

AC44

ALBEMARLE COUNTY 2044

COMPREHENSIVE PLAN

ADOPTED 10.15 2025

PART 4: APPENDIX

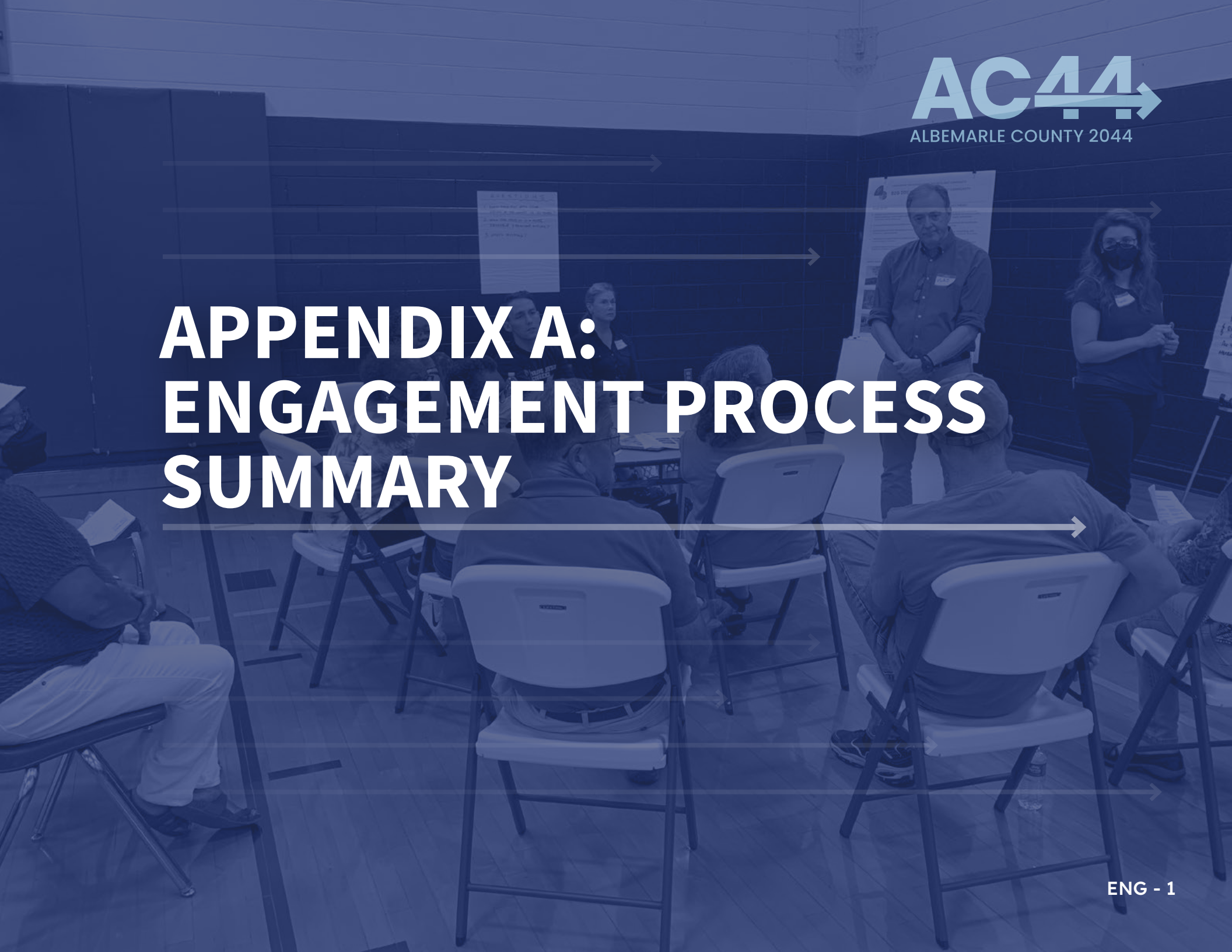
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AC44
ALBEMARLE COUNTY 2044

APPENDIX A: ENGAGEMENT PROCESS SUMMARY

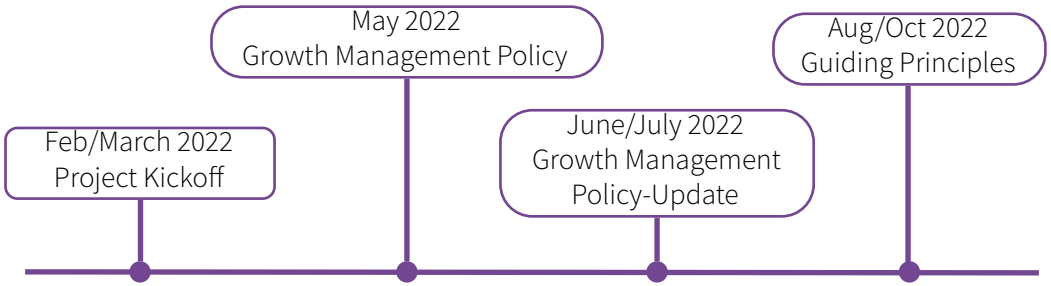
PHASE 1 ENGAGEMENT OVERVIEW

AC44 Phase 1 evaluated whether the County should update its Growth Management Policy to support goals for equity, climate action, and planning for growth. The County also established the AC44 Framework for an Equitable and Resilient Community to guide the development of the rest of the Comprehensive Plan.

First, County staff shared information on the Growth Management Policy in the County's 2015 Comprehensive Plan, how the Policy is implemented, and why it is important to review it periodically. Community members were asked to share their feedback and experiences related to the 2015 Growth Management Policy. Participants were asked to rate the Policy's effectiveness in supporting goals for equity and climate action and asked what updates (if any) could advance equity and climate action.

Second, community members were asked to share their feedback on seven possible 'Growth Management options' to help meet goals related to equity, climate action, and accommodating 20 years of projected growth. Participants were asked how each option supports these goals and to share which option(s) the County should continue to explore and why. Input on these options informed relevant AC44 recommendations in Phase 2 and Phase 3, and especially informed AC44's Land Use Chapter and Transportation Chapter.

Finally, community members were invited to share their feedback on a set of Big Ideas (which became the Guiding Principles) for an equitable and resilient community through a series of roundtables and an online questionnaire. Community members were asked to consider whether the Big Ideas reflect their vision of the community in 20 years, if they guide the community toward being more equitable and resilient, and what was missing.

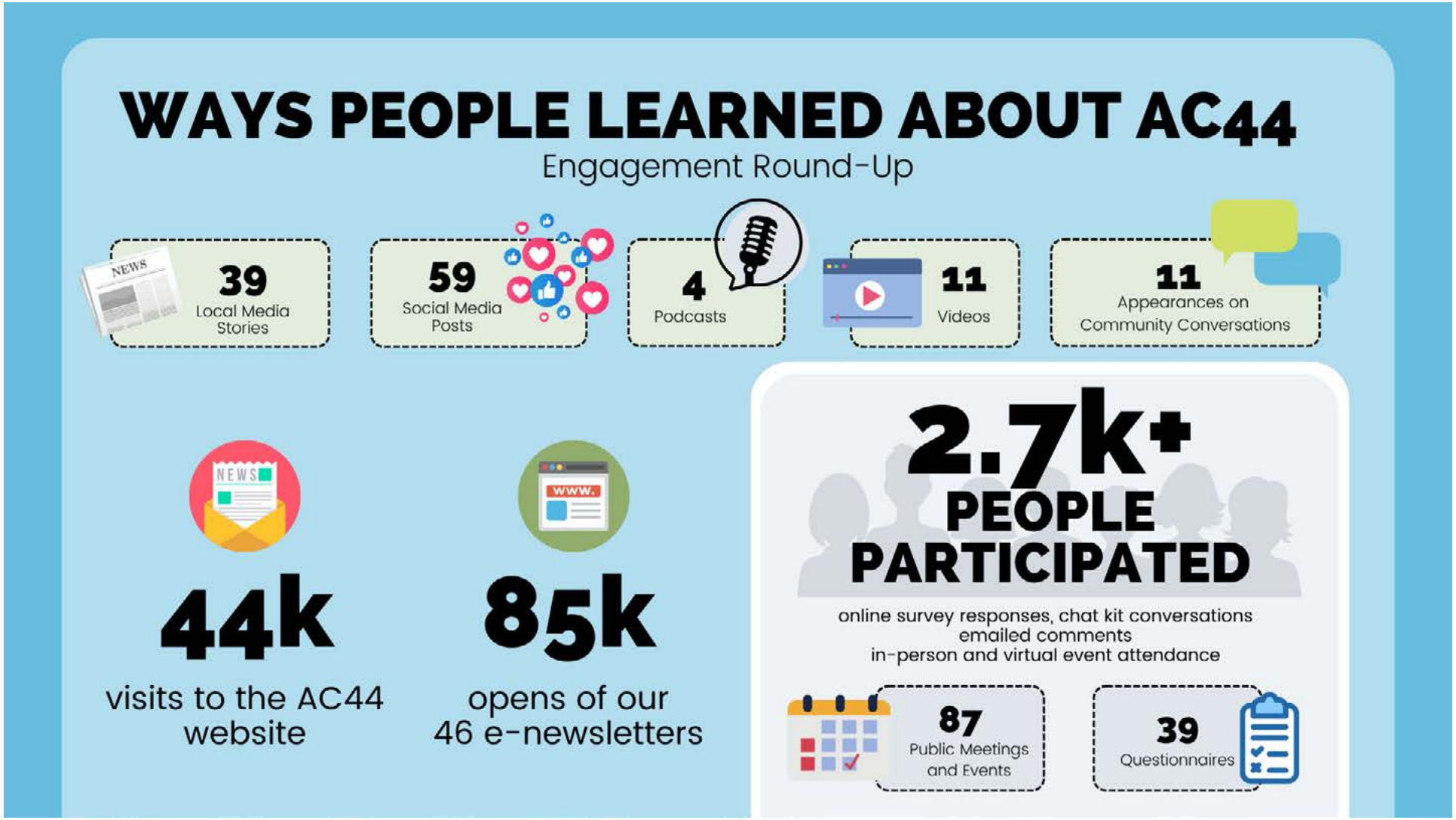








Community members were invited to share their feedback throughout the process for the AC44 Comprehensive Plan update.



Community engagement was a critical component of all four phases of AC44. A wide variety of engagement methods were used, with online web content and surveys reaching the greatest number of community members.

Project Kickoff

February/March 2022

Purpose

Share thoughts on the current Growth Management Policy and what should be prioritized with potential updates. Learn about the history of the Policy and how it has been applied.

Questions Asked

- How well does the current Policy capture your vision for the future growth of the County?
- What has been your experience with growth management in the County? How has it impacted your life, in beneficial or challenging ways?
- How successful has the current Policy been at achieving its objectives? (e.g., protecting the Rural Area, promoting dense/mixed-use development in the Development Areas)
- What should the County prioritize as the County updates the Policy? (e.g., public parks/trails planning, community facilities, housing types, protecting resources)
- How can the County update the policy to provide more equitable service provision and build a more resilient community?



Project kickoff meeting at Yancey Elementary School.

Engagement

- **Online questionnaire**
- **5 in-person pop-ups**
- **2 virtual events**

Work Sessions: Planning Commission + Board of Supervisors

- Planning Commission (5/22/2022): Review initial findings from the draft Land Use Buildout Analysis.
- Board of Supervisors (6/1/2022): Review initial findings from the draft Land Use Buildout Analysis.

2015 Growth Management Policy

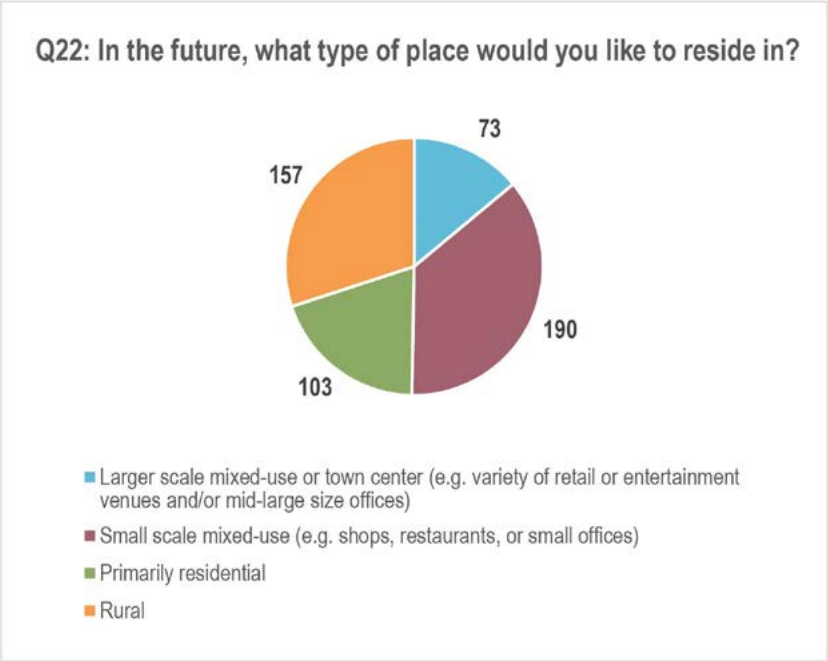
May 2022

Purpose

Share thoughts on the current Growth Management Policy and what should be prioritized with potential updates. Learn about the history of the Policy and how it has been applied.

Questions Asked

- How well does the current Policy capture your vision for the future growth of the County?
- What has been your experience with growth management in the County? How has it impacted your life, in beneficial or challenging ways?
- How successful has the current Policy been at achieving its objectives? (e.g., protecting the Rural Area, promoting dense/mixed-use development in the Development Areas)
- What should the County prioritize as the County updates the Policy? (e.g., public parks/trails planning, community facilities, housing types, protecting resources).
- How can the County update the Policy to provide more equitable service provision and build a more resilient community?



Engagement

- **Online questionnaire**
- **4 in-person pop-ups**
- **1 virtual event**
- **Working group meeting**

Work Sessions: Planning Commission + Board of Supervisors

- Planning Commission (5/24/22): Review initial findings from the draft Land Use Buildout Analysis.
- Board of Supervisors (6/1/22): Review initial findings from the draft Land Use Buildout Analysis.

Growth Management Policy - Options for Updating

June/July 2022

Purpose

Share seven options for updating the Growth Management Policy to address:

- Projected demand and population growth.
- Equitable access to services/resources.
- Implement the Climate Action Plan and build community resilience.

For each, explained why the County should consider it and how it could be implemented if pursued.

Questions Asked

- For each of the options: how well it aligns with projected demand/growth, equitable access to services/resources, and climate action/resilience.
- Which options should the County continue to explore? Can choose multiple. Explain rationale.
- Are there other options the County should consider?

Engagement

- **Online questionnaire**
- **3 in-person roundtables**
- **1 online open house**
- **Working group meeting**

Work Sessions: Planning Commission + Board of Supervisors

Planning Commission (7/26/22): Discuss community input on the seven options and how those options could inform the development of common themes and a Plan framework (which became the Guiding Principles). Multiple options could be pursued. They included:

- More density and infill in the Development Areas paired with green infrastructure.
- Align future land use designations with what is actually being built (which is typically not achieving desired density but may be more realistic).
- Draft criteria that would identify when, where, and how the Development Areas should be expanded.
- Consider opportunities for non-residential development around I-64 interstate interchanges to support job growth and economic development goals.
- Explore the possibility of 'rural villages' in the Rural Area to promote small-scale commercial and service uses to serve nearby Rural Area residents.
- More equitable service provision focused on essential services and community health.
- Promote forest retention and regenerative land uses in the Rural Area to support climate action goals.

AC44 Guiding Principles:

Green and Resilient, Welcoming and Equitable, Connected and Accessible, and Thriving and Prosperous

August - October 2022

Purpose

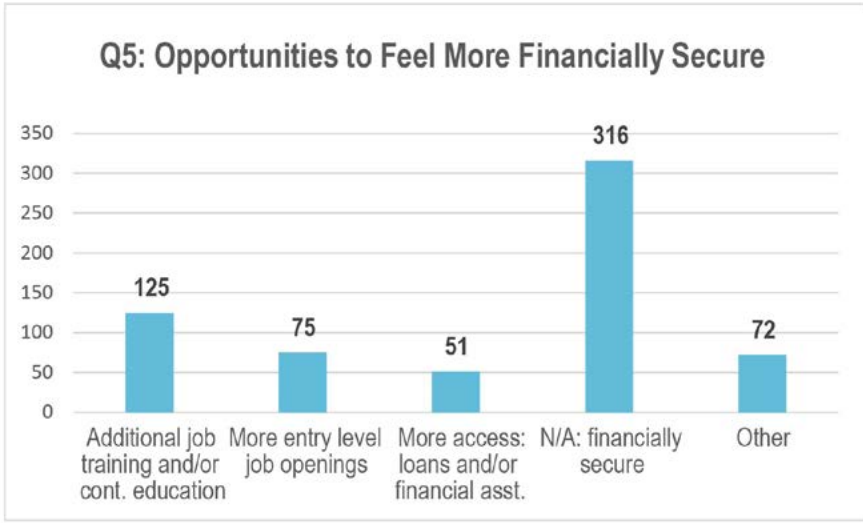
Develop Guiding Principles for the AC44 Comprehensive Plan update. Draft Guiding Principles were developed based on input from the Growth Management Options round and then refined during this round of engagement.

Questions Asked

- Do the draft Guiding Principles reflect your vision of our community in 20 years?
- • Do they guide us toward a more equitable and resilient community?
- • If not, what's missing? What changes are needed?



AC44's Guiding Principles.



Work Sessions: Planning Commission + Board of Supervisors

- Planning Commission (9/27/22): Planning Commission input on the draft Guiding Principles
- Board of Supervisors (10/19/22): Board of Supervisors input on the draft Guiding Principles

Engagement

- **Online questionnaire**
- **2 in-person roundtables**
- **2 virtual roundtables**
- **Working group meeting**

PHASE 2 ENGAGEMENT OVERVIEW

In AC44 Phase 2, the County reviewed existing conditions and recent trends for each Comprehensive Plan chapter by sharing a series of topic reports. County staff drafted Goals and Objectives for each chapter using community, Planning Commission, and Board of Supervisor input, collaboration between County staff and partner agencies, review of the 2015 Comprehensive Plan, incorporation of best practices, and the Framework for an Equitable and Resilient Community. The County also developed draft planning toolkits for coordinated land use and transportation planning, including Activity Centers and rural communities.

In the first round of engagement, the County asked for community input on challenges and opportunities for each Comprehensive Plan chapter. Along with quantitative data, this feedback informed the issues that AC44 recommendations needed to address.

Then, the County asked for community feedback on the draft Planning Toolkits: Activity Centers, Development Areas Expansion Considerations, Rural Communities, and Rural Interstate Interchanges. These topics were first discussed during Phase 1 (growth management options) that could be used to support coordinated land use and transportation planning, build on current Comprehensive Plan recommendations, including the Growth Management Policy, and implement the AC44 Framework. These toolkit topics needed significant community input and guidance from the Planning Commission and the Board of Supervisors prior to drafting the updated Goals, Objectives, and Actions for these topics.







Feedback gathered at all AC44 public engagement events was shared with the Planning Commission and the Board of Supervisors.

Challenges and Opportunities, by Plan Topic

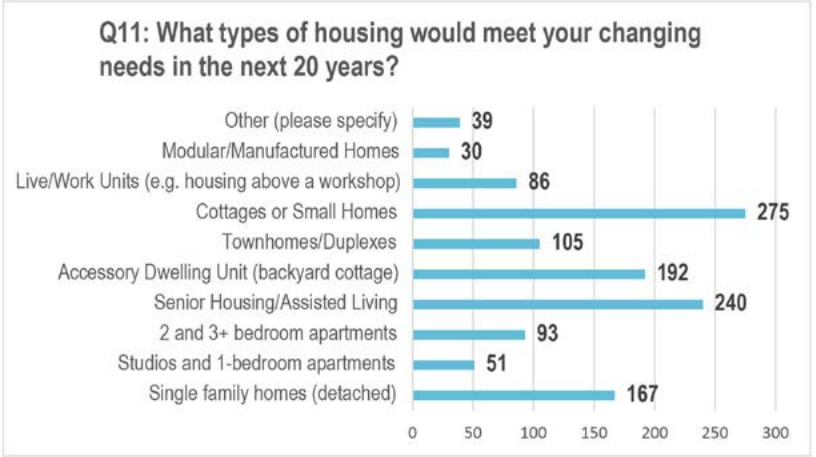
February/March 2023

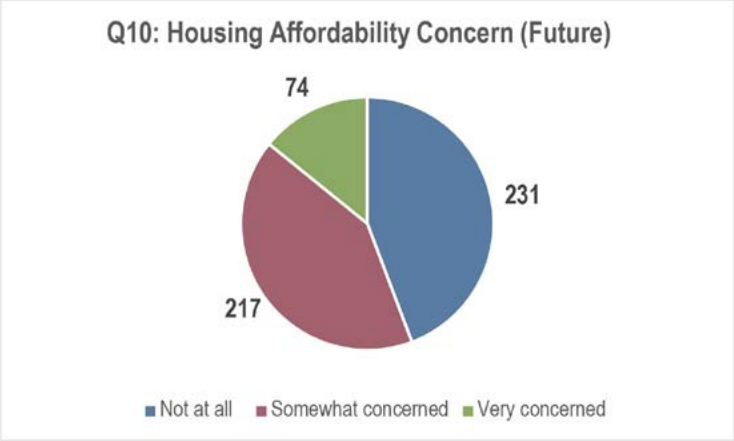
Purpose

Identify community needs and priorities by Plan topic. Share information about each Plan topic for background information and relevant context/ data.

Questions Asked

- How do you want to get around the County in the future, assuming adequate infrastructure and service?
  - » What options might support your transportation preference? Rank in order of priority.
- What opportunities would help you feel more financially stable and secure?
- What options might support your future career or business needs? Rank in order of priority.
- Are you concerned about being able to afford your current housing in the future?
- Consider how your housing needs could change in the next 20 years (e.g. changes in access needs or mobility, a relative moving in, needing a larger or smaller home). What types of housing may be needed to meet your needs?
- What options might support your future housing needs? Rank in order of priority.
- Rank how important different historic/scenic/cultural/natural resources are for the community.
- How would you prioritize ways to protect natural resources in order to improve the community's resilience to climate change? Rank in order of priority.
- How would you prioritize the following ways to protect the county's historic and cultural resources? Rank in order of priority.





Questions Asked (continued)

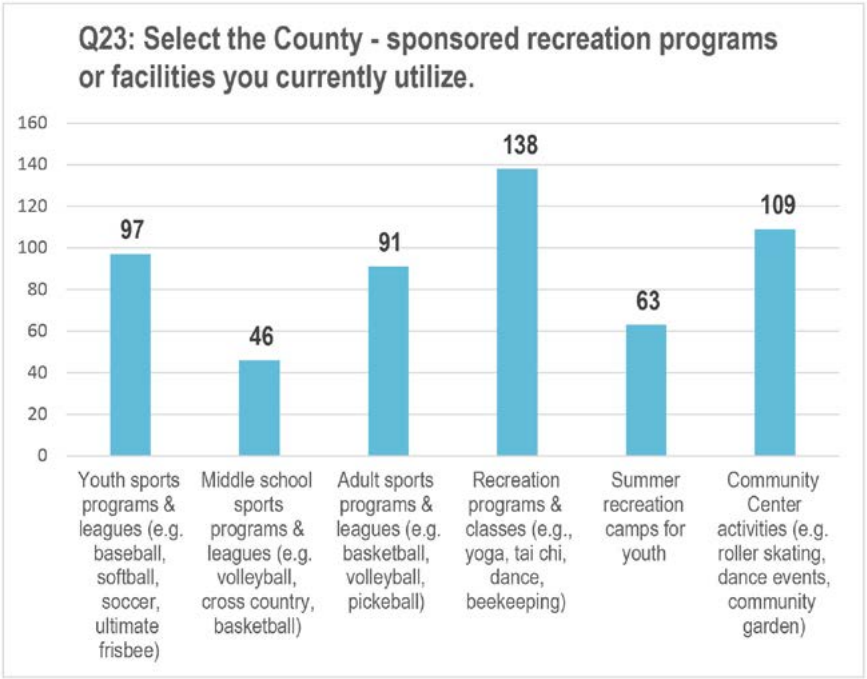
- Which services and amenities (community facilities) would you like to have closer to your home?
- What might improve your access to public services and amenities (e.g. community centers, libraries, recycling locations, parks)?
- What challenges (if any) do you have with accessing existing recreation facilities (parks, trails, athletic complexes, programs) in the county?
- What options might support your recreation needs in the future? Rank in order of priority.
- What options could make community services/resources more equitable?
- What options could make the community more resilient?
- For all the above – is anything missing? If so, how would you prioritize?
- Where should future growth be directed? Current Development Areas, Rural Area with existing development/uses, expanding the Development Areas.
- In the future, what type of place would you like to reside in? Large mixed-use centers, small scale mixed-use centers, primarily residential, rural.

Engagement

- **Online questionnaire**
- **6 in-person pop-ups**
- **Working group meeting**
- **Community chat kits**

Chat Kits/In-Person Events

- How do you want to get around the County in 2044 (e.g., walk, bike, drive, take transit)?
- What business or job opportunities do you need to ensure you are financially stable and secure in 2044?
- How might your housing needs change between now and 2044?
- What types of businesses, amenities, recreational opportunities and housing do you wish you had closer to where you live?
- How do you think your life will be different in the next 20 years as a result of climate change, and what should local government due to address future climate change impacts?



Planning Toolkits for Coordinated Land Use & Transportation Planning

Topic includes Activity Centers, Multimodal Plan, Future Land Use, Process for Potential Future Development Areas Expansion, Rural Crossroads Communities, Rural Interstate Interchanges (all in the context of the Growth Management Policy)

May - September 2023

Purpose

Develop Plan recommendations for coordinated land use and transportation planning in both the Development Areas and the Rural Area to implement the Growth Management Policy. Share approach and draft recommendations for future land use designations (and how will be applied to the Future Land Use Map), Activity Centers, the Multimodal Systems Plan and modal emphasis mapping, and Rural Area communities.

Questions Asked

Activity Centers

- What feedback do you have on the recommended scale, form, level of development, public spaces, and multimodal transportation for the draft Activity Center types (Neighborhood, Town, Destination)?
- What feedback do you have on the draft Activity Center locations and how the draft Center types have been applied?
- Are there transportation connections that you would add or change for any of the draft Centers?

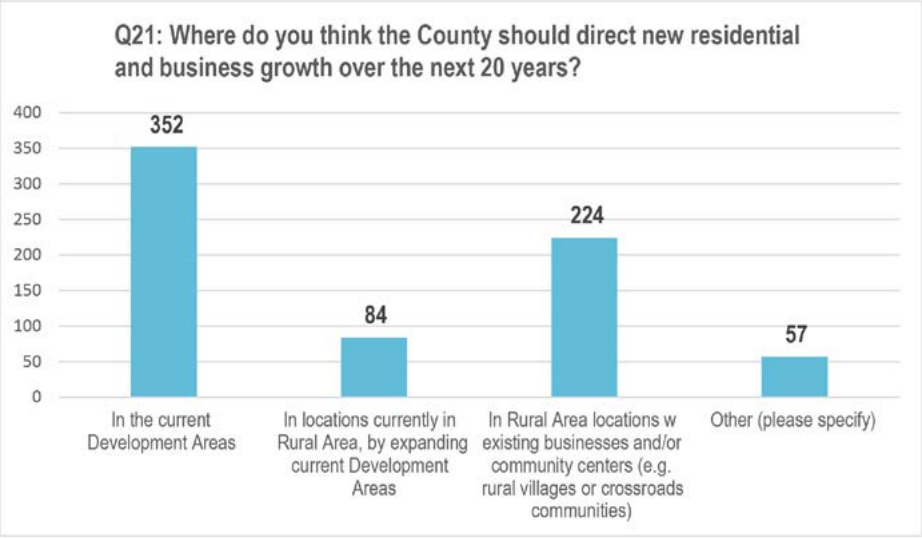
Potential Future Development Area Expansion Factors

- Are there considerations for 'where' and 'how' to expand that you would change? What's missing?
- Are there considerations for 'when' to expand that you would change? What's missing?

