



THRIVE

MONTGOMERY 2050
Let's Plan Our Future. Together

Planning Board Draft | April 2021

 **Montgomery Planning**

THE MARYLAND-NATIONAL CAPITAL PARK AND PLANNING COMMISSION

Thrive Montgomery 2050 contains the text and supporting maps for a comprehensive amendment to the 1969 General Plan (On Wedges and Corridors) for the Physical Development of the Maryland-Washington Regional District in Montgomery and Prince George's Counties, as amended; the 1993 General Plan Refinement of the Goals and Objectives for Montgomery County, as amended; the Master Plan of Historic Preservation, as amended; the 2010 Purple Line Functional Plan, as amended; the 2011 Housing Element of the General Plan, as amended; the 2013 County-wide Transit Corridors Functional Master Plan, as amended; the 2018 Master Plan of Highways and Transitways, as amended; 2018 Energized Public Spaces Functional Master Plan as amended; and the 2018 Bicycle Master Plan, as amended.

Thrive Montgomery 2050 is a general plan for the county with a 30-year horizon. It sets a vision for the county and encompasses broad, county-wide policy recommendations for land use, zoning, housing, the economy, equity, transportation, parks and open space, the environment, and historic resources. These recommendations provide guidance for future master plans, county and state capital improvement processes, and other public and private initiatives that influence land use and planning in the county. None of the plan's zoning-related recommendations can be implemented without a sectional map amendment, district map amendment, or a zoning text amendment approved by the County Council.

Sources of Copies

The Maryland-National Capital Park and Planning Commission, 2425 Reedie Drive, Wheaton, MD, 20902. Online at www.thrivemontgomery.com.

The Maryland-National Capital Park and Planning Commission

The Maryland-National Capital Park and Planning Commission is a bicounty agency created by the General Assembly of Maryland in 1927. The Commission's geographic authority extends to the great majority of Montgomery and Prince George's Counties; the Maryland-Washington Regional District (M-NCPPC planning jurisdiction) comprises 1,001 square miles, while the Metropolitan District (parks) comprises 919 square miles, in the two counties.

The Commission prepares, adopts and amends or extends The General Plan (On Wedges and Corridors) for the Physical Development of the Maryland-Washington Regional District in Montgomery and Prince George's Counties. The Commission operates in each county through Planning Boards appointed by those county governments. The Planning Boards are responsible for implementation of local plans, zoning ordinances, and subdivision regulations; and the administration of the bicounty park system.

The Maryland-National Capital Park and Planning Commission encourages the involvement and participation of individuals with disabilities, and its facilities are accessible. For assistance with special needs (e.g., large print materials, listening devices, sign language interpretation, etc.), please contact the M-NCPPC Montgomery County Commissioners Office by telephone at 301-495-4605 or by email at mcpchair@mncppc-mc.org. Maryland residents can also use the free Maryland Relay Service for assistance with calls to or from hearing or speech impaired persons; for information, go to www.mdrelay.org or call 866-269-9006.





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When Montgomery County's first general plan, known as the "Wedges and Corridors Plan," was adopted in 1964, much of our land was undeveloped. That plan guided the county's growth for more than 50 years¹ and helped make the county one of the most desirable places to live and work in the United States. Our success was built on an award-winning park system and high-quality schools along with forward-thinking leadership in preserving farmland, fostering the emergence of urban centers and mass transit, and shaping the design of attractive suburban subdivisions. Montgomery County prospered under the Wedges and Corridors Plan.



Today, however, we find ourselves facing new challenges and changing circumstances that require us to rethink approaches that served us well in the past. Montgomery County has tremendous assets, including a highly educated workforce, proximity to the nation’s capital, and a culture of openness to newcomers, but we also are struggling to attract businesses and house our residents, grappling with a legacy of racial and economic inequality, and facing the effects of climate change.

At the same time, the demographic characteristics of Montgomery County residents have changed. As a group our residents are older, more diverse, and less likely to live in traditional family arrangements. We have evolved from a bedroom community to a complex jurisdiction with major employment centers, urban hubs, mature residential neighborhoods, and rural landscapes. We compete with the District of Columbia and neighboring jurisdictions for talent, jobs, and economic development. All this is unfolding as technology reshapes how we work, shop, and live, influencing planning and real estate development in unprecedented ways.

The combination of rapid social, environmental, technological, demographic, and economic shifts at the national and global levels along with changes in our community require us to take a clear-eyed look at our strengths and weaknesses and to challenge the assumptions that have guided us to this point. While the Wedges and Corridors Plan was visionary, its implementation also had some unintended consequences such as inequitable investment between the eastern and western parts of the county, excessive reliance on automobiles, and zoning of more than one-third of the county exclusively for single family homes. Discriminatory land use and planning-related practices, including the legacy of redlining and racial covenants combined with exclusionary zoning, produced inequitable patterns of development.

While the end of de jure racial discrimination eliminated many legal barriers to equity, social and economic obstacles remain. For Montgomery County to continue to thrive, we must be prepared to make difficult decisions and take bold steps to prepare for the future. Thrive Montgomery 2050 is the vehicle for assessing these shifts and adapting our approach to planning for the next 30 years.

WHAT IS A GENERAL PLAN? WHAT IS THRIVE MONTGOMERY 2050?

A general plan is a long-range guide for the development of a community. Every jurisdiction must adopt some form of general or “comprehensive” plan as a legal predicate for the exercise of the government’s land use and zoning powers, but Thrive Montgomery 2050 also serves a broader purpose in guiding how our community should respond to economic, social, and environmental opportunities and challenges – both the ones that are apparent now and the ones that will emerge over the coming decades.

Thrive Montgomery 2050 defines the basic land use setting and context for all public and private actions in the county and directly addresses the land-use and planning issues covered by all comprehensive plans. Its recommendations also touch on the objectives and actions of other public and private entities that are responsible for implementing and providing related services and amenities. For example, while M-NCPPC has no direct role in meeting the educational needs of the county, both the physical form (quality and types of housing, retail, and transportation) and setting of a community (location, proximity to schools, colleges, amenities, services, and jobs) influence the educational prospects of its children and young adults.

The purpose of a 30-year plan is not to predict and respond to a single future but to be prepared to face multiple, unpredictable futures. We therefore must consider how disruption from climate change, pandemics, or terrorist attacks could affect the county, as well as the implications of automation, artificial intelligence, and economic changes at the regional, national, and global scale.

Thrive Montgomery 2050 does not abandon or reject the Wedges and Corridors concept but instead modernizes it to remain relevant. Just as the Wedges and Corridors Plan and its refinements framed issues for further action, Thrive Montgomery 2050’s broad policy recommendations will require amendments to other plans, policies, and development rules before they can be implemented. In other words, this plan outlines issues and ways to address them but does not include zoning recommendations or other specific land use guidance in targeted geographic areas or discrete subjects such as transportation networks. Relevant area plans and functional plans will remain valid until modified pursuant to the guidance provided by this plan.

Overarching objectives of Thrive Montgomery 2050

Thrive Montgomery 2050 is about embracing new realities, addressing historic inequities, and shifting the way we think about how the county should grow. Montgomery County is growing more slowly than in past decades, but our population is still projected by the Metropolitan Washington Council of Governments to increase by about 200,000 people over the next 30 years.

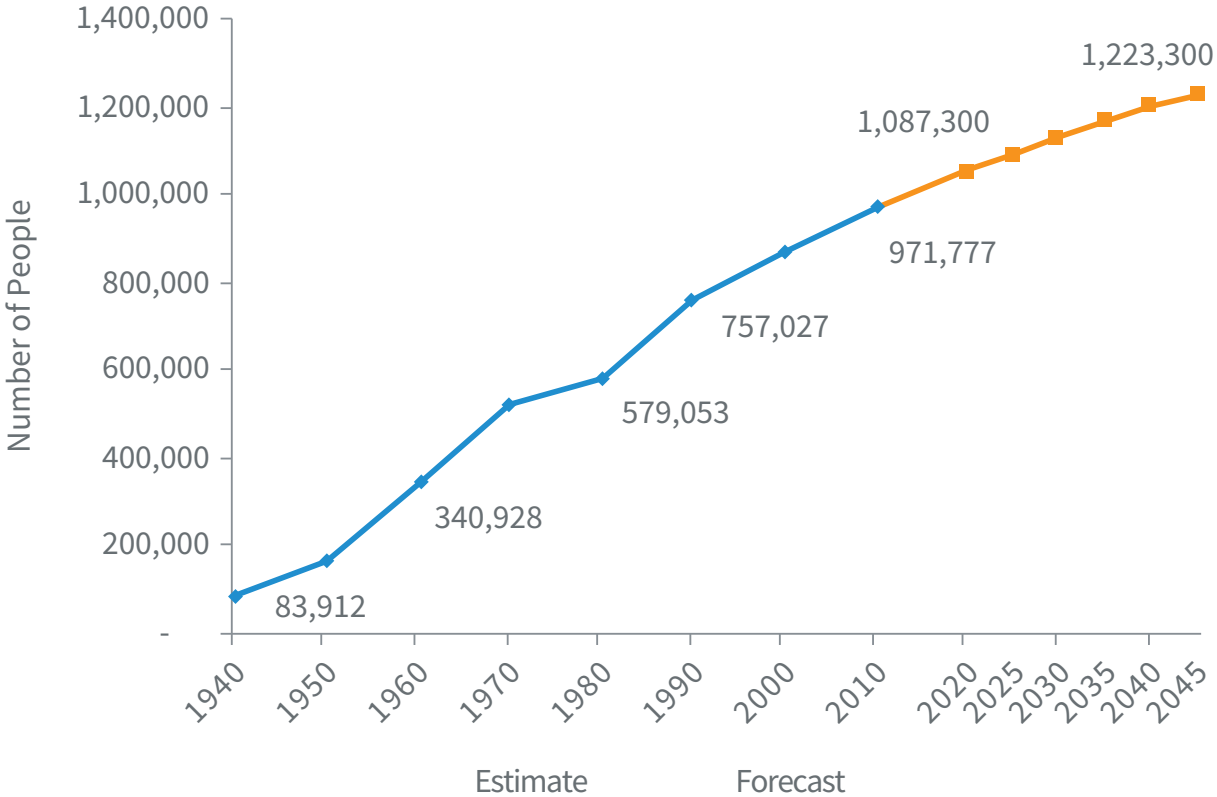
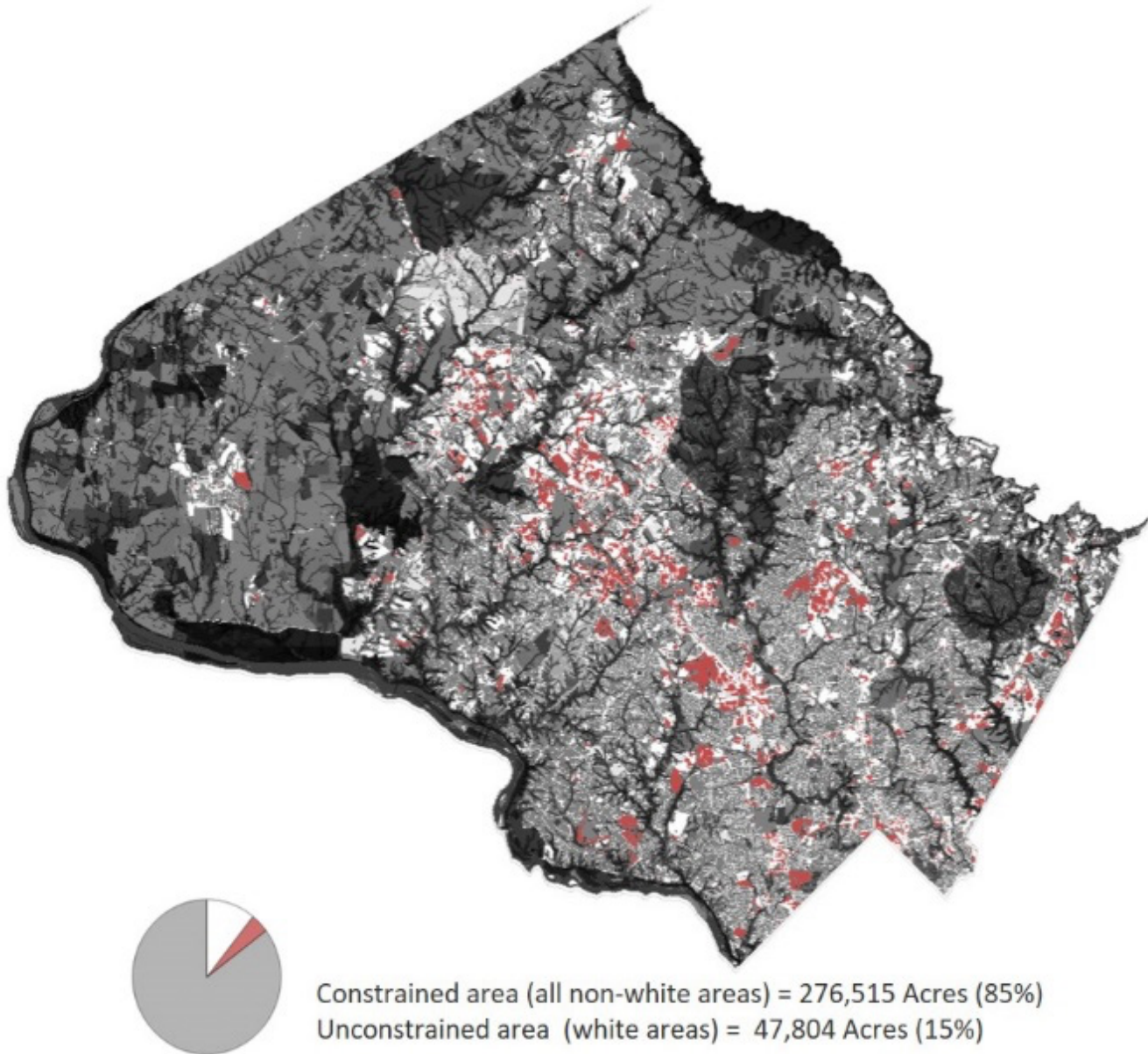


Figure 1: Population estimate and forecast, 1940-2045

The county has relatively little undeveloped land left to accommodate this growth, even if new construction is relatively compact. With 85 percent of our land already developed or otherwise constrained, accommodating even the relatively modest growth expected over the life of this plan is an ambitious undertaking. The way we think about growth needs to change. We need to reconsider sites previously considered unsuitable for development such as parking lots or the air rights over existing buildings and find ways to use land more efficiently.

With 85 percent of our land already developed or otherwise constrained, accommodating even the relatively modest growth expected over the life of this plan is an ambitious undertaking.



Environmental constraints (medium and dark grey):
 Streams, Wetland Buffers, Erodible soils, Parks & Biodiversity areas, Special Protection Areas, Agricultural Reserve, Forest Conservation Easements.

Man-made constraints (light grey):
 Utility Sites (WSSC, Transmission Lines), Transportation Infrastructure (Metro, Rail, State Roads, Federal Highways), Government Owned sites, Rustic Roads, Public Education Facilities, Historic Resources, Transferrable Development Rights (TDR) Exhausted, Rockville Quarry, Regulated Affordable Housing, Private Institutions, Homeowners Associations Common Ownership, Single-Family Homes.

Redevelopment qualifiers (red):
 Multiple Owners, Improvement Value > Land Value, Office Buildings less than 50 years old, Retail Buildings less than 15 years old.

Figure 2: Land available to accommodate growth

This plan outlines strategies to accommodate growth in ways that not only make room for new residents but also improve the quality of life for the people who are already here. It anticipates a county that inevitably will become more urban, more diverse, and more interconnected. It makes a case for why and how we need to take steps to become more prosperous, equitable, and resilient as we use growth and redevelopment to create places that are more economically competitive, foster a stronger sense of trust and inclusiveness among people from different backgrounds, and improve environmental quality and public health in the process.

The ideas and recommendations in this plan are therefore organized to achieve three overarching objectives: economic competitiveness, racial and social equity, and environmental sustainability.



Economic Health



Community Equity



Environmental Resilience

Economic performance and competitiveness

Our quality of life depends on the ability to attract and retain employers and the employees they need. Montgomery County is in the 99th percentile of all counties in the United States in terms of household income, household net worth, and educational attainment. While we continue to benefit from our proximity to the nation's capital, which draws highly skilled, educated, and motivated people from all over the world, the county's economic performance has been sliding since the Great Recession of 2008.

The total number of jobs in the county grew by five percent from 2004 to 2019, while 20 similarly sized counties across the country grew their employment base by an average of 21 percent. Montgomery County experienced the slowest rate of business formation in the Washington region from 2010 to 2019.

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As a result, household income growth in the county lagged the national average (-2 percent vs. 10 percent) and was the slowest in the region during this period. Montgomery County added jobs, albeit slowly, but growth came largely in lower-wage sectors of the economy.

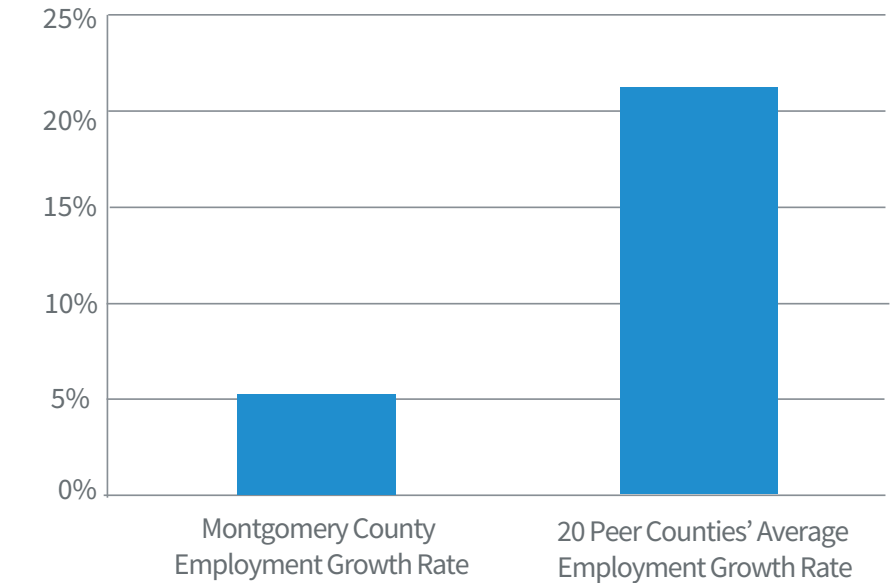


Figure 3: Montgomery County's Job growth rate compared to similarly sized counties, 2004-2019

	Population	Establishments
U.S.	6.3%	12.2%
Montgomery Co.	8.1%	5.4%
Loudoun Co.	32.4%	37.8%
Washington, DC	17.3%	17.7%
Arlington Co.	14.1%	14.1%
Frederick Co.	11.2%	10.4%
Fairfax Co.	6.1%	9.5%
Prince George's Co.	5.3%	6.7%

Figure 4: Percentage change in population and establishments, 2010-2019

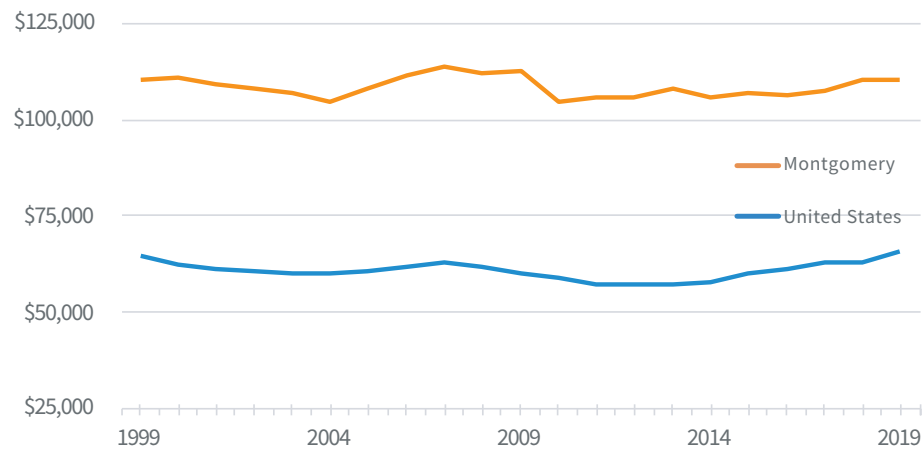


Figure 5: Real Median Household Income, 1999-2019

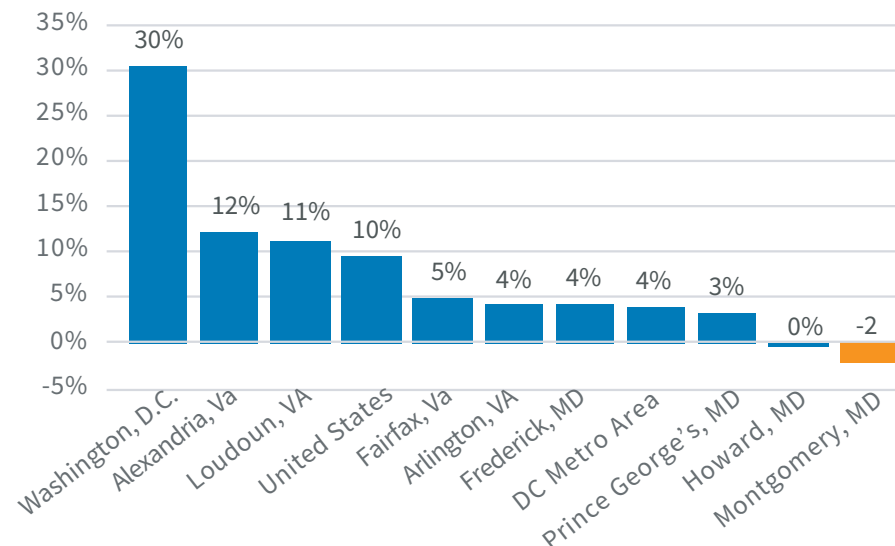


Figure 6: Real Median Household Income Change, 2009-2019

This weak household income and job growth shrinks the county's tax base, constraining its capacity to provide high-quality amenities and services and limiting the ability of many county residents to buy homes, a key tool for building household wealth and investing in their communities.

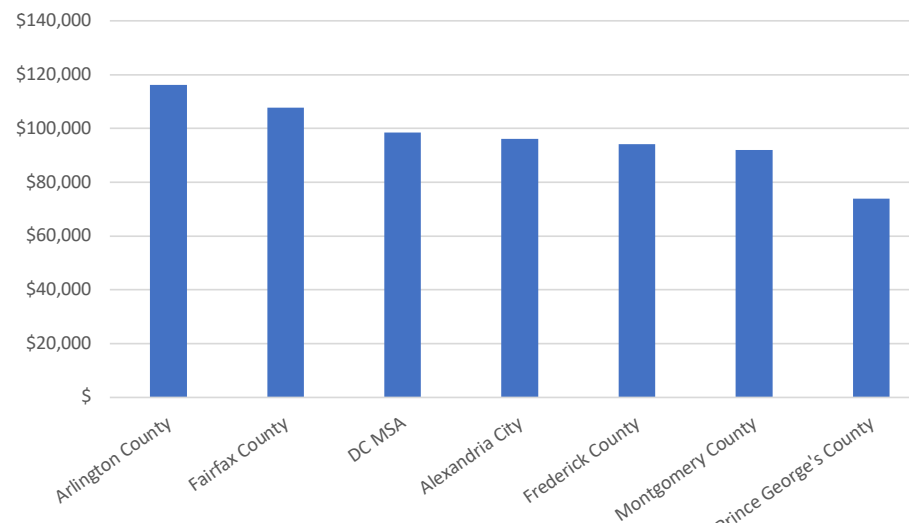


Figure 7: Median Household Net Worth, Age 25-44, 2019

This is particularly the case for younger households, who struggle to afford a home and put down roots. Montgomery County is capturing a smaller share of young adults than most similar counties across the country.

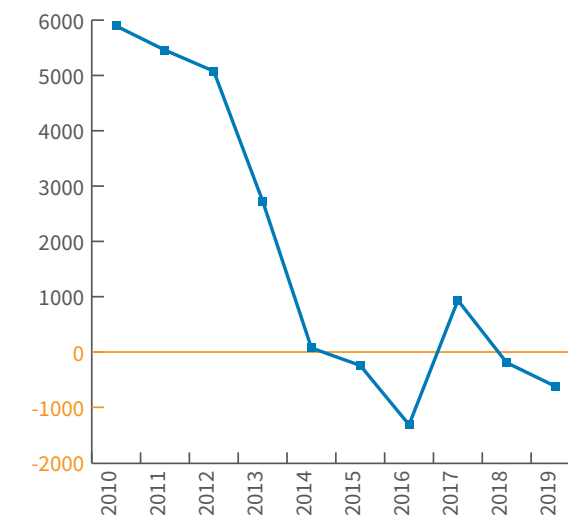


Figure 8: Net Migration to Montgomery County, Ages 25-44, 2010-2019

All this is occurring at the same time as large numbers of our residents are reaching retirement age, creating the region's highest elder-adult dependency ratio. Unless we can attract and retain more young adults, this aging of our workforce will put pressure on the tax base as the proportion of Montgomery County residents in retirement grows and the percentage of residents in their peak earning years shrinks.

	2000	2010	2020
Montgomery Co.	16.7%	18.2%	25.3%
Frederick Co.	14.4%	16.4%	23.2%
Prince George's Co.	11.2%	13.4%	21.0%
Alexandria	11.8%	22.1%	16.6%
Fairfax Co.	7.0%	9.8%	16.0%
Arlington Co.	12.2%	11.2%	15.0%
Loudoun Co.	8.2%	9.8%	14.9%

Figure 9: Washington Metropolitan Region's Elder-Adult Dependency Ratios, 2000-2020

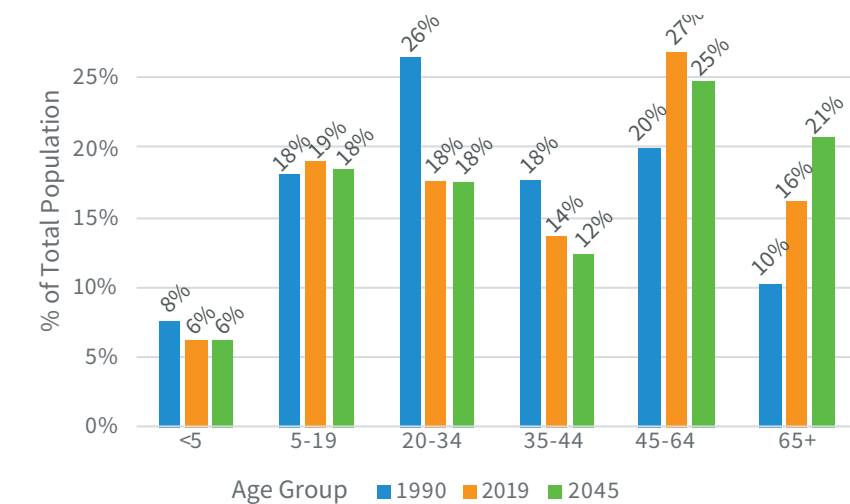


Figure 10: Percent of Population by Age Group, 1990-2045



55 Percent of Job Growth in Lower Paid Jobs



61 Percent of Job Loss in Higher Paid Jobs

This demographic shift means that the county's economic performance will have to get better just to maintain current levels of tax revenue and the services it funds, making economic competitiveness an even more pressing concern.

We are part of a dynamic regional economy with a rich mix of public institutions and private companies. The county has significant concentrations in two sectors: hospitality and life sciences, which together form a strong foundation to produce higher wage jobs and spur economic growth. Montgomery County is home to companies representing 50 percent of the market capitalization of the entire hospitality sector, and the Washington area is consistently ranked as one of the nation's top life science clusters, with I-270 as its epicenter. Vaccine development for the COVID-19 pandemic has the potential to spark a new wave of investment in this sector. Local institutions such as the University of Maryland are leading ground-breaking research in emerging fields such as quantum computing.

As we work to fortify the county's economic performance, we must simultaneously bolster our dominance in existing sectors, diversify our job base, improve connections to centers of employment and innovation throughout the region, and provide the kinds of infrastructure, services, and amenities that will strengthen our ability to compete effectively in the future.

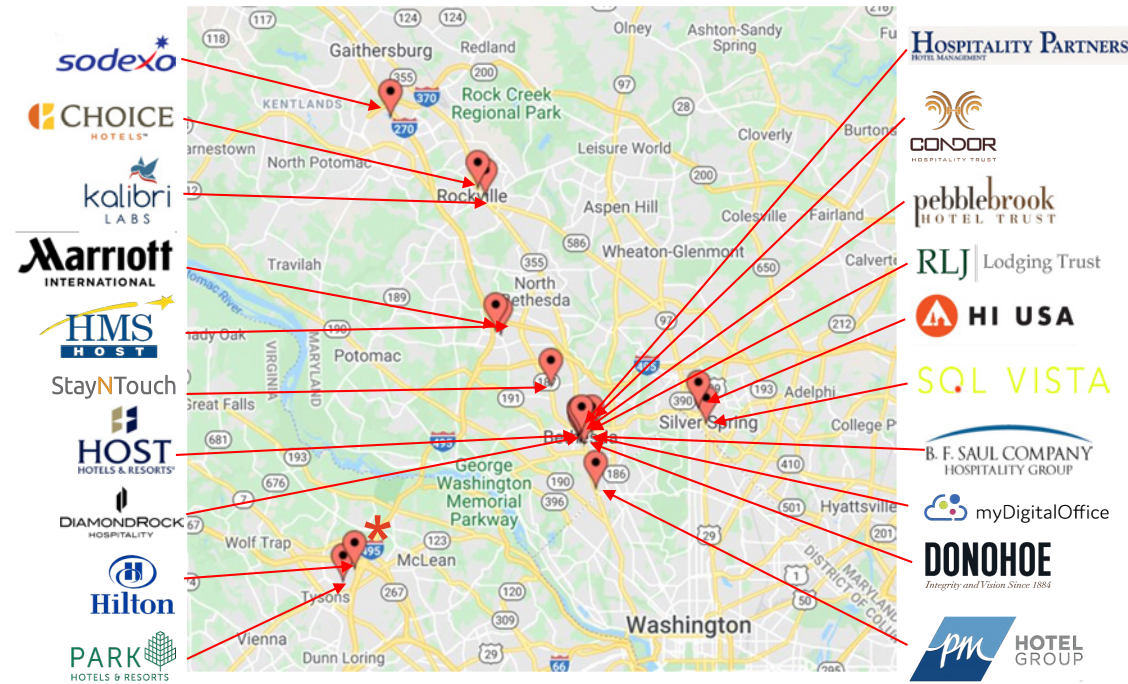


Figure 11: Hospitality Firms Headquarters in the Washington Metropolitan Region

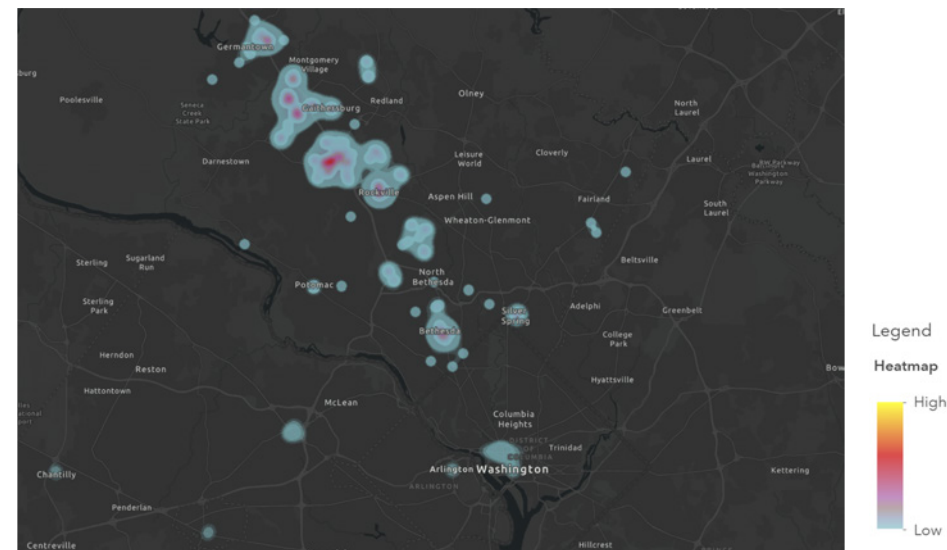


Figure 12: I-270 in Montgomery County is the Epicenter of Life Sciences Firms in the Washington Region.



Racial equity and social inclusion

Diversity and inclusion are essential to our economic success as well as to our ability to produce more equitable outcomes for all our residents, who need high quality housing, education, jobs, transportation, and recreational opportunities. The county's overall population has steadily grown more diverse as a result of a steady influx of foreign-born immigrants. But past patterns of discrimination – some intentional, some unintentional – have left many communities geographically, economically, and socially isolated.

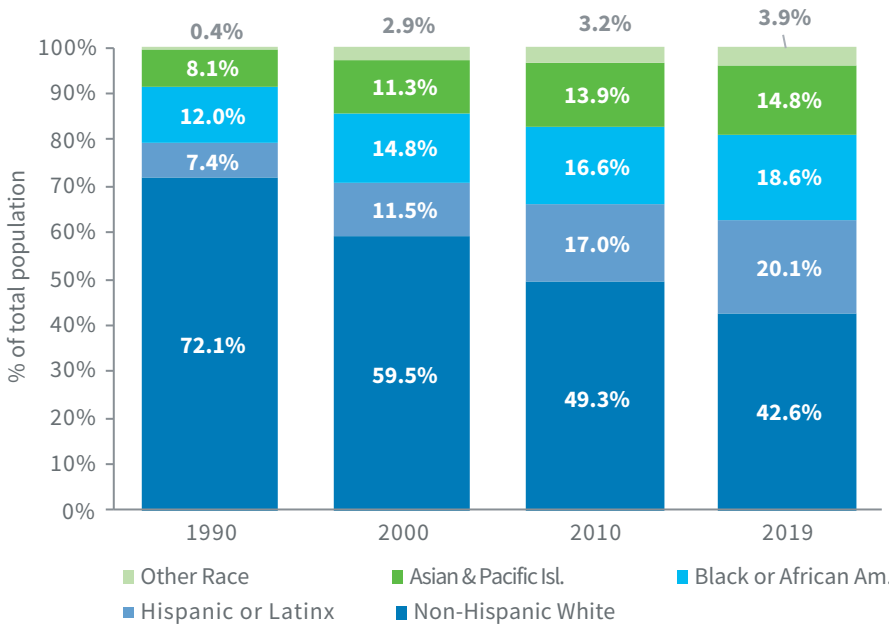


Figure 13: Population by Race and Hispanic Origin, 1990-2019

After the Civil War and the end of slavery, African Americans suffered from pervasive discrimination in the provision of economic and educational opportunities, housing, health care, and basic public services. The resulting alienation led to the creation of self-reliant kinship communities in many parts of Montgomery County in the late 19th century. Planning decisions and real estate development practices aggravated these injustices for most of the 20th century. Redlining and restrictive covenants created geographic divisions that have left a legacy of injustice, and the effects of these efforts to separate people by race and class continue to be felt today. More recently, disinvestment from and abandonment of neighborhoods previously considered highly desirable, combined with the suburbanization of poverty, have created new geographic divisions and barriers to equity and inclusion. The Wedges and Corridor plan's focus on the I-270 corridor and related planning decisions exacerbated this problem by discouraging growth in the East County, focusing public and private investment to the west.

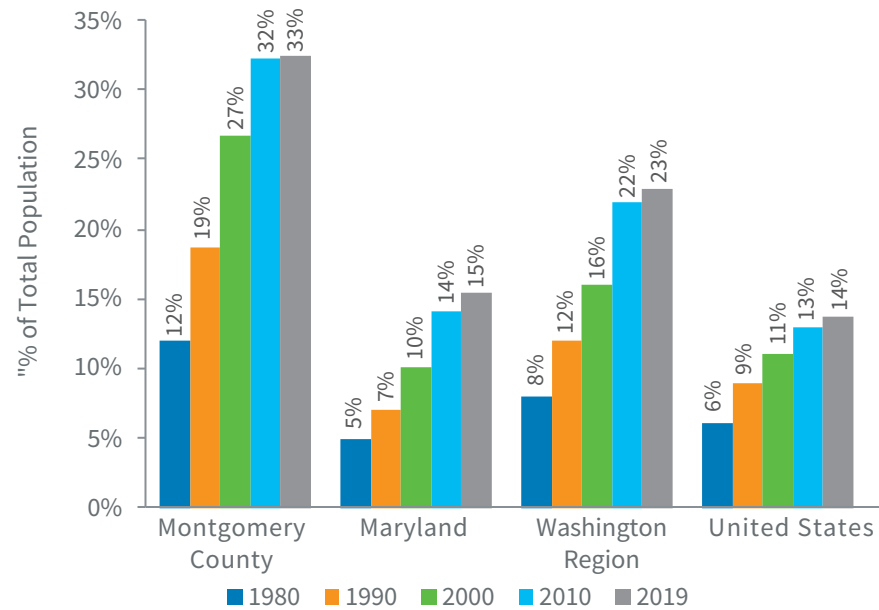


Figure 14: Percentage of Foreign-Born Population by Jurisdiction, 1990-2019



Figure 15: Scotland School Building in 1942. It was demolished in 1968 to make way for a townhouse development

Today communities with high concentrations of racial and ethnic minorities also show lagging median household incomes. The resulting gaps in quality-of-life indicators can be seen among Black, Hispanic, and Asian residents. Moreover, even as the county becomes more racially and ethnically diverse, our neighborhoods are still largely separated along income and racial lines.

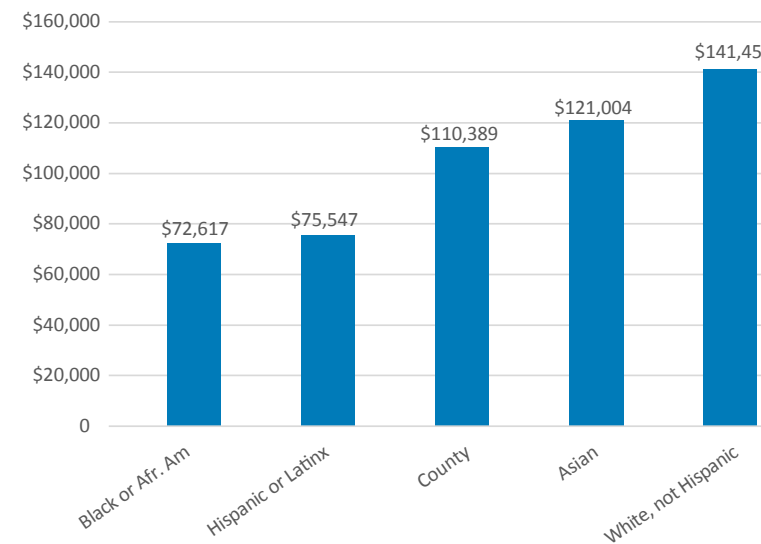


Figure 16: Median Household Income by Race and Ethnicity, 2019

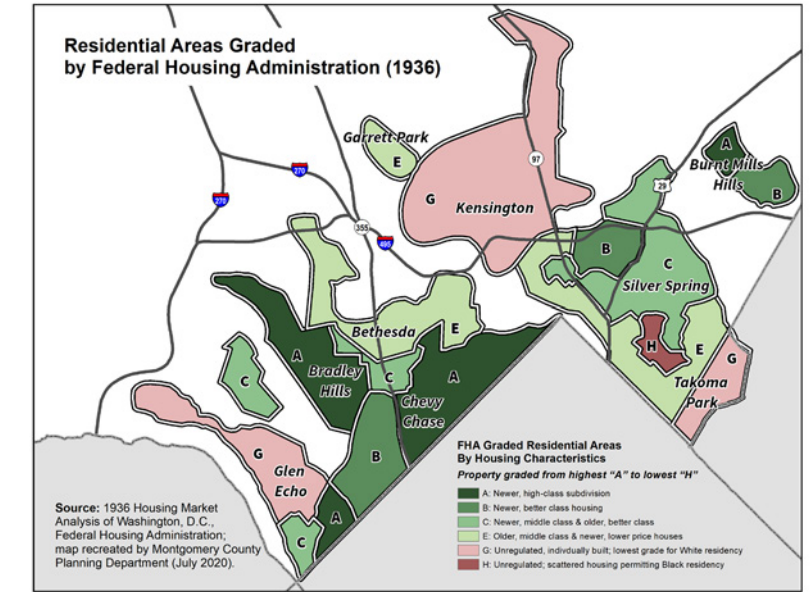


Figure 17: Approximate Location of Outstanding Commitments of the Federal Housing Administration in Montgomery County

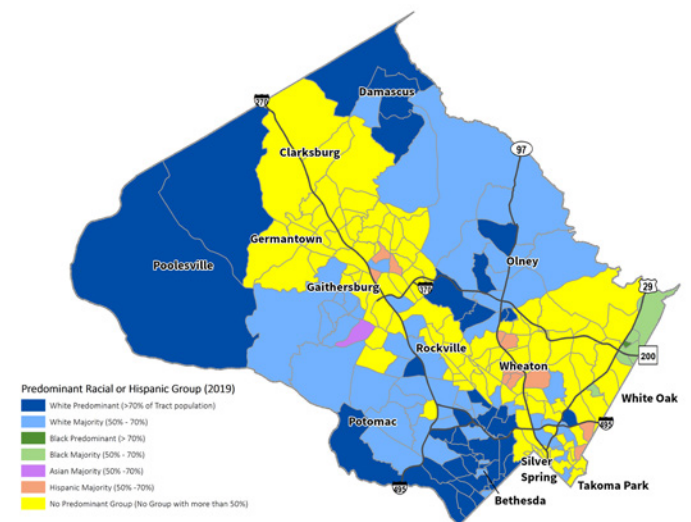


Figure 18: Percentage of major racial and ethnic groups in Montgomery County, 2019

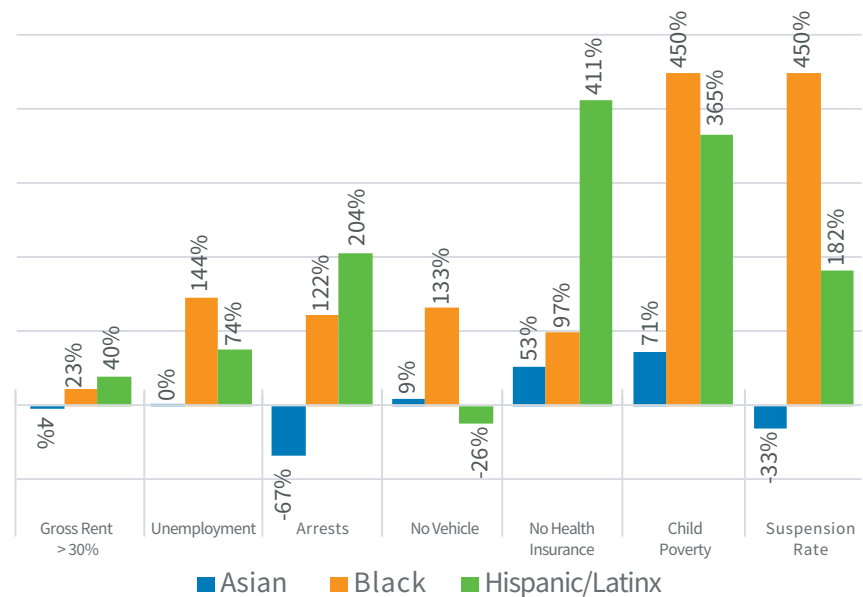


Figure 19: Racial Disparities by Race/Ethnicity Compared to White Population

This separation of neighborhoods along lines defined by race and income has important consequences for access to educational opportunities and the life prospects of our county’s children. In 2019, three-quarters of Black, Hispanic, and English-learning students in Montgomery County Public Schools – along with more than 80 percent of all low-income students in the system – were enrolled in high-poverty-focus schools. By comparison, more than two-thirds of all white, Asian, and multi-racial students were enrolled in low-poverty schools.

