,719 | 20% | 10,065 | 68,785 | 14,584,893 |
| 2026 | 47,208 | 81,697 | 70% | 57,188 | 20% | 9,442 | 66,629 | 14,516,108 |
| 2027 | 44,150 | 79,078 | 70% | 55,355 | 20% | 8,830 | 64,185 | 14,449,479 |
| 2028 | 43,456 | 80,326 | 70% | 56,228 | 20% | 8,691 | 64,920 | 14,385,294 |
| 2029 | 42,733 | 81,299 | 70% | 56,909 | 20% | 8,547 | 65,456 | 14,320,375 |
| 2030 | 41,036 | 80,210 | 70% | 56,147 | 20% | 8,207 | 64,354 | 14,254,919 |
| 2031 | 39,385 | 78,955 | 70% | 55,269 | 20% | 7,877 | 63,146 | 14,190,565 |
| 2032 | 37,768 | 77,507 | 70% | 54,255 | 20% | 7,554 | 61,809 | 14,127,419 |
| 2033 | 37,110 | 77,824 | 70% | 54,477 | 20% | 7,422 | 61,899 | 14,065,610 |
| 2034 | 36,447 | 77,976 | 70% | 54,583 | 20% | 7,289 | 61,872 | 14,003,712 |
| 2035 | 34,861 | 75,991 | 70% | 53,194 | 20% | 6,972 | 60,166 | 13,941,840 |
| 2036 | 33,323 | 73,917 | 70% | 51,742 | 20% | 6,665 | 58,406 | 13,881,674 |
| 2037 | 31,824 | 71,731 | 70% | 50,211 | 20% | 6,365 | 56,576 | 13,823,267 |
| 2038 | 31,238 | 71,453 | 70% | 50,017 | 20% | 6,248 | 56,265 | 13,766,691 |
| 2039 | 30,651 | 71,059 | 70% | 49,741 | 20% | 6,130 | 55,872 | 13,710,427 |
| 2040 | 30,070 | 70,589 | 70% | 49,412 | 20% | 6,014 | 55,426 | 13,654,555 |
| **Totals** | **1,039,003** | **2,026,374** | | **1,408,073** | | **207,801** | **1,615,873** | |

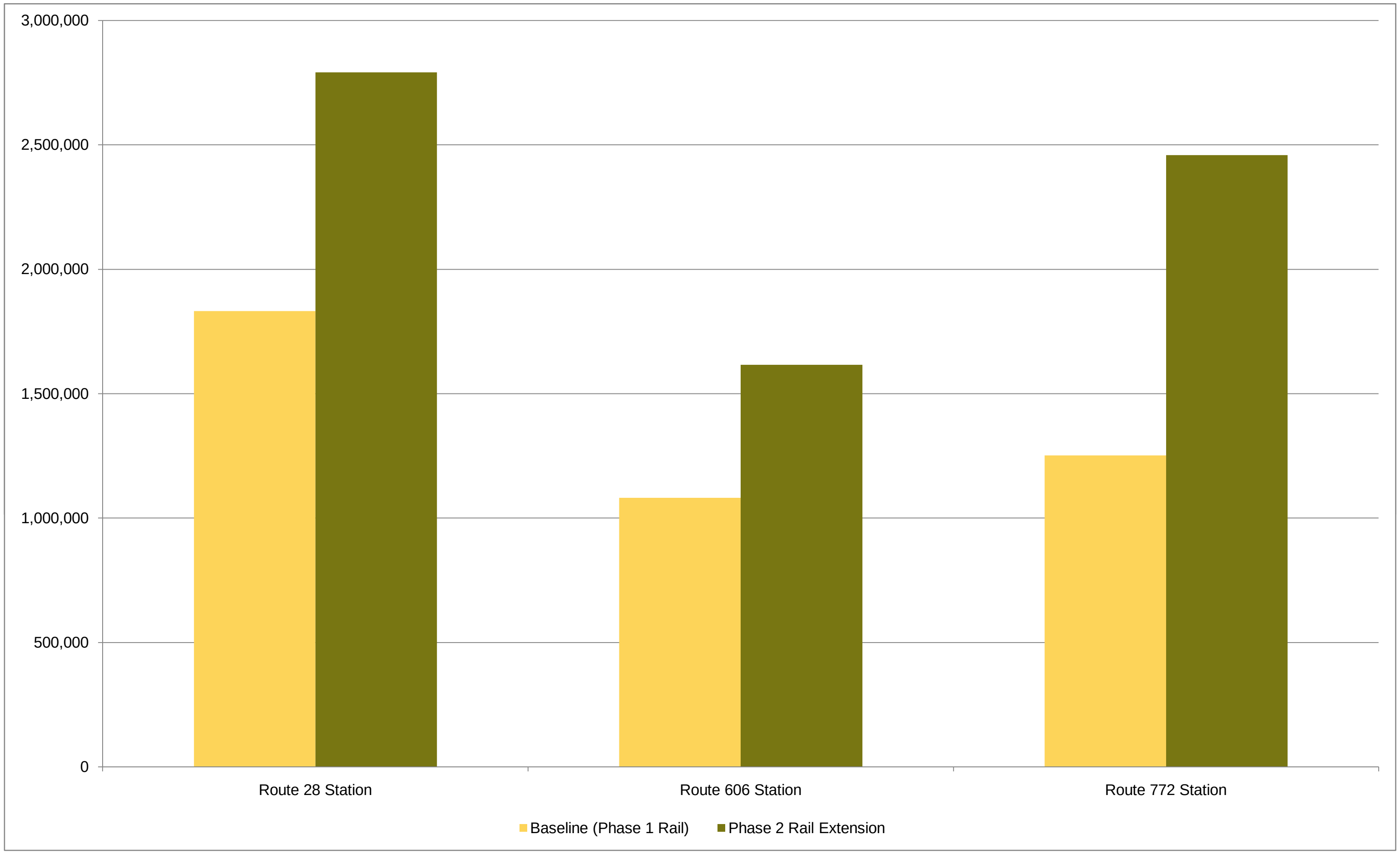
## Exhibit II-22

### PHASE 2 RAIL EXTENSION STATION AREA OFFICE DEMAND AND SUPPLY FORECAST
### PLANNED METRO STATIONS IN LOUDOUN COUNTY
### 2011 - 2040

| Year | Additional Demand Due to Metro | Route 267 Corridor Demand | Route 772 Station Area Capture of Corridor Demand | Route 772 Station Area Capture | Route 772 Station Capture of Additional Demand Due to Metro | Route 772 Capture of Additional Demand Due to Metro | Total Route 772 Station Area Office Demand | Route 772 Station Area Capacity |
|---|---|---|---|---|---|---|---|---|
| 2010 | 0 | 0 | 40% | 0 | 40% | 0 | 0 | 14,442,880 |
| 2011 | 0 | 0 | 40% | 0 | 40% | 0 | 0 | 14,442,880 |
| 2012 | 0 | 0 | 40% | 0 | 40% | 0 | 0 | 14,442,880 |
| 2013 | 0 | 85,086 | 40% | 34,035 | 40% | 0 | 34,035 | 14,442,880 |
| 2014 | 0 | 89,388 | 40% | 35,755 | 40% | 0 | 35,755 | 14,408,846 |
| 2015 | 0 | 100,916 | 40% | 40,366 | 40% | 0 | 40,366 | 14,373,091 |
| 2016 | 0 | 112,751 | 40% | 45,100 | 40% | 0 | 45,100 | 14,332,724 |
| 2017 | 0 | 125,275 | 40% | 50,110 | 40% | 0 | 50,110 | 14,287,624 |
| 2018 | 70,396 | 174,489 | 55% | 95,969 | 40% | 28,159 | 124,128 | 14,237,514 |
| 2019 | 69,604 | 180,016 | 55% | 99,009 | 40% | 27,842 | 126,850 | 14,113,386 |
| 2020 | 64,647 | 174,010 | 55% | 95,705 | 40% | 25,859 | 121,564 | 13,986,536 |
| 2021 | 59,826 | 167,212 | 55% | 91,967 | 40% | 23,930 | 115,897 | 13,864,972 |
| 2022 | 55,060 | 159,196 | 55% | 87,558 | 40% | 22,024 | 109,582 | 13,749,075 |
| 2023 | 54,340 | 161,975 | 55% | 89,086 | 40% | 21,736 | 110,822 | 13,639,493 |
| 2024 | 53,543 | 164,014 | 55% | 90,208 | 40% | 21,417 | 111,625 | 13,528,671 |
| 2025 | 50,327 | 158,185 | 55% | 87,002 | 40% | 20,131 | 107,133 | 13,417,046 |
| 2026 | 47,208 | 152,014 | 55% | 83,608 | 40% | 18,883 | 102,491 | 13,309,913 |
| 2027 | 44,150 | 145,315 | 55% | 79,923 | 40% | 17,660 | 97,583 | 13,207,422 |
| 2028 | 43,456 | 145,893 | 55% | 80,241 | 40% | 17,382 | 97,623 | 13,109,839 |
| 2029 | 42,733 | 146,047 | 55% | 80,326 | 40% | 17,093 | 97,419 | 13,012,216 |
| 2030 | 41,036 | 142,612 | 55% | 78,437 | 40% | 16,415 | 94,851 | 12,914,797 |
| 2031 | 39,385 | 139,026 | 55% | 76,464 | 40% | 15,754 | 92,218 | 12,819,945 |
| 2032 | 37,768 | 135,232 | 55% | 74,378 | 40% | 15,107 | 89,485 | 12,727,727 |
| 2033 | 37,110 | 134,615 | 55% | 74,038 | 40% | 14,844 | 88,882 | 12,638,242 |
| 2034 | 36,447 | 133,779 | 55% | 73,579 | 40% | 14,579 | 88,157 | 12,549,360 |
| 2035 | 34,861 | 129,369 | 55% | 71,153 | 40% | 13,945 | 85,097 | 12,461,203 |
| 2036 | 33,323 | 124,917 | 55% | 68,704 | 40% | 13,329 | 82,033 | 12,376,106 |
| 2037 | 31,824 | 120,381 | 55% | 66,209 | 40% | 12,729 | 78,939 | 12,294,072 |
| 2038 | 31,238 | 119,123 | 55% | 65,518 | 40% | 12,495 | 78,013 | 12,215,134 |
| 2039 | 30,651 | 117,723 | 55% | 64,748 | 40% | 12,260 | 77,008 | 12,137,121 |
| 2040 | 30,070 | 116,244 | 55% | 63,934 | 40% | 12,028 | 75,962 | 12,060,113 |
| **Totals** | **1,039,003** | **3,854,801** | | **2,043,128** | | **415,601** | **2,458,730** | |

*Exhibit II-23*

**STATION AREA OFFICE DEMAND FORECAST**
**LOUDOUN COUNTY**
**2011 - 2040**




RCLCO



Station Area Demand Graph
04-08824.0005
Printed: 4/15/2011

**Exhibit II-24**

## HISTORICAL FLEX SPACE ABSORPTION PER EMPLOYEE
## LOUDOUN COUNTY
## 1998 - 2009

| | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | Avg. 99 - 08 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **LOUDOUN COUNTY** | | | | | | | | | | | | | |
| Total Permitted Flex Space SF[1] | 7,837,821 | 9,055,410 | 12,262,743 | 13,623,769 | 14,038,841 | 14,507,701 | 15,794,779 | 17,137,754 | 18,680,590 | 20,517,019 | 22,279,539 | 22,349,414 | |
| Annual Growth | | 1,217,589 | 3,207,333 | 1,361,026 | 415,072 | 468,860 | 1,287,078 | 1,342,975 | 1,542,836 | 1,836,429 | 1,762,520 | 69,875 | 1,444,172 |
| Flex Vacancy Rate[1] | 5.20% | 1.90% | 5.40% | 18.90% | 21.40% | 19.20% | 15.90% | 15.10% | 13.30% | 14.20% | 13.30% | 18.00% | 13.07% |
| Total Occupied Space | 7,430,254 | 8,883,357 | 11,600,555 | 11,048,877 | 11,034,529 | 11,722,222 | 13,283,409 | 14,549,953 | 16,196,072 | 17,603,602 | 19,316,360 | 18,326,519 | |
| Annual Growth | | 1,453,103 | 2,717,198 | -551,678 | -14,348 | 687,693 | 1,561,187 | 1,266,544 | 1,646,118 | 1,407,531 | 1,712,758 | -989,841 | 1,188,611 |
| Total Employment[2] | 51,598 | 55,826 | 95,412 | 106,183 | 107,330 | 117,570 | 123,383 | 130,308 | 137,011 | 142,278 | 146,226 | 149,113 | |
| Annual Growth | | 4,228 | 39,586 | 10,771 | 1,147 | 10,240 | 5,813 | 6,925 | 6,703 | 5,267 | 3,948 | 2,887 | 9,463 |
| Absorption per Total Employee | | **344** | **69** | **-51** | **-13** | **67** | **269** | **183** | **246** | **267** | **434** | **-343** | **126** |

1/ 2009 Loudoun County Fiscal Impact Committee Guidelines
2/Moody's Analytics (1998 - 1999); 2009 Loudoun County Fiscal Impact Committee Guidelines (2000 -2009)
3/Costar

*Exhibit II-25*

## FLEX SPACE DEMAND FORECAST
## LOUDOUN COUNTY
## 2011 - 2040

| | | | | Route 7 | | Route 28 | | Route 267 | | Route 625 | | Route 606 | | Route 50 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Employment Growth[1] | Absorption per Employee[2] | Projected New Flex Space Demand | % Capture | Flex Demand | % Capture | Flex Demand | % Capture | Flex Demand | % Capture | Flex Demand | % Capture | Flex Demand | % Capture | Flex Demand |
| 2011 | 7,678 | 125 | 960,000 | 25% | 240,000 | 20% | 192,000 | 10% | 96,000 | 10% | 96,000 | 20% | 192,000 | 15% | 144,000 |
| 2012 | 7,270 | 122 | 888,000 | 25% | 222,000 | 20% | 177,600 | 10% | 88,800 | 10% | 88,800 | 20% | 177,600 | 15% | 133,200 |
| 2013 | 7,252 | 119 | 867,000 | 25% | 216,750 | 20% | 173,400 | 10% | 86,700 | 10% | 86,700 | 20% | 173,400 | 15% | 130,050 |
| 2014 | 7,199 | 117 | 841,000 | 25% | 210,250 | 20% | 168,200 | 10% | 84,100 | 10% | 84,100 | 20% | 168,200 | 15% | 126,150 |
| 2015 | 7,725 | 114 | 882,000 | 25% | 220,500 | 20% | 176,400 | 10% | 88,200 | 10% | 88,200 | 20% | 176,400 | 15% | 132,300 |
| 2016 | 8,215 | 112 | 917,000 | 25% | 229,250 | 20% | 183,400 | 10% | 91,700 | 10% | 91,700 | 20% | 183,400 | 15% | 137,550 |
| 2017 | 8,694 | 109 | 949,000 | 25% | 237,250 | 20% | 189,800 | 10% | 94,900 | 10% | 94,900 | 20% | 189,800 | 15% | 142,350 |
| 2018 | 8,588 | 107 | 917,000 | 25% | 229,250 | 20% | 183,400 | 10% | 91,700 | 10% | 91,700 | 20% | 183,400 | 15% | 137,550 |
| 2019 | 8,490 | 104 | 886,000 | 25% | 221,500 | 20% | 177,200 | 10% | 88,600 | 10% | 88,600 | 20% | 177,200 | 15% | 132,900 |
| 2020 | 7,848 | 102 | 801,000 | 25% | 200,250 | 20% | 160,200 | 10% | 80,100 | 10% | 80,100 | 20% | 160,200 | 15% | 120,150 |
| 2021 | 7,214 | 100 | 720,000 | 25% | 180,000 | 20% | 144,000 | 10% | 72,000 | 10% | 72,000 | 20% | 144,000 | 15% | 108,000 |
| 2022 | 6,576 | 98 | 641,000 | 25% | 160,250 | 20% | 128,200 | 10% | 64,100 | 10% | 64,100 | 20% | 128,200 | 15% | 96,150 |
| 2023 | 6,440 | 95 | 614,000 | 25% | 153,500 | 20% | 122,800 | 10% | 61,400 | 10% | 61,400 | 20% | 122,800 | 15% | 92,100 |
| 2024 | 6,284 | 93 | 586,000 | 25% | 146,500 | 20% | 117,200 | 10% | 58,600 | 10% | 58,600 | 20% | 117,200 | 15% | 87,900 |
| 2025 | 5,828 | 91 | 531,000 | 25% | 132,750 | 20% | 106,200 | 10% | 53,100 | 10% | 53,100 | 20% | 106,200 | 15% | 79,650 |
| 2026 | 5,387 | 89 | 480,000 | 25% | 120,000 | 20% | 96,000 | 10% | 48,000 | 10% | 48,000 | 20% | 96,000 | 15% | 72,000 |
| 2027 | 4,957 | 87 | 432,000 | 25% | 108,000 | 20% | 86,400 | 10% | 43,200 | 10% | 43,200 | 20% | 86,400 | 15% | 64,800 |
| 2028 | 4,812 | 85 | 410,000 | 25% | 102,500 | 20% | 82,000 | 10% | 41,000 | 10% | 41,000 | 20% | 82,000 | 15% | 61,500 |
| 2029 | 4,663 | 83 | 388,000 | 25% | 97,000 | 20% | 77,600 | 10% | 38,800 | 10% | 38,800 | 20% | 77,600 | 15% | 58,200 |
| 2030 | 4,402 | 81 | 358,000 | 25% | 89,500 | 20% | 71,600 | 10% | 35,800 | 10% | 35,800 | 20% | 71,600 | 15% | 53,700 |
| 2031 | 4,150 | 80 | 330,000 | 25% | 82,500 | 20% | 66,000 | 10% | 33,000 | 10% | 33,000 | 20% | 66,000 | 15% | 49,500 |
| 2032 | 3,907 | 78 | 304,000 | 25% | 76,000 | 20% | 60,800 | 10% | 30,400 | 10% | 30,400 | 20% | 60,800 | 15% | 45,600 |
| 2033 | 3,774 | 76 | 287,000 | 25% | 71,750 | 20% | 57,400 | 10% | 28,700 | 10% | 28,700 | 20% | 57,400 | 15% | 43,050 |
| 2034 | 3,642 | 74 | 271,000 | 25% | 67,750 | 20% | 54,200 | 10% | 27,100 | 10% | 27,100 | 20% | 54,200 | 15% | 40,650 |
| 2035 | 3,414 | 73 | 248,000 | 25% | 62,000 | 20% | 49,600 | 10% | 24,800 | 10% | 24,800 | 20% | 49,600 | 15% | 37,200 |
| 2036 | 3,197 | 71 | 227,000 | 25% | 56,750 | 20% | 45,400 | 10% | 22,700 | 10% | 22,700 | 20% | 45,400 | 15% | 34,050 |
| 2037 | 2,988 | 70 | 208,000 | 25% | 52,000 | 20% | 41,600 | 10% | 20,800 | 10% | 20,800 | 20% | 41,600 | 15% | 31,200 |
| 2038 | 2,878 | 68 | 196,000 | 25% | 49,000 | 20% | 39,200 | 10% | 19,600 | 10% | 19,600 | 20% | 39,200 | 15% | 29,400 |
| 2039 | 2,770 | 66 | 184,000 | 25% | 46,000 | 20% | 36,800 | 10% | 18,400 | 10% | 18,400 | 20% | 36,800 | 15% | 27,600 |
| 2040 | 2,664 | 65 | 173,000 | 25% | 43,250 | 20% | 34,600 | 10% | 17,300 | 10% | 17,300 | 20% | 34,600 | 15% | 25,950 |
| **Total** | **168,908** | | **16,496,000** | | **4,124,000** | | **3,299,200** | | **1,649,600** | | **1,649,600** | | **3,299,200** | | |

1/See Exhibit II-11
2/RCLCO; See Exhibit II-24

## *Exhibit II-26*

## BASELINE (PHASE 1 RAIL) OFFICE AND FLEX DEMAND AND SUPPLY
## LOUDOUN COUNTY
## 2011 - 2040

| | Route 7 | | | | Route 28 | | | | Route 267 | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Office Demand | Flex Demand | Total | Capacity | Office Demand | Flex Demand | Total | Capacity | Office Demand | Flex Demand | Total | Capacity |
| 2011 | 0 | 240,000 | 240,000 | 11,401,156 | 0 | 192,000 | 192,000 | 17,652,299 | 0 | 96,000 | 96,000 | 23,526,224 |
| 2012 | 0 | 222,000 | 222,000 | 11,161,156 | 0 | 177,600 | 177,600 | 17,460,299 | 0 | 88,800 | 88,800 | 23,430,224 |
| 2013 | 213,767 | 216,750 | 430,517 | 10,939,156 | 170,585 | 173,400 | 343,985 | 17,282,699 | 85,086 | 86,700 | 171,786 | 23,341,424 |
| 2014 | 210,664 | 210,250 | 420,914 | 10,508,639 | 172,757 | 168,200 | 340,957 | 16,938,714 | 89,388 | 84,100 | 173,488 | 23,169,638 |
| 2015 | 223,585 | 220,500 | 444,085 | 10,087,725 | 188,424 | 176,400 | 364,824 | 16,597,757 | 100,916 | 88,200 | 189,116 | 22,996,150 |
| 2016 | 235,304 | 229,250 | 464,554 | 9,643,640 | 203,783 | 183,400 | 387,183 | 16,232,933 | 112,751 | 91,700 | 204,451 | 22,807,034 |
| 2017 | 246,708 | 237,250 | 483,958 | 9,179,086 | 219,568 | 189,800 | 409,368 | 15,845,750 | 125,275 | 94,900 | 220,175 | 22,602,584 |
| 2018 | 242,295 | 229,250 | 471,545 | 8,695,128 | 221,603 | 183,400 | 405,003 | 15,436,382 | 130,168 | 91,700 | 221,868 | 22,382,408 |
| 2019 | 238,274 | 221,500 | 459,774 | 8,223,582 | 223,951 | 177,200 | 401,151 | 15,031,379 | 135,225 | 88,600 | 223,825 | 22,160,540 |
| 2020 | 219,748 | 200,250 | 419,998 | 7,763,809 | 212,251 | 160,200 | 372,451 | 14,630,228 | 131,560 | 80,100 | 211,660 | 21,936,715 |
| 2021 | 201,640 | 180,000 | 381,640 | 7,343,810 | 200,146 | 144,000 | 344,146 | 14,257,777 | 127,183 | 72,000 | 199,183 | 21,725,055 |
| 2022 | 183,463 | 160,250 | 343,713 | 6,962,170 | 187,139 | 128,200 | 315,339 | 13,913,631 | 121,768 | 64,100 | 185,868 | 21,525,872 |
| 2023 | 178,524 | 153,500 | 332,024 | 6,618,458 | 187,137 | 122,800 | 309,937 | 13,598,293 | 124,548 | 61,400 | 185,948 | 21,340,004 |
| 2024 | 173,010 | 146,500 | 319,510 | 6,286,433 | 186,372 | 117,200 | 303,572 | 13,288,356 | 126,740 | 58,600 | 185,340 | 21,154,056 |
| 2025 | 159,804 | 132,750 | 292,554 | 5,966,924 | 176,906 | 106,200 | 283,106 | 12,984,784 | 122,804 | 53,100 | 175,904 | 20,968,716 |
| 2026 | 147,168 | 120,000 | 267,168 | 5,674,369 | 167,422 | 96,000 | 263,422 | 12,701,678 | 118,529 | 48,000 | 166,529 | 20,792,812 |
| 2027 | 134,898 | 108,000 | 242,898 | 5,407,202 | 157,708 | 86,400 | 244,108 | 12,438,256 | 113,774 | 43,200 | 156,974 | 20,626,283 |
| 2028 | 129,939 | 102,500 | 232,439 | 5,164,304 | 156,110 | 82,000 | 238,110 | 12,194,148 | 114,671 | 41,000 | 155,671 | 20,469,309 |
| 2029 | 124,865 | 97,000 | 221,865 | 4,931,865 | 154,163 | 77,600 | 231,763 | 11,956,038 | 115,215 | 38,800 | 154,015 | 20,313,638 |
| 2030 | 117,103 | 89,500 | 206,603 | 4,710,000 | 148,578 | 71,600 | 220,178 | 11,724,274 | 112,897 | 35,800 | 148,697 | 20,159,624 |
| 2031 | 109,693 | 82,500 | 192,193 | 4,503,397 | 143,024 | 66,000 | 209,024 | 11,504,097 | 110,421 | 33,000 | 143,421 | 20,010,927 |
| 2032 | 102,573 | 76,000 | 178,573 | 4,311,205 | 137,440 | 60,800 | 198,240 | 11,295,072 | 107,744 | 30,400 | 138,144 | 19,867,506 |
| 2033 | 98,199 | 71,750 | 169,949 | 4,132,632 | 135,217 | 57,400 | 192,617 | 11,096,833 | 107,571 | 28,700 | 136,271 | 19,729,362 |
| 2034 | 93,895 | 67,750 | 161,645 | 3,962,683 | 132,866 | 54,200 | 187,066 | 10,904,216 | 107,206 | 27,100 | 134,306 | 19,593,091 |
| 2035 | 87,396 | 62,000 | 149,396 | 3,801,038 | 127,089 | 49,600 | 176,689 | 10,717,150 | 103,951 | 24,800 | 128,751 | 19,458,785 |
| 2036 | 81,256 | 56,750 | 138,006 | 3,651,642 | 121,429 | 45,400 | 166,829 | 10,540,461 | 100,631 | 22,700 | 123,331 | 19,330,034 |
| 2037 | 75,426 | 52,000 | 127,426 | 3,513,636 | 115,833 | 41,600 | 157,433 | 10,373,632 | 97,214 | 20,800 | 118,014 | 19,206,703 |
| 2038 | 71,919 | 49,000 | 120,919 | 3,386,209 | 113,500 | 39,200 | 152,700 | 10,216,199 | 96,423 | 19,600 | 116,023 | 19,088,689 |
| 2039 | 68,506 | 46,000 | 114,506 | 3,265,291 | 111,104 | 36,800 | 147,904 | 10,063,499 | 95,502 | 18,400 | 113,902 | 18,972,666 |
| 2040 | 65,222 | 43,250 | 108,472 | 3,150,785 | 108,703 | 34,600 | 143,303 | 9,915,595 | 94,503 | 17,300 | 111,803 | 18,858,764 |
| **Total** | **4,234,843** | **4,124,000** | **8,358,843** | | **4,580,807** | **3,299,200** | **7,880,007** | | **3,129,663** | **1,649,600** | **4,779,263** | |