Q2: Preferred mode of travel in future (Avg. ranked priority order, 1=highest)	
Walk	1
Bike, e-bike, or bikeshare service	2
Primarily drive alone	3
Use transit (CAT, JAUNT)	4
Use shared services (carshare, rideshare, bikeshare, scootershare)	5
Electric personal mobility device (scooter, one wheel, other)	6
Carpool	7

Engagement

- Online questionnaire
- 4 in-person open houses
- 1 virtual open house/CAC meeting
- Community chat kits
- Think like a planner activity
- Charlottesville Area Development Roundtable (CADRe) meeting
- Economic Development Authority meeting
- Jefferson Area Board for Aging (JABA) workshop
- Meetings with County committees (e.g., Natural Heritage Committee [NHC], Architectural Review Board [ARB], Historic Preservation Committee [HPC])
- Central Virginia Regional Housing Partnership (CVRHP) meeting



Rural Crossroads Communities

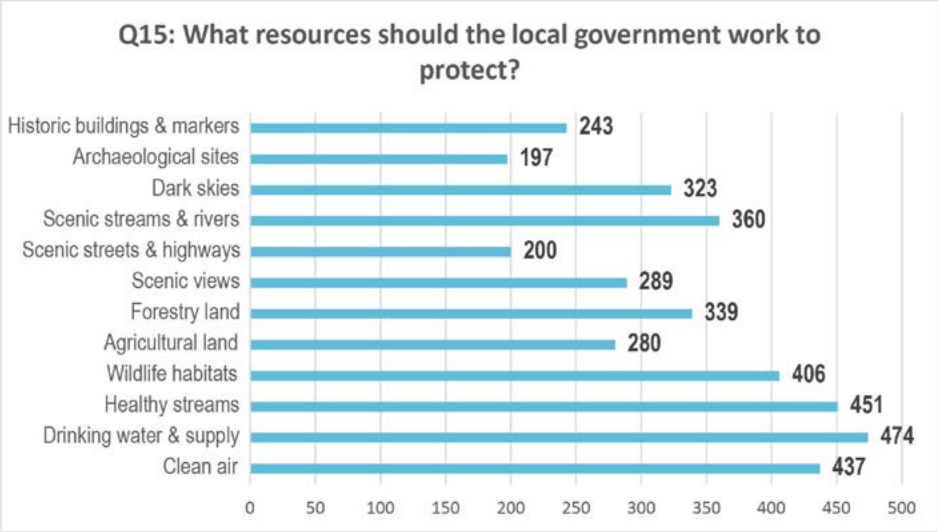
- What small-scale services or businesses are most needed in crossroads communities for nearby community members?
- What natural or cultural resources do you feel the County's conservation programs should focus on protecting?
- Along with Advance Mills, Batesville, Covesville, Free Union, Greenwood, Proffit, and White Hall, are there other places in the Rural Area that you would consider crossroads communities?
- If the updated Comprehensive Plan has recommendations for community 'hubs' in the Rural Area, in part to prepare for and respond to weather events and other potential events/ emergencies, what other uses of these spaces would you hope to see?

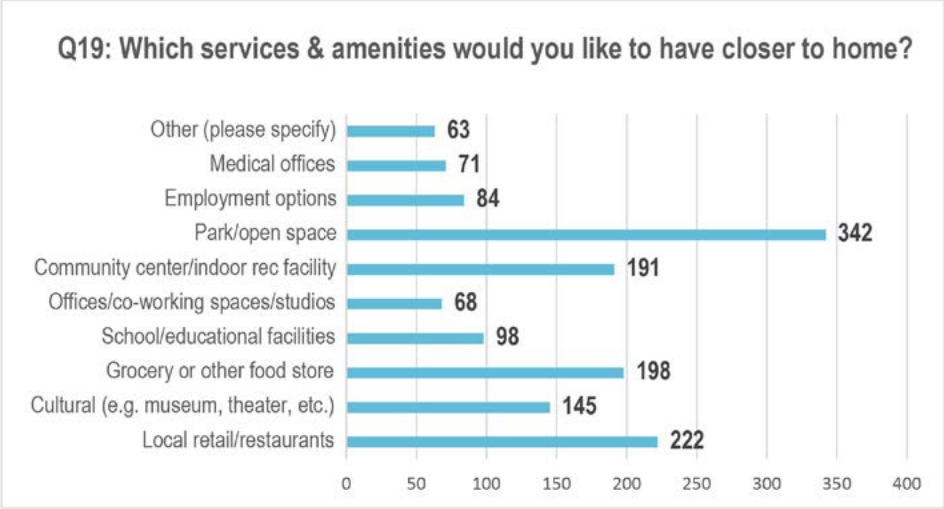
Rural Interstate Interchanges

- Should changes be made to the current recommended land uses at some rural interstate interchanges?
- If not, please share why not.
- If yes, please share what land uses and/or businesses you would like to see. Include the rural interstate interchange location(s) in your comments.

CAC-Specific Questions

- What are your preferred transportation modes for getting around [insert CAC area]?
- Do any major bicycle or transit modal emphases seem to be missing?
- What destinations (in this area or elsewhere) do you want to be able to walk, bike, or take transit to?
- Are there any terms or recommendations that the County can clarify?
- Do you have any initial feedback on the draft proposed updates to the land use designations?





Work Sessions: Planning Commission + Board of Supervisors

- Planning Commission (4/25/23): Input on the proposed approach for the planning toolkits and if these are the right topics for this round of engagement.
- Planning Commission (8/8/23): Direction on which options to pursue for each of the planning toolkits. Staff report options for each toolkit; the first option was 'no change from 2015 Plan.'
- Board of Supervisors (9/6/23): Board direction on which options to pursue for each of the planning toolkits. The Board considered community and Planning Commission input. The Board gave the following direction:
  - » Continue to map and identify Activity Centers and connect with multimodal transportation options. Consolidate the 50 centers across the 5 Area Plans.
  - » Develop a policy for potential future Development Areas expansion. Do not map potential areas at this time.
  - » Allow small-scale professional and doctors/dentist offices in rural communities by SP, and other appropriate small-scale uses that serve surrounding community members' essential needs. Small area planning should be used to identify other potential changes for individual communities.
  - » Draft an Action for future small area plans for the Shadwell and Yancey Mills I-64 interchanges to study appropriate land uses and needed infrastructure. Consider ag/forestry or supporting uses that could locate there.

Goals and Objectives, by Plan Topic

September 2023 - March 2024

Purpose

Share and finalize draft Goals and Objectives for each Plan topic. Share updated topic reports for each. Share draft updated future land use designations, Activity centers/modal emphases, and Community Design Guidelines.

Questions Asked

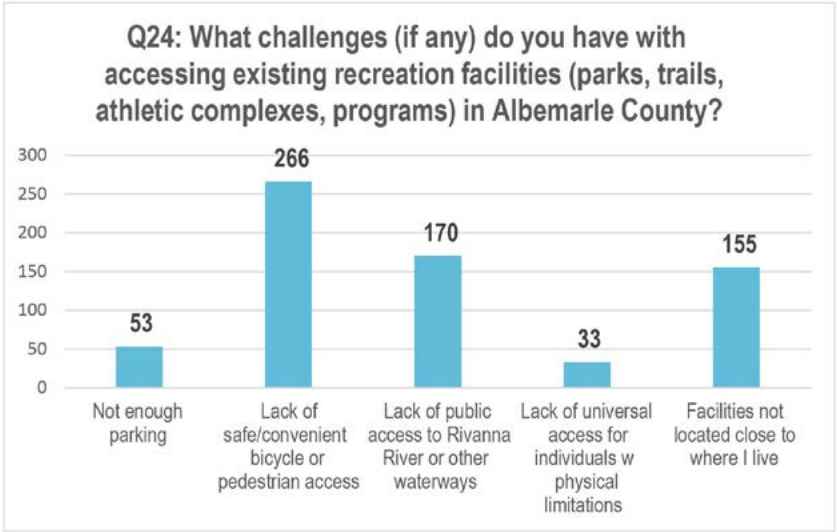
- How well does each Goal support the Guiding Principles?
- Is there anything you feel is missing from the draft Goals and Objectives for this chapter? What change(s) would you suggest?

Chapter-specific questions for the Development Areas

- » Do you have any feedback on any of the draft future land use designations?
- » Do the draft Community Design Guidelines support the type of development you would hope to see in the Development Areas? Does anything seem to be missing?
- » What are your preferred transportation modes for getting around the Development Areas? Consider specific locations (e.g. where you live, or work, or go for activities) that you frequently go (or would like to go).
- » Do any major bicycle or transit modal emphases seem to be missing from any of the draft modal emphasis maps? If so, please describe where (e.g. a street name or a location/ landmark).
- » What destinations do you want to be able to walk, bike, or take transit to in the future?
- » Do you have any feedback on the draft Activity Center place types (Neighborhood, Town, Destination) or how they have been applied in the Development Areas?



County staff held pop-up events to reach more community members.



Rural Area Meeting Questions

- Crossroads communities
  - » What should a crossroads community have in it?
    - » Follow up: What do you value about crossroads communities (e.g., historic resources)?
    - » Follow up: prioritization
  - » What opportunities are there to increase community resilience here?
    - » Follow up: What would you like to see?
- Transportation in the Rural Area
  - » The County has heard from the community that they want better bicycle pedestrian and transit accommodations in the rural areas. What would make it safer to walk and bike in the Rural Area?
  - » Follow up: What would the benefit be to you/the community?
  - » What are your transit or ride-share needs? Where do you want to take transit to/what destinations/what services?
- Land conservation in the Rural Area
  - » What features of the County's Rural Area do you feel are important to protect through land conservation?
  - » Are the tools in the County's toolkit (conservation easements and ag-forestal districts) doing a good job of protecting what's important? What should the County be considering for future conservation efforts?

Engagement

- **Online questionnaires (each chapter topic)**
- **6 CAC meetings**
- **2 in-person Rural Area workshops**
- **1 pop-up (in coordination with Loop De'Ville)**
- **1 working group meeting**
- **1 virtual open house**
- **3 office hours**

Work Sessions: Planning Commission + Board of Supervisors

- Planning Commission (10/10/23): Goals and Objectives for Environmental Stewardship, Parks, Historic Resources.
- Planning Commission (11/14/23): Goals and Objectives for Housing and Thriving Economy.
- BOS (1/17/24): Goals and Objectives for Environmental Stewardship, Parks, Historic Resources, Housing, and Thriving Economy.
- Planning Commission (2/13/24): Goals and Objectives for the Development Areas (LUT) and Community Facilities.
- Planning Commission (2/27/24): Goals and Objectives for the Rural Area (LUT).
- Planning Commission (3/12/24): Goals and Objectives for the Rural Area (LUT).
- Board of Supervisors (3/20/24): Goals and Objectives for the Development Areas (LUT) and Rural Area (LUT).
- Board of Supervisors (4/3/24): Goals and Objectives for Community Facilities.

PHASE 3 ENGAGEMENT OVERVIEW

Phase 3 of Albemarle County's AC44 Comprehensive Plan update focused on translating the plan's goals and objectives into actionable strategies. These actions encompass capital projects, policy updates, code revisions, programs, and partnerships aimed at guiding the county's development through 2044.

From May 2024 to May 2025, nine topic area chapters were drafted and released to the public one at a time on the AC44 project website. Each chapter highlighted key issues and outlined Goals and Actions to implement AC44's Objectives. Community members were encouraged to review, upvote, and comment on the actions proposed for each chapter online, as well review objectives for each chapter, and to share opinions on how to prioritize the implementation of these objectives.

In addition to the online activities, the County organized events such as community check-ins and virtual lunch-and-learn sessions to preview draft AC44 chapters and gather feedback. For example, a community check-in October 2024 focused on the Growth Management Policy and Land Use topics. These sessions were held monthly starting in October 2024.



AC44 TOPIC CHAPTERS



The AC44 website allowed visitors to read draft chapters and share feedback on chapter content.

Plan Actions

May 2024 - June 2025

Purpose

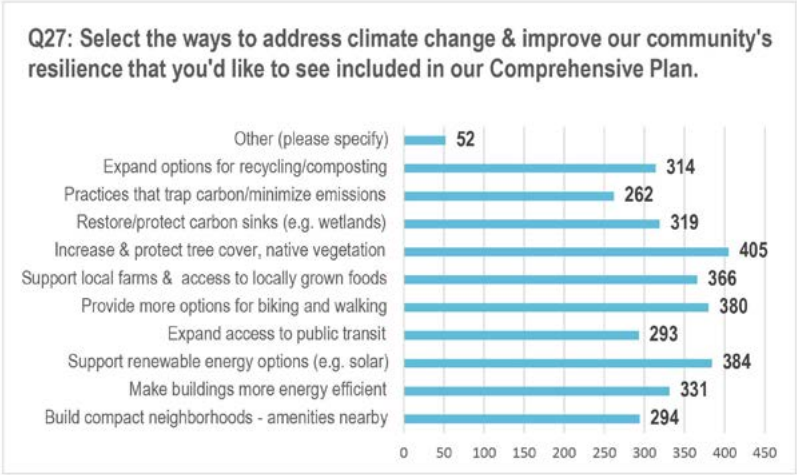
Share and finalize draft Actions for each AC44 chapter..

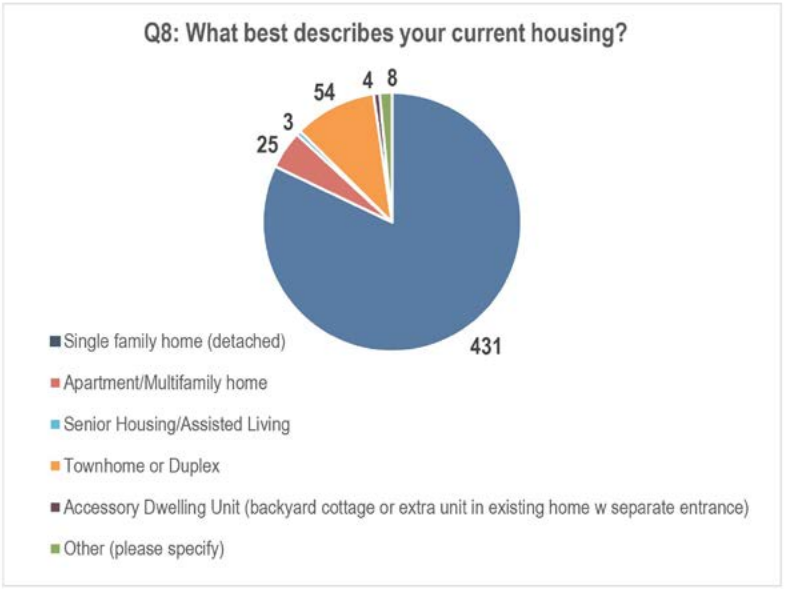
Questions Asked

- Actions

  Community members were able to review, upvote, and comment on draft actions for each chapter.

- Ranking Objectives
  - » Rank the chapter objectives in the order you would prioritize implementation.
  - » When considering the implementation of your top priorities, what challenges do you anticipate?
  - » When considering the implementation of your top priorities, what opportunities do you anticipate?
  - » What overlapping chapters do you think are the most important for implementation of this chapter?
  - » Share additional feedback for our project team (open ended).





Engagement

Working group meeting

Online Questionnaire: feedback on draft actions

Online questionnaire: rank objectives

Community Check-ins (3)

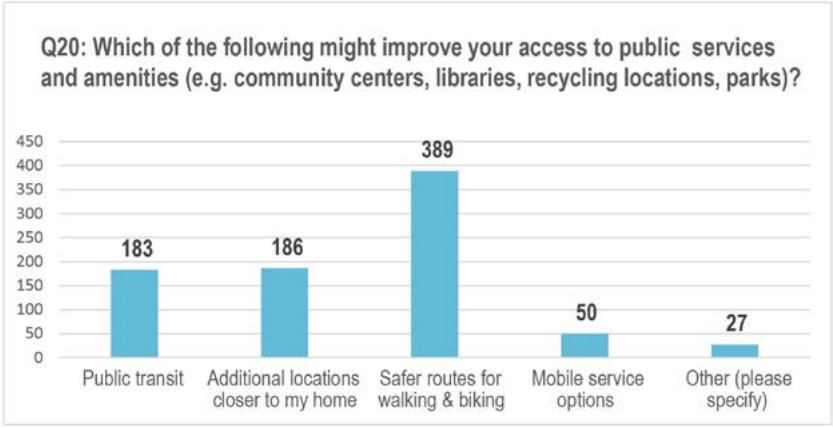
- **(10/30/24) GMP/Land Use**
- **(1/29/25) Environmental Stewardship, Parks**
- **(5/22/25) Transportation**

Lunch and Learns (5)

- **(11/21/24) Development Areas Land Use**
- **(12/12/24) Rural Area Land Use**
- **(2/27/25) Thriving Economy**
- **(4/24/25) Housing & Community Facilities**
- **(6/26/25) Cultural Resources**

Planning Commission / Board of Supervisor Work Sessions

- Planning Commission (10/08/2024): Draft Growth Management Policy and draft factors for Development Areas utilization.
- Board of Supervisors (10/16/24): Draft Growth Management Policy and draft factors for Development Areas utilization.
- Planning Commission (10/22/24): Draft Development Areas Land Use Chapter topics: Future Land Use Map, Future Land Use Categories, and Activity Centers.
- Board of Supervisors (11/06/24): Draft Development Areas Land Use Chapter topics: Future Land Use Map, Future Land Use Categories, and Activity Centers.
- Planning Commission (11/12/24): Draft Development Areas Land Use Chapter.
- Planning Commission (11/19/24): Draft Rural Area Land Use policies from the draft chapter.
- Board of Supervisors (11/20/24): Draft Development Areas Land Use Chapter – focused on Actions.
- Planning Commission (12/10/24): Draft Rural Area Land Use Chapter – focused on Actions.
- Planning Commission (12/17/24): Draft Environmental Stewardship Chapter.
- Board of Supervisors (1/08/25): Draft Rural Area Land Use Chapter.
- Board of Supervisors (1/22/25): Draft Environmental Stewardship Chapter.
- Board of Supervisors (2/19/25): Draft Development Areas Land Use Chapter, Rural Area Land Use Chapter, and Growth Management Policy.
- Planning Commission (2/25/25): Draft Parks, Recreation, & Open Space Chapter.
- Board of Supervisors (3/05/25): Draft Parks, Recreation, & Open Space Chapter.
- Planning Commission (3/11/25): Draft Community Facilities and Thriving Economy chapters.
- Board of Supervisors (4/02/25): Draft Community Facilities and Thriving Economy chapters.
- Board of Supervisors (4/08/25): Draft Housing Chapter.
- Planning Commission (5/06/25): Draft Transportation Chapter.
- Board of Supervisors (5/07/25): Draft Housing Chapter.



PHASE 4 ENGAGEMENT THEMES

Housing that is affordable and accessible

Community input emphasized that everyone in the community should have access to housing they can afford that is safe and healthy. Housing needs to be attainable and sustainable. Major themes heard include:

- A variety of housing types, sizes, and price points are needed across the Development Areas.
- Housing should be energy-efficient, both for climate action and to reduce household energy cost burdens.
- There are not enough housing options for smaller household sizes, first- time home buyers, and households looking for smaller units (downsizing). Many new units being built are larger and more expensive.
- Many people who are employed in the county, or who grew up in the county and moved away, or who grew up in the county and are entering the workforce, are unable to afford housing in the county. Without affordable housing choices in the county, people will continue to end up living further away and having to commute in.
- Being able to age in the community is a concern. Many respondents to questionnaires and workshops felt they or someone they know would need assisted/senior living in the next 10 years. However, this type of housing is often not affordable or available. There is also a need to pair assisted/ senior living with transportation options other than driving a personal vehicle.

Phase 4 included presenting a full draft version of AC44 that was later edited and refined with input from community members, the Planning Commission, and the Board of Supervisors.

A protected and restored natural environment

Protecting and restoring the natural environment continues to be a top priority for the community, including for the benefit of native plants and animals, recreation and access to nature, water quality, scenic beauty, and community enjoyment.

Major themes heard include:

- Protect and restore important habitats and wildlife corridors, prioritizing forest blocks and important areas identified in the Biodiversity Action Plan. Reduce habitat fragmentation.
- Improve water quality and protect riparian buffers. Restore degraded streams and wetlands to improve habitat and flood resiliency. Reduce stormwater runoff and pollution into waterways through green infrastructure.
- Important habitats and native species are found in the Development Areas and the Rural Area. While the Rural Area contains the majority of local environmental features, it is still important to identify and protect those features and species in the Development Areas.
- Protect dark skies for human and animal well-being.
- Protect scenic streams and views.

Vibrant mixed-use centers in the Development Areas

Community input identified the vision for the Development Areas, including neighborhoods with a variety of housing types that are walkable to businesses, services, jobs, and parks, protected and restored natural areas, vibrant and connected Activity Centers, and efficient use of land and infrastructure. Major themes heard include:

- Activity Centers should have a variety of housing types that are walkable to jobs and retail/services such as shops, restaurants, laundry services, childcare, and health care. They should also have welcoming and usable open and recreational spaces.
- Encourage infill and adaptive reuse of existing structures, large parking areas, and older shopping malls. Use Development Areas land effectively to protect the Rural Area.
- Allowing more dense and mixed-use development makes walking, biking, and public transit more feasible. Developments should be well designed so that walking and biking is safe and accessible and that there are a variety of uses nearby to walk or bike to. If people are going to walk and bike, they need useful destinations to walk and bike to.
- Concern with empty storefronts and lack of foot traffic in some existing areas with retail/commercial.
- Provide more flexibility for small businesses, including home occupations.
- Consider walkable mixed-use 'hubs' across the county, not just centered around the city. Some could be similar to the city's downtown mall to reduce the need to drive into Charlottesville for services and amenities.

Multimodal transportation choices

Community input emphasized the importance of safe, affordable, and comfortable transportation options for walking, biking, transit, and driving. Major themes heard include:

- Walking and biking were the two highest ranked preferred modes of travel in the future. However, for community members to feel safe walking and biking, bicycle and pedestrian infrastructure needs to be separated from vehicles (e.g., sidewalks with buffers, shared-use paths, protected bike lanes). Safe crossings are also needed to address high-speed and high-volume roads, especially Route 29 North and Route 250 East, as well as barriers such as narrow bridges over Interstate 64 and railroad tracks.
- Desire to improve the frequency and reliability of transit options, including more on-demand service to fill gaps. Transit was highlighted as important for accessing services, health care, jobs, and amenities.
- Having transportation options other than using a personal vehicle is essential for being able to age in the community.
- Consider multimodal transportation connections between the Development Areas and the Rural Area, including park and rides and potential bike/shared-use path routes.
- Safety improvements are needed, including traffic calming and improved lighting along key road corridors.

Rural Area with small-scale rural communities and protected natural environment and cultural resources

Community input identified the key elements of the Rural Area, including small-scale rural communities that support surrounding community members, protected and restored natural areas, celebrated historic and cultural resources, and working farms. Major themes heard include:

- Rural communities should be small-scale and rural in character, with businesses and services that primarily serve surrounding community members. New businesses and services should make use of existing buildings, including through adaptive reuse.
- Protect land for agriculture in the Rural Area and support local food systems.
- Protect and uplift historic and cultural resources, including historic freetowns, tribal acknowledgment and commemoration, and historic cemeteries.
- Support for the Community Resilience Hubs concept. Community members would like to see classes, events, programs, affordable food access, senior/youth centers, emergency shelters, and phone/internet access at these hubs.



Greenway trails provide valuable recreation opportunities.

Access to parks and trails

Community input underscored the importance of having parks, trails, community centers, and natural areas across the county. Parks are a critical aspect of quality of life and well-being. Major themes heard include:

- When asked 'which services and amenities would you like to have closer to home?', parks were the top-ranked choice.
- More parks are needed in the Development Areas, including smaller and more urban-scale parks.
- Expand the network of trails across the county to create a more-connected network. Trails in the Development Areas could connect destinations including neighborhoods, centers, schools, and parks.
- More recreation opportunities are needed for underserved visitors, including, but not limited to, teenagers, seniors, and people with special needs.
- Improved accessibility is needed for parks, trails, and facilities, including to provide access for wheelchairs and strollers.
- Provide greater access to waterways, especially the Rivanna River.
- More sports fields/courts and outdoor public spaces for music and entertainment are needed.

A resilient and healthy community

Community input highlighted the importance of ensuring the community is resilient to impacts and shocks to our environment and economy, including due to the effects of climate change. A resilient community is better prepared for and able to recover from natural hazards, storms, and economic downturns.

Major themes heard include:

- Prepare for and protect the community from the following natural hazards and effects of climate change: flooding, increasing temperatures, drought, and forest fires.
- Increase tree coverage to reduce the heat island effect and provide shaded places to walk.
- Address food deserts and increase access to affordable and healthy food.
- Concern with above-ground power lines and losing power during storms, especially in the Rural Area.
- Increase solar and renewable energy generation in the county, including utility-scale solar and rooftop/parking lot solar.
- Address failing septic systems, especially when they could impact public water supplies and when homeowners need financial assistance.
- More childcare options (and more affordable options) are needed, including for the local workforce.
- More job training opportunities are needed, especially for trades and technical jobs that do not require a four-year degree. Training should support local well-paying career ladder jobs.



Local food banks can help ensure access to healthy foods.



AC44
ALBEMARLE COUNTY 2044

APPENDIX B: COMMUNITY STORY

QUALITY OF LIFE, WELL-BEING, & EQUITY

As Albemarle County continues to evolve, it maintains strong rankings across various quality of life indicators, including life expectancy, median income, and access to knowledge. According to the 2021 Albemarle County Equity Profile, Albemarle County has a score of 7.42 on the American Human Development Index (AHDI). This index is created using these quality-of-life factors to assess the well-being of residents in an area. Virginia's overall AHDI score is 5.8.

While Albemarle County has a high household median income, high access to education, and above-average life expectancy overall, there are significant disparities in these quality-of-life factors across different parts of the county. The Equity Profile examines census tract-level data to look at differences by location in the county. For instance, AHDI scores in the county range from 9.26 in North Garden (census tract 112.02) to 4.65 in Oak Hill, Old Lynchburg Road (census tract 113.02).

The maps below provide a detailed view of quality-of-life indicators across Albemarle County. These measures of well-being vary considerably by location and even within the same Development Area. As AC44 implementation moves forward, these data will serve as a valuable tool in addressing disparities and ensuring equitable access to resources across the county.