As we seek a future that is more equitable and inclusive, improved access to infrastructure and amenities in racially, socially, and economically isolated areas will not be enough – we also must facilitate the integration of neighborhoods by race and income. Increasing the share of racially and economically mixed neighborhoods and schools across all parts of the county is critical to ensure that the inequities of the past will not be perpetuated in the future.

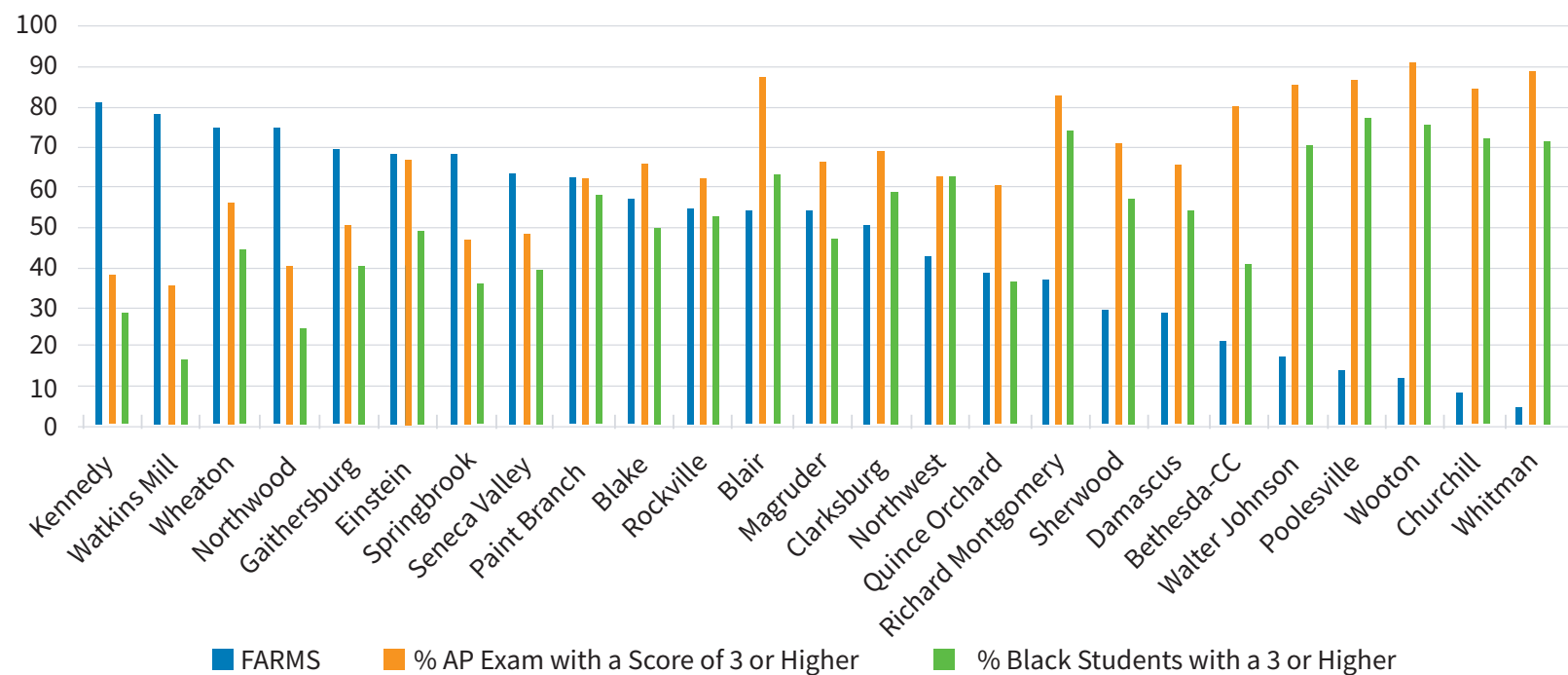


Figure 20: Concentrations of Low-Income Students vs. AP Performance, 2016-2017

In parallel with steps to reduce inequality in the geographic distribution of resources and opportunities, Montgomery County must work to build a shared sense of purpose that can help strengthen efforts to promote respect for diversity, demonstrate the value of inclusion, and build a foundation for greater trust. This concept, often described by academics under the umbrella term “social capital,” can pay dividends not only in sustaining support for racial and social justice but in bolstering civic capacity more broadly.

In this regard, decisions about land use, transportation, and public infrastructure can play an important role in building a sense of community. Different measures of social capital, including trust in public and private institutions, political participation, whether neighbors know each other, and other indicia of connection and cohesion are influenced by qualities of the built environment. The design of our communities can greatly influence levels of community cohesion and social interaction. Creating social capital requires the built environment to encourage and make it easier for people to meet others and engage in activities. For this reason, Thrive Montgomery 2050 emphasizes the roles streets, parks, and public spaces play in creating a physical environment where a sense of community can flourish.

Advancing racial equity through just planning policies and public investments, promoting the racial and economic integration of neighborhoods, and focusing on the potential for the design of communities to help build social trust and inclusion while encouraging civic participation are among the most significant elements of Thrive Montgomery 2050.

Environmental resilience

The Wedges and Corridors Plan laid the groundwork for the adoption of forward-thinking policies that emphasized land preservation for resource conservation and agriculture, protection of our streams, forests, and trees

and reduction of greenhouse gas emissions. One-third of the county’s land is now protected within the Agricultural Reserve and another 13.8 percent is under the stewardship of the Parks Department. Along with aggressive stormwater and forest conservation regulations, these efforts have established a strong framework for the protection of natural resources.

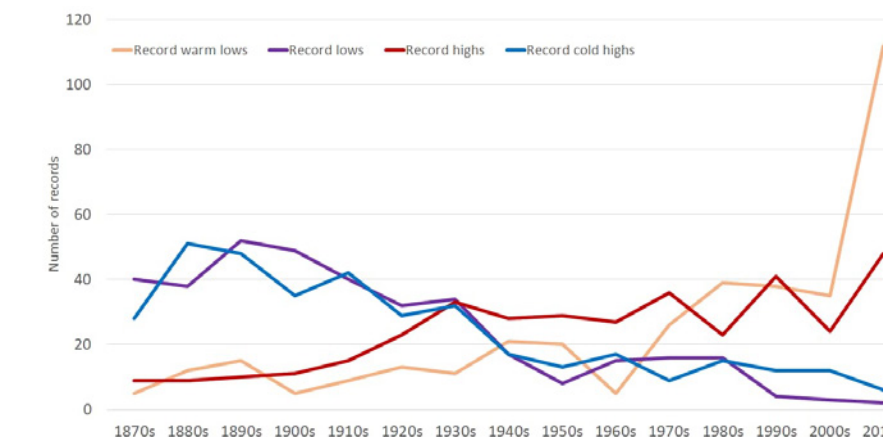
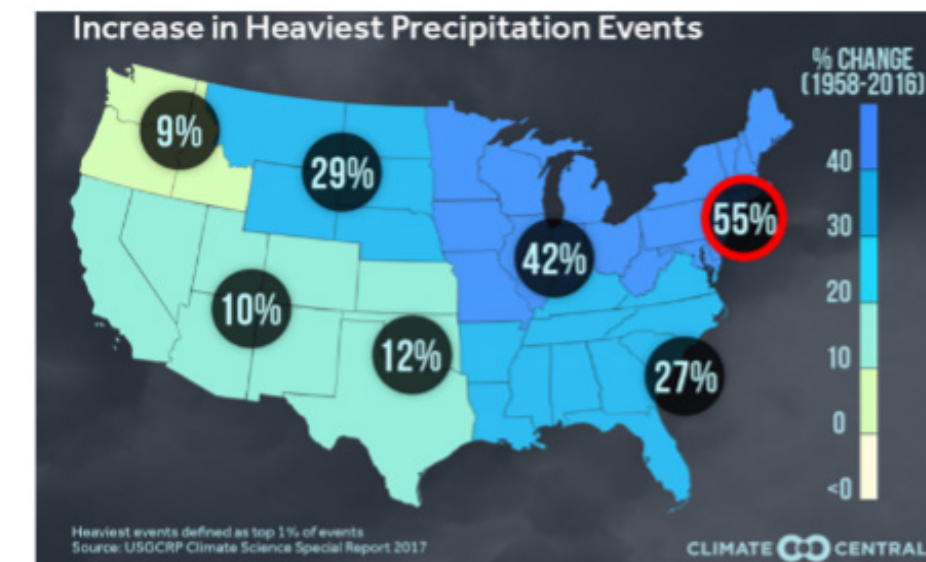


Figure 21: Heaviest Precipitation Events and Daily Temperature Record in Washington DC

Despite these policies, the county cannot avoid the impact of global climate change. Precipitation in northeastern United States increased by 55 percent between 1958 and 2016. This trend has meant more frequent violent weather events like the flash flooding that occurred in July 2019, when the D.C. region received a month's worth of rain in a single day,

causing streams to rise 10 feet in less than an hour, inundating vehicles, businesses, roads and closing the Metrorail system. The past decade has also been the hottest 10-year period in the region's recorded history, with rising hospitalizations due to extreme heat impacts. The adverse effects of a changing climate will be felt most acutely by the poor and people of color, who are likely to suffer a disproportionate share of the damage to real property and personal health.

Montgomery County has made progress in reducing its greenhouse gas emissions, a key contributor to climate change, but has much farther to go to meet its goal of eliminating these emissions by 2035. Together, buildings and transportation are responsible for more than 90 percent of our county's greenhouse gas emissions, making reduced reliance on driving and more energy-efficient development patterns essential to meeting our climate objectives.

In this regard, a stronger focus on walking, biking, and transit infrastructure will be crucial, but the significance of mixed uses and compact development in reducing driving should not be overlooked. The environmental benefits of dense, walkable neighborhoods dovetail with the increasing preference across age groups to live in walkable places served by a mix of uses and amenities.

Of course, not even the most sustainable transportation planning and development strategies will be able to resolve every environmental challenge facing the county. Thrive Montgomery 2050 builds on the tradition of robust protection of the natural environment. It proposes a series of strategies to mitigate the effects of climate change and minimize pollution. The plan also anticipates the need for public and private infrastructure to be made more resilient so as to withstand more severe weather and protect us from the effects of environmental degradation from sources that are beyond our ability to control.

Other important but subsidiary objectives

The plan also addresses other important but subsidiary goals that complement the three overarching objectives discussed above.

Improving public health and encouraging active lifestyles

The length and quality of human life are strongly influenced by both the natural and built environment. In 2018, more than three-fifths of adults in Montgomery County were overweight or obese. Five of the seven zip codes in the county with household incomes in the lowest quartile also have the lowest average life spans. And even though low-income residents and people of color are more likely to suffer from negative health outcomes for several reasons, all residents can benefit from a more active lifestyle supported by an emphasis on transit, walking, and biking, and easy access to parks and recreational opportunities. Active lifestyles can serve to improve public health while simultaneously reducing the ecological footprint of human activity.

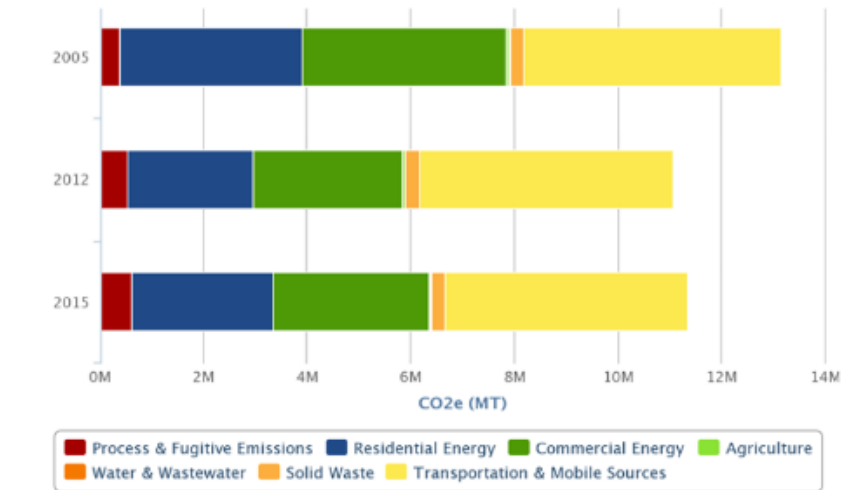


Figure 22: Sources of CO2 emissions in Montgomery County, 2005 to 2015

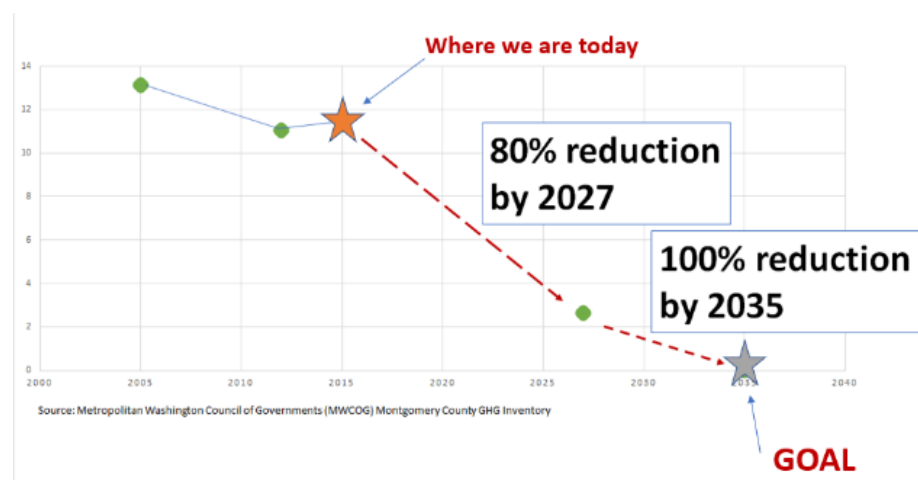


Figure 23: Montgomery County's Commitment to Reduce GHG Emissions to Zero by 2035

Elevating quality of design and highlighting role of arts and culture

The Wedges and Corridors Plan envisioned a variety of living environments and encouraged “imaginative urban design” to avoid sterile suburban sprawl. Nonetheless, that plan was a product of its time. It relied on design approaches that were typical of the 1960s, emphasizing the convenience of driving and rigid separation of land uses.



Good design is not a luxury but a critical economic development tool. Businesses and workers now prefer walkable, accessible, amenity rich, mixed-use places that facilitate the interaction and exchange of ideas that feed innovation. A greater share of residents across ages prefer walkable, transit-rich neighborhoods as well. Combined with the lack of undeveloped land far from transit, these forces dictate a shift toward redevelopment and infill that converts “parking lots to places” near existing or planned transit lines and incorporating walkable form.



Our arts and culture sector taken as a whole would be the county’s sixth-largest employer. The sector taps into creative, social, and economic networks, and its practitioners have developed tools to share stories, encourage empathy, and empower creative exchange. Supporting a healthy arts and culture ecosystem will not only enrich the lives of our residents and bring us closer together but also will help attract talent and spur innovation.

Urbanism as organizing principle

Thrive Montgomery 2050 applies the principles of urbanism – a term this plan uses as shorthand for a set of ideas about what makes human settlements successful – to guide their future growth. Urbanism draws on the lessons of thousands of years of experimentation and evolution in the design and development of villages, towns, and cities to apply the ideas that have proven to endure as the foundation for adaptable and resilient communities everywhere. An urbanism-focused approach to the development of land and related infrastructure (such as roadways, transit systems, and parks) emphasizes the value of: (1) a compact form of development; (2) diverse uses and building types; and (3) transportation networks that take advantage of and complement these two land use strategies, at all densities and scales.

This approach calls for focusing growth in a limited number of locations rather than dispersing it, avoiding “sprawl.” It means encouraging the agglomeration of different uses such as retail, housing, and office space as well as diversity within each type of use. For example, a variety of housing sizes and types near employment and retail helps to ensure that people of diverse income levels can live and work in proximity to each other. This over time produces more racially and socioeconomically integrated neighborhoods and schools, providing more equitable access to economic opportunities, public services, and amenities. It also emphasizes the importance of walking, biking and transit and reduces reliance on cars.

Of course, other factors – particularly quality and thoughtfulness in the design of buildings, streets, neighborhoods, and public spaces – are also essential. Combined with the fundamentals of urbanism, design excellence can help create a sense of place, facilitate social interaction, and encourage active lifestyles.

These principles of urbanism are equally relevant to rural, suburban, and urban areas. In fact, the preservation of land for agriculture in a place like Montgomery County depends on concentrating development in urban centers instead of permitting sprawl, and even suburban and rural areas benefit from a mix of uses and housing types – at appropriately calibrated intensity and scale – to serve their needs.

With attention to both the functional and aesthetic aspects of design, urbanism is not only consistent with a commitment to maintaining the best of what has made Montgomery County attractive in the past but is necessary to preserve and build on these qualities while correcting the errors of auto-centric planning and its damaging effects on the environment, racial equity, and social cohesion.

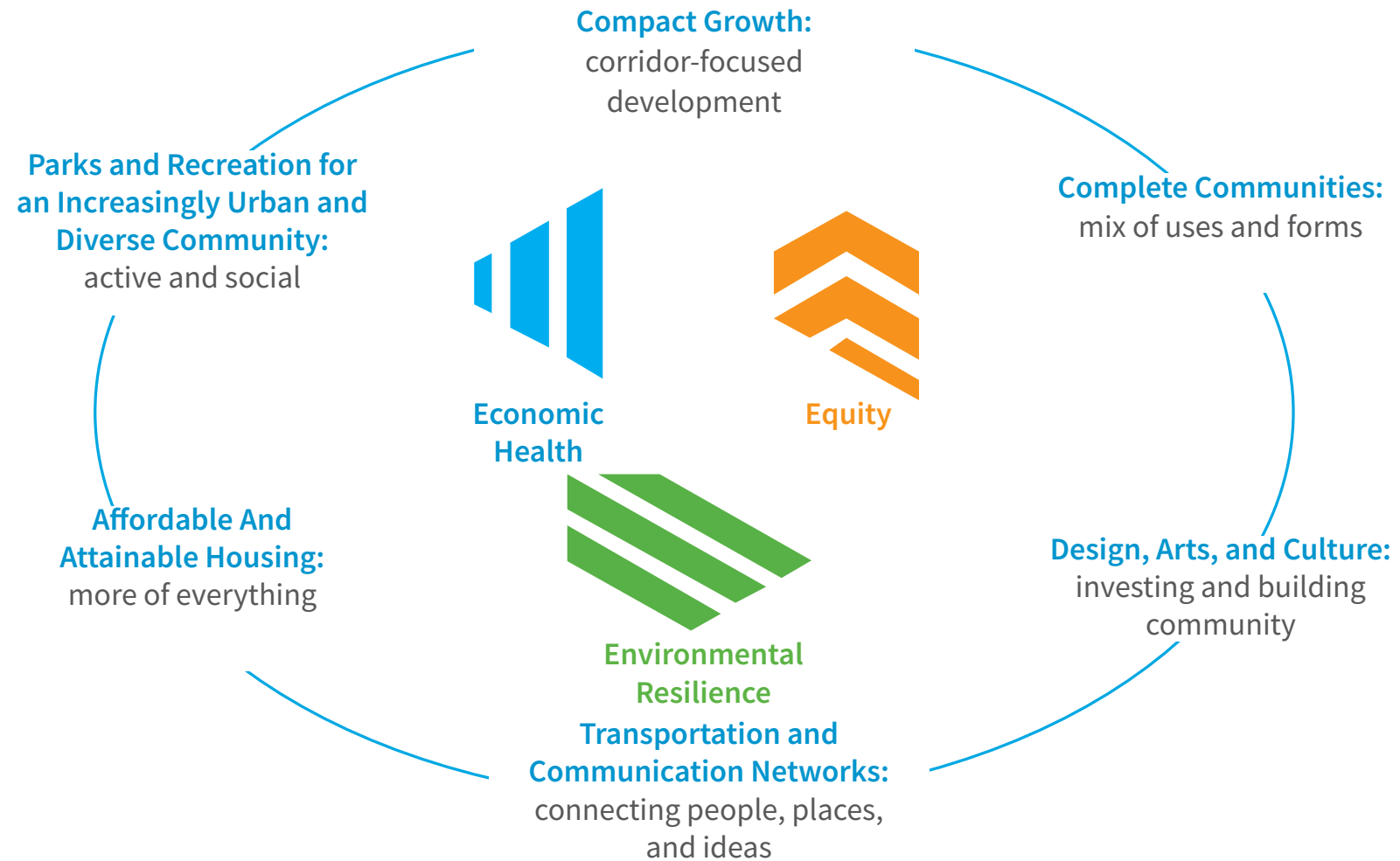
These issues are complex and have multiple causes, many of them outside the scope of land-use planning and therefore the direct influence of Thrive Montgomery 2050. However, land-use regulation and other policies adopted by local government play an important role in perpetuating, and even reinforcing, many associated undesirable outcomes such as lack of connectedness and the social isolation of the young and the elderly. As a result, our approach to growth and planning for the future must be comprehensive.

Urbanism = (1) a compact form of development; (2) diverse uses and building types; and (3) transportation networks that take advantage of and complement these two land use strategies, at all densities and scales.

A blueprint for the future

While Thrive Montgomery 2050 outlines long-term goals and policies, the task of preparing Montgomery County to meet the challenges of the future is pressing and immediate. The job losses caused by the coronavirus pandemic, the racial unrest sparked by the killing of George Floyd, and the damage caused by the increased frequency and severity of extreme weather events have highlighted the importance of taking steps to strengthen our economic, social, and environmental resilience without further delay.

The current public health crisis and emergent demands for action to address police misconduct may recede or be resolved in the coming months, but rapid technological, demographic, and social change will continue to test our collective ability to respond effectively and adapt to new circumstances. The consequences of these changes are already playing out in the lives of our residents, reshaping our hopes and fears about the future. Thrive Montgomery 2050 establishes a blueprint for the work of implementing the new approaches needed to respond, starting immediately and extending over a period of decades.



Related to the three primary objectives, the plan is organized into six chapters:

- **Compact Growth:** corridor-focused development
- **Complete Communities:** mix of uses and form
- **Design, Arts, and Culture:** investing and building community
- **Transportation and Communication Networks:** connecting people, places, and ideas
- **Affordable and Attainable Housing:** more of everything
- **Parks and Recreation for an Increasingly Urban and Diverse Community:** active and social

The ideas in each chapter are intended to complement each other and outline approaches calibrated for varying scales of planning. The chapter on “Compact Growth” describes a countywide approach to directing growth that aims to concentrate development along corridors to maximize the efficiency of infrastructure, preserve land, and focus investment. The “Complete Communities” chapter covers strategies for individual

neighborhoods and districts that build on the foundation of a compact footprint for growth by incorporating a mix of uses, building types, and lot sizes to create livable places that are accessible and inviting to people with a variety of income levels, household sizes, and lifestyles. The chapter on “Design, Arts & Culture” discusses the finer-grained analysis of urban design concepts applicable to blocks and individual development sites, the architecture of public and private buildings, the landscape of plazas and public spaces, and elements of street design.

These concepts are reinforced in the “Housing” chapter recommendations intended to diversify our housing stock across incomes, building types and geography. The “Transportation” chapter describes the multi-modal and digital infrastructure required to support compact growth and the creation of walkable, well-designed complete communities. The “Parks” chapter describes the role of public and privately-owned parks and gathering spaces in encouraging social interaction, promoting a healthy lifestyle through physical activity and mitigating the effects of climate change through environmental stewardship. Our park system is an important part



of the regional network of trail connections. Each chapter also includes its own set of issues and challenges that are addressed through a set of goals, policies, and actions. Each chapter explains how its recommendations serve the broader objectives of Thrive Montgomery 2050 and describes metrics to measure progress in implementing the chapter's ideas. No plan that is designed to provide guidance over a period of decades can anticipate every difficult problem, attractive opportunity, or useful idea that may emerge, so these metrics should be used to assess new proposals as well as measuring the success or failure of the plan's recommendations over time.

Thrive Montgomery 2050 is a blueprint for creating a community that offers equitable access to jobs, affordable housing, transportation, parks, and public spaces. Just as importantly, it can help point the way to using design of the built environment to strengthen the social and physical health of our residents, supporting active lifestyles and encouraging interaction and engagement. This vision builds on the Wedges and Corridors plan, with a greater emphasis on the development of compact, complete communities and the role of corridors as places to grow, while preserving natural resources and the Agricultural Reserve. It is designed to integrate arts and culture into the fabric of our community and open opportunities for creative expression.

This framework calls for us to rethink the way we live and work. It will require us to make difficult decisions. As the noted urbanist Gil Penalosa says, though, the cost of doing nothing is not nothing. The failure to embrace new approaches will leave future generations grappling with the consequences of sustained economic underperformance, growing inequities and accelerated environmental degradation. The Wedges and Corridors Plan succeeded in outlining the challenges of its time and focusing attention on ways to address them. Our responsibility is to set a new direction to solve a new set of challenges to build a better future for our community.





COMPACT GROWTH

CORRIDOR-FOCUSED
DEVELOPMENT

When the Wedges and Corridors Plan was adopted much of Montgomery County was undeveloped. The plan recognized, however, that what seemed to be abundant available land must be used wisely:

“Land should be treated as one of our most precious possessions, using efficiently what we need for accommodating expected urban growth, and conserving the rest for the unforeseeable future. Land is too valuable an asset to be heedlessly wasted by allowing it to be developed aimlessly in a scattered pattern.”

Accordingly, the Wedges and Corridors Plan recommended two distinct patterns of growth: the urban pattern and the rural pattern. The urban pattern was envisioned as a compact form of urban development, concentrated in the existing urban ring and proposed corridor cities along significant transportation corridors within the region, including the I-95/Route 29 corridor as well as the I-270/Route 355 corridor. The rural pattern, by contrast, was envisioned as serving four broad purposes:

“1) to help mold the urban pattern into an efficient and pleasant one; 2) to provide and protect large open spaces for the “change of pace” and recreational opportunities needed by present and future generations; 3) to provide a favorable rural environment in which farming, mineral extraction, hunting, fishing and other natural resource activities can be carried on without disruption; and 4) to conserve natural resources and protect the public water supply.”

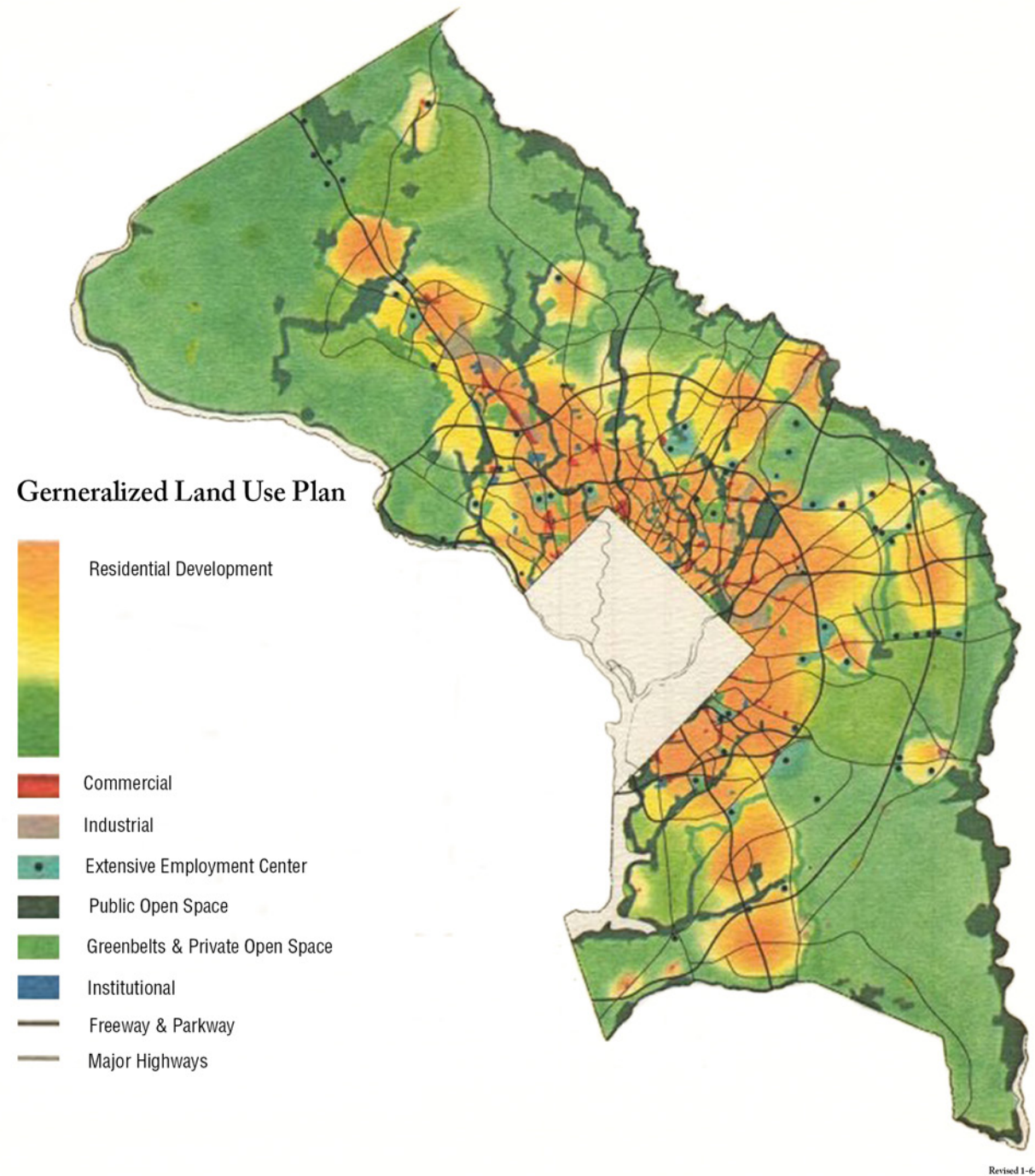


Figure 24: 1964 Wedges and Corridors Plan - urban and rural patterns

While the Wedges and Corridors Plan was visionary in recognizing the consequences of sprawl and the value of land preservation, subsequent land use and transportation planning decisions did not always adhere to the 1964 plan’s guidance, illustrating the political economy of sprawl. On one hand, resistance to the kinds of dense infill and development in areas within the growth footprint identified by the 1964 plan left the urban form unrealized in many areas. On the other hand, the desire of property owners to maximize the value of their land in some cases led to more development in outlying areas than contemplated in 1964. The failure to impose tighter limits on sprawl allowed development to disperse, increasing the cost of roads, water, sewer, and other public infrastructure by limiting economies of scale. The premature development of land on the outer edges of the growth envelope also limited opportunities to offer cost-effective transit service.

Conversely, the 1964 plan envisioned corridor cities along I-270, I-95, and Route 29, yet subsequent planning efforts, including the 1993 Refinement, disregarded and ultimately removed the growth corridor along Route 29 and I-95 in the eastern portion of the county. The excision of the Route 29 corridor effectively directed new public and private investment away from the East County and toward the established urban ring and I-270 corridor. As a result, the I-270 corridor has benefited from successive cycles of investment and reinvestment, even as other corridors – including Georgia Avenue, where Metrorail’s Red Line was built – were largely left behind. This recurring pattern aggravated the racial and economic disparities between the eastern and western parts of the county that remain today.

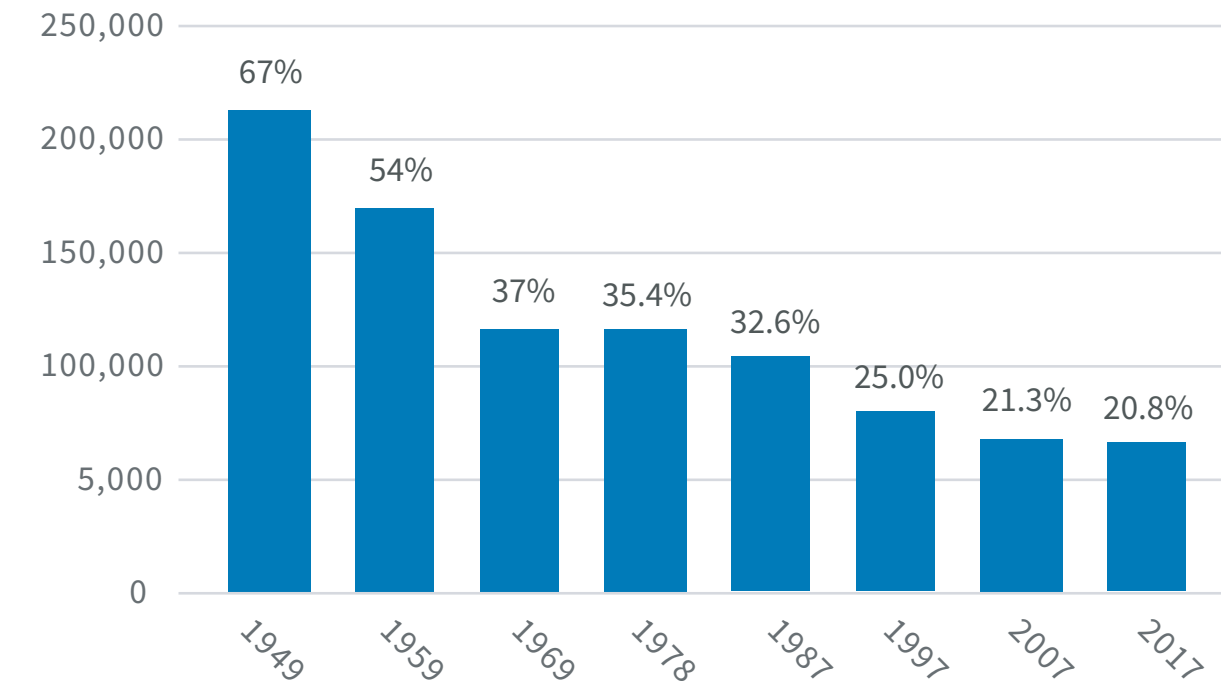


Figure 25: Acres and percent of land in farms, 1949 - 2017

Moreover, the Wedges and Corridors plan neglected to fully articulate how the broader public should expect to benefit from maintaining a rural pattern over much of the county’s land area. The plan explained that land preservation is important to recreation, agriculture and conservation of natural resources but did not describe how people living in urban parts of the county would access these opportunities. The result is that many people who live outside what became the Agricultural Reserve are unfamiliar with it and have limited opportunities to visit, enjoy and develop an appreciation for the value of continued preservation of land for farming, recreation, and environmental stewardship. They also miss out on opportunities to learn about the county’s rural heritage, eat and drink locally produced food and beverages, and participate in outdoor activities such as hiking, biking, camping, and fishing.

If we fail to make efficient use of land, the available space for growth, outdoor recreation, agriculture and natural resource conservation will rapidly diminish. The cost of building and maintaining water and sewer infrastructure, roads, and public services will become harder to manage. Problems such as traffic congestion and climate change will be exacerbated.