*Exhibit II-26*

## BASELINE (PHASE 1 RAIL) OFFICE AND FLEX DEMAND AND SUPPLY
## LOUDOUN COUNTY
## 2011 - 2040

| | Route 625 | | | | Route 606 | | | | Route 50 | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Office Demand | Flex Demand | Total | Capacity | Office Demand | Flex Demand | Total | Capacity | Office Demand | Flex Demand | Total | Capacity |
| 2011 | 0 | 96,000 | 96,000 | 9,694,773 | 0 | 192,000 | 192,000 | 14,102,463 | 0 | 144,000 | 144,000 | 9,821,840 |
| 2012 | 0 | 88,800 | 88,800 | 9,598,773 | 0 | 177,600 | 177,600 | 13,910,463 | 0 | 133,200 | 133,200 | 9,677,840 |
| 2013 | 96,895 | 86,700 | 183,595 | 9,509,973 | 30,499 | 173,400 | 203,899 | 13,732,863 | 20,470 | 130,050 | 150,520 | 9,544,640 |
| 2014 | 97,519 | 84,100 | 181,619 | 9,326,378 | 34,105 | 168,200 | 202,305 | 13,528,964 | 20,731 | 126,150 | 146,881 | 9,394,120 |
| 2015 | 105,701 | 88,200 | 193,901 | 9,144,759 | 40,620 | 176,400 | 217,020 | 13,326,658 | 22,611 | 132,300 | 154,911 | 9,247,239 |
| 2016 | 113,607 | 91,700 | 205,307 | 8,950,858 | 47,540 | 183,400 | 230,940 | 13,109,638 | 24,454 | 137,550 | 162,004 | 9,092,328 |
| 2017 | 121,646 | 94,900 | 216,546 | 8,745,551 | 55,014 | 189,800 | 244,814 | 12,878,698 | 26,348 | 142,350 | 168,698 | 8,930,324 |
| 2018 | 122,010 | 91,700 | 213,710 | 8,529,005 | 59,255 | 183,400 | 242,655 | 12,633,885 | 26,592 | 137,550 | 164,142 | 8,761,626 |
| 2019 | 122,536 | 88,600 | 211,136 | 8,315,295 | 63,561 | 177,200 | 240,761 | 12,391,229 | 26,874 | 132,900 | 159,774 | 8,597,484 |
| 2020 | 115,412 | 80,100 | 195,512 | 8,104,159 | 63,639 | 160,200 | 223,839 | 12,150,468 | 25,470 | 120,150 | 145,620 | 8,437,709 |
| 2021 | 108,154 | 72,000 | 180,154 | 7,908,646 | 63,136 | 144,000 | 207,136 | 11,926,629 | 24,018 | 108,000 | 132,018 | 8,292,089 |
| 2022 | 100,497 | 64,100 | 164,597 | 7,728,492 | 61,884 | 128,200 | 190,084 | 11,719,493 | 22,457 | 96,150 | 118,607 | 8,160,072 |
| 2023 | 99,871 | 61,400 | 161,271 | 7,563,895 | 64,664 | 122,800 | 187,464 | 11,529,409 | 22,456 | 92,100 | 114,556 | 8,041,465 |
| 2024 | 98,844 | 58,600 | 157,444 | 7,402,624 | 67,101 | 117,200 | 184,301 | 11,341,945 | 22,365 | 87,900 | 110,265 | 7,926,909 |
| 2025 | 93,241 | 53,100 | 146,341 | 7,245,180 | 66,194 | 106,200 | 172,394 | 11,157,644 | 21,229 | 79,650 | 100,879 | 7,816,644 |
| 2026 | 87,694 | 48,000 | 135,694 | 7,098,839 | 64,954 | 96,000 | 160,954 | 10,985,250 | 20,091 | 72,000 | 92,091 | 7,715,765 |
| 2027 | 82,092 | 43,200 | 125,292 | 6,963,146 | 63,307 | 86,400 | 149,707 | 10,824,296 | 18,925 | 64,800 | 83,725 | 7,623,675 |
| 2028 | 80,755 | 41,000 | 121,755 | 6,837,854 | 64,715 | 82,000 | 146,715 | 10,674,588 | 18,733 | 61,500 | 80,233 | 7,539,950 |
| 2029 | 79,252 | 38,800 | 118,052 | 6,716,099 | 65,882 | 77,600 | 143,482 | 10,527,873 | 18,500 | 58,200 | 76,700 | 7,459,717 |
| 2030 | 75,906 | 35,800 | 111,706 | 6,598,047 | 65,352 | 71,600 | 136,952 | 10,384,391 | 17,829 | 53,700 | 71,529 | 7,383,017 |
| 2031 | 72,615 | 33,000 | 105,615 | 6,486,341 | 64,653 | 66,000 | 130,653 | 10,247,439 | 17,163 | 49,500 | 66,663 | 7,311,488 |
| 2032 | 69,345 | 30,400 | 99,745 | 6,380,726 | 63,763 | 60,800 | 124,563 | 10,116,786 | 16,493 | 45,600 | 62,093 | 7,244,825 |
| 2033 | 67,800 | 28,700 | 96,500 | 6,280,980 | 64,302 | 57,400 | 121,702 | 9,992,223 | 16,226 | 43,050 | 59,276 | 7,182,732 |
| 2034 | 66,207 | 27,100 | 93,307 | 6,184,480 | 64,689 | 54,200 | 118,889 | 9,870,520 | 15,944 | 40,650 | 56,594 | 7,123,456 |
| 2035 | 62,935 | 24,800 | 87,735 | 6,091,174 | 63,282 | 49,600 | 112,882 | 9,751,631 | 15,251 | 37,200 | 52,451 | 7,066,862 |
| 2036 | 59,758 | 22,700 | 82,458 | 6,003,439 | 61,774 | 45,400 | 107,174 | 9,638,749 | 14,571 | 34,050 | 48,621 | 7,014,411 |
| 2037 | 56,650 | 20,800 | 77,450 | 5,920,981 | 60,147 | 41,600 | 101,747 | 9,531,576 | 13,900 | 31,200 | 45,100 | 6,965,790 |
| 2038 | 55,164 | 19,600 | 74,764 | 5,843,531 | 60,103 | 39,200 | 99,303 | 9,429,828 | 13,620 | 29,400 | 43,020 | 6,920,690 |
| 2039 | 53,664 | 18,400 | 72,064 | 5,768,767 | 59,949 | 36,800 | 96,749 | 9,330,525 | 13,332 | 27,600 | 40,932 | 6,877,670 |
| 2040 | 52,177 | 17,300 | 69,477 | 5,696,704 | 59,718 | 34,600 | 94,318 | 9,233,777 | 13,044 | 25,950 | 38,994 | 6,836,737 |
| | **2,417,947** | **1,649,600** | **4,067,547** | | **1,663,805** | **3,299,200** | **4,963,005** | | **549,697** | **2,474,400** | **3,024,097** | |

***Exhibit II-27***

## PHASE 2 RAIL EXTENSION OF METRO OFFICE AND FLEX DEMAND AND SUPPLY
## LOUDOUN COUNTY
## 2011 - 2040

| | Route 7 | | | | Route 28 | | | | Route 267 | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Office Demand | Flex Demand | Total | Capacity | Office Demand | Flex Demand | Total | Capacity | Office Demand | Flex Demand | Total | Capacity |
| 2011 | 0 | 240,000 | 240,000 | 11,401,156 | 0 | 192,000 | 192,000 | 17,652,299 | 0 | 96,000 | 96,000 | 23,526,224 |
| 2012 | 0 | 222,000 | 222,000 | 11,161,156 | 0 | 177,600 | 177,600 | 17,460,299 | 0 | 88,800 | 88,800 | 23,430,224 |
| 2013 | 213,767 | 216,750 | 430,517 | 10,939,156 | 170,585 | 173,400 | 343,985 | 17,282,699 | 85,086 | 86,700 | 171,786 | 23,341,424 |
| 2014 | 210,664 | 210,250 | 420,914 | 10,508,639 | 172,757 | 168,200 | 340,957 | 16,938,714 | 89,388 | 84,100 | 173,488 | 23,169,638 |
| 2015 | 223,585 | 220,500 | 444,085 | 10,087,725 | 188,424 | 176,400 | 364,824 | 16,597,757 | 100,916 | 88,200 | 189,116 | 22,996,150 |
| 2016 | 235,304 | 229,250 | 464,554 | 9,643,640 | 203,783 | 183,400 | 387,183 | 16,232,933 | 112,751 | 91,700 | 204,451 | 22,807,034 |
| 2017 | 246,708 | 237,250 | 483,958 | 9,179,086 | 219,568 | 189,800 | 409,368 | 15,845,750 | 125,275 | 94,900 | 220,175 | 22,602,584 |
| 2018 | 175,814 | 229,250 | 405,064 | 8,695,128 | 271,922 | 183,400 | 455,322 | 15,436,382 | 202,648 | 91,700 | 294,348 | 22,382,408 |
| 2019 | 171,088 | 221,500 | 392,588 | 8,290,063 | 274,188 | 177,200 | 451,388 | 14,981,060 | 207,857 | 88,600 | 296,457 | 22,088,061 |
| 2020 | 156,073 | 200,250 | 356,323 | 7,897,475 | 259,335 | 160,200 | 419,535 | 14,529,672 | 199,869 | 80,100 | 279,969 | 21,791,604 |
| 2021 | 141,596 | 180,000 | 321,596 | 7,541,152 | 244,091 | 144,000 | 388,091 | 14,110,138 | 191,143 | 72,000 | 263,143 | 21,511,635 |
| 2022 | 127,321 | 160,250 | 287,571 | 7,219,556 | 227,877 | 128,200 | 356,077 | 13,722,047 | 181,220 | 64,100 | 245,320 | 21,248,492 |
| 2023 | 122,383 | 153,500 | 275,883 | 6,931,985 | 227,587 | 122,800 | 350,387 | 13,365,970 | 183,711 | 61,400 | 245,111 | 21,003,172 |
| 2024 | 117,098 | 146,500 | 263,598 | 6,656,101 | 226,426 | 117,200 | 343,626 | 13,015,583 | 185,431 | 58,600 | 244,031 | 20,758,061 |
| 2025 | 106,732 | 132,750 | 239,482 | 6,392,503 | 214,728 | 106,200 | 320,928 | 12,671,958 | 178,316 | 53,100 | 231,416 | 20,514,030 |
| 2026 | 96,941 | 120,000 | 216,941 | 6,153,021 | 203,048 | 96,000 | 299,048 | 12,351,030 | 170,897 | 48,000 | 218,897 | 20,282,614 |
| 2027 | 87,586 | 108,000 | 195,586 | 5,936,080 | 191,138 | 86,400 | 277,538 | 12,051,982 | 162,975 | 43,200 | 206,175 | 20,063,717 |
| 2028 | 83,105 | 102,500 | 185,605 | 5,740,494 | 189,104 | 82,000 | 271,104 | 11,774,444 | 163,275 | 41,000 | 204,275 | 19,857,541 |
| 2029 | 78,616 | 97,000 | 175,616 | 5,554,889 | 186,673 | 77,600 | 264,273 | 11,503,340 | 163,140 | 38,800 | 201,940 | 19,653,267 |
| 2030 | 72,530 | 89,500 | 162,030 | 5,379,273 | 179,850 | 71,600 | 251,450 | 11,239,068 | 159,027 | 35,800 | 194,827 | 19,451,326 |
| 2031 | 66,785 | 82,500 | 149,285 | 5,217,243 | 173,081 | 66,000 | 239,081 | 10,987,617 | 154,780 | 33,000 | 187,780 | 19,256,499 |
| 2032 | 61,341 | 76,000 | 137,341 | 5,067,958 | 166,291 | 60,800 | 227,091 | 10,748,537 | 150,339 | 30,400 | 180,739 | 19,068,720 |
| 2033 | 57,634 | 71,750 | 129,384 | 4,930,617 | 163,582 | 57,400 | 220,982 | 10,521,446 | 149,459 | 28,700 | 178,159 | 18,887,981 |
| 2034 | 54,035 | 67,750 | 121,785 | 4,801,233 | 160,731 | 54,200 | 214,931 | 10,300,463 | 148,358 | 27,100 | 175,458 | 18,709,822 |
| 2035 | 49,269 | 62,000 | 111,269 | 4,679,448 | 153,743 | 49,600 | 203,343 | 10,085,533 | 143,313 | 24,800 | 168,113 | 18,534,364 |
| 2036 | 44,828 | 56,750 | 101,578 | 4,568,179 | 146,901 | 45,400 | 192,301 | 9,882,190 | 138,246 | 22,700 | 160,946 | 18,366,251 |
| 2037 | 40,676 | 52,000 | 92,676 | 4,466,601 | 140,146 | 41,600 | 181,746 | 9,689,889 | 133,110 | 20,800 | 153,910 | 18,205,305 |
| 2038 | 37,868 | 49,000 | 86,868 | 4,373,924 | 137,345 | 39,200 | 176,545 | 9,508,143 | 131,618 | 19,600 | 151,218 | 18,051,395 |
| 2039 | 35,175 | 46,000 | 81,175 | 4,287,056 | 134,475 | 36,800 | 171,275 | 9,331,597 | 129,983 | 18,400 | 148,383 | 17,900,177 |
| 2040 | 32,611 | 43,250 | 75,861 | 4,205,881 | 131,601 | 34,600 | 166,201 | 9,160,323 | 128,272 | 17,300 | 145,572 | 17,751,793 |
| **Total** | **3,147,135** | **4,124,000** | **7,271,135** | | **5,358,978** | **3,299,200** | **8,658,178** | | **4,270,402** | **1,649,600** | **5,920,002** | |

*Exhibit II-27*

## PHASE 2 RAIL EXTENSION OF METRO OFFICE AND FLEX DEMAND AND SUPPLY
## LOUDOUN COUNTY
## 2011 - 2040

| | Route 625 | | | | Route 606 | | | | Route 50 | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Office Demand | Flex Demand | Total | Capacity | Office Demand | Flex Demand | Total | Capacity | Office Demand | Flex Demand | Total | Capacity |
| 2011 | 0 | 96,000 | 96,000 | 9,694,773 | 0 | 192,000 | 192,000 | 14,102,463 | 0 | 144,000 | 144,000 | 9,821,840 |
| 2012 | 0 | 88,800 | 88,800 | 9,598,773 | 0 | 177,600 | 177,600 | 13,910,463 | 0 | 133,200 | 133,200 | 9,677,840 |
| 2013 | 96,895 | 86,700 | 183,595 | 9,509,973 | 30,499 | 173,400 | 203,899 | 13,732,863 | 20,470 | 130,050 | 150,520 | 9,544,640 |
| 2014 | 97,519 | 84,100 | 181,619 | 9,326,378 | 34,105 | 168,200 | 202,305 | 13,528,964 | 20,731 | 126,150 | 146,881 | 9,394,120 |
| 2015 | 105,701 | 88,200 | 193,901 | 9,144,759 | 40,620 | 176,400 | 217,020 | 13,326,658 | 22,611 | 132,300 | 154,911 | 9,247,239 |
| 2016 | 113,607 | 91,700 | 205,307 | 8,950,858 | 47,540 | 183,400 | 230,940 | 13,109,638 | 24,454 | 137,550 | 162,004 | 9,092,328 |
| 2017 | 121,646 | 94,900 | 216,546 | 8,745,551 | 55,014 | 189,800 | 244,814 | 12,878,698 | 26,348 | 142,350 | 168,698 | 8,930,324 |
| 2018 | 99,850 | 91,700 | 191,550 | 8,529,005 | 109,574 | 183,400 | 292,974 | 12,633,885 | 26,592 | 137,550 | 164,142 | 8,761,626 |
| 2019 | 100,141 | 88,600 | 188,741 | 8,337,455 | 113,798 | 177,200 | 290,998 | 12,340,910 | 26,874 | 132,900 | 159,774 | 8,597,484 |
| 2020 | 94,187 | 80,100 | 174,287 | 8,148,714 | 110,723 | 160,200 | 270,923 | 12,049,913 | 25,470 | 120,150 | 145,620 | 8,437,709 |
| 2021 | 88,139 | 72,000 | 160,139 | 7,974,427 | 107,081 | 144,000 | 251,081 | 11,778,989 | 24,018 | 108,000 | 132,018 | 8,292,089 |
| 2022 | 81,783 | 64,100 | 145,883 | 7,814,287 | 102,622 | 128,200 | 230,822 | 11,527,908 | 22,457 | 96,150 | 118,607 | 8,160,072 |
| 2023 | 81,157 | 61,400 | 142,557 | 7,668,404 | 105,114 | 122,800 | 227,914 | 11,297,086 | 22,456 | 92,100 | 114,556 | 8,041,465 |
| 2024 | 80,207 | 58,600 | 138,807 | 7,525,847 | 107,155 | 117,200 | 224,355 | 11,069,172 | 22,365 | 87,900 | 110,265 | 7,926,909 |
| 2025 | 75,550 | 53,100 | 128,650 | 7,387,040 | 104,016 | 106,200 | 210,216 | 10,844,817 | 21,229 | 79,650 | 100,879 | 7,816,644 |
| 2026 | 70,951 | 48,000 | 118,951 | 7,258,390 | 100,580 | 96,000 | 196,580 | 10,634,602 | 20,091 | 72,000 | 92,091 | 7,715,765 |
| 2027 | 66,321 | 43,200 | 109,521 | 7,139,438 | 96,738 | 86,400 | 183,138 | 10,438,022 | 18,925 | 64,800 | 83,725 | 7,623,675 |
| 2028 | 65,144 | 41,000 | 106,144 | 7,029,917 | 97,709 | 82,000 | 179,709 | 10,254,884 | 18,733 | 61,500 | 80,233 | 7,539,950 |
| 2029 | 63,836 | 38,800 | 102,636 | 6,923,773 | 98,392 | 77,600 | 175,992 | 10,075,176 | 18,500 | 58,200 | 76,700 | 7,459,717 |
| 2030 | 61,048 | 35,800 | 96,848 | 6,821,137 | 96,624 | 71,600 | 168,224 | 9,899,184 | 17,829 | 53,700 | 71,529 | 7,383,017 |
| 2031 | 58,312 | 33,000 | 91,312 | 6,724,289 | 94,709 | 66,000 | 160,709 | 9,730,960 | 17,163 | 49,500 | 66,663 | 7,311,488 |
| 2032 | 55,602 | 30,400 | 86,002 | 6,632,977 | 92,615 | 60,800 | 153,415 | 9,570,250 | 16,493 | 45,600 | 62,093 | 7,244,825 |
| 2033 | 54,278 | 28,700 | 82,978 | 6,546,975 | 92,668 | 57,400 | 150,068 | 9,416,836 | 16,226 | 43,050 | 59,276 | 7,182,732 |
| 2034 | 52,920 | 27,100 | 80,020 | 6,463,997 | 92,554 | 54,200 | 146,754 | 9,266,768 | 15,944 | 40,650 | 56,594 | 7,123,456 |
| 2035 | 50,226 | 24,800 | 75,026 | 6,383,977 | 89,936 | 49,600 | 139,536 | 9,120,014 | 15,251 | 37,200 | 52,451 | 7,066,862 |
| 2036 | 47,615 | 22,700 | 70,315 | 6,308,951 | 87,246 | 45,400 | 132,646 | 8,980,478 | 14,571 | 34,050 | 48,621 | 7,014,411 |
| 2037 | 45,067 | 20,800 | 65,867 | 6,238,636 | 84,460 | 41,600 | 126,060 | 8,847,832 | 13,900 | 31,200 | 45,100 | 6,965,790 |
| 2038 | 43,814 | 19,600 | 63,414 | 6,172,769 | 83,948 | 39,200 | 123,148 | 8,721,772 | 13,620 | 29,400 | 43,020 | 6,920,690 |
| 2039 | 42,553 | 18,400 | 60,953 | 6,109,356 | 83,320 | 36,800 | 120,120 | 8,598,624 | 13,332 | 27,600 | 40,932 | 6,877,670 |
| 2040 | 41,307 | 17,300 | 58,607 | 6,048,403 | 82,617 | 34,600 | 117,217 | 8,478,505 | 13,044 | 25,950 | 38,994 | 6,836,737 |
| | **2,055,378** | **1,649,600** | **3,704,978** | | **2,441,975** | **3,299,200** | **5,741,175** | | **549,697** | **2,474,400** | **3,024,097** | |

## Exhibit III-1

## HISTORICAL RETAIL ABSORPTION PER HOUSEHOLD
## LOUDOUN COUNTY
## 1998 - 2009

| | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | Avg. 99 - 08 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Total Permitted Retail SF[1] | 5,997,766 | 6,529,896 | 7,409,877 | 7,870,895 | 8,400,813 | 9,132,285 | 9,931,958 | 10,472,666 | 11,662,438 | 12,411,786 | 13,258,224 | 13,286,454 | |
| Annual Growth | | 532,130 | 879,981 | 461,018 | 529,918 | 731,472 | 799,673 | 540,708 | 1,189,772 | 749,348 | 846,438 | 28,230 | 726,046 |
| Retail Vacancy Rate[1] | 13.30% | 10.10% | 9.50% | 10.00% | 8.00% | 6.20% | 3.00% | 3.00% | 2.00% | 2.70% | 6.00% | 6.00% | 6.71% |
| Total Occupied Space | 5,200,063 | 5,870,377 | 6,705,939 | 7,083,806 | 7,728,748 | 8,566,083 | 9,633,999 | 10,158,486 | 11,429,189 | 12,076,668 | 12,462,731 | 12,489,267 | |
| Annual Growth | | 670,313 | 835,562 | 377,867 | 644,942 | 837,335 | 1,067,916 | 524,487 | 1,270,703 | 647,479 | 386,063 | 26,536 | 726,267 |
| Households[2] | 51,598 | 55,826 | 61,420 | 67,027 | 71,796 | 77,650 | 83,906 | 87,477 | 92,795 | 95,659 | 98,181 | 99,837 | |
| Annual Growth | | 4,228 | 5,593 | 5,607 | 4,769 | 5,855 | 6,256 | 3,571 | 5,318 | 2,864 | 2,522 | 1,656 | 4,658 |
| Absorption per Household | | **159** | **149** | **67** | **135** | **143** | **171** | **147** | **239** | **226** | **153** | **16** | **156** |

1/ 2009 Loudoun County Fiscal Impact Committee Guidelines
2/Moody's Economy.com (through 2004); 2009 Loudoun County Fiscal Impact Committee Guidelines (2005 - 2009)