Albemarle County AHDI (2023)

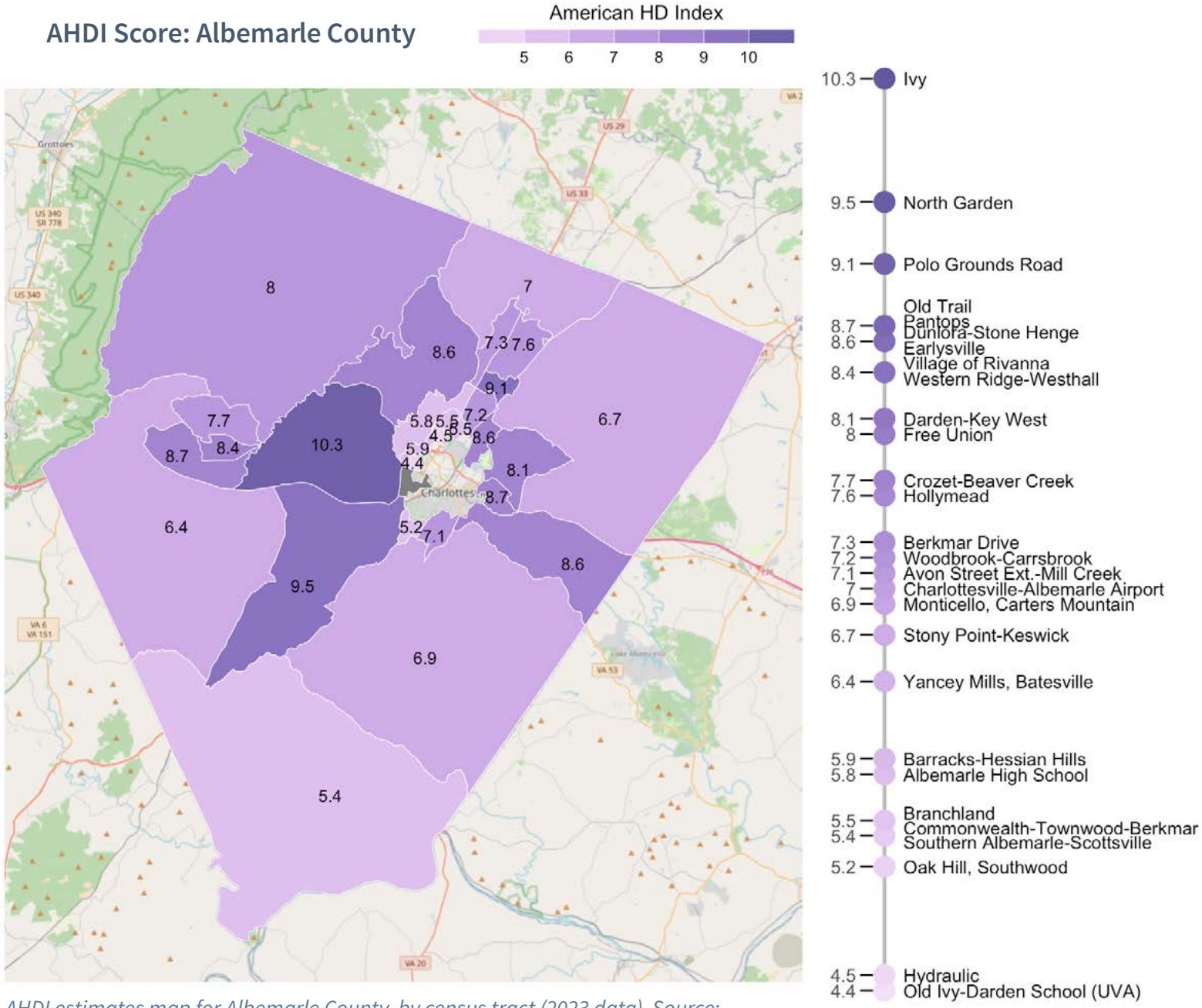
The first map shows the 2023 American Human Development Index (AHDI) estimates for each census tract in Albemarle County. This index is a metric to assess well-being and equity across health, access to education, and living standards. It identifies areas where there are disparities in well-being and can inform policy updates to enhance equity for all community members.





Many factors affect quality of life, including health and wellness, income, and access to knowledge. Images: pedestrian bridge at Woolen Mills (upper) and Northside Library (lower).

AHDI Score: Albemarle County



AHDI estimates map for Albemarle County, by census tract (2023 data). Source: U.S. Census Bureau, American Community Survey.

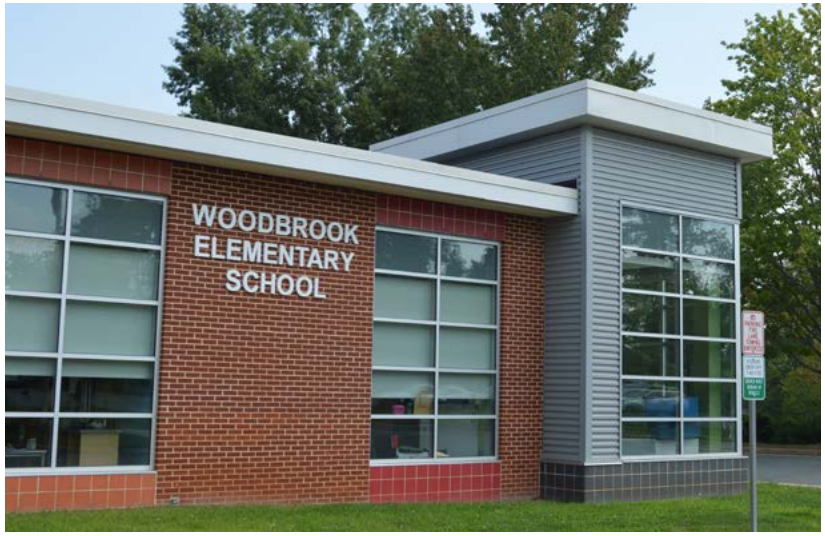
Albemarle County Median Household Income (2023)

While the county's overall median household income is relatively high, many cost-of-living factors in the area are also high, especially housing costs. Median household income in the county ranges from $52,000 (excluding census tracts that are primarily part of the University of Virginia) to $180,000 by census tract. The county's overall median household income is $102,617. The map below shows median household income data from across the county, by census tract. (Source: U.S. Census Bureau, American Community Survey, 2023.

Albemarle County Educational Attainment (2023)

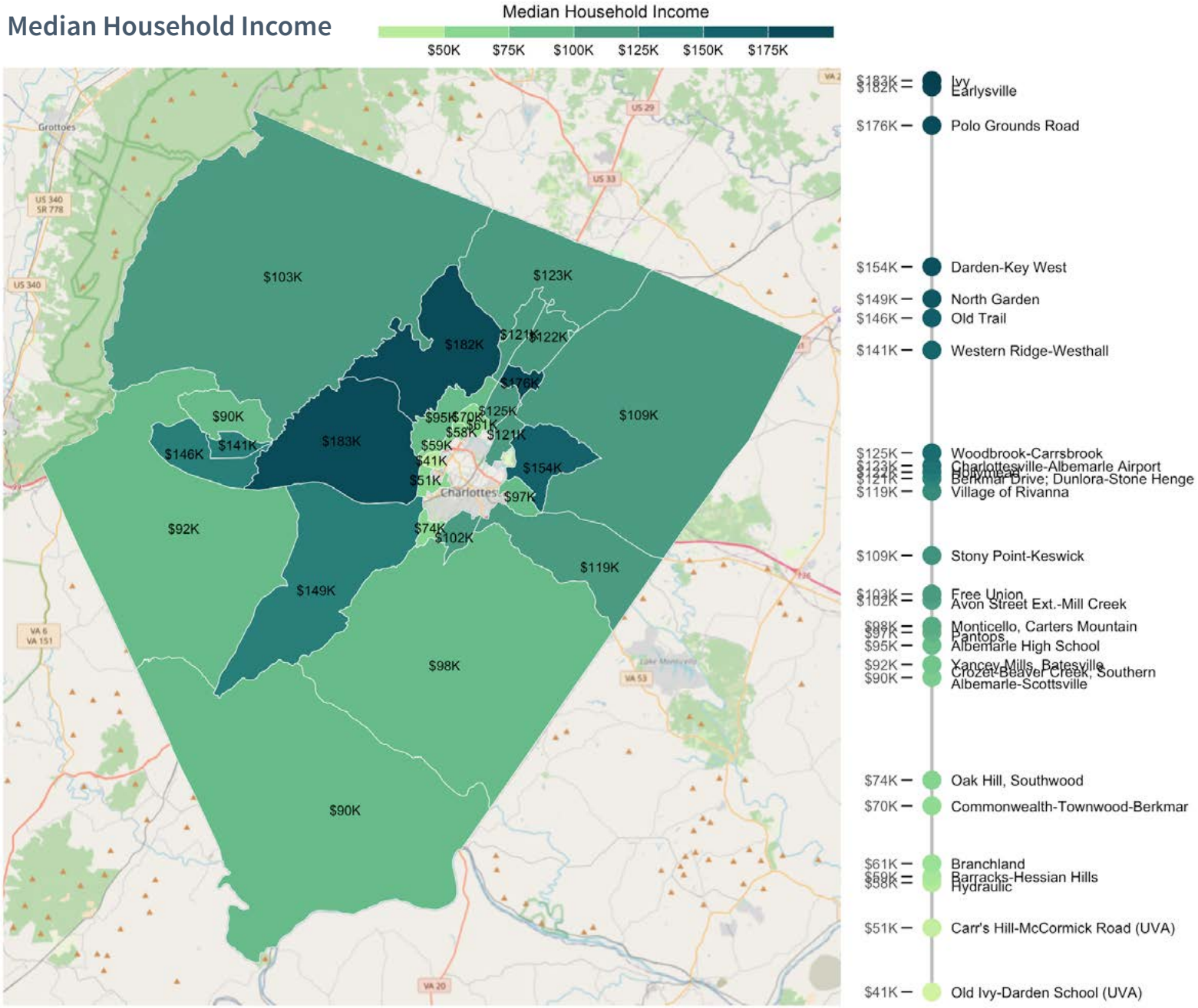
Educational attainment varies across the county, by location. As noted in the 2021 Albemarle County Equity Profile, education is connected to income, which in turn affects what people can afford to meet their needs. Figures range from 37% to 86% of community members aged 25 and older who have a bachelor's degree or higher. Bachelor's degree attainment varies greatly by race and ethnicity; 65% of white adults hold a bachelor's degree or higher compared to 31% of Black adults and 36% of Hispanic adults. Additionally, one out of five Hispanic residents in the county have less than a high school diploma – the highest percentage of any racial/ethnic group.





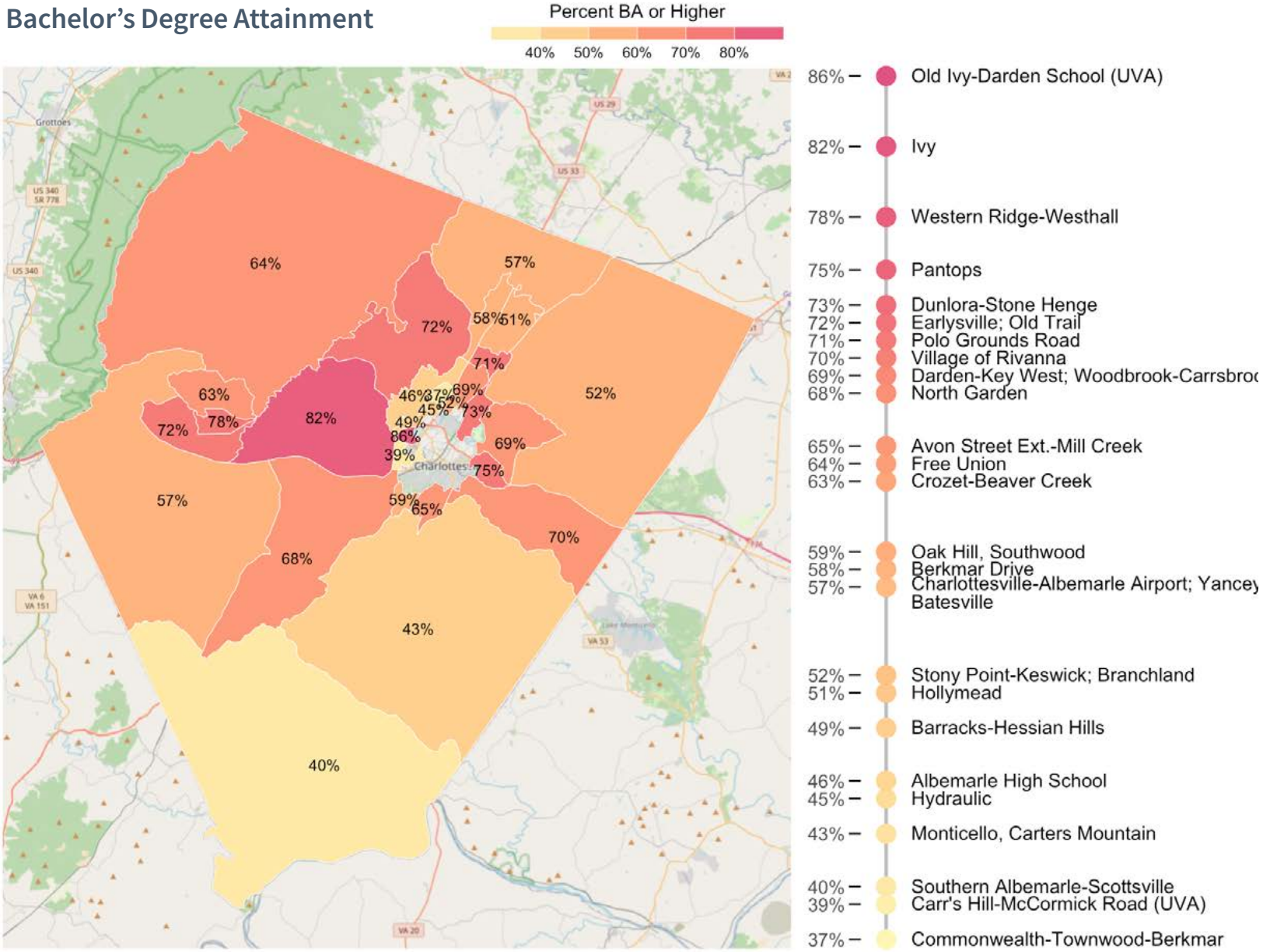
Household income and educational attainment rate varies across different areas of the county and by race and ethnicity.

Median Household Income



Median household income in Albemarle County, by census tract (2023 data).
Source: U.S. Census Bureau, American Community Survey.

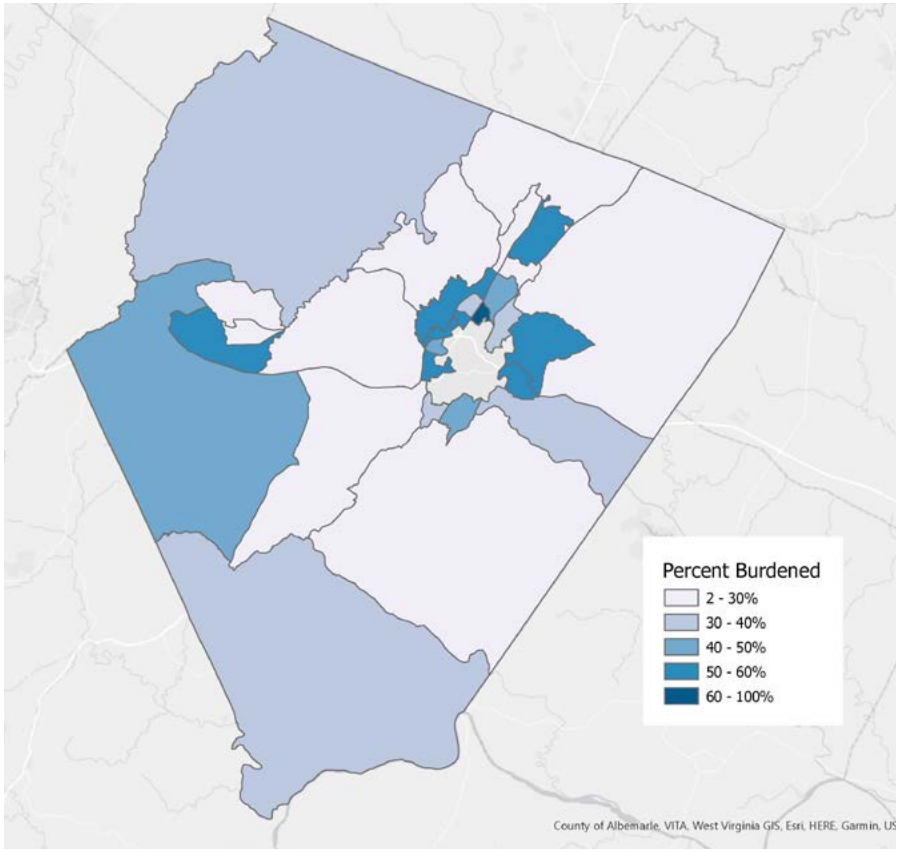
Bachelor's Degree Attainment



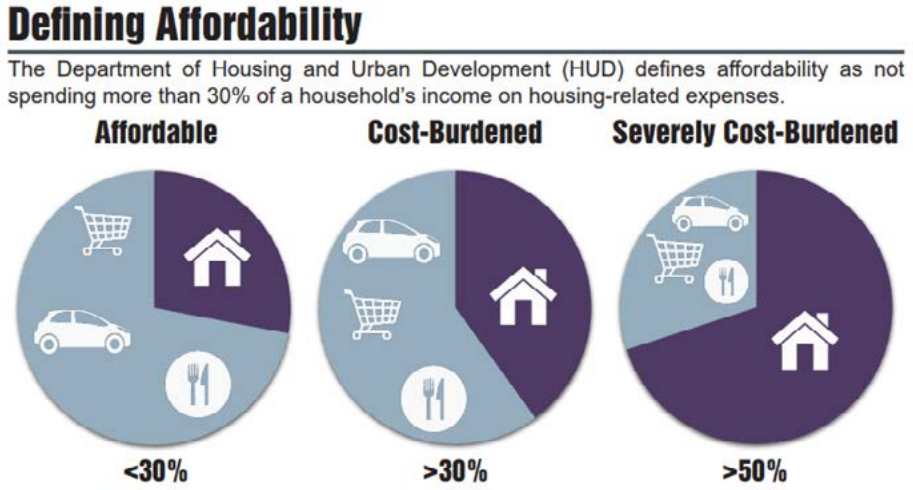
Bachelor's degree attainment in Albemarle County, by census tract (2023 data). Source: U.S. Census Bureau, American Community Survey.

Albemarle Cost-Burdened Renter Households (2022)

About 5,648 households, or 13% of all county households, are severely cost-burdened. About 86.6% of county households with incomes less than $35,000 are cost-burdened, compared with about 36.5% of households with household incomes of $50,000 to $75,000 and 7.6% of households making over $75,000. This means that cost burden is not evenly distributed among income levels and disproportionately impacts lower-income residents.



Percent of cost-burdened renter households in Albemarle County (2023 data). Source: U.S. Census Bureau, American Community Survey.



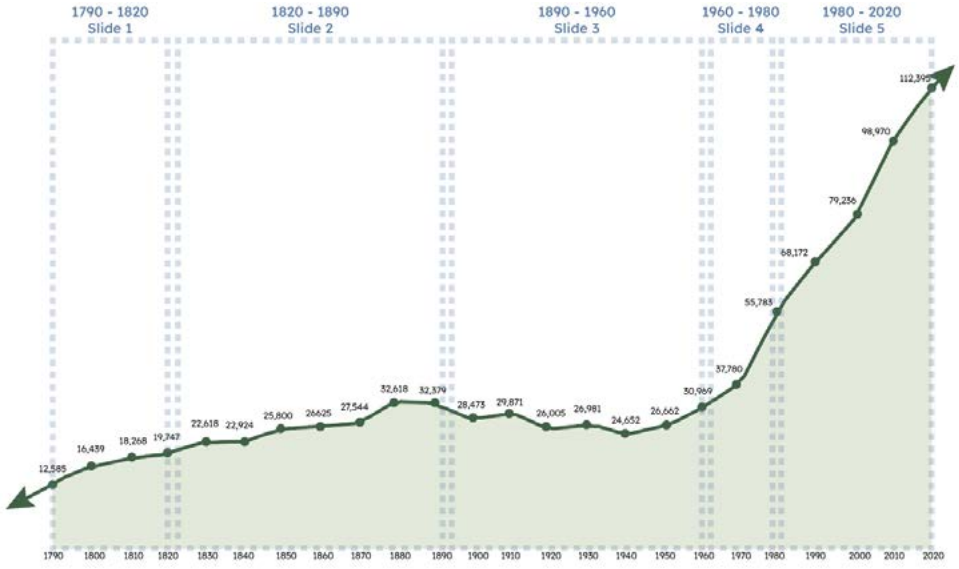


The Southwood neighborhood is an affordable housing cooperative effort between Albemarle County and Habitat for Humanity.

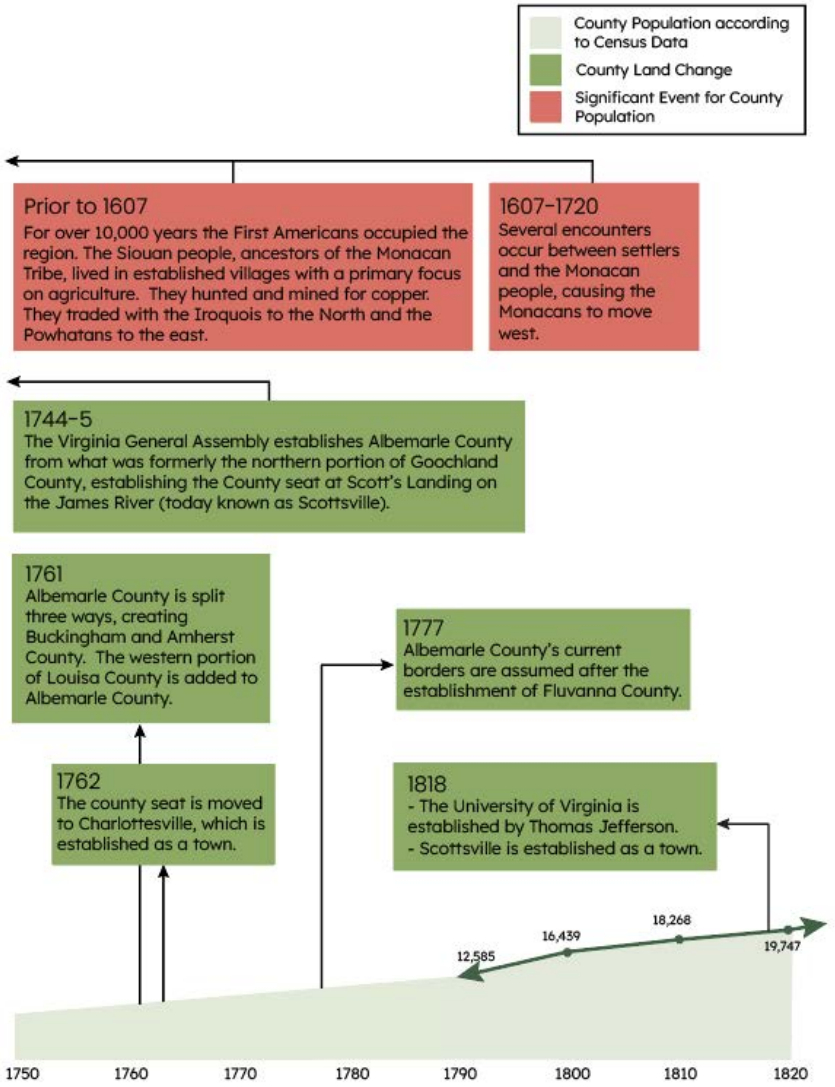
SECTION 2: HISTORY OF ALBEMARLE COUNTY

Understanding Albemarle County's history provides important context for the community's current physical layout and form of development. The information below provides a summary of some of the major policies and decisions that have shaped the community.

Population growth is not a new phenomenon in the county. This timeline graphic shows population growth over time. The history below highlights some of the events that have impacted the county's population and settlement patterns over time. We acknowledge that this is an incomplete history, and all the important county events are not able to be summarized in a short report; and further, much of our history is still not documented, especially of marginalized populations.



Population change in Albemarle County, 1790 to 2020.



Captain John Smith's 1608 map of Virginia indicated Native American villages, including the Monacan people in the Piedmont Region. Source: National Parks Service

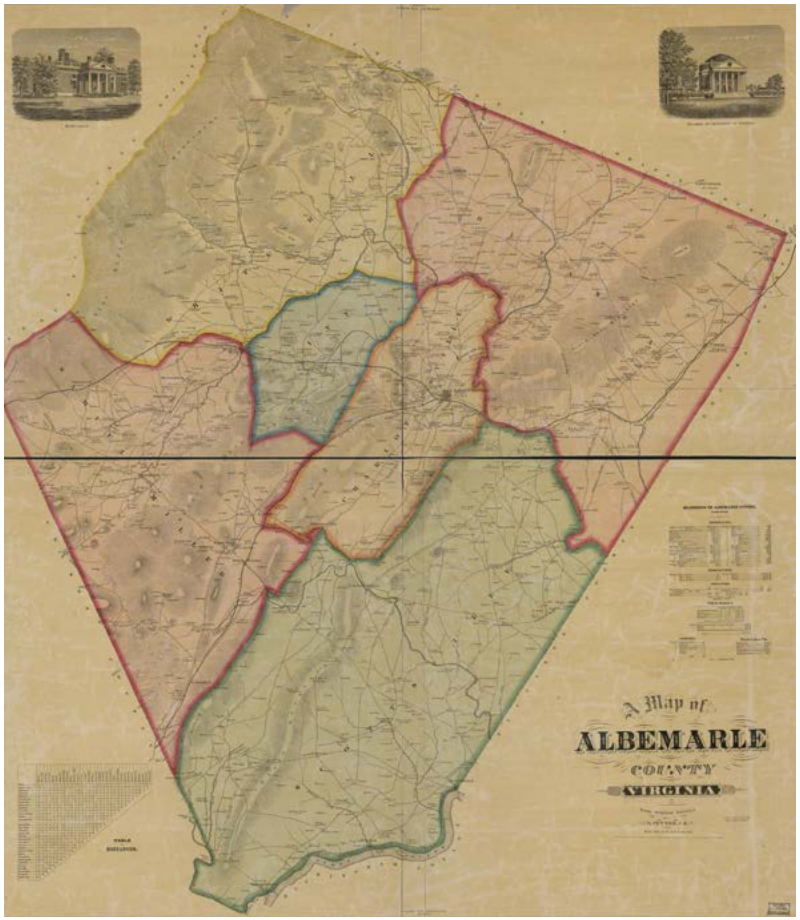
Monacan Nation History

While Albemarle County was officially established in 1744, the area's history extends far earlier. By 1744, Native Americans had been living in the area for over 10,000 years. The Siouan people, ancestors of the Monacan tribe, lived in established villages with a primary focus on agriculture. They hunted and mined for copper and traded with the Iroquois to the north and the Powhatans to the east. The Monacan tribe is documented as having lived in Albemarle County for at least 1,000 years. The original tribe territory covered more than half of Virginia, including the Piedmont Region and part of the Blue Ridge Mountains. As British colonists moved west across Virginia in the 1700s, they forced Native Americans from their lands. The Monacan tribe, unwilling to enter into conflict with the colonists, relocated west, with many members settling in present-day Amherst County; some remained in Albemarle County.

Additional conflicts and discriminatory laws forced Monacans and other Native Americans to leave the area and even move out of the state of Virginia. The Racial Integrity Act of 1924 re-quired that birth certificates identify all Virginians as either "white" or "colored", essentially erasing the Native American identity from the paperwork of the state. This is part of the reason why it was so difficult for the Monacan Nation to achieve recognition due to a lack of continuity in the historical record. However, the Monacan Indian Nation was recognized by the state of Virginia in 1989 and federally recognized in 2018. The Monacan Nation is one of seven federal-ly recognized tribes in Virginia and the only such Virginia tribe located west of Richmond.