Thrive Montgomery 2050 proposes a recommitment to concentrating growth in downtowns, town centers, rural villages, and intensively developed centers of activity, or nodes, along major transportation corridors to maximize the efficient use of land and create Complete Communities. These corridors establish a web, connecting residents to existing and future centers of activity and Complete Communities. Outside of these corridors, limited, organic growth is permitted to meet localized needs for services and provide a balanced, diverse, and appropriate range of housing choices; increase racial and socioeconomic integration; and achieve more Complete Communities in all parts of the county. This limited development must be managed in ways that help to form more Complete Communities without expanding established development

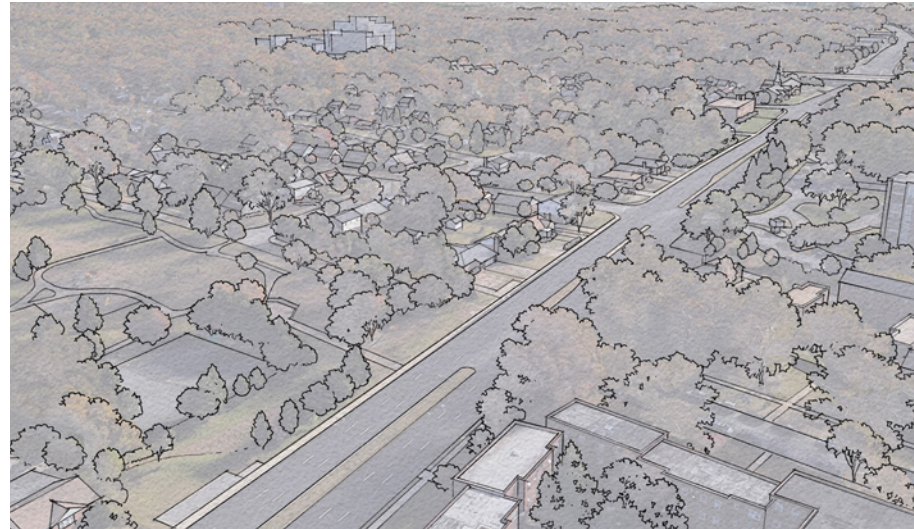


Figure 26: Georgia Avenue looking south from Evans Parkway Neighborhood Park—today

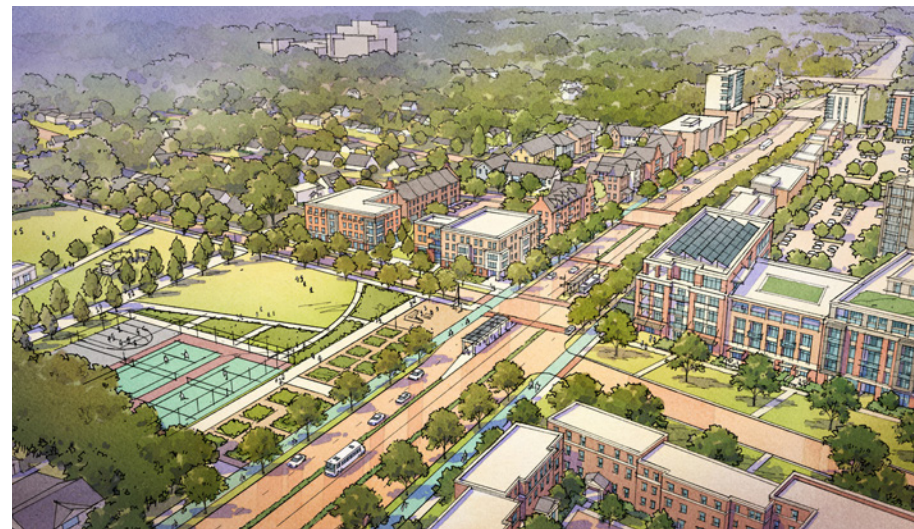


Figure 27: Georgia Avenue looking south from Evans Parkway Neighborhood Park—possible future

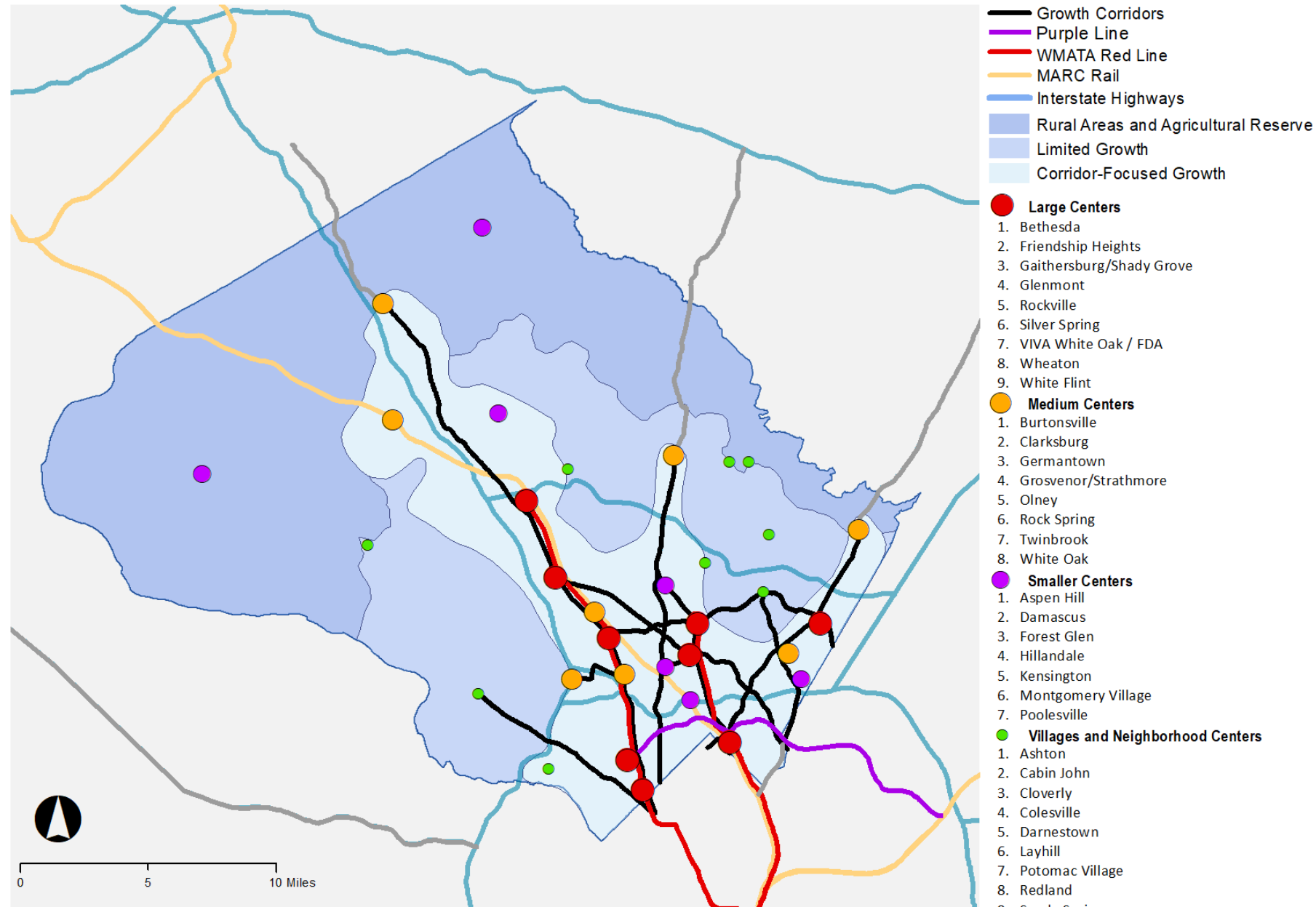
footprints or encouraging significant intensification of land uses outside of Complete Communities. Preservation of land for recreation, agriculture and environmental management must be ensured for the benefit of the entire county.

The concept of corridor-focused growth is a fundamental organizing element for Thrive Montgomery 2050, as it recognizes not only that intensively developed centers of activity and preservation of land both play a vital role in our quality of life but that neither pattern can exist without the other.

The concept of corridor-focused growth is a fundamental organizing element for Thrive Montgomery 2050, as it recognizes not only that intensively developed centers of activity and preservation of land both play a vital role in our quality of life but that neither pattern can exist without the other. By identifying the places where growth should be encouraged, this chapter establishes the framework to create Complete Communities, which depend on a compact footprint to give them coherence. The scale of development, building types, and diversity of uses envisioned within this footprint are discussed in greater detail in the Complete Communities chapter. In turn, the design elements that complement and reinforce Complete Communities are discussed in the Design, Arts, and Culture chapter.



Figure 28: Major transit corridors can be transformed from existing unsafe traffic arteries to a series of Complete Communities with a variety of housing and other uses.



The Thrive Montgomery 2050 Growth diagram illustrates growth concepts and potential centers of activity, but the diagram should be considered in the context of the Compact Growth and Complete Communities chapters. The centers of activity shown are not exhaustive of all existing or potential centers.

Figure 29: Corridor-focused growth

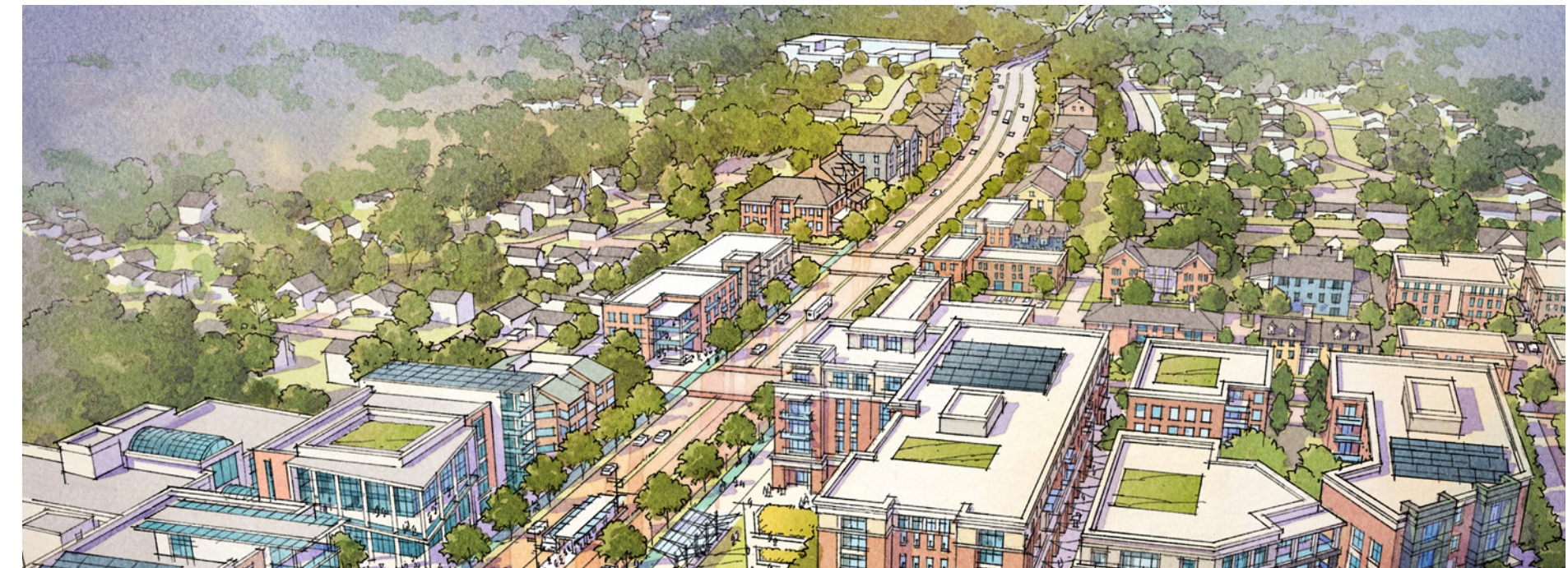
In order to maximize the efficiency of land use and public investment, the county will pursue the following policies and practices:

Concentrate growth in centers of activity along corridors through compact, infill development and redevelopment to maximize efficient use of land.

- Amend land use, design, and zoning regulations, including the Zoning Ordinance and Subdivision Regulations, to remove regulatory barriers and permit corridor-focused compact development. Appropriate densities will vary but should be sufficient to support, at a minimum, the efficient provision of transit service along these corridors.
- Improve the environmental sustainability of growth by encouraging infill and redevelopment to curb sprawl and bring areas built out in an era with little or no environmental regulations up to robust standards for stormwater management and other state-of-the-practice environmental standards.

Promote and prioritize public investment in infrastructure along growth corridors and leverage it to attract future private investment in a compact form.

- Adopt new methods of financing public infrastructure, such as value capture, tax increment financing, and other mechanisms to facilitate investment and provision of appropriate infrastructure in areas identified as appropriate for more intensive development.
- Establish high-quality transit infrastructure along growth corridors through capital investment and ensure reliable, frequent service through operational investment.
- Leverage federal, state and local incentive programs, publicly owned land and land investment opportunities for corridor infill development and redevelopment.



Limit growth beyond corridors to compact, infill development and redevelopment in Complete Communities to prevent sprawl. Apply principles of urbanism at an appropriate scale along a rural-to-urban transect as outlined in the Complete Communities chapter.

- Sustainably manage land outside growth corridors and Complete Communities to increase biodiversity, improve the health of natural habitats, preserve privately owned forests, protect watersheds and aquifers, and improve water quality while providing expanded opportunities for outdoor recreation, including vigorous physical activity.

Preserve and enhance the Agricultural Reserve and manage the areas designated within the footprint for a rural pattern of development for the benefit of the entire county.

- Maximize the benefits of the Agricultural Reserve through policies designed to ensure the continued viability of farming as an economically productive and sustainable activity, discourage sprawl, facilitate a broad range of outdoor recreation and tourism activities, conserve land and natural resources, and promote practices that advance environmental quality.
- Improve access to the Agricultural Reserve for the public to experience and directly benefit from this valuable resource for locally grown food, outdoor recreation, and tourism.

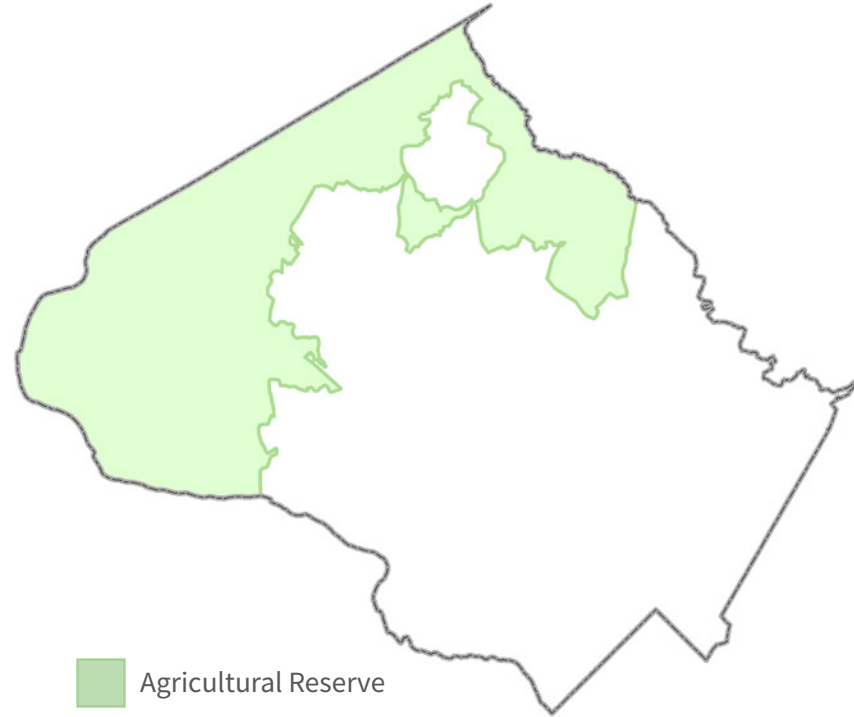


Figure 30: Montgomery County Agricultural Reserve.



Montgomery County's population is projected to grow by approximately 200,000 people over the next 30 years, and these policies and practices are critical to not only accommodating this growth but also to achieving Thrive Montgomery 2050's key objectives as well as combating and adapting to climate change. Nearly 85 percent of the county's land is already developed or otherwise constrained. If we fail to maintain effective barriers to sprawl, we will paint ourselves into a corner where space for farming, recreation, and resource management is exhausted along with space for additional growth.

We must encourage compact, infill development and redevelopment to accommodate anticipated population growth in a way that supports dense, vibrant, energized communities. The strategy of concentrating growth within nodes along corridors served by infrastructure, services, and amenities – including transit – and create focused centers of activity. This focus will in turn reduce the cost of public infrastructure and deliver more favorable returns on both public and private investment. Compact, infill development and redevelopment also align with the increasing desire of residents, businesses and employers seeking walkable, transit-oriented communities, as demonstrated by transit-oriented areas across the region and country.



We must encourage compact, infill development to accommodate anticipated population growth of approximately 200,000 more people over the next 30 years.

Growth corridors in the East County are vital to reversing decades of disinvestment.

The identification of growth corridors in the East County – particularly along Route 29 and the Georgia Avenue corridor along Metrorail’s Red Line – is vital to reversing decades of disinvestment and ensuring that the benefits of growth are more equitably distributed across lines of geography, class, and race. Political opposition to development in the East County – most clearly expressed by the removal of the I-95/Route 29 corridor in the 1993 Refinement of the Wedges and Corridors Plan from the areas identified as appropriate for growth – pushed public and private investment to the west. Subsequent public and private investment was focused along the I-270 corridor because this area appeared to offer the best prospects for growth and success. Meanwhile, the East County became relatively less attractive for employers and residents, feeding a cycle of disinvestment.

This pattern is consistent with what real estate developer and scholar Christopher B. Leinberger has described as the phenomenon of the “favored quarter.” Leinberger observes that in many metropolitan areas, decisions about the geographic allocation of resources made decades in the past are reinforced and repeated. Once an area receives resources and attention from the government and private sector, Leinberger argues, future investment tends to follow in the same location, reinforcing its head start and leaving other areas farther behind.

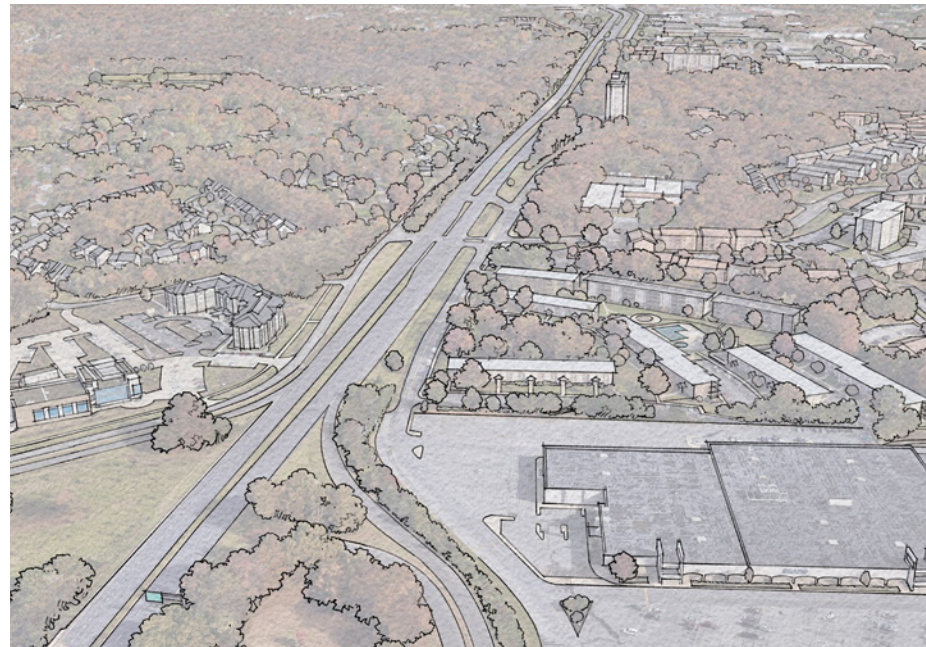


Figure 31: Colesville Road/Columbia Pike (Route 29) looking east from its intersection with New Hampshire Avenue—today



Figure 31: Colesville Road/Columbia Pike (Route 29) looking east from its intersection with New Hampshire Avenue—possible future

The evolution of the I-270 corridor as the “favored quarter” and accompanying limits on development in the East County were not the sole – or even the most important – cause of the racial and economic divide between the eastern and western part of the county. The logic of the favored quarter, however, was and is a significant factor in reinforcing disparities in access to investment, infrastructure, and services as well as the concentration of poverty and diminished access to opportunity. By focusing investment and encouraging development along corridors in the East County, this plan will establish the foundation for Complete Communities that will create a more prosperous and equitable future in this area.

Among the most clear-cut benefits of the efficient use of land, including compact corridor-focused growth together with reinforcement of the rural pattern outside of the corridors, is to make development more environmentally sustainable in general and to reduce greenhouse gas emissions in particular. By concentrating development in a limited footprint, corridor-centered growth facilitates walking, biking, and transit use and reduces emissions from motor vehicles. A compact form of development reduces driving even among people who continue to rely on cars, because trip distances decline as a wider range of needs can be met within a short distance, reducing vehicle miles traveled.



Figure 33: Lining corridors with appropriate densities provides housing options

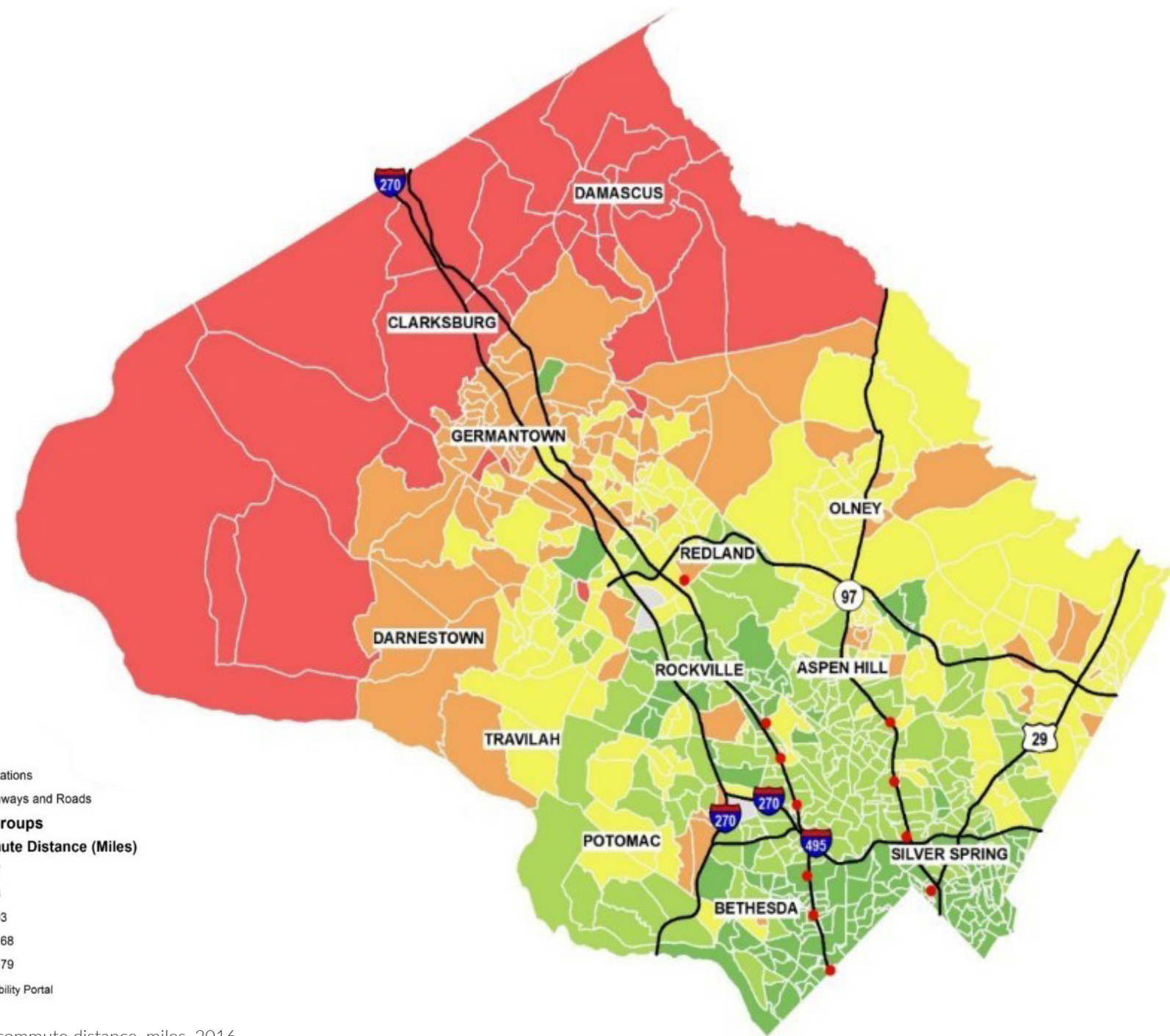


Figure 34: Median commute distance, miles, 2016

Compact growth also improves the environmental performance of both sites and buildings, as it allows the redevelopment of areas developed prior to the adoption of modern stormwater controls and often characterized by high proportions of impervious surface cover. A compact form of infill development or redevelopment can reduce stormwater runoff and heat island effect by using green infrastructure, green roofs, and other green cover, as well as building design and orientation to reduce urban temperatures.



Figure 35: At Pike and Rose, infill development reduced stormwater runoff flows by over 70 percent.

Finally, compact, corridor-focused development is essential to the continued protection of the Agricultural Reserve and preservation of land for environmental stewardship and recreation. As our population grows and the region continues to develop, pressure on rural areas and natural systems will increase. The preservation of the Agricultural Reserve reinforces the concentration of growth and maximizes the land available for farming, recreation and natural resource conservation.



While farming should remain the primary use in the Agricultural Reserve, the area set aside for the rural pattern also provides opportunities for recreation, tourism and natural resource conservation, uses that must be acknowledged and supported. The Agricultural Reserve improves the attractiveness and livability of the county because it provides opportunities for locally grown food, outdoor recreation, education, and tourism. The continued preservation of the Agricultural Reserve, along with the county's park system, also protects the county's forests, wetlands, meadows and streams, supports biodiversity and natural habitats, and protects watersheds, aquifers, and water quality.

In assessing future plans, projects, and proposals related to the efficient use of land and measuring the success or failure of the approaches recommended in this plan, relevant measures may include:

- Amount of infill development/redevelopment along major corridors.
- Proportion of new population, employment and housing within a mile (or half-mile) of priority corridors.
- Non-auto driver mode share (walking, biking, transit use) and corresponding reduction in VMT.
- Public and private investment in infrastructure, services, and amenities along corridors, overall and by area of county.
- Acres of farmland, natural habitats, forests and environmentally sensitive areas protected.
- Economic productivity of farming.
- Amount of space for outdoor recreation and variety of activities supported.
- Percentage increase in environmental performance of buildings and sites, overall and by area of county.
- Number of visitors from outside the Agricultural Reserve for recreation, commerce, and tourism.
- Maintenance and improvement in measures of stream water quality.
- Reduction in impervious cover and increase in area of impervious cover treated.





COMPLETE COMMUNITIES

MIX OF USES AND FORMS

While the Wedges and Corridors Plan was extraordinarily progressive in advocating a transit-oriented, compact form of development, it rejected the idea of mixed commercial and residential uses. The plan said the spaces designated for different uses should ultimately work together to achieve a “pleasant and economically feasible whole” but that these uses should be physically separated. It recommended Euclidean zoning, with areas set aside for multifamily, townhouse, and single-family housing along with isolated commercial and industrial zones, saying:

“[C]ommercial and industrial zones should exclude residences both because good residential neighborhoods cannot be maintained in such areas, and because business and industry can function more effectively where space allotted them is uninterrupted by housing.”



In addition to a rigid separation of uses, the plan insisted on the desirability of barriers, buffers and transitions between land uses to achieve harmony and compatibility:

“[L]ong established commercial centers expand into nearby residential neighborhoods, causing more transitional problems. The end result is a disease known as urban blight. This disease is contagious and is almost sure to spread where preventative measures are not taken.”

While the polycentric urbanism embodied by the 1964 plan’s corridor cities concept was fundamentally sound, its approach to the separation of uses and emphasis on transitions and buffers was not entirely successful in producing pleasant and economically vibrant commercial districts, and its other shortcomings have become increasingly obvious, namely:

- The separate-and-buffer approach failed to anticipate – much less meet – the demand for housing in mixed-use centers of activity. The corridor cities neither achieved the densities nor provided for the variety of uses, building types and services necessary to maximize their value in attracting residents and workers looking for more vibrant and appealing places to live and work.
- A handful of locations in Montgomery County have attracted investment in office, retail, and residential uses, but most lack the combination of elements – including a compact form with diverse housing types, commercial uses, transit and a walkable public realm – that support the kinds of human interaction common to the most successful places. Meanwhile, the areas surrounding our most eclectic centers of activity largely remain characterized by a separation of land uses and uniform lot sizes, lot coverage, and building forms.

The separation of uses and associated homogeneity in lot sizes, development standards and building forms, coupled with the commitment

to barriers, buffers and transitions had the effect – whether intentional or not – of discouraging connections among people and places and reinforcing racial, social and economic divisions between neighborhoods and parts of the county.

The implementation of these approaches also made access to the full range of economic, educational and cultural opportunities (as well as services, amenities, and infrastructure) far too dependent on access to cars. By separating uses and investing heavily in roads, we have made driving the only practical way for many residents and workers to meet their daily needs – trips that should be feasible on foot, on a bicycle, or on a train or bus.

The preservation and protection of neighborhoods dedicated exclusively to detached single-family houses has left residents disconnected from retail and other services, encouraged the construction of stand-alone public facilities, and perpetuated the inefficient use of land.





Our land use policies have evolved in recent years to reflect a changing social and demographic context as well as changing preferences. The county also has evolved from a bedroom community to the District of Columbia to a county with several distinct employment centers. These changes have coincided with the emergence of increasingly strong market preferences for transit-oriented, mixed-use communities with a unique sense of place. Our plans have been responsive to these trends to some degree, but implementation of transit-oriented, mixed-use development has been limited due to economic and regulatory constraints.

In addition to transit-oriented, mixed-use development, the concept of “15-minute living” has emerged as a way of reimagining existing communities to maximize their attractiveness and efficiency by locating living spaces in each neighborhood or district within walking distance of services, infrastructure, facilities, and amenities that serve the daily needs of the people who live there. While a rigid application of 15-minute living is unlikely to be practical in every part of the county, the concept is a useful way to think about how to build complete communities and should be an organizing principle in planning for their success.

To ensure that demand for future development in Montgomery County is harnessed to embrace complete communities and 15-minute living – both by building new centers of activity along corridors and by making existing ones more complete – the county will pursue the following policies:

Identify and integrate elements needed to complete centers of housing, retail, and office development and plan to make 15-minute living a reality for as many people as possible.

- Update zoning allocations and standards to encourage the integration of varied uses, building types and lot sizes.
- Apply flexible approaches to accommodate infill and redevelopment that improve access to amenities, active transportation, parks, and open spaces, and a broader range of housing types at the neighborhood scale.
- Prioritize neighborhood-level land use planning as a tool to enhance overall quality of community life and avoid reinforcing outdated land use patterns.
- Allow sufficient densities to make a wide range of uses economically viable in complete communities. Encourage densities sufficient to support convenience retail and other local-serving amenities at the neighborhood level. Provide guidance for accommodating additional density in a context-sensitive manner.
- Ensure that complete communities are integrated into their surroundings and supported by a public realm that encourages walking, biking and rolling, as well as social interaction through the configuration of sidewalks, paths, landmarks, and gathering spaces.
- Adopt planning approaches that prioritize providing more complete communities in service to improving the quality of community life throughout the county.



Encourage co-location and adjacency of all essential and public services, especially along growth corridors and in complete communities.

- Maximize the utility of existing and new public facilities by extending their reach into the surrounding neighborhoods through active transportation improvements that prioritize walking, biking, rolling, and transit use.
- Develop standards for colocation of public facilities that promote mixing of uses or services and compact development strategies. Encourage public-private partnerships and ensure they promote social interaction and physical activity.

Retrofit centers of activity and large-scale single-use developments to include a mixture of uses and diversity of housing types and to provide a critical mass of housing, jobs, services, and amenities for vibrant, dynamic complete communities.

- Ensure employment uses in economic clusters develop in a mixed-use format along with housing, retail, amenities, and transit, and ensure they are integrated into the surrounding communities.
- Allow creation of co-located subsidized housing, discussed further in the Affordable and Attainable Housing Chapter, for industries that employ large numbers of employees (permanent or seasonal).
- Encourage higher density economic and housing cooperatives (live/work areas such as home occupations, artist villages, farmers’ market/villages, tech/life-science startup incubators).

MONTGOMERY COUNTY HAS REACHED A
STAGE WHERE GREENFIELD OPPORTUNITIES
LARGELY HAVE BEEN EXHAUSTED AND
THE GENERAL LOCATIONS OF BUSINESS
DISTRICTS, RESIDENTIAL NEIGHBORHOODS,
AND FARMLAND HAVE BEEN ESTABLISHED,
OR ARE AT LEAST PLANNED



Montgomery County has reached a stage where greenfield opportunities largely have been exhausted and the general locations of business districts, residential neighborhoods, and farmland have been established, or are at least planned. For example, the downtowns of Silver Spring and Bethesda; the new life sciences hubs anticipated in the Great Seneca Science Corridor and White Oak; and the emerging town centers in Germantown and White Flint have zoning capacity as well as physical space for tens of millions of square feet of development.

The task of this plan, therefore, is less about identifying new locations for large government or corporate tenants and more about making parts of the county that already have been developed or planned more attractive to residents and workers, which in turn will help attract employers. The central premise is that making individual neighborhoods and districts more complete is among the most effective ways to accomplish this goal. Combined with a compact development footprint, clear standards to ensure quality of design; complementary transportation infrastructure to

support walking, rolling, and riding; and appealing parks and recreation offerings for active lifestyles; more complete communities are essential to our competitiveness.

The combination of strategies that can help create a more complete community in any particular place depends heavily on context. The scale (village vs. town center vs. downtown), location (inside vs. outside the growth footprint) and type of district or neighborhood (e.g., office park vs. central business district vs. residential neighborhood vs. suburban shopping center) all influence which elements should be incorporated and how they should be tailored. Despite the varying needs and conditions of different parts of the county, however, the concept of encouraging more diversity of use and form is relevant in almost every location. For example:

- Existing suburban office parks in locations such as Rock Spring or Clarksburg's COMSAT site have large existing buildings that can accommodate employment but lack the integration of uses, services, and amenities necessary to succeed in an increasingly competitive office market. Complete community strategies can help reposition these employment centers through infill and redevelopment to incorporate housing, restaurants, and public spaces along with better transit service, making them more attractive to both residents and employers.
- Likewise, for places the county hopes to see emerge as important centers for office employment, such as White Flint, White Oak, or Germantown, the integration of additional housing options can help to encourage activity beyond regular business hours, creating the sense of energy and activity during the evening and on weekends.
- Centers of activity in suburban and rural areas, which range from large retail shopping centers such as Aspen Hill, to clusters of commercial and neighborhood serving retail uses like the shopping areas in Potomac Village or Four Corners, offer convenience retail for surrounding subdivisions but often lack safe pedestrian accommodations, good

transit connections, or high-quality parks and public spaces. In some places, new kinds of commercial development, such as medical offices, will be viable even where office space or other employment-related uses are difficult to attract. The recommendations in this chapter and elsewhere in the plan can help make these neighborhoods more walkable and livable.





Each complete community will embrace a mix of uses including employment and diverse housing types to accommodate as many daily needs as practicable. Implementation will be organic and incremental, through infill and redevelopment within centers of activity along corridors as well as within existing downtowns, town centers and rural villages. This implementation will be primarily market driven, using the development review process to funnel contributions from private developers to streetscape improvements, dedication and construction of parks and public spaces, and the addition of bicycle and pedestrian infrastructure.

As explained in the chapter on Compact Growth, development of new or substantially expanded centers of activity should be focused along corridors. Limited, organic development beyond the corridors and defined growth areas should be allowed to increase the diversity of housing types in existing residential neighborhoods and make these areas more complete, particularly near existing centers of activity or development. Opportunities for increased housing diversity outside the defined growth areas will allow neighborhoods to evolve over time to address current and future housing needs and become more racially and socioeconomically integrated.



How Complete Communities will serve the goals of Thrive Montgomery 2050

Planning for complete communities, with a true integration of uses, diversity of building types, and variety of lot sizes, represents a departure from the automobile-oriented land use planning of the last several decades and the embrace of a planning paradigm that is far more likely to help attract employers, workers, and residents by offering convenience, walkability and a quality of place only available when the needs of people are considered ahead of the needs of cars.

As previously explained, the creation of vibrant, dynamic complete communities that include housing, jobs, services, amenities and opportunities for social gathering and interaction will attract employment, advancing our economic performance and competitiveness. This approach will not be sufficient standing alone and it is not intended as a substitute for other elements of a comprehensive economic development strategy. In an era with limited demand for new office construction and a strong market preference for locating businesses in high-quality, mixed-use, walkable and transit-oriented areas, however, it is one of the best strategies available to local government to attract and retain employers.

In addition, flexible use and development standards that allow variety in lot sizes, building types, and building placement offer an opportunity to increase commercial and residential diversity within neighborhoods. A broad assortment of retail, office, and live-work spaces designed to fit the needs of individual businesses can support different kinds of work and employment arrangements. The diversity of housing and employment types provides a means for renters, first-time homebuyers, or new business owners to access and participate in competitive markets.



Diversity in development is especially important to producing housing that matches the needs of our future. The integration of accessory dwelling units, duplexes, and multi-family buildings within the same community supports a broader range of households and incomes, reduces the concentration of poverty, and increases racial and economic equity. A mixture of housing types – coupled with strategies to use the built

environment to encourage social interaction – can help create integrated communities where people across the ethnic, racial, social, and economic spectrum not only live and work together but develop a sense of shared purpose and community. These elements also create opportunities for housing suitable to every stage of life, allowing residents to stay in the same neighborhoods as they age.



Finally, complete communities will also create long-term sustainability for both human and environmental health. A mixture of uses and forms, together with a built environment that facilitates active lifestyles, allows more trips to be completed by walking, biking, rolling, and transit, reducing vehicle miles traveled and dependence on cars while increasing physical fitness and opportunities for social interaction. Likewise, the mixture of uses, co-location and adjacency of public services and amenities improves sustainability by reducing building footprints, cutting energy use. Co-location also helps to maximize community use and social interaction.

In assessing proposals related to the creation of complete communities and measuring the success or failure of the approaches recommended in this plan relevant measures may include:

- Population density in centers of activity along corridors as well as within existing downtowns, town centers and rural villages
- Diversity uses and structures
- Racial, ethnic, and income diversity
- Median age/life stages concentration
- Percentage of employment growth overall and by area of the county
- Car ownership levels
- Transit usage for inter-county travel
- Weekend transit usage
- Numbers of co-located facilities/amenities
- Public investment ratios for walking, biking, rolling, transit, and automobile
- Median vehicular expense per county household
- Median housing expense per county household
- Emergence of key population and mixed-use centers
- Increasing commercial activity in otherwise residential neighborhoods





DESIGN, ARTS & CULTURE

INVESTING AND BUILDING
COMMUNITY

Design of the built environment strongly influences our quality of life. The pattern of development across a city, county, and region; the configuration of neighborhoods and districts; and the architecture of individual buildings collectively shape our perception of places and influence how we choose to travel, recreate and socialize. This chapter focuses on the urban design principles applicable to blocks and individual development sites, the architecture of public and private buildings, the landscape of plazas and public spaces, and elements of street design.

Design serves functional and aesthetic purposes. Functional considerations dictate how structures are built and how they connect to the sidewalks, streets and spaces around them to facilitate movement, social interaction, and physical activity. Aesthetic aspects of design, along with the integration of arts and cultural elements, influence how streets, buildings and spaces look and feel to create beauty and a sense of place. Arts and cultural practices touch every corner of life and are among the most visible indicators of the social values and diversity of a place. Public art and cultural institutions highlight new perspectives, preserve local history and traditions, deepen our understanding of others, and expand our imaginations.



The configuration of buildings and streets, along with the expression of arts and culture strongly influence the perception of a place and shape behavior in public spaces

The Wedges and Corridors Plan envisioned a variety of living environments and encouraged “imaginative urban design” to avoid sterile suburban sprawl. Unfortunately, design approaches intended to serve a range of functional objectives and aesthetic aspirations soon succumbed to an emphasis on the convenience of driving and the assumption that different land uses, building types, and even lot sizes should be separated. Over time, these priorities produced design approaches that failed to create quality places with lasting value.

Despite the 1964 plan’s recognition of the importance of urban design, a continued emphasis on facilitating driving has created unattractive and unsafe walking environments, even in areas with significant investments in transit infrastructure



Automobile-oriented design meant that thoughtful site arrangement was subverted by an insistence on the provision of abundant and visually prominent surface parking, with buildings placed in the middle of large asphalt lots or entrances and front doors obscured by driveways and garages. Buildings were disconnected from public spaces and set back from streets. Streets were widened, pushing buildings farther apart and preventing a sense of enclosure, which discouraged walking by making it less convenient and comfortable. Space for sidewalks, seating, and greenery was sacrificed to make more space for parking and roads, shrinking the size and utility of public spaces. Other elements of street design such as lighting and signage were enlarged to make them more visible to motorists passing at high speeds, making streetscapes less engaging to pedestrians and degrading the quality of the public realm.



Buildings designed to accommodate single uses, while less expensive when considered in isolation, created an inventory of structures that are inflexible and costly to reuse. Malls, office parks, and other large, single-use buildings are difficult to repurpose and the high cost of adapting their layouts to meet new spatial needs due to technological shifts, demographic changes, and market preferences shrinks their useful lives and makes them less sustainable. The consequences of the limited adaptability of our building stock are evident in persistently elevated office vacancy rates accompanied by an acute shortage of housing.



Intimate streets with buildings fronting on to sidewalks encourage walking and social interaction while wide roads with buildings set far apart appear uninviting, are unsafe and promote more driving



Malls, office parks, and other large, single-use sites are less adaptable and require significant investment to repurpose as compared to smaller buildings built in mixed-use districts



Montgomery County’s land use matured over the life of the Wedges and Corridors plan, and as we approach the point where greenfield development opportunities within the growth envelope have been exhausted, a new approach more suited to infill and redevelopment is required. When the subdivision of farmland was the primary strategy for accommodating growth, the focus of land use regulation was on the entitlement process, which allocates development rights and responsibility for the provision of basic infrastructure such as roads and sewer pipes. The form and orientation of buildings to each other and to the public realm were a subsidiary consideration.



Entitlement-centered approaches to zoning often result in homogenous communities while form-based regulations can create neighborhoods that are more mixed and celebrate local geography, climate and building traditions

Entitlement-centered rules are well-suited to standardized, cookie-cutter subdivisions but poorly adapted to the design of distinctive projects that respond to their surroundings and the needs of increasingly constrained development sites – to say nothing of celebrating local geography, history and culture. We can no longer afford to ignore the attributes of neighborhood and site design that strongly influence perceptions of the quality and potential of a place. Dispersed buildings and sprawling parking lots lead to underbuilt sites that are poorly suited to repositioning, infill, and redevelopment and reduce the utility of investment in parks, transit, and other public amenities and infrastructure.

These problems are every bit as evident in the design of public buildings as in private development. Typical parcel size standards for public buildings such as schools are too large to fit most available sites, limiting the location of new facilities. The shortage of “adequate” sites along with a growing student population leads to a tear-down-and-rebuild approach with larger and larger numbers of students in bigger and bigger buildings. Boundary areas draw students from farther away, leading to the allocation of more space for parking, less walking and bicycling, longer bus rides and drives for parents as well as longer commutes for staff.