## Exhibit III-2

### CURRENT HOUSEHOLD AND RETAIL INVENTORY DISTRIBUTION BY PLANNING AREA
### LOUDOUN COUNTY
### 1998 - 2009

| | Households | Distribution | Retail Inventory (SF) | Distribution |
|---|---|---|---|---|
| Ashburn | 30,796 | 29% | 2,819,125 | 20% |
| Dulles | 13,534 | 13% | 1,446,171 | 10% |
| Leesburg | 19,020 | 18% | 3,961,515 | 28% |
| Northwest | 3,572 | 3% | 68,796 | 0% |
| Potomac | 15,583 | 14% | 1,083,359 | 8% |
| Route 15 North | 1,674 | 2% | 7,361 | 0% |
| Route 15 South | 1,353 | 1% | 21,303 | 0% |
| Route 7 West | 7,497 | 7% | 451,047 | 3% |
| Southwest | 3,175 | 3% | 372,823 | 3% |
| Sterling | 11,712 | 11% | 3,843,142 | 27% |
| Total | 107,916 | 100% | 14,074,642 | 100% |

SOURCE: Loudoun County 2009 Fiscal Impact Committee Guidelines

## Exhibit III-3

### ESTIMATED RETAIL DEMAND PER HOUSEHOLD
### LOUDOUN AND FAIRFAX COUNTIES
### 2009

| | Fairfax County | Loudoun County | | Fairfax County | | Loudoun County | |
|---|---|---|---|---|---|---|---|
| | Annual Retail Expenditures[1] | Annual Retail Expenditures[1] | Sales/SF Threshold[2] | Supportable SF | SF per Household | Supportable SF | SF Per Household |
| Motor Vehicle and Parts | $3,270,766,207 | $948,785,327 | $300 | 10,902,554 | 23 | 3,162,618 | 30 |
| Furniture and Home Furnishings | $525,626,780 | $147,813,127 | $300 | 1,752,089 | 4 | 492,710 | 5 |
| Electronics and Appliances | $545,571,529 | $153,442,886 | $350 | 1,558,776 | 3 | 438,408 | 4 |
| Building Materials and Supplies | $2,157,948,500 | $616,586,564 | $300 | 7,193,162 | 15 | 2,055,289 | 20 |
| Lawn/Garden Equipment | $192,176,598 | $54,367,177 | $300 | 640,589 | 1 | 181,224 | 2 |
| Supermarket | $2,061,598,267 | $566,607,265 | $450 | 4,581,329 | 10 | 1,259,127 | 12 |
| Convenience | $102,774,991 | $28,908,251 | $400 | 256,937 | 1 | 72,271 | 1 |
| Specialty Foods | $63,517,215 | $17,608,399 | $400 | 158,793 | 0 | 44,021 | 0 |
| Beer, Wine, and Liquor | $164,525,124 | $45,239,778 | $400 | 411,313 | 1 | 113,099 | 1 |
| Pharmacy | $928,361,753 | $234,577,402 | $400 | 2,320,904 | 5 | 586,444 | 6 |
| Other Health and Beauty | $151,700,519 | $38,346,644 | $300 | 505,668 | 1 | 127,822 | 1 |
| Apparel | $766,378,370 | $212,515,440 | $325 | 2,358,087 | 5 | 653,894 | 6 |
| Shoes | $137,478,999 | $39,046,210 | $350 | 392,797 | 1 | 111,561 | 1 |
| Jewelry, Luggage, Leather Goods | $182,923,688 | $48,832,229 | $350 | 522,639 | 1 | 139,521 | 1 |
| Sporting Goods | $170,272,246 | $49,238,215 | $300 | 567,574 | 1 | 164,127 | 2 |
| Hobby and Musical Instruments | $127,572,110 | $35,964,349 | $275 | 463,899 | 1 | 130,779 | 1 |
| Books, Periodicals, and Music | $141,148,238 | $38,334,555 | $275 | 513,266 | 1 | 139,398 | 1 |
| Department Stores | $1,429,903,035 | $396,476,430 | $350 | 4,085,437 | 9 | 1,132,790 | 11 |
| Warehouse Clubs and Super Stores | $5,640,153,680 | $1,569,552,453 | $700 | 8,057,362 | 17 | 2,242,218 | 21 |
| Other General Merchandise | $1,368,650,365 | $379,555,919 | $400 | 3,421,626 | 7 | 948,890 | 9 |
| Florist | $42,078,441 | $11,874,753 | $300 | 140,261 | 0 | 39,583 | 0 |
| Office Supplies, Stationery, & Gifts | $221,964,539 | $61,954,206 | $275 | 807,144 | 2 | 225,288 | 2 |
| Other Miscellaneous | $165,082,796 | $47,502,587 | $300 | 550,276 | 1 | 158,342 | 2 |
| Full-Service Restaurants | $987,559,125 | $276,727,719 | $400 | 2,468,898 | 5 | 691,819 | 7 |
| Limited-Service Restaurants | $900,189,703 | $254,122,241 | $450 | 2,000,422 | 4 | 564,716 | 5 |
| Special Foodservices | $182,006,347 | $51,296,449 | $400 | 455,016 | 1 | 128,241 | 1 |
| Drinking Places | $115,063,312 | $31,391,634 | $450 | 255,696 | 1 | 69,759 | 1 |
| **Total** | **$22,742,992,477** | **$6,356,668,209** | | **57,342,516** | **121** | **16,073,959** | **154** |

| | |
|---|---|
| Fairfax County Households[3] | 474,886 |
| Loudoun County Households[3] | 104,327 |

1/Claritas 2009
2/Industry typical standards based on RCLCO knowledge and experience
3/Claritas 2009

## Exhibit III-4

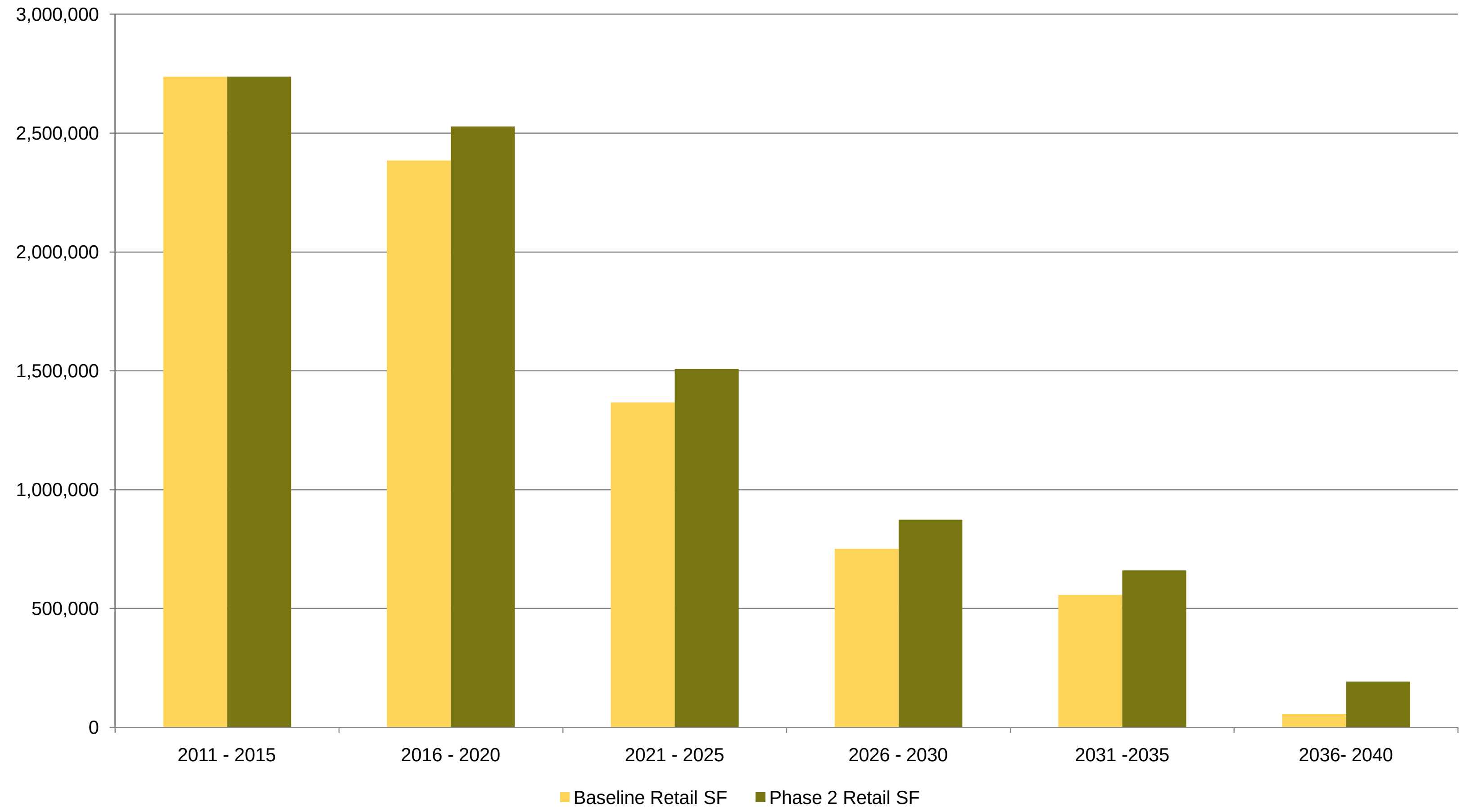
# RETAIL DEMAND FORECAST
# LOUDOUN COUNTY
# 2011 - 2040

| | New Housing Units[1] | | New Households[2] | | Absorption per Household[3] | Projected New Retail Space Demand | |
|---|---|---|---|---|---|---|---|
| | RCLCO Baseline (Phase 1 Rail) | RCLCO Phase 2 Rail | RCLCO Baseline (Phase 1 Rail) | RCLCO Phase 2 Rail | | RCLCO Baseline (Phase 1 Rail) | RCLCO Phase 2 Rail |
| 2011 | 2,932 | 2,932 | 2,786 | 2,786 | 154 | 430,000 | 430,000 |
| 2012 | 3,454 | 3,454 | 3,281 | 3,281 | 153 | 504,000 | 504,000 |
| 2013 | 3,981 | 3,981 | 3,782 | 3,782 | 153 | 578,000 | 578,000 |
| 2014 | 4,394 | 4,394 | 4,174 | 4,174 | 152 | 634,000 | 634,000 |
| 2015 | 4,115 | 4,119 | 3,910 | 3,913 | 151 | 591,000 | 592,000 |
| 2016 | 3,809 | 3,813 | 3,619 | 3,622 | 150 | 544,000 | 545,000 |
| 2017 | 3,618 | 3,711 | 3,437 | 3,526 | 150 | 514,000 | 528,000 |
| 2018 | 3,436 | 3,627 | 3,264 | 3,446 | 149 | 486,000 | 513,000 |
| 2019 | 3,159 | 3,491 | 3,001 | 3,316 | 148 | 445,000 | 491,000 |
| 2020 | 2,826 | 3,221 | 2,684 | 3,060 | 147 | 396,000 | 451,000 |
| 2021 | 2,468 | 2,849 | 2,345 | 2,706 | 147 | 344,000 | 397,000 |
| 2022 | 2,224 | 2,548 | 2,113 | 2,421 | 146 | 308,000 | 353,000 |
| 2023 | 2,033 | 2,171 | 1,931 | 2,063 | 145 | 280,000 | 300,000 |
| 2024 | 1,736 | 1,824 | 1,649 | 1,733 | 144 | 238,000 | 250,000 |
| 2025 | 1,445 | 1,523 | 1,373 | 1,447 | 144 | 197,000 | 208,000 |
| 2026 | 1,208 | 1,386 | 1,148 | 1,317 | 143 | 164,000 | 188,000 |
| 2027 | 1,191 | 1,374 | 1,131 | 1,305 | 142 | 161,000 | 186,000 |
| 2028 | 1,154 | 1,340 | 1,096 | 1,273 | 142 | 155,000 | 180,000 |
| 2029 | 1,057 | 1,235 | 1,004 | 1,173 | 141 | 141,000 | 165,000 |
| 2030 | 978 | 1,165 | 929 | 1,107 | 140 | 130,000 | 155,000 |
| 2031 | 917 | 1,098 | 872 | 1,043 | 140 | 122,000 | 145,000 |
| 2032 | 916 | 1,069 | 870 | 1,016 | 139 | 121,000 | 141,000 |
| 2033 | 915 | 1,040 | 869 | 988 | 138 | 120,000 | 137,000 |
| 2034 | 880 | 945 | 836 | 897 | 137 | 115,000 | 123,000 |
| 2035 | 609 | 878 | 579 | 834 | 137 | 79,000 | 114,000 |
| 2036 | 311 | 746 | 295 | 709 | 136 | 40,000 | 96,000 |
| 2037 | 60 | 483 | 57 | 459 | 135 | 8,000 | 62,000 |
| 2038 | 23 | 227 | 22 | 216 | 135 | 3,000 | 29,000 |
| 2039 | 22 | 22 | 21 | 21 | 134 | 3,000 | 3,000 |
| 2040 | 21 | 21 | 20 | 20 | 133 | 3,000 | 3,000 |
| Total | 55,890 | 60,688 | 53,096 | 57,653 | | 7,854,000 | 8,501,000 |

1/See Exhibits I-23 and I-24
2/Assumes 5% Vacancy Rate
3/See Exhibits III-1 and III-2

**Exhibit III-5**

**RETAIL DEMAND (SF) FORECAST COMPARISON**
**LOUDOUN COUNTY**
**2011 - 2040**



## Exhibit III-6

## BASELINE (PHASE 1 RAIL EXTENSION) SCENARIO RETAIL DEMAND BY PLANNING AREA
## LOUDOUN COUNTY
## 2011 - 2040

**Projected Capture of Household Growth**

| | 2011 - 2015 | 2016 - 2020 | 2021 - 2025 | 2026 - 2030 | 2031 - 2035 | 2036 - 2040 |
|---|---|---|---|---|---|---|
| Ashburn | 29% | 22% | 25% | 40% | 43% | 31% |
| Dulles | 34% | 43% | 34% | 21% | 23% | 19% |
| Leesburg | 12% | 7% | 5% | 7% | 8% | 6% |
| Northwest | 3% | 3% | 3% | 4% | 3% | 19% |
| Potomac | 2% | 1% | 0% | 1% | 1% | 0% |
| Route 15 North | 4% | 4% | 5% | 0% | 0% | 0% |
| Route 15 South | 2% | 3% | 4% | 0% | 0% | 0% |
| Route 7 West | 7% | 8% | 8% | 5% | 0% | 0% |
| Southwest | 1% | 1% | 1% | 2% | 1% | 8% |
| Sterling | 6% | 9% | 13% | 20% | 21% | 17% |
| Total | 100% | 100% | 100% | 100% | 100% | 100% |

**Projected Capture of Retail Demand**

| | 2011 - 2015 | 2016 - 2020 | 2021 - 2025 | 2026 - 2030 | 2031 - 2035 | 2036 - 2040 |
|---|---|---|---|---|---|---|
| Ashburn | 30% | 25% | 30% | 40% | 40% | 35% |
| Dulles | 30% | 40% | 36% | 21% | 21% | 26% |
| Leesburg | 12% | 7% | 5% | 5% | 5% | 5% |
| Northwest | 0% | 0% | 0% | 0% | 0% | 0% |
| Potomac | 1% | 1% | 1% | 1% | 1% | 1% |
| Route 15 North | 1% | 1% | 1% | 1% | 1% | 1% |
| Route 15 South | 1% | 1% | 1% | 1% | 1% | 1% |
| Route 7 West | 5% | 5% | 1% | 1% | 1% | 1% |
| Southwest | 0% | 0% | 0% | 0% | 0% | 0% |
| Sterling | 20% | 20% | 25% | 30% | 30% | 30% |
| Total | 100% | 100% | 100% | 100% | 100% | 100% |

**Projected Retail Demand (SF)**

| | 2011 - 2015 | 2016 - 2020 | 2021 - 2025 | 2026 - 2030 | 2031 - 2035 | 2036 - 2040 | Total |
|---|---|---|---|---|---|---|---|
| Ashburn | 821,100 | 596,250 | 410,100 | 300,400 | 222,800 | 19,950 | 2,370,600 |
| Dulles | 821,100 | 954,000 | 492,120 | 157,710 | 116,970 | 14,820 | 2,556,720 |
| Leesburg | 328,440 | 166,950 | 68,350 | 37,550 | 27,850 | 2,850 | 631,990 |
| Northwest | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Potomac | 27,370 | 23,850 | 13,670 | 7,510 | 5,570 | 570 | 78,540 |
| Route 15 North | 27,370 | 23,850 | 13,670 | 7,510 | 5,570 | 570 | 78,540 |
| Route 15 South | 27,370 | 23,850 | 13,670 | 7,510 | 5,570 | 570 | 78,540 |
| Route 7 West | 136,850 | 119,250 | 13,670 | 7,510 | 5,570 | 570 | 283,420 |
| Southwest | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sterling | 547,400 | 477,000 | 341,750 | 225,300 | 167,100 | 17,100 | 1,775,650 |
| Total | 2,737,000 | 2,385,000 | 1,367,000 | 751,000 | 557,000 | 57,000 | 7,854,000 |

## Exhibit III-7

## PHASE 2 RAIL EXTENSION SCENARIO RETAIL DEMAND BY PLANNING AREA
## LOUDOUN COUNTY
## 2011 - 2040

**Projected Capture of Household Growth**

| | 2011 - 2015 | 2016 - 2020 | 2021 - 2025 | 2026 - 2030 | 2031 - 2035 | 2036 - 2040 |
|---|---|---|---|---|---|---|
| Ashburn | 30% | 27% | 30% | 41% | 43% | 34% |
| Dulles | 33% | 39% | 31% | 18% | 23% | 29% |
| Leesburg | 12% | 6% | 4% | 6% | 8% | 10% |
| Northwest | 3% | 3% | 3% | 3% | 3% | 6% |
| Potomac | 2% | 1% | 0% | 1% | 1% | 1% |
| Route 15 North | 4% | 4% | 5% | 0% | 0% | 0% |
| Route 15 South | 2% | 3% | 4% | 0% | 0% | 0% |
| Route 7 West | 7% | 7% | 8% | 4% | 0% | 0% |
| Southwest | 1% | 1% | 1% | 1% | 1% | 3% |
| Sterling | 7% | 9% | 14% | 26% | 21% | 18% |
| Total | 100% | 100% | 100% | 100% | 100% | 100% |

**Projected Capture of Retail Demand**

| | 2011 - 2015 | 2016 - 2020 | 2021 - 2025 | 2026 - 2030 | 2031 - 2035 | 2036 - 2040 |
|---|---|---|---|---|---|---|
| Ashburn | 30% | 30% | 35% | 35% | 40% | 36% |
| Dulles | 30% | 35% | 31% | 25% | 25% | 30% |
| Leesburg | 12% | 7% | 5% | 6% | 5% | 5% |
| Northwest | 0% | 0% | 0% | 0% | 0% | 0% |
| Potomac | 1% | 1% | 1% | 1% | 1% | 1% |
| Route 15 North | 1% | 1% | 1% | 1% | 1% | 1% |
| Route 15 South | 1% | 1% | 1% | 1% | 1% | 1% |
| Route 7 West | 5% | 5% | 1% | 1% | 1% | 1% |
| Southwest | 0% | 0% | 0% | 0% | 0% | 0% |
| Sterling | 20% | 20% | 25% | 30% | 26% | 25% |
| Total | 100% | 100% | 100% | 100% | 100% | 100% |

**Projected Retail Demand (SF)**

| | 2011 - 2015 | 2016 - 2020 | 2021 - 2025 | 2026 - 2030 | 2031 - 2035 | 2036 - 2040 | Total |
|---|---|---|---|---|---|---|---|
| Ashburn | 821,400 | 758,400 | 527,800 | 305,900 | 264,000 | 69,480 | 2,746,980 |
| Dulles | 821,400 | 884,800 | 467,480 | 218,500 | 165,000 | 57,900 | 2,615,080 |
| Leesburg | 328,560 | 176,960 | 75,400 | 52,440 | 33,000 | 9,650 | 676,010 |
| Northwest | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Potomac | 27,380 | 25,280 | 15,080 | 8,740 | 6,600 | 1,930 | 85,010 |
| Route 15 North | 27,380 | 25,280 | 15,080 | 8,740 | 6,600 | 1,930 | 85,010 |
| Route 15 South | 27,380 | 25,280 | 15,080 | 8,740 | 6,600 | 1,930 | 85,010 |
| Route 7 West | 136,900 | 126,400 | 15,080 | 8,740 | 6,600 | 1,930 | 295,650 |
| Southwest | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sterling | 547,600 | 505,600 | 377,000 | 262,200 | 171,600 | 48,250 | 1,912,250 |
| Total | 2,738,000 | 2,528,000 | 1,508,000 | 874,000 | 660,000 | 193,000 | 8,501,000 |

## Exhibit III-8

### STATION AREA RETAIL DEMAND FORECAST
### LOUDOUN COUNTY
### 2011 - 2040

| Baseline (Phase 1 Rail Extension) | 2011 - 2015 | 2016 - 2020 | 2021 - 2025 | 2026 - 2030 | 2031 - 2035 | 2036 - 2040 | Total |
|---|---|---|---|---|---|---|---|
| Ashburn Planning Area Retail Demand (SF) | 821,100 | 596,250 | 410,100 | 300,400 | 222,800 | 19,950 | 2,370,600 |
| Est. % Town Center Retail[1] | 20% | 20% | 20% | 20% | 20% | 20% | |
| Town Center Retail Demand | 164,220 | 119,250 | 82,020 | 60,080 | 44,560 | 3,990 | 474,120 |
| Route 606 Station Area Capture of Town Center Retail | 10% | 10% | 10% | 10% | 10% | 10% | |
| **Route 606 Station Area Retail Demand** | **16,422** | **11,925** | **8,202** | **6,008** | **4,456** | **399** | **47,412** |
| | | | | | | | |
| Route 772 Station Area Capture of Town Center Retail | 20% | 20% | 20% | 20% | 20% | 20% | |
| **Route 772 Station Area Retail Demand** | **32,844** | **23,850** | **16,404** | **12,016** | **8,912** | **798** | **94,824** |
| | | | | | | | |
| Sterling Planning Area Retail Demand (SF) | 547,400 | 477,000 | 341,750 | 225,300 | 167,100 | 17,100 | 1,775,650 |
| Est. % Town Center Retail[1] | 20% | 20% | 20% | 20% | 20% | 20% | |
| Town Center Retail Demand | 109,480 | 95,400 | 68,350 | 45,060 | 33,420 | 3,420 | 355,130 |
| Route 28 Station Area Capture of Town Center Retail | 80% | 80% | 80% | 80% | 80% | 80% | |
| **Route 28 Station Area Retail Demand** | **87,584** | **76,320** | **54,680** | **36,048** | **26,736** | **2,736** | **284,104** |

| Phase 2 Rail Extension | 2011 - 2015 | 2016 - 2020 | 2021 - 2025 | 2026 - 2030 | 2031 - 2035 | 2036 - 2040 | Total |
|---|---|---|---|---|---|---|---|
| Ashburn Planning Area Retail Demand (SF) | 821,400 | 758,400 | 527,800 | 305,900 | 264,000 | 69,480 | 2,746,980 |
| Est. % Town Center Retail[1] | 20% | 20% | 20% | 20% | 20% | 20% | |
| Town Center Retail Demand | 164,280 | 151,680 | 105,560 | 61,180 | 52,800 | 13,896 | 549,396 |
| Route 606 Station Area Capture of Town Center Retail | 15% | 15% | 15% | 15% | 15% | 15% | |
| **Route 606 Station Area Retail Demand** | **24,642** | **22,752** | **15,834** | **9,177** | **7,920** | **2,084** | **82,409** |
| | | | | | | | |
| Route 772 Station Area Capture of Town Center Retail | 35% | 35% | 35% | 35% | 35% | 35% | |
| **Route 772 Station Area Retail Demand** | **57,498** | **53,088** | **36,946** | **21,413** | **18,480** | **4,864** | **192,289** |
| | | | | | | | |
| Sterling Planning Area Retail Demand (SF) | 547,600 | 505,600 | 377,000 | 262,200 | 171,600 | 48,250 | 1,912,250 |
| Est. % Town Center Retail[1] | 20% | 20% | 20% | 20% | 20% | 20% | |
| Town Center Retail Demand | 109,520 | 101,120 | 75,400 | 52,440 | 34,320 | 9,650 | 382,450 |
| Route 28 Station Area Capture of Town Center Retail | 90% | 90% | 90% | 90% | 90% | 90% | |
| **Route 28 Station Area Retail Demand** | **98,568** | **91,008** | **67,860** | **47,196** | **30,888** | **8,685** | **344,205** |