Captain John Smith's 1608 map of Virginia indicated Native American villages, including the Monacan people in the Piedmont Region. Source: National Parks Service



Albemarle County Historic Map, 1875. Source: Library of Congress

Changing County Boundaries

In 1744, the Virginia Assembly created Albemarle County from the northern part of Goochland County. The county seat was at Scott's Landing (now Scottsville) on the James River. In 1761, Albemarle County lost some of its land area with the creation of Buckingham County and Amherst County. The western part of Louisa County was also added to Albemarle County. In 1762, the county seat moved from Scottsville to Charlottesville, which was established as a town. Albemarle County's current boundaries were finalized in 1777 after the creation of Fluvanna County. In 1818, there were two significant events – Thomas Jefferson founded the University of Virginia and Scottsville was formally established as a town.

The plantation economy of the antebellum Virginia Piedmont relied heavily on waterways to power mills and transport goods for export in the Tidewater region. The Rivanna River served as a vital link to the James River from the northern half of Albemarle County. Large land holdings and mill villages bordering the river were defining qualities of the landscape.

American Civil War

From 1861 to 1865, Virginia fought on the side of the Confederacy in support of maintaining the institution of slavery. About 14,000 enslaved people, over half of Albemarle County's population at the time, lived in the county at the start of the war. The most significant Civil War engagement in the county was the Battle of Rio Hill on February 29, 1864.

Post-Civil War

After the American Civil War, formerly enslaved and freeborn African Americans purchased land across Albemarle County and established free Black communities, including Free Town (Crozet), Proffit, Cartersburg, Salem Church (Union Ridge Baptist Church), Free State (currently Belvedere/Dunlora), and Union Ridge/Hydraulic Mills. There are many historic and cultural resources and local family histories associated with these places, including River View Farm at Ivy Creek Natural Area and Union Mission Baptist Church in Crozet. Leaders in these communities established critical services and gathering places, including schools and community centers.

While this historically African American community spanned much of Three Notch'd Road, the area near Union Mission Baptist Church (organized in 1913) was one of its centers. Edgar Wesley, one of the church's founders and trustees, and his wife Maggie lived in a home across the street from the church, where they operated a small store next to their home. The store was a space where meetings of fraternal societies such as the Odd Fellows were held, and the Wesley family provided classroom space inside their home. This classroom space was used until the Crozet Elementary School for African Americans opened next to the church in 1916. This school space was especially important, as African American students were excluded from the schools provided to their white counterparts. The Union Mission area included community leaders, educators, and business owners.

Despite the U.S. Supreme Court's 1954 Brown vs. Board of Education ruling, Albemarle County continued building segregated schools for African American students through at least 1958, including Virginia L. Murray Elementary. Albemarle County Schools did not begin to integrate until 1963 and took another four years to integrate fully.



Union Mission Baptist Church, Crozet area.



River View Farm at Ivy Creek was established in the late 1800s.



The covers of Albemarle County's Comprehensive Plans, 1971 to 2015.

History of Local Planning & Growth

Charlottesville was formally established as a city in 1888. Over the next century, there were multiple changes to city and county boundaries and tensions over annexation. Annexation is a process used by localities to expand their land area. Since cities in Virginia are independent of counties, cities can acquire land from an adjacent county through annexation.

Prior to 1900, the City of Charlottesville annexed land from Albemarle County about five times. These annexations were relatively small areas of land, totaling about 1.2 square miles. After 1900, the City annexed land from the County three times. These annexations were significantly larger areas of land. They added over 7 square miles of land to Charlottesville, establishing the city's current boundaries.

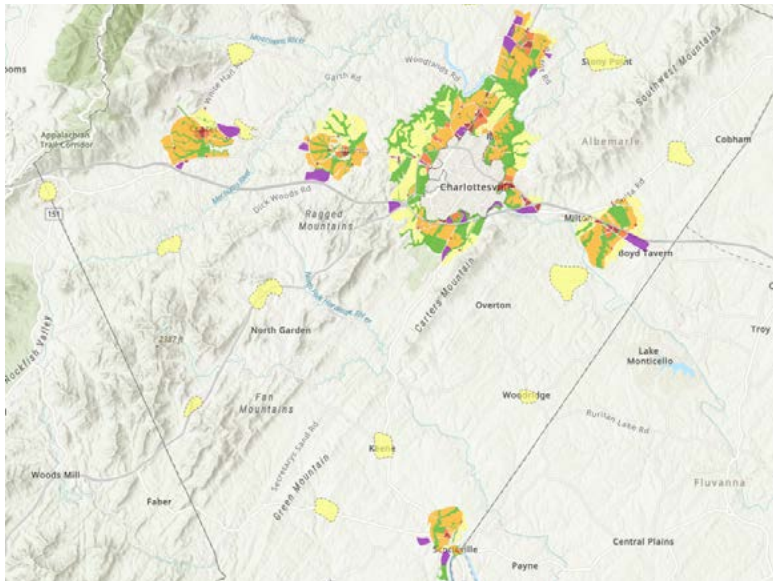
In 1944, Albemarle County established its first Planning Commission. In 1949, the County established its first Subdivision Ordinance and failed to adopt its first proposed Zoning Ordinance. At that time, adoption required approval by a majority of county voters; the proposed ordinance failed to win a majority of votes.

By 1962, the Albemarle County Board of Supervisors recognized that regulating locations where public water and sewer could be supplied could be used to incentivize development in certain areas and potentially protect against annexation. In 1964, the County established the Albemarle County Service Authority (ACSA) and began working toward acquiring existing private water and sewer facilities in some county neighborhoods. The County also used federal funding to study areas for public water supply. ACSA completed the Beaver Creek Reservoir in 1965 and the sewer interceptor in 1988 to provide Crozet with public water and sewer service.

In 1964, the County also adopted Service Authority Project Areas to establish where public water and/or public sewer service would be provided. These Project Areas were mapped and adopted as the ACSA Jurisdictional Area in 1982. The ACSA Jurisdictional Area remains in place today. It has been amended over the years. While its boundaries mainly correspond with the boundaries of the Development Areas, there are some areas with public water or public sewer (or both) that are in the Rural Area.

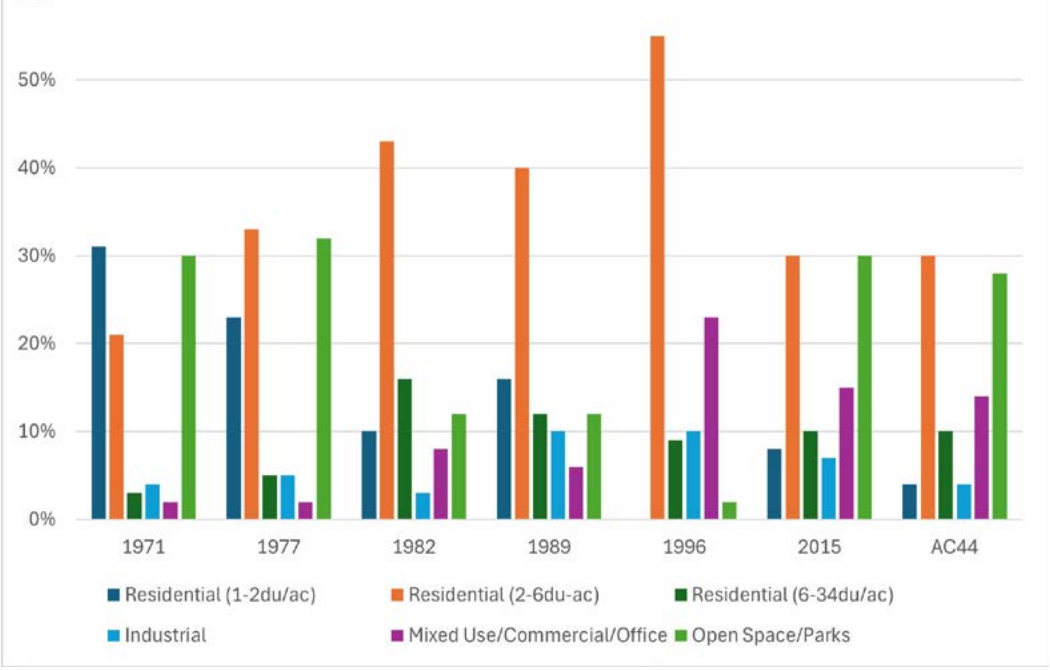
In 1967, the Virginia General Assembly determined that a voter referendum was no longer required to adopt a Zoning Ordinance in the county. One year later in 1968, Albemarle County adopted its first Zoning Ordinance. There were two public hearings before its adoption.

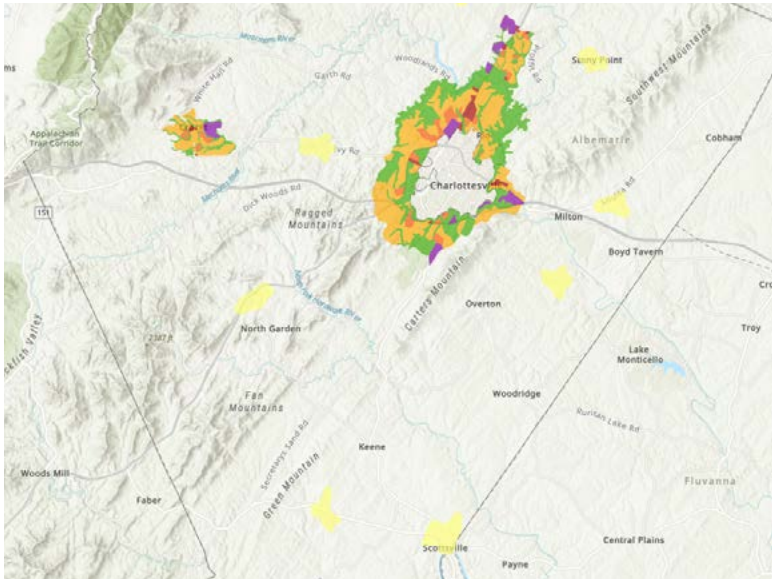
The County adopted its first Comprehensive Plan in 1971, three years after adopting its first Zoning Ordinance. This Comprehensive Plan established the County's first Growth Management Policy, directing growth into the Urban Area (similar to today's Neighborhoods 1-7), five Communities, and 14 Villages. The Plan estimated that future growth needed to accommodate a population of 185,000 people by the year 2000. Encouraging development in the designated Development Areas was intended to reduce sprawl, protect natural resources, and provide public services and utilities more efficiently. The 1971 Comprehensive Plan directed new public utilities, including public water and sewer, to these Development Areas. Conservation of natural resources and open space was a significant focus of the Plan.



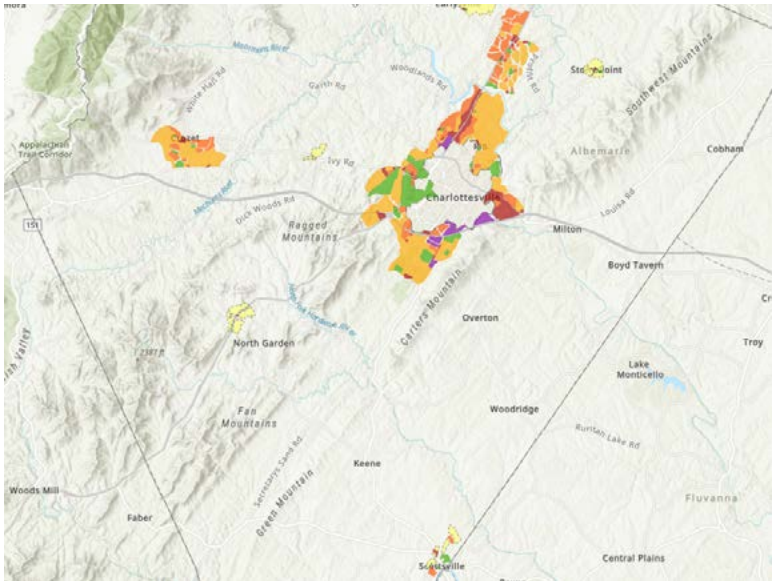
Land use map from the County's 1971 Comprehensive Plan.

COMPARISON OF LAND USE CATEGORIES BY AREA ACROSS PREVIOUS COMPREHENSIVE PLANS





Land Use Map, 1977 Comprehensive Plan



Land Use Map, 1977 Comprehensive Plan

In 1972, the City attempted to annex about 12 square miles of county land. The effort ultimately failed. At the same time as the water and sewer Project Areas were being established, the State Water Control Board mandated that the City and County coordinate on their watershed planning efforts, including the merging of utilities. This resulted in the establishment of the Rivanna Water and Sewer Authority (RWSA) in 1972. A subsequent state mandate required a single regional wastewater treatment facility to serve the Charlottesville-Albemarle urban area. The facility was established at Moore's Creek. In 1974, the County rewrote its Subdivision Ordinance.

The 1977 Comprehensive Plan update reduced the size of the Development Areas, mainly due to revised population projections for the next 20 years (86,800 people by 1995) and a stronger demand for housing in the Rural Area. Leading up to the 1977 Comprehensive Plan update, about 60% of new residential development was in the Rural Area. Another main priority for the Development Areas was to protect water supply watersheds, which are areas where water drains into the public water supply. The 1977 Comprehensive Plan placed more emphasis on natural areas, conservation, and agricultural uses, with less priority given to economic and residential development. Natural and agricultural areas were to be protected for their economic benefits, but also for their 'physically attractive rural landscape.' The Plan emphasized protecting rural viewsheds and landscapes that were visible by people driving through the Rural Area.

In 1980, Albemarle County adopted a major update to the Zoning Ordinance. This was paired with a downzoning of properties in the Rural Area to Rural Area zoning, with some exceptions for legacy/existing development. A major focus of the Zoning Ordinance update and rezoning of the Rural Area was to protect the water supply watershed.

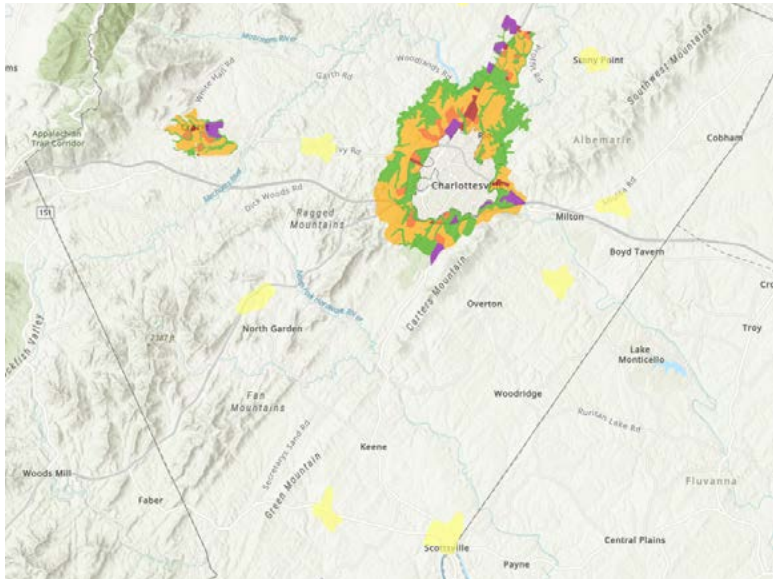
Tensions over annexation and the need to coordinate on public water supply planning led to the 1982 'annexation agreement' between the City of Charlottesville and Albemarle County, which remains in place today. The City gave up its authority to annex in exchange for the County contributing a portion of its real property tax base to the City. This occurs annually as a part of the budget, per the formula in the agreement.

The 1982 Comprehensive Plan was the first update after the County adopted its 1980 Zoning Ordinance and downzoned (reduced the number of housing units and commercial/industrial uses allowed) most of the County's Rural Area. The development trends leading up to the 1982 Plan update showed continued residential development in the Rural Area, with more than half of new residential units built in the Rural Area in the preceding years. The 1982 update removed over half of the designated Villages from the Development Areas, mainly those in water supply watersheds (with the exceptions of Ivy and Earlysville).

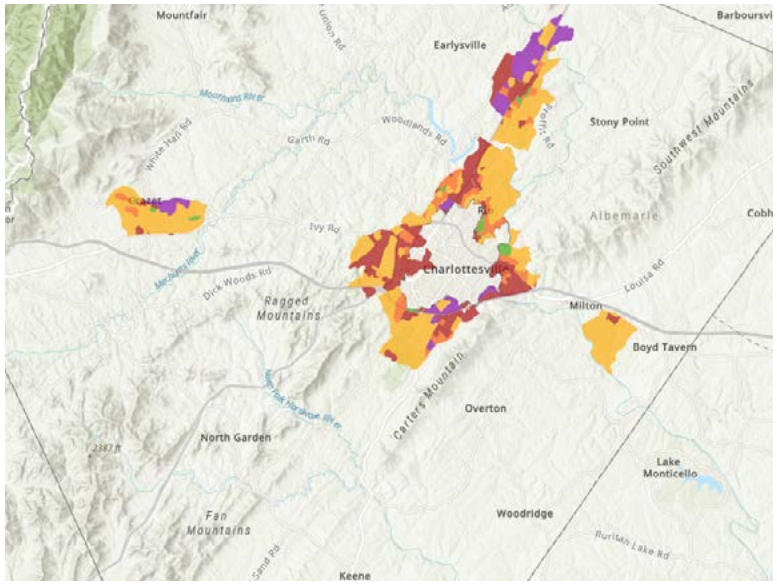
The focus of the 1989 Comprehensive Plan shifted toward encouraging growth in the Development Areas versus preventing development in the Rural Area. The development trends between the 1982 and 1989 Comprehensive Plan updates remained relatively unchanged, with just over half of all new units being built in the Rural Area. The 1989 Plan had more proactive recommendations for the Development Areas, including planning for and providing public water and sewer, transportation improvements, stormwater management, and neighborhood plans for Crozet and Pantops. The update also removed Ivy and Stony Point Villages from the Development Areas.

Between the 1989 and 1996 Comprehensive Plans, the County made several significant changes to the Development Areas. Four applicant requests to amend the Comprehensive Plan were approved; they added about 3.75 square miles of land to the Development Areas. These areas included the Village of Rivanna, the North Fork Research Park expansion, the North Pointe area, and the eastern portion of Piney Mountain.

The 1996 Comprehensive Plan update removed the villages of North Garden and Earlysville, leaving the Village of Rivanna as the only village in the county. The Board of Supervisors did not want to expand the Development Areas and directed that the existing Development Areas should be used more efficiently to accommodate growth. Supporting this, the Comprehensive Plan stated that 'the form of development must change and must be more urban and less suburban,' and that the Development Areas would need to 'gradually allow for an overall increase in density in the



Land Use Map, 1982 Comprehensive Plan

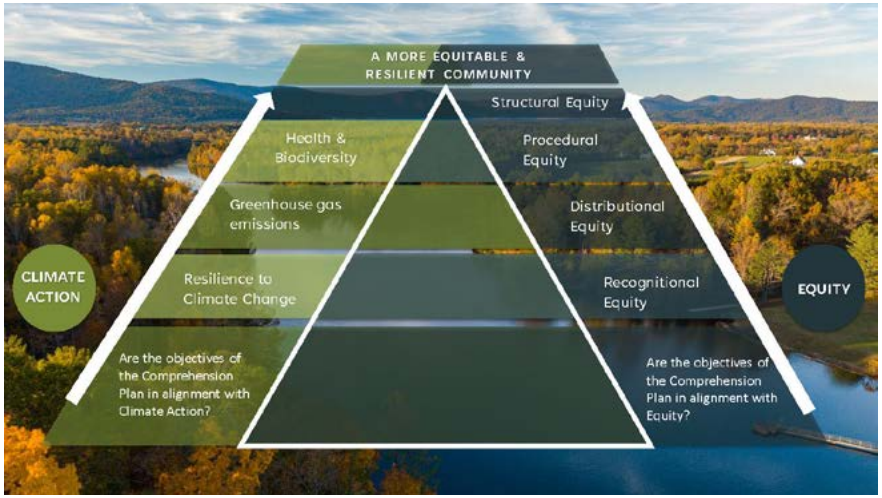


Land Use Map, 1996 Comprehensive Plan



	Single-Family Detached	Single-Family Attached, Townhouses, and Duplexes	Multifamily	Mobile homes
1982 Comp Plan est. units in 1982	66.27%	5.44%	20.78%	7.50%
1989 Comp Plan est. units in 1987	62.51%	11.53%	19.54%	6.42%
1996 Comp Plan est. units in 1995	70.10%	9%	16.12%	4.78%
2015 Comp Plan est. units in 2013	62.60%	11.28%	21.93%	4.19%
2019 Estimates est. units per 2019 Census Data	62%	13%	22.30%	2.70%

Housing unit types by Comprehensive Plan year, 1982 to 2019.



AC44 incorporates County priorities of climate action and equity.

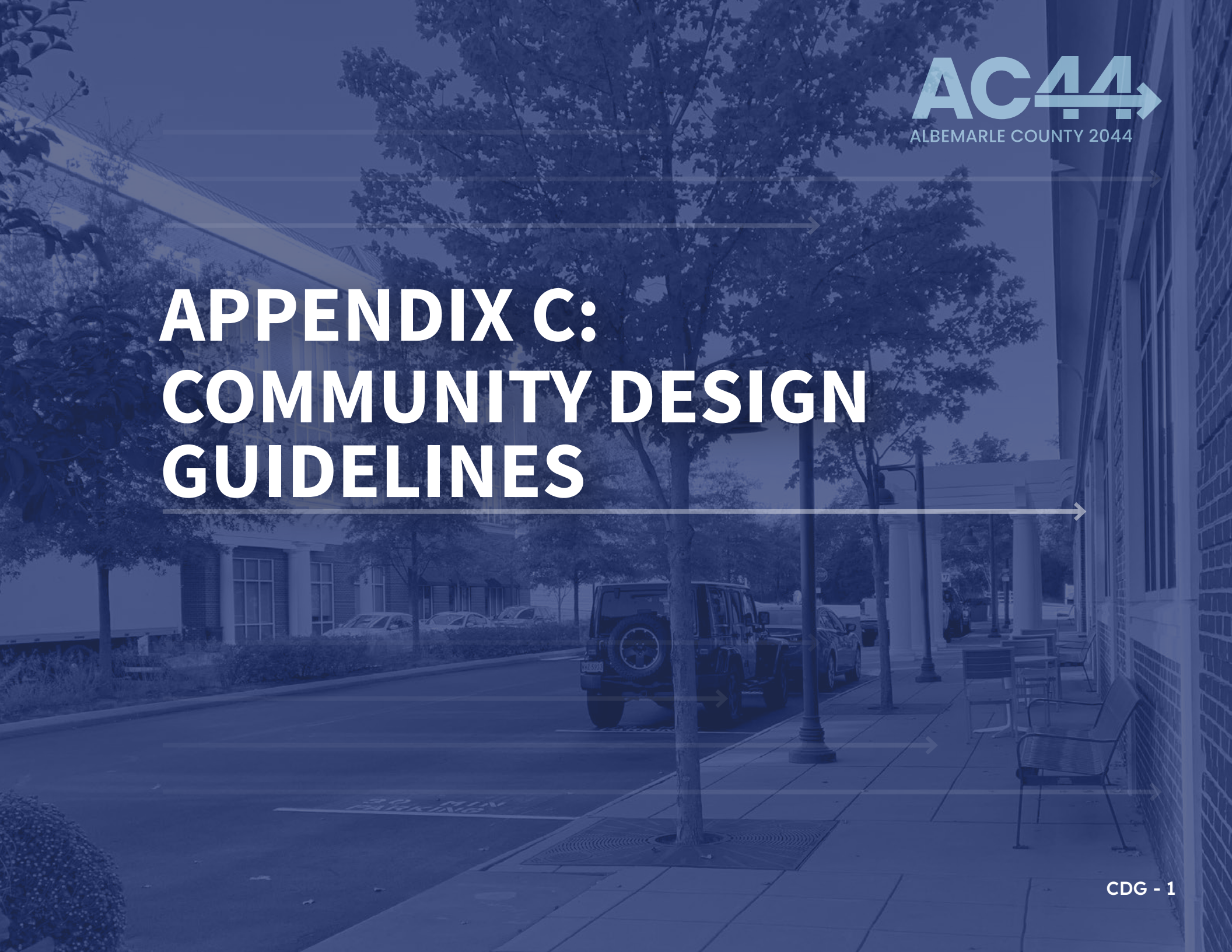
Development Areas.'

The Neighborhood Model Principles, adopted as a Comprehensive Plan Amendment in 2001, were intended to implement this form and density of development. Neighborhood Model recommendations included walkability, a variety of housing types, mixed-use developments, parks, and connected transportation systems.

The 1996 Comprehensive Plan recommended Master Plans for each Development Area. The first Master Plan adopted by the County was Crozet in 2004. Subsequent Master Plans and updates included Pantops in 2008, the Village of Rivanna in 2010, an update to the Crozet Master Plan in 2010, Places29 in 2011, Pantops in 2019, and another update to the Crozet Master Plan in 2021. The County also adopted a Southern and Western Master Plan with the Comprehensive Plan update in 2015 and the Rio29 Small Area Plan in 2018.

The 2015 Comprehensive Plan update did not significantly change the boundaries of the Development Areas. However, the update did designate the area of Biscuit Run in Neighborhoods 4 and 5 as Parks and Green Systems. This area had previously received a rezoning approval for up to 3,100 dwelling units and 150,000 square feet of commercial uses across 828 acres.

The 2015 update incorporated the Neighborhood Model Principles into the Comprehensive Plan and described expectations for the form and density of new development that should occur in the Development Areas. It was also the first update to reference climate change and the need for climate action, including the need to study climate change impacts and plan for resiliency to mitigate impacts. Recommendations in the Comprehensive Plan resulted in the County adopting its Climate Action Plan in 2020.



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ALBEMARLE COUNTY 2044

APPENDIX C: COMMUNITY DESIGN GUIDELINES

LAND USE

INTENT

Throughout the Development Areas, provide a mix of land uses and a variety of housing types, and maintain a hard edge between the Development Areas and the Rural Area.

CONSIDERATIONS

1. Direct the majority of the county's new residential (housing) and non-residential (office, retail, commercial, industrial) growth will occur in the Development Areas.
2. Create a mixture of residential and non-residential uses to advance the goals of convenient access to work, services, and entertainment. Single-use proposed projects will be evaluated on the adjacent types of uses and whether the use contributes to an overall mix of uses in the area.
3. Evaluate projects proposing one housing type only based on the nearby and adjacent housing unit types and whether the type contributes to an overall mix of housing types in the area. Build a full range of housing choices and housing types throughout the Development Areas.
4. Review dedicated affordable housing units based on the County's Housing Policy (Housing Albemarle) and the recommendations in the Housing Chapter of AC44.
5. Maintain hard boundaries between the Development Areas and the Rural Area, with mixed-use, dense, and compact development encouraged up to that boundary. Development in the Development Areas will be consistent with the applicable future land use designations and Activity Center place types and will not be reduced or be 'transitional'/suburban at the edges of the Development Areas.
6. Maximize the overall density in new developments, while conserving critical environmental resources, such as steep slopes, stream buffers, and wildlife corridors.
7. Recognize that not all circumstances or properties are the same. Thus, some of these guidelines may not be suitable for all future developments.
8. Emphasize the reuse of existing sites in the Development Areas, especially outdated uses with large parking lots or existing uses with a relatively low residential density/commercial intensity relative to the Future Land Use Map.



Downtown Crozet.