Infill design standards and colocation strategies for public facilities are needed to create sustainable civic buildings within walking distance of neighborhoods



An expanding public art field and its growing presence in the built environment require new government programs that can support nontraditional and temporary installations and performances.

Montgomery County has evolved into one of the most diverse jurisdictions in the nation and our arts and culture sector is impressive in its scope and depth. Taken as a whole, the sector would be the sixth-largest employer in the county. While the county makes significant investments in arts and culture, these investments are not always equitably distributed. Emerging organizations that support underserved communities often lack the funding and base of support enjoyed by some of their more established counterparts. Artists and arts organizations cite the lack of affordable living, working, and sales spaces as a major challenge. The field of public art has been expanding to embrace a wider range of approaches including civic and placemaking practices, but the county's art programs lag in its ability to apply these approaches.

In order to maximize the contributions of design, arts, and culture toward creating strong communities with lasting value, the county will pursue the following policies and practices:

Use design-based tools to create attractive places with lasting value that encourage social interaction and reinforce a sense of place.

- Use codes, design guidelines, pattern-based zoning, and regulatory tools that focus on the physical forms of buildings, streets, and spaces to ensure development across the county satisfies the following goals through massing, architecture, landscape, and street design:
 - Ensure that all architecture and landscape designs physically define streets and public spaces as places of shared use that engage the pedestrian and are configured to encourage social interaction.
 - Link individual architectural projects seamlessly to their surroundings irrespective of style. Civic buildings and public gathering places must be treated as important sites whose design reinforces community identity and a culture of inclusion and democracy.
 - Design buildings, streets, and parking to prioritize the pedestrian scale and encourage walking and bicycling through smaller blocks, narrower streets, buffered bike lanes and sidewalks. Slow vehicle speeds and minimize surface parking while adequately accommodating automobiles.
 - Accommodate new development with a context sensitive approach to architecture and landscape design that acknowledges neighboring structures, local climate, and topography.
 - Physically integrate government and private development sites into their surrounding neighborhoods such that they welcome the general public and support local economic development by facilitating movement and interaction of people and transfer of ideas and innovation.
 - Preserve, renew, and reuse existing and historic buildings, districts, and landscapes to affirm the continuity and evolution of communities while celebrating local culture and identity.

- Replace vague concepts such as “compatibility” with clear standards for form, site layout, setbacks, architecture, and the location of parking. Adopt rules for “missing middle” housing types such as tiny houses, cottages, courtyard clusters, duplexes, multiplexes, small apartment buildings; shared housing, co-housing and accessory dwelling units (ADUs). Amend land-use, design, and zoning regulations, including the Zoning Ordinance and Subdivision Regulations, to remove regulatory barriers and facilitate development of these housing types.
- Update the zoning code to include basic form-based elements for all zones. Adopt context-sensitive design guidance for all master planning efforts.

Promote design strategies and retrofits to make new and existing buildings more sustainable and resilient to disruption and change.

- Encourage state-of-the-practice sustainability features such as net-zero/ carbon-positive buildings, biophilic design and on-site energy generation for new public buildings and large private developments on sites across the county.
- Promote cost-effective infill and adaptive reuse design strategies to retrofit single-use commercial sites such as retail strips, malls, and office parks into mixed use developments.
- Incentivize the reuse of historic buildings and existing structures to accommodate the evolution of communities, maintain building diversity, preserve naturally occurring affordable space, and retain embodied energy of structures.
- Establish standards for public facilities that align with infill and redevelopment strategies and acknowledge the county’s limited land supply and ambitious climate-action goals.

- Implement policies to ensure that new buildings and parking structures are adaptable to changing technologies and market preferences and are able to mitigate effects of climate change over time.

Support arts and cultural institutions and programming to celebrate our diversity, strengthen pride of place, and make the county more attractive and interesting.

- Create an inclusive arts-and-culture plan that establishes a refreshed vision; sets goals, criteria, and priorities for the county’s support of the arts-and-culture sector; and addresses how the county’s arts and culture resources are allocated.
- Improve access for artists and arts groups to affordable living, working, and presentation spaces with a focus on economic, geographic, and cultural equity.
- Promote public art, cultural spaces, and cultural hubs along corridors and in Complete Communities.
- Eliminate regulatory barriers to live-work spaces, home studios, galleries, and other small-scale art-making and creative businesses.
- Enable all residents to experience public art daily by incorporating it into the design of buildings, streets, infrastructure, and public spaces.
- Use new public facilities to demonstrate principles of architecture as civic art and broader cultural representation.
- Encourage property owners, non-profit organizations, and government agencies to maximize use of parks and public spaces for artistic and cultural programming, activation, and placemaking. Maintain an annual calendar of events varying in scale, time, and location to help guide efforts to improve the reach of diverse programming.

- Partner with agencies to strengthen data collection about investments and better align arts-and-culture related policies with Thrive Montgomery 2050’s goals of economic competitiveness, social equity and environmental resilience.

These policies will ensure that the design of our built environment supports our economic competitiveness. Design-based tools will create attractive buildings, streets, and public spaces that retain greater economic value over time. The thoughtful arrangement of these elements will create places that become destinations for commerce and social activity and add value to their surroundings,

encouraging neighboring owners to reinvest in their own properties to match and take advantage of adjacencies. Places designed with pedestrians in mind will lead to more human interaction and facilitate the exchange of ideas, attracting innovative companies and creative professionals. Comfortable, tree-lined streets will meet market demand for walkable places.



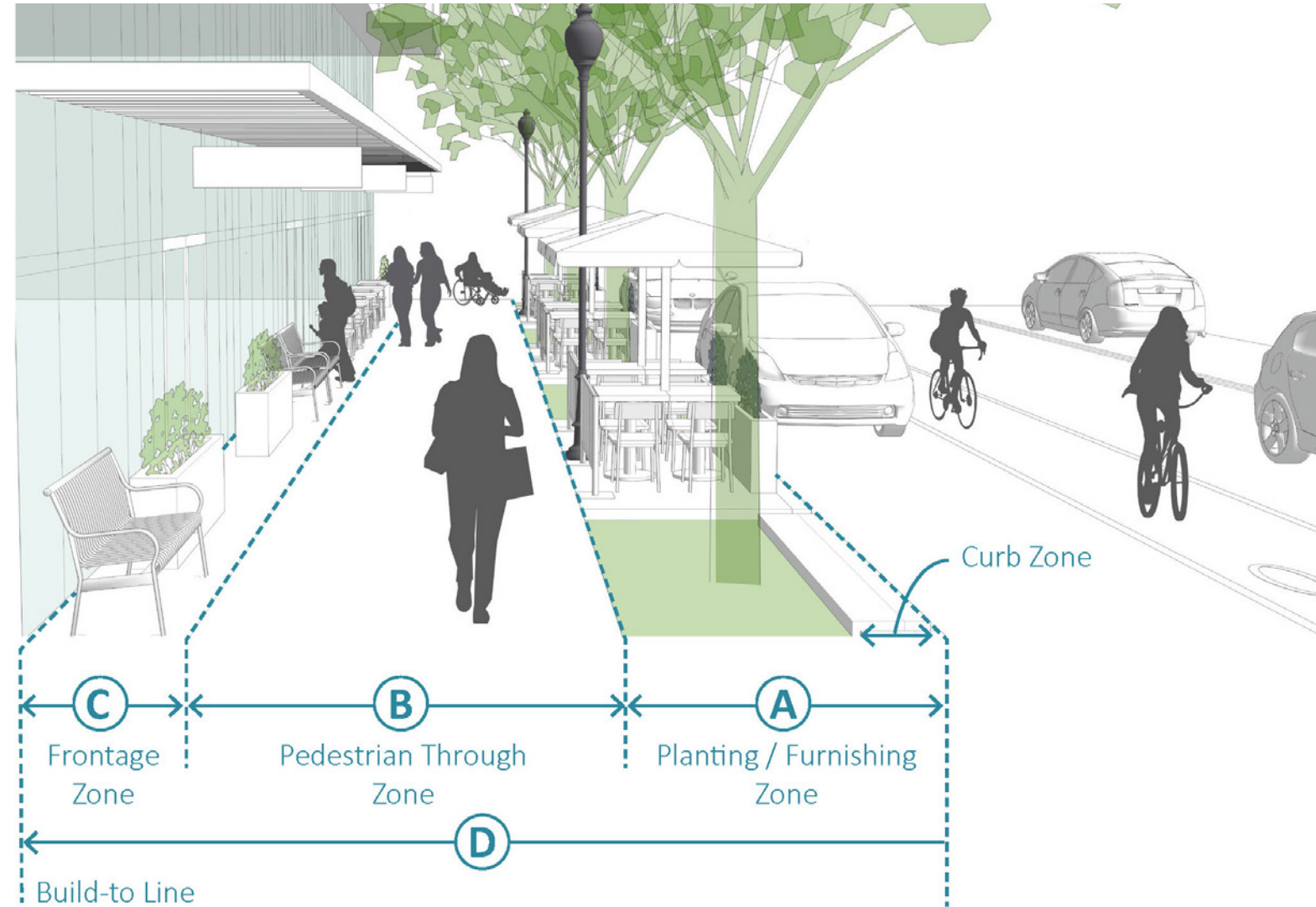
Sustainable design strategies for new construction and retrofits will enhance the environmental performance of buildings and neighborhoods. Promoting sustainability features in new public and private buildings will reduce the ecological impact of growth. Encouraging adaptive reuse of existing buildings and incentivizing cost-effective retrofits of single-use sites into mixed-use projects will reduce energy consumption and greenhouse-gas emissions. Compact site standards and colocation of public facilities along with state-of-the-practice sustainability features will help achieve ambitious climate action goals and make more efficient use of public land.



Cost effective strategies to adaptively reuse our building stock and infill redevelopment of single-use sites are needed to achieve the county's ambitious climate action goals



Design codes based on physical form will serve as predictable guides for change, address community concerns over accommodating growth, and illustrate hard-to-define concepts such as “character” and “compatibility.” A shift away from these kinds of vague standards will help make regulatory decisions more equitable by applying more objective criteria in evaluating development proposals and their relationship to their surroundings. Clear standards governing acceptable form will discourage amorphous claims about the “incompatibility” of different housing types and neighborhood-serving retail, facilitating the creation of mixed income neighborhoods where essential services are within walking distance of most residences.



Clear form-based design standards that are not overly prescriptive allow the mixing of uses, building types and architectural styles while ensuring a consistent quality of streets and public spaces

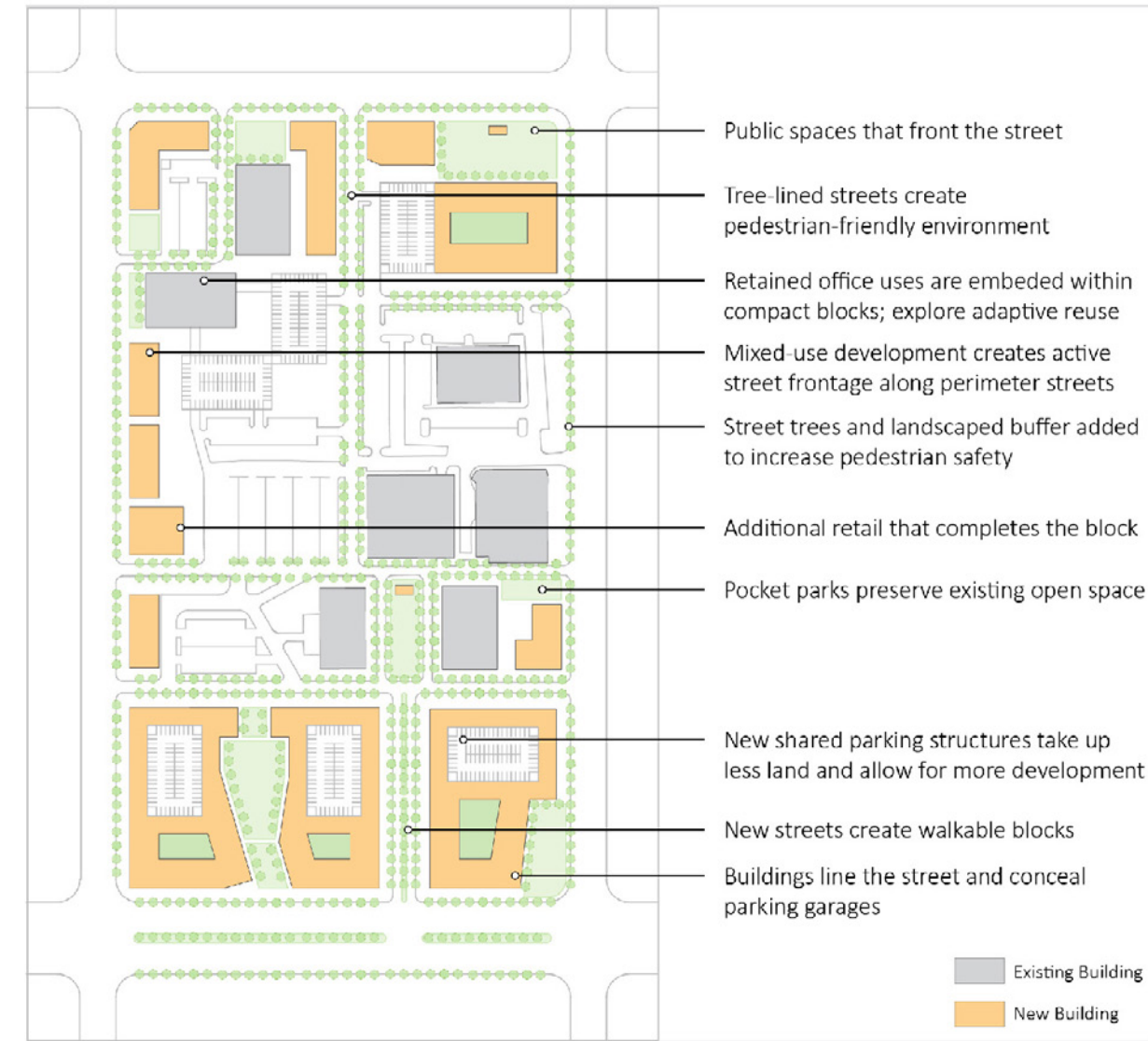


Figure 37: Potential redevelopment of a typical suburban office park.

Diagram shows potential infill, adaptive reuse, and partial redevelopment of a typical office park that creates smaller development blocks connected by a complete street network and varying open spaces.



Figure 36: Typical street design guidelines



A focus on form and adaptability rather than use and density in regulatory systems will provide flexibility to respond to changing market conditions and demographic trends and adapt to disruptive technological and environmental change. Designing buildings and parking with adaptability in mind will prolong the useful life of structures and reduce scrape-and-replace development practices, conserving energy embodied in existing structures.

Highly skilled workers in creative or knowledge-intensive occupations are particularly sensitive to quality of place, which includes an open and tolerant attitude toward different people, cultures, and lifestyles along with attention to the built and natural environment and excellent public services. A desire for human interaction cuts across lines of age, race and ethnicity, and class and is critical to the happiness of individuals as well as the collective well-being of a community. Encouraging different kinds of people to interact in public spaces is important to building a sense of community with shared interests and values. Arts and culture spaces and programming can help us better understand and appreciate each other, strengthening support for diversity and inclusion and building trust.

In many cases the problem is not that there is insufficient public space but that it fails to draw people in and use it, for example this shot of the 100 percent corner in downtown Bethesda is quite elaborately designed and typically not well utilized.



Affordable living, administrative, working, and presentation spaces for artists throughout the county will help to showcase our diversity and attract and retain cultural uses and arts related businesses. Strategic investments in these kinds of spaces can increase the economic contribution of arts and culture over the long run by reinforcing the role of the sector in building centers of social gathering and cultural events which in turn attract other business and investment.

Artistic and cultural programming in our public spaces – with a calendar of events varying in scale, time, and location – will help improve the equitable distribution of resources to celebrate our cultural diversity. By focusing investments in public art, cultural spaces, and cultural hubs along corridors and in Complete Communities we can make these places welcoming and attractive to people from different backgrounds. Support for arts and culture can provide creative tools to share untold stories, encourage empathy, give voice to diverse points of view, and foster civic dialogue and participation.



In assessing proposals related to design, arts, and culture and measuring the success or failure of the approaches recommended in this plan, relevant measures may include:

- Public-use space per capita
- Pedestrian traffic in downtowns and suburban activity centers
- Visitation and time spent in select urban, suburban, and rural gathering places
- Number and spatial distribution of public art installations, temporary and permanent
- Number and spatial distribution of publicly funded community events such as festivals, street fairs, sporting tournaments, etc.
- Number, use type, and square footage of businesses classified as cultural categories by the North American Industry Classification System (NAICS)
- Average rent, total square footage, and spatial distribution of available art/creative/maker-space
- County budget allocated to arts and cultural agencies and programming and local spending by patrons of arts and cultural events
- Retention and growth of arts- and culture-related businesses
- Number and spatial distribution of cultural heritage and historic designations
- Number of buildings with performance-based energy certification
- Number of adaptively reused, retrofitted, and repositioned structures and structures designed with flexibility for future uses and/or adaptability in mind



TRANSPORTATION AND COMMUNICATION NETWORKS

CONNECTING PEOPLE, PLACES,
AND IDEAS

No land use plan can be successful without a complementary transportation plan, because even the most forward-thinking land use policies will fail if they are not supported by transportation infrastructure and services that reinforce – or at least avoid undermining – their objectives. As the Wedges and Corridors Plan recognized more than half a century ago:

“An efficient system of transportation must include rapid transit designed to meet a major part of the critical rush-hour need. Without rapid transit, highways and parking garages will consume the downtown areas; the advantages of central locations will decrease; the city will become fragmented and unworkable. The mental frustrations of congested highway travel will take its toll, not to mention the extra costs of second cars and soaring insurance rate. In Los Angeles where an automobile dominated transportation system reigns supreme, there is still a commuter problem even though approximately two-thirds of the downtown section is given over to streets and parking and loading facilities. There is no future in permitting the Regional District to drift into such a ‘solution.’”

Despite this prescient warning, we remain heavily dependent on automobiles, with more than two-thirds of workers in the county driving alone to and from work. Montgomery County has among the lowest percentages of commuters in the region who walk, pedal, roll, or ride transit, and our transportation system is a major contributor to greenhouse gas emissions.

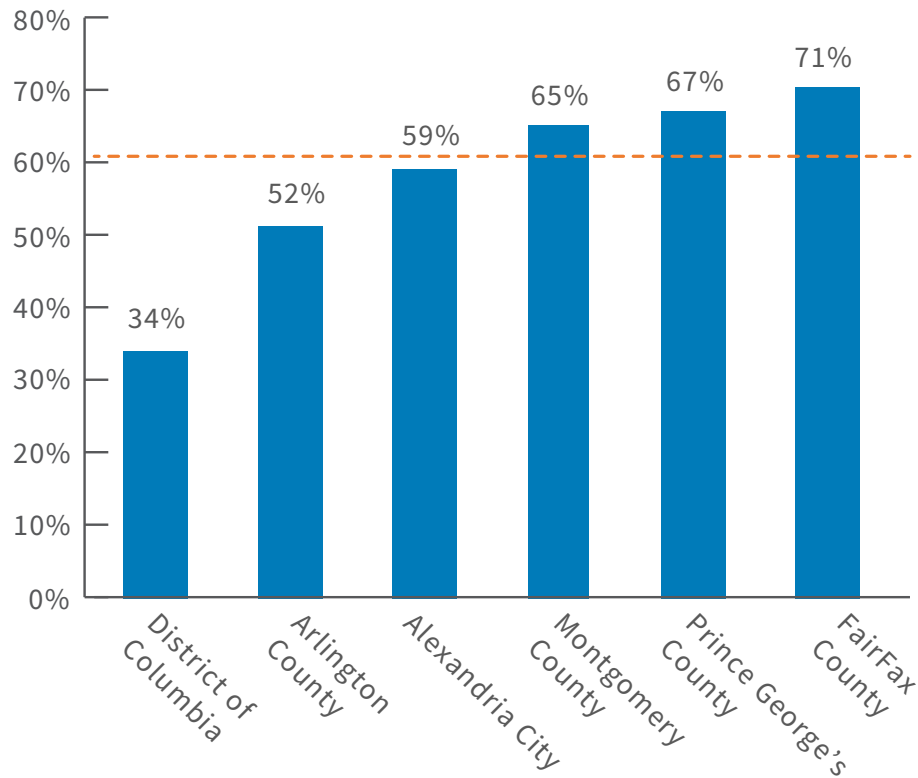


Figure 38: Percent of commuters who drive alone, by jurisdiction, 2019

Our dependence on driving is rooted in generations of efforts to facilitate the movement of as many automobiles as quickly as possible while funneling traffic to a handful of north-south arterial roadways that tie otherwise disconnected subdivisions to job and retail centers. Successive “improvements” to these roads have added more and more lanes for

vehicles at the expense of space for pedestrians, bicycles, dedicated lanes for transit vehicles, street trees and anything else that might slow cars. This makes alternatives to driving less practical and appealing, which leads to more driving and in turn generates demand for wider roads.

Reinforcing this vicious cycle is the fact that optimizing major arterials for cars has made these corridors unattractive and unsafe, discouraging private investment and compact, transit-oriented development even where high-quality transit infrastructure is already in place (as evidenced by several large underutilized properties along corridors near Metrorail stations).

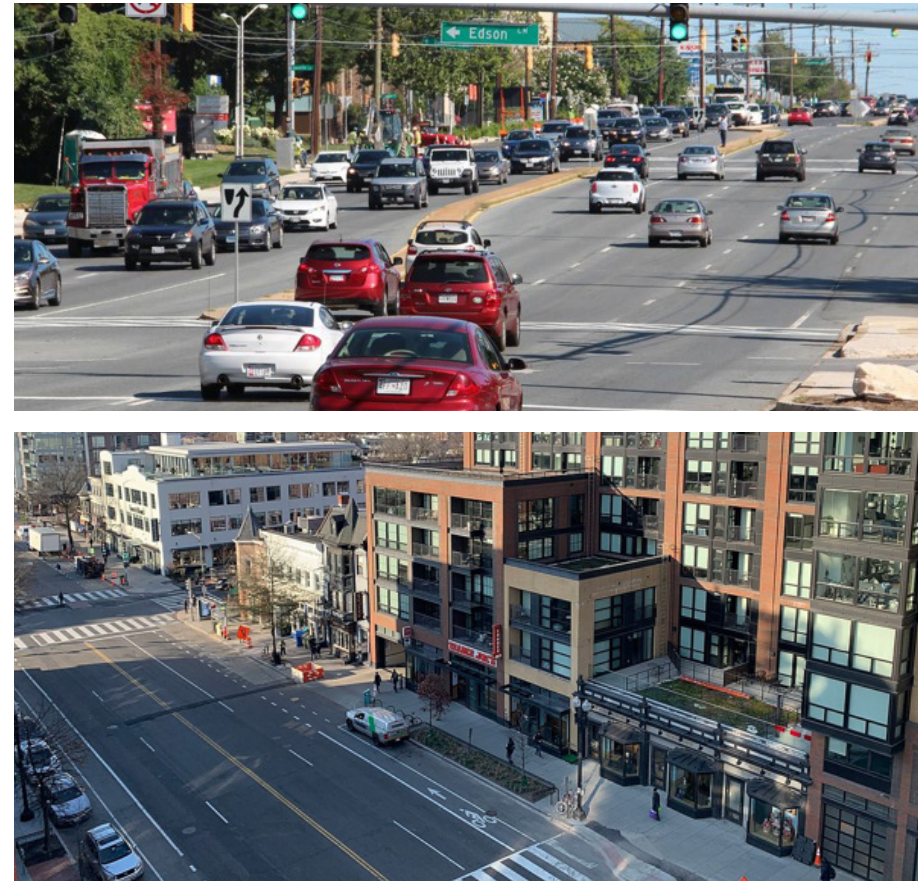


Figure 39: Thrive Montgomery 2050 recommends borrowing elements found in more urban boulevards (such as 14th Street NW in DC - bottom) to corridors like Rockville Pike (top).

The most obviously and acutely damaging consequence of this dynamic is that pedestrians, bicyclists, and drivers are killed or seriously injured with disturbing frequency. Somewhat more subtle, but perhaps just as significant, is the effect that automobile-oriented design has on the vitality and appeal of neighborhoods and commercial districts alike. Safe, attractive streets encourage people to get out and walk, pedal, or roll, whether simply to get some exercise, to run an errand, to go to work or school, or to reach an intermediate destination such as a bus stop or rail station. This kind of activity supports physical and mental health and facilitates the casual social interaction that build a sense of place and community. Ugly, unsafe roadways are barriers that degrade the quality of life of everyone who lives and works near them, even if they are never involved in a traffic collision and even if they do not personally enjoy walking, rolling or bicycling.

The radial pattern of automobile-centric corridors, limited infrastructure to support alternatives to driving, and the absence of street grid connections also make our transportation network less adaptable and resilient. The hub-and-spoke model of arterial corridors was a logical way to link suburban enclaves to jobs in and around the District of Columbia, but other important centers of activity have emerged. Our prosperity depends on access to Frederick, Prince George’s, Howard, and Baltimore as well as Arlington, Fairfax, and Loudoun. The lack of efficient transit connections to schools, businesses, laboratories, and other important centers of economic, intellectual, and social activity in these jurisdictions leaves us unable to take full advantage of our presence in one of the most dynamic regions in the country, if not the world.

ABOUT 40% OF FEDERAL JOBS AT GOVERNMENT AGENCIES AND 30% OF JOBS AT PRIVATE EMPLOYERS IN MONTGOMERY COUNTY ARE WITHIN ½ MILES OF A METRO RAIL OR MARC STATION.

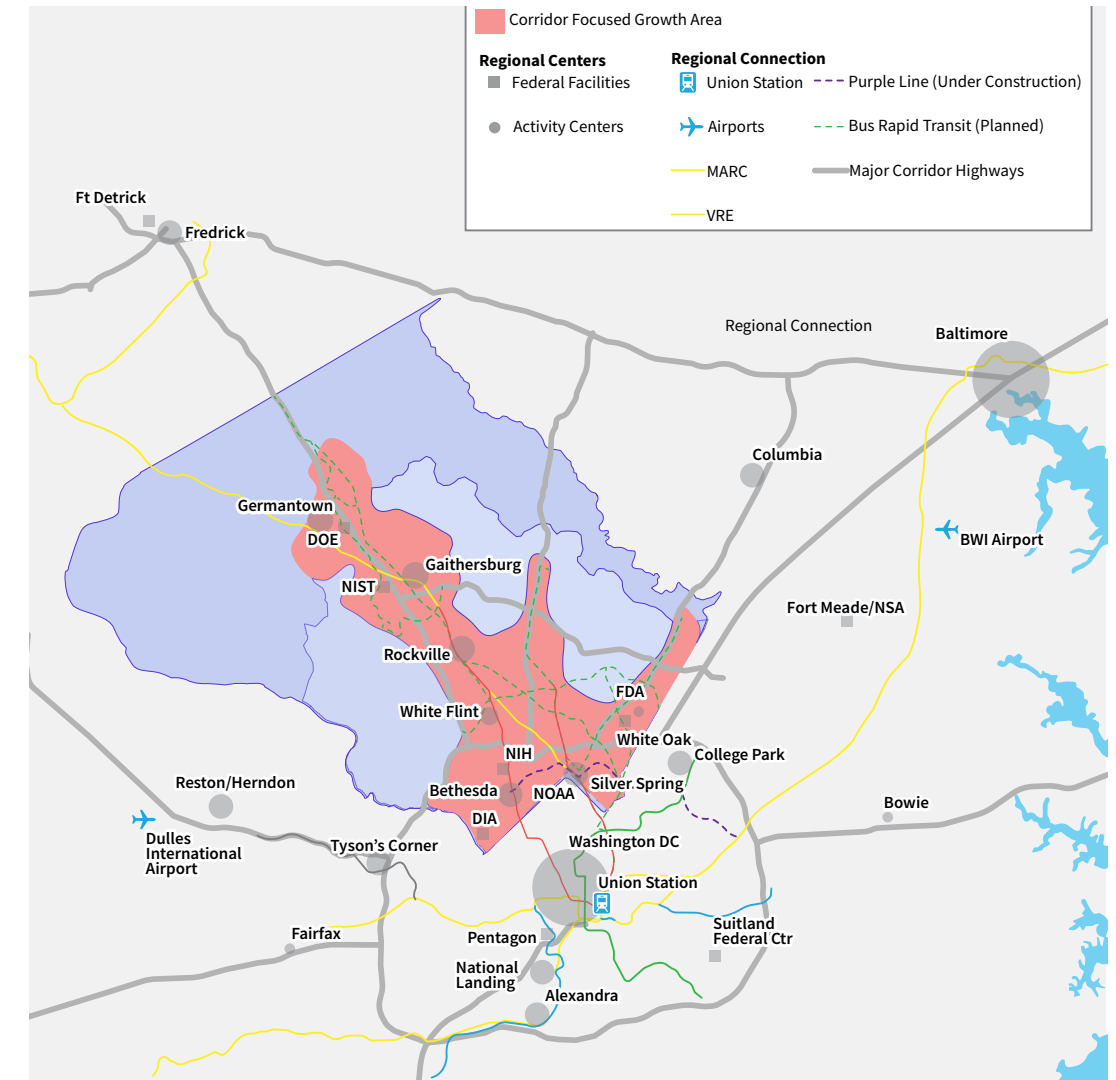


Figure 40: Regional connections to activity centers.

Even for travel within Montgomery County, our legacy road network has serious shortcomings. Our central business districts and major suburban corridors generally lack the grid of streets that create the building blocks of a thriving community, with frequent intersections and narrower vehicle lanes to facilitate slower speeds and safer crossings to make walking, rolling and bicycling more practical and attractive and to provide access points and routing options for automobiles. More and more residents and workers prefer transit and other alternatives to driving alone – and a significant number do not have access to a car – but most jobs in the county are not located near high-quality transit, and many of our neighborhoods lack even sidewalks. Combined with the absence of efficient east-west connections, especially for transit riders, this pattern limits access to jobs and opportunity, particularly for low-income residents who are more likely to depend on transit and makes our transportation system less adaptable and resilient.



Figure 41: Connectivity is higher in a traditional grid of streets (Downtown Bethesda, left), compared to a conventional cul-de-sac pattern of streets (Olney, right).

The failure to provide robust alternatives to driving and the inability to provide additional space for roads – in combination with low rates of housing construction – leaves more commuters stuck in traffic and pushes jobs as well as people to other jurisdictions. The result is that the county loses residents, jobs, and tax revenue while simultaneously increasing traffic congestion as more people drive through the county on the way to jobs and homes in other places. Meanwhile, the importance of virtual connections, including the deployment of high-speed wireless networks and fiber optic cable, continues to grow.

The county will base its efforts to improve connectivity on the following policies and practices:

Develop a safe, comfortable and irresistible network for walking, biking, and rolling.

- Expand the street grid in downtowns, town centers, transit corridors, and suburban centers of activity to create shorter blocks.
- Stop planning or constructing new highways or major road widenings for cars.
- Convert existing traffic lanes and on-street parking to create space for walkways, bikeways, and street buffers with landscaping and street trees.
- Prioritize the provision of safe, comfortable, and attractive sidewalks, bikeways, roadway crossings, and other improvements to support walking, bicycling, and transit usage in capital budgets, development approvals and mandatory referrals.
- Transform the road network by incorporating complete streets design principles with the goal of eliminating all transportation-related roadway fatalities and severe injuries and supporting the emergence of more livable communities.

Build a world-class transit system.

- Build a network of rail, bus rapid transit, and local bus infrastructure and services that make transit the fastest, most convenient and most reliable way to travel to centers of economic, social and educational activity and opportunity.
- Convert existing general purpose traffic lanes to dedicated transit lanes.
- Connect historically disadvantaged people and parts of the county to jobs, amenities, and services by prioritizing investments in increasing access to frequent and reliable all-day transit service.

- Ensure safe and comfortable access to transit stations via walking, rolling, and bicycling.

Adapt policies to reflect the economic and environmental costs of driving alone

- Employ pricing mechanisms, such as congestion pricing or the collection and allocation of tolls to support walking, rolling, bicycling, and transit.
- Manage parking efficiently by charging market rates and reducing the supply of public and private parking.
- Encourage the proliferation of non-polluting vehicles by upgrading government fleets and requiring appropriate infrastructure.

Develop and extend advanced communications networks

- Facilitate construction of high-speed fiber optic and wireless infrastructure and other information and communication technology to supplement transportation links with improved virtual connections.
- Focus investment in communications infrastructure and services to connect people and parts of the county that lack convenient access to jobs and educational opportunities
- Support teleworking by accelerating deployment of information and communications technology and making working from home easier by facilitating Complete Communities.

These policies are not enough by themselves to ensure the county's economic success, but they are essential building blocks for stronger economic performance. Better transit connections to job centers, for example, will make the county a more attractive choice for employers by making it easier for their current and future employees to get to work. The total number of jobs within a 30-minute commute is a common measure of an area's suitability for investment. With drive times and pass-through automobile traffic predicted to continue growing, investments in transit can significantly increase our "commute shed" and avoid ever-longer drives to and from work.

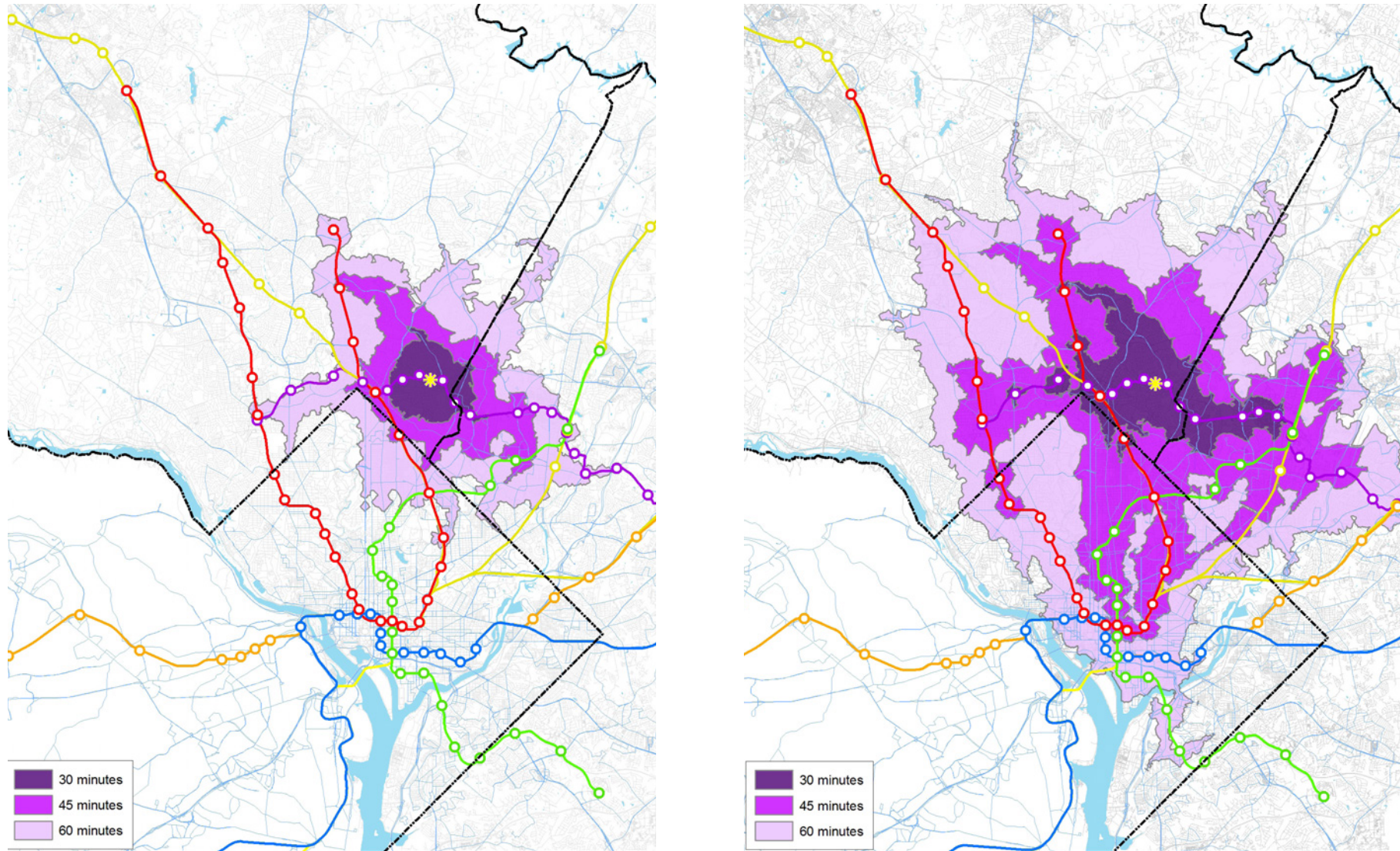


Figure 42: The Purple Line commute shed before (left) and after (right) the completion of the light rail line

A higher priority for investments in transit, walking, rolling, and bicycling infrastructure is also critical to building Complete Communities (described in XX) that have the amenities, sense of place, and level of activity that more and more people of all backgrounds and ages are seeking. This is true because transit exerts a gravitational pull on real estate development by creating incentives and opportunities to locate a variety of uses, services, and activities near station locations – and to each other.

By the same token, successful mixed-use centers require a transportation scheme that supports modes of travel appropriate to the trips users need to make to meet their needs. For example, a rail-based transit line may serve to connect jobs to housing in different parts of the county or region,

but sidewalks and bikeways are better suited to connecting offices to shops, restaurants, or apartment buildings in a town center or between a downtown and the residential neighborhoods surrounding it. The point of this plan's emphasis on supporting alternatives to automobile travel is not to eliminate driving, but to make short trips around town by bicycle or bus safe and appealing. A quick trip to the grocery should be manageable on foot, while a visit to another town might require a trip by car, train, or even airplane. The most desirable places to live and work are the ones that offer a menu of choices that make all sorts of travel effortless and delightful while supporting best practices in land use rather than relying on a single mode of travel at the expense of every other consideration.

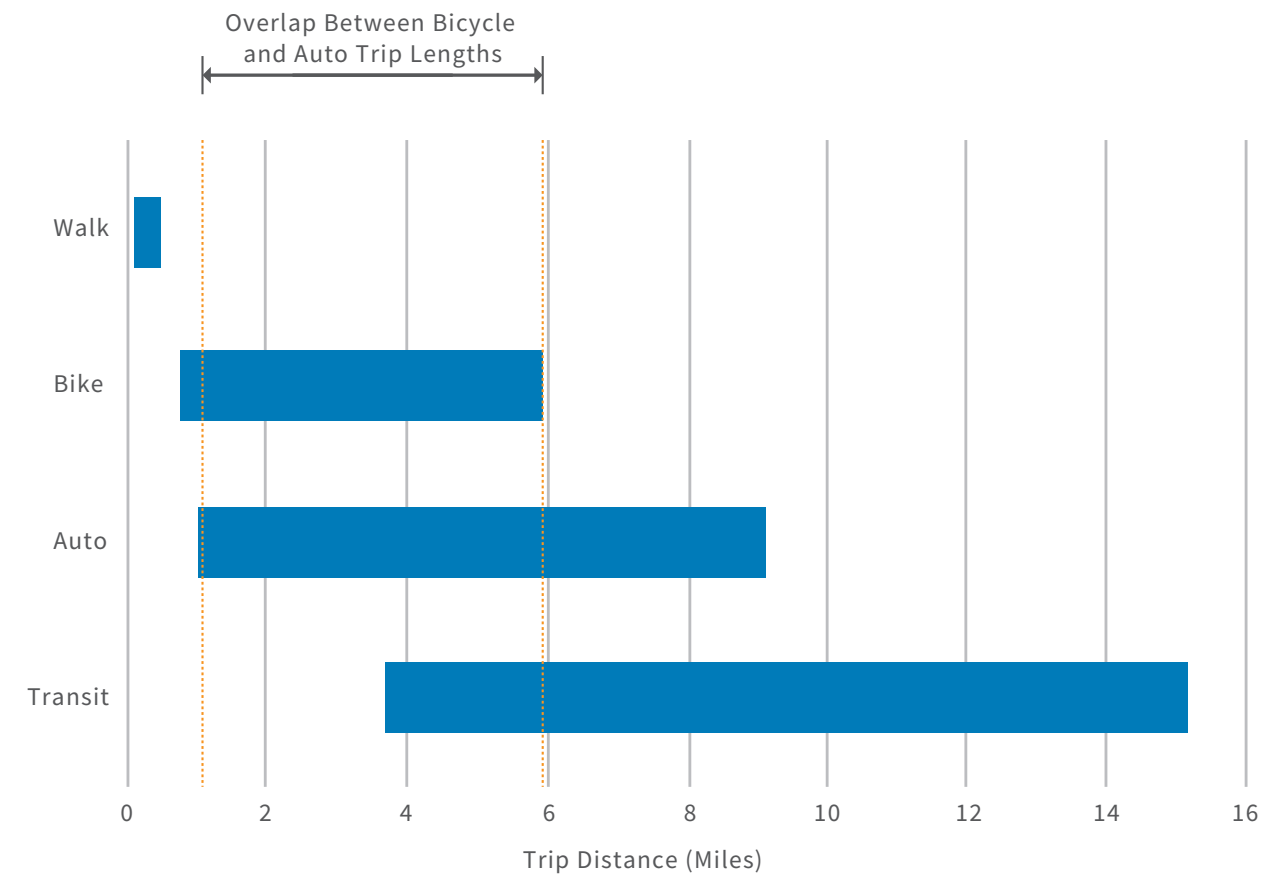


Figure 43: Most auto trips can be made within a short bicycle trip. In Montgomery County, half of all auto trips are between 1.0 and 9.1 miles long, whereas half of all bicycle trips are between 0.8 and 5.9 miles long.