1/RCLCO estimate based on expenditures by store category and the estimated desirability of a "town center" location for stores within a given category; See Exhibit III-3

# Exhibit IV-1

## HOTEL DEVELOPMENT TRENDS
## LOUDOUN COUNTY
## 2000 - 2009

| | Loudoun County Hotel Rooms[1] | Loudoun County Office Space[2] | Hotel Rooms per 1,000 SF RBA Office Space | Regional Average Rooms per 1,000 SF RBA[3] | Delta | Rooms Supported by Air Traffic |
|---|---|---|---|---|---|---|
| 2000 | 3,260 | 11,682,805 | 0.28 | 0.21 | 0.07 | 810 |
| 2001 | 3,521 | 12,526,636 | 0.28 | 0.21 | 0.07 | 890 |
| 2002 | 3,622 | 12,683,028 | 0.29 | 0.21 | 0.08 | 960 |
| 2003 | 3,622 | 13,644,831 | 0.27 | 0.21 | 0.06 | 760 |
| 2004 | 3,875 | 13,961,362 | 0.28 | 0.21 | 0.07 | 940 |
| 2005 | 4,119 | 14,690,668 | 0.28 | 0.21 | 0.07 | 1,030 |
| 2006 | 4,270 | 15,374,118 | 0.28 | 0.21 | 0.07 | 1,040 |
| 2007 | 4,760 | 15,900,539 | 0.30 | 0.21 | 0.09 | 1,420 |
| 2008 | 4,896 | 16,271,238 | 0.30 | 0.21 | 0.09 | 1,480 |
| 2009 | 5,290 | 16,525,358 | 0.32 | 0.21 | 0.11 | 1,820 |
| **Average** | | | **0.29** | **0.21** | **0.08** | **1,115** |

1/Smith Travel Research
2/Loudoun County Growth Summary 2009
3/HVS

## Exhibit IV-2

## ANNUAL PASSENGERS
## DULLES AIRPORT
## 2000 - 2009

| Year | Total Passengers[1] | Est. Hotel Rooms Supported by Air Passengers[2] | Passengers per Room |
|---|---|---|---|
| 2000 | 20,104,693 | 810 | 24,821 |
| 2001 | 18,002,319 | 890 | 20,227 |
| 2002 | 17,235,163 | 960 | 17,953 |
| 2003 | 16,950,381 | 760 | 22,303 |
| 2004 | 22,868,852 | 940 | 24,329 |
| 2005 | 27,052,118 | 1,030 | 26,264 |
| 2006 | 23,020,362 | 1,040 | 22,135 |
| 2007 | 24,737,528 | 1,420 | 17,421 |
| 2008 | 23,876,780 | 1,480 | 16,133 |
| 2009 | 23,213,341 | 1,820 | 12,755 |
| | | | 20,434 |

1/Metropolitan Washington Airports Authority
2/See Exhibit V-1

## Exhibit IV-3

## HOTEL DEMAND FORECAST
## LOUDOUN COUNTY
## 2011 - 2040

| | Projected Office Space Delivery (Baseline) | Projected Office Space Delivery (Metro) | Hotel Rooms per 1,000 SF Office | Dulles Airport Passengers[1] | Growth in Airport Passengers | Hotel Room Demand per Passenger | Baseline Hotel Demand | Phase 2 Extension Hotel Demand |
|---|---|---|---|---|---|---|---|---|
| 2011 | - | - | 0.21 | 23,561,195 | 348,195 | 20,000 | 17 | 17 |
| 2012 | - | - | 0.21 | 23,914,613 | 353,418 | 20,000 | 18 | 18 |
| 2013 | 682,339 | 682,339 | 0.21 | 24,273,332 | 358,719 | 20,000 | 161 | 161 |
| 2014 | 691,029 | 691,029 | 0.21 | 24,637,432 | 364,100 | 20,000 | 163 | 163 |
| 2015 | 753,694 | 753,694 | 0.21 | 25,006,994 | 369,561 | 20,000 | 177 | 177 |
| 2016 | 815,134 | 815,134 | 0.21 | 25,382,098 | 375,105 | 20,000 | 190 | 190 |
| 2017 | 878,271 | 878,271 | 0.21 | 25,762,830 | 380,731 | 20,000 | 203 | 203 |
| 2018 | 886,413 | 956,810 | 0.21 | 26,149,272 | 386,442 | 20,000 | 205 | 220 |
| 2019 | 895,805 | 965,409 | 0.21 | 26,541,511 | 392,239 | 20,000 | 208 | 222 |
| 2020 | 849,002 | 913,650 | 0.21 | 26,939,634 | 398,123 | 20,000 | 198 | 212 |
| 2021 | 800,584 | 860,410 | 0.21 | 27,343,729 | 404,095 | 20,000 | 188 | 201 |
| 2022 | 748,555 | 803,615 | 0.21 | 27,753,885 | 410,156 | 20,000 | 178 | 189 |
| 2023 | 748,548 | 802,888 | 0.21 | 28,170,193 | 416,308 | 20,000 | 178 | 189 |
| 2024 | 745,486 | 799,029 | 0.21 | 28,592,746 | 422,553 | 20,000 | 178 | 189 |
| 2025 | 707,624 | 757,952 | 0.21 | 29,021,637 | 428,891 | 20,000 | 170 | 181 |
| 2026 | 669,689 | 716,897 | 0.21 | 29,456,962 | 435,325 | 20,000 | 162 | 172 |
| 2027 | 630,831 | 674,980 | 0.21 | 29,898,816 | 441,854 | 20,000 | 155 | 164 |
| 2028 | 624,441 | 667,897 | 0.21 | 30,347,298 | 448,482 | 20,000 | 154 | 163 |
| 2029 | 616,653 | 659,386 | 0.21 | 30,802,508 | 455,209 | 20,000 | 152 | 161 |
| 2030 | 594,311 | 635,347 | 0.21 | 31,264,545 | 462,038 | 20,000 | 148 | 157 |
| 2031 | 572,098 | 611,483 | 0.21 | 31,733,513 | 468,968 | 20,000 | 144 | 152 |
| 2032 | 549,758 | 587,526 | 0.21 | 32,209,516 | 476,003 | 20,000 | 139 | 147 |
| 2033 | 540,867 | 577,977 | 0.21 | 32,692,659 | 483,143 | 20,000 | 138 | 146 |
| 2034 | 531,462 | 567,909 | 0.21 | 33,183,049 | 490,390 | 20,000 | 136 | 144 |
| 2035 | 508,358 | 543,219 | 0.21 | 33,680,795 | 497,746 | 20,000 | 132 | 139 |
| 2036 | 485,715 | 519,038 | 0.21 | 34,186,006 | 505,212 | 20,000 | 127 | 134 |
| 2037 | 463,333 | 495,157 | 0.21 | 34,698,797 | 512,790 | 20,000 | 123 | 130 |
| 2038 | 454,001 | 485,239 | 0.21 | 35,219,278 | 520,482 | 20,000 | 121 | 128 |
| 2039 | 444,416 | 475,067 | 0.21 | 35,747,568 | 528,289 | 20,000 | 120 | 126 |
| 2040 | 434,812 | 464,882 | 0.21 | 36,283,781 | 536,214 | 20,000 | 118 | 124 |
| **Total** | | | | | | | **4,501** | **4,720** |

1/Metropolitan Washington Airports Authority

## Exhibit IV-4

## PROJECTED HOTEL DEMAND BY CORRIDOR (BASELINE)
## LOUDOUN COUNTY
## 2011 - 2040

| | Projected Hotel Demand[1] | Route 7 Capture | Route 7 Demand | Route 28 Capture | Route 28 Demand | Route 625 Capture | Route 625 Demand | Route 606 Capture | Route 606 Demand | Route 267 Capture | Route 267 Demand | Route 50 Capture | Route 50 Demand | Total Capture[2] |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2011 | 17 | 10% | 2 | 40% | 7 | 5% | 1 | 15% | 3 | 15% | 3 | 5% | 1 | 90% |
| 2012 | 18 | 10% | 2 | 40% | 7 | 5% | 1 | 15% | 3 | 15% | 3 | 5% | 1 | 90% |
| 2013 | 161 | 10% | 16 | 40% | 64 | 5% | 8 | 15% | 24 | 15% | 24 | 5% | 8 | 90% |
| 2014 | 163 | 10% | 16 | 40% | 65 | 5% | 8 | 15% | 24 | 15% | 24 | 5% | 8 | 90% |
| 2015 | 177 | 10% | 18 | 40% | 71 | 5% | 9 | 15% | 27 | 15% | 27 | 5% | 9 | 90% |
| 2016 | 190 | 10% | 19 | 40% | 76 | 5% | 9 | 15% | 28 | 15% | 28 | 5% | 9 | 90% |
| 2017 | 203 | 10% | 20 | 40% | 81 | 5% | 10 | 15% | 31 | 15% | 31 | 5% | 10 | 90% |
| 2018 | 205 | 10% | 21 | 40% | 82 | 5% | 10 | 15% | 31 | 15% | 31 | 5% | 10 | 90% |
| 2019 | 208 | 10% | 21 | 40% | 83 | 5% | 10 | 15% | 31 | 15% | 31 | 5% | 10 | 90% |
| 2020 | 198 | 10% | 20 | 40% | 79 | 5% | 10 | 15% | 30 | 15% | 30 | 5% | 10 | 90% |
| 2021 | 188 | 10% | 19 | 40% | 75 | 5% | 9 | 15% | 28 | 15% | 28 | 5% | 9 | 90% |
| 2022 | 178 | 10% | 18 | 40% | 71 | 5% | 9 | 15% | 27 | 15% | 27 | 5% | 9 | 90% |
| 2023 | 178 | 10% | 18 | 40% | 71 | 5% | 9 | 15% | 27 | 15% | 27 | 5% | 9 | 90% |
| 2024 | 178 | 10% | 18 | 40% | 71 | 5% | 9 | 15% | 27 | 15% | 27 | 5% | 9 | 90% |
| 2025 | 170 | 10% | 17 | 40% | 68 | 5% | 9 | 15% | 26 | 15% | 26 | 5% | 9 | 90% |
| 2026 | 162 | 10% | 16 | 40% | 65 | 5% | 8 | 15% | 24 | 15% | 24 | 5% | 8 | 90% |
| 2027 | 155 | 10% | 15 | 40% | 62 | 5% | 8 | 15% | 23 | 15% | 23 | 5% | 8 | 90% |
| 2028 | 154 | 10% | 15 | 40% | 61 | 5% | 8 | 15% | 23 | 15% | 23 | 5% | 8 | 90% |
| 2029 | 152 | 10% | 15 | 40% | 61 | 5% | 8 | 15% | 23 | 15% | 23 | 5% | 8 | 90% |
| 2030 | 148 | 10% | 15 | 40% | 59 | 5% | 7 | 15% | 22 | 15% | 22 | 5% | 7 | 90% |
| 2031 | 144 | 10% | 14 | 40% | 57 | 5% | 7 | 15% | 22 | 15% | 22 | 5% | 7 | 90% |
| 2032 | 139 | 10% | 14 | 40% | 56 | 5% | 7 | 15% | 21 | 15% | 21 | 5% | 7 | 90% |
| 2033 | 138 | 10% | 14 | 40% | 55 | 5% | 7 | 15% | 21 | 15% | 21 | 5% | 7 | 90% |
| 2034 | 136 | 10% | 14 | 40% | 54 | 5% | 7 | 15% | 20 | 15% | 20 | 5% | 7 | 90% |
| 2035 | 132 | 10% | 13 | 40% | 53 | 5% | 7 | 15% | 20 | 15% | 20 | 5% | 7 | 90% |
| 2036 | 127 | 10% | 13 | 40% | 51 | 5% | 6 | 15% | 19 | 15% | 19 | 5% | 6 | 90% |
| 2037 | 123 | 10% | 12 | 40% | 49 | 5% | 6 | 15% | 18 | 15% | 18 | 5% | 6 | 90% |
| 2038 | 121 | 10% | 12 | 40% | 49 | 5% | 6 | 15% | 18 | 15% | 18 | 5% | 6 | 90% |
| 2039 | 120 | 10% | 12 | 40% | 48 | 5% | 6 | 15% | 18 | 15% | 18 | 5% | 6 | 90% |
| 2040 | 118 | 10% | 12 | 40% | 47 | 5% | 6 | 15% | 18 | 15% | 18 | 5% | 6 | 90% |
| **Total** | **4,501** | | **450** | | **1,801** | | **225** | | **675** | | **675** | | **225** | |

1/See Exhibit IV-3
2/Capture rates do not add to 100% because some hotels are likely to locate outside of corridor areas but still within Loudoun County

## Exhibit IV-5

### HOTEL DEMAND BY CORRIDOR (PHASE 2 EXTENSION)
### LOUDOUN COUNTY
### 2011 - 2040

| | Projected Hotel Demand[1] | Route 7 Capture | Route 7 Demand | Route 28 Capture | Route 28 Demand | Route 625 Capture | Route 625 Demand | Route 606 Capture | Route 606 Demand | Route 267 Capture | Route 267 Demand | Route 50 Capture | Route 50 Demand | Total Capture[2] |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2010 | - | 10% | 0 | 30% | 0 | 5% | 0 | 20% | 0 | 20% | 0 | 5% | 0 | 90% |
| 2011 | 17 | 10% | 2 | 30% | 5 | 5% | 1 | 20% | 3 | 20% | 3 | 5% | 1 | 90% |
| 2012 | 18 | 10% | 2 | 30% | 5 | 5% | 1 | 20% | 4 | 20% | 4 | 5% | 1 | 90% |
| 2013 | 161 | 10% | 16 | 30% | 48 | 5% | 8 | 20% | 32 | 20% | 32 | 5% | 8 | 90% |
| 2014 | 163 | 10% | 16 | 30% | 49 | 5% | 8 | 20% | 33 | 20% | 33 | 5% | 8 | 90% |
| 2015 | 177 | 10% | 18 | 30% | 53 | 5% | 9 | 20% | 35 | 20% | 35 | 5% | 9 | 90% |
| 2016 | 190 | 10% | 19 | 30% | 57 | 5% | 9 | 20% | 38 | 20% | 38 | 5% | 9 | 90% |
| 2017 | 203 | 10% | 20 | 30% | 61 | 5% | 10 | 20% | 41 | 20% | 41 | 5% | 10 | 90% |
| 2018 | 220 | 10% | 22 | 30% | 66 | 5% | 11 | 20% | 44 | 20% | 44 | 5% | 11 | 90% |
| 2019 | 222 | 10% | 22 | 30% | 67 | 5% | 11 | 20% | 44 | 20% | 44 | 5% | 11 | 90% |
| 2020 | 212 | 10% | 21 | 30% | 64 | 5% | 11 | 20% | 42 | 20% | 42 | 5% | 11 | 90% |
| 2021 | 201 | 10% | 20 | 30% | 60 | 5% | 10 | 20% | 40 | 20% | 40 | 5% | 10 | 90% |
| 2022 | 189 | 10% | 19 | 30% | 57 | 5% | 9 | 20% | 38 | 20% | 38 | 5% | 9 | 90% |
| 2023 | 189 | 10% | 19 | 30% | 57 | 5% | 9 | 20% | 38 | 20% | 38 | 5% | 9 | 90% |
| 2024 | 189 | 10% | 19 | 30% | 57 | 5% | 9 | 20% | 38 | 20% | 38 | 5% | 9 | 90% |
| 2025 | 181 | 10% | 18 | 30% | 54 | 5% | 9 | 20% | 36 | 20% | 36 | 5% | 9 | 90% |
| 2026 | 172 | 10% | 17 | 30% | 52 | 5% | 9 | 20% | 34 | 20% | 34 | 5% | 9 | 90% |
| 2027 | 164 | 10% | 16 | 30% | 49 | 5% | 8 | 20% | 33 | 20% | 33 | 5% | 8 | 90% |
| 2028 | 163 | 10% | 16 | 30% | 49 | 5% | 8 | 20% | 33 | 20% | 33 | 5% | 8 | 90% |
| 2029 | 161 | 10% | 16 | 30% | 48 | 5% | 8 | 20% | 32 | 20% | 32 | 5% | 8 | 90% |
| 2030 | 157 | 10% | 16 | 30% | 47 | 5% | 8 | 20% | 31 | 20% | 31 | 5% | 8 | 90% |
| 2031 | 152 | 10% | 15 | 30% | 46 | 5% | 8 | 20% | 30 | 20% | 30 | 5% | 8 | 90% |
| 2032 | 147 | 10% | 15 | 30% | 44 | 5% | 7 | 20% | 29 | 20% | 29 | 5% | 7 | 90% |
| 2033 | 146 | 10% | 15 | 30% | 44 | 5% | 7 | 20% | 29 | 20% | 29 | 5% | 7 | 90% |
| 2034 | 144 | 10% | 14 | 30% | 43 | 5% | 7 | 20% | 29 | 20% | 29 | 5% | 7 | 90% |
| 2035 | 139 | 10% | 14 | 30% | 42 | 5% | 7 | 20% | 28 | 20% | 28 | 5% | 7 | 90% |
| 2036 | 134 | 10% | 13 | 30% | 40 | 5% | 7 | 20% | 27 | 20% | 27 | 5% | 7 | 90% |
| 2037 | 130 | 10% | 13 | 30% | 39 | 5% | 6 | 20% | 26 | 20% | 26 | 5% | 6 | 90% |
| 2038 | 128 | 10% | 13 | 30% | 38 | 5% | 6 | 20% | 26 | 20% | 26 | 5% | 6 | 90% |
| 2039 | 126 | 10% | 13 | 30% | 38 | 5% | 6 | 20% | 25 | 20% | 25 | 5% | 6 | 90% |
| 2040 | 124 | 10% | 12 | 30% | 37 | 5% | 6 | 20% | 25 | 20% | 25 | 5% | 6 | 90% |
| **Total** | **4,720** | | **472** | | **1,416** | | **236** | | **944** | | **944** | | **236** | |

1/See Exhibit IV-3
2/Capture rates do not add to 100% because some hotels are likely to locate outside of corridor areas but still within Loudoun County

## Exhibit IV-6

### STATION AREA HOTEL DEMAND
### LOUDOUN COUNTY
### 2011 - 2040

| | Baseline (Phase 1 Extension) | | | | | | | | | Phase 2 Extension | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Route 28 Demand | Station Area Capture | Station Area Demand | Route 606 Demand | Station Area Capture | Station Area Demand | Route 267 Demand | Station Area Capture | Station Area Demand | Route 28 Demand | Station Area Capture | Station Area Demand | Route 606 Demand | Station Area Capture | Station Area Demand | Route 267 Demand | Station Area Capture | Station Area Demand |
| 2010 | - | 30% | - | - | 60% | 0 | 0 | 65% | 0 | 0 | 55% | 0 | 0 | 70% | 0 | 0 | 75% | 0 |
| 2011 | 7 | 30% | 2 | 3 | 60% | 2 | 3 | 65% | 2 | 5 | 55% | 3 | 3 | 70% | 2 | 3 | 75% | 3 |
| 2012 | 7 | 30% | 2 | 3 | 60% | 2 | 3 | 65% | 2 | 5 | 55% | 3 | 4 | 70% | 2 | 4 | 75% | 3 |
| 2013 | 64 | 30% | 19 | 24 | 60% | 15 | 24 | 65% | 16 | 48 | 55% | 27 | 32 | 70% | 23 | 32 | 75% | 24 |
| 2014 | 65 | 30% | 20 | 24 | 60% | 15 | 24 | 65% | 16 | 49 | 55% | 27 | 33 | 70% | 23 | 33 | 75% | 24 |
| 2015 | 71 | 30% | 21 | 27 | 60% | 16 | 27 | 65% | 17 | 53 | 55% | 29 | 35 | 70% | 25 | 35 | 75% | 27 |
| 2016 | 76 | 30% | 23 | 28 | 60% | 17 | 28 | 65% | 19 | 57 | 55% | 31 | 38 | 70% | 27 | 38 | 75% | 28 |
| 2017 | 81 | 30% | 24 | 31 | 60% | 18 | 31 | 65% | 20 | 61 | 55% | 34 | 41 | 70% | 28 | 41 | 75% | 31 |
| 2018 | 82 | 30% | 25 | 31 | 60% | 18 | 31 | 65% | 20 | 66 | 55% | 36 | 44 | 70% | 31 | 44 | 75% | 33 |
| 2019 | 83 | 30% | 25 | 31 | 60% | 19 | 31 | 65% | 20 | 67 | 55% | 37 | 44 | 70% | 31 | 44 | 75% | 33 |
| 2020 | 79 | 30% | 24 | 30 | 60% | 18 | 30 | 65% | 19 | 64 | 55% | 35 | 42 | 70% | 30 | 42 | 75% | 32 |
| 2021 | 75 | 30% | 23 | 28 | 60% | 17 | 28 | 65% | 18 | 60 | 55% | 33 | 40 | 70% | 28 | 40 | 75% | 30 |
| 2022 | 71 | 30% | 21 | 27 | 60% | 16 | 27 | 65% | 17 | 57 | 55% | 31 | 38 | 70% | 26 | 38 | 75% | 28 |
| 2023 | 71 | 30% | 21 | 27 | 60% | 16 | 27 | 65% | 17 | 57 | 55% | 31 | 38 | 70% | 27 | 38 | 75% | 28 |
| 2024 | 71 | 30% | 21 | 27 | 60% | 16 | 27 | 65% | 17 | 57 | 55% | 31 | 38 | 70% | 26 | 38 | 75% | 28 |
| 2025 | 68 | 30% | 20 | 26 | 60% | 15 | 26 | 65% | 17 | 54 | 55% | 30 | 36 | 70% | 25 | 36 | 75% | 27 |
| 2026 | 65 | 30% | 19 | 24 | 60% | 15 | 24 | 65% | 16 | 52 | 55% | 28 | 34 | 70% | 24 | 34 | 75% | 26 |
| 2027 | 62 | 30% | 19 | 23 | 60% | 14 | 23 | 65% | 15 | 49 | 55% | 27 | 33 | 70% | 23 | 33 | 75% | 25 |
| 2028 | 61 | 30% | 18 | 23 | 60% | 14 | 23 | 65% | 15 | 49 | 55% | 27 | 33 | 70% | 23 | 33 | 75% | 24 |
| 2029 | 61 | 30% | 18 | 23 | 60% | 14 | 23 | 65% | 15 | 48 | 55% | 27 | 32 | 70% | 23 | 32 | 75% | 24 |
| 2030 | 59 | 30% | 18 | 22 | 60% | 13 | 22 | 65% | 14 | 47 | 55% | 26 | 31 | 70% | 22 | 31 | 75% | 23 |
| 2031 | 57 | 30% | 17 | 22 | 60% | 13 | 22 | 65% | 14 | 46 | 55% | 25 | 30 | 70% | 21 | 30 | 75% | 23 |
| 2032 | 56 | 30% | 17 | 21 | 60% | 13 | 21 | 65% | 14 | 44 | 55% | 24 | 29 | 70% | 21 | 29 | 75% | 22 |
| 2033 | 55 | 30% | 17 | 21 | 60% | 12 | 21 | 65% | 13 | 44 | 55% | 24 | 29 | 70% | 20 | 29 | 75% | 22 |
| 2034 | 54 | 30% | 16 | 20 | 60% | 12 | 20 | 65% | 13 | 43 | 55% | 24 | 29 | 70% | 20 | 29 | 75% | 22 |
| 2035 | 53 | 30% | 16 | 20 | 60% | 12 | 20 | 65% | 13 | 42 | 55% | 23 | 28 | 70% | 19 | 28 | 75% | 21 |
| 2036 | 51 | 30% | 15 | 19 | 60% | 11 | 19 | 65% | 12 | 40 | 55% | 22 | 27 | 70% | 19 | 27 | 75% | 20 |
| 2037 | 49 | 30% | 15 | 18 | 60% | 11 | 18 | 65% | 12 | 39 | 55% | 21 | 26 | 70% | 18 | 26 | 75% | 19 |
| 2038 | 49 | 30% | 15 | 18 | 60% | 11 | 18 | 65% | 12 | 38 | 55% | 21 | 26 | 70% | 18 | 26 | 75% | 19 |
| 2039 | 48 | 30% | 14 | 18 | 60% | 11 | 18 | 65% | 12 | 38 | 55% | 21 | 25 | 70% | 18 | 25 | 75% | 19 |
| 2040 | 47 | 30% | 14 | 18 | 60% | 11 | 18 | 65% | 12 | 37 | 55% | 21 | 25 | 70% | 17 | 25 | 75% | 19 |
| **Total** | **1,801** | | **540** | **675** | | **405** | **675** | | **439** | **1,416** | | **779** | **944** | | **661** | **944** | | **708** |