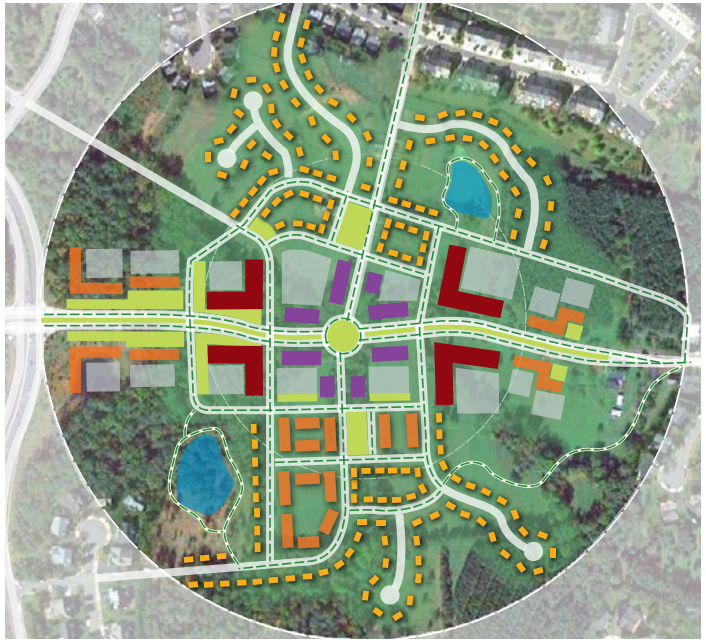


Illustration of development form in an Activity Center.

TRANSPORTATION

INTENT

Deliver safe, comfortable, accessible multimodal transportation options through a connected transportation network.

CONSIDERATIONS

1. Develop a safe and comfortable pedestrian network, including sidewalks on both sides of streets, crosswalks as needed for safe access, walking paths and trails, and connections to nearby or on-site recreation, commercial areas, schools, and other destinations.
2. Include access management strategies when planning improvements to through corridors and arterials and within Activity Centers.
3. Separate pedestrian infrastructure and protect pedestrians from vehicles. Create an urban environment with spatial enclosure along County streets to encourage walkability.
4. Separate bicycle infrastructure from vehicles on higher speed and higher volume roadways.
5. Provide safe and secure bicycle parking in commercial and employment areas and for housing units without garages. The guidebook 'Essentials of Bike Parking' published by the Association of Pedestrian and Bicycle Professionals provides more information.
6. Provide safe and convenient multimodal transportation connections and infrastructure for all levels of users based on recommendations in the County's Multimodal Transportation Plan's Modal Emphasis maps and applicable Small Area Plans.
7. Design streets to encourage traffic calming and slower driving speeds, as outlined in the Urban Street Design Guidelines published by the National Association of City Transportation Officials.
8. Connect streets within and between developments so pedestrians can easily bike or walk to many destinations, traffic has alternative routes, and car trips are reduced in number and length.
9. Connect new neighborhoods to existing neighborhoods, Activity Centers, and parks and open space. If road connections are found to be infeasible, provide bike and pedestrian connections per the County's Multimodal Transportation Plan.
10. Discourage cul-de-sacs and encourage connections throughout sites. Where cul-de-sacs are necessary, include pedestrian and bicycle connections to nearby streets.
11. Along existing and future transit routes, provide transit stops with high-quality and ADA-compliant pedestrian infrastructure and shelters in coordination with transit providers.
12. Link transportation solutions in the Development Areas to land use policies and new development to expand opportunities to walk, bike, or take public transit.
13. Provide safe and secure bicycle parking/storage for multi-family residential and mixed uses along the bicycle modal emphasis network and in all Activity Centers and Employment Districts.



Multimodal transportation networks include pedestrian, bicycle, and vehicle infrastructure. Source: City of Austin Transportation website



Image source: Protected Bicycle Lane Planning and Design Guide (City of Portland, Oregon)

Community Design Guideline #10 – Separate pedestrian infrastructure and protect pedestrians from vehicles. Create an urban environment with spatial enclosure along County streets to encourage walkability.

Community Design Guideline #14 – Design streets to encourage traffic calming and slower driving speeds, as outlined in the Urban Street Design Guidelines published by the National Association of City Transportation Officials.



Image source: Urban Street Design Guidelines (National Association of City Transportation Officials)

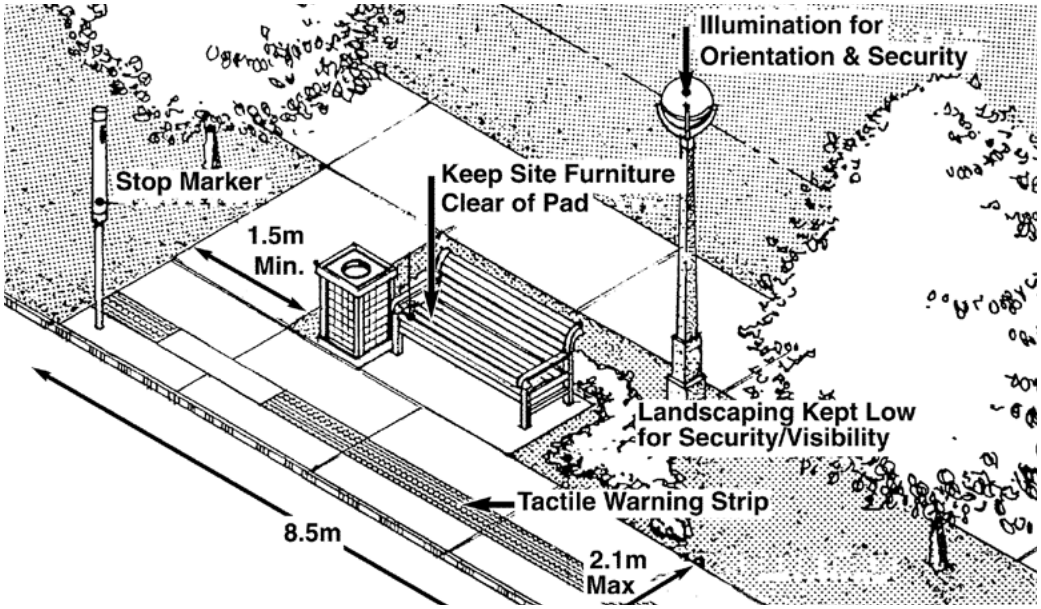


Image source: Design Guidelines for Accessible Bus Stops

Community Design Guideline #18 – Along transit routes and in coordination with transit providers, provide transit stops with high-quality and ADA-compliant pedestrian infrastructure and shelters.

SITE DESIGN

INTENT

Provide spaces that are human scaled and enjoyable to use. Balance development with the protection and restoration of the natural environment. Design elements supporting the recommendations of AC44's Environmental Stewardship Chapter.

CONSIDERATIONS

1. Plant street trees from the approved plant list at regular intervals within landscape buffers between the sidewalk and the road on all streets, with sufficient lateral and vertical space for trees to survive and thrive.
2. Relegate parking to the side or rear of buildings. Recess garages behind the line established by the front facade.
3. Primary building entrances will face the street (or amenity for amenity-oriented lots).
4. Screen parking lots/parking areas with landscaping and trees from residential, commercial, office, and mixed-use development.
5. Respect natural terrain, especially slopes greater than 25% and slopes along waterways during development.
6. Smooth out regraded slopes, as abrupt or steep grades are difficult to vegetate and maintain.
7. Preserve and enhance on-site historic, scenic, and cultural resources, including through adaptive reuse, as feasible and appropriate.
8. Provide lighting within the right of way for transit stops and sidewalks/pedestrian paths/pedestrian crossings in mixed-use and commercial areas.
9. Focus increasingly dense and intense opportunities for a diverse range of housing options, jobs, goods, and services generating continuous activity in the Activity Centers.



Image source: Albemarle County Rio29 Small Area Plan



Image source: City of Boston Complete Streets Design Guidelines

PARKS, RECREATION, & OPEN SPACE

INTENT

Provide equitable and expanding access to public parks, trails, natural areas, and open space. Design elements that support the recommendations in AC44's Parks, Recreation, & Open Space Chapter and the County's Climate Action Plan are strongly encouraged.

CONSIDERATIONS

1. Connect neighborhoods via trails to parks, natural areas, Activity Centers, and other key destinations such as schools and shopping centers.
2. Balance providing recreation opportunities with conservation and/or restoration of habitat cores, wildlife corridors, and other significant natural areas and environmental features identified in the Biodiversity Action Plan.
3. Foster a well-developed open space system including public access to parks, trails, and open spaces so residents and workers can walk and bike to a public park, experience preserved natural areas, and enjoy public gathering places.
4. Protect natural, historic, cultural, and environmental resources.



Open space plaza.



Chris Greene Lake.

REFERENCE: BEST PRACTICES

The following best practices are intended to serve as a reference for the development community and have been organized by the four Design Guideline categories. These best practices may also be implemented as requirements or development bonuses through future Zoning Ordinance updates.

LAND USE

1. Strongly encourage missing middle housing types throughout the Development Areas, including, but not limited to, small and medium multiplexes (including duplexes/triplexes/quadruplexes), single-family cottages/bungalows, live-work units, accessory dwelling units, and tiny houses.

TRANSPORTATION

1. Enhance transit stops with elements such as benches, shelters, and bicycle parking.
2. Implement EV charging infrastructure, especially for multifamily, commercial, office, and mixed-use developments.
3. Construct green streets as a means to enhance the street and manage stormwater.
4. Discourage the vacation/abandonment of public rights-of-way and the construction of privately-owned roadways.
5. Support the expansion of micromobility devices especially in the Activity Centers.
6. Provide and require amenities that enhance the bicycling experience, such as parking, street trees and other shade structures.

SITE DESIGN

1. Redevelop and reuse existing infrastructure where feasible.
2. Encourage shared parking and parking reductions.
3. Dedicate parking for carpooling and EV charging.
4. Incorporate public art and wayfinding into building and site design, especially in mixed-use and commercial areas.
5. Provide shade and weather protection for pedestrians, transparent windows along the first floor of buildings especially along major corridors, benches and trash cans, outdoor patio spaces, and public restrooms in mixed-use and commercial areas.
6. Use low-impact development (LID) best practices for stormwater management such as bioswales, permeable pavement, rain gardens/bioretention swells, green roofs, and tree preservation.
7. Implement pavement options to reduce runoff and/or the heat island effect, such as permeable pavement and reflect/cooling pavements.
8. Implement renewable energy sourcing such as rooftop and parking lot solar facilities at sites.
9. Use renewable energy storage (e.g., batteries to store solar energy).

PARKS, RECREATION AMENITIES, & OPEN SPACE

1. Implement creative on-site recreational amenities, including, but not limited to, natural playscapes, outdoor fitness equipment, obstacle course/“ninja” play equipment, solar-powered outlets/ stations, and climbing walls or other climbing equipment.
2. Use areas in steep slopes, floodplain, and stream buffers as common or public open space, instead of having these environmental features on individual lots.
3. Design clusters or “groves” of native canopy trees to maximize cumulative environmental benefits. Existing forested land cover should be conserved and/or restored where possible and appropriate.

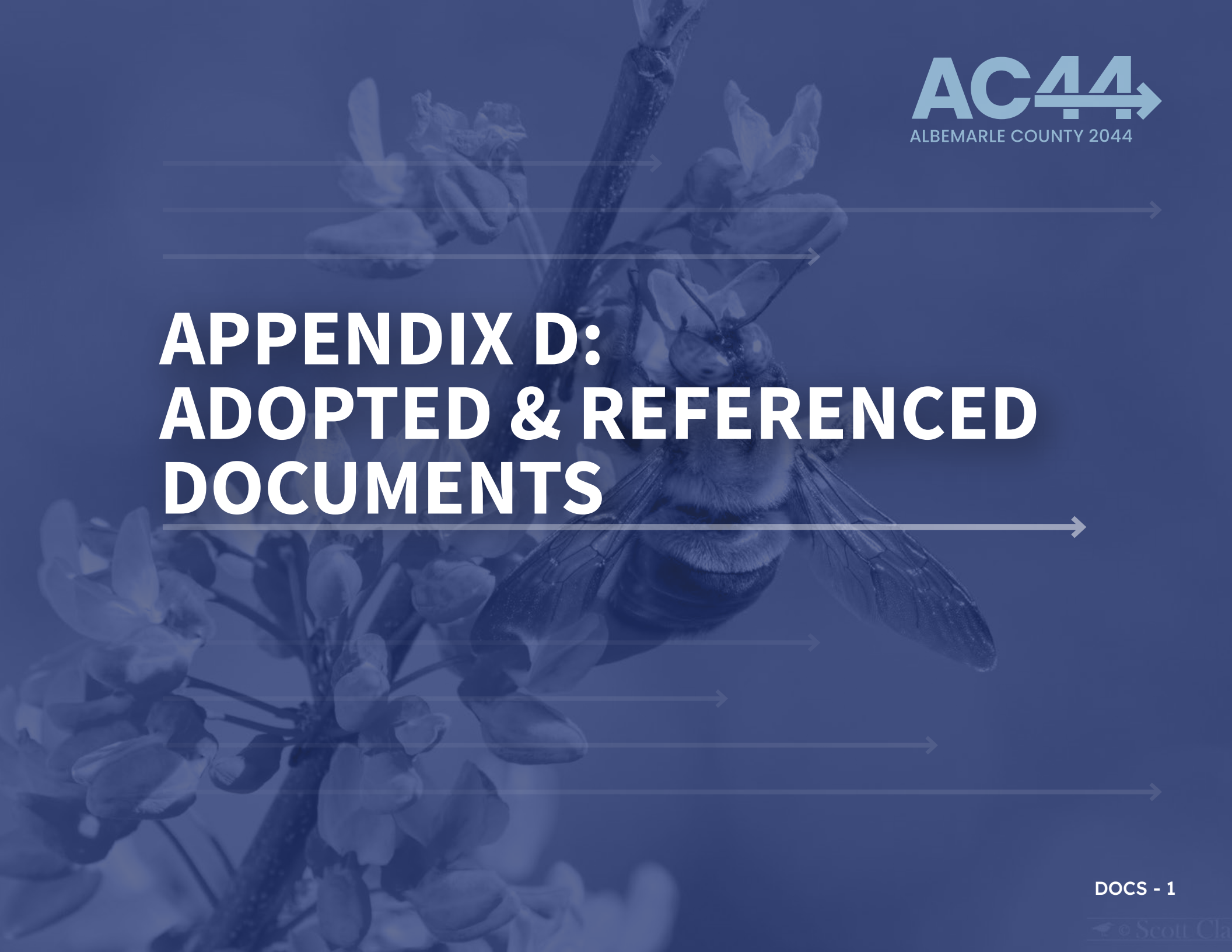


“Ninja” style equipment offers recreational options for a variety of ages, including teens. Image: Rockwater Park in Culpeper, Virginia.



Floodplain areas offer opportunities for usable greenspace, including greenway trails.

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APPENDIX D: ADOPTED & REFERENCED DOCUMENTS

ADOPTED DOCUMENTS

Each of the plans in the section below is considered a part of AC44. Any updates to these plans will require a Comprehensive Plan Amendment (see AC44 Part III, Implementation Chapter, "Comprehensive Plan Amendments").

Climate Action Plan

Crozet Master Plan

Economic Development Strategic Plan

Housing Albemarle

Pantops Master Plan

Places 29 Master Plan

Rio 29 Small Area Plan

Southern and Western Neighborhoods Master Plan

Village of Rivanna Master Plan

REFERENCED DOCUMENTS

The following statewide and regional planning documents served as resources during the update of the County's Comprehensive Plan.

Albemarle County Equity Profile (County, 2021)

Albemarle County Parks & Recreation Needs Assessment (County, 2018)

Albemarle County Strategic Plan (County, 2022)

Avon Street Corridor Plan (County, 2023)

Biodiversity Action Plan (County, 2018)

Broadway Blueprint Economic Development Revitalization Study (County, 2022)

Broadway Blueprint Phase 2 Implementation Study (County, 2024)

Community Well-Being Profile (County, 2025)

Comprehensive Economic Development Strategy (TJPDC, 2024)

County/City Tourism Master Plan (Destination 2045: Crafting Our Tourism Future Together) CACVB, 2024)

Hydraulic Small Area Plan (TJPDC, 2018)

Lambs Lane Campus Master Plan (ACPS, 2022)

Long-Range Transportation Plan (CAMPO, 2024)

Move Safely Blue Ridge (TJPDC, 2025)

Planning for Affordability - A Regional Approach (TJPDC, 2021)

Potential for Improvements (VDOT, 2025)

Natural Hazard Mitigation Plan (TJPDC, 2023)

Regional Transit Governance Study (TJPDC, 2023)

Regional Transit Vision Plan (TJPDC, 2022)

Regional Travel Demand Model (CAMPO)

Regional Water Supply Plan (DCR)

Rio Road (East) Corridor Plan (County, 2022)

Rivanna River Urban Corridor Plan (TJPDC, 2022)

Six-Year Improvement Plan (DRPT and VDOT, 2025)

Statewide Transportation Improvement Program (CTB, 2023)

Strategic Plan for Economic Development of the Commonwealth (VEDP, FY25-29)

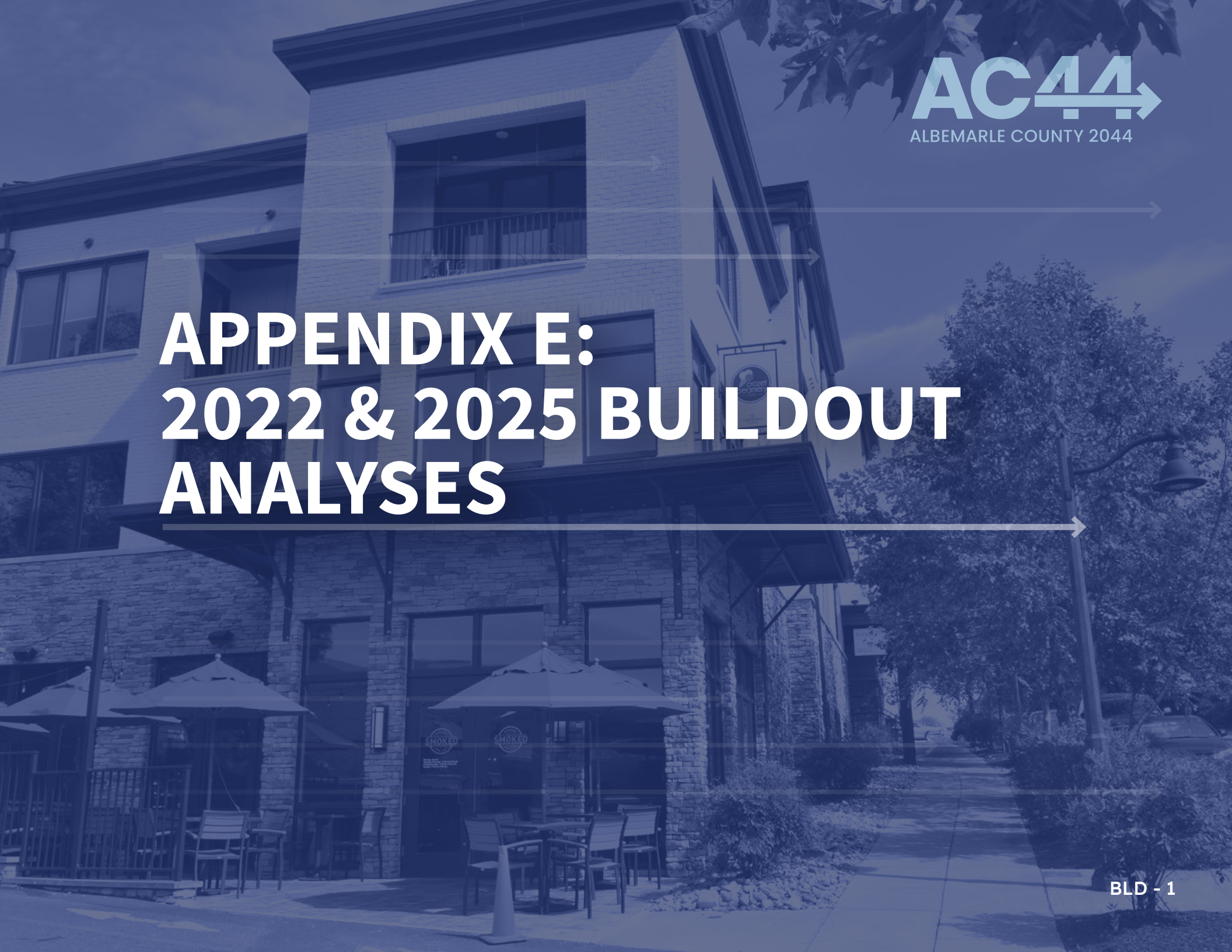
Stream Health Initiative (County, 2021)

Town of Scottsville Comprehensive Plan (Town, 2018)

Virginia Outdoors Plan (DCR, 2024)

Virginia Wildlife Corridor Action Plan (VDWR, 2023)

VTrans: Virginia's Transportation Plan (CTB, 2022)



AC44
ALBEMARLE COUNTY 2044

APPENDIX E: 2022 & 2025 BUILDOUT ANALYSES

County of Albemarle
Community Development Department – Planning Division

ac44@albemarle.org
tel: 434-296-5832

MEMORANDUM

DATE: September 2025

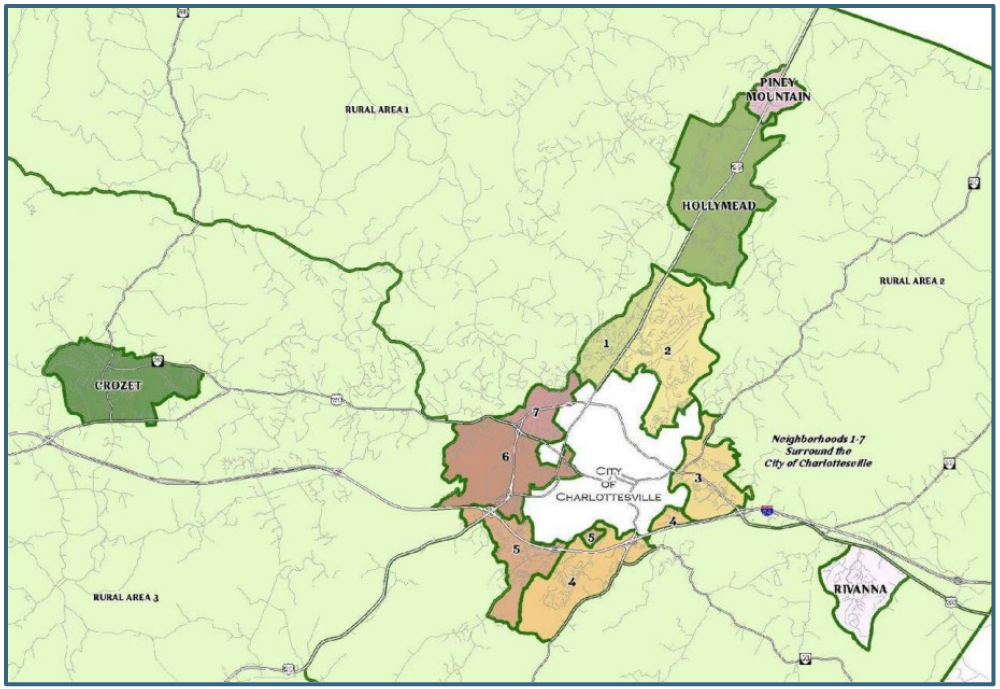
TO: Albemarle County Board of Supervisors

FROM: Long-Range Planning Team, Albemarle County Planning Division

RE: AC44 and the 2025 Land Use Buildout Analysis

Introduction

In early 2022, the first phase of the AC44 Comprehensive Plan update focused on a review of the County's Growth Management Policy. One element of this work evaluated the current Development Areas to establish a baseline understanding of its potential capacity to accommodate future growth and demand. This evaluation was captured in the 2022 Land Use Buildout Analysis. The 2022 Land Use Buildout Analysis reviewed the County's 20-year population growth projections and the associated need for new housing and businesses. Then, it compared these figures to the maximum theoretical buildout of land within the County's designated Development Areas. This analysis is based on the Comprehensive Plan's future land use designations for Development Area parcels, which are found within the Development Area Master Plans, and their recommended densities and intensities associated with each land use category.



Albemarle County's Development Areas

The 2022 Land Use Buildout utilized assumptions based on existing conditions, current trends, and historical development patterns within the County to estimate buildout totals for each of five real estate categories: residential, retail, office, industrial, and hotel.

The 2025 Land Use Buildout Analysis used the same research approach and methodology as the 2022 Land Use Buildout Analysis. The updated analysis begins by calculating the Development Pipeline, which refers to either the projects currently under review or projects that have been approved but remain unbuilt within the Development Areas. Then, the remaining land not identified as part of the Development Pipeline but is vacant or has the

potential to redevelop is assigned a theoretical buildout scenario to estimate its capacity. Finally, the Development Pipeline and the buildout scenario are combined to estimate the total theoretical maximum buildout of the Development Areas.

Broadly, redevelopment potential was identified by parcels with land values that were greater than their improvement value; however, each land use type used specific criteria to identify redevelopment potential. A full list of the redevelopment criterion for each land use type begins on page 5 of the 2022 Land Use Buildout Analysis.

Summary of the 2022 Land Use Buildout Analysis

Residential Findings

The residential estimates in the 2022 Land Use Buildout Analysis identified 9,377 approved unbuilt units and 5,504 under-review units in the Development Pipeline as of February 2022. The analysis identified the potential for 9,252 additional units beyond the pipeline for a theoretical maximum number of 24,133 new units that could be built in the Development Areas.

Summary of Development Area Residential Pipeline and Buildout Totals

Maximum Remaining Unbuilt Approved Units	Maximum Units Under Review	Residential Theoretical Maximum Buildout Estimate	Total Theoretical Maximum Future Residential Buildout
9,377	5,504	9,252	24,133

The 2022 study concluded that theoretical maximum buildout estimate appears to sufficiently meet the projected 20-year demand based on the forecasted population increase and trends in residential development and occupancy observed in the County between 2010-2021. The estimated demand over 20 years ranged between 11,500 – 13,500 residential units.

Land Use Type	20-Year Demand Forecast		Theoretical Maximum Buildout Estimates			
	Low	High	Max. Approved	Max. Under Review	Max. Buildout Estimate	Total
Residential (units)	11,500	13,500	9,377	5,504	9,252	24,133

Non-Residential Findings

A similar methodology was used to analyze non-residential development. An analysis of the acreage that was vacant or had the potential to redevelop based on certain eligibility criteria was applied to different use-types, including retail, office, hotel, and industrial. This approach calculated the following capacity:

Summary of Development Areas Theoretical Maximum Buildout

Retail/ Commercial Sq.Ft.	Office/ Institutional Sq.Ft.	Hotel Rooms	Industrial Sq.Ft.
1,959,849	2,725,883	2,554	5,565,023

These theoretical maximum buildout figures appeared to sufficiently meet the projected 20-year demand based on the forecasted population increase and observed trends of the County's non-residential development, such as vacancy rates and cost per square foot of space, between 2010-2021.

10- and 20-Year Albemarle County Market Demand Forecasts

Land Use Type	2010-2021 Average Annual Completions	10-Year Demand Forecast		20-Year Demand Forecast	
		Low	High	Low	High
Retail (sq. ft.)	69,444	550,000	700,000	1,000,000	1,300,000
Office (sq. ft.)	39,924	325,000	500,000	750,000	1,000,000
Industrial (sq. ft.)	41,288	450,000	600,000	950,000	1,100,000
Hotel (rooms)	37	350	500	750	900

Land Use Buildout Analysis – 2025

There has been significant development activity since the 2022 analysis was completed. Projects have continued to build out and some projects have been completed. Other projects that were previously under review are now approved and under construction. Finally, entirely new projects have been submitted and are now under review.