Thrive Montgomery's 2050's focus on compact growth and infill – along with the limited availability of land for expanding rights-of-way – makes it essential that we decisively reject the impulse to make sure that driving remains as easy and convenient as possible in favor of making walking, rolling, bicycling, and transit the most practical and attractive ways of getting from one place to another. Even with autonomous capabilities, cars require much more space per passenger than buses and trains, and walking, rolling, and bicycling are the most spatially efficient forms of travel of all. The addition of new highways, travel lanes and grade-

separated interchanges may help to relieve congestion in the short term, but new highways, wide roads, and high-speed access ramps are fundamentally at odds with efforts to design neighborhoods and districts to encourage human interaction and foster a sense of place. This makes it imperative to embrace the long-term economic, environmental, and social benefits of transit-served, walkable and bikeable neighborhoods and avoid undercutting our land use goals with auto-dominated road design and transportation infrastructure.

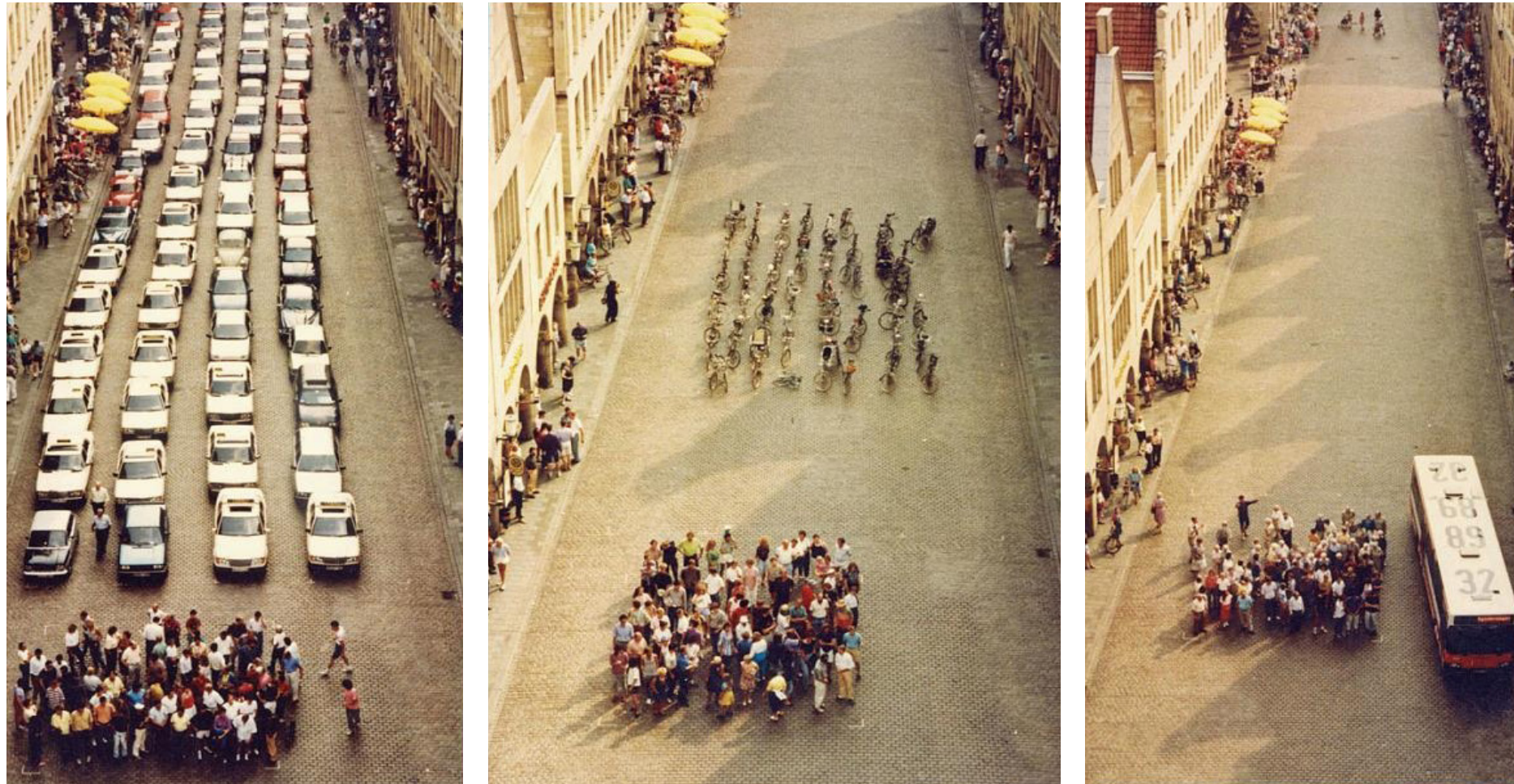


Figure 44: The spatial requirements to transport the same number of people by automobile (left), bicycle (middle), and bus (right),

A transit-focused approach that facilitates walking, rolling, and bicycling also promises to serve our residents more equitably. Enhanced access to jobs via transit, walking, rolling and bicycling will help mitigate inequities for people of color and low wage earners who are more likely to live in areas without adequate infrastructure to meet their mobility needs without an automobile. People in these communities are less likely to own a car and lack access to high-quality transit service that operates frequently and reliably throughout the day and into the evening. Expanded transit service also serves as an affordable and attainable housing tool by connecting areas where housing is relatively inexpensive to jobs, schools, and amenities without subjecting residents to high transportation expenses or impractically long commutes.

The reordered transportation priorities in this plan will help meet the county's goal of eliminating all traffic-related fatalities and severe injuries by 2030, which is especially important in making transportation more equitable because people of color are more likely to be hurt or killed in crashes. Streets that go beyond safety to make walking, rolling, and bicycling preferred ways of getting around will enhance human interaction and build social capital. Pedestrian-friendly rural, suburban, and urban centers will enjoy the benefits of a stronger sense of place where the conditions for high levels of civic participation and a feeling of community are far easier to create and maintain.

HISPANIC AND NON-HISPANIC BLACK/AFRICAN AMERICAN RESIDENTS HAVE A 33% HIGHER TRAFFIC FATALITY RATE COMPARED TO NON-HISPANIC WHITE RESIDENTS.

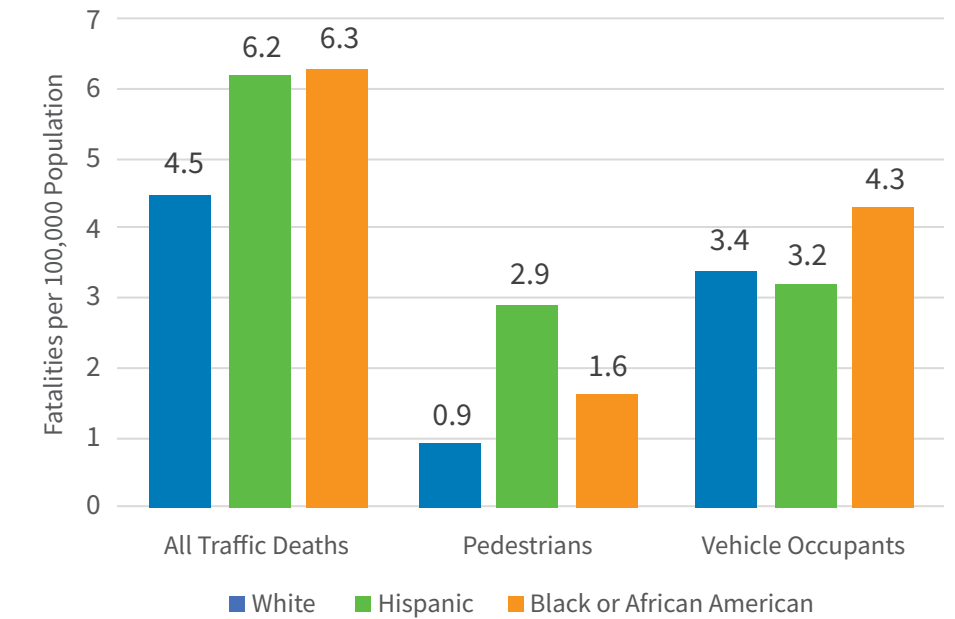


Figure 45: Traffic fatality rates by race, 2011-2015

The evolution of corridors originally planned for the convenience of drivers into multimodal streets where transportation and land use are harmonized to support focused development of a compact mix of uses and building types will reduce driving and make our transportation system more sustainable and resilient. In particular, filling in missing connections and breaking up large blocks to create a finer-grained network of streets along our suburban corridors will be challenging, but a more connected street grid is perhaps the single most important step to make our streets safer and more attractive and reconnect communities divided by overbuilt highways. For this reason, the addition of local street connections should be a top priority in both capital budgets and development review.

Investing in pedestrian, bicycling, and transit infrastructure will make active transportation a viable alternative to many vehicle trips. Bicycling has especially strong potential as a substitute for automobile trips of less than 3 miles, which comprise about half of all trips taken in the region. Survey research demonstrates that bicyclists are much more likely to say they enjoy their commute than people who use other modes to get to work. Integrating pedestrian and bicycling infrastructure in parks and open spaces will extend the transportation network and expose more residents to nature on a daily basis, boosting mental and physical health. An interconnected grid system will increase choice of modes, provide multiple routes for travel, and be better equipped to handle extreme weather and other disruptions.

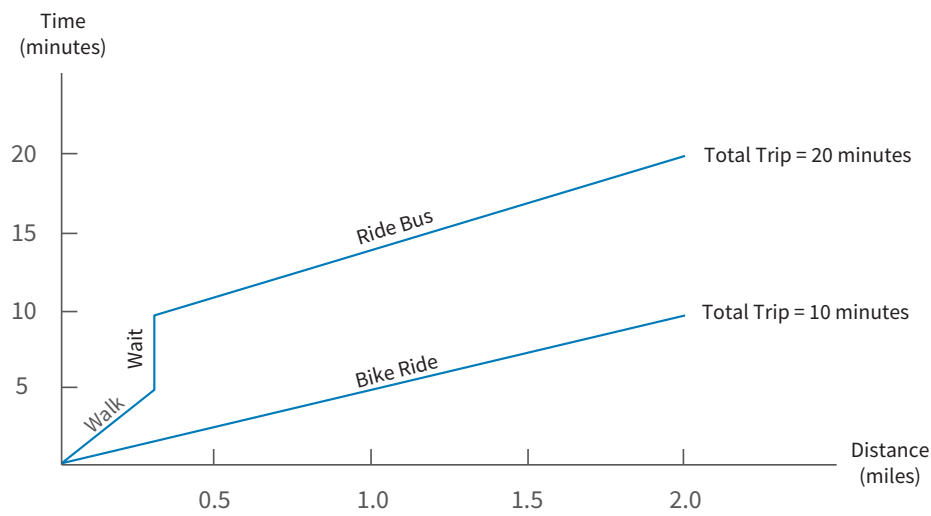


Figure 46: Total trip time for short trips - bicycling v bus.

Reducing the supply of parking – and the amount of land allocated to parking spaces – over time will increase the amount of space available for economically productive activity, reduce the cost of development, and relieve pressure on undeveloped land, all of which will enhance the county’s economic and environmental performance. Shared parking


strategies promote mixed-use development, improve pedestrian-friendly design, and encourage social interaction, while redevelopment of parking lots into higher and better uses improves environmental sustainability by creating opportunities to add tree cover, incorporate infrastructure for stormwater management, and create more landscaped areas that provide habitat for local pollinators, birds, and animals.

Finally, robust investment in the county’s digital infrastructure will better connect residents to online job opportunities, encourage continued teleworking to reduce commuting trips, dilute rush-hour traffic, enhance worker productivity and improve quality of life, increasing the county’s overall attraction and competitiveness.

In assessing proposals related to transportation and communications and measuring the success or failure of the approaches recommended in this plan, relevant measures may include:

- Vehicle Miles Traveled (VMT): Down
- Non-Auto Driver Mode Share (NADMS): Up
- Person Trip accessibility for pedestrians and bicyclists: Up
- Number of traffic-related severe injuries and fatalities: Down
- Transportation system’s GHG emissions: Down
- Miles of auto travel lanes per capita: Down
- Teleworking: Up
- Motor vehicle parking per unit of development: Down





AFFORDABLE & ATTAINABLE HOUSING

MORE OF EVERYTHING

The Washington region has experienced slow but steady growth in recent decades, even as many parts of the country have struggled to attract residents and economic opportunities. Unfortunately, the region (including Montgomery County and most neighboring jurisdictions) has not generated enough new housing – particularly housing that matches the incomes and needs of the workforce – to match this relatively moderate pace of population and job growth. From 1980 to 2018, the average number of dwellings built each year in Montgomery County has steadily declined, both in absolute terms and relative to the rest of the region. Building permits have lagged well behind the 4,200 a year average that the Council of Governments (COG) has estimated are needed to address inadequate housing production and supply.

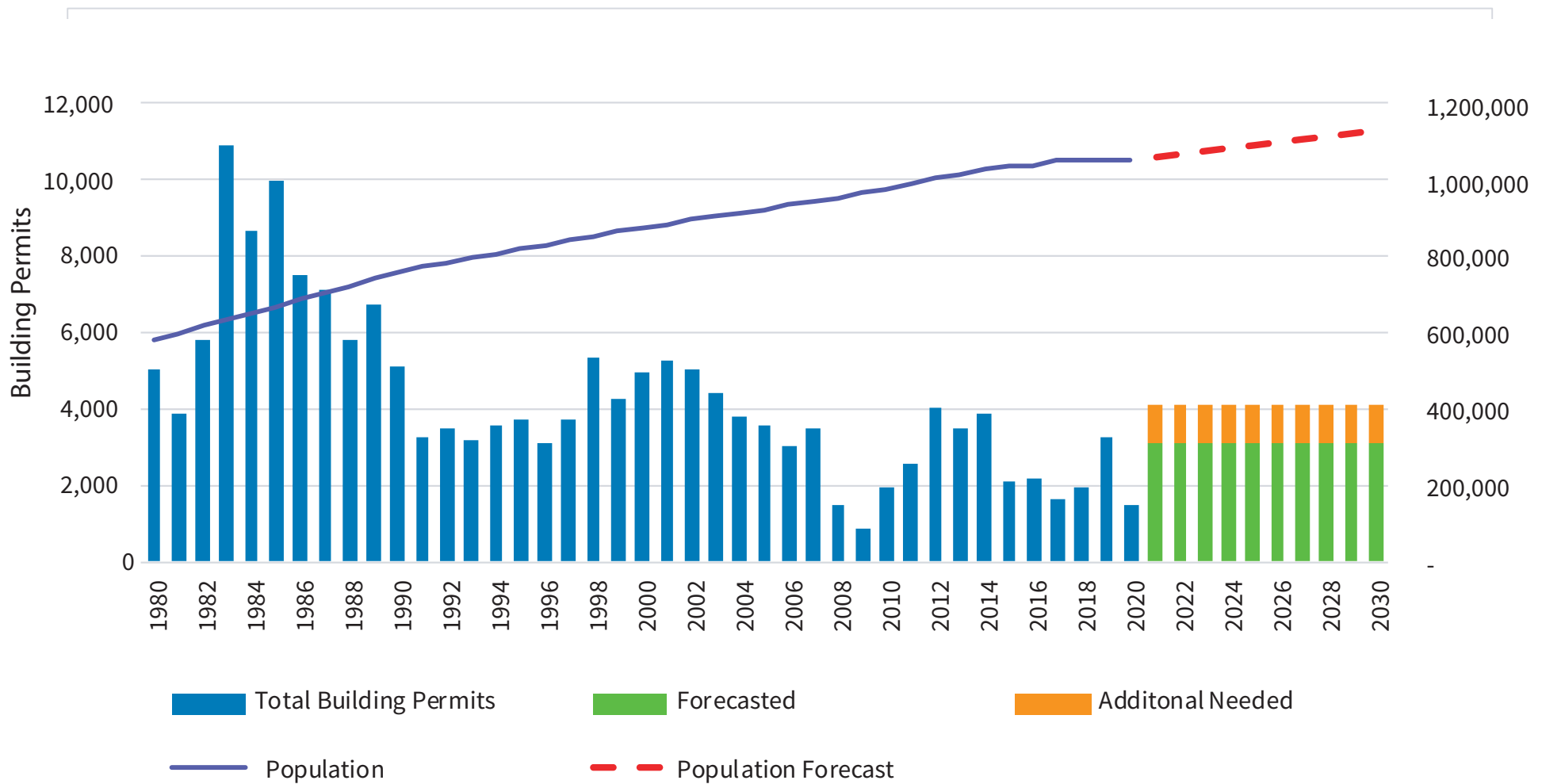


Figure 47: Montgomery County population growth and building permits, 1980-2020



Figure 48: Number of Cost-Burdened Renter Households, 2009-2019

The barbell income growth helps to explain why even though the number of housing cost-burdened renters has increased, the percentage of renters households that are cost burdened over the same period.

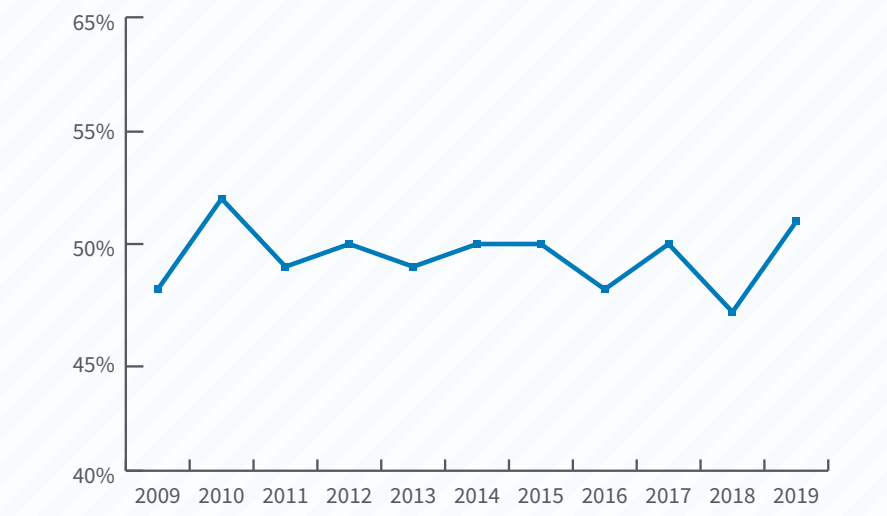


Figure 49: Percentage of Cost-Burdened Renter Households, 2009-2019

THE NUMBER OF HOUSEHOLDS SPENDING AT LEAST 30 PERCENT OF INCOME ON HOUSING COSTS HAS CONTINUED TO GROW

Weak supply is driving the price of housing up for both renters and those who want to own their home. The number of households spending at least 30 percent of income on housing costs has continued to grow. Housing price increases have outpaced growth in incomes, leading some people to leave the county in search of more affordable places to live. Homeownership rates have been in decline, especially for adults under the age of 35. The obstacles faced by young workers in finding housing they can afford makes it harder for employers to attract and retain the employees they need, damaging our economic competitiveness.

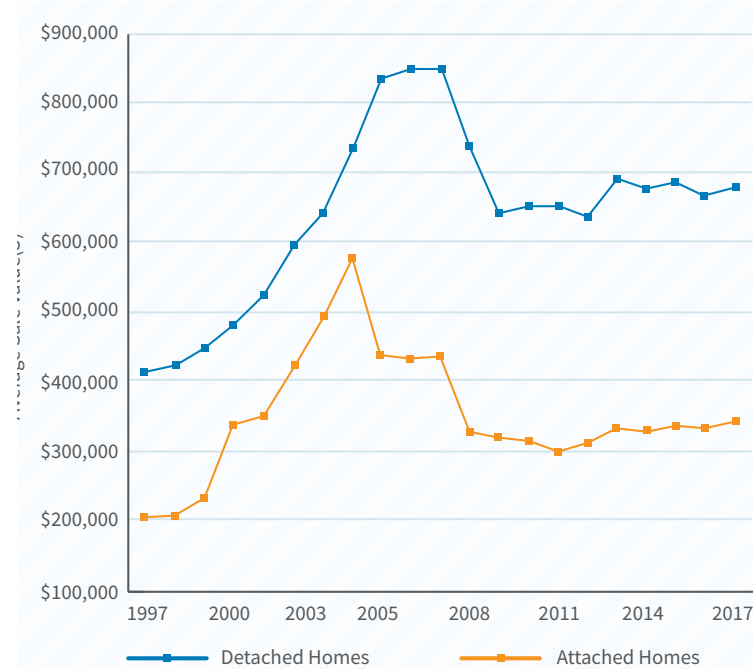


Figure 50: Average Sales Price of Single-Family Homes, 1997-2017

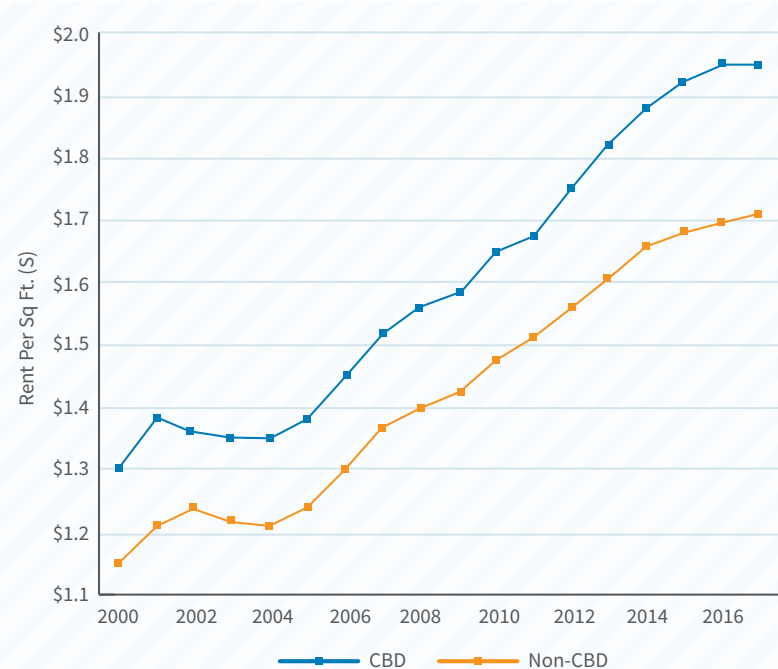


Figure 52: Average Multifamily Residential Rent Per Square Foot, 2000-2016

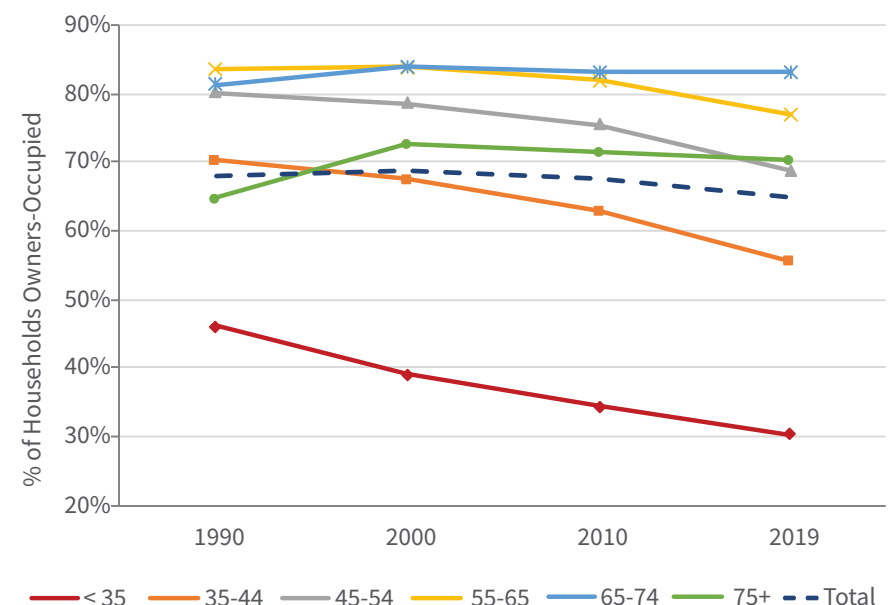


Figure 51: Homeownership rate by householders age, 1990-2019

The county's housing challenges are not limited to the slow pace of new construction. Social and economic changes have opened a growing gap between the living patterns of the early 21st century and the housing stock of earlier generations. The stereotypical family household of the 1950s, consisting of a married couple with children living at home, represents a steadily diminishing share of all households. The percentage of households consisting of one person living alone increased from seven percent in 1960 to 25 percent in 2018, partly as a result of a trend toward deferring marriage and childbirth, and partly because a larger number of older people are divorced or widowed.

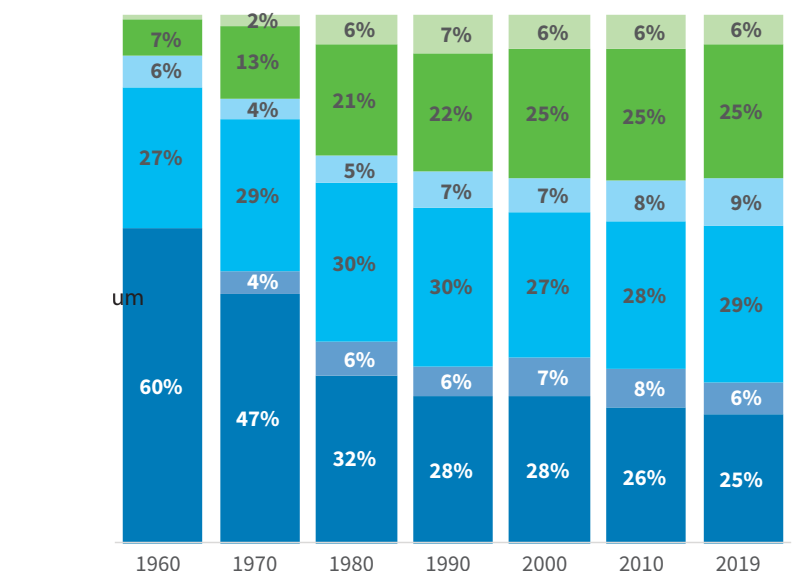


Figure 53: Change in Household Family Types, 1960-2019

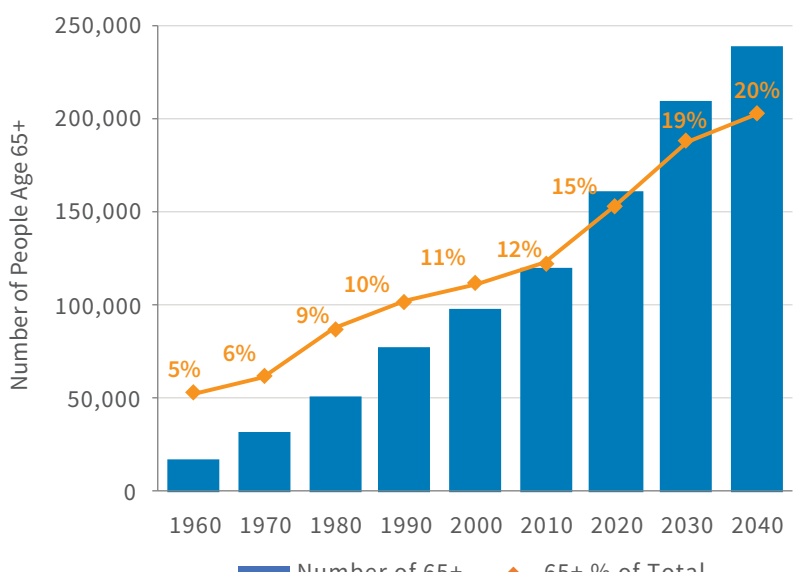


Figure 54: Age 65+ population, 1960-2040

Despite the shrinking size of households, new single-family homes are getting larger, and single-family dwellings make up two-thirds of the county's housing stock. Options to buy a starter home or downsize are limited, and by some estimates, as many as one in three owner households are "over housed" – that is, their houses have more bedrooms than they need. All of this is partially a function of the fact that more than one-third of the county's land area is zoned for single family housing, more than ten times the area zoned for mixed use development.

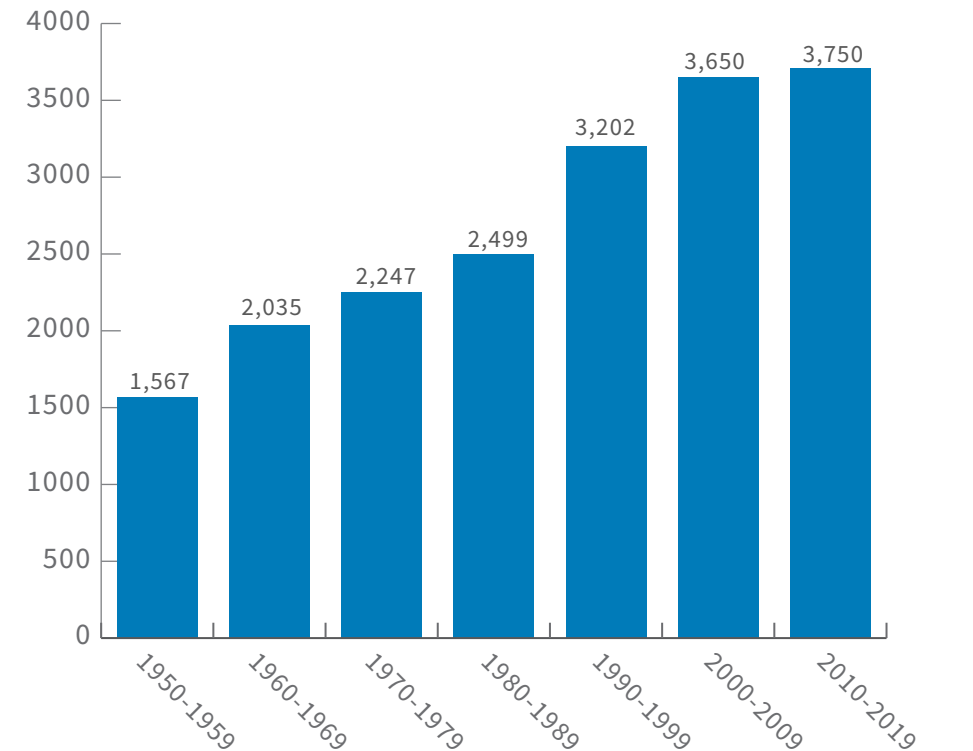


Figure 55: Average gross floor area of a single-family house by year built

Number of Bedrooms	Number of People in Household				
	1	2	3	4	5-6
0-1	5,800	800	400	100	200
2	11,300	9,800	3,000	1,000	1,700
3	16,500	28,000	16,400	12,200	10,100
4	9,200	31,000	17,400	16,900	11,700
5+	3,400	12,800	7,100	11,400	9,900

Figure 56: Number of owner households by housing unit and household size, 2018

80,000 owner households or 32 percent of owner households, are over-housed(as defined by the housing situations outlined in red, where there are at least 2 more bedrooms than there are people), compared to only 3 percent of renters households by the same measure

The high cost and limited variety of available housing exacerbate inequality and segregation by race and class. Home prices vary widely in different parts of the county, closely tracking the racial and economic characteristics of neighborhoods, with predominantly white residents living in more expensive neighborhoods with better access to jobs, schools, and transportation options than the African American or Latino residents of less expensive neighborhoods. These inequities reinforce the legacy of racism and both de facto and de jure segregation and continue to influence the geographic distribution of opportunities and resources, leading to inequitable outcomes in educational attainment, economic opportunity, and public health.