## Exhibit V-1

### SUMMARY OF FISCAL IMPACT ANALYSIS OUTPUTS
### ROUTE 28 STATION AREA
### 2011 - 2040

| Baseline (Dulles Rail Phase 1) | 2011 - 2015 | 2016 - 2020 | 2021 -2025 | 2026 - 2030 | 2031 - 2035 | 2036 - 2040 | Total |
|---|---|---|---|---|---|---|---|
| **Development Forecast** | | | | | | | |
| Residential Units | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Office Space | 212,706 | 432,462 | 375,080 | 313,593 | 270,254 | 228,228 | 1,832,323 |
| Retail Space | 87,584 | 76,320 | 54,680 | 36,048 | 26,736 | 2,736 | 284,104 |
| Hotel Rooms | 64 | 121 | 107 | 92 | 83 | 73 | 540 |
| **Revenues** | | | | | | | |
| Real Property Tax | $3,792,000 | $9,843,000 | $15,721,000 | $20,460,000 | $24,370,000 | $27,054,000 | $101,240,000 |
| Personal Property Tax | $504,000 | $2,277,000 | $4,063,000 | $5,538,000 | $6,780,000 | $7,797,000 | $26,959,000 |
| Sales Tax | $991,000 | $2,431,000 | $3,471,000 | $4,183,000 | $4,692,000 | $4,865,000 | $20,633,000 |
| BPOL | $423,000 | $3,062,000 | $6,091,000 | $8,611,000 | $10,720,000 | $12,489,000 | $41,396,000 |
| Hotel/Motel Tax | $72,000 | $358,000 | $658,000 | $916,000 | $1,144,000 | $1,172,000 | $4,320,000 |
| Development-Related Permits | $303,000 | $404,000 | $334,000 | $276,000 | $233,000 | $146,000 | $1,696,000 |
| Other | $265,000 | $1,313,000 | $2,418,000 | $3,366,000 | $4,190,000 | $4,895,000 | $16,447,000 |
| Revenues from the Commonwealth | $34,000 | $165,000 | $299,000 | $409,000 | $503,000 | $580,000 | $1,990,000 |
| Revenues from the Federal Govt. | $0 | $0 | $0 | $0 | $0 | $0 | $0 |
| Construction-Related Revenues | $467,000 | $699,000 | $587,000 | $481,000 | $408,000 | $280,000 | $2,922,000 |
| **Total Revenues** | $6,851,000 | $20,552,000 | $33,642,000 | $44,240,000 | $53,040,000 | $59,278,000 | $217,603,000 |
| **Expenditures** | | | | | | | |
| Law Enforcement | $250,000 | $1,220,000 | $2,209,000 | $3,027,000 | $3,716,000 | $4,287,000 | $14,709,000 |
| Fire/Rescue Services | $268,000 | $1,310,000 | $2,372,000 | $3,250,000 | $3,989,000 | $4,603,000 | $15,792,000 |
| Education | $0 | $0 | $0 | $0 | $0 | $0 | $0 |
| All Other Governmental Expenditures | $862,000 | $4,215,000 | $7,631,000 | $10,456,000 | $12,834,000 | $14,807,000 | $50,805,000 |
| Comprehensive Services Act | $0 | $0 | $0 | $0 | $0 | $0 | $0 |
| **Total** | $1,380,000 | $6,745,000 | $12,212,000 | $16,733,000 | $20,539,000 | $23,697,000 | $81,306,000 |
| **NET FISCAL IMPACT** | **$5,471,000** | **$13,807,000** | **$21,430,000** | **$27,507,000** | **$32,501,000** | **$35,581,000** | **$136,297,000** |
| **Dulles Rail Phase 2 Extension** | | | | | | | |
| **Development Forecast** | | | | | | | |
| Residential Units | 0 | 0 | 183 | 839 | 243 | 0 | 1,265 |
| Office Space | 212,706 | 612,992 | 624,973 | 518,623 | 445,828 | 376,655 | 2,791,778 |
| Retail Space | 98,568 | 91,008 | 67,860 | 47,196 | 30,888 | 8,685 | 344,205 |
| Hotel Rooms | 89 | 173 | 157 | 135 | 120 | 106 | 779 |
| **Revenues** | | | | | | | |
| Real Property Tax | $4,848,000 | $12,340,000 | $22,169,000 | $37,952,000 | $50,735,000 | $56,165,000 | $184,209,000 |
| Personal Property Tax | $555,000 | $2,726,000 | $5,618,000 | $9,283,000 | $12,305,000 | $14,008,000 | $44,495,000 |
| Sales Tax | $1,111,000 | $2,866,000 | $4,240,000 | $5,518,000 | $6,163,000 | $6,410,000 | $26,308,000 |
| BPOL | $442,000 | $3,407,000 | $8,185,000 | $12,420,000 | $15,879,000 | $18,749,000 | $59,082,000 |
| Hotel/Motel Tax | $99,000 | $509,000 | $956,000 | $1,340,000 | $1,677,000 | $1,976,000 | $6,557,000 |
| Development-Related Permits | $324,000 | $602,000 | $705,000 | $1,234,000 | $601,000 | $249,000 | $3,715,000 |
| Other | $275,000 | $1,543,000 | $3,448,000 | $6,008,000 | $8,006,000 | $9,226,000 | $28,506,000 |
| Revenues from the Commonwealth | $35,000 | $191,000 | $565,000 | $2,880,000 | $4,734,000 | $4,966,000 | $13,371,000 |
| Revenues from the Federal Govt. | $0 | $0 | $20,000 | $284,000 | $496,000 | $509,000 | $1,309,000 |
| Construction-Related Revenues | $500,000 | $1,011,000 | $1,167,000 | $1,849,000 | $978,000 | $478,000 | $5,983,000 |
| **Total Revenues** | $8,189,000 | $25,195,000 | $47,073,000 | $78,768,000 | $101,574,000 | $112,736,000 | $373,535,000 |
| **Expenditures** | | | | | | | |
| Law Enforcement | $259,000 | $1,414,000 | $3,052,000 | $4,977,000 | $6,569,000 | $7,536,000 | $23,807,000 |
| Fire/Rescue Services | $278,000 | $1,518,000 | $3,277,000 | $5,344,000 | $7,053,000 | $8,091,000 | $25,561,000 |
| Education | $0 | $0 | $591,000 | $8,588,000 | $14,968,000 | $15,363,000 | $39,510,000 |
| All Other Governmental Expenditures | $893,000 | $4,883,000 | $10,643,000 | $18,677,000 | $25,278,000 | $28,686,000 | $89,060,000 |
| Comprehensive Services Act | $0 | $0 | $3,000 | $44,000 | $77,000 | $79,000 | $203,000 |
| **Total** | $1,430,000 | $7,815,000 | $17,566,000 | $37,630,000 | $53,945,000 | $59,755,000 | $178,141,000 |
| **NET FISCAL IMPACT** | **$6,759,000** | **$17,380,000** | **$29,507,000** | **$41,138,000** | **$47,629,000** | **$52,981,000** | **$195,394,000** |

## Exhibit V-2

### SUMMARY OF FISCAL IMPACT ANALYSIS OUTPUTS
### ROUTE 606 STATION AREA
### 2011 - 2040

| Baseline (Dulles Rail Phase 1) | 2011 - 2015 | 2016 - 2020 | 2021 -2025 | 2026 - 2030 | 2031 - 2035 | 2036 - 2040 | Total |
|---|---|---|---|---|---|---|---|
| **Development Forecast** | | | | | | | |
| Residential Units | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Office Space | 68,396 | 187,856 | 209,936 | 210,737 | 208,448 | 196,099 | 1,081,473 |
| Retail Space | 16,422 | 11,925 | 8,202 | 6,008 | 4,456 | 399 | 47,412 |
| Hotel Rooms | 48 | 90 | 80 | 69 | 62 | 55 | 405 |
| **Revenues** | | | | | | | |
| Real Property Tax | $5,156,000 | $7,330,000 | $9,972,000 | $12,554,000 | $15,037,000 | $17,333,000 | $67,382,000 |
| Personal Property Tax | $173,000 | $923,000 | $1,844,000 | $2,740,000 | $3,600,000 | $4,403,000 | $13,683,000 |
| Sales Tax | $210,000 | $518,000 | $718,000 | $861,000 | $970,000 | $1,021,000 | $4,298,000 |
| BPOL | $118,000 | $1,057,000 | $2,471,000 | $3,939,000 | $5,392,000 | $6,787,000 | $19,764,000 |
| Hotel/Motel Tax | $54,000 | $269,000 | $493,000 | $687,000 | $858,000 | $1,009,000 | $3,370,000 |
| Development-Related Permits | $108,000 | $185,000 | $187,000 | $181,000 | $173,000 | $128,000 | $962,000 |
| Other | $76,000 | $471,000 | $1,012,000 | $1,577,000 | $2,143,000 | $2,688,000 | $7,967,000 |
| Revenues from the Commonwealth | $10,000 | $59,000 | $124,000 | $190,000 | $256,000 | $318,000 | $957,000 |
| Revenues from the Federal Govt. | $0 | $0 | $0 | $0 | $0 | $0 | $0 |
| Construction-Related Revenues | $159,000 | $307,000 | $317,000 | $307,000 | $296,000 | $241,000 | $1,627,000 |
| **Total Revenues** | $6,064,000 | $11,119,000 | $17,138,000 | $23,036,000 | $28,725,000 | $33,928,000 | $120,010,000 |
| **Expenditures** | | | | | | | |
| Law Enforcement | $72,000 | $435,000 | $917,000 | $1,408,000 | $1,893,000 | $2,353,000 | $7,078,000 |
| Fire/Rescue Services | $78,000 | $467,000 | $984,000 | $1,512,000 | $2,032,000 | $2,527,000 | $7,600,000 |
| Education | $0 | $0 | $0 | $0 | $0 | $0 | $0 |
| All Other Governmental Expenditures | $250,000 | $1,502,000 | $3,166,000 | $4,863,000 | $6,537,000 | $8,129,000 | $24,447,000 |
| Comprehensive Services Act | $0 | $0 | $0 | $0 | $0 | $0 | $0 |
| **Total** | $400,000 | $2,404,000 | $5,067,000 | $7,783,000 | $10,462,000 | $13,009,000 | $39,125,000 |
| **NET FISCAL IMPACT** | **$5,664,000** | **$8,715,000** | **$12,071,000** | **$15,253,000** | **$18,263,000** | **$20,919,000** | **$80,885,000** |

| Dulles Rail Phase 2 Extension | 2011 - 2015 | 2016 - 2020 | 2021 -2025 | 2026 - 2030 | 2031 - 2035 | 2036 - 2040 | Total |
|---|---|---|---|---|---|---|---|
| **Development Forecast** | | | | | | | |
| Residential Units | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Office Space | 68,396 | 284,155 | 346,344 | 325,543 | 308,891 | 282,545 | 1,615,873 |
| Retail Space | 24,642 | 22,752 | 15,834 | 9,177 | 7,920 | 2,084 | 82,409 |
| Hotel Rooms | 75 | 147 | 133 | 114 | 102 | 90 | 661 |
| **Revenues** | | | | | | | |
| Real Property Tax | $5,321,000 | $8,529,000 | $13,322,000 | $17,734,000 | $21,796,000 | $25,469,000 | $92,171,000 |
| Personal Property Tax | $223,000 | $1,267,000 | $2,818,000 | $4,255,000 | $5,579,000 | $6,783,000 | $20,925,000 |
| Sales Tax | $303,000 | $845,000 | $1,234,000 | $1,470,000 | $1,648,000 | $1,750,000 | $7,250,000 |
| BPOL | $132,000 | $1,267,000 | $3,643,000 | $6,006,000 | $8,220,000 | $10,276,000 | $29,544,000 |
| Hotel/Motel Tax | $84,000 | $448,000 | $844,000 | $1,183,000 | $1,481,000 | $1,745,000 | $5,785,000 |
| Development-Related Permits | $129,000 | $305,000 | $306,000 | $280,000 | $260,000 | $189,000 | $1,469,000 |
| Other | $85,000 | $611,000 | $1,562,000 | $2,511,000 | $3,432,000 | $4,303,000 | $12,504,000 |
| Revenues from the Commonwealth | $11,000 | $74,000 | $184,000 | $290,000 | $389,000 | $480,000 | $1,428,000 |
| Revenues from the Federal Govt. | $0 | $0 | $0 | $0 | $0 | $0 | $0 |
| Construction-Related Revenues | $190,000 | $501,000 | $537,000 | $491,000 | $459,000 | $366,000 | $2,544,000 |
| **Total Revenues** | $6,478,000 | $13,847,000 | $24,450,000 | $34,220,000 | $43,264,000 | $51,361,000 | $173,620,000 |
| **Expenditures** | | | | | | | |
| Law Enforcement | $80,000 | $548,000 | $1,362,000 | $2,141,000 | $2,873,000 | $3,547,000 | $10,551,000 |
| Fire/Rescue Services | $86,000 | $588,000 | $1,462,000 | $2,299,000 | $3,085,000 | $3,809,000 | $11,329,000 |
| Education | $0 | $0 | $0 | $0 | $0 | $0 | $0 |
| All Other Governmental Expenditures | $276,000 | $1,891,000 | $4,705,000 | $7,396,000 | $9,924,000 | $12,253,000 | $36,445,000 |
| Comprehensive Services Act | $0 | $0 | $0 | $0 | $0 | $0 | $0 |
| **Total** | $442,000 | $3,027,000 | $7,529,000 | $11,836,000 | $15,882,000 | $19,609,000 | $58,325,000 |
| **NET FISCAL IMPACT** | **$6,036,000** | **$10,820,000** | **$16,921,000** | **$22,384,000** | **$27,382,000** | **$31,752,000** | **$115,295,000** |

## Exhibit V-3

## SUMMARY OF FISCAL IMPACT ANALYSIS OUTPUTS
## ROUTE 772 STATION AREA
## 2011 - 2040

| Baseline (Dulles Rail Phase 1) | 2011 - 2015 | 2016 - 2020 | 2021 -2025 | 2026 - 2030 | 2031 - 2035 | 2036 - 2040 | Total |
|---|---|---|---|---|---|---|---|
| **Development Forecast** | | | | | | | |
| Residential Units | 1,084 | 1,203 | 1,103 | 1,017 | 825 | 71 | 5,303 |
| Office Space | 110,156 | 253,992 | 249,217 | 230,034 | 214,757 | 193,709 | 1,251,865 |
| Retail Space | 32,844 | 23,850 | 16,404 | 12,016 | 8,912 | 798 | 94,824 |
| Hotel Rooms | 52 | 98 | 87 | 75 | 67 | 59 | 439 |
| **Revenues** | | | | | | | |
| Real Property Tax | $24,374,000 | $45,213,000 | $62,573,000 | $78,324,000 | $92,024,000 | $98,849,000 | $401,357,000 |
| Personal Property Tax | $1,525,000 | $5,116,000 | $8,496,000 | $11,633,000 | $14,384,000 | $15,944,000 | $57,098,000 |
| Sales Tax | $905,000 | $1,868,000 | $2,520,000 | $3,086,000 | $3,518,000 | $3,532,000 | $15,429,000 |
| BPOL | $309,000 | $1,827,000 | $3,710,000 | $5,493,000 | $7,123,000 | $8,527,000 | $26,989,000 |
| Hotel/Motel Tax | $59,000 | $291,000 | $535,000 | $745,000 | $929,000 | $1,087,000 | $3,646,000 |
| Development-Related Permits | $1,187,000 | $1,379,000 | $1,263,000 | $1,162,000 | $962,000 | $190,000 | $6,143,000 |
| Other | $1,352,000 | $3,829,000 | $6,038,000 | $8,170,000 | $10,042,000 | $11,014,000 | $40,445,000 |
| Revenues from the Commonwealth | $2,755,000 | $8,200,000 | $12,489,000 | $16,383,000 | $19,743,000 | $21,143,000 | $80,713,000 |
| Revenues from the Federal Govt. | $320,000 | $953,000 | $1,462,000 | $1,927,000 | $2,329,000 | $2,492,000 | $9,483,000 |
| Construction-Related Revenues | $1,664,000 | $1,991,000 | $1,786,000 | $1,643,000 | $1,371,000 | $336,000 | $8,791,000 |
| **Total Revenues** | $34,450,000 | $70,667,000 | $100,872,000 | $128,566,000 | $152,425,000 | $163,114,000 | $650,094,000 |
| **Expenditures** | | | | | | | |
| Law Enforcement | $770,000 | $2,597,000 | $4,295,000 | $5,867,000 | $7,256,000 | $8,076,000 | $28,861,000 |
| Fire/Rescue Services | $826,000 | $2,789,000 | $4,611,000 | $6,300,000 | $7,791,000 | $8,671,000 | $30,988,000 |
| Education | $10,410,000 | $30,797,000 | $46,661,000 | $61,026,000 | $73,405,000 | $78,435,000 | $300,734,000 |
| All Other Governmental Expenditures | $4,175,000 | $13,528,000 | $21,944,000 | $29,743,000 | $36,582,000 | $40,243,000 | $146,215,000 |
| Comprehensive Services Act | $53,000 | $158,000 | $240,000 | $313,000 | $377,000 | $403,000 | $1,544,000 |
| **Total** | $16,234,000 | $49,869,000 | $77,751,000 | $103,249,000 | $125,411,000 | $135,828,000 | $508,342,000 |
| **NET FISCAL IMPACT** | **$18,216,000** | **$20,798,000** | **$23,121,000** | **$25,317,000** | **$27,014,000** | **$27,286,000** | **$141,752,000** |
| **Dulles Rail Phase 2 Extension** | | | | | | | |
| **Development Forecast** | | | | | | | |
| Residential Units | 1,654 | 2,431 | 2,076 | 1,497 | 1,002 | 128 | 8,788 |
| Office Space | 110,156 | 467,752 | 555,059 | 489,968 | 443,839 | 391,955 | 2,458,730 |
| Retail Space | 57,498 | 53,088 | 36,946 | 21,413 | 18,480 | 4,864 | 192,289 |
| Hotel Rooms | 80 | 157 | 142 | 122 | 109 | 96 | 708 |
| **Revenues** | | | | | | | |
| Real Property Tax | $33,855,000 | $74,044,000 | $114,954,000 | $143,499,000 | $165,679,000 | $176,766,000 | $708,797,000 |
| Personal Property Tax | $2,279,000 | $8,768,000 | $16,335,000 | $22,056,000 | $26,603,000 | $29,185,000 | $105,226,000 |
| Sales Tax | $1,458,000 | $3,520,000 | $4,931,000 | $5,772,000 | $6,383,000 | $6,477,000 | $28,541,000 |
| BPOL | $404,000 | $2,472,000 | $6,594,000 | $10,384,000 | $13,746,000 | $16,635,000 | $50,235,000 |
| Hotel/Motel Tax | $90,000 | $476,000 | $896,000 | $1,256,000 | $1,572,000 | $1,852,000 | $6,142,000 |
| Development-Related Permits | $1,760,000 | $2,783,000 | $2,429,000 | $1,820,000 | $1,309,000 | $374,000 | $10,475,000 |
| Other | $2,003,000 | $6,143,000 | $10,529,000 | $13,877,000 | $16,616,000 | $18,204,000 | $67,372,000 |
| Revenues from the Commonwealth | $3,981,000 | $12,788,000 | $20,464,000 | $25,236,000 | $28,809,000 | $30,164,000 | $121,442,000 |
| Revenues from the Federal Govt. | $464,000 | $1,499,000 | $2,430,000 | $3,020,000 | $3,458,000 | $3,615,000 | $14,486,000 |
| Construction-Related Revenues | $2,496,000 | $4,071,000 | $3,589,000 | $2,697,000 | $1,984,000 | $688,000 | $15,525,000 |
| **Total Revenues** | $48,790,000 | $116,564,000 | $183,151,000 | $229,617,000 | $266,159,000 | $283,960,000 | $1,128,241,000 |
| **Expenditures** | | | | | | | |
| Law Enforcement | $1,083,000 | $4,001,000 | $7,427,000 | $10,006,000 | $12,102,000 | $13,416,000 | $48,035,000 |
| Fire/Rescue Services | $1,163,000 | $4,296,000 | $7,974,000 | $10,744,000 | $12,994,000 | $14,404,000 | $51,575,000 |
| Education | $15,053,000 | $48,007,000 | $76,075,000 | $93,212,000 | $105,957,000 | $110,516,000 | $448,820,000 |
| All Other Governmental Expenditures | $5,945,000 | $21,076,000 | $37,777,000 | $49,906,000 | $59,539,000 | $64,934,000 | $239,177,000 |
| Comprehensive Services Act | $77,000 | $247,000 | $391,000 | $479,000 | $544,000 | $568,000 | $2,306,000 |
| **Total** | $23,321,000 | $77,627,000 | $129,644,000 | $164,347,000 | $191,136,000 | $203,838,000 | $789,913,000 |
| **NET FISCAL IMPACT** | **$25,469,000** | **$38,937,000** | **$53,507,000** | **$65,270,000** | **$75,023,000** | **$80,122,000** | **$338,328,000** |