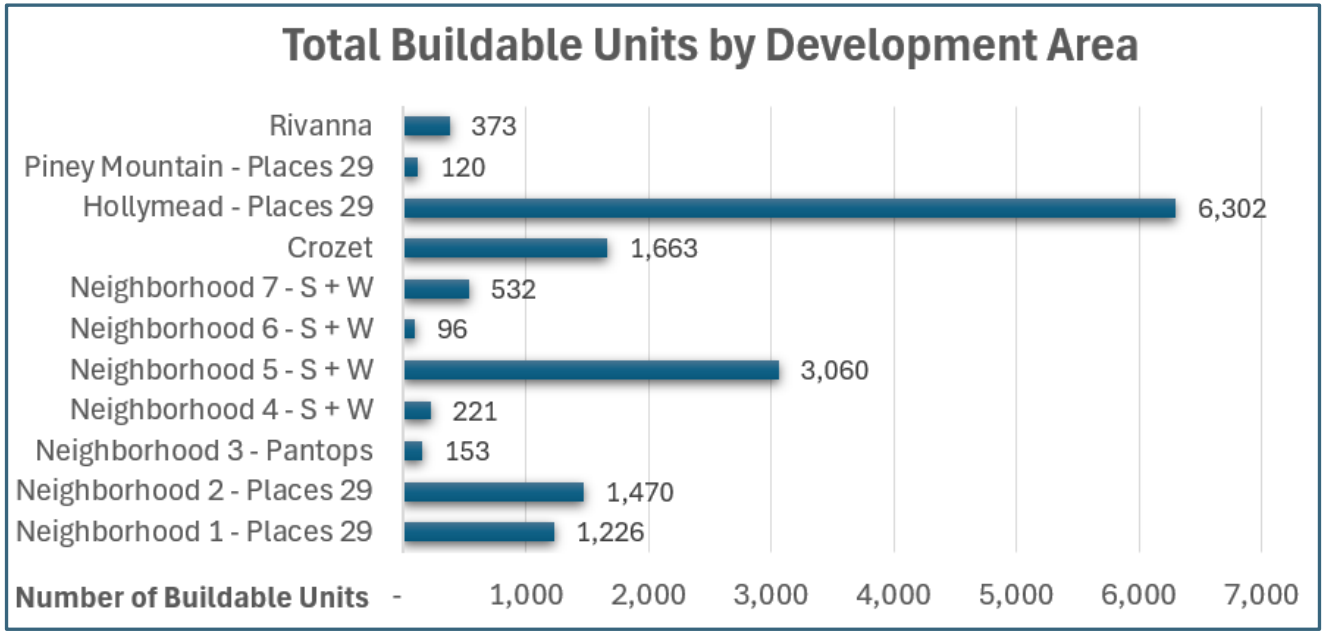
The 2025 Land Use Buildout Analysis uses the same research approach and methodology as the 2022 report. Using the same approach provides the best opportunity to make historical comparisons and observe trends since the AC44 Comprehensive Plan update effort first began. Both the overall data and the trends of the data are valuable insights as the County nears the end of the AC44 update, and as updates to County policies and plans are considered.

Residential Findings – 2025

The Development Pipeline includes approved development plans and development plans under review as of April 2025 and is shown on the next page.

2025 Land Use Buildout Analysis - Residential				
Development Area	**Max. Remaining Approved Units (Unbuilt)**	**Max. Units Under Review**	**Total Buildable Units**	**Share of Total**
Neighborhood 1 - Places 29	1,019	207	1,226	8.1%
Neighborhood 2 - Places 29	534	936	1,470	9.7%
Neighborhood 3 - Pantops	12	141	153	1.0%
Neighborhood 4 - S+W	208	13	221	1.5%
Neighborhood 5 - S+W	1,583	1,477	3,060	20.1%
Neighborhood 6 - S+W	-	96	96	0.6%
Neighborhood 7 - S+W	532	-	532	3.5%
Crozet	1,516	147	1,663	10.9%
Hollymead - Places 29	5,333	969	6,302	41.4%
Piney Mountain - Places 29	120	-	120	0.8%
Rivanna	373	-	373	2.5%
Total	**11,230**	**3,986**	**15,216**	**100.0%**

The chart below graphically displays the table above:

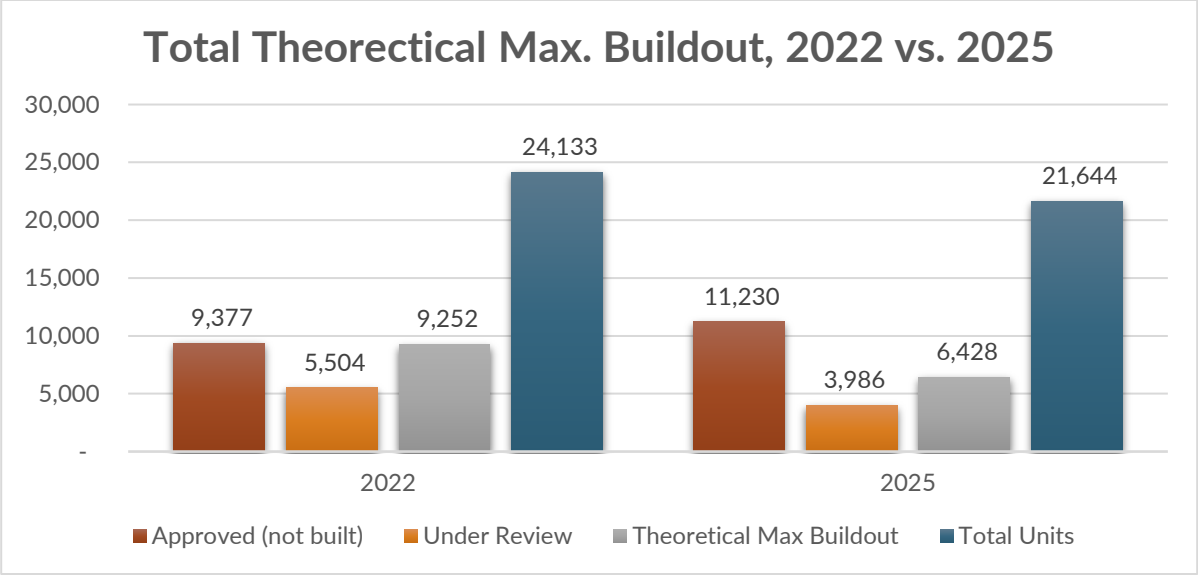


Overall, between 2022 and 2025, the total number of buildable units increased by 335 units.

The total buildable units combine with the updated theoretical maximum residential buildout to yield a total of 21,644 dwelling units. The 2025 amount is an overall decrease in the theoretical maximum residential buildout of 2,489 dwelling units from the theoretical maximum residential buildout in 2022.

		2022	2025	Trend
"Development Pipeline"	Max. Remaining Approved Units (Unbuilt)	9,377	11,230	Up
	Max. Units Under Review	5,504	3,986	Down
Theoretical Max. Buildout Estimate		9,252	6,428	Down
Total		24,133	21,644	Down

The chart below graphically displays the table above:



The decrease in total number of dwelling units can be attributed in part to the number of units built over the study period. From 2022 through the first quarter of 2025, a total of 2,924 residential units in the Development Areas received a certificate of occupancy.

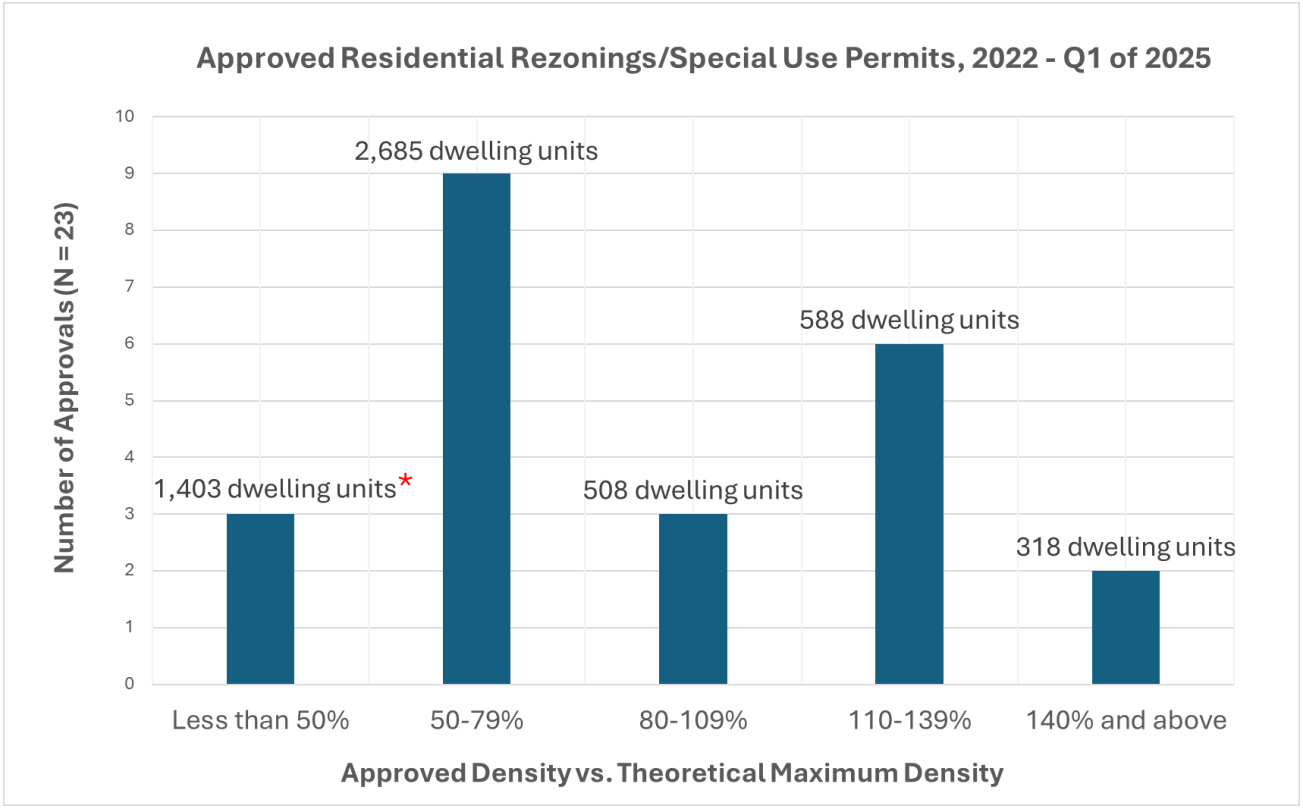
	2022	2023	2024	2025 (through 4/1/25)	Total
# of Residential Dwelling Units issued a Certificate of Occupancy in the Development Areas	699	904	1232	89	2,924

Residential Results – 2025

The updated theoretical maximum residential buildout has decreased since 2022, but is more than 21,500 dwelling units. Based on projected population increase over the next 20 years, there is expected demand for 11,500 to 13,500 new housing units. This level of demand requires approximately 675 net new dwelling units per year at the high end of the forecast. Between 2015-2024, on average, the number of dwelling units constructed in the County has exceeded this level of demand. Within the Development Areas, an average of 735 new dwelling units have been constructed per year.

Nevertheless, as documented in the 2022 analysis, it is very important to acknowledge the numerous constraints and challenges to developing at a theoretical maximum level. The 2022 Buildout Analysis cited the total number of dwelling units approved for residential rezoning applications from 2016-2021 were 58% of the theoretical maximum buildout recommended by the Comprehensive Plan. The 2025 analysis calculated a similar figure for residential rezoning applications approved from 2022 through the first quarter of 2025. Over this time frame, the total number of dwelling units were 56% of the theoretical maximum buildout recommended by the Comprehensive Plan.

However, a closer look at the distribution of data for the 2025 analysis shows that one project disproportionately impacts the 56% figure. The approved residential rezoning in North Fork permits up to 1,400 dwelling units on 172 acres. This project is significantly different from the other 22 projects included in the analysis, which on average were approved for 180 dwelling units on 15 acres.



As a result, if the North Fork residential rezoning is excluded from the analysis, then total number of approved dwelling units were 70% of the theoretical maximum buildout recommended by the Comprehensive Plan. This figure more accurately represents the overall dataset used for the updated 2025 analysis.

Non-Residential Findings – 2025

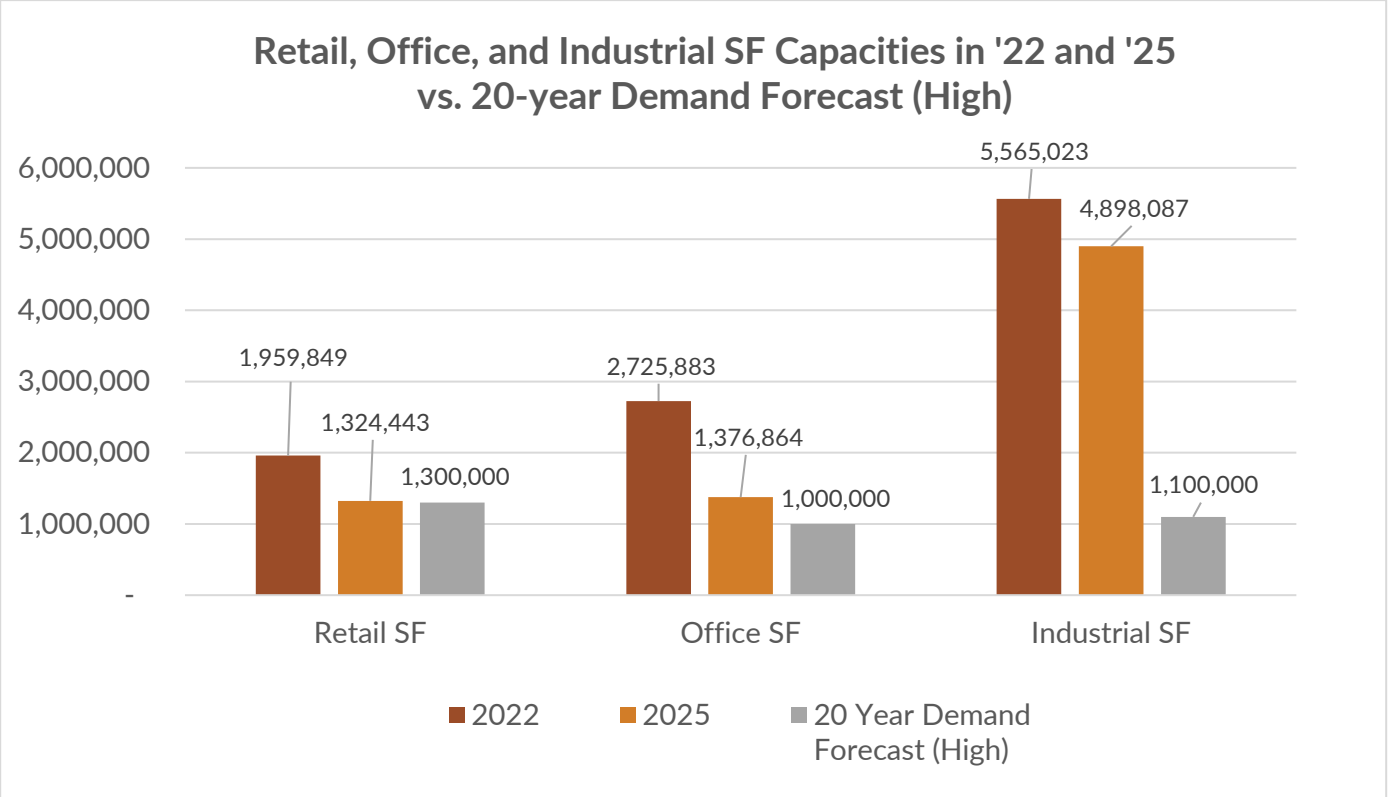
There has also been notable non-residential development activity since the 2022 analysis was completed. The current analysis for non-residential uses is shown below:

Summary of Maximum Theoretical Non-Residential Buildout by Development Area				
Development Area	**Retail SF**	**Office SF**	**Industrial SF**	**Hotel Rooms**
Neighborhood 1 - Places 29	141,602	207,281	21,949	267
Neighborhood 2 - Places 29	119,707	206,177	-	254
Neighborhood 3 - Pantops	109,759	72,707	98,475	101
Neighborhood 4 - S+W	102,458	86,334	238,882	166
Neighborhood 5 - S+W	16,325	86,741	1,040,886	-
Neighborhood 6 - S+W	13,128	-	-	-
Neighborhood 7 - S+W	17,277	12,958		-
Crozet	236,764	223,827	494,871	436
Hollymead - Places 29	491,887	435,040	2,893,107	275
Piney Mountain - Places 29	75,536	45,799	109,917	92
Rivanna	-	-	-	-
Total	**1,324,443**	**1,376,864**	**4,898,087**	**1,591**

This table compares the 2022 and 2025 theoretical capacities for non-residential uses:

	Theoretical Maximum Buildout		**20 Year Demand Forecast (High)**	**Trend**
	2022	**2025**		
Retail SF	1,959,849	1,324,443	1,300,000	Down
Office SF	2,725,883	1,376,864	1,000,000	Down
Industrial SF	5,565,023	4,898,087	1,100,000	Down
Hotel Rooms	2,554	1,591	900	Down

This graphic compares the theoretical maximum non-residential buildout to the high-end of the projected 20-year demand forecast for retail, office, and industrial uses. Although the theoretical maximum non-residential buildout for each land-use type has declined since 2022, they still exceed the high-end of the projected 20-year demand forecast.



Non-Residential Results – 2025

As with residential capacity, the updated theoretical maximum non-residential buildout has decreased since 2022, but remain at levels that are above the high-end of the 20-year demand forecast for each land use type.

And, also like residential capacity, it must be emphasized that there are numerous constraints and challenges to developing at a theoretical maximum level. An updated approach to projecting demand for non-residential space, including consideration of the County's goals for economic development, will provide the best possible analysis for future decision-making.

Overall Results – 2025

There are approximately 23,800 acres in the Development Areas. At the time of the 2025 analysis, approximately 1,446 acres (or 6.1%) are developable under the criterion used by the 2022 Land Use Buildout Analysis. The 2022 analysis found approximately 1,634 acres (or 6.9%) were developable.

Interestingly, the remaining developable acreage is nearly split between acreage that is currently vacant and acreage that will require some amount of redevelopment (e.g. infill development, demolition of existing structures, etc.). This information can be useful as strategies are developed to maximize the utilization of the Development Areas.

Conclusion

The 2025 Land Use Buildout Analysis utilizes the same research approach and methodology as the 2022 report. Doing so provides the opportunity to observe trends over time, but it also requires the redevelopment criteria and buildout assumptions used in the 2022 analysis to be used once again.

Looking ahead, future analyses will benefit from an updated research approach. These changes will include using the latest available data sets, as well as demand projections that are forward-looking and rely on more market-based factors than what has been used previously. Future analyses can also model multiple different buildout scenarios by changing the theoretical buildout assumptions. Finally, these analyses can be run on a more frequent basis and allow better monitoring of the County's utilization of its Development Areas as called for in the AC44 Comprehensive Plan update.

Albemarle County Land Use Buildout

September 1, 2022

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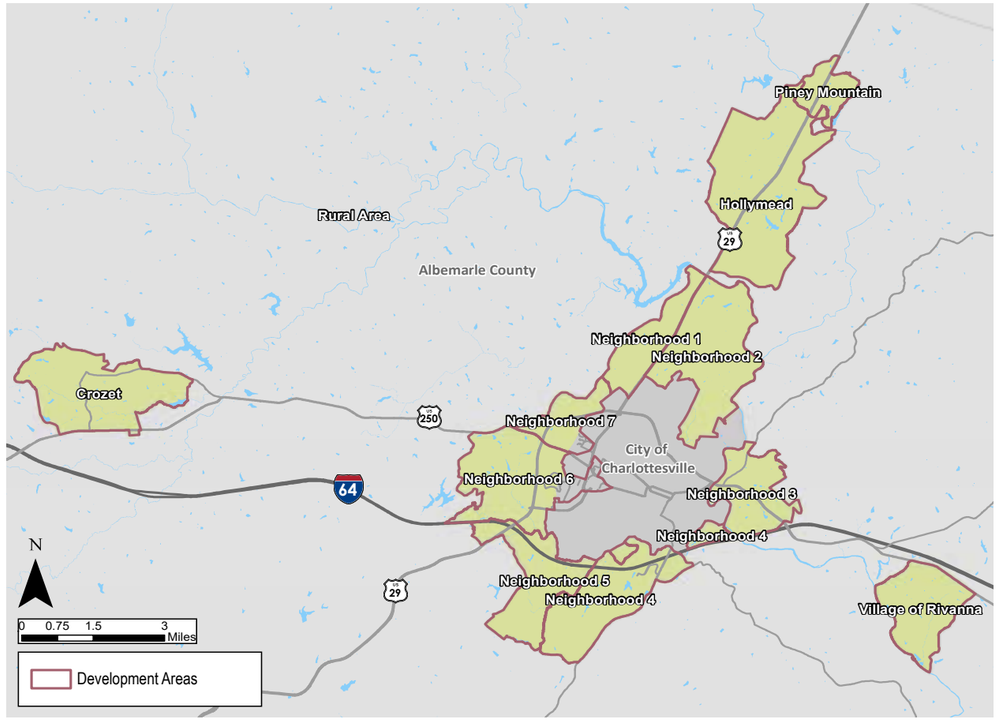
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Chapter 1: Introduction

Study Overview

Albemarle County is beginning a Comprehensive Plan (or 'Comp Plan') update. The Comp Plan update process is expected to be completed in the year 2024 and will establish a 20-year guiding document for the County. Because it is a 20-year planning horizon, the Comp Plan update process is being called Albemarle 2044, or AC44 for short. AC44 will be a four phased process, with the first phase focusing on Planning for Growth. This phase includes a review and evaluation of the County's current Growth Management Policy. To properly evaluate the current policy, it is important to establish an understanding of the existing land use and future growth projections for the County.

The County's current Growth Management Policy comes from the 2015 Comprehensive Plan. The policy divides Albemarle County into designated Development Areas (currently approximately 5% of the County, or 37 square miles) and the Rural Area (currently approximately 95% of the County, or 690 square miles). The majority of new residential, commercial, retail, office, industrial, and mixed-use development is intended to be located within the County's Development Areas. The Rural Area is envisioned to have limited residential development, and commercial and employment areas are intended to support rural land uses.



Albemarle County Development Areas as noted in their Comprehensive Plan

New uses or businesses in the Rural Area are expected to be mainly agricultural (such as farming) or related to forestry (such as logging). This approach to growth management requires a clear understanding of projected growth and land capacity to ensure Development Area acreage can accommodate future development.

The data and projections in this Land Use Buildout Analysis are intended to be an early step in evaluating the current Growth Management Policy. The analysis is designed to establish an understanding of existing conditions and future growth projections compared with the projected future capacity of the County's designated Development Areas. The Buildout Analysis estimates the potential for the designated Development Areas to accommodate the demand for housing and business growth in the County, looking out over a period of 20-years. This analysis combines an inventory of approved and proposed residential development projects with identification of land capacity to inform growth management policy decisions for the next generation.

Goals of the Study

Albemarle County engaged a team of staff from Kimley-Horn to assist with the Land Use Buildout Analysis, to support the Planning for Growth phase of AC44 and in conjunction with the existing goals of the 2015 Comprehensive Plan (see Development Areas Objective #4). The goal of this Buildout Analysis is to better understand if the existing land capacity is sufficient to support future development needs and opportunities in Albemarle County, looking out over a period of 20 years.

As the Buildout Analysis is a long-range snapshot based on information currently available, it is necessary to understand that the findings should be used as a guide to inform growth management policy. Future demand forecasts estimated in this analysis use assumptions based on existing conditions, current market trends, and historical development patterns within the County. Estimated buildout totals use assumptions based on future land use designations, infrastructure and environmental features, and open space. It is important to note that the ultimate buildout of County land is contingent upon factors that are not possible to accurately predict, including environmental and economic constraints, a landowners' decision on how to use their property, and the political will to approve projects at the target residential densities or non-residential intensities. All these factors will ultimately determine the final use and buildout of County land and are not able to be fully known in advance.

How to Use the Study

The study establishes an analysis and dataset for Albemarle County to use in the AC44 process and for future planning and economic development efforts. The findings of this study will help inform the evaluation of the current Growth Management Policy as part of the AC44 project. The dataset is also designed to be updated and manipulated to be used for future phases of AC44 or other future planning efforts. This could include running scenarios on possible adjustments to the future land use designations to evaluate how proposed changes could change an area's capacity for future growth.

This Buildout Analysis details the methodology used to determine the buildable acreage throughout Albemarle County. While it is acknowledged that some new growth will occur in the Rural Areas, this analysis considers whether the Development Areas have sufficient land area and units in the pipeline to accommodate all of the County's expected growth. The Buildout Analysis discusses the current residential development pipeline and the impacts those projects had on the process.

The Buildout Analysis forecasts market demand by land use type for the County on a ten- and 20-year horizon. The Buildout Analysis also includes land use buildout estimates by Development Area. The Buildout Analysis notes the total available acreage, total buildable acreage, known residential projects that are underway or proposed, as well as an estimated buildout based on a set of development assumptions that have been vetted by County staff and regional and local development experts.

2015 Albemarle County Comprehensive Plan Development Area Goals & Objectives

***Goal*:**

Albemarle's Development Areas will be vibrant active places with attractive neighborhoods, high quality, mixed-use areas, thriving business and industry, all supported by services, infrastructure, and multimodal transportation networks.

***Objective 4*:**

Use Development Area land efficiently to prevent premature expansion of the Development Areas.

***Strategy 4a*:**

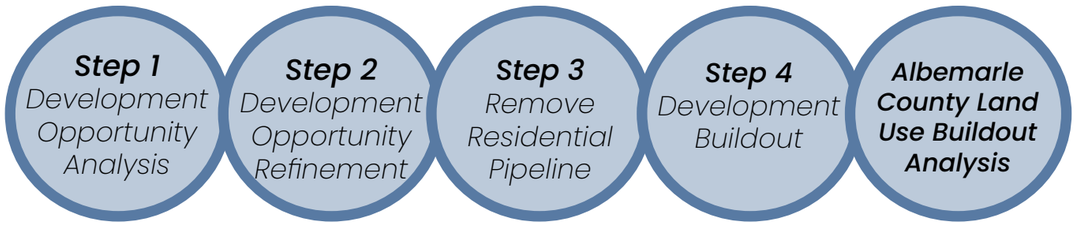
Continue to monitor building activity in both the Development Areas and the Rural Area to gain information on the rate of residential and non-residential development in the County.

***Strategy 4b*:**

Update the capacity analysis every two years to ensure adequate residential land exists to meet new housing needs.

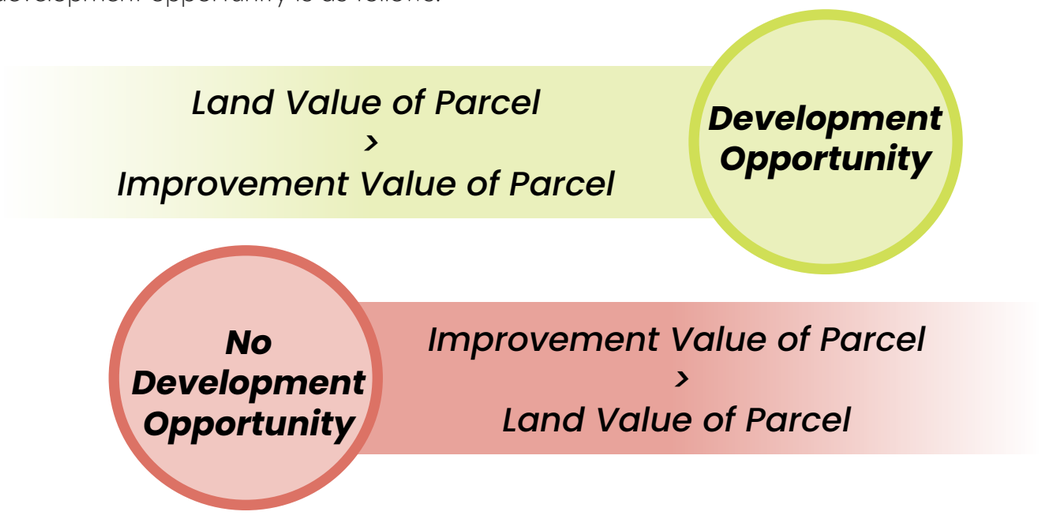
Chapter 2: Methodology

To determine the availability of developable land within the County's current Development Areas, the Buildout Analysis relied on a phased model that determined the development opportunity of each parcel in the Development Areas. The first step in the methodology was to run a high-level development opportunity analysis on all parcels in the County's Development Areas. From there, the inventory of parcels was refined with additional criteria based on their land use type and intended use to classify a parcel with opportunity to develop or not.