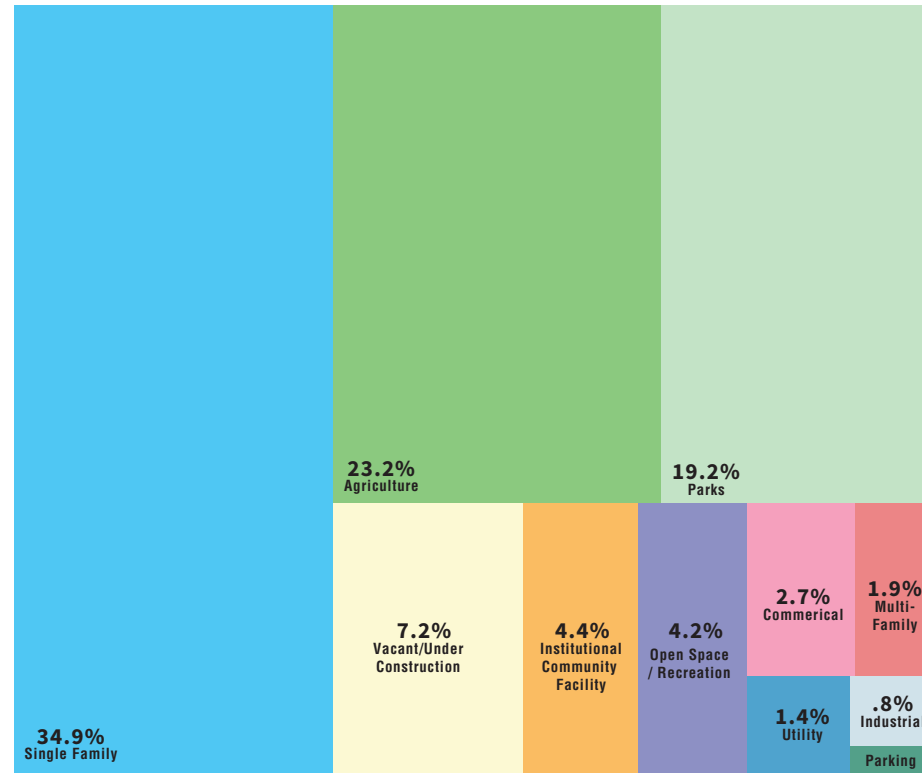


Figure 57: Percentage of major land use groups in Montgomery County, 2020

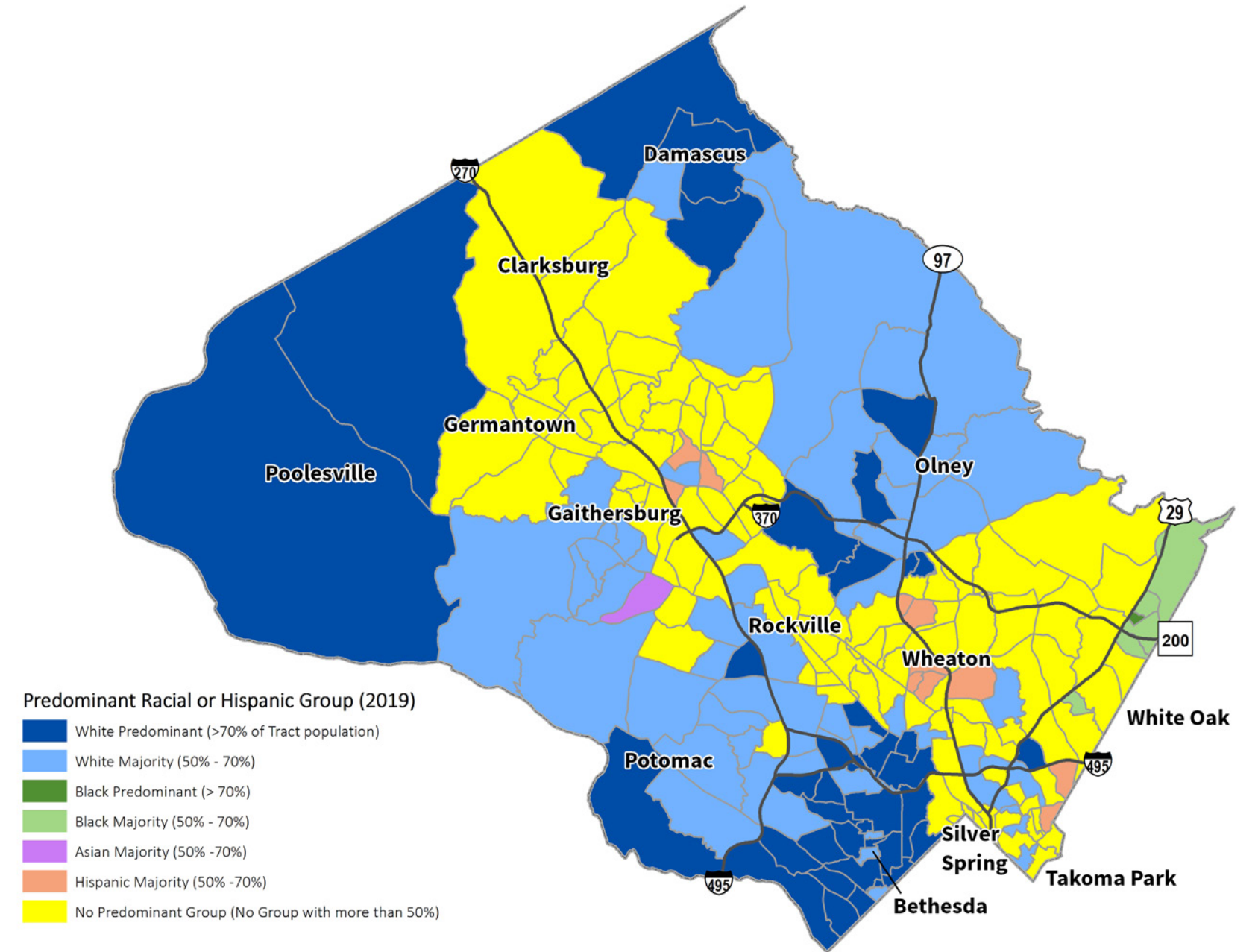


Figure 58: Predominant Racial or Ethnic Group by Census Tract, 2019

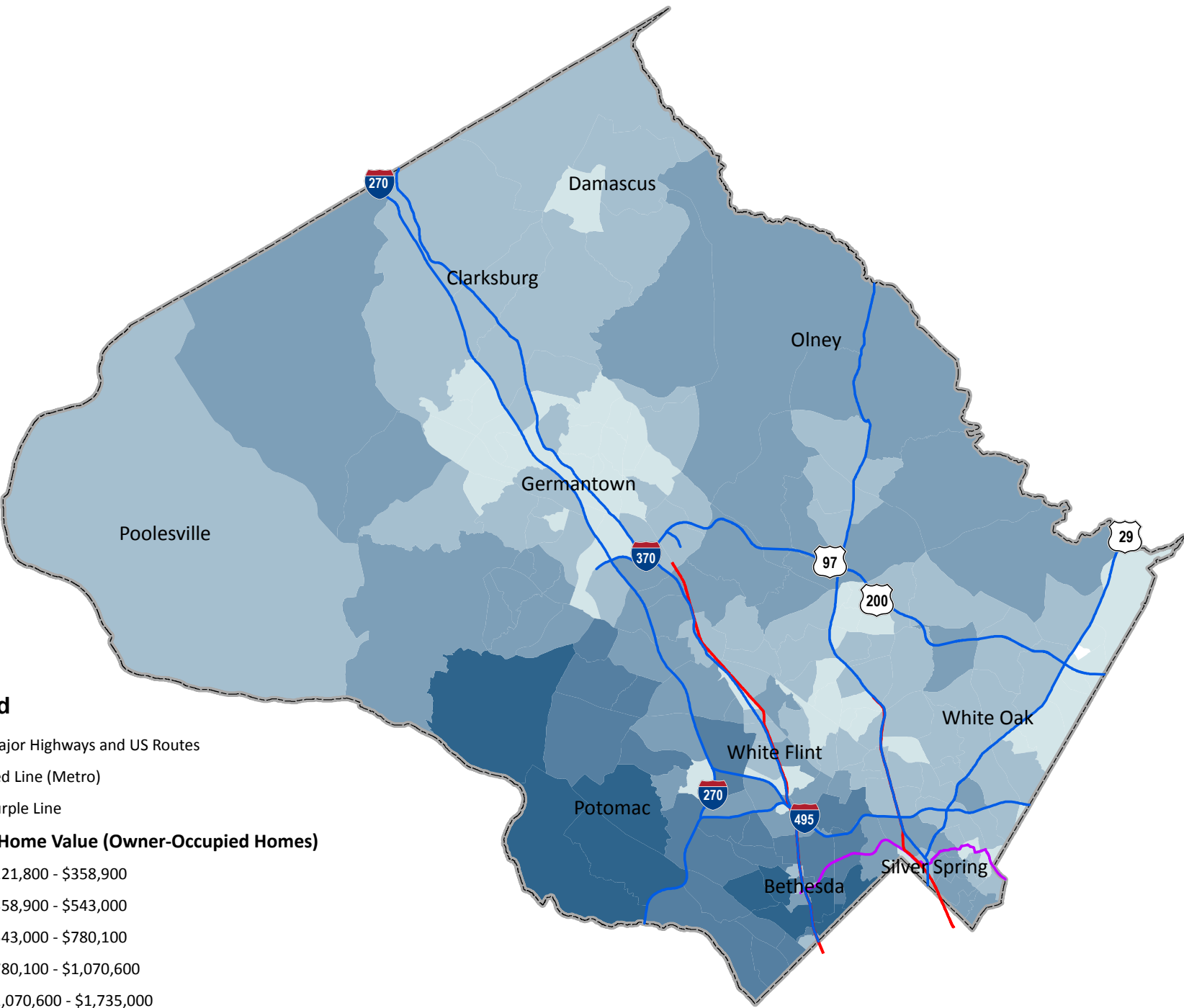
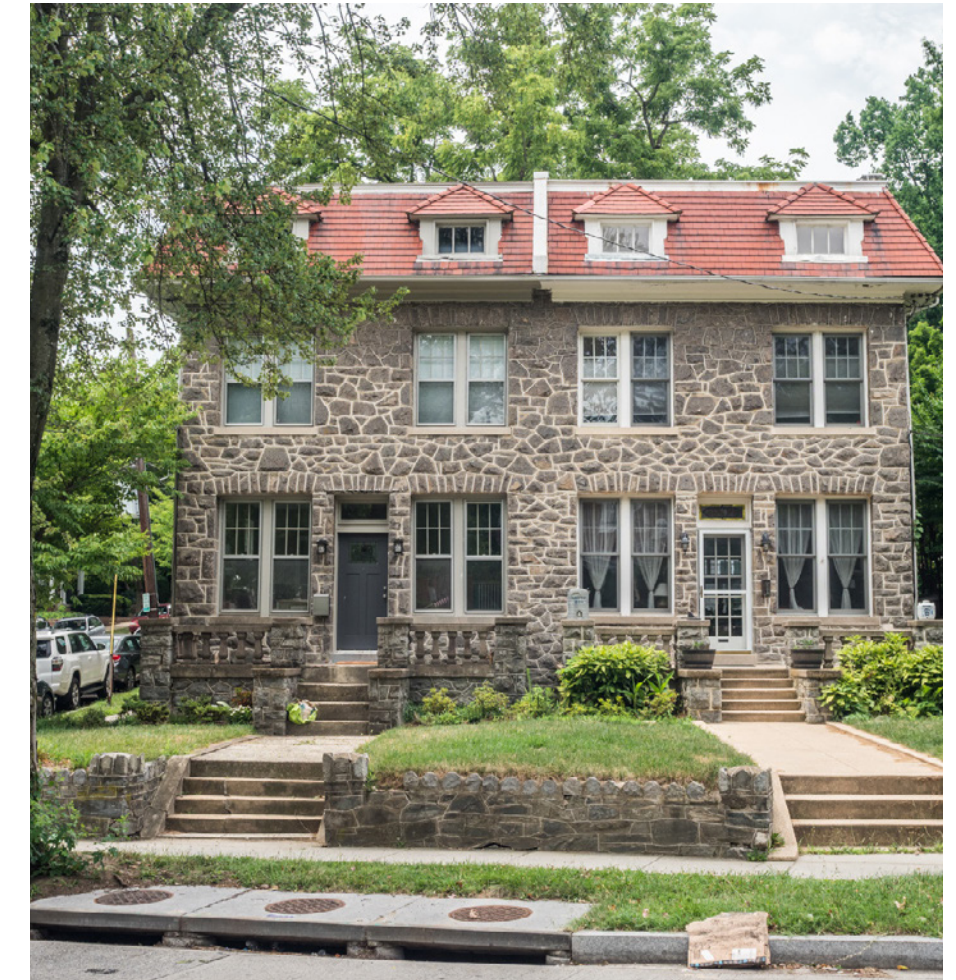
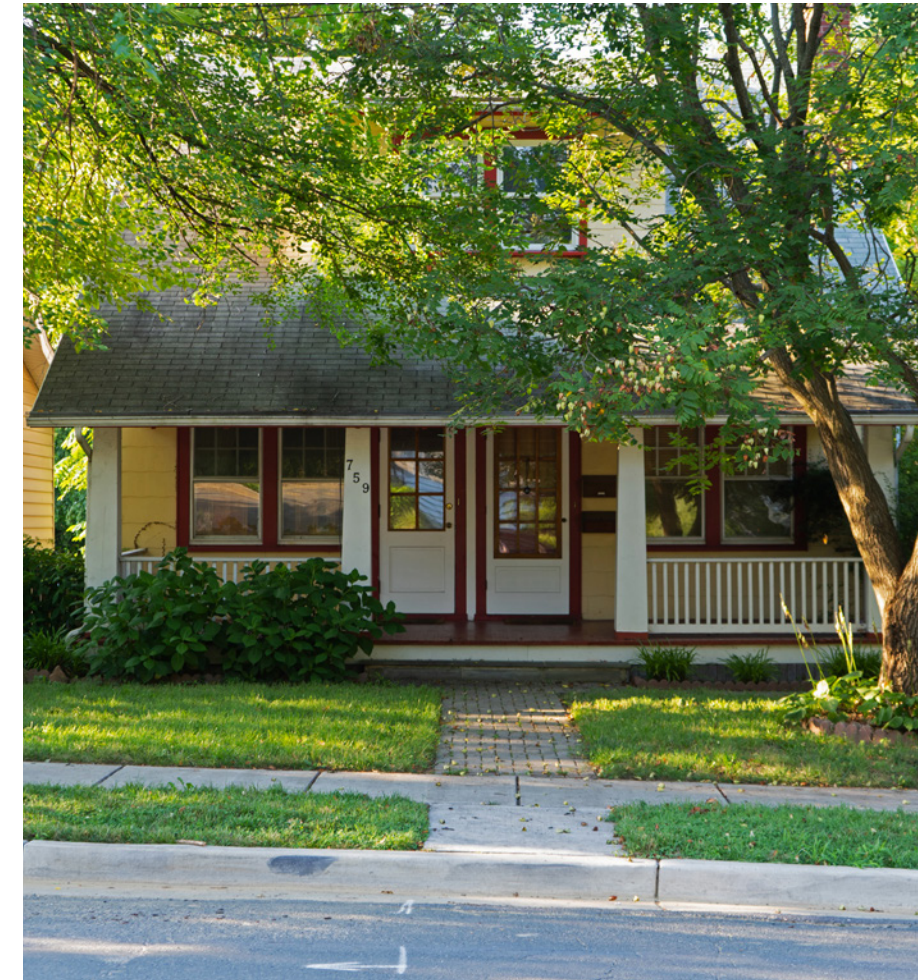


Figure 59: Median value of owner-occupied homes, 2019

BY 2045, THE PEOPLE OF COLOR ARE FORECAST TO MAKE UP 73 PERCENT OF THE COUNTY'S POPULATION, WITH A SIGNIFICANT PERCENTAGE EARNING LESS THAN \$50,000 A YEAR.

Expansion and diversification of our housing stock is an essential step toward reducing these kinds of racial and socioeconomic inequality. By 2045, the people of color are forecast to make up 73 percent of the county's population, with a significant percentage earning less than \$50,000 a year. In order to match the anticipated incomes and housing types suited to the county's future population, about half of all new dwellings will need to be rental units in multifamily buildings (including both apartment and townhome, duplex, triplex, and quadplex units) and more than one quarter will need to be for-sale units in multifamily buildings (including condominiums and other attached and semi-detached building types). With more than one-third of the county's land area currently zoned for single family residences, these needs will be difficult to meet.



MONTGOMERY COUNTY
IS EXPECTED TO ADD
OVER 60,000 NEW
HOUSEHOLDS BY 2040.

Without more housing in general and an increase in the availability of smaller, less expensive housing in particular, housing will become less affordable and attainable to a broad swath of the county's residents. Some will leave the county, either commuting long distances from home to work or departing the region in search of a more affordable place to live. Others will struggle with the burden of paying their rent or mortgage, reducing their standard of living.

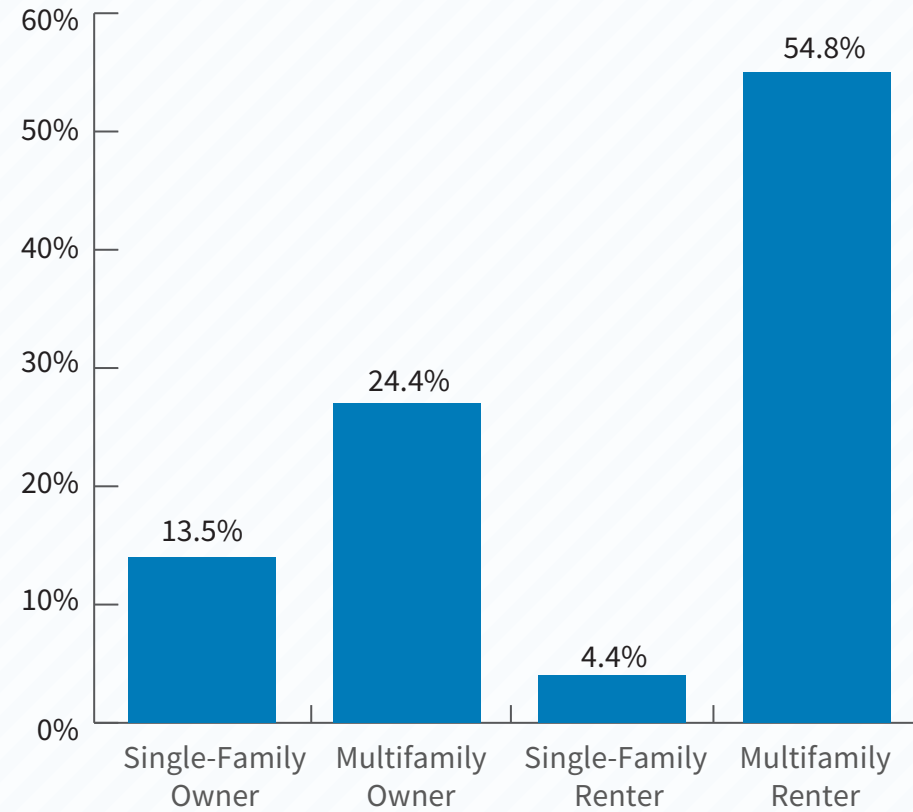


Figure 60: Forecast of owner and renter households by housing types, 2040.

Between 2020 and 2040, Montgomery County is expected to need to add 63,031 new households, both working and non-working households, specifically new residents who are seniors or persons with disabilities.

Over the 2020 to 2040 period, forecast assumptions suggest that Montgomery County will need to add the following types of housing units to accommodate the forecasted households.

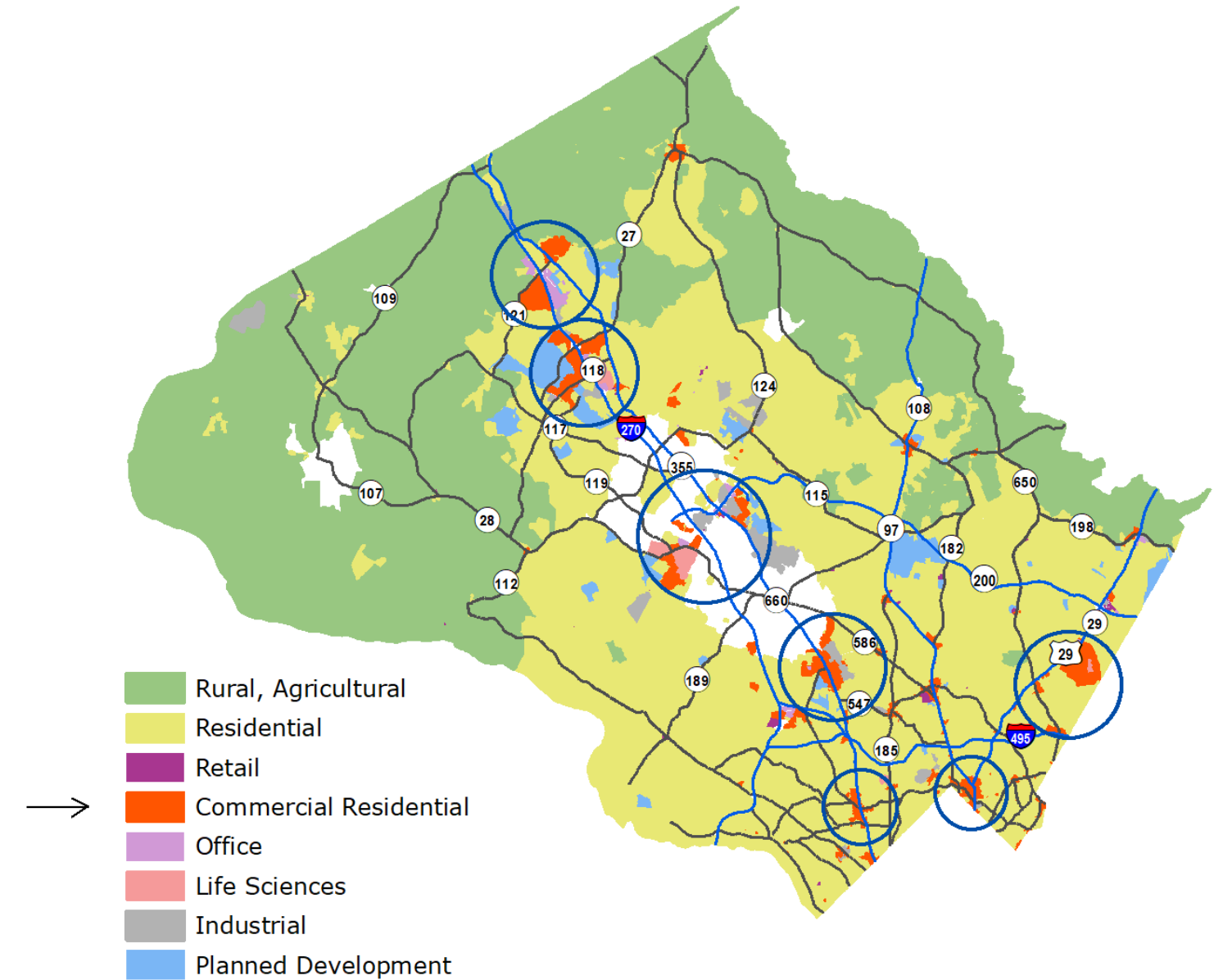
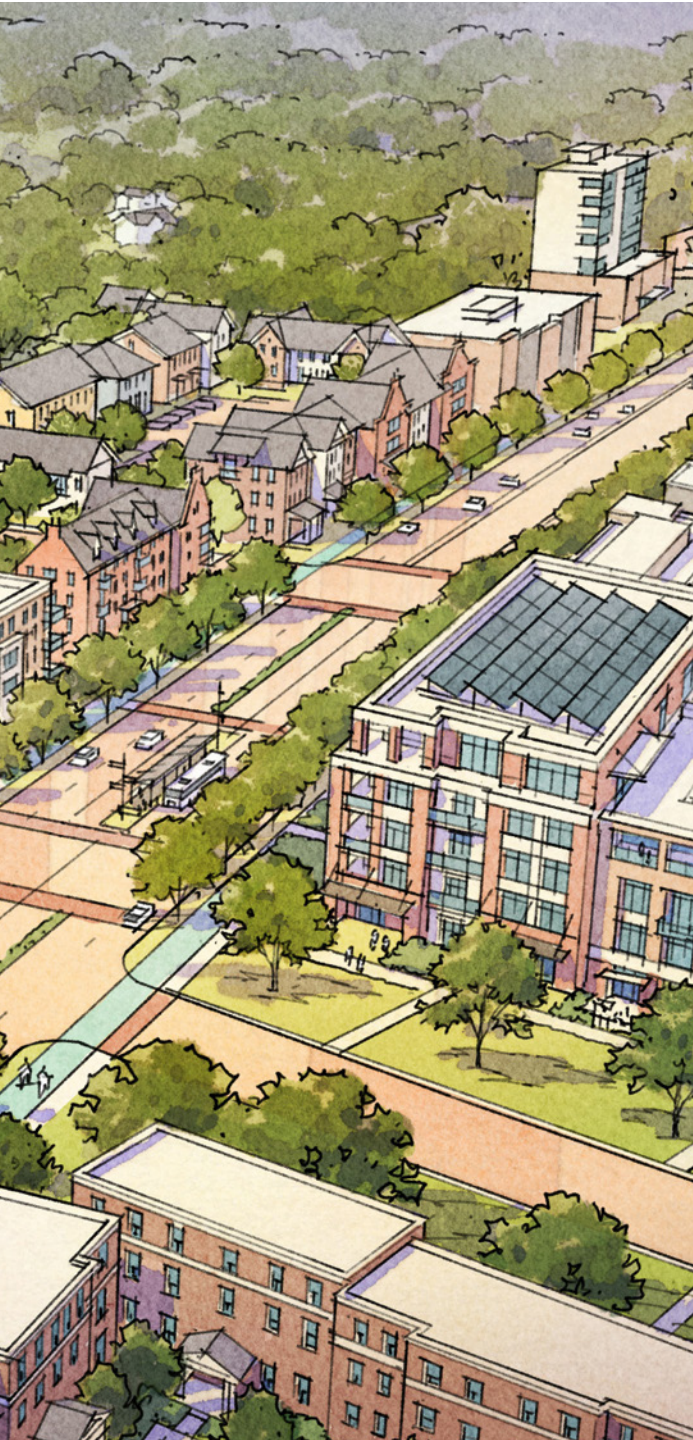


Figure 61: Land uses in Montgomery County, 2020



IN ORDER TO ADDRESS THE COUNTY'S NEED TO INCREASE THE AMOUNT AND VARIETY OF HOUSING, THE COUNTY WILL PURSUE THE FOLLOWING POLICIES AND ACTIONS:

Encourage the production of more housing to better match supply with demand

- Expand opportunities to increase residential density, especially along major corridors and in locations where additional housing can assist in the development of Complete Communities.
- Increase the number of income-restricted affordable housing units, especially for low-income households.
- As part of the commitment to the Housing First approach, develop strategies to build deeply affordable housing and provide permanent supportive housing.
- Reform building codes to reduce costs by accommodating innovative construction methods and materials including modular prefabricated housing and mass timber.
- Prioritize use of public land for co-location of housing and other uses, particularly where government agencies design new facilities or dispose of real property.
- Increase regulatory flexibility to incentivize residential infill, redevelopment, and repositioning of office parks, shopping malls, and other underutilized properties.
- Provide financial incentives such as Payment in Lieu of Taxes to boost housing production for market rate and affordable housing, especially near transit and in Complete Communities.

Plan for a wide range of housing types and sizes to meet diverse needs

- Facilitate the development of a variety of housing types in every part of the county but especially in areas near transit, employment, and educational opportunities.
- Support creative housing options including single-room occupancy units (SROs); “missing middle” housing types such as tiny houses, cottages, duplexes, multiplexes, and small apartment buildings; shared housing, co-housing, accessory dwelling units (ADUs), social housing and cooperative housing to help meet housing needs and diversify housing options.
- Encourage provision of multi-bedroom units suitable for households with children in multifamily housing.
- Integrate people with disabilities, people transitioning from homelessness, and older adults into attainable housing with appropriate amenities and services.



Figure 62: New growth along major transit corridors can provide a variety of housing options and provide multiple travel choices to connect with local and regional destinations.

Promote racial and economic diversity and equity in housing in every neighborhood

- Calibrate the applicability of the Moderately Priced Dwelling Unit (MPDU) program and other affordable housing programs to provide price-regulated units appropriate for income levels ranging from deeply affordable to workforce.
- Develop targeted strategies to minimize gentrification and displacement while promoting integration and avoiding the concentration of poverty.
- Refine regulatory tools and financial incentives with the goal of avoiding a net loss of market-rate and income-restricted affordable housing stock without erecting disincentives for the construction of additional units.
- Identify and allocate additional revenue for the Housing Initiative Fund (HIF) to meet the needs of low-income households.
- Expand existing programs designed to increase access to homeownership, especially among low-income residents, people of color, and young adults; create new programs and entities such as community land trusts to maintain long term affordable homeownership opportunities.
- Improve collection of data on neighborhood change to monitor and address involuntary displacement, disinvestment, and related phenomena.



A healthy supply of new housing that is suited to meet the needs of households of different sizes, incomes, needs, and preferences is central to achieving Thrive Montgomery’s key objectives:

First, increasing the supply of new housing near transit, jobs, and amenities will improve the quality of life for everyone in the county while

helping to attract and retain the broadly skilled workforce that employers need, making the county more economically competitive. The increased demand for walkable neighborhoods with a mix of uses – especially near transit – is well documented. Housing in “Walkable Urban Places (WalkUPs)” command prices 71 percent higher per square foot than other locations in the Washington area, reflecting both the desirability and

relative shortage of these kinds of places. By concentrating more housing of different sizes and types near high-quality transit corridors, we can provide housing that will help keep the most productive workers in the county, curb escalating prices in the most desirable locations, and improve accessibility of jobs, transportation, and services.

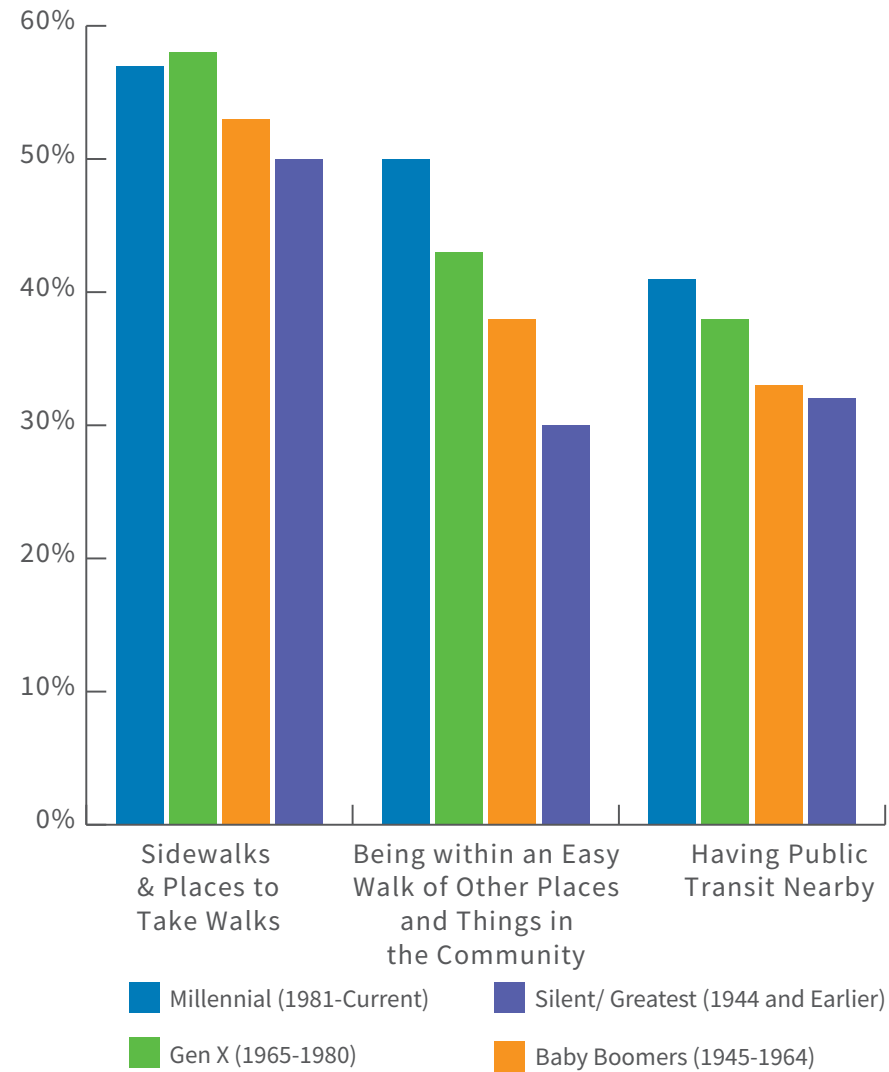


Figure 63: Living preferences in the US, 2015

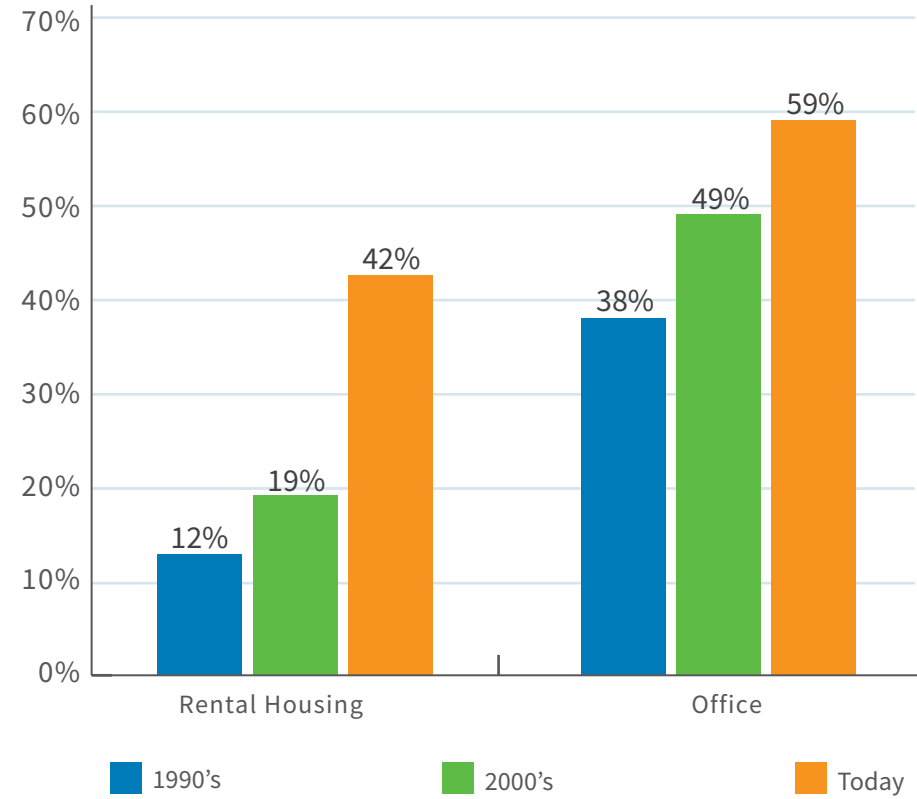


Figure 64: Share of new construction in Washington area Walkups.

Second, the construction of a wider variety of sizes and types of housing and a focus on affordability and attainability will help diversify the mix of incomes in neighborhoods across the county, improving access to services, amenities, and infrastructure for low- and moderate-income residents, who are disproportionately people of color.

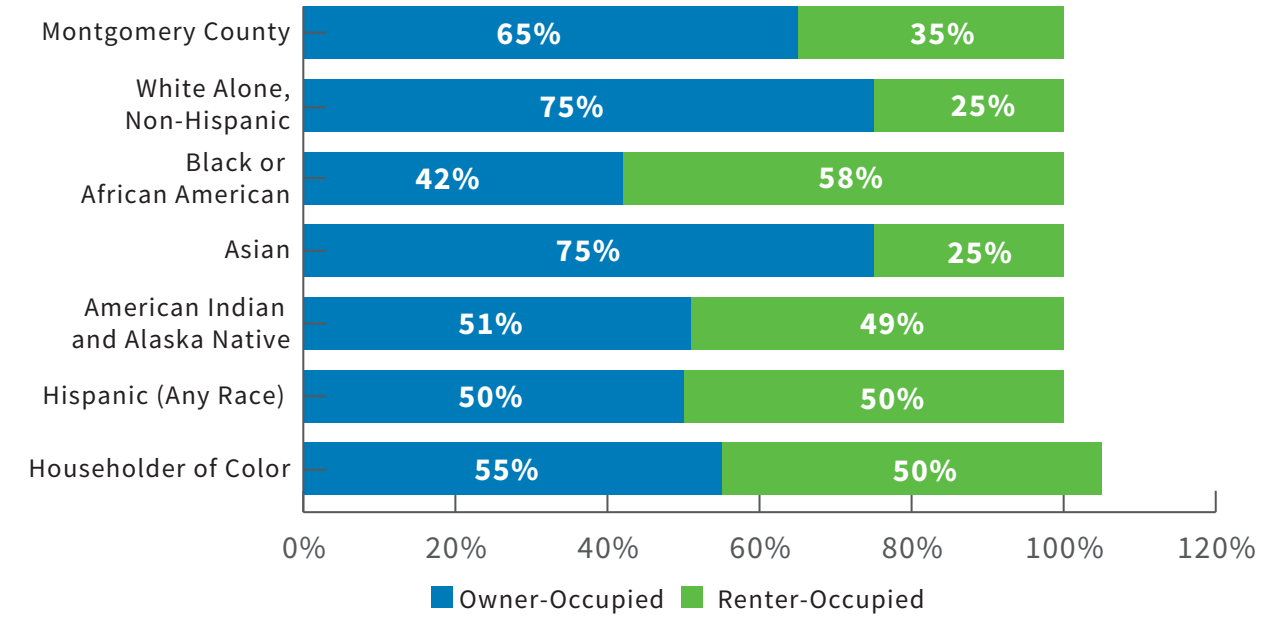


Figure 65: Rate of homeownership by race, 2017

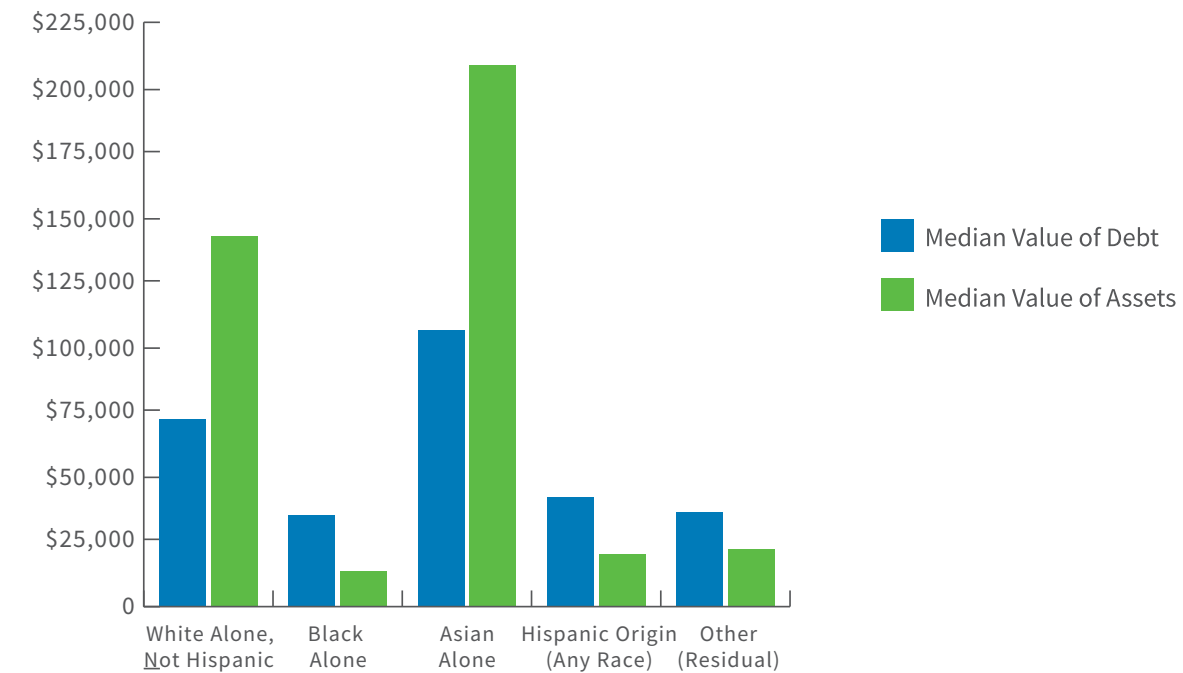
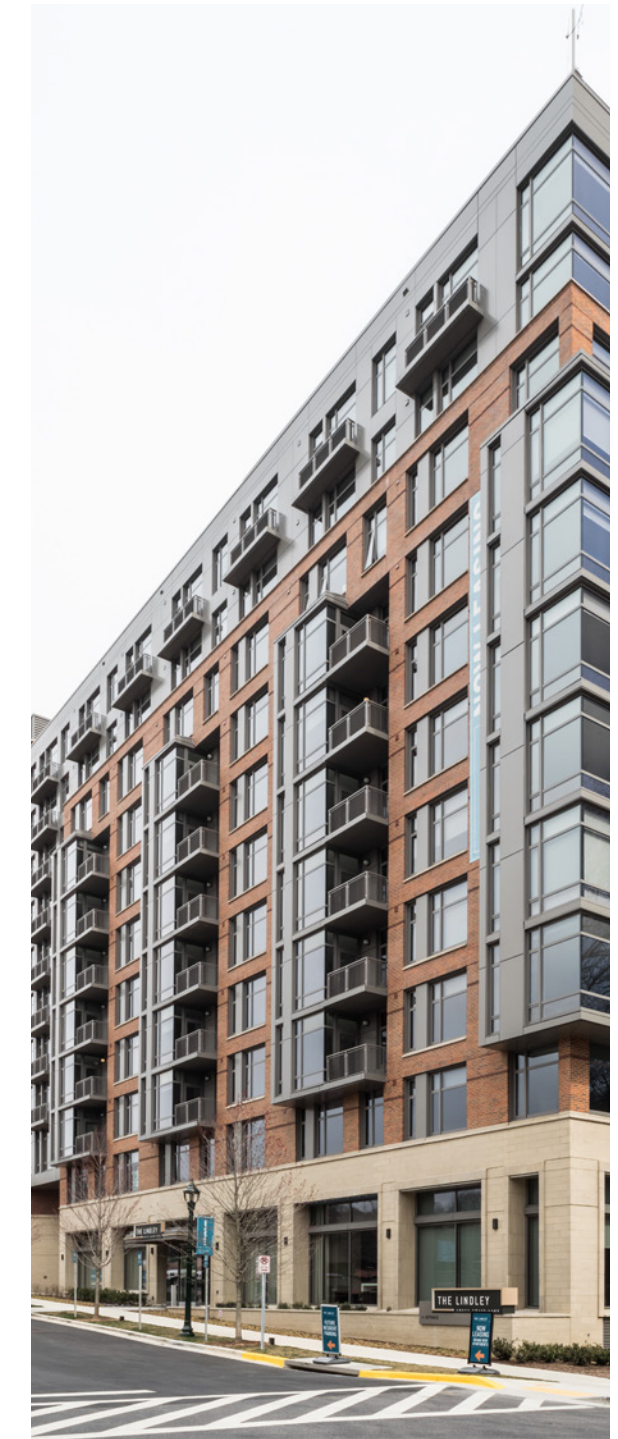


Figure 66: Wealth accumulation and debt by race, 2016



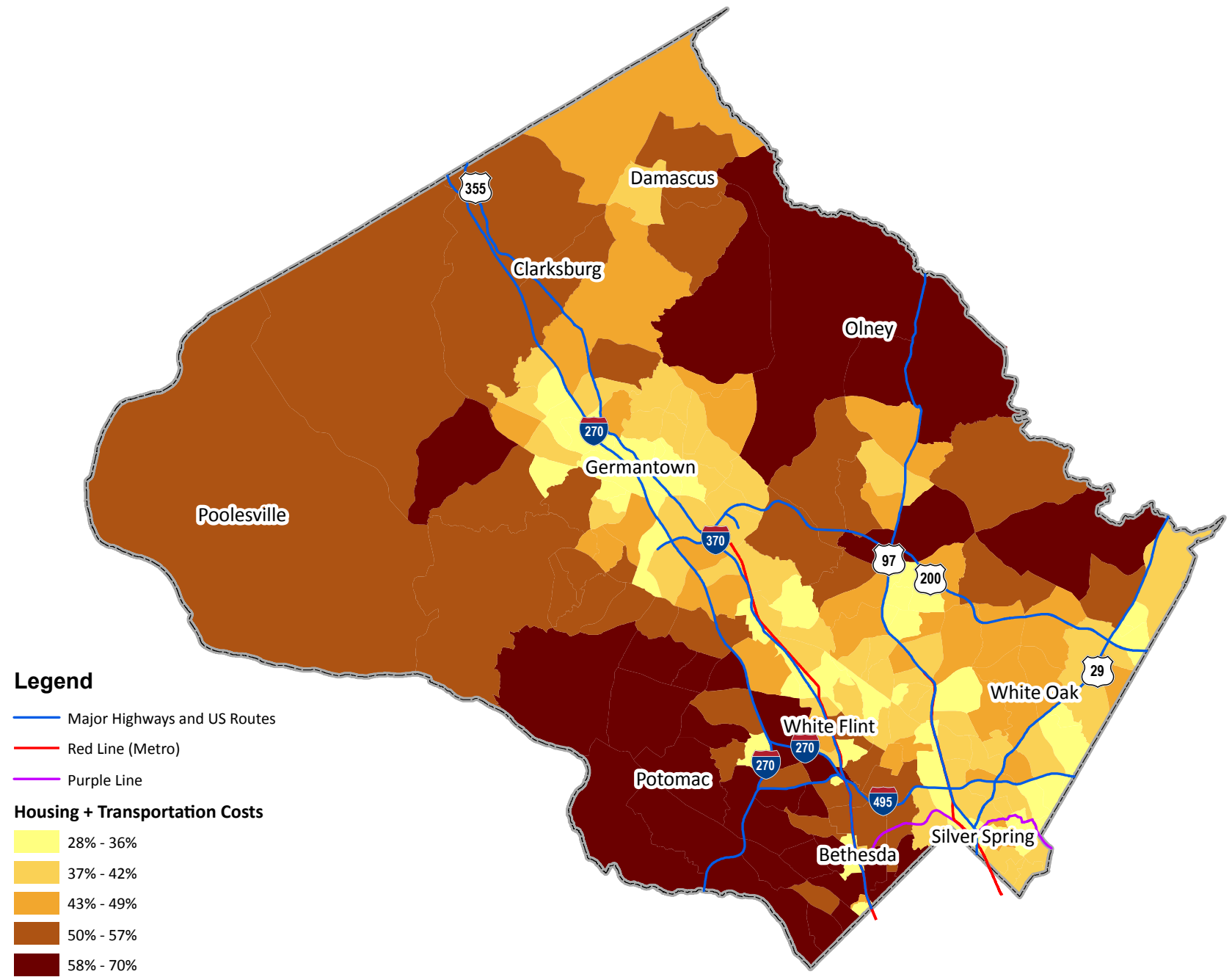


Figure 67: Cost of Housing + Transportation in Montgomery County, 2017

Adding more “Missing Middle” housing types – ranging from low to medium densities such as accessory dwelling units (ADU’s); duplexes; triplexes; quadplexes; live-work units; and clustered housing such as townhouses, courtyard dwellings and smaller apartment buildings to more neighborhoods will provide more choice, enhance intergenerational interaction, promote aging in place, and build social capital.

Missing middle housing will not necessarily be “affordable” in the same sense as price- or income-restricted units that receive public subsidies or are covered by the county’s moderately priced dwelling unit program, but it will fill crucial gaps in the housing market. For first-time buyers who struggle to save enough for a down payment on a large, single-family house, a duplex or tiny house can provide an accessible point of entry to home ownership. For empty nesters who want to downsize but cannot find a smaller, less expensive home in the neighborhood where they raised

their family, a small apartment building or a courtyard bungalow could provide a welcome alternative to relocating from the area.

Of course, missing middle housing by its nature is highly likely to be more affordable than single family detached houses in the same neighborhood. This is true because these housing types require less land, employ relatively inexpensive wood frame construction, and are designed for people looking for smaller and more efficient living spaces. Critics who argue that less expensive alternatives to single family detached dwellings are not worth pursuing unless they are certain to be affordable to low-income households are missing the point of missing middle housing. Our community needs a wider variety of options accessible across the spectrum of incomes, family sizes, and lifestyles in order to make the housing market function effectively for all of our residents at every stage of their lives.