## Exhibit V-4

## SUMMARY OF FISCAL IMPACT ANALYSIS OUTPUTS
## ALL STATION AREA DEVELOPMENT
## 2011 - 2040

| Baseline (Dulles Rail Phase 1) | 2011 - 2015 | 2016 - 2020 | 2021 -2025 | 2026 - 2030 | 2031 - 2035 | 2036 - 2040 | Total |
|---|---|---|---|---|---|---|---|
| **Development Forecast** | | | | | | | |
| Residential Units | 1,084 | 1,203 | 1,103 | 1,017 | 825 | 71 | 5,303 |
| Office Space | 391,258 | 874,310 | 834,233 | 754,364 | 693,460 | 618,036 | 4,165,661 |
| Retail Space | 136,850 | 112,095 | 79,286 | 54,072 | 40,104 | 3,933 | 426,340 |
| Hotel Rooms | 165 | 309 | 274 | 237 | 212 | 187 | 1,384 |
| **Revenues** | | | | | | | |
| Real Property Tax | $33,322,000 | $62,386,000 | $88,266,000 | $111,338,000 | $131,431,000 | $143,236,000 | $569,979,000 |
| Personal Property Tax | $2,202,000 | $8,316,000 | $14,403,000 | $19,911,000 | $24,764,000 | $28,144,000 | $97,740,000 |
| Sales Tax | $2,106,000 | $4,817,000 | $6,709,000 | $8,130,000 | $9,180,000 | $9,418,000 | $40,360,000 |
| BPOL | $850,000 | $5,946,000 | $12,272,000 | $18,043,000 | $23,235,000 | $27,803,000 | $88,149,000 |
| Hotel/Motel Tax | $185,000 | $918,000 | $1,686,000 | $2,348,000 | $2,931,000 | $3,268,000 | $11,336,000 |
| Development-Related Permits | $1,598,000 | $1,968,000 | $1,784,000 | $1,619,000 | $1,368,000 | $464,000 | $8,801,000 |
| Other | $1,693,000 | $5,613,000 | $9,468,000 | $13,113,000 | $16,375,000 | $18,597,000 | $64,859,000 |
| Revenues from the Commonwealth | $2,799,000 | $8,424,000 | $12,912,000 | $16,982,000 | $20,502,000 | $22,041,000 | $83,660,000 |
| Revenues from the Federal Govt. | $320,000 | $953,000 | $1,462,000 | $1,927,000 | $2,329,000 | $2,492,000 | $9,483,000 |
| Construction-Related Revenues | $2,290,000 | $2,997,000 | $2,690,000 | $2,431,000 | $2,075,000 | $857,000 | $13,340,000 |
| **Total Revenues** | $47,365,000 | $102,338,000 | $151,652,000 | $195,842,000 | $234,190,000 | $256,320,000 | $987,707,000 |
| **Expenditures** | | | | | | | |
| Law Enforcement | $1,092,000 | $4,252,000 | $7,421,000 | $10,302,000 | $12,865,000 | $14,716,000 | $50,648,000 |
| Fire/Rescue Services | $1,172,000 | $4,566,000 | $7,967,000 | $11,062,000 | $13,812,000 | $15,801,000 | $54,380,000 |
| Education | $10,410,000 | $30,797,000 | $46,661,000 | $61,026,000 | $73,405,000 | $78,435,000 | $300,734,000 |
| All Other Governmental Expenditures | $5,287,000 | $19,245,000 | $32,741,000 | $45,062,000 | $55,953,000 | $63,179,000 | $221,467,000 |
| Comprehensive Services Act | $53,000 | $158,000 | $240,000 | $313,000 | $377,000 | $403,000 | $1,544,000 |
| **Total** | $18,014,000 | $59,018,000 | $95,030,000 | $127,765,000 | $156,412,000 | $172,534,000 | $628,773,000 |
| **NET FISCAL IMPACT** | **$29,351,000** | **$43,320,000** | **$56,622,000** | **$68,077,000** | **$77,778,000** | **$83,786,000** | **$358,934,000** |
| **Annual Avg.** | **$5,870,200** | **$8,664,000** | **$11,324,400** | **$13,615,400** | **$15,555,600** | **$16,757,200** | |
| **Dulles Rail Phase 2 Extension** | | | | | | | |
| **Development Forecast** | | | | | | | |
| Residential Units | 1,654 | 2,431 | 2,259 | 2,336 | 1,245 | 128 | 10,053 |
| Office Space | 391,258 | 1,364,899 | 1,526,376 | 1,334,133 | 1,198,559 | 1,051,155 | 6,866,381 |
| Retail Space | 180,708 | 166,848 | 120,640 | 77,786 | 57,288 | 15,633 | 618,903 |
| Hotel Rooms | 244 | 477 | 432 | 372 | 331 | 292 | 2,147 |
| **Revenues** | | | | | | | |
| Real Property Tax | $44,024,000 | $94,913,000 | $150,445,000 | $199,185,000 | $238,210,000 | $258,400,000 | $985,177,000 |
| Personal Property Tax | $3,057,000 | $12,761,000 | $24,771,000 | $35,594,000 | $44,487,000 | $49,976,000 | $170,646,000 |
| Sales Tax | $2,872,000 | $7,231,000 | $10,405,000 | $12,760,000 | $14,194,000 | $14,637,000 | $62,099,000 |
| BPOL | $978,000 | $7,146,000 | $18,422,000 | $28,810,000 | $37,845,000 | $45,660,000 | $138,861,000 |
| Hotel/Motel Tax | $273,000 | $1,433,000 | $2,696,000 | $3,779,000 | $4,730,000 | $5,573,000 | $18,484,000 |
| Development-Related Permits | $2,213,000 | $3,690,000 | $3,440,000 | $3,334,000 | $2,170,000 | $812,000 | $15,659,000 |
| Other | $2,363,000 | $8,297,000 | $15,539,000 | $22,396,000 | $28,054,000 | $31,733,000 | $108,382,000 |
| Revenues from the Commonwealth | $4,027,000 | $13,053,000 | $21,213,000 | $28,406,000 | $33,932,000 | $35,610,000 | $136,241,000 |
| Revenues from the Federal Govt. | $464,000 | $1,499,000 | $2,450,000 | $3,304,000 | $3,954,000 | $4,124,000 | $15,795,000 |
| Construction-Related Revenues | $3,186,000 | $5,583,000 | $5,293,000 | $5,037,000 | $3,421,000 | $1,532,000 | $24,052,000 |
| **Total Revenues** | $63,457,000 | $155,606,000 | $254,674,000 | $342,605,000 | $410,997,000 | $448,057,000 | $1,675,396,000 |
| **Expenditures** | | | | | | | |
| Law Enforcement | $1,422,000 | $5,963,000 | $11,841,000 | $17,124,000 | $21,544,000 | $24,499,000 | $82,393,000 |
| Fire/Rescue Services | $1,527,000 | $6,402,000 | $12,713,000 | $18,387,000 | $23,132,000 | $26,304,000 | $88,465,000 |
| Education | $15,053,000 | $48,007,000 | $76,666,000 | $101,800,000 | $120,925,000 | $125,879,000 | $488,330,000 |
| All Other Governmental Expenditures | $7,114,000 | $27,850,000 | $53,125,000 | $75,979,000 | $94,741,000 | $105,873,000 | $364,682,000 |
| Comprehensive Services Act | $77,000 | $247,000 | $394,000 | $523,000 | $621,000 | $647,000 | $2,509,000 |
| **Total** | $25,193,000 | $88,469,000 | $154,739,000 | $213,813,000 | $260,963,000 | $283,202,000 | $1,026,379,000 |
| **NET FISCAL IMPACT** | **$38,264,000** | **$67,137,000** | **$99,935,000** | **$128,792,000** | **$150,034,000** | **$164,855,000** | **$649,017,000** |
| **Annual Avg.** | **$7,652,800** | **$13,427,400** | **$19,987,000** | **$25,758,400** | **$30,006,800** | **$32,971,000** | |

## Exhibit V-5

### SUMMARY OF FISCAL IMPACT ANALYSIS OUTPUTS
### COUNTYWIDE IMPACT OF ADDITIONAL DEVELOPMENT DUE TO METRO VS. STATION AREA IMPACT
### 2011 - 2040

| Countywide Delta | 2011 - 2015 | 2016 - 2020 | 2021 -2025 | 2026 - 2030 | 2031 - 2035 | 2036 - 2040 | Total |
|---|---|---|---|---|---|---|---|
| **Development Forecast** | | | | | | | |
| Residential Units | 4 | 972 | 1,019 | 895 | 770 | 1,138 | 4,797 |
| Office Space | 0 | 204,648 | 273,097 | 218,582 | 185,571 | 157,106 | 1,039,003 |
| Retail Space | 1,000 | 143,000 | 141,000 | 123,000 | 103,000 | 136,000 | 647,000 |
| Hotel Rooms | 0 | 56 | 55 | 44 | 38 | 26 | 218 |
| **Revenues** | | | | | | | |
| Real Property Tax | $7,789,000 | $20,066,000 | $52,816,000 | $68,622,000 | $84,754,000 | $106,116,000 | $340,163,000 |
| Personal Property Tax | $4,000 | $1,895,000 | $6,943,000 | $10,051,000 | $13,080,000 | $16,664,000 | $48,637,000 |
| Sales Tax | $11,000 | $2,020,000 | $4,697,000 | $6,824,000 | $8,738,000 | $11,072,000 | $33,362,000 |
| BPOL | $1,000 | $618,000 | $3,138,000 | $5,228,000 | $7,055,000 | $8,737,000 | $24,777,000 |
| Hotel/Motel Tax | $0 | $114,000 | $313,000 | $471,000 | $605,000 | $716,000 | $2,219,000 |
| Development-Related Permits | $24,000 | $1,235,000 | $1,266,000 | $1,097,000 | $948,000 | $1,250,000 | $5,820,000 |
| Other | $4,000 | $1,266,000 | $4,225,000 | $5,596,000 | $7,106,000 | $9,031,000 | $27,228,000 |
| Revenues from the Commonwealth | $5,000 | $1,966,000 | $8,529,000 | $9,724,000 | $11,532,000 | $14,323,000 | $46,079,000 |
| Revenues from the Federal Govt. | $1,000 | $218,000 | $961,000 | $1,135,000 | $1,372,000 | $1,737,000 | $5,424,000 |
| Construction-Related Revenues | $26,000 | $1,907,000 | $2,067,000 | $1,672,000 | $1,450,000 | $1,857,000 | $8,979,000 |
| **Total Revenues** | $7,865,000 | $31,305,000 | $84,955,000 | $110,420,000 | $136,640,000 | $171,503,000 | $542,688,000 |
| **Expenditures** | | | | | | | |
| Law Enforcement | $2,000 | $701,000 | $2,981,000 | $4,183,000 | $5,361,000 | $6,780,000 | $20,008,000 |
| Fire/Rescue Services | $2,000 | $753,000 | $3,201,000 | $4,491,000 | $5,756,000 | $7,279,000 | $21,482,000 |
| Education | $20,000 | $7,382,000 | $31,991,000 | $35,839,000 | $42,152,000 | $52,148,000 | $169,532,000 |
| All Other Governmental Expenditures | $8,000 | $3,391,000 | $14,695,000 | $20,048,000 | $25,533,000 | $32,544,000 | $96,219,000 |
| Comprehensive Services Act | $0 | $38,000 | $164,000 | $184,000 | $216,000 | $268,000 | $870,000 |
| **Total** | $32,000 | $12,265,000 | $53,032,000 | $64,745,000 | $79,018,000 | $99,019,000 | $308,111,000 |
| **NET FISCAL IMPACT** | **$7,833,000** | **$19,040,000** | **$31,923,000** | **$45,675,000** | **$57,622,000** | **$72,484,000** | **$234,577,000** |
| **Annual Avg.** | **$1,566,600** | **$3,808,000** | **$6,384,600** | **$9,135,000** | **$11,524,400** | **$14,496,800** | |
| **Station Area Delta** | | | | | | | |
| **Development Forecast** | | | | | | | |
| Residential Units | 569 | 1,228 | 1,156 | 1,319 | 420 | 57 | 4,750 |
| Office Space | 0 | 490,589 | 692,143 | 579,769 | 505,099 | 433,119 | 2,700,719 |
| Retail Space | 43,858 | 54,753 | 41,354 | 23,714 | 17,184 | 11,700 | 192,563 |
| Hotel Rooms | 79 | 168 | 158 | 135 | 119 | 105 | 763 |
| **Revenues** | | | | | | | |
| Real Property Tax | $10,702,000 | $32,527,000 | $62,179,000 | $87,847,000 | $106,779,000 | $115,164,000 | $415,198,000 |
| Personal Property Tax | $855,000 | $4,445,000 | $10,368,000 | $15,683,000 | $19,723,000 | $21,832,000 | $72,906,000 |
| Sales Tax | $766,000 | $2,414,000 | $3,696,000 | $4,630,000 | $5,014,000 | $5,219,000 | $21,739,000 |
| BPOL | $128,000 | $1,200,000 | $6,150,000 | $10,767,000 | $14,610,000 | $17,857,000 | $50,712,000 |
| Hotel/Motel Tax | $88,000 | $515,000 | $1,010,000 | $1,431,000 | $1,799,000 | $2,305,000 | $7,148,000 |
| Development-Related Permits | $615,000 | $1,722,000 | $1,656,000 | $1,715,000 | $802,000 | $348,000 | $6,858,000 |
| Other | $670,000 | $2,684,000 | $6,071,000 | $9,283,000 | $11,679,000 | $13,136,000 | $43,523,000 |
| Revenues from the Commonwealth | $1,228,000 | $4,629,000 | $8,301,000 | $11,424,000 | $13,430,000 | $13,569,000 | $52,581,000 |
| Revenues from the Federal Govt. | $144,000 | $546,000 | $988,000 | $1,377,000 | $1,625,000 | $1,632,000 | $6,312,000 |
| Construction-Related Revenues | $896,000 | $2,586,000 | $2,603,000 | $2,606,000 | $1,346,000 | $675,000 | $10,712,000 |
| **Total Revenues** | $16,092,000 | $53,268,000 | $103,022,000 | $146,763,000 | $176,807,000 | $191,737,000 | $687,689,000 |
| **Expenditures** | | | | | | | |
| Law Enforcement | $330,000 | $1,711,000 | $4,420,000 | $6,822,000 | $8,679,000 | $9,783,000 | $31,745,000 |
| Fire/Rescue Services | $355,000 | $1,836,000 | $4,746,000 | $7,325,000 | $9,320,000 | $10,503,000 | $34,085,000 |
| Education | $4,643,000 | $17,210,000 | $30,005,000 | $40,774,000 | $47,520,000 | $47,444,000 | $187,596,000 |
| All Other Governmental Expenditures | $1,827,000 | $8,605,000 | $20,384,000 | $30,917,000 | $38,788,000 | $42,694,000 | $143,215,000 |
| Comprehensive Services Act | $24,000 | $89,000 | $154,000 | $210,000 | $244,000 | $244,000 | $965,000 |
| **Total** | $7,179,000 | $29,451,000 | $59,709,000 | $86,048,000 | $104,551,000 | $110,668,000 | $397,606,000 |
| **NET FISCAL IMPACT** | **$8,913,000** | **$23,817,000** | **$43,313,000** | **$60,715,000** | **$72,256,000** | **$81,069,000** | **$290,083,000** |
| **Annual Avg.** | **$1,782,600** | **$4,763,400** | **$8,662,600** | **$12,143,000** | **$14,451,200** | **$16,213,800** | |

NOTE: The difference in countywide property tax revenues in the 2011 - 2015 period is due to the increased value of unimproved land associated with higher residential densities.
The difference in the countywide number of housing units and retail space in the 2011 - 2015 period is due to rounding error in the forecast models.

## Exhibit V-6

## DEVELOPMENT FORECAST SUMMARY
## COUNTYWIDE AND STATION AREA TOTALS UNDER BASELINE AND PHASE 2 EXTENSION SCENARIOS
## 2011 - 2040

| Residential Units | | | | | |
|---|---|---|---|---|---|
| Countywide Baseline | Countywide with Metro | % Difference | Station Areas Baseline | Station Areas with Metro | % Difference |
| 55,890 | 60,690 | 9% | 5,300 | 10,050 | 90% |

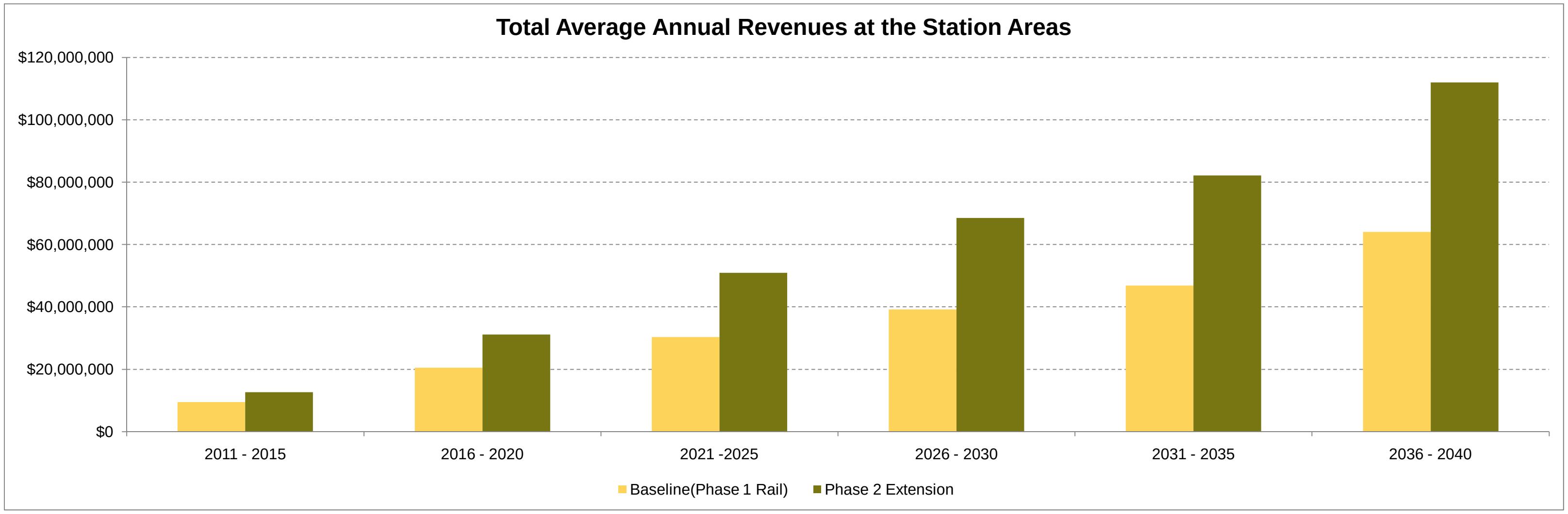
| Office Space (Square Feet) | | | | | |
|---|---|---|---|---|---|
| Countywide Baseline | Countywide with Metro | % Difference | Station Areas Baseline | Station Areas with Metro | % Difference |
| 18,323,000 | 19,362,000 | 6% | 4,166,000 | 6,866,000 | 65% |

| Retail Space (Square Feet) | | | | | |
|---|---|---|---|---|---|
| Countywide Baseline | Countywide with Metro | % Difference | Station Areas Baseline | Station Areas with Metro | % Difference |
| 7,854,000 | 8,501,000 | 8% | 426,000 | 619,000 | 45% |

| Hotel Rooms | | | | | |
|---|---|---|---|---|---|
| Countywide Baseline | Countywide with Metro | % Difference | Station Areas Baseline | Station Areas with Metro | % Difference |
| 4,500 | 4,720 | 5% | 1,380 | 2,150 | 56% |

**Exhibit V-7**

**SUMMARY OF FISCAL IMPACT ANALYSIS OUTPUTS**
**ALL STATION AREA DEVELOPMENT**
**2011 - 2040**



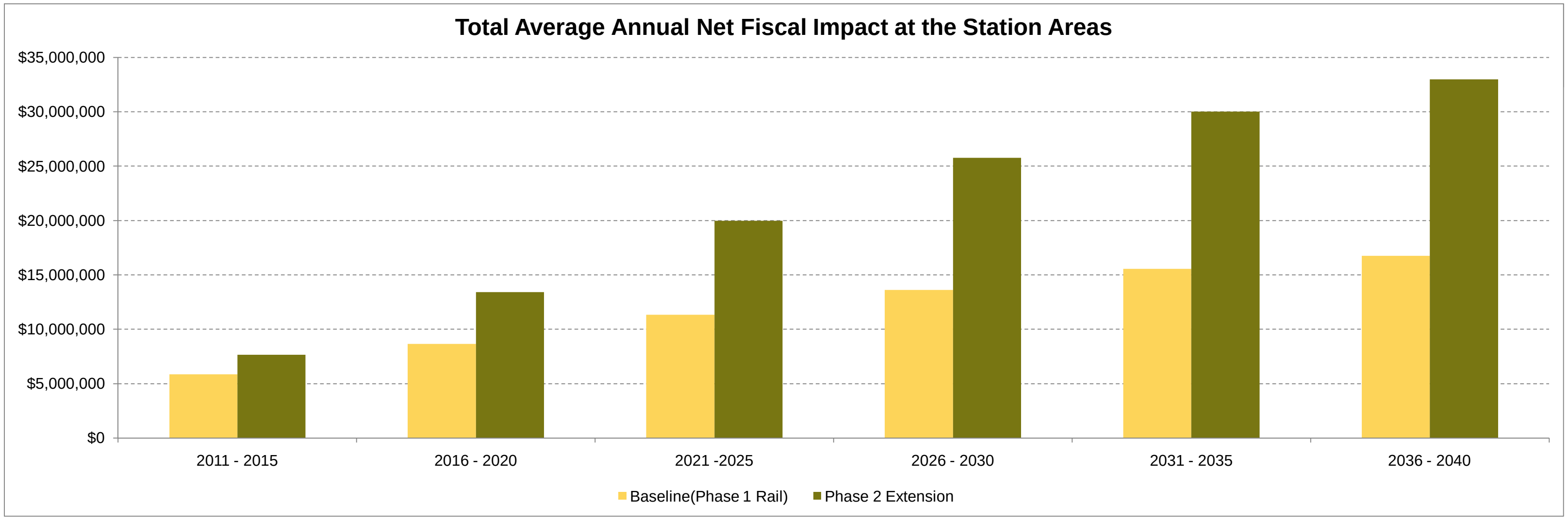
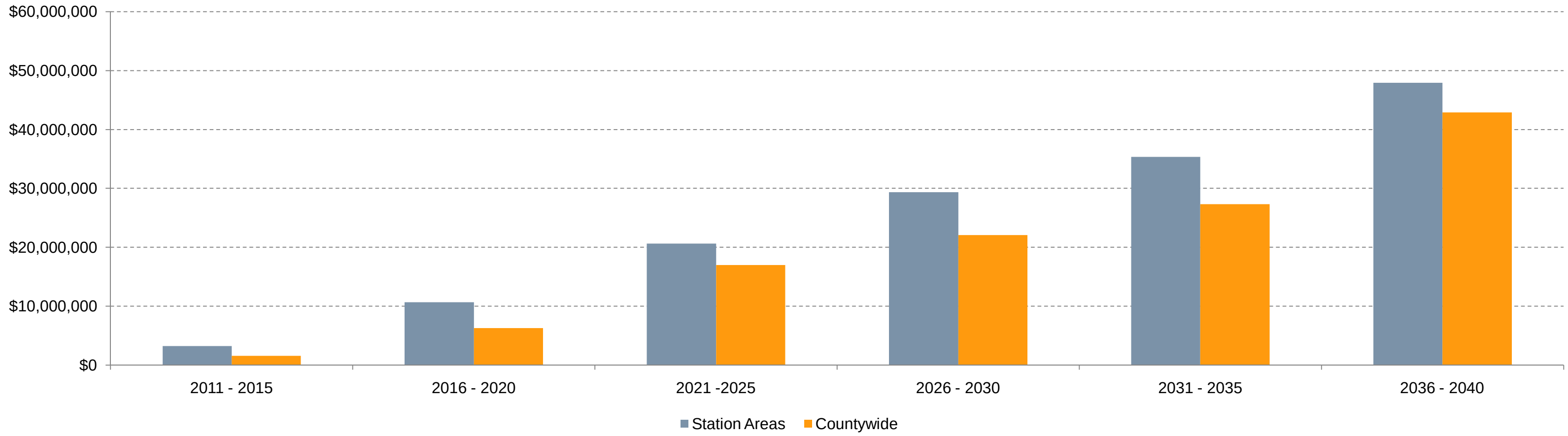



**Exhibit V-8**

**SUMMARY OF FISCAL IMPACT ANALYSIS OUTPUTS**
**ALL STATION AREA DEVELOPMENT**
**2011 - 2040**

**Average Annual Difference in Revenues between Baseline and Phase 2 Extension Scenarios at Station Areas and Countywide**




**Average Annual Difference in Net Fiscal Impact between Baseline and Phase 2 Extension Scenarios at Station Areas and Countywide**