Step 1: Initial Development Opportunity Analysis

The opportunity analysis approach compares the current value of land to any existing improvements, such as built structures, for each parcel within the County's Development Areas. Parcels with "development opportunity" refer to parcels that have the potential to receive development or redevelopment within the next 20 years. In these instances, the value of the land is greater than the value of any existing improvements. Properties designated with "no development opportunity" have existing on-site improvements that are valued higher than the land itself. Therefore, the likelihood of development or redevelopment is low. The initial methodology to identify parcels with or without development opportunity is as follows:



Step 2: Development Opportunity Refinement by Land Use

After the team completed the initial opportunity analysis, the second step focused on properties' future land use designations as identified in the Comprehensive Plan and Master Plans. The team analyzed future land use designations and applied a methodology to each land use based on whether a property's primary land use is designated as residential, commercial, or industrial uses.

In the case that a parcel was designated with a different primary and secondary future land use type, the primary land use type was used. Land use types with multiple uses such as 'mixed-use' were evaluated using a tiered approach. These parcels were evaluated using the residential methodology first, and should the parcel be viable for residential development, the parcel was evaluated using commercial methodology for a final development designation. The methodology for each category is described below.

Residential Refinement Methodology

The refined residential land buildout calculation adjusted the properties with development opportunity based on acreage and provided an extra layer of exclusions for properties that are unlikely to be developed despite the improvement value being lower than the land value. These exclusions were largely focused on properties that were severely environmentally constrained or have an ownership structure that limited development in perpetuity.

Residential with Development Opportunity

- Land value > improvement value and parcel > or = 2 acres
- Vacant parcel

Residential without Development Opportunity

- Parcel is completely in Conservation Easement
- Parcel is completely in Floodplain
- Improvement value > land value
- Parcel is part of HOA open space
- County-owned and used for stormwater management, schools, road ROW, water/sewer utilities, public park, or other use that precludes residential development
- Owned by the University of Virginia

Commercial Refinement Methodology

Tax assessor valuation for commercial properties take into account building occupancy and retail sales, which created miscalculations in the first phase analysis. As such, the second phase specifically marked commercial properties of certain types as no development opportunity, including big box retailers, automotive-related uses, and mini-warehouse/storage facilities. These property types were excluded due to their low redevelopment rates in Albemarle County.

Commercial with Development Opportunity

- Land value > improvement value
- Parcel is designated commercial or mixed use in the Comp Plan and/or is zoned Highway Commercial (HC), Commercial Office (CO), Commercial (C1), Planned Development Shopping Center (PDSC), Planned Development Mixed Commercial (PDMC)

Commercial without Development Opportunity

- Improvement value > land value
- Big box stores (e.g. Walmart, Target, Lowe's, etc.)
- Auto stores/service/dealers
- Mini-warehouse or storage built after 2000

Industrial Refinement Methodology

Consistent with commercial properties, industrial parcels required additional refinement to the initial analysis due to methodology utilized in appraising properties for tax purposes. The second phase analysis incorporates base zoning designations that support industrial development, property size, and a reduction in the ratio between land value and improvement value as noted below.

Industrial with Development Opportunity

- Parcel is designated Office/Flex/R+D/LI in the Comp Plan and/or is zoned Light Industrial or Heavy Industrial or Planned Industrial (PDIP)
- Parcel is > or = 2 acres

Industrial without Development Opportunity

- Improvement Value is Greater or Equal to 40% of the Total Valuation
  - AND/OR Improvement Value is Greater or Equal to $1.5M

Step 3: Identify/Remove Known Residential Development Pipeline

Pipeline projects are projects currently under review, approved, or under construction in the County. Development pipelines were inventoried for residential and non-residential land uses; however, they are treated separately in this analysis. Pipeline projects in the 'under review' category ultimately may not be approved or may be approved at a different density or mix of uses than currently proposed.

As most of the residential projects are on vacant properties, the parcels were initially flagged as properties with development opportunity. To support an accurate residential buildout, the pipeline properties, updated in February 2022, have been removed as properties with development opportunity in the buildout analysis. The total yield from the proposed or approved development plans have been added into the final buildout numbers.

Non-residential projects represent total approved or under review square footage, regardless of land use type. The inability to distinguish between non-residential land use types is based on the County's application, review, and approval process. Since we do not have specific land uses by type in the future non-residential development pipeline, these properties and totals were not removed from the model.

Step 4: Theoretical Maximum Buildout

After netting out the known residential pipeline projects, a set of development assumptions were applied to the remaining parcels according to their future land use. The resulting development totals represent the estimated future buildout in the County's Development Areas, based on future land use designations.

Description of Future Land Use Categories

The future land use categories used to define the assumed buildout are described in the Albemarle County Comprehensive Plan including the Master Plans and Small Area Plans. Categories with similar intended uses were combined to streamline the analysis; categories with no developable land available were removed from consideration.

The following categories were used:

Albemarle County Future Land Use Categories
Neighborhood Density Residential Low
Neighborhood Density Residential
Middle Density Residential
Neighborhood Mixed Use
Urban Density Residential
Community Mixed Use
Downtown (Crozet)
Regional Mixed Use
Office / Research & Development / Flex / Light Industrial or Employment Mixed Use, or Mixed Office R & D / Flex and Commercial
Industrial, Light Industrial, Heavy Industrial
Institutional
Public Open Space, Parks and Green Systems, Potential Public Park
Privately Owned Open Space; Environmental Features
Urban Mixed Use (in Centers)
Urban Mixed Use (in areas around Centers)
Commercial Mixed Use
Small Area Plan (Rio29)
Rural Area

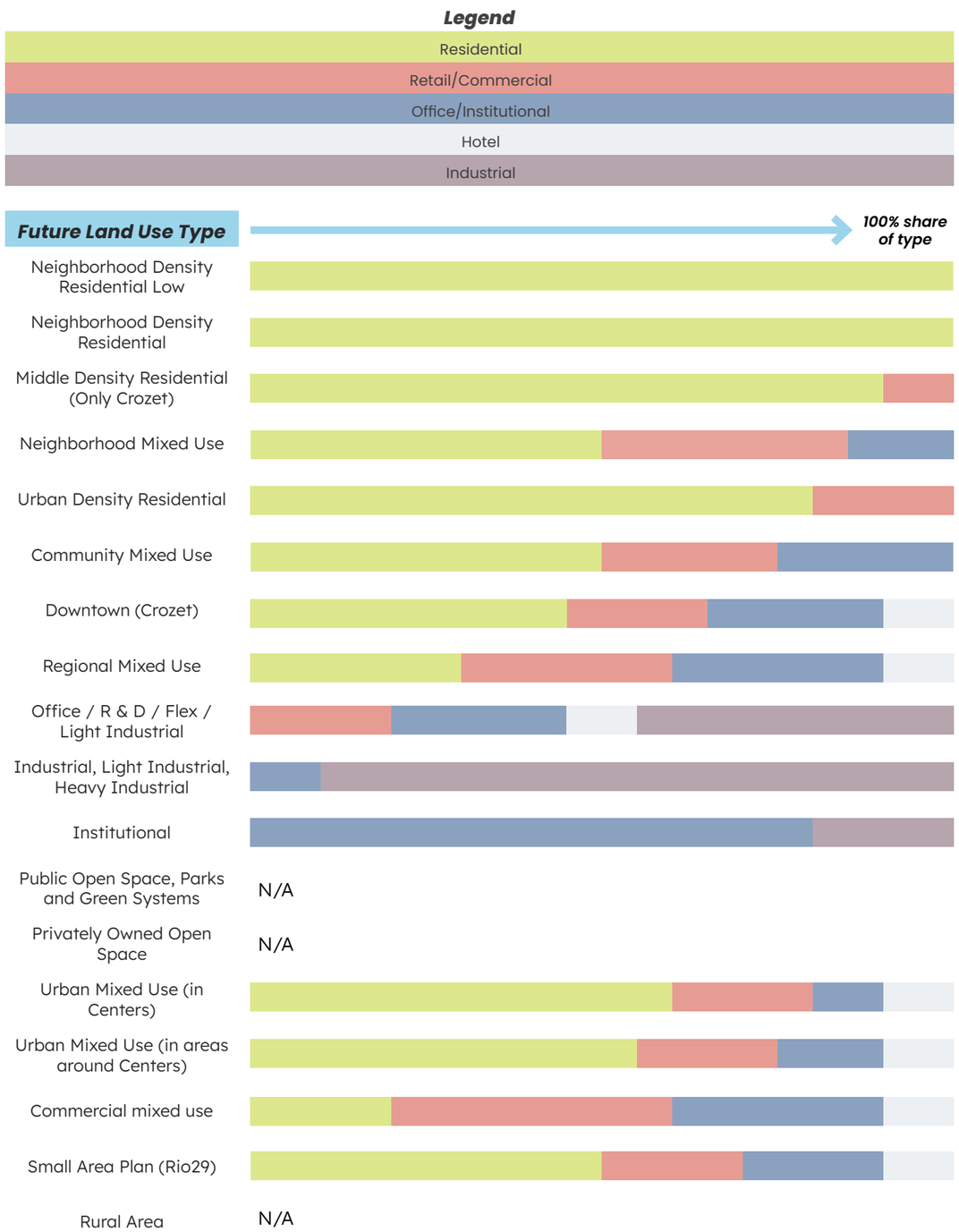
Buildout Assumptions by Future Land Use Category

After determining the amount of developable land in each land use type, the County buildout was determined through density and intensity assumptions for residential units, retail and commercial square foot per acre, office and institutional square foot per acre, hotel rooms per acre, and industrial square foot per acre. Each of these categories received inputs guided by the Albemarle County Comprehensive Plan. The graphic on page 10 summarizes the land use mix buildout assumptions utilized for each and use type. The complete assumption table is in Appendix A.

Before applying the assumptions to the developable land, between 10-20% of each parcel's acreage was removed to account for infrastructure and environmental needs, such as roads, parking, and stormwater management. Similarly, between 10-20% of the acreage was also taken off for open space (both required open space and designated environmental features) and to account for parcels that have split designations with Parks/Green Systems (or equivalent) as a secondary land use designation. These assumptions were designed to create a conservative, but realistic, approach to determining how much land can be developed without encroaching on designated open space and environmental features (including stream buffers, floodplain, and steep slopes). The table on Page 11 denotes the percentage decrease for infrastructure, environmental impacts, and open space by land use category. It should be noted that a standard, medium, and high scale was used for open space decrease to account for Development Areas with greater environmental impacts.

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Buildout Assumptions by Future Land Use Category



Albemarle Land Use Buildout

Buildout Decreases for Environmental (ENV) and Infrastructure (INF) Impacts

Future Land Use Type	% Decrease for INF & ENV	% Decrease for Open Space STANDARD	% Decrease for Open Space MEDIUM	% Decrease for Open Space HIGH
Neighborhood Density Residential Low	5%	10%	15%	20%
Neighborhood Density Residential	5%	10%	15%	20%
Neighborhood Mixed Use	10%	10%	15%	20%
Urban Density Residential	20%	10%	15%	20%
Community Mixed Use	20%	20%	25%	30%
Downtown (Crozet)	20%	10%	15%	20%
Regional Mixed Use	15%	10%	15%	20%
Office / R & D / Flex / Light Industrial	15%	10%	15%	20%
Industrial, Light Industrial, Heavy Industrial	10%	10%	15%	20%
Institutional	10%	65%	70%	75%
Urban Mixed Use (in Centers)	20%	10%	10%	10%
Urban Mixed Use (in areas around Centers)	20%	10%	10%	10%
Commercial Mixed Use	20%	10%	15%	20%
Small Area Plan (Rio29)	20%	10%	15%	20%
Middle Density Residential (Only Crozet)	10%	10%	15%	20%

Development Area Open Space Designation		
Standard	Medium	High
Neighborhood 1	Neighborhood 3	Neighborhood 4
Neighborhood 2	Hollymead	Neighborhood 5
Neighborhood 7	Crozet	Neighborhood 6
Piney Mountain		Village of Rivanna

Description of Existing Zoning Districts

Albemarle County's Zoning Ordinance defines each of the 21 zoning districts. Each parcel in the County is zoned as one of these districts. Developable acreage totals were estimated by zoning district after the Land Use Buildout Analysis was completed. See below for a full list of the zoning districts. It should be noted that the Village Residential, Monticello Historic District, and Rural Areas districts are only located in the Rural Areas.

Albemarle County Existing Zoning Districts
R1 Residential
R2 Residential
R4 Residential
R6 Residential
R10 Residential
R15 Residential
Planned Unit Development
Planned Residential Development
Neighborhood Model District
Village Residential
C1 Commercial
CO Commercial Office
Highway Commercial
Planned Development Shopping Center
Planned Development Mixed Commercial
Downtown Crozet District
Light Industry
Heavy Industry
Planned Development Industrial Park
Monticello Historical District
Rural Areas

Chapter 3: What is the Development Pipeline

Defining Development Pipeline

The "Development Pipeline" is a term for a project's progression through Albemarle County Community Development's permitting process. Pipeline projects are those that are under various stages of review (whether for a rezoning, site plan, or building permit), or projects that have all approvals completed, but are not yet built. County staff provided a list of the residential pipeline projects for this analysis, updated as of February 2022. Residential pipeline projects (including any residential units within mixed-use developments) make up most of all projects submitted for approval. Inventories of both residential and non-residential pipeline projects are presented in this Chapter.

Site plan approvals are typically valid for a short period after approval to ensure that the plans submitted are consistent with the most recent regulations, although this period can be extended by other entities including the General Assembly. "Legislative Review" applications, also known as rezonings and special use permits, typically feature more uncertainty in timing due to the longer review process, which introduces additional risk and uncertainty for developers regarding financing and market conditions. These projects often ask for more units than will be built, and sometimes can wait for years or decades before beginning construction. For example, several large rezonings approved in the early 2000s have developed later (or less) than expected due to the "Great Recession" of 2007-2009. Another example is Old Trail Village development in Crozet, which was initially approved in 2005 for a total of 2,200 units. As the development is completed, it is expected to deliver closer to 1,200 total units.

Approved and Under Review Residential Development Projects

As of February 2022, an estimated 9,377 unbuilt units were in the approved development pipeline, with about 43% of these units located within the Community of Hollymead in large planned developments such as Hollymead Town Center, North Pointe, and Brookhill. Given that it is a common occurrence for larger rezonings in the pipeline to not utilize all the original approved capacity, the pipeline figure included likely overestimates the actual final buildout. However, since final buildout of these projects is not able to be predicted, no adjustments have been made to the estimated 9,377 unbuilt units.

An estimated additional 5,504 units were identified as "under review" within the pipeline projects as of February 2022. These include legislative review applications (rezonings and special use permits) and by-right applications (for projects permitted under the property's existing zoning district). Approximately 4,612 of these units are part of legislative review applications, and the remaining 892 are part of by-right applications. The 4,612-unit estimate could change as the legislative review projects work their way through the review process before potential final approval. Since the County must approve any by-right developments that meet all applicable regulations, the by-right units are unlikely to change significantly.

Summary of Approved Development Pipeline, 2022

Development Area	Max Units Approved	Units Built	Remaining Unbuilt Units
Neighborhood 1	1,186	299	887
Neighborhood 2	901	647	254
Neighborhood 3	389	88	301
Neighborhood 4	431	260	171
Neighborhood 5	817	117	700
Neighborhood 6	0	0	0
Neighborhood 7	197	142	55
Crozet	2,875	1,083	1,791
Hollymead	5,114	464	4,650
Piney Mountain	781	622	159
Village of Rivanna	633	224	409
Total	**13,324**	**3,947**	**9,377**

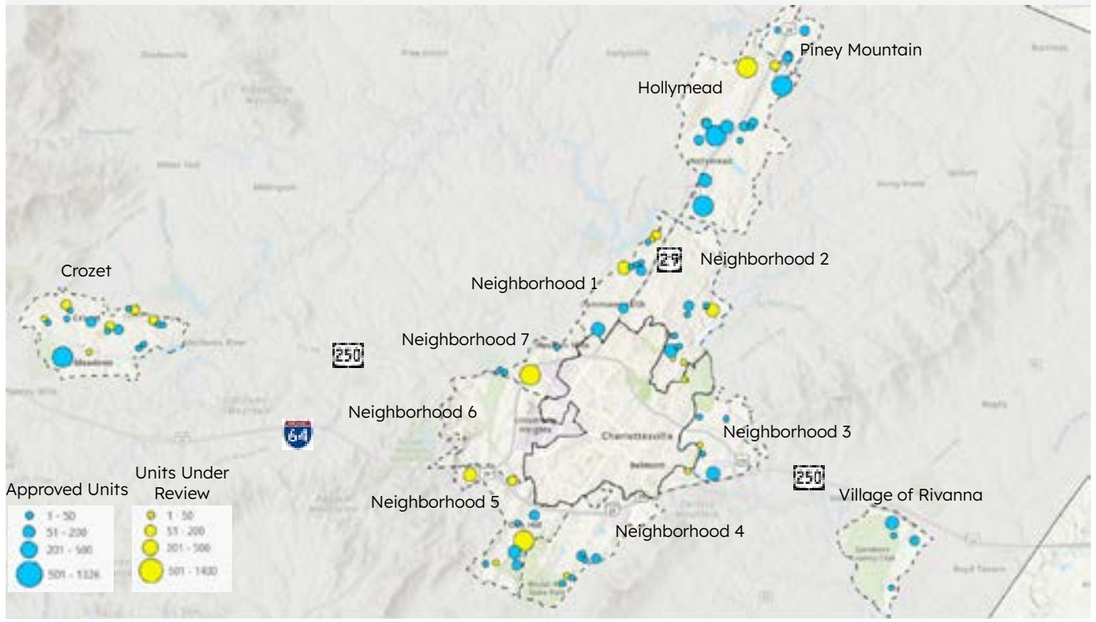
Source: Albemarle County, February 2022

Summary of Under Review Development Pipeline, 2022

Development Area	Max Units Under Review
Neighborhood 1	360
Neighborhood 2	707
Neighborhood 3	40
Neighborhood 4	98
Neighborhood 5	1,548
Neighborhood 6	0
Neighborhood 7	525
Crozet	526
Hollymead	1,700
Piney Mountain	0
Village of Rivanna	0
Total	**5,504**

Source: Albemarle County, February 2022

The following map shows development pipeline projects that are approved (shown in **blue**) and under-review (shown in **yellow**). It should be noted that the entire neighborhood boundaries are used for each development, even though the remaining units in the pipeline may take up only a small section of the overall neighborhood. For example, the full boundaries of Avinity are shown, even though only an estimated 14 units remain in the pipeline. As shown on the following table, there are a combined 14,881 units that have either been approved or are under review that could be developed in the future. Hollymead contains 42.6% of the total buildable units in the pipeline, followed by Crozet (15.6%) and Neighborhood 5 (15.1%).



Pipeline Project Locations within Albemarle County

Summary of Approved & Under Review Development Pipeline, 2022

Development Area	Remaining Approved Units	Max Units Under Review	Total Buildable Units	Share of Total
Neighborhood 1	887	360	1,247	8.4%
Neighborhood 2	254	707	961	6.5%
Neighborhood 3	301	40	341	2.4%
Neighborhood 4	171	98	269	1.8%
Neighborhood 5	700	1,548	2,248	15.1%
Neighborhood 6	0	0	0	0.0%
Neighborhood 7	55	525	580	3.9%
Crozet	1,791	526	2,317	15.6%
Hollymead	4,650	1,700	6,350	42.6%
Piney Mountain	159	0	159	1.1%
Village of Rivanna	409	0	409	2.7%
Total	**9,377**	**5,504**	**14,881**	**100.0%**

Approved and under review residential pipeline projects by Development Area, detailed by individual project, are presented in the Appendix of this report. These estimates were current as of February 2022. Since that time, projects in the under-review pipeline may have been approved, new projects may have been submitted that are now under review, and additional units may have been built for the approved pipeline projects.

Approved and Under Review Non-Residential Development Projects

The non-residential pipeline is an estimate (based on County records and data) of the total square footage of non-residential uses that are currently under review or approved. The non-residential pipeline in this analysis differs from residential pipeline because non-residential land uses are not differentiated in the pipeline between land use (retail, office, industrial, hospitality, etc.). This is because in many cases the distinction is not clearly made through the entitlement process and, in some cases, projects do not specify a maximum approved square footage. As such, the non-residential pipeline was not able to be accurately incorporated into the land use buildout analysis because approved projects do not specify what types of uses will be built. At the time of this analysis, the non-residential pipeline projects have not been mapped. This effort is underway and can be incorporated into this analysis at a subsequent update.

There is an estimated more than 8.1 million square feet of non-residential space approved and unbuilt in the pipeline. There is an additional 668,041 square feet currently under review. More than 5.0 million square feet, or 62.1 percent, of the remaining approved and unbuilt non-residential space is located in the Hollymead Development Area, which includes the North Fork, a UVA Discovery Park. North Fork is the largest non-residential site in the approved pipeline currently with more than 3.0 million square feet remaining to be built.

Development Area	Square Feet Under Review	Square Feet Approved	Square Feet Built	Remaining Approved Unbuilt Square Feet
Neighborhood 1	11,180	1,904,600	573,473	1,331,127
Neighborhood 2	6,049	117,150	54,614	62,536
Neighborhood 3	1,500	1,106,323	760,825	345,498
Neighborhood 4	89,212	550,600	453,663	96,937
Neighborhood 5	435,000	451,000	0	451,000
Neighborhood 6	11,600	434,722	0	434,722
Neighborhood 7	0	28,930	0	28,930
Crozet	113,500	306,500	104,843	185,657
Hollymead	0	6,297,432	1,246,001	5,051,431
Piney Mountain	0	178,800	90,576	88,224
Village of Rivanna	0	60,000	0	60,000
Total	**668,041**	**11,436,057**	**3,283,995**	**8,136,062**

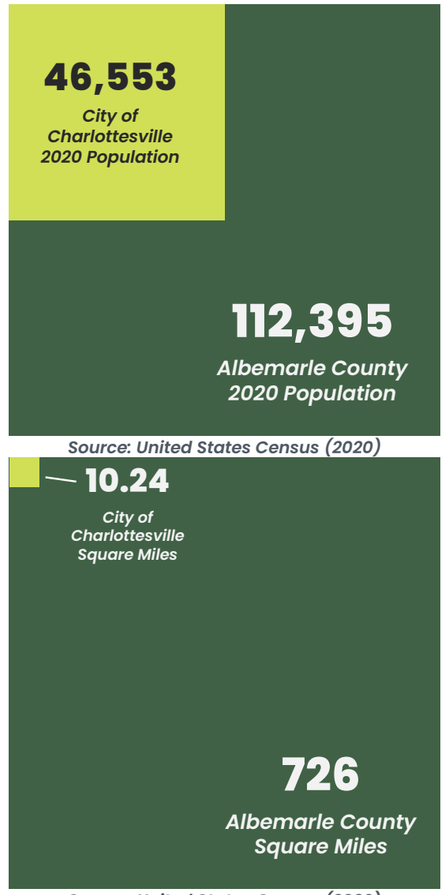
The County conducted a similar review of the non-residential pipeline in 2013, which can be found in the 2015 Comprehensive Plan References. The total pipeline of non-residential square footage calculated for this report was very similar to the calculation completed in 2013. The 2013 analysis did not include the full square footage approved for North Fork, otherwise the totals would have been nearly identical for approved and unbuilt non-residential square footage. The similarity between the figures in 2013 and 2022 suggests some level of consistency year over year between the total approved square footage and the amount of square footage remaining to be built.

Many of the non-residential projects are planned developments (e.g. Neighborhood Model District and Planned Shopping Center) that allow a variety of types of uses. These projects often take years to build out, if they ever completely build out. While many projects allow light industrial/flex uses per their approved rezonings, their sites may not prove to be suitable for industrial users (due to constraining factors that are described in Chapter 7), and they may be more likely to instead develop with other types of uses.

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Chapter 4: Looking to the Future—Population and Market Projections

This section provides an estimated market demand forecast for 20-years of growth in Albemarle County. The market demand forecasts provide an estimated number of residential units, retail, office, and industrial square feet, and the number of hotel rooms expected to be built in Albemarle County over the next 20 years. The demand forecasts are estimates that are based on projected population growth combined with the historic pace of growth over the last decade in the County. While these forecasts are based on historic growth patterns and projected growth and demand, they are predicated on the assumption that conditions present in the past will continue. These forecasts do not consider potential growth limitations like the availability of land, the cost of development, or environmental constraints. The purpose of this section is to provide a high-level guide to estimate the need for housing and non-residential development to support the projected population growth over a 20-year horizon. We will consider how this compares to the potential buildout of the Development Areas.



Population Trends and Projections

As of 2020, Albemarle County had an estimated 112,395 residents, an increase of 13,425 people, or 13.6%, from 2010. The City of Charlottesville reached 46,553 residents in 2020, an increase of 3,078 people or 7.1% over the last decade. The Town of Scottsville is included in the total population for Albemarle County as part of the US Census, however, Scottsville is an independent town that governs its own land use and zoning. Population growth varied in surrounding localities during the same period. Growth rates were strongest north and east of Albemarle County where Greene County grew by 11.7%, Louisa County increased by 13.4%, and Orange County increased by 8.3%. Counties to the south and west of Albemarle County experienced slower growth rates, including Buckingham County with a 1.9% decrease since 2010 and Nelson County which lost 1.6% of the population.

Combined, the Development Areas and the Town of Scottsville had a total estimated population of 64,682 people in 2020. Although the Development Areas account for approximately 5% of the total land mass in Albemarle County, they contain 57.5% of the population. The estimated population for the Rural Area is 47,713 people.

Median Age of Residents

The residents of Albemarle County have a median age of 39.4 years. This is younger than many of the surrounding counties due to the influence of the University of Virginia (UVA). As a point of comparison, Louisa County has a median age of 44.8 years and Orange County's median is 42.0 years. More than 32.0% of the residents in Albemarle County are under the age of 24. However, while the median age is lower than other nearby counties, it has increased since 2010's measure of 37.6. The share of residents aged 65 and over increased from 13.7% to 18.6%.

Households and Income

The average household size in Albemarle County was 2.42 people based on 2020 American Community Survey (ACS) data. Based on this size, the County had approximately 46,444 households as of the 2020 US Census. The median household income was estimated at $79,880 in Albemarle County, notably higher than most surrounding counties (Orange County's was $71,548 and Louisa County's was $60,975). The City of Charlottesville had a notably lower median of $59,471, which is directly influenced by the student body at UVA.