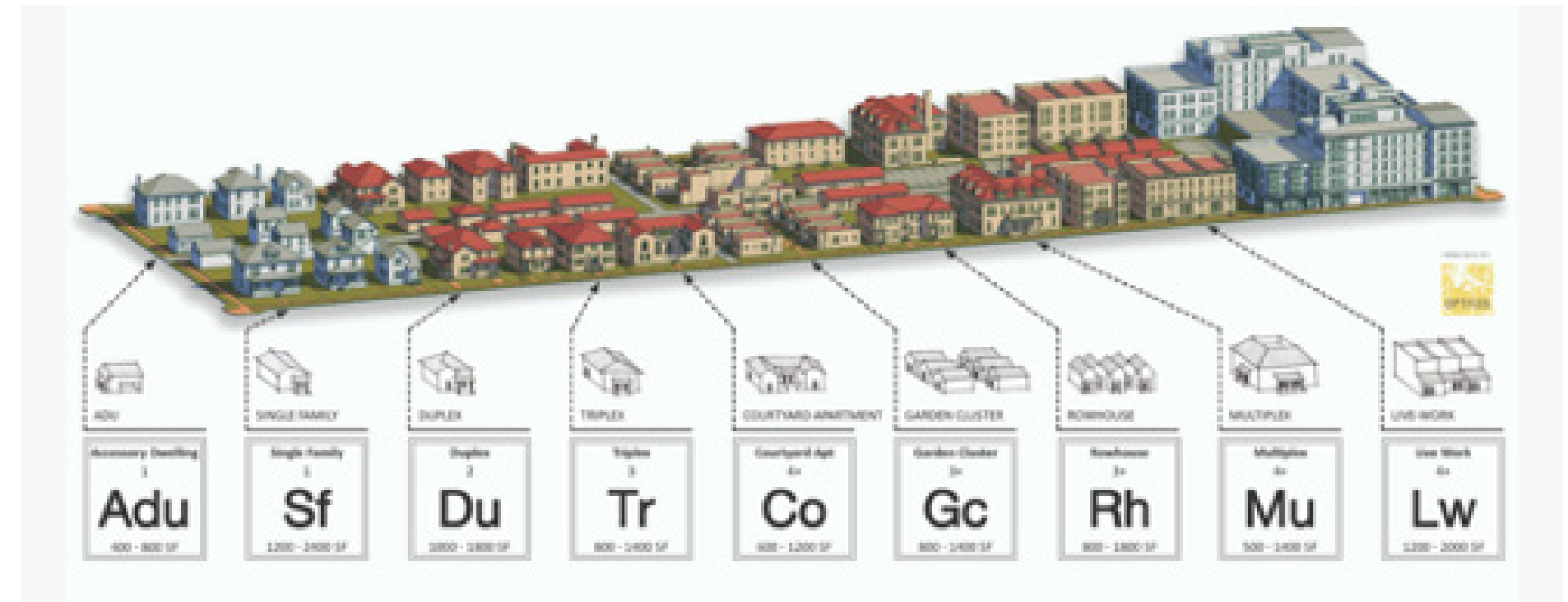
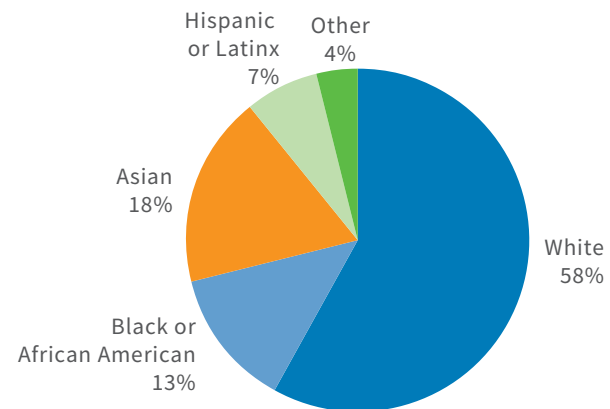
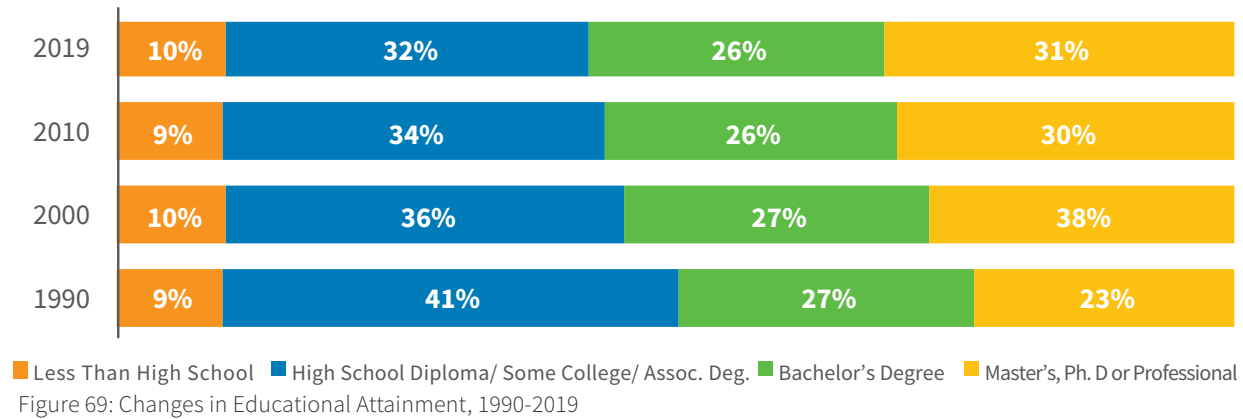


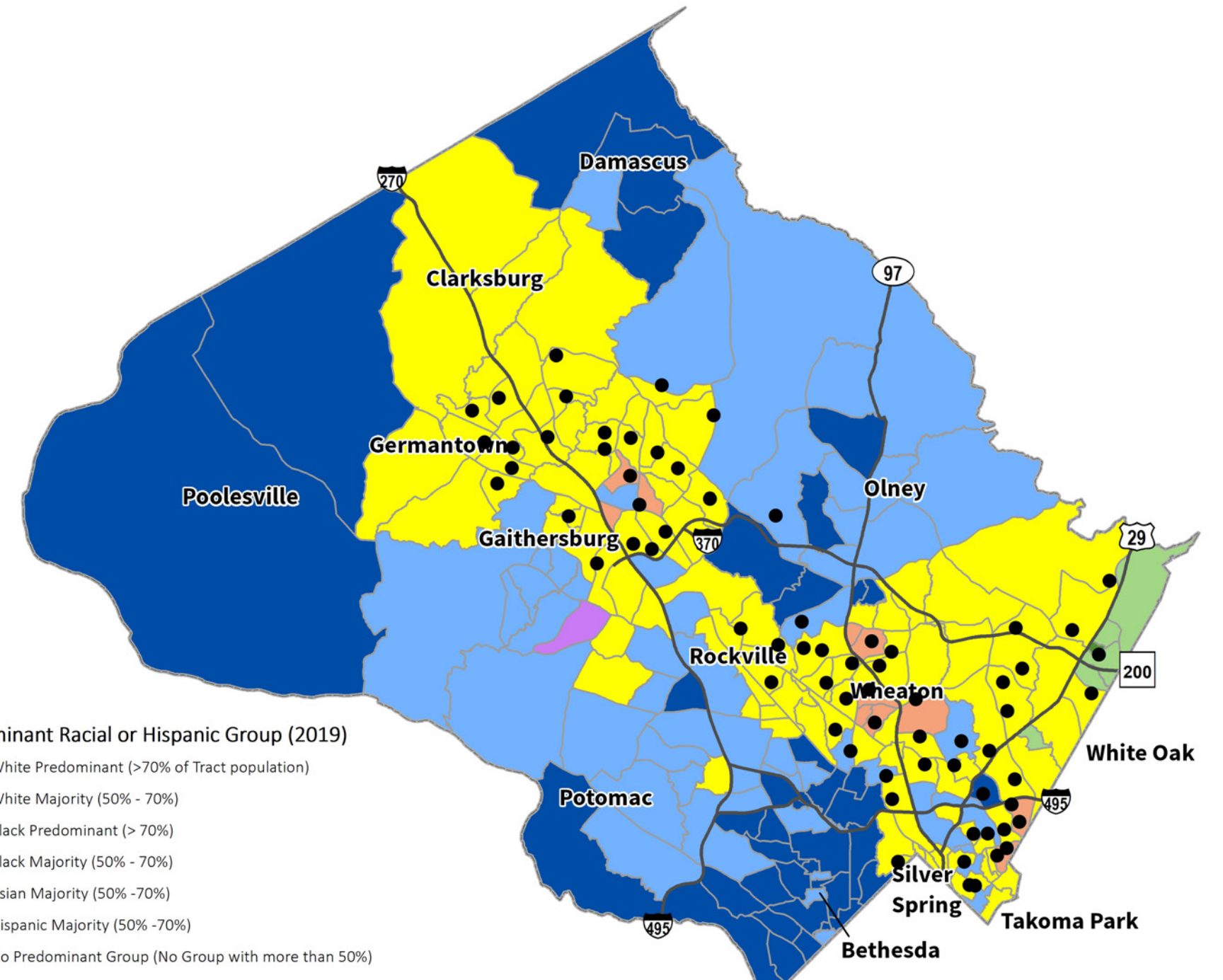
Figure 68: Missing middle housing types. Photo credit: Opticos Design



Preservation of natural-occurring and regulated existing affordable units will minimize gentrification and displacement as these communities see future investments in transit infrastructure, schools, and amenities. Building new affordable housing in existing amenity-rich neighborhoods will expand access to quality education for a wider range of students, leading to more integrated schools and helping close the achievement gap for people of color. Over time, these efforts will minimize de facto segregation based on income between school districts and encourage greater social mobility. Mixed-income housing in communities lagging investments will help mitigate the concentration of poverty and enhance access to amenities and recreational opportunities for current residents.



Third, a broader range of housing types – particularly the inclusion of multifamily buildings of varying scale depending on their location – will reinforce the benefits of Complete Communities because flexible residential zoning will allow more people to live closer to work, increase the walkability of neighborhoods, and limit the development footprint on the environment. By allowing smaller residences and more multifamily building types, encouraging infill and repurposing, and adding housing near transit and jobs, these recommendations will collectively reduce greenhouse gas emissions and improve other measures of environmental health.



In assessing proposals related to the supply of housing and measuring the success or failure of the approaches recommended in this plan, relevant measures may include:

- Rates of homeownership by race, income, and area
- Number of and proportion of cost-burdened households
- Combined housing and transportation costs
- Rent and mortgage payments as a fraction of the cost of living
- Number of low-income households in a census tract (concentration of poverty)
- Number of low-income households lost in a census tract over a period of time (displacement)
- Racial and income diversity within neighborhoods
- Proportion of housing units proximate to transit routes and job centers
- Number of residential units issued building permits, overall and by area of county
- Number of affordable units by type, overall and by area of county
- Naturally Occurring Affordable Housing preserved, overall and by area of county
- Number of homeless residents
- Proportion of missing middle housing units and units in multifamily buildings
- Range of home prices
- Greenhouse gas emissions from residential buildings and transportation per capita





PARKS AND RECREATION

FOR AN INCREASINGLY URBAN
AND DIVERSE COMMUNITY:
ACTIVE AND SOCIAL

Montgomery County has long been a leader in adopting forward-thinking policies for the preservation of land for parks, recreation, agriculture, and resource conservation. The M-NCPPC has won the National Recreation and Parks Association Gold Medal for the country's best large parks system a record six times. Like other aspects of planning, however, the success of our approach to parks, recreation and open space must continue to evolve to meet changing needs.



The story of the Parks Department closely tracks the ways in which American suburbs – and the attitudes, lifestyles, and values of their residents – have changed:

- In the 1920s and 1930s, developers of early down-county subdivisions dedicated stream valley floodplains to the M-NCPPC. The resulting parks helped to market these subdivisions and provided a place for water and sewer infrastructure along with parkways for pleasure driving.
- In the early post-war period, Montgomery County’s role as a bedroom community for a growing capital city increased demand for organized recreation in park activity buildings, ballfields, and tennis courts. The development pattern throughout these early decades of the Parks Department’s history was characterized by subdivisions of single-family homes with backyards grouped by residents with similar income and social structure and designed with the assumption that residents could, would and should drive to major amenities.
- By the 1960s and 1970s, the influence of the environmental movement – sparked in part by Silver Spring’s Rachel Carson – led the park system to devote more attention to resource stewardship. The 1980s and 1990s saw the introduction of “smart growth” and increased appreciation for the benefits of a compact form of development, with park acquisition and the Agricultural Reserve working together as part of a comprehensive approach to land conservation policy as a tool to protect the environment and discourage sprawl.
- At the turn of the 21st century, the desire to revitalize central business districts led the Parks Department to plan and build more urban parks, initially as “buffers” to protect abutting single-family neighborhoods from more intensive – or simply different – types of development such as apartment buildings, townhouses, or commercial uses.

Montgomery County Parks Timeline 1930 to 2010

1930s-1940s



**Stream Vally Parks
Water Protection**

1950s-1960s



**Regional Parks
And Athletic Fields**

1970s



Neighborhood Parks

1960s-1970s



Environmental Awareness

1980s-1990s



**Smart Growth
Open Space Preservation**

2000s-2010s



Urban Park Shortage

The Parks Department has built a well-deserved reputation for environmental stewardship, and it has made progress in providing a wider range of recreational opportunities, such as cricket, to meet the needs of a more culturally diverse population. It has room, however, for improvement:

- Our highest density areas are far from places where the most acreage of parkland exists in the county, with lack of alternatives to accessing such parks other than driving.
- Many conservation-oriented parks lack trails and are inaccessible to walkers, cyclists, and transit users, limiting their availability to the greater public.
- Parks conceived as buffers often act as separators rather than gathering places for people.
- Park facility standards and acquisition strategies conceived during a period of greenfield expansion are incompatible with infill development and adaptive reuse of sites.

Meanwhile, the role of land conservation and stewardship in addressing the county's environmental sustainability goals is as important as ever. Urban redevelopment and infill will reduce the environmental impact of future growth by reducing greenhouse gas emissions and help reverse the damage from earlier development by incorporating



modern state-of-the-practice stormwater management features. Nonetheless, the environmental performance of green infrastructure on public land must keep getting better to improve water quality, limit property damage and erosion from flooding, and add tree and forest cover.

In addition to maintaining its leadership role in environmental management, the Parks Department must continue to take on new roles:

- Serve residents of downtowns, town centers, and other intensively developed areas
- Focus on social engagement and community building as a central role of parks and recreation
- Encourage vigorous physical activity for people of all ages, abilities, and cultures

Over the coming decades, our challenge is to acquire, develop and program parks, recreation, and privately owned public spaces that provide a range of active recreation and community building opportunities throughout the most intensively developed parts of the county while continuing to apply sound environmental stewardship practices to public lands.

In order to maximize the contributions of parks and recreation towards creating strong communities with lasting value, the county will pursue the following policies and practices:

Focus on creating high quality urban parks

- Prioritize acquisition of land for parks in urban centers and other intensively developed places along growth corridors and in Complete Communities using the Legacy Urban Space CIP commitment and the Energized Public Spaces Functional Master Plan (EPS Plan) as a starting point.

- Offer programs in urban parks to encourage usage, extend time spent in parks and make these spaces centers of activity.
- Implement the EPS Plan to ensure that densely populated parts of the county enjoy walkable access to a full range of park experiences.
- Integrate privately owned public spaces (POPS) with the park/recreation system to supplement publicly owned and managed gathering spaces and athletic facilities, using a range of ownership and management approaches to public space.
- Coordinate land use and park planning to ensure Complete Communities have access to a range of park types through a combination of public and privately owned facilities.



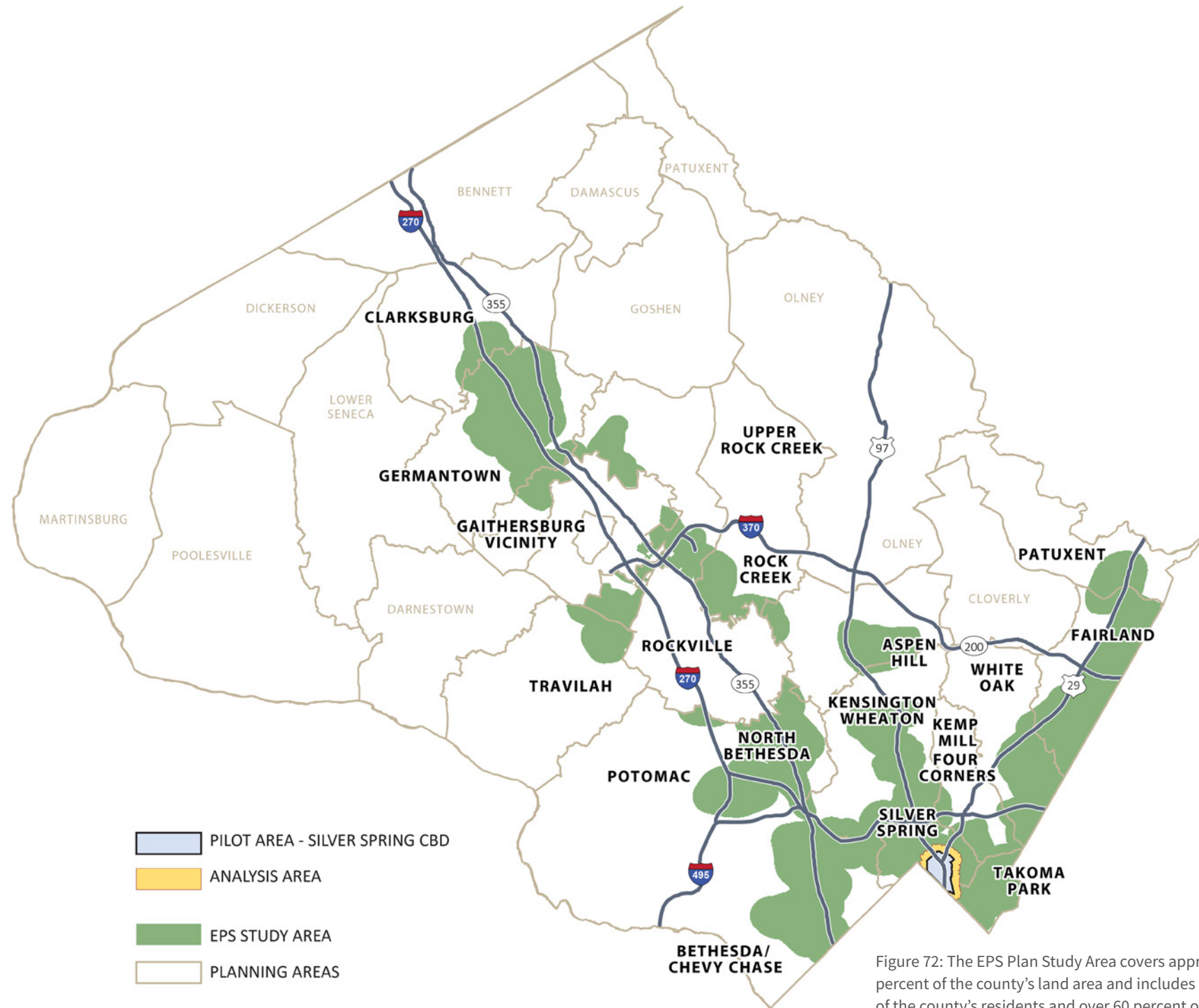


Figure 72: The EPS Plan Study Area covers approximately 17 percent of the county's land area and includes over 40 percent of the county's residents and over 60 percent of its jobs.

Use park and recreation facilities/programs to promote active lifestyles

- Include active recreation as an integral element in park planning and design.
- Encourage active recreation as a key component of POPS in all parts of the county.
- Provide park/recreation facilities and programs designed to encourage residents of all ages/ cultures to engage in vigorous physical activity.
- Integrate park trails and paths into transportation planning and better use them to connect residents to jobs and centers of activity.



CDC data from 2019 indicates that only 14.6-20.5 percent of Maryland adolescents (grades 9-12) achieve one hour or more of moderate and/or vigorous physical activity daily.

Recent survey data show that the percentage of children under age 12 who played team sports "regularly" has declined in recent years, from 42 percent in 2011 to 38 percent in 2018.



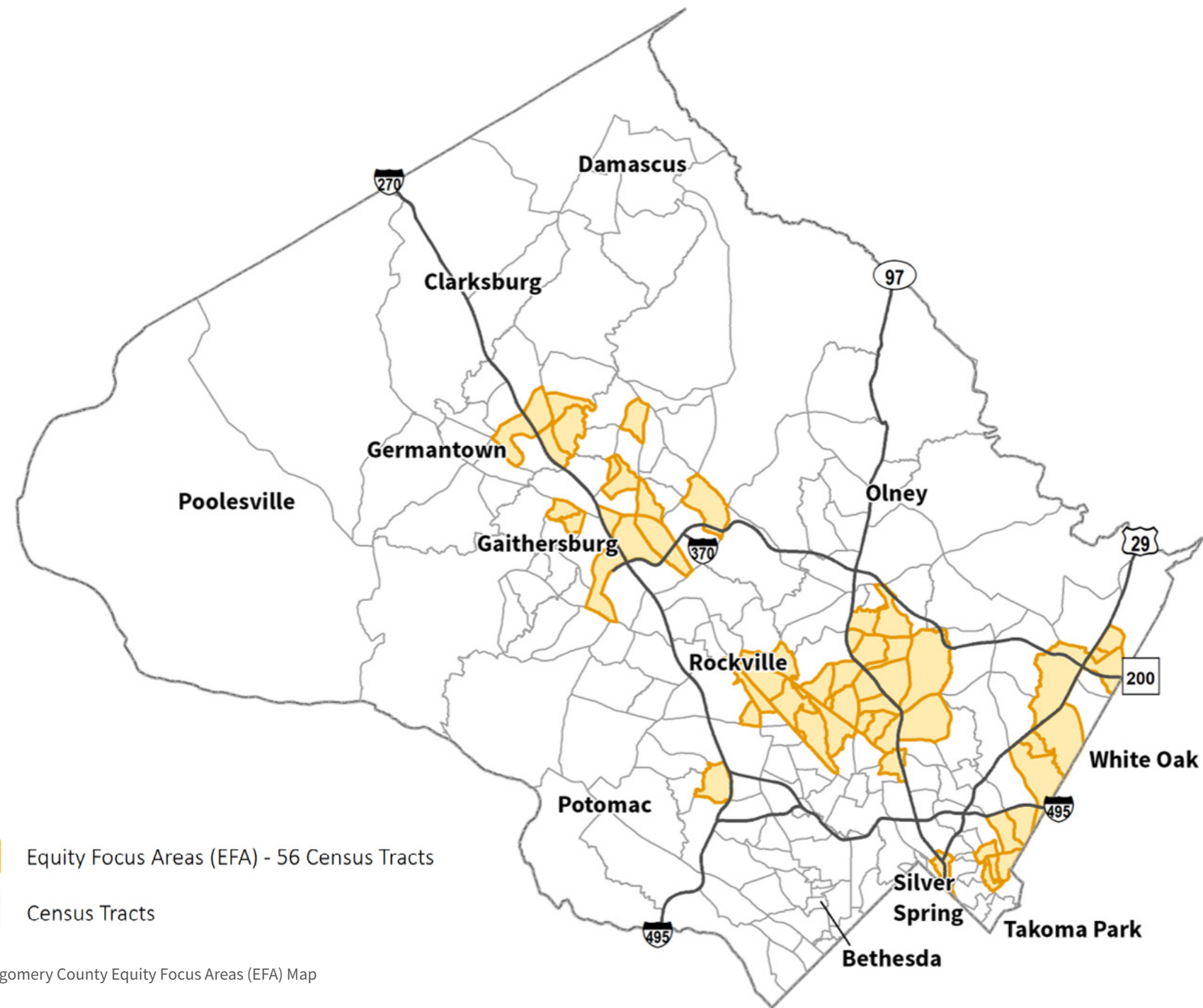


Figure 73: Montgomery County Equity Focus Areas (EFA) Map

Ensure that parks and recreation opportunities are accessible and equitably distributed

- Amend the EPS Plan study area to incorporate more refined analysis of equity in its methodology.
- Use equity measures in developing capital budgets for park and recreation facilities.
- Gather data on – and address – barriers to participation in park and recreation programs.
- Improve accessibility of park and recreation facilities via walking, biking and transit.

Make social connection a central objective for parks and recreation

- Design park, recreation, and related infrastructure and services around building community, creating opportunities for interaction, and making parks and recreational amenities a central element of Complete Communities.
- Connect neighborhoods and people to parks with a world-class trail network.
- Include food/beverage in planning and programming parks and recreational facilities.
- Provide park amenities that appeal to visitors with different interests/physical abilities.

Update park facility standards and acquisition strategies to align with infill development and adaptive reuse. Coordinate with county agencies to encourage the simultaneous accommodation of multiple needs, including recreation, education, community-building, and resource stewardship - through colocation, adaptive reuse, co-programming and other forms of combined or shared uses of public land, buildings and related infrastructure.





Maintain high standards of environmental stewardship in park management and operations

- Reaffirm the Parks Department’s commitment to resource conservation, stewardship, and sustainability practices such as innovative stream and habitat restoration projects.
- Selectively acquire additional land where needed to protect sensitive natural resources, improve water quality, increase tree cover, enhance wildlife corridors, curb invasive species, and achieve other environmental goals.
- Create a resiliency plan to improve the ability of park and recreation facilities and natural resources to withstand the effects of climate change.

Integrate parks/rec/public spaces into economic development strategies and land use planning to attract employers and workers, build social connections, encourage healthy lifestyles, and create vibrant places, especially as part of Complete Communities.

These policies will strengthen the role of parks and recreation in economic competitiveness, racial equity, environmental sustainability and an active, healthy community for all.

World-class places require world-class park, recreation and cultural amenities. Look to Central Park in New York, Golden Gate Park in San Francisco, Millennium Park in Chicago, or Hyde Park in London and the significance of great urban parks becomes clear. Parks are essential to creating vibrant, economically competitive places. In fact, parks and the amenities they provide are regularly cited as among the most important factors influencing decisions by businesses about where to relocate or expand.

Multiple academic studies have shown that parks increase adjacent property values from 5 percent to 20 percent, providing incentives for property owners to contribute to the creation of public parkland or to build POPS as part of their development projects. This data also shows that taxpayer-funded investment in parks and related programming and amenities deliver strong economic returns on investment to the public.



The quality and accessibility of urban parks is a basic component of equity in the delivery of public services. Parks are so integral to what makes a community desirable and healthy that ensuring equity in decisions about which land is acquired for parks in what part of the county and how that land is used is essential to achieving our goals for racial and socioeconomic justice. The Parks Department has made major strides in

recent years in incorporating quantitative measures of equity in its capital budget recommendations, and this approach should be expanded to include analysis of programs and facilities run by other agencies, such as Montgomery County Public Schools, the Department of Recreation, and the Department of Libraries.



Of course, parks also play a major role in environmental sustainability. Climate change has resulted in increased frequency, intensity and/or duration of fires, flooding/ rain events, drought, wind events, and extreme temperatures. This rapid destabilization of climate patterns jeopardizes the ecological stability of nearly all global communities. Parks and natural areas help address the effects of climate change and enhance environmental resiliency. Stream restoration and stormwater management projects on parkland protect against flooding and improve water quality. Parks provide wildlife corridors that can account for changes in habitat patterns. Urban tree canopy mitigates thermal pollution, helps limit the heat island effect of intensive development, filters pollutants, and sequesters carbon. Habitat restoration provides wildlife with natural terrain, reduces human-wildlife conflict and improves overall ecosystem performance. These benefits to the natural environment are especially important in parts of the county that have not been the beneficiaries of high levels of public and private investment.



Figure 74: Evans Parkway stream before and after restoration



Well-designed and sited parks are one of the most straightforward ways to establish a clear sense of place. They invite people of all ages, cultures, incomes, and interests to gather and interact in ways not achieved in any other location or context. Not only do they foster social connectedness, but with healthy levels of civic engagement and social cohesion, they can act as community hubs and focal points for response and recovery during natural disasters and other emergencies.

Parks and recreation also are vital to improving health outcomes for all our residents. According to the CDC, more than 60 percent of U.S. adults do not engage in the recommended amount of activity and approximately 25 percent of U.S. adults are not active at all. Because 90 percent of outdoor experiences happen close to home, parks - particularly in urban areas - play an important role in outdoor recreation. Trails for example, are a great way to motivate people to explore public spaces and new parts of the county, expose residents to different neighborhoods

and encourage exercise and healthy lifestyles. Likewise, community gardens help to reduce the impact of food deserts in low-income areas, encourage physical activity and social interaction, and give residents who do not have yards access to nutritious foods that contribute to a healthy lifestyle. Access to opportunities for vigorous physical activity is especially important to improve health outcomes and quality of life for people of color, who suffer higher rates of diabetes, high blood pressure and obesity.

In assessing proposals related to parks and recreation and measuring the success or failure of the approaches recommended in this plan, relevant measures may include:

- Number of urban parks: Up
- Miles of streams restored, and stormwater runoff treated: Up
- Childhood obesity: Down
- Stream water quality: Up
- Urban tree canopy: Up
- Additional miles of trails built: Up
- Participation in vigorous physical activity: Up
- Park and recreation patronage/participation by race/ethnicity, language spoken and age: Up
- Awards and other recognition of excellence in urban parks and trails: Up
- Patronage at community gatherings: Up
- Proportion of population within 15-minute walk of three park experiences: Up

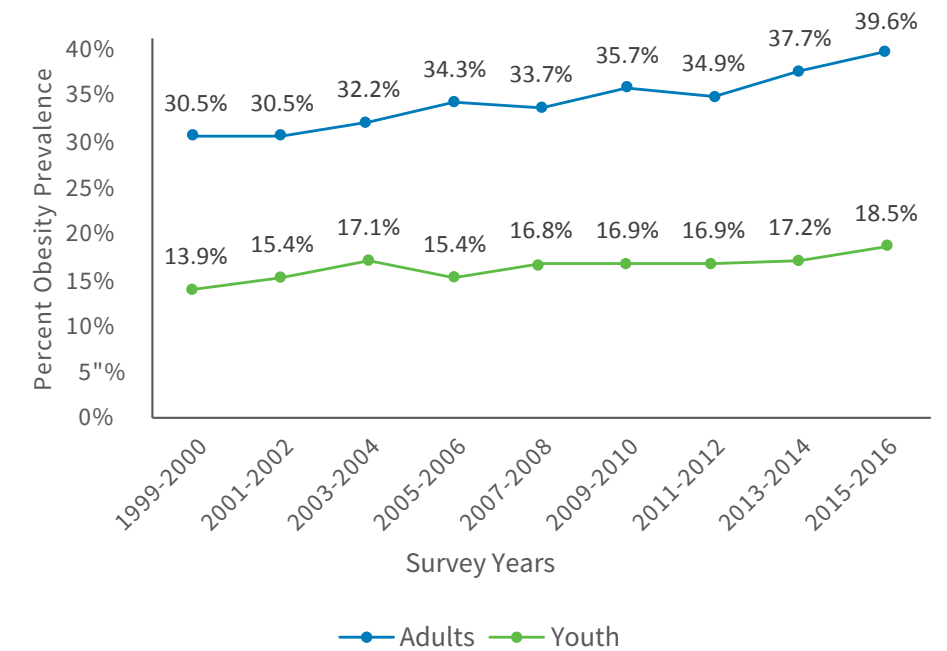


Figure 75: Trends in obesity prevalence among adults aged 20 and over (age adjusted) and youth (ages 2-19 years) in the U.S. 1999-2016



CONCLUSION

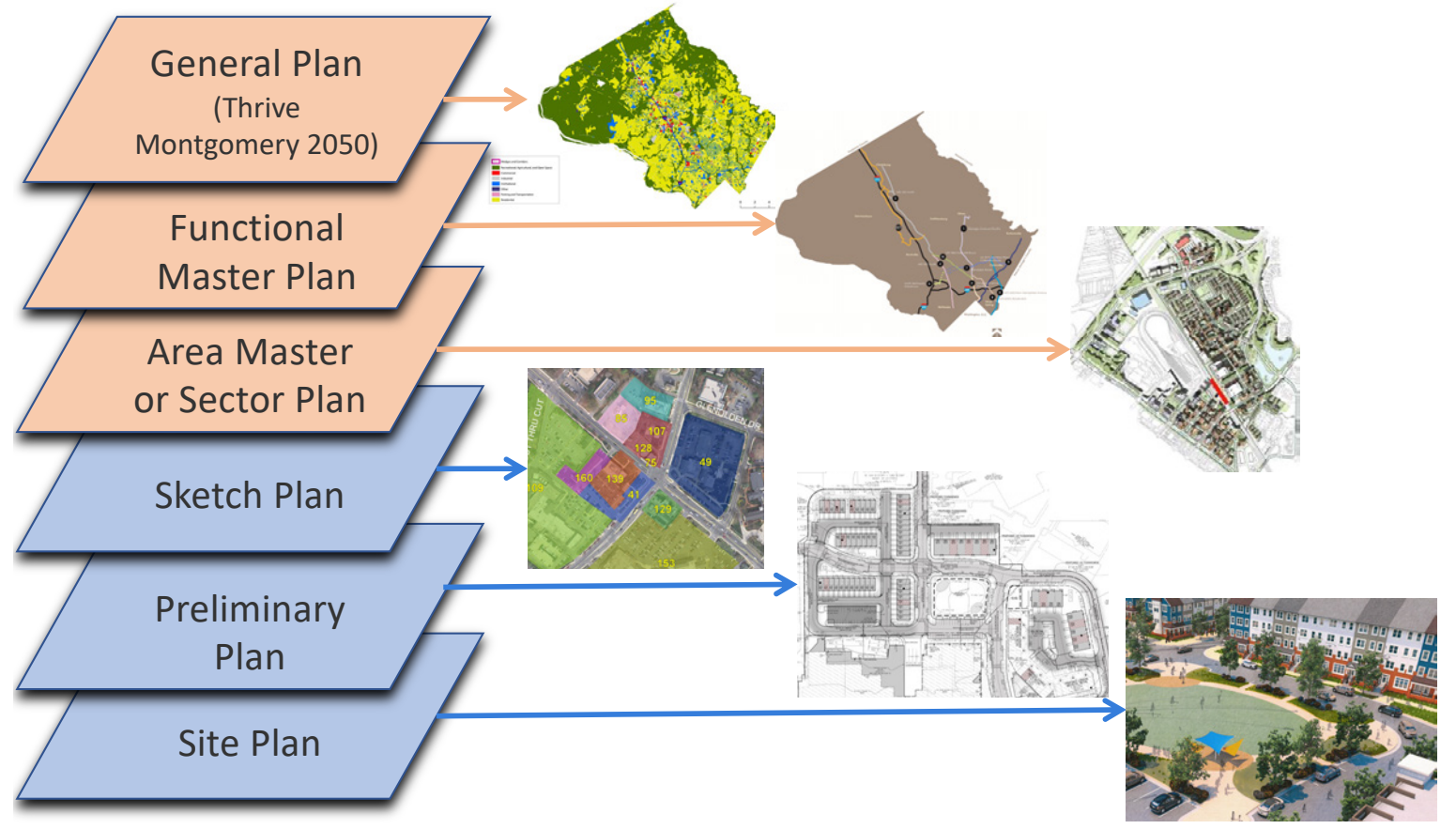
Thrive Montgomery 2050 establishes a framework for responding to economic, demographic, social, and environmental change in ways that are rooted in enduring lessons about what has made places successful in the past, while remaining adaptable to unforeseen circumstances. That is why the plan emphasizes the basic concepts of compact form; diversity of building types and design; and complementary transportation infrastructure, instead of attempting to predict the pace and direction of technological innovation or the consequences of catastrophic events, whether natural or man-made, whose long-term effects are impossible to forecast with certainty.

This plan seeks to ensure that we are prepared to face multiple possible futures. This document is therefore a guidebook, not an exhaustive list of prescriptions. It does not address every topic relevant to our future, but it provides strong direction for decisions about land use, transportation, and related issues within the ability of local government to influence.

Cooperation among public and private sectors in implementation

The policies and actions proposed within Thrive Montgomery 2050 focus primarily on subjects under the authority of the Planning and Parks Departments. Full implementation of its recommendations, however, will require the cooperation of many other government bodies. For example, updating the zoning code will require coordination with Department

of Permitting Services, while changes to street design standards require coordination with the Department of Transportation and the State Highway Administration. Agencies such as the Arts and Humanities Council will lead the creation of a new cultural plan, and the Department of Recreation, working with the Parks Department, will help expand opportunities for physical activity.



Market-driven development will play an important role in implementing Thrive Montgomery 2050. We are embarking on an ambitious effort in an age of intense competition and disruption in the private sector and shrinking fiscal capacity of government entities at all levels. To successfully implement these bold ideas, we will need to strategically align public and private investments to maximize their long-term benefits to the county. Future growth will be focused in a compact footprint through private sector-led real estate projects. Infill and redevelopment along major corridors will create a finer-grained network of streets and add gathering spaces that complement publicly owned parks. Property owners will retrofit outdated buildings for new

uses and enhance environmental performance by redeveloping surface parking lots and incorporating stormwater management. Private investment in diverse housing types and neighborhood serving retail will fill in missing amenities and lead to more Complete Communities.

Moving from plans to action

To start the process of implementing the ideas in Thrive Montgomery 2050, a standalone “Actions Document” has been created that covers short, medium, and long-term tasks for implementing the policies proposed in this plan. The Actions Document will help direct the work program for the Planning and Parks Departments and guide certain other government agencies. It should

not be considered exhaustive, and it should be updated regularly. It covers:

- Reviews of existing policies, regulations, and programs;
- Studies and new master, functional, or facility plans to delve more deeply into the topics addressed in the policies, collect and analyze data, and identify detailed strategies for decision making and implementation;
- Development of tools and templates to support master planning, regulatory review and other planning processes; and
- Changes to agency governance and practices that shape how decisions are made.

Along the way, the county undoubtedly will encounter issues not anticipated by this plan. The indicators listed below are intended, along with the more detailed metrics listed in previous chapters, to guide how these types of issues and potential responses should be evaluated and allow for periodic assessments of progress to inform priorities and set shorter-term goals:

- Economic performance and competitiveness
- Wage and job growth
- New business formation
- Economic output per capita
- Physical activity and public health
- Racial equity and social inclusion
- Racial and economic integration of neighborhoods and schools
- Measures of social capital, civic engagement, and community trust
- Equitable life outcomes across race, income, age, gender, etc.
- Environmental sustainability and resilience
- Greenhouse gas emissions
- Vehicle miles traveled
- Water and air quality

The county's Capital Improvement Program (CIP) should be aligned with Thrive Montgomery 2050's recommendations to create the conditions to attract private development through the provision of transit, sidewalks and a walkable grid of streets, great urban parks, and high-performing and racially integrated schools. The combination of such public and private investments is the most reliable long-term strategy for expanding

the county's tax base by attracting workers to the high-quality Complete Communities, which in turn will entice businesses and employers to locate here to be closer to a broadly skilled work force. Impact fees from private development will help fund provision of specific public services, but new sources of funding such as tax increment financing, land value capture, and other mechanisms along with more effective use of county assets such as public land and right-of-way will be needed.



WHAT CAN THRIVE MONTGOMERY 2050 – OR ANY PLAN – ACHIEVE?

Planners have influence over the physical development of the communities where they work but their power is limited. They do not have the expertise, resources, or authority to control decisions not directly related to real estate development, transportation infrastructure, or the administration of parks. Land use regulation can prevent or impose conditions on real estate development, but it cannot compel the owner of a property to build on it. Planning agencies can help other governmental bodies identify problems and suggest solutions but generally do not control budget decisions relating to public infrastructure or services.

So, what is the role (and value) of planning? Planning helps to facilitate the success of human settlements in specific places – in this case, the 504 square miles comprising Montgomery County. People come together to live and work in groups in order to engage in economic, social, and intellectual exchange. The development of land to accommodate these groups produces settlements of varying size and scale ranging from a few houses or stores at a rural crossroads to a village, town, city, or ultimately a conurbation such as the Washington metropolitan area. The task of planners is to help guide the creation and evolution of the built environment in ways that will assist these settlements in maximizing the exchange value of place while minimizing the negative externalities associated with the development of land and intensification of its uses.

Planners are often asked to predict the course of technological, economic, or social changes that may influence a community's future prospects and to develop strategies for dealing with these changes. While planners must make educated guesses about future trends, the history of planning is littered with examples of predictions gone badly awry. This does not mean that planners have nothing to offer – only that they do not have a crystal ball, and to the extent that their proposals rely exclusively on assumptions about how the future will unfold, they are on shaky ground. We must consider how climate change, pandemics, or terrorist attacks might affect our future, and we need to think about the implications of autonomous vehicles, artificial intelligence, and economic change. However, the foundational elements of what make places work for people have proven remarkably consistent over time, and this plan relies on those foundations to establish a framework for the next generation of our county's development.

For Montgomery County in the early to mid-21st century, this means formulating strategies designed to strengthen economic competitiveness, reduce and reverse environmental degradation, and ensure that the benefits of development and growth are widely shared across lines of race, ethnicity, and class while countering related inequities in the spatial distribution of resources and opportunities. It also requires creating solutions for improving the depth and breadth of civic engagement, fostering a sense of place, and building strong community bonds.