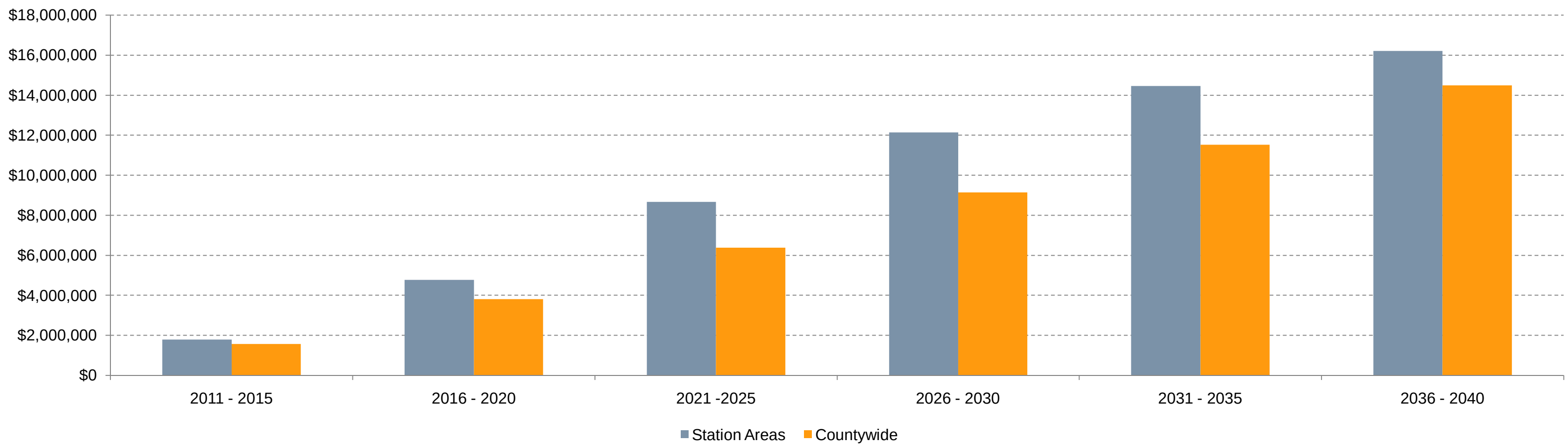
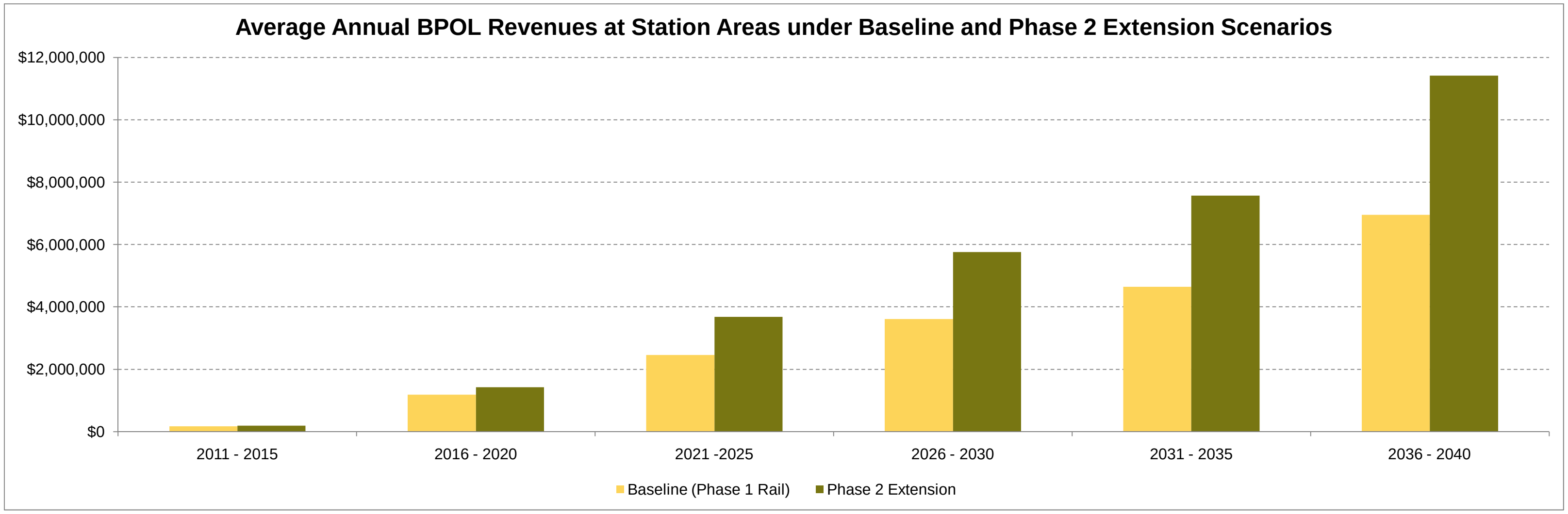


**Exhibit V-9**

**SUMMARY OF FISCAL IMPACT ANALYSIS OUTPUTS**
**ALL STATION AREA DEVELOPMENT**
**2011 - 2040**



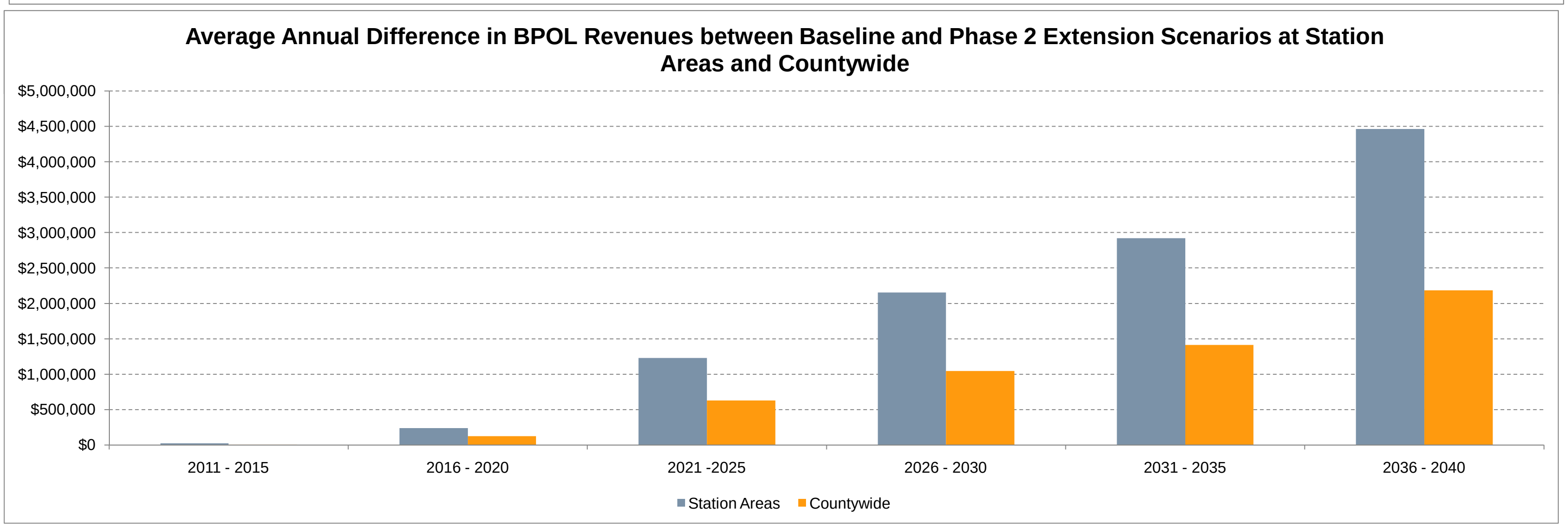



**Exhibit V-10**

**RENTAL APARMENT COMPARABLES FOR BENCHMARK VALUATIO**
**LOUDOUN COUNTY STATION AREAS**
**DECEMBER 2010**


| | |
|---|---|
| 1 | Camden Silo Creek |
| 2 | Camden Westwind |
| 3 | Broadlands Apartments |
| 4 | Arbors at Broadlands |
| 5 | Camden Dulles Station |
| ★ | Station Areas |

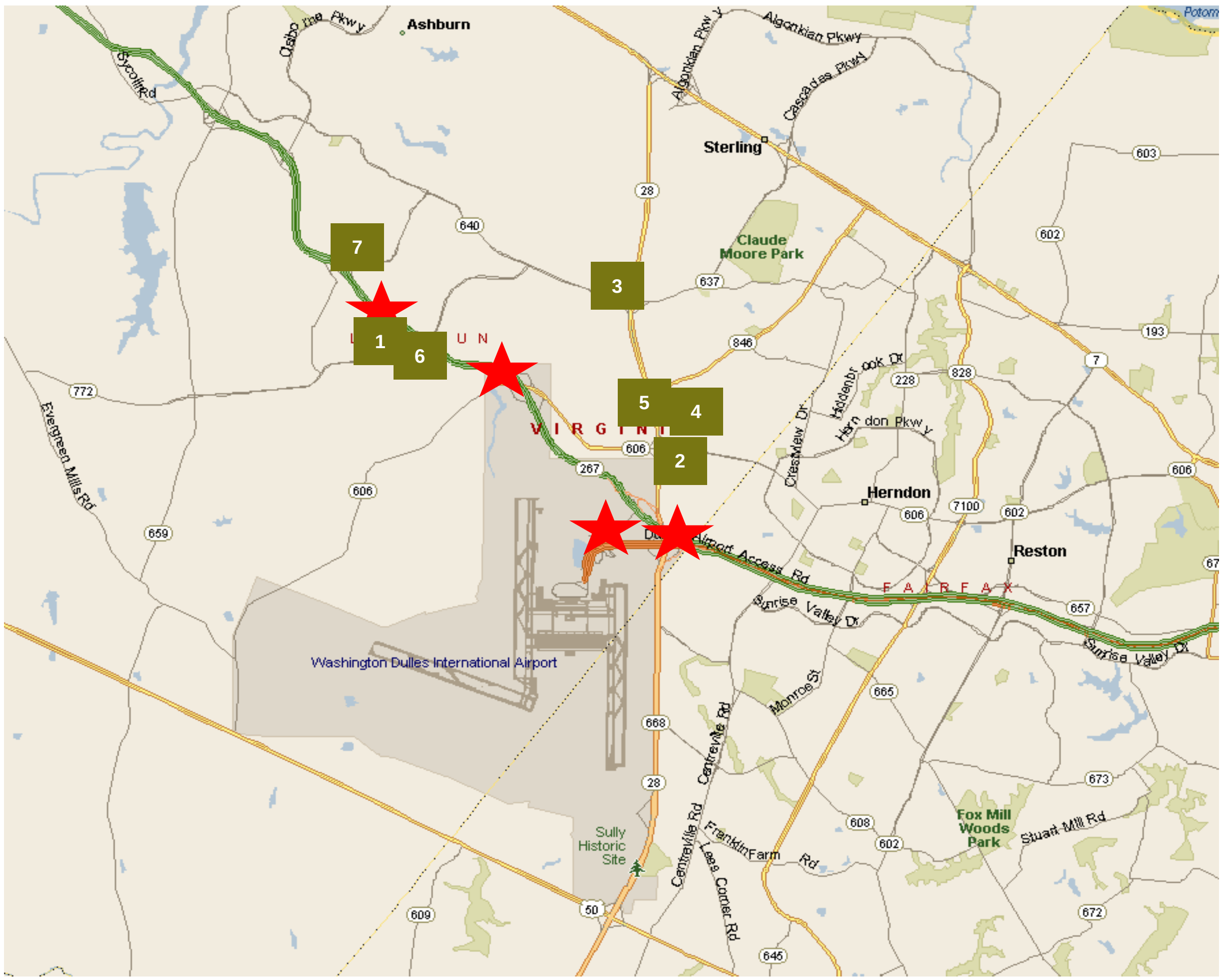
## Exhibit V-11

## RENTAL APARTMENT BENCHMARK VALUATION
## LOUDOUN COUNTY STATION AREAS
## DECEMBER 2010

| Map Key | Address | Property Name | Type | Year Built | Units | Land Area | Land Value | Land Value per Acre | Land Value per Unit | Improved Value | Improved Value per Unit | Total Value | Total Value per Unit | Weight (Relevance) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 43449 Silo Creek Terrace Ashburn, VA 20147 119392634 | Camden Silo Creek | Garden | 2003 | 284 | 21.4 | $8,520,000 | $398,131 | $30,000 | $32,386,200 | $114,036 | $40,906,200 | $144,036 | 20% |
| 2 | 22541 Hickory Hill Sq. Ashburn, VA 20148 | Camden Westwind | Garden | 2005 | 464 | 21.01 | $13,920,000 | $662,542 | $30,000 | $44,027,100 | $94,886 | $57,947,100 | $124,886 | 30% |
| 3 | 21799 Crescent Park Square Ashburn, VA 20148 119362255 | Broadlands Apartments | Garden | 2003 | 292 | 19.86 | $8,760,000 | $441,088 | $30,000 | $33,462,200 | $114,597 | $42,222,200 | $144,597 | 20% |
| 4 | 43170 Thistledown Terrace Broadlands, VA 118268165 | Arbors at Broadlands | Garden | 2000 | 240 | 14.54 | $7,200,000 | $495,186 | $30,000 | $27,471,200 | $114,463 | $34,671,200 | $144,463 | 20% |
| 5 | 2320 Dulles Station Blvd. Herndon, VA 20171 | Camden Dulles Station | Garden | 2007 | 366 | 2.61 | $8,137,500 | $3,118,134 | $22,234 | $20,123,010 | $54,981 | $28,260,510 | $77,215 | 10% |
| | **AVERAGE** | | | | | | | **$1,023,000** | **$28,000** | | **$99,000** | | **$127,000** | |
| | **WEIGHTED AVERAGE** | | | | | | | **$777,000** | **$29,000** | | **$103,000** | | **$132,000** | |

## Exhibit V-12

### HOTEL COMPARABLES FOR BENCHMARK VALUATION
### LOUDOUN COUNTY STATION AREAS
### DECEMBER 2010




| | |
|---|---|
| 1 | Hilton Garden Inn |
| 2 | Hotel Sierra |
| 3 | Residence Inn |
| 4 | Springhill Suites |
| 5 | Hampton Inn Suites |
| 6 | Aloft Hotel |
| 7 | Embassy Suites |
| ★ | Station Areas |

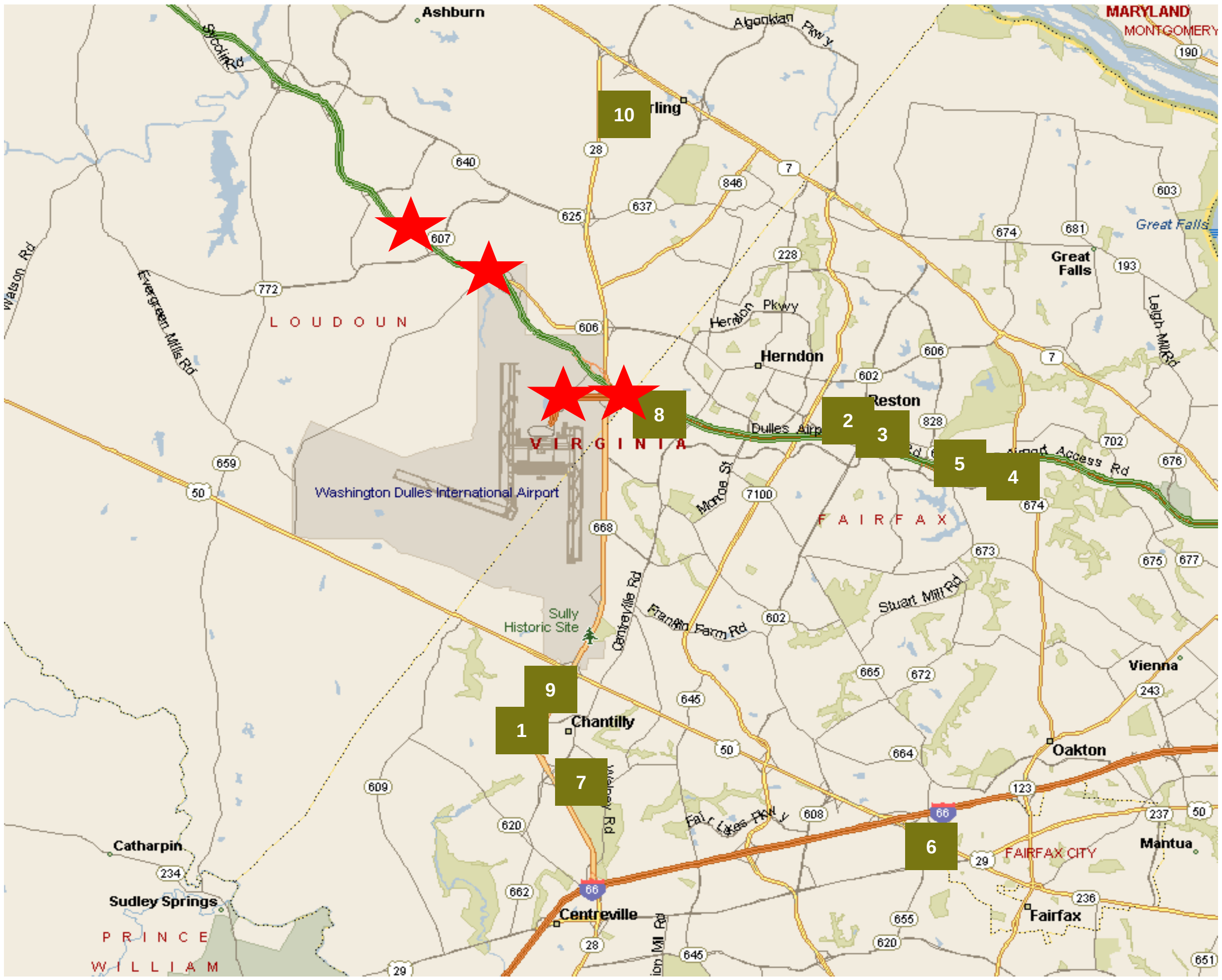
## Exhibit V-13

### HOTEL BENCHMARK VALUATION
### LOUDOUN COUNTY STATION AREAS
### DECEMBER 2010

| Map Key | Address | Property Name | Year Built | Units | Land Area | Land Value | Land Value per Acre | Land Value per Unit | Improvement Value | Improvement Value per Unit | Total Value | Total Value per Unit | Weight (Relevance) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 22400 Flagstaff Plaza<br>Ashburn, VA<br>089-18-4284-000 | Hilton Garden Inn<br>Dulles North | 2009 | 135 | 2.63 | $1,145,600 | $435,589 | $8,486 | $6,005,200 | $44,483 | $7,150,800 | $52,969 | 14.3% |
| 2 | 45520 Dulles Plaza<br>Sterling, VA<br>034-26-0115-000 | Hotel Sierra | 2007 | 162 | 3.73 | $2,071,600 | $555,389 | $12,788 | $13,512,200 | $83,409 | $15,583,800 | $96,196 | 14.3% |
| 3 | 45250 Monterey Place<br>Dulles, VA<br>043-19-5918-000 | Residence Inn<br>Dulles Airport | 2006 | 151 | 6.6 | $4,671,800 | $707,848 | $30,939 | $17,355,400 | $114,936 | $22,027,200 | $145,875 | 14.3% |
| 4 | 22595 Shaw Road<br>Sterling, VA<br>033-35-1280-000 | Springhill Suites<br>Dulles Airport | 2007 | 158 | 2.47 | $2,098,100 | $849,433 | $13,279 | $10,651,900 | $67,417 | $12,750,000 | $80,696 | 14.3% |
| 5 | 22700 Holiday Park Dr.<br>Sterling, VA<br>033-15-0495-000 | Hampton Inn Suites | 2007 | 170 | 3.94 | $1,587,500 | $402,919 | $9,338 | $12,685,300 | $74,619 | $14,272,800 | $83,958 | 14.3% |
| 6 | 22390 Flagstaff Plaza<br>Dulles, VA<br>089-18-0679-000 | Aloft Hotel<br>Dulles North | 2008 | 135 | 4.12 | $1,794,700 | $435,607 | $13,294 | $4,822,300 | $35,721 | $6,617,000 | $49,015 | 14.3% |
| 7 | 44620 Waxpool Rd.<br>Ashburn, VA<br>061-37-8938-000 | Embassy Suites<br>& Homewood Suites<br>Dulles North | 2005 | 244 | 7.16 | $3,976,600 | $555,391 | $16,298 | $24,300,300 | $99,591 | $28,276,900 | $115,889 | 14.3% |
| | **AVERAGE** | | | | | | **$563,000** | **$15,000** | | **$74,000** | | **$89,000** | |
| | **WEIGHTED AVERAGE** | | | | | | **$563,000** | **$15,000** | | **$74,000** | | **$89,000** | |

## Exhibit V-14

**OFFICE COMPARABLES FOR BENCHMARK VALUATION**
**LOUDOUN COUNTY STATION AREAS**
**DECEMBER 2010**




| | |
|---|---|
| 1 | Liberty Center III |
| 2 | Democracy Tower |
| 3 | SOMA at Reston TC -A |
| 4 | One Dulles Corridor |
| 5 | Reston Eastpointe |
| 6 | Bridgewater Corporate Center |
| 7 | Plaza East I & II |
| 8 | Dulles Station |
| 9 | Ellipse at Westfield |
| 10 | Corporate Office Park at Dulles Town Center |
| ★ | Station Areas |

## Exhibit V-15

### OFFICE PROPERTY BENCHMARK VALUATION
### LOUDOUN COUNTY STATION AREAS
### DECEMBER 2010

| Map Key | Address | Property Name | Stories | Year Built | RBA | Land Area | Land Value | Land Value per Acre | Land Value per SF | Improvement Value | Improvement Value per SF | Total Value | Total Value per SF | Vacancy Rate | Weight (Relevance) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 14668 Lee Road<br>Chantilly, VA | Liberty Center III | 6 | 2006 | 170,220 | 6.8 | $3,108,020 | $455,339 | $18 | $31,591,290 | $186 | $34,699,310 | $204 | 4% | 15% |
| 2 | 11955 Democracy<br>Reston, VA | Democracy Tower | 10 | 2009 | 235,000 | 2.3 | $14,105,110 | $6,025,307 | $60 | $53,035,440 | $226 | $67,140,550 | $286 | 0% | 0% |
| 3 | 1814 Library St.<br>Reston, VA | SOMA at Reston TC -A | 10 | 2008 | 643,232 | 2.8 | $33,282,490 | $11,827,644 | $52 | $161,350,250 | $251 | $194,632,740 | $303 | 0% | 0% |
| 4 | 10740 Parkridge Blvd.<br>Reston, VA | One Dulles Corridor | 7 | 2008 | 215,716 | 5.7 | $6,183,830 | $1,087,835 | $29 | $16,882,470 | $78 | $23,066,300 | $107 | 100% | 0% |
| 5 | 11091 Sunset Hills Road<br>Reston, VA | Reston Eastpointe | 7 | 2008 | 196,000 | 5.5 | $8,582,450 | $1,550,865 | $44 | $36,700,640 | $187 | $45,283,090 | $231 | 30% | 10% |
| 6 | 11325 Random Hills Rd.<br>Fairfax, VA | Bridgewater Corporate Center | 8 | 2006 | 198,062 | 5.3 | $5,670,000 | $1,072,208 | $29 | $29,222,670 | $148 | $34,892,670 | $176 | 13% | 15% |
| 7 | 14151 Park Meadow Drive<br>Chantilly, VA 20151 | Plaza East I & II | 5 | 2007 | 265,828 | 17.9 | $5,060,480 | $283,203 | $19 | $11,172,660 | $42 | $16,233,140 | $61 | 100% | 0% |
| 8 | 2300 Dulles Station Blvd.<br>Chantilly, VA | Dulles Station | 6 | 2007 | 193,769 | 1.8 | $4,674,230 | $2,668,748 | $24 | $32,815,690 | $169 | $37,489,920 | $193 | 6% | 20% |
| 9 | 14501 George Carter Way<br>Chantilly, VA | Ellipse at Westfield | 5 | 2008 | 262,982 | 8.2 | $17,333,400 | $2,106,082 | $66 | $28,125,030 | $107 | $45,458,430 | $173 | 3% | 20% |
| 10 | 21000 Atlantic Blvd.<br>Sterling, VA | Corporate Office Park<br>at Dulles Town Center | 7 | 2001 | 180,000 | 12.5 | $5,040,700 | $403,256 | $28 | $30,196,800 | $168 | $35,237,500 | $196 | 19% | 20% |
| | **AVERAGE** | | | | | | | **$3,009,000** | **$37** | | **$156** | | **$193** | **28%** | |
| | **WEIGHTED AVERAGE** | | | | | | | **$1,420,000** | **$35** | | **$158** | | **$193** | | |

## Exhibit V-16

### RETAIL COMPARABLES FOR BENCHMARK VALUATION
### LOUDOUN COUNTY STATION AREAS
### DECEMBER 2010


| | |
|---|---|
| 1 | Brambleton Town Center |
| 2 | 23500 Overland |
| 3 | Broadlands Marketplace |
| 4 | Broadlands Village Center |
| 5 | Cameron Chase Village Center |

★ Station Areas

## Exhibit V-17

### RETAIL PROPERTY BENCHMARK VALUATION
### LOUDOUN COUNTY STATION AREAS
### DECEMBER 2010

| Map Key | Address | Property Name | Stories | Year Built | RBA | Land Area | Land Value | Land Value per Acre | Land Value per SF | Improvement Value | Improvement Value per SF | Total Value | Total Value per SF | Vacancy Rate | Weight (Relevance) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 22855 Brambleton Plaza<br>Brambleton, VA | Brambleton Town Center | 2 | 2005 | 110,000<br>(300,000 buildable) | 42.8 | $22,356,700 | $522,719 | $75 | $19,781,300 | $180 | $42,138,000 | $383 | 0% | 30% |
| 2 | 23500 Overland Dr.<br>Sterling, VA | 23500 Overland | 1 | 2007 | 11,449 | 1.1 | $1,035,000 | $958,333 | $90 | $894,100 | $78 | $1,929,100 | $168 | 0% | 10% |
| 3 | 43300 Southern Walk Plaza<br>Ashburn, VA | Broadlands Marketplace | 1 | 2007 | 52,000 | 10.6 | $6,019,600 | $566,284 | $116 | $11,508,300 | $221 | $17,527,900 | $337 | 6% | 20% |
| 4 | 43150 Broadlands Center Plaza<br>Ashburn, VA | Broadlands Village Center | 1 | 2003 | 163,000 | 24.0 | $13,467,500 | $560,445 | $83 | $29,373,200 | $180 | $42,840,700 | $263 | 8% | 20% |
| 5 | 44260 Ice Rink Plaza<br>Ashburn, VA | Cameron Chase Village Center | 1 | 2005 | 29,000 | 4.6 | $3,631,700 | $789,500 | $125 | $6,165,600 | $213 | $9,797,300 | $338 | 0% | 20% |
| | **AVERAGE** | | | | | | | **$679,000** | **$98** | | **$174** | | **$272** | | |
| | **WEIGHTED AVERAGE** | | | | | | | **$636,000** | **$96** | | **$185** | | **$281** | | |