Modifications to other plans, policies, and rules

- Master and sector plans will be updated as amendments to Thrive Montgomery 2050, providing more detailed recommendations for specific areas of the county. These more detailed plans will cover issues such as land use and zoning, transportation, environmental protection, historic and cultural resources, and public facilities.
- Functional plans will refine and implement Thrive Montgomery 2050's recommendations with countywide scope. Functional plans address a system, such as the road and transit network, or a subject such as recreational tourism or affordable housing.
- Implementation will require changes to the zoning code, the building code, the subdivision regulations, and the adequate public facilities ordinance. These laws, which are part of the Montgomery County Code, establish setbacks, maximum heights, and parking requirements; specify which uses are permitted by right or subject to discretionary review; govern lot shapes and sizes; provide for dedication of rights-of-way and contributions of space and funds for parks and schools; and set other development standards and conditions that must be aligned with the recommendations of this plan.
- The Planning Department will develop guidelines and reference manuals on specific policies and implementation tools. Examples include the Fire Department Access Performance-Based Design Guide, a document produced by the Planning Department and the Department of Permitting Services to facilitate attractive community design while ensuring access to emergency vehicles such as fire trucks.
- The Parks Department's policies and rules also will need to be reviewed to ensure support for the recommendations in this plan. The Parks, Recreation and Open Space (PROS) plan, the Energized Public Spaces (EPS) plan, the Parks Department's capital budget plans, and other key documents should be updated to reflect the direction provided in this plan and provide more detailed guidance for achieving relevant goals.



Relationship between Thrive Montgomery 2050 and the Climate Action Plan

Thrive Montgomery 2050 was drafted in parallel with an initiative by Montgomery County's executive branch to develop a Climate Action Plan (CAP), which outlines ways to reduce the county's net greenhouse gas emissions to zero by 2035. The CAP also recommends approaches to deal with the hazards of climate change predicted for Montgomery County: extreme heat, extreme precipitation, high winds, and drought. The Planning Department staff worked with executive branch representatives to ensure that the goals, policies, and actions recommended by Thrive Montgomery 2050 and the CAP are complementary rather than duplicative.

Thrive Montgomery 2050 is a high-level document that focuses on long-range planning and policies to guide the physical development of the county, including where and how land will be preserved or developed for housing, office buildings, parks, agriculture, recreation, and transportation infrastructure. These kinds of decisions have a major influence on greenhouse gas emissions, carbon sequestration, and adaptation to climate change.

The CAP, on the other hand, recommends specific actions to be taken in the near-term to achieve the goal of eliminating greenhouse gas emissions by 2035 and to mitigate or adapt to the effects of increased heat and flooding, high winds, and drought. Thrive Montgomery 2050 incorporates a wide range of recommendations related to climate change and its connection to land use, transportation, and parks, and the Planning and Parks Departments will implement recommendations in the CAP that are within the scope of the M-NCPPC's responsibilities. Together these plans will create a comprehensive approach to climate change at the local level.



Montgomery County has a lot of things going for it

In addition to the advantages we have enjoyed by virtue of our location in the national capital region, we have benefitted from a tradition of thoughtful planning that has allowed us to develop and grow while preserving land and other resources in ways that have supported a high quality of life. The Wedges and Corridors Plan was exceptionally progressive for its time, and it helped us to build high quality park and school systems, preserved natural resources and farmland, and laid the groundwork for transit-oriented smart growth. Thrive Montgomery 2050 has attempted to provide an unflinching assessment of the Wedges and Corridors Plan but the truth is that many of the shortcomings of subsequent decisions about land use, transportation and parks were more a product of the failure to follow through on its ideas than of flaws in its general approach.

In fact, our more difficult problems stem from the very things that have helped us. The federal government's presence has given us a foundation of good jobs and a concentration of public investment in life sciences and information technology that provide enviable opportunities. The very stability and reliability of the base of employment tied to government, however, breeds complacency about the need to compete effectively to capitalize on those opportunities.

The Montgomery County community faces far more adversity and uncertainty than in the past, leaving less room for error and requiring focus and discipline to ensure our future success. The days when our task was simply to manage growth are over. We do not have the luxury of waiting for opportunities to present themselves but instead must be prepared to respond to market forces and compete for jobs and investment.

Our past success also blinded us to the reality that Montgomery County's prosperity has left many people out. As the demographics of our community change rapidly along dimensions of age, race and ethnicity, income and wealth, culture, and language, the need to confront inequitable practices has grown increasingly urgent. The urgency of demands for racial justice and the need to rebuild bonds of trust and community are clear.

As for environmental sustainability, Montgomery County's past record of support for water quality protection, forest conservation, and land preservation are helpful but ultimately will not be sufficient to shield us from the effects of climate change. More creative strategies to build resilience and improve sustainability of both the built and natural environments are critical.



While these economic, social, and environmental changes will not be easy to navigate, Montgomery County is well-positioned to make the decisions and investments necessary to success. Our community is in the 99th percentile of all counties in the country in terms of household income and educational attainment, with annual economic output of almost \$100 billion and an amazingly diverse population. We can draw on tremendous human and physical resources; our assets would be the envy of almost any local jurisdiction anywhere. If we plan carefully and act decisively for change, Montgomery County can thrive well into the future.





APPENDICES

APPENDIX A

Compliance with state law requirements

Maryland law requires local jurisdictions and agencies to meet specific standards and requirements for the exercise of planning authority delegated by the state. In Montgomery County, these requirements are usually met through new master plans, which amend the General Plan. In some cases, state planning requirements are met through the adoption of county regulations or guidelines, which are summarized below and are incorporated by reference.

12 Visions of the State Planning Act

Maryland's 2009 Planning Visions law created 12 "visions" to guide sound growth and development policy. The visions address quality of life and sustainability; public participation; growth areas; community design; infrastructure; transportation; housing; economic development; environmental protection; resource conservation and stewardship, and implementation.

Thrive Montgomery 2050's goals and policies are consistent with and support these visions:

1. Quality of Life and Sustainability

Thrive Montgomery 2050 makes recommendations designed to improve the quality of life of the county's residents by making the distribution of public services and amenities more equitable; improving housing affordability; and broadening access to economic, educational, social and recreational opportunities. The Plan also emphasizes sustainability and protection of natural resources coupled with environmental resilience and adaptation to climate change.

2. Public Participation

The Plan has been developed with broad and deep engagement with neighborhood organizations, businesses, cultural groups, religious institutions and other stakeholders. The role of land use, transportation and park planning in building civic capacity and social capital is among its central themes.

3. Growth Areas

Thrive Montgomery 2050 proposes that almost all new residential and non-residential development should be located in existing and planned population and business centers near existing and planned transit such as the Metro rail stations and the bus rapid transit (BRT) corridors. All of these places are within the county's Priority Funding Areas.²

4. Community Design

The Plan emphasizes the importance of design excellence in creating Complete Communities that are attractive and lovable, foster social engagement, build a stronger sense of community, and create social and economic value.

5. Infrastructure

The Plan concentrates future growth in transit accessible places where infrastructure to support current and planned growth is either already available or can be provided in an efficient, sustainable, and equitable manner. It recommends continuing support of agriculture and protecting environmental resources such as forests and streams.

6. Transportation

A safe, efficient, and multimodal transportation system with transit as the predominant mode of travel is key to creating economically resilient, equitable, and sustainable communities. The Plan emphasizes walking, biking, rolling and other non-motorized modes of travel with emphasis on moving people rather than vehicles. The plan's recommendations for reducing travel by car are critical to meeting the county's goal of eliminating greenhouse gas emissions by 2035.

7. Housing

The Plan emphasizes the need to produce more housing of all types and sizes, especially near transit, for a range of incomes to deal with the housing affordability crisis. It recommends a range of mechanisms such as rezoning for a wider variety of residential building types and adopting innovative financing and construction techniques to increase housing choices for a diverse and aging population.

8. Economic Development

The Plan is based on the idea that a compact form of development with a mix of uses and forms and high quality parks and public spaces supported by infrastructure designed to make walking, rolling, and riding transit attractive and convenient is the best way to make communities attractive to employers who need highly educated workers and want to take advantage of public and private health care and technology related assets in the county and within the Washington region

9. Environmental Protection

The Plan emphasizes the role of "smart urbanism" incorporating a compact form of development, preservation of land for agriculture and conservation and natural resources, a strong park system, and reduced reliance on driving is the most effective way to make population growth and economic activity more sustainable. The Plan

includes ambitious recommendations designed to reduce vehicle miles traveled, encourage more energy efficient buildings, and a variety of other steps to cut greenhouse gas emissions, protect water quality, and enhance tree cover and other environmental resources.

10. Resource Conservation

The Plan's recommendations on Complete Communities; compact development; heavier reliance on walking, rolling, and transit with reductions in vehicular travel; stewardship of parks and land conservation; and other environmental management strategies such as stream restoration will help protect and conserve the county's waterways, forests, farmland, and other natural resources.

11. Stewardship

Thrive Montgomery 2050 provides policy guidance to be implemented by numerous public and private entities. Successful implementation will require sustained support from government agencies, businesses, community-based organizations and residents.

12. Implementation

Thrive Montgomery 2050 emphasizes the importance of indicators to track progress and evaluate how new ideas and proposals will help achieve the Plan's objectives. It discusses the roles of public agencies, the private sector and the community in implementing the Plan's ideas. It provides high level guidance on funding sources that will be tapped to support capital investments as well as the need to identify new funding sources and financing strategies. It also describes the policy and regulatory tools available for implementation.

Senate Bill 236—Sustainable Growth and Agricultural Preservation Act of 2012 (SB 236)

Senate Bill 236 (SB 236) requires local jurisdictions to map and adopt specified growth tier designations to limit the proliferation of onsite sewage disposal systems and protect and conserve agricultural and other open space land.

The law stipulates the creation of four tiers of land use categories to identify where major and minor residential subdivisions may be located in a jurisdiction and what type of sewerage system will serve them. It includes a four-tier classification for all areas within a jurisdiction:

- Tier I - Areas currently served by sewerage systems.
- Tier II - Growth areas planned to be served by sewerage systems.
- Tier III - Areas not planned to be served by sewerage systems. These are areas where growth on septic systems can occur.
- Tier IV - Areas planned for preservation and conservation.

Montgomery County implemented SB 236 by adopting a Tiers Map through an amendment to the county’s subdivision regulations (codified at Chapter 50, §50.4.3 of the County Code). The official map displaying the county’s Growth Tier areas is located on the Planning Department’s website and is incorporated by reference into Thrive Montgomery 2050.

The Agricultural Stewardship Act of 2006 – House Bill 2 (HB 2)

House Bill 2 (HB 2) requires counties certified under the Maryland Agricultural Land Preservation Foundation to receive funding for farmland preservation to establish Priority Preservation Areas in their comprehensive plans and manage them according to certain criteria. In Montgomery County, the requirements of HB 2 are met through the Functional Master Plan for the Preservation of Agriculture and Rural Open Space.

Economic Growth, Resource Protection, and Planning Act of 1992, as amended

(House Bill 1141 Land Use Planning – Local Government Planning, 2006 (HB 1141))

The 1992 Economic Growth, Resource Protection, and Planning Act required local jurisdictions to adopt a “sensitive areas” element designed to protect sensitive areas from the adverse effects of development. Sensitive areas include streams and their buffers, 100-year floodplains, habitats of threatened and endangered species, steep slopes, wetlands and other areas in need of special protection.

In Montgomery County, the sensitive areas element was satisfied by the Planning Board’s approval of the Guidelines for Environmental Management of Development in Montgomery County (the Guidelines). The Guidelines are a compilation of policies and guidelines that affect the protection of sensitive resources during the development review process.

Local jurisdictions are also required to include a water resources planning element in their comprehensive plans. This element ensures that drinking water and other water resources will be adequate and suitable receiving waters and land areas will be available to meet stormwater management and wastewater treatment and disposal needs of existing and future development. Montgomery County met this requirement through its Water Resources Functional Plan, which was approved by the County Council in July of 2010, and adopted by the full Commission in September 2010.

Mineral Resources Element

HB 1141 also requires local jurisdictions to include a mineral resources element in their comprehensive plans, if current geological information is available.

There are currently only two remaining mineral extraction operations in the county: The Aggregate Industries Travilah Quarry near Rockville; and the Tri-State Stone quarry on Seven Locks Road near River Road. The Travilah Quarry is zoned Heavy Industrial (IH), covers over 320 acres and is over 400 feet deep in places. It produces much of the aggregate used in construction for the National Capital Region. The Tri-State Stone quarry is



a 21.5-acre operation that produces natural stone (mica-schist quartzite) products for residential construction. Both quarries still have significant reserves and are expected to be in operation for some years to come.

When the quarries are depleted or otherwise closed, the sites will be reclaimed for other uses. In the case of the Travilah Quarry, studies have long been underway by the Interstate Commission on the Potomac River Basin, the Washington Suburban Sanitary Commission, the Metropolitan Washington Council of Governments, DC Water, and the Washington Aqueduct to use the open pit as an emergency water supply reservoir. The Potomac Master Plan recommends that should redevelopment of the area of the quarry that is not needed for the reservoir be proposed prior to another master plan amendment, an advisory group will be formed to provide the opportunity for public review.

The Tri-State Stone quarry is located in a residential development, is zoned R-200, and is a legal non-conforming use as the quarry and building supply operation predate implementation of the zone. Like similar nearby mines that were eventually closed and redeveloped as residential areas, the Tri-State quarry will be also be evaluated for reclamation and redevelopment when it closes.

Given the dwindling of commercially viable mineral deposits throughout the county, the preferred use of land in the Agricultural Reserve for agriculture, and the importance of the two large sole-source aquifers in the county, new operations to extract mineral resources are not currently expected. All existing or new mining operations will continue to be guided by master plans and other applicable law.

APPENDIX B

Glossary

Accessory Dwelling Unit (ADU): A residential unit on the same lot as an existing single-family dwelling and used as a complete, independent living facility with provisions for cooking, eating, sanitation, and sleeping. It can be within the main structure of the house, an addition to the main structure, or a separate structure on the same lot.

Active transportation: Non-motorized forms of transportation, such as walking, biking and rolling via wheelchair, scooter, or other conveyance.

Affordable housing: Housing that is either built under a government regulation or a binding agreement that requires the unit to be affordable to households at or below specified income levels or is available at market prices that achieve the same result. The moderately-priced dwelling unit (MPDU) program's income requirements typically set the price of units at levels affordable to households earning 65 percent of area median income (AMI) for garden apartments, and 70 percent (AMI) for high-rise apartments.

Agricultural Reserve: A designated area of Montgomery County planned and zoned primarily for agricultural uses that includes the majority of the county's remaining working farms and certain other non-farm land uses.

Attainable housing: Housing that is both affordable to households at a range of income levels and suitable for needs of these households. Implicit in the concept of attainable housing is the idea that a range of housing options (type, size, tenure, cost) exists in the local market.

Area median income (AMI): The midpoint of a region's income distribution – half of households in a region earn more than the median and half earn less than the median. For housing policy, income thresholds set relative to the area median income—such as 50% of the area median income—identify households eligible to live in income-restricted housing units and the affordability of housing units to low-income households.

Biophilic design: The practice of designing the built environment with a focus on connecting people with nature. See more on <https://www.metropolismag.com/architecture/what-is-and-is-not-biophilic-design/>

Built environment: Any manmade building, structure, or other intervention that alters the natural landscape for the purpose of serving or accommodating human activity or need. It includes cities, buildings, urban spaces, infrastructure, roads, parks, and any ancillary features that serve these structures.

Bus rapid transit (BRT): A fixed-guideway transit system where buses operate in dedicated lanes, either physically or through signing and marking, distinct from general purpose lanes used by automobiles. BRT systems also typically include off-board fare collection systems and advanced transit information systems.

Capital Improvement Program (CIP): A six-year comprehensive statement of the objectives with cost estimates and proposed construction schedules for capital projects and programs for all agencies for which the county sets tax rates or approves budgets or programs. Examples include the construction of public schools, street maintenance, and parks improvements.

Central Business Districts (CBDs): downtowns or major commercial centers. Montgomery County has four areas officially designated in the County Code as Central Business Districts: Bethesda; Friendship Heights; Silver Spring; and Wheaton.

Civic capacity: The capacity of individuals in a democracy to become active citizens and to work together to solve collective problems and of communities to encourage such a participation in their members.

Climate Action Plan: In July 2019, Montgomery County launched a planning process to develop prioritized actions and strategies to meet the county's greenhouse gas emissions reduction goals. The county released a draft Climate Action Plan in 2020.

Climate change: A change in global or regional climate patterns, particularly the change apparent from the late 20th century onwards attributable largely to increased levels of atmospheric carbon dioxide produced by the use of fossil fuels.

Co-housing: Semi-communal housing consisting of a cluster of private homes and a shared community space (such as for cooking or laundry facilities).

Co-location: Locating more than one public facility in one place. For example, locating a library and a park on the same property or next to each other.

Commercial centers: A broad grouping of areas of high commercial activity with a concentration of jobs, retail, housing, transit and other ancillary uses and support services. It includes central business districts, downtowns, and town centers.

Compact form of development: The practice of consolidating development of the built environment in ways that place buildings and infrastructure close together to reduce walking, biking, or driving distances and to make efficient use of land. According to Growing Cooler, The Evidence on Urban Development and Climate Change, “The term “compact development” does not imply high-rise or even uniformly high density, but rather higher average “blended” densities. Compact development also features a mix of land uses, development of strong population and employment centers, interconnection of streets, and the design of structures and spaces at a human scale.”³

Community land trust: A homeownership mechanism used to ensure long-

term housing affordability. The trust acquires land and maintains ownership of it permanently. The trust enters a long-term, renewable lease with prospective homeowners instead of a traditional sale. When the property is sold, the homeowner earns only a portion of the increased property value. The remainder is kept by the trust, preserving the affordability for future low- to moderate-income families.

Concentration of poverty: Neighborhoods where a high proportion of residents live below the federal poverty threshold.

Conditional use: A conditional use, previously known as a “special exception,” is a use that is not permitted as a matter of right in the zone where it is located but may be allowed subject to a review process administered by a hearing examiner.

Congestion pricing: Congestion pricing (also called decongestion pricing) is a mechanism to reduce traffic congestion by charging a fee for vehicles entering a certain area, usually a commercial center, during rush hours. In addition to reducing traffic through shifting some of the traffic to non-rush hours, it also helps improve air quality and other modes of travel such as walking and bicycling.

Connectivity: The number of ways and variety of options to reach multiple destinations. There are many different ways to define connectivity for land use purposes. For example, subdivisions with dead end streets may have poor connectivity with surrounding land uses. A grid street pattern often provides more options to connect with destinations within or outside a neighborhood or commercial center. Connectivity also implies non-physical means (telephone, internet, social media, etc.) to connect with others.

Cooperative housing (or co-op housing): An alternative to the traditional method of homeownership. In cooperative housing, the residents own a part of a corporation that owns and manages the building.

Corridor: An uninterrupted area of developed or undeveloped land paralleling a

transportation route (such as a street, highway, or rail) or the land within one-quarter mile of both sides of designated high-volume transportation facilities, such as arterial roads. If the designated transportation facility is a limited access highway, the corridor extends one-quarter mile from the interchanges.

Cost-burdened household: A household that spends 30% or more of its income on housing costs.

Density: A measure of the amount of development on a property. Density is often expressed as the number of residential units per acre of land (or another unit of measure), or the total amount of residential or commercial square footage on a property. When expressed as the ratio of residential or commercial square footage to square footage of lot area, it is called Floor Area Ratio (FAR).

Design guidelines: A set of guidelines intended to influence the design of buildings, landscapes and other parts of the built environment to achieve a desired level of quality for the physical environment. They typically include statements of intent and objectives supported by graphic illustrations.

Disadvantaged People: Places that are affected most by economic, health and environmental burdens, including low-incomes, poverty, high unemployment, lack of access to jobs and quality education, and increased risk of health problems.

Downtowns: Downtowns are Montgomery County's highest density areas including central business districts and urban centers. They are envisioned to have dense, transit-oriented development and a walkable street grid (existing or planned). These areas are envisioned to share several of the following characteristics: identified as central business districts and/or major employment centers; high levels of existing or anticipated pedestrian and bicyclist activity ; high levels of transit service; street grid with high levels of connectivity; continuous building frontage along streets, with minimal curb cuts; and mostly below ground or structured parking.

Duplex: A residential structure that typically resembles a single housing unit but contains two dwelling units. It can be arranged as two units next to each other sharing a common wall, or one unit above the other.

Employment centers: Areas with a high concentration of jobs.

Equity: just and fair inclusion into a society where all can participate and prosper. The goal of equity is to create conditions that allow all to reach their full potential. Equity and equality are often confused, but equality only achieves fairness if everyone starts from the same place and needs the same help. Equality may be defined as treating every individual in the same manner irrespective of needs and requirements.

Equity Focus Areas: Equity Focus Areas are parts of Montgomery County that may experience the highest inequities in access to community amenities and other resources to support a good quality of life.

Functional master plan: A master plan addressing either a county-wide system, such as circulation or green infrastructure, or a policy, such as agricultural preservation or housing. A functional master plan amends the General Plan but does not make land use or zoning recommendations.

Green infrastructure: The interconnected network of natural areas (forests, 100-year floodplains, wetlands, meadows, and streams and their buffers) and conservation parks that comprise natural ecosystems and provide environmental services.

Greenfield development: Development on undeveloped land or land previously used for agriculture or left to evolve naturally.

Greenhouse gas (GHG) emissions: Gases that trap heat in the atmosphere, such as carbon dioxide, methane, nitrous oxide, and fluorinated gases.

Growth Policy: A set of rules and guidelines governing the obligations of private developers to contribute toward the cost and construction of public facilities such as roads and schools needed to accommodate new growth.

High-Quality Transit: Includes rail and bus rapid transit service that is reliable, frequent, fast and comfortable. Generally, the transit service should be so frequent that passengers do not need to consult a schedule.

Housing First Initiative: A national program that offers permanent, affordable housing as quickly as possible for individuals and families experiencing homelessness, then provides the supportive

Housing Initiative Fund (HIF): Administered by Montgomery County's Department of Housing and Community Affairs, the fund provides loans to the Housing Opportunities Commission (HOC), nonprofit developers, experienced rental property owners and for-profit developers to build new housing units, renovate deteriorated multi-family housing developments, preserve existing affordable housing and provide housing for people with disabilities. The fund receives revenue from a variety of sources including loan repayments and property tax revenue.

Impervious surfaces: Any surface that prevents or significantly impedes the infiltration of water into the underlying soil, including any structure, building, patio, road, sidewalk, driveway, parking surface, compacted gravel, pavement, asphalt, concrete, stone, brick, tile, swimming pool, or artificial turf.

Infrastructure: The built facilities, generally publicly funded, required to serve a community's development and operational needs. Infrastructure includes roads, water supply and sewer systems, schools, health care facilities, libraries, parks and recreation, and other services.

Land use: The use of any pieces of land through buildings or open land for activities including housing; retail; commerce; manufacturing; roads; parking; parks and recreation; and institutional uses such as schools, healthcare and all other human activities.

Land use plan: The land use element of an approved and adopted general, master, sector, or functional plan.

Land value capture (LVC) or Value Capture: A method of funding infrastructure improvements based on recovering all or some of the increase in property value generated by public infrastructure investment. LVC can help mitigate the challenges cities face in obtaining public funding, while also providing benefits to private sector partners.

Mandatory Referral: The Maryland State law and review process that requires all county, state and federal agencies and public utilities to refer any land use changes/improvements and infrastructure projects in Montgomery and Prince George's counties to the M-NCPPC for advisory review and approval.

Master plans: Master plans (or area master plans, or sector plans) are long-term planning documents that provide detailed and specific land use and zoning recommendations for a specific place or geography of the county. They also address transportation, the natural environment, urban design, historic resources, public facilities, and implementation techniques. All master plans are amendments to the General Plan.

Mass timber: Specialized wood building construction using engineered wood products created through lamination and compression of multiple layers to create solid panels of wood that are used as structural elements to frame a building's walls, floors, and roofs.

Missing middle housing: The term missing middle housing encompasses a variety of housing types that range from low- to medium densities such as duplexes; triplexes; quadplexes, live-work units; and clustered housing such as townhouses, courtyard dwellings and smaller apartment buildings.

Mixed-income housing: Housing units affordable to a broad range of income levels.

Mixed-use development: A development that typically contains residential and commercial uses in the same building or within a small area. For example, a residential building with ground floor retail is a typical mixed-use development.

Moderately Priced Dwelling Unit (MPDU): Montgomery County’s inclusionary zoning program that requires a minimum of 12.5-15 percent of new units in a development to be affordable to households earning up to 65 percent of area median income for garden-style apartments and up to 70 percent for high-rise apartments

Montgomery County Zoning Ordinance: Chapter 59 of the Montgomery County Code, which contains the zoning controls to regulate the use and development of all private property in the county. It generally defines permitted uses, maximum building floor area or the maximum number of units permissible on each property, and maximum building heights, minimum setbacks, open space and other requirements to shape all buildings and related improvements.

Multifamily housing: A building containing three or more dwelling units on a single lot.

Naturally occurring affordable housing: Market-rate residential units that are affordable to low and middle-income households without public subsidies. It generally refers to rental housing but can include ownership properties as well.

Nodes: Places where people and transportation routes congregate.

Payment in Lieu of Taxes (PILOT): PILOTs allow local governments, when authorized by state law, to receive negotiated payments instead of applicable real estate and special district taxes for a certain period of time. The intent is to help lower the cost of development in return for a commitment from a developer to provide a public benefit such as affordable housing to low-income residents. <https://www3.montgomerycountymd.gov/311/Solutions.aspx?SolutionId=1-5JQAZZ>

Public space: Open area or building space available for use and enjoyment by the public.

Public realm: Any open space or built environment that is open to the public for access and enjoyment. Typically, the public realm includes roads, sidewalks, streetscapes, and public spaces. An expanded definition of public realm includes all that is visible from a public space. For example, building facades of private buildings as they line the streets or surround a public plaza are part of the experience of walking through the street or the plaza. A neon sign on a private building becomes part of the perception of the overall space.

Public-private partnership: A cooperative arrangement between at least one public and one private sector entity to carry out a project or initiative.

Purple Line: A 16-mile rapid transit line extending from Bethesda, MD, (Montgomery County) to New Carrollton, MD, (Prince George’s County). The Purple Line will connect directly to the Metrorail Red, Green, and Orange Lines.

Race: A social construct that artificially divides people into distinct groups based on characteristics such as physical appearance (including color), ancestral heritage, cultural affiliation, cultural history, ethnic classification, and the social, economic and political needs of a society at a given period. This definition is cited directly from Montgomery County Bill 27-19 (lines 49-53).

Rail or Rail transit: In Montgomery County rail transit includes Metrorail, the Purple Line, and

Maryland Area Regional Commuter (MARC) train service.

Redlining: Redlining in the context of land use refers to discriminatory real estate practices designed to prevent African American or other groups from obtaining mortgage loans in certain neighborhoods. In 1935, the Federal Home Loan Bank Board (FHLBB) asked the Home Owners’ Loan Corporation (HOLC) to look at 239 cities and create “residential security maps” to indicate the level of security for real estate investments in each surveyed city. On the maps, the newest areas—those considered desirable for lending purposes—were outlined in green and known as “Type A.” These were typically affluent suburbs on the outskirts of cities. “Type B” neighborhoods, outlined in blue, were considered “Still Desirable,” whereas older “Type C” were labeled “Declining” and outlined in yellow. “Type D” neighborhoods were outlined in red and were considered the riskiest for mortgage support. These neighborhoods tended to be the older districts in the center of cities; often they were also African American neighborhoods.

Right-of-way: The legal right, established by usage or grant, to pass along a specific route through grounds or property belonging to another. In this document, this term generally describes the land available for roads, sidewalks, utility lines, and transit infrastructure.

Shared housing: A rental housing unit where two or more people live and share rent, utilities, and other housing related costs.

Single-family home (or unit): A single-family home or unit is one primary residence on a recorded piece of land. A single-family detached home is a stand-

alone structure that does not share any walls with another housing unit. A duplex has two side-by-side units with a shared party wall. Duplexes are considered semi-detached single-family units. Townhouses are considered attached single-family homes.

Single-family neighborhoods: Neighborhoods that predominately include single-family detached and/or attached homes. These neighborhoods are typically in zones that restrict other types of housing or development.

Social capital: the combination of trust, interpersonal relationships, a sense of belonging, shared norms and values, respect and appreciation for diversity, sense of mutual obligation and reciprocity, and other factors that contribute to the willingness and ability of members of a community to cooperate and communicate with each other effectively to achieve shared objectives.

Social justice: Equitable access to wealth, opportunity, and privileges. It encompasses the idea that no individual and group should have a disproportionately higher share of political and economic power than all other individuals and groups leading to a just society.

Sprawl: A pattern of low-density suburban development that is highly dependent upon the automobile as the main form of travel and is considered the source of today’s traffic congestion, environmental degradation and other issues associated with the growth of suburbs since at least World War II.

Stormwater management: The collection, conveyance, storage, treatment, and disposal of stormwater runoff to prevent accelerated channel erosion, increased flood damage, and degradation of water quality.

Streetscape: The improvements within and adjoining a street right-of-way that influence our perception of streets. It includes the width of the roadway, street

trees and landscaping, sidewalk/pavement, street lighting, and other street furniture.

Sustainability: the practice of meeting the economic, social, and environmental needs of the present without compromising the ability to meet the needs of the future.

Tax increment financing (TIF): A tool that subsidizes new development by refunding or diverting a portion of the tax increase resulting from redevelopment of a property to help finance development in an area or (less frequently) on a project site.

Town centers: Town centers are similar to downtowns but generally feature less intense development and cover a smaller geographic area. They typically have high- to moderate-intensity residential development, including multi-family buildings and townhouses, and retail (existing or planned). Town centers share the following characteristics: a regional or neighborhood-serving retail node with housing and other uses; medium to high levels of pedestrian and bicyclist activity; medium levels of existing or planned transit service; a street grid that ties into the surrounding streets; continuous building frontage along streets, with some curb cuts; a mix of structured and underground parking as well as surface parking lots.

Transfer of Development Rights (TDR): A zoning mechanism that, in Montgomery County, grants property owners in the Agricultural Reserve one development right for each five acres of land. These development rights can be sold (transferred) to landowners or developers who can use them to develop at a higher density in designated areas elsewhere in the county.

Transit: In Thrive Montgomery 2050, transit, or public transit, means a public transportation system for moving passengers by rail, buses, and shuttles.

Transit-oriented Development (TOD): A mixed-use development within walking

distance (up to one-half mile) of a transit stop. TODs typically have sufficient development density to support frequent transit service and a mix of residential, retail, office, and public uses in a walkable environment, making it convenient for residents and employees to travel by transit, bicycle, or foot.

Transportation networks: A set of transportation facilities including highways and roads, rail lines, transit facilities, trails, and bike paths that together form the transportation system of a jurisdiction or a region.

Tree canopy: The layer of leaves, branches, and stems of trees that cover the ground when viewed from above and that can be measured as a percentage of a land area shaded by trees.

Triplex: A residential structure that contains three units.

Underutilized properties: A vacant property or one that is developed at an amount less than permitted by the applicable zoning controls.

Urbanism: The best characteristics of cities and centers of human settlements including a compact building form; shorter distances between destinations; a mix of uses such as a mix of living and work places in a variety of buildings types in close proximity to each other; and streets that are safe for walking, biking and other forms of travel without being dominated by vehicles.

Urban design: The process of giving form, shape, and character to the arrangement of buildings on specific sites, in whole neighborhoods, or throughout a community. Urban design blends architecture, landscaping, and city planning concepts to make an urban area accessible, attractive, and functional.

Value Capture: See land value capture

Vehicle miles traveled (VMT): The amount of travel for all vehicles in a geographic region over a given period.

Wedges and Corridors: The planning framework underlying the 1964 General Plan for Montgomery and Prince George's counties. The concept was created in 1960 for the entire Washington, DC, region. The corridors were the major interstate highways radiating out of Washington, DC, which was envisioned to be the major employment center of the region. Each corridor was meant to have a string of cities (corridor cities) designed to accommodate most future residential. The wedges were the triangular-shaped pieces of land between the corridors.

Zone: A land classification under the Montgomery County Zoning Ordinance intended to regulate the land uses and buildings permitted in each zone. Certain uses are permitted by right and others as conditional uses. Any use not expressly permitted is prohibited. A zone also regulates building height, setback open space and other requirements.

Zoning: The practice of classifying different areas and properties in a jurisdiction into zones for the purpose of regulating the use and development of private land. Each zone specifies the permitted uses within each zone, the maximum size and bulk of buildings, the minimum required front, side and back yards, the minimum off-street parking, and other prerequisites to obtaining permission to build on a property.

Zoning Ordinance: see Montgomery County Zoning Ordinance.



END NOTES

1. The Wedges and Corridors Plan was amended twice – in 1969 and 1993 – but its essential structure was retained. (page 2)
2. Priority Funding Areas, <https://planning.maryland.gov/Pages/OurProducts/pfamap.aspx> (page. 141)
3. Growing Cooler, The Evidence on Urban Development and Climate Change, 2008 (page 146)
By Reid Ewing, By Keith Bartholomew, By Steve Winkelman, By Jerry Walters, By Don Chen
<https://www.smartgrowthamerica.org/app/legacy/documents/growingcoolerCH1.pdf>

SOURCES

Figure 1: Population estimate and forecast, 1940-2045
Source: U.S. Census Bureau; MWCOG Cooperative Forecast, Round 9.1; Montgomery Planning Research & Strategic Projects

Figure 2: Land available to accommodate growth
Source: Montgomery Planning

Figure 3: Montgomery County's job growth rate compared to similarly sized counties, 2004-2019
Source: Bureau of Labor Statistics, Quarterly Census of Employment and Wages

Figure 4: Percentage change in population and establishments, 2010-2019
Source: Quarterly census on employment and wages, 2010 and 2019; U.S. Census, Bureau of Labor Statistics

Figure 5: Real median household income, 1999-2019
Source: 2006-2019 ACS 1-year estimates, 2000, 2010 U.S. Census, 2000-2005 Small Area Income & Poverty Estimates, U.S. Census Bureau

Figure 6: Real median income household change, 2009-2019
Source: 2009 and 2019 American Community Survey, 1-year estimates, U.S. Census Bureau

Figure 7: Median household net worth, Age 25-44, 2019
Source: StratoDem Analytics, Reach Advisors analysis of US Census Bureau, American Community Survey data

Figure 8: Net migration to Montgomery County age 25 to 44, 2010-2019
Source: StratoDem Analytics, Reach Advisors analysis of US Census Bureau American Community Survey data

Figure 9: Washington Metropolitan region's elder-adult dependency ratios, 2000-2020
Source: StratoDem Analytics, Reach Advisors analysis of US Census Bureau American Community Survey data

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Source: 1990 U.S. Census, 2019 American Community Survey, 1-year estimates; 2020 Population Projections by Age, Maryland Department of Planning (12/2020)

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Source: StratoDem Analytics; MCEDC

Figure 12: I-270 in Montgomery County is the epicenter of life sciences firms in the Washington region
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Source: 1990, 2010 U.S. Census; 2019 American Community Survey, 1-year estimates, U.S. Census Bureau.

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Source: Montgomery History, photographer unknown

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Source: 1936 Housing Market Analysis of Washington, DC, Federal Housing Administration, recreated by the Montgomery Planning, July 2020

Figure 18: Percentage of major racial and ethnic groups in Montgomery County, 2019
Source: 2015-2019 American Community Survey, 5-Year estimates

Figure 19: Racial disparities by race and ethnicity compared to White population, 2019
Source: “Racial Equity Profile Montgomery County”, Office of Legislative Oversight, Montgomery County, July 2019

Figure 20: Concentrations of low-income students versus AP Performance, 2016
Source: MCPS, 2016 AP and IB Exam Participation and Performance, January 2017

Figure 21: Heaviest precipitation events and daily temperature records in Washington DC region by decades.
Source: Ian Livingston, “The 2010s were D.C.’s hottest decade as warm became the new norm,” The Washington Post, January 3, 2020.

Figure 22: Sources of CO2 emissions in Montgomery County, 2005-2015
Source: MWCOG, Montgomery County GHG Inventory

Figure 23: Montgomery County’s commitment to reduce greenhouse gas emissions to zero by 2035
Source: MWCOG, Montgomery County GHG Inventory

Figure 24: 1964 Wedges and Corridors Plan – urban and rural patterns
Source: Montgomery Planning

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Source: Census of Agriculture 1949-2017; National Agricultural Statistics Services. U.S. Department of Agriculture

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Source: Montgomery Planning

Figure 27: Georgia Avenue looking south from Evans Parkway Neighborhood Park – possible future
Source: Montgomery Planning

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Source: Montgomery Planning

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Source: Montgomery Planning

Figure 30: Montgomery County Agricultural Reserve
Source: Montgomery Planning

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Source: Montgomery Planning

Figure 32: Colesville Road/Columbia Pike (Route 29) looking east from its intersection with New Hampshire Avenue – possible future
Source: Montgomery Planning

Figure 33: Lining corridors with appropriate densities provides housing options
Source: Montgomery Planning

Figure 34: Median commute distance, miles, 2016
Source: HUD Location Affordability Portal; American Community Survey, 2016 American Community Survey, 5 year estimate, U.S. Census Bureau

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Source: Montgomery Planning

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Source: Montgomery Planning

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Source: Montgomery Planning

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Source: 2019 American Community Survey, 5-year estimate U.S. Census Bureau

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Source: Montgomery Planning

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Source: Montgomery Planning

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Source: Purple Line Corridor Coalition

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Source: Source: Metropolitan Washington Council of Governments, 2017-2018 Regional Household Travel Survey

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Source: Source: Press Office, City of Muenster, Germany

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Source: Source: Centers for Disease Control and Prevention, National Center for Health Statistics. Underlying Cause of Death 2011-2015 on CDC WONDER Online Database, released December 2016.

Figure 46: Total trip time for short trips – bicycling versus bus
Source: Montgomery Planning

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Source: Census Bureau Building Permits Survey, Census Population Estimate, MWCOG Round 9.1 Cooperative Forecast

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Source: 2019 American Community Survey, 1-year estimate U.S. Census Bureau.

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Source: 1960-2010 U.S. Census, 2019 American Community Survey, 1-year estimate

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Source: Montgomery Planning

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Source: National Association of Realtors, Portland State University, "Community and Transportation Preferences Survey, US Metro Areas." 2015

Figure 64: Share of new construction in Washington area walkups
Source: Leinberger, Christopher. "DC: The Walk Up Wake Up Call: The Nation's Capital as a National Model for Walkable Urban Places" The George Washington University School of Business, 2012

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Source: Montgomery Parks

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Source: Montgomery Parks

Figure 75: Trends in obesity prevalence among adults aged 20 and over and youth (ages 2-19) in the US, 1999-2016
Source: NCHS, National Health and Nutrition Examination Survey, 1999-2016





THE PLANNING PROCESS

1 The **WORKING DRAFT PLAN** is prepared by the Montgomery County Planning Department for presentation to the Montgomery County Planning Board. The Planning Board reviews the Working Draft Plan, makes preliminary changes as appropriate, and approves the Plan for public hearing. After the Planning Board's changes are made, the document becomes the Public Hearing Draft Plan.

Staff presented the Thrive Montgomery 2050 Working Draft Plan to the Planning Board on October 1, 2020. The Planning Board reviewed and approved the plan as the Public Hearing Draft Plan and scheduled a public hearing on November 19, 2020.

2 The **PUBLIC HEARING DRAFT PLAN** is the formal proposal to amend the current General Plan. Its recommendations are not necessarily those of the Planning Board; it is prepared for the purpose of receiving public testimony. The Planning Board holds a public hearing and receives testimony, after which it holds public work sessions to review testimony and revise the Public Hearing Draft Plan as appropriate. When the Planning Board's changes are made, the document becomes the Planning Board Draft Plan.

The Planning Board held a public hearing and received testimony on the Thrive Montgomery 2050 Public Hearing Draft Plan on November 19, 2020. The record of the public hearing was kept open till December 10, 2020.

3 The **PLANNING BOARD DRAFT PLAN** is the Planning Board's recommended Plan and reflects their revisions to the Public Hearing Draft Plan. The Regional District Act requires the Planning Board to transmit a master plan (or a General Plan) to the County Council with copies to the County Executive who must, within 60 days, prepare and transmit a fiscal impact analysis of the Planning Board Draft Plan to the County Council. The County Executive may also forward other comments and recommendations to the County Council.

After receiving the County Executive's comments, the County Council holds a public hearing to receive public testimony. After the hearing record is closed, the relevant Council committee holds public worksessions to review testimony, then makes recommendations to the County Council. The Council holds worksessions, then adopts a resolution approving the Planning Board Draft, as revised.

After County Council approval, the plan is forwarded to The Maryland-National Capital Park and Planning Commission for adoption. Once adopted by the Commission, the plan officially amends the master plans, functional plans, and sector plans cited in the Commission's adoption resolution.



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MONTGOMERY 2050
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Planning Board Draft | April 2021

 **Montgomery Planning**

THE MARYLAND-NATIONAL CAPITAL PARK AND PLANNING COMMISSION