**Exhibit V-18**

**UNIMPROVED LAND COMPARABLES FOR BENCHMARK VALUATION**
**LOUDOUN COUNTY**
**2010**


RCLCO

## Exhibit V-19

# UNIMPROVED LAND
# LOUDOUN COUNTY STATION AREAS
# DECEMBER 2010

**Multifamily**

| Map Key | Parcel | Acres | Zoning | Units Allowed | Land Value | Land Value per Unit | |
|---|---|---|---|---|---|---|---|
| 1 | 029286005000 | 15.9 | R-16 | 254 | $4,959,100 | $19,493 | $311,893 |
| 2 | 031378798000 | 15.9 | R-16 | 254 | $966,000 | $3,797 | $60,755 |
| **AVERAGE** | | | | | | **$12,000** | |

**Single-Family Detached**

| Map Key | Parcel | Acres | Zoning | Units Allowed | Land Value | Land Value per Unit | |
|---|---|---|---|---|---|---|---|
| 3 | 035282686000 | 9.9 | R1 | 9 | $850,000 | $85,859 | $85,859 |
| 4 | 035383640000 | 14.13 | R1 | 36 | $1,201,100 | $85,004 | $85,004 |
| 5 | 157275925000 | 16.8 | R1 | 16 | $2,012,400 | $119,786 | $119,786 |
| **AVERAGE** | | | | | | **$97,000** | |

**Office/Commercial**

| Map Key | Parcel | Acres | Zoning | FAR FT. | Land Value | Land Value per Acre | Land Value per FAR FT. |
|---|---|---|---|---|---|---|---|
| 7 | 060307119000 | 85 | PDIP | 1,481,040 | $16,746,000 | $197,012 | $11 |
| 8 | 045299249000 | 17 | PDIP | 296,208 | $5,911,000 | $347,706 | $20 |
| 9 | 046303281000 | 8.3 | PDIP | 144,619 | $3,348,300 | $403,410 | $23 |
| 10 | 061362081000 | 71 | PDOP | 1,237,104 | $20,899,700 | $294,362 | $17 |
| **AVERAGE** | | | | | | **$349,000** | **$18** |

**Exhibit V-20**

**SELECTED CONDOMINIUM COMPARABLES FOR BENCHMARK VALUATION**
**LOUDOUN COUNTY**
**2010**


| | |
|---|---|
| 1 | Commons on Potomac Square |
| 2 | Midtown at Reston Town Center |
| 3 | Bryson at Woodland Park |
| 4 | The Mercer |

## *Exhibit V-21*

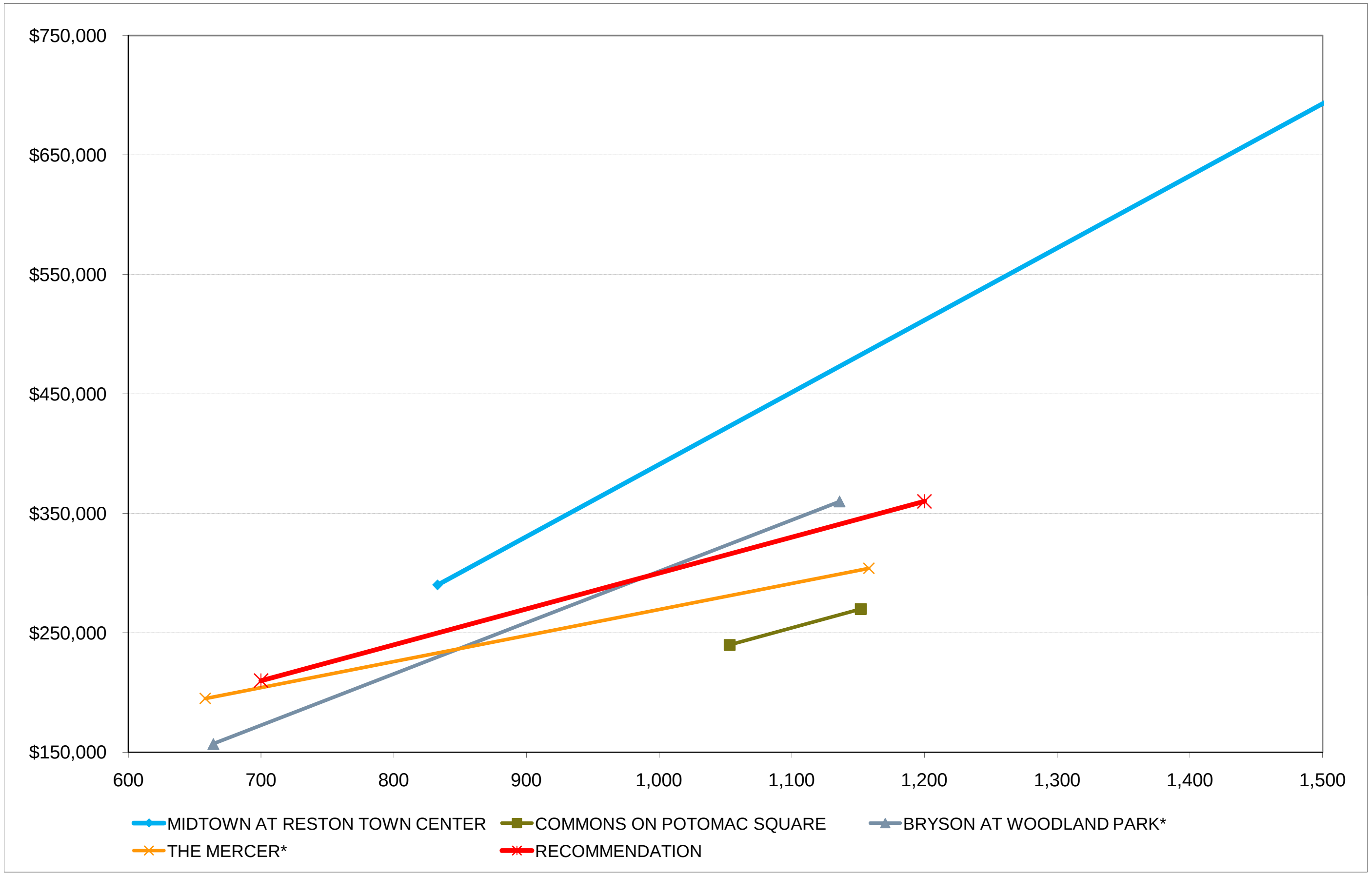
# SURVEY OF SELECTED FOR-SALE RESIDENTIAL PROJECTS
# COMPETITIVE MARKET AREA
# NOVEMBER 2010

| MAP ID # | PROJECT LOCATION DEVELOPER | DATE BEGAN SALES | FLOORS/ UNIT TYPES | TOTAL UNITS | UNIT SIZE RANGE | AVG SIZE | EFFECTIVE UNIT PRICE RANGE | AVG PRICE | VALUE RATIO RANGE | AVG $/SF | COMMENTS |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | **CONDOMINIUMS** | | | | | | | | | | |
| 1 | **COMMONS ON POTOMAC SQUARE** | 2007 | **TOTAL** | **100** | **1,053 - 1,152** | **1,103** | **$239,900 - $269,900** | **$252,400** | **$228 - $234** | **$230** | |
| | Sterling, VA 20165 | | 1/1 | | 1,053 - 1,053 | 1,053 | $239,900 - $239,900 | $239,900 | $228 - $228 | $228 | 10 Units have sold |
| | Comstock Homes | | 2/2 | | 1,120 - 1,152 | 1,136 | $259,900 - $269,900 | $264,900 | $232 - $234 | $233 | in the past year |
| 2 | **MIDTOWN AT RESTON TOWN CENTER** | 2006 | **TOTAL** | **293** | **833 - 2,283** | **1,558** | **$290,000 - $1,166,020** | **$553,928** | **$328 - $511** | **$404** | |
| | Reston, VA 20190 | | 1/1 + Den | | 833 - 1,009 | 921 | $290,000 - $400,000 | $345,000 | $348 - $396 | $372 | |
| | | | 1/2 | | 939 - 956 | 948 | $315,000 - $321,500 | $318,250 | $335 - $336 | $336 | |
| | Kettler | | 2/1 | | 833 - 833 | 833 | $322,500 - $322,500 | $322,500 | $387 - $387 | $387 | |
| | | | 2/2 | | 939 - 1,646 | 1,293 | $429,000 - $781,110 | $605,055 | $457 - $475 | $466 | |
| | | | 3/2 | | 1,523 - 1,986 | 1,755 | $500,000 - $975,000 | $737,500 | $328 - $491 | $410 | |
| | | | 3/3 | | 2,111 - 2,283 | 2,197 | $824,500 - $1,166,020 | $995,260 | $391 - $511 | $451 | |
| 3 | **BRYSON AT WOODLAND PARK*** | 2005 | **TOTAL** | **584** | **664 - 1,136** | **900** | **$157,000 - $359,900** | **$270,413** | **$236 - $317** | **$283** | |
| | Herndon, VA 20171 | | 1/1 | | 664 - 813 | 739 | $157,000 - $229,679 | $193,340 | $236 - $283 | $259 | |
| | Bryson | | 2/1 | | 947 - 947 | 947 | $258,000 - $258,000 | $258,000 | $272 - $272 | $272 | |
| | | | 2/2 | | 1,136 - 1,136 | 1,136 | $359,900 - $359,900 | $359,900 | $317 - $317 | $317 | |
| 4 | **THE MERCER*** | 2005 | **TOTAL** | **194** | **658 - 1,158** | **908** | **$195,000 - $304,000** | **$243,250** | **$285 - $278** | **$281** | |
| | Reston, VA 20191 | | 1/1 | | 658 - 758 | 708 | $195,000 - $211,000 | $203,000 | $296 - $278 | $287 | Sold out new units |
| | JBG | | 2/2 | | 922 - 1,158 | 1,040 | $263,000 - $304,000 | $283,500 | $285 - $263 | $274 | in 2008 |
| | **AVERAGES:** | | | **293** | **802 - 1,432** | **1,117** | **$220,000 - $525,000** | **$330,000** | **$269 - $335** | **$299** | |

*Recently sold-out community. Sales data is resale only
SOURCES: MLS, HanleyWood, RCLCO

*Exhibit V-22*

**CONDOMINIUM PRICE TO SIZE RELATIONSHIP
ACTIVELY SELLING CONDOMINIUM PROPERTIES
NOVEMBER 2010**




*Recently built community.  Sales data is resale only

*Exhibit V-23*

**FOR-SALE COMPETITIVE MARKET ADJUSTMENT TABLE**
**LOUDOUN AND FAIRFAX COUNTIES, VA**
**NOVEMBER 2010**

| Condominium Community | Price per SF | Location/ Access | Execution/ Finish | Mixed Use Premium | Product Type | Amenities | Adj for Current Low Prices | Total Difference | Adjusted Price | Weight |
|---|---|---|---|---|---|---|---|---|---|---|
| THE MERCER | $281 | -3.0% | 0.0% | -5.0% | 0.0% | 0.0% | 5.0% | -3.0% | $272 | 25% |
| MIDTOWN (East/West) | $404 | -3.0% | 0.0% | -15.0% | -5.0% | 0.0% | 5.0% | -18.0% | $331 | 25% |
| COMMONS ON POTOMAC SQUARE | $230 | 4.0% | 5.0% | 0.0% | 5.0% | 5.0% | 5.0% | 24.0% | $286 | 25% |
| BRYSON AT WOODLAND PARK | $283 | -2.0% | 0.0% | 0.0% | 5.0% | 5.0% | 5.0% | 13.0% | $320 | 25% |
| | | | | | | | | | **$302** | 100% |

**Exhibit V-24**

**HISTORICAL AND FORECASTED MEDIAN EXISTING HOME PRICE**
**WASHINGTON METROPOLITAN AREA**
**DECEMBER 2010**

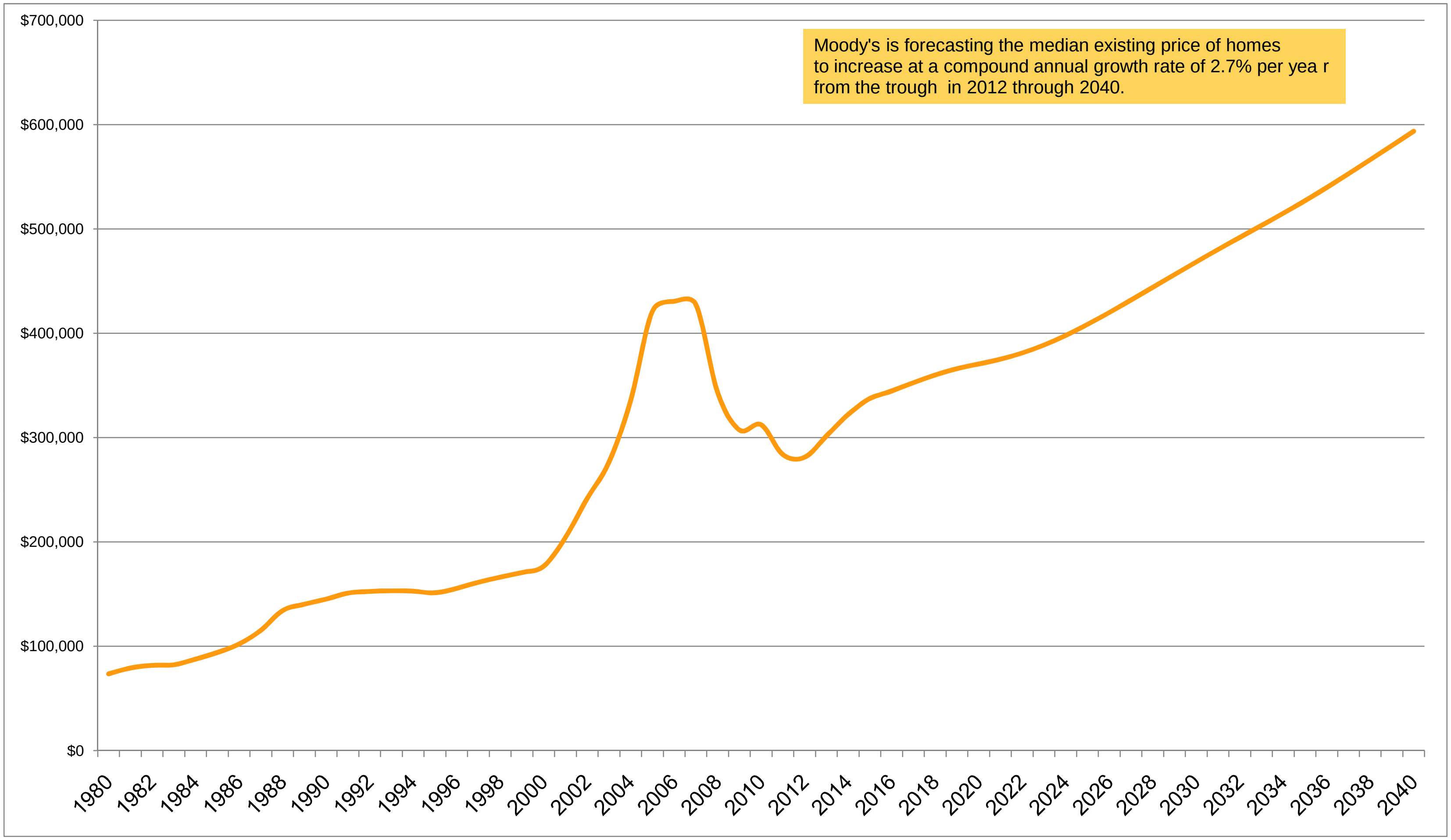


*Exhibit V-25*

## ANNUAL NEW FOR SALE CONDOMINIUM DEMAND
## ASHBURN PLANNING AREA
## 2010-2040

| Annual Income Range | Less than $50,000 | $50,000 $75,000 | $75,000 $100,000 | $100,000 $125,000 | $125,000 $150,000 | $150,000 + | | |
|---|---|---|---|---|---|---|---|---|
| **Likely New Unit Price Range** | **Less than $200,000** | **$200,000 $300,000** | **$300,000 $400,000** | **$400,000 $500,000** | **$500,000 $600,000** | **$600,000 +** | **TOTAL** | |
| **Total HHs in PMA** [1] | 3,556 | 3,741 | 4,706 | 4,733 | 3,579 | 8,425 | 28,740 | |
| % Owners [2] | 57% | 69% | 78% | 88% | 92% | 96% | 83% | |
| **Owner HHs in PMA** [1] | 2,024 | 2,594 | 3,685 | 4,174 | 3,293 | 8,113 | 23,882 | |
| (x) % in Turnover [2] | 7% | 9% | 10% | 9% | 10% | 8% | 8% | |
| (x) % likely to purchase vs. rent[3] | 55% | 65% | 95% | 98% | 100% | 100% | | |
| **(=) Potential Pool of Owner Demand** | **74** | **157** | **341** | **372** | **338** | **615** | **1,897** | |
| **Renters Becoming Owners (Exhibit V-6)** | **0** | **71** | **90** | **114** | **95** | **112** | **482** | |
| **Owners Becoming Renters** | **61** | **84** | **18** | **8** | **0** | **0** | **171** | |
| **Income Distribution of New HHs** [1] | 12% | 13% | 16% | 16% | 12% | 29% | 564 | |
| **Average Annual New HHs** [1] | 70 | 73 | 92 | 93 | 70 | 165 | 564 | |
| (x) Owner Propensity [2] | 57% | 69% | 78% | 88% | 92% | 96% | 83% | |
| **(=) Average Annual New Owner HHs** | 40 | 51 | 72 | 82 | 65 | 159 | 469 | |
| **TOTAL POTENTIAL DEPTH OF DEMAND** | **114** | **278** | **503** | **568** | **498** | **887** | **2,848** | |
| (x) % Likely Choose Condominium[4] | 95% | 75% | 40% | 25% | 15% | 5% | 27% | |
| **Total For-Sale Condominium Demand** | 109 | 209 | 201 | 142 | 75 | 44 | 780 | 32% |
| **Total Rental Apartment Demand(Exhibit V-26)** | 625 | 507 | 307 | 133 | 37 | 19 | 1,628 | 68% |
| **Total Mutifamily Demand Potential** | 734 | 716 | 509 | 275 | 112 | 63 | 2,407 | 100% |
| **FEASIBILITY OF CAPTURE BY NEW DEVELOPMENT**[5] | 0% | 50% | 100% | 100% | 100% | 100% | 73% | |
| **CONDOMINIUM DEMAND POOL**[6] | 0 | 104 | 201 | 142 | 75 | 44 | 567 | 43% |
| **RENTAL DEMAND POOL**[6] | 0 | 254 | 307 | 133 | 37 | 19 | 750 | 57% |
| | | | | | | | | 100% |

1/2009 Fiscal Impact Committee Guidelines (Total); Claritas (Distribution by Income)
2/US Census Bureau; American Community Survey 2006 - 2008 PUMS Data
3/Based on RCLCO experience
4/Based on RCLCO market experience, MRIS historical sales data, and an assumption of increasing demand for multifamily property in this market area due to land supply constraints
5/RCLCO estimate of ability of new development to compete in the given price/rent ranges
6/Represents total pool of demand in the price range where it is feasible for new development to compete

*Exhibit V-26*

**ANNUAL RENTAL DEMAND**
**ASHBURN PLANNING AREA**
**2010-2040**

| Annual Income Range | Less than $50,000 | $50,000 $75,000 | $75,000 $100,000 | $100,000 $125,000 | $125,000 $150,000 | $150,000 + | |
|---|---|---|---|---|---|---|---|
| **Likely New Monthly Rent Range** | **Less than $1,250** | **$1,250 $1,875** | **$1,875 $2,500** | **$2,500 $3,125** | **$3,125 $3,750** | **$3,750 +** | **TOTAL** |
| **Total HHs in PMA** [1] | 3,556 | 3,741 | 4,706 | 4,733 | 3,579 | 8,425 | 28,740 |
| % Renters [2] | 43% | 31% | 22% | 12% | 8% | 4% | 17% |
| **Renter HHs in PMA** [1] | 1,532 | 1,147 | 1,022 | 559 | 286 | 312 | 4,858 |
| (x) % in Turnover [2] | 35% | 41% | 35% | 41% | 44% | 40% | 28% |
| (x) % likely to rent vs. purchase[3] | 100% | 85% | 75% | 50% | 25% | 10% | |
| **(=) Potential Pool** | **534** | **400** | **269** | **114** | **32** | **12** | **1,362** |
| **Owners Becoming Renters** | **61** | **84** | **18** | **8** | **0** | **0** | **171** |
| **Renters Becoming Owners** | **0** | **71** | **90** | **114** | **95** | **112** | **482** |
| **Income Distribution of New HHs** [1] | 12% | 13% | 16% | 16% | 12% | 29% | 564 |
| **Average Annual New HH's** [1] | 70 | 73 | 92 | 93 | 70 | 165 | 564 |
| (x) Renter Propensity [2] | 43% | 31% | 22% | 12% | 8% | 4% | 17% |
| **(=) New Rental Households** | 30 | 23 | 20 | 11 | 6 | 6 | 95 |
| **TOTAL POTENTIAL DEPTH OF DEMAND** | **625** | **507** | **307** | **133** | **37** | **19** | **1,628** |

1/2009 Fiscal Impact Committee Guidelines (Total); Claritas (Distribution by Income)
2/US Census Bureau; American Community Survey 2006 - 2008 PUMS Data
3/Based on RCLCO experience

## Exhibit V-27

# ESTIMATED GROSS RECEIPTS PER EMPLOYEE BY OFFICE-USING NAICS CODE
# LOUDOUN COUNTY
# 2007

| Office-using industries[1] | NAICS | Employees | Receipts | Receipts per Employee |
|---|---|---|---|---|
| Software Publishers | 5112 | 577 | $142,901,000 | $247,662 |
| Motion Picture and Sound Recording Industries | 512 | N/A | N/A | N/A |
| Broadcasting (except Internet) | 515 | N/A | N/A | N/A |
| Wired Telecommunications Carriers | 5171 | N/A | N/A | N/A |
| Wireless Telecommunications Carriers (except Satellite) | 5172 | N/A | N/A | N/A |
| Other Telecommunications | 5179 | N/A | N/A | N/A |
| Internet Service Providers, Web Search Portals, and Data Processing Services | 518 | 474 | $117,837,000 | $248,601 |
| Finance and Insurance | 52 | N/A | N/A | N/A |
| Legal Services | 5411 | N/A | N/A | N/A |
| Accounting, Tax Preparation, Bookkeeping, and Payroll Services | 5412 | 482 | $48,347,000 | $100,305 |
| Architectural, Engineering, and Related Services | 5413 | 2,292 | $740,163,000 | $322,933 |
| Computer Systems Design and Related Services | 5415 | 5,510 | $1,700,802,000 | $308,675 |
| Management, Scientific, and Technical Consulting Services | 5416 | 1,066 | $241,609,000 | $226,650 |
| Advertising and Related Services | 5418 | 266 | $35,931,000 | $135,079 |
| Management of Companies and Enterprises | 55 | 0 | $0 | N/A |
| Office Administrative Services | 5611 | 1,630 | $132,519,000 | $81,300 |
| Employment Services | 5613 | 2,440 | $213,648,000 | $87,561 |
| Business Support Services | 5614 | 1,043 | $128,099,000 | $122,818 |
| Travel Arrangement and Reservation Services | 5615 | N/A | N/A | N/A |
| Offices of Physicians | 6211 | 1,323 | $197,120,000 | $148,995 |
| Offices of Dentists | 6212 | 1,018 | $123,657,000 | $121,471 |
| Offices of Other Health Practitioners | 6213 | 419 | $39,622,000 | $94,563 |
| Religious Organizations | 8131 | 0 | $0 | N/A |
| Social Advocacy Organizations | 8133 | 0 | $0 | N/A |
| Civic and Social Organizations | 8134 | 0 | $0 | N/A |
| Business, Professional, Labor, Political, and Similar Organizations | 8139 | 0 | $0 | N/A |
| | | **18,540** | **$3,862,255,000** | **$208,000** |

1/Based on Moody's Analytics definition of office-using industry sectors

SOURCE: US Census Bureau; 2007 Economic Census