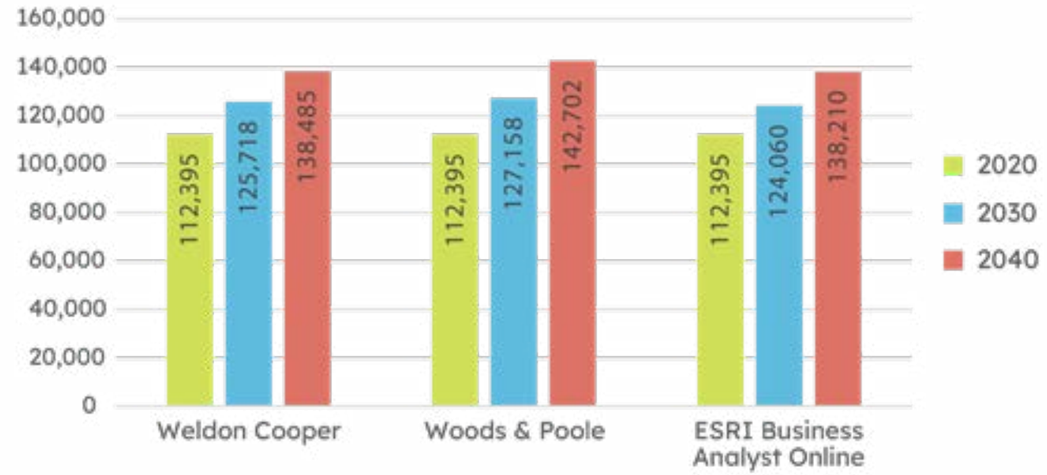
Population Projections

Population projections for Albemarle County are based on three third-party socioeconomic data sources, as follows:

- **Weldon Cooper Center for Public Service.** The Weldon Cooper Center for Public Service is part of the University of Virginia's Center for Public Service. The Center provides a variety of services, including research and analytics, government training, and leadership development programs. Efforts under the research and analytics department include demographic estimates and forecasting for counties and cities in Virginia. The Demographics Research Group provides the official annual population estimates for Virginia and its localities. Weldon Cooper's most recent updates were released in 2021, incorporating demographic changes since the 2020 Census.
- **Woods & Poole Economics, Inc.** Woods & Poole is a private entity that produces annual projections for every county in the United States. The methodology is top-down, leveraging forecasts for the entirety of the United States to inform growth in regions, then in counties. Data is provided between the years 1970 and 2040 in one-year increments. Woods & Poole updates their data on an annual basis but has yet to comprehensively incorporate the results of the 2020 US Census.
- **ESRI Business Analyst Online.** ESRI's Business Analyst platform provides socioeconomic trends and forecasts for standard and customized geographies across the world. Forecast guidance is provided for five-year increments. The most recently released data sets from ESRI incorporate ACS data but, like Woods & Poole, have not yet fully incorporated the findings of the 2020 US Census.

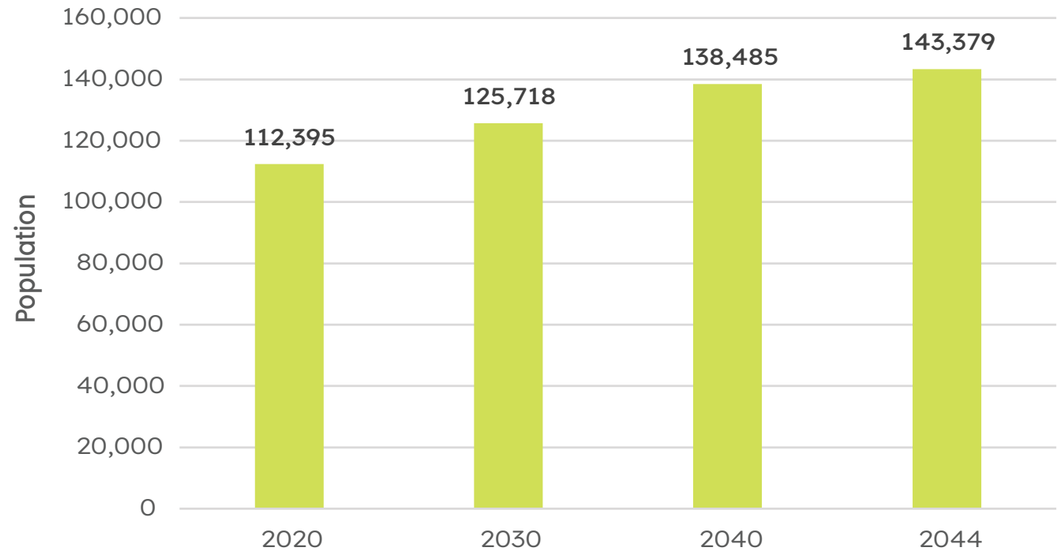
The three sources have comparable forecast totals over the next 20 years. Net new population growth ranges from 25,815 residents over the 20-year period (ESRI Business Analyst Online) to 30,307 new residents by Woods & Poole. The Weldon Cooper Center for Public Service forecast results in the addition of over 26,000 new residents in Albemarle County over 20 years.

Albemarle County Population 20-Year Forecasts, 2020-2040



Source: Weldon Cooper Center for Public Service (2021), Woods & Poole (2018), ESRI Business Analyst Online (2021)

Extrapolation of Albemarle County 20-Year Population Forecasts, 2020-2044



Source: Weldon Cooper Center for Public Service (2021); Kimley-Horn

The AC44 Comprehensive Plan will use a 20-year planning horizon, ending in the year 2044. Based on the Weldon Cooper forecasts for Albemarle County, the population could reach more than 143,000 in the timeframe of the plan. The 2044 population projections are based on extrapolations of data points provided by the Weldon Cooper Center between 2030 and 2040.

Demand Forecasts by Real Estate Sector

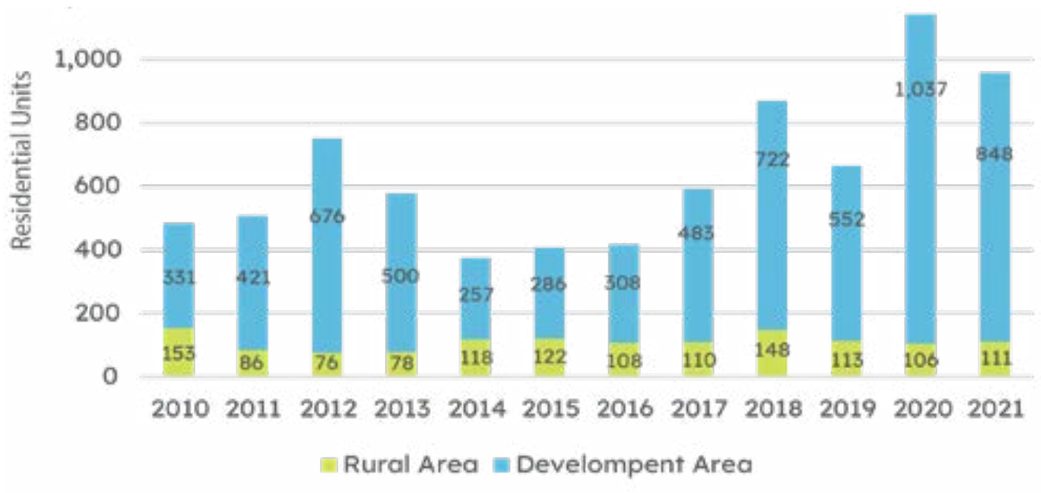
Residential

Estimating demand for residential units is typically tied to population growth. This analysis also considers historic development trends related to the addition of new units in Albemarle County. Trends demonstrating the addition of new units since 2010 are based on Certificate of Occupancy (CO) data.

Nationally, housing has been one of the strongest performing real estate sectors following recovery from the 2007-2009 Great Recession. Demand for all types of housing has generally eclipsed supply, resulting in low inventories and increasing sales prices. While the full impact of COVID-19 remains to be seen, it is likely that the pandemic has influenced residential development in the near-, and likely, long-term.

In the last decade, an average of nearly 650 new residential units were completed each year in Albemarle County. The completion of new units was lowest in 2014, with only 408 units built and highest in 2020, exceeding 1,100 units. About 82.8% of new residential units were built in the Development Areas and 17.2% were built in the Rural Area.

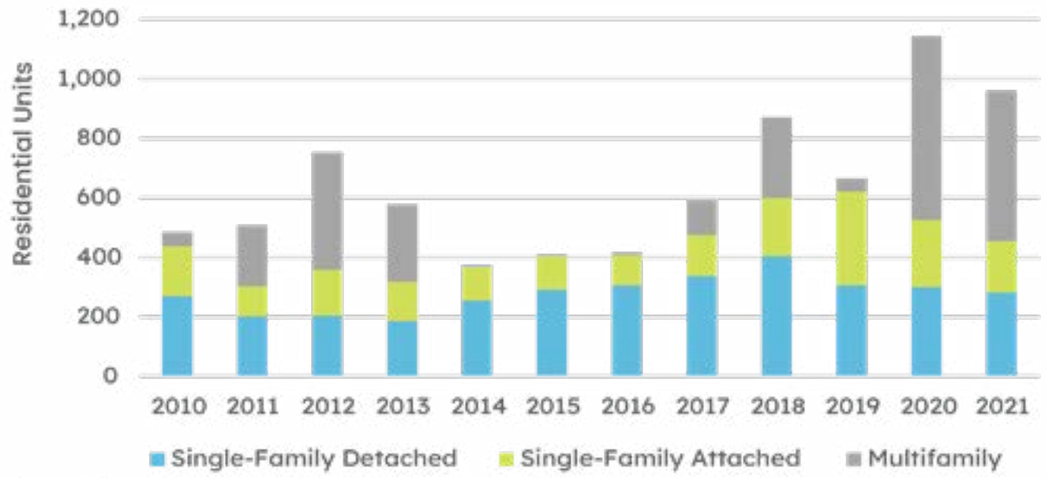
New Residential Units Completed by Development Area and Rural Area, 2010-2021



Source: Albemarle County Certificate of Occupancy Data (2022)

Since 2010, 43.2% of the new units completed in Albemarle County have been single-family detached, including mobile homes. Attached units, including single-family attached, townhouses, duplexes, and condominiums, account for 24.9% of the new units since 2010, and the remaining 31.9% have been multifamily or accessory apartments. The share of multifamily units was highest in the most recent two years.

New Residential Units Completed by Type, 2010-2021



Source: Albemarle County Certificate of Occupancy Data (2022)

For-Sale Residential Sales

The Charlottesville Area Association of Realtors (CAAR) releases a quarterly Home Sales Report for the Charlottesville area, including the City of Charlottesville and Albemarle, Fluvanna, Greene, Louisa, and Nelson counties. In the last five years, annual home sales across the region have increased from 983 in 2017 to 1,228 in 2021, a 24.9% increase. In 2021, the sales activity in Albemarle County comprised over 40% of the CAAR region total. Sales of new construction houses across the region have remained relatively consistent year over year, ranging from 180 to 230 sales of new units per year.

Residential Sales, 2017-2021



Source: CAAR Charlottesville Area Home Sales Report (2022), Virginia REALTORS (2022)

Home sales declined between 2020 and 2021 by 5% across the CAAR region. The slowing of sales activity across the region is likely influenced by rising home prices and limited available inventory. In Albemarle County, home sales declined by 1%, over the last year, from 509 in 2020 to 505 in 2021. Available housing units in the County remained on the market for 29 days in fourth-quarter 2021, compared to 57 days in 2020. The region wide available inventory declined from an average of 4.1 months of supply in 2017 to only one month of supply in 2021. Sales data is presented in this section because it provides additional information on supply and demand momentum in the residential market in Albemarle County beyond the understanding of what new units have been constructed each year.

Residential Vacancy Rates

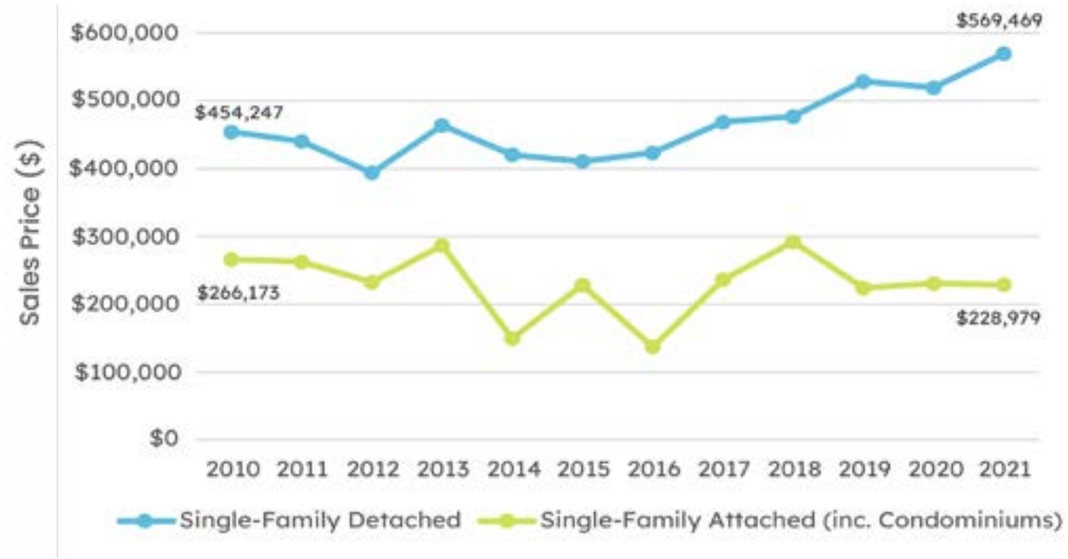
According to the American Community Survey, Albemarle County had an estimated 46,325 residential units with an aggregate vacancy rate of 8.3%. This vacancy rate represents the average across all housing units in the County. However, housing vacancy is not consistent across all types of units. Traditional owner-occupied housing has notably lower vacancy rates than rental units. Homeowner vacancy rates in Albemarle County were estimated at 0.4% as of the 2020 data release, marking one of the lowest measures in recent years. Homeowner vacancy rates have been in decline but have historically averaged around 1.0%.

Vacancy rates for rental multifamily units in Albemarle County have consistently remained between 3.0% and 6.0%, a range that indicates market health where there are units available to support inter- and intra-market moves. Rental units had a 2020 vacancy rate of 4.5% based on US Census data.

Residential Price Points

The following graphic demonstrates the average sales price for single-family detached and single-family attached units (including townhouses, attached single-family units, and condominiums) between 2010 and 2021. Data is based on listed sales in Albemarle County as tracked by the Tax Assessors office and only includes transactions that have a price listed. Between 2010 and 2021, the average sales price for single-family detached units increased from $454,247 to nearly $570,000, representing a 25.4% increase over 11 years. Based on the same dataset, attached for-sale residential units experienced a modest decline in average sales price over the same period.

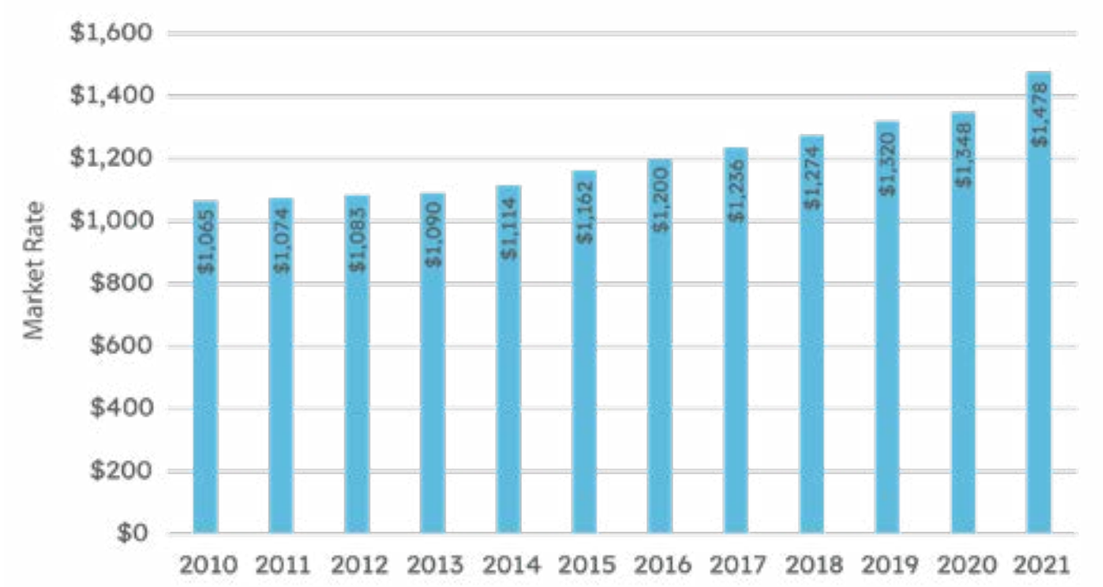
For-Sale Residential Average Sales Prices, 2010-2021



Source: Albemarle County Tax Card Level Data (2022)

Average monthly rents increased by 38.8% in Albemarle County, from $1,065 per month in 2010 to $1,487 per month in 2021. Annual increases were more modest between 2010 and 2014, ranging from 0.6% to 0.9% per year. Since 2014, the average annual increase in monthly rents in Albemarle County was nearly 4.0%.

Multifamily Residential Average Monthly Market Rent, 2010-2021



Source: CoStar (2022)

Residential Unit Demand Forecast

Forecasted demand for residential units considers both the forecasted population increase in Albemarle County and the 10-year development trend for new residential units. Based on the population forecasts previously presented, Albemarle County could add between 25,800 and 30,300 new residents over the next 20 years. Based on an average household size of 2.42 people (US Census 5-Year ACS 2020 estimate) and an average housing vacancy rate of 8.3% the County could generate demand for 11,500 to 13,500 new housing units through 2040. A low- and high-range is provided for both ten-year and 20-year planning horizons.

10- and 20-Year Albemarle County Residential Demand Forecasts

2010-2021 Annual Residential Completions	10-Year Demand Forecast (Units)		20-Year Demand Forecast (Units)	
	Low	High	Low	High
646	6,000	7,500	11,500	13,500

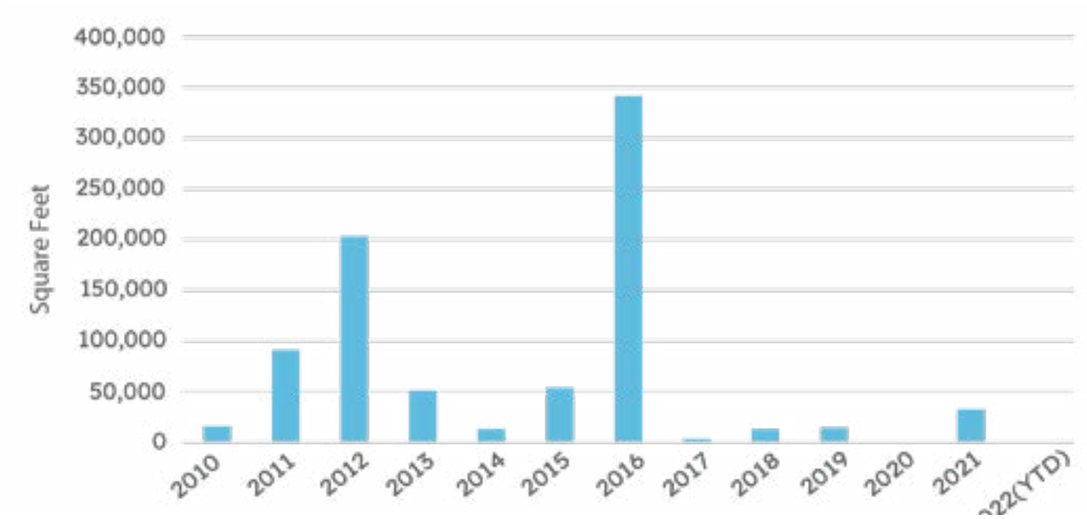
Retail

Retail has been one of the most impacted industries during the COVID-19 pandemic. Many retail businesses and restaurants were required to close in many states across the country to support social distancing, and many also had to initially reopen with very limited capacity. Local, or independent, retailers have been hit particularly hard, with many having to permanently close as consumer spending and store traffic plummeted. It should be noted that some retailers, primarily grocery, pharmacy, and building supply stores that offer essential services, have fared well during this time.

COVID-19 amplified trends that were already impacting retail, particularly as it relates to the influence of online shopping. Online shopping has increased rapidly since the beginning of March 2020. As local economies reopen, brick and mortar sales experienced some rebound, demonstrated in retail national receipt indexes. However, online retailers have been positioning to sustain their increased market capture. Locations that offer experiential retail options in a mixed-use environment were well positioned to attract initial momentum during recovery from the COVID-19 pandemic.

The retail analysis incorporates a wide range of retail types, including automotive uses, general retail like convenience stores, shopping centers, and big-box retailers, supermarkets, and dining and restaurant establishments. The graph below demonstrates annual totals for new retail square footage in the last decade. Retail construction was strongest in the first half of the decade, with new projects dropping off significantly in the last five years. The strongest year of retail completions was in 2016 when the Wegman's grocery-anchored 5th Street Station shopping center was completed. Since 2010, annual retail completions in Albemarle County averaged approximately 70,000 square feet, ranging from almost no new space completed in 2020 to nearly 350,000 square feet of new space in 2016.

Albemarle County Retail Completion Trends, 2010-2022

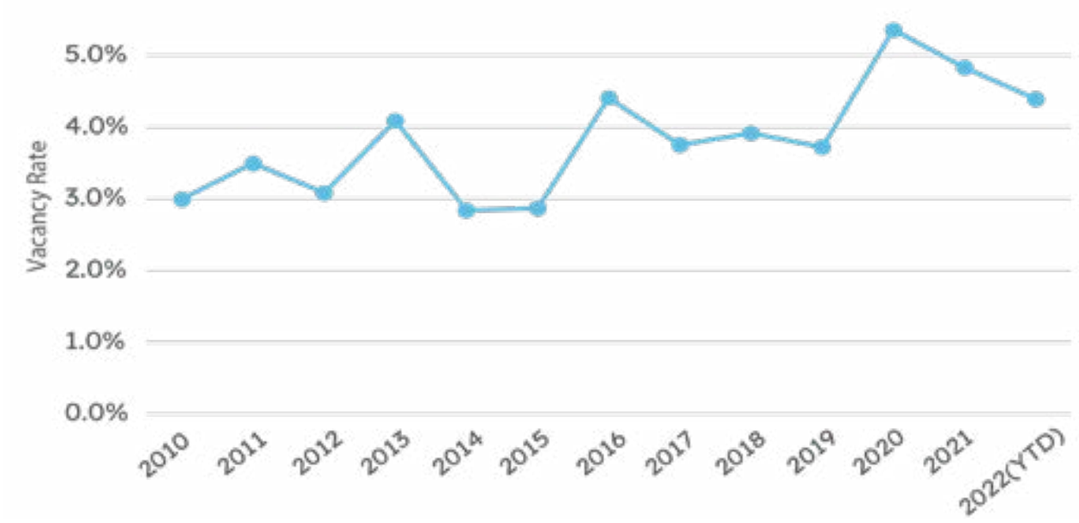


Source: Albemarle County Tax Card Level Data (2022)

Retail Vacancy Rates

Retail vacancy rates in Albemarle County have traditionally ranged from 3.0% to 4.5%. This measure includes both multi-tenant shopping center space and free-standing retailers that are often owner occupied. Shopping centers in the County have a comparably higher historical vacancy rate, exceeding 10%. Retail vacancy in the County increased during the COVID-19 pandemic, a result of store closures. Vacancy has improved since the 2020-peak but is still elevated from typical historic trends.

Albemarle County Retail Vacancy Rate Trends, 2010-2022

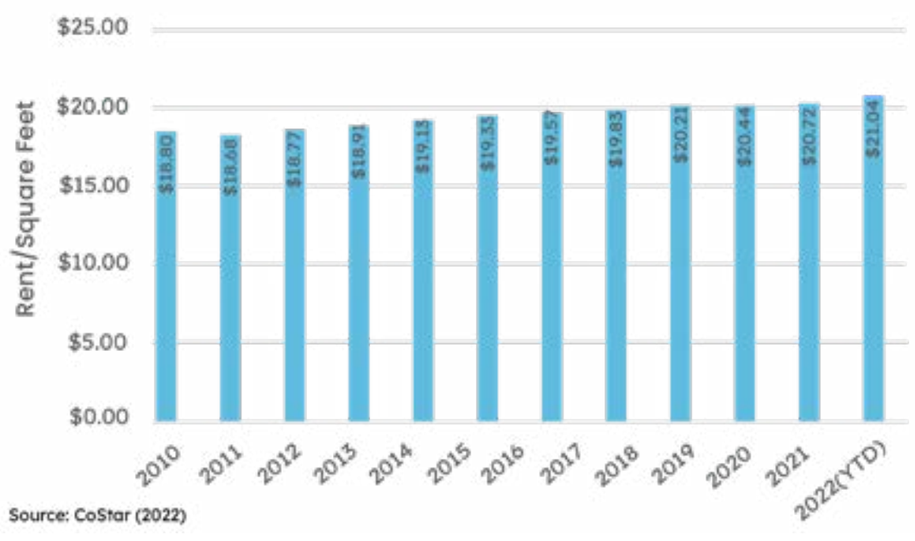


Source: CoStar (2022)

Retail Lease Rates

The average retail in Albemarle County at year-end 2021 was $21.04 per square foot, a 11.9% increase from $18.80 per square foot in 2010. Since 2010 the average annual retail rent increase was 1.0%.

Albemarle County Retail Rent Trends, 2010-2022



Source: CoStar (2022)

Retail Demand Forecast

The retail demand forecast for Albemarle County considers increases in population to estimate future spending potential through 2040. The methodology for determining future retail demand in the County is based on a combination of population growth and recent annual development that provides guidance for how much retail could be supported.

Ten-year retail demand is forecasted to be between 550,000 and 700,000 square feet, and 20-year demand could exceed 1.3 million. These totals consider the shift towards online shopping, but with an acknowledgment that there will be a continued place in the market for brick-and-mortar stores. It also considers the potential for redevelopment of under-performing retail centers that would reduce the overall inventory in Albemarle County and free up demand for newer, modern space. Retail completions have slowed by 5.0% to 8.0% in the last five years compared to previous totals. This decrease was considered, particularly in the short-term, for forecasting future demand.

10- and 20-Year Albemarle County Retail Demand Forecasts

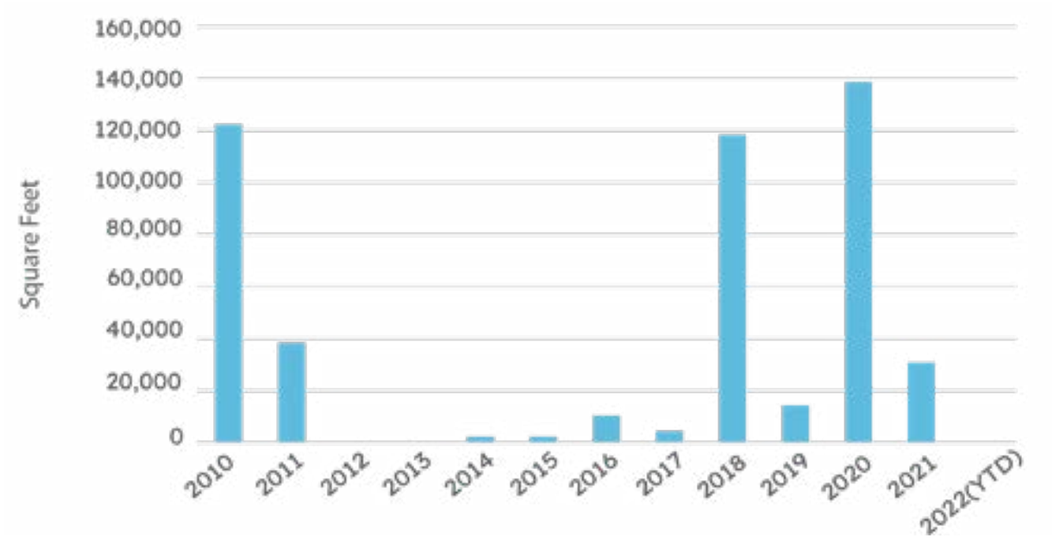
2010-2021 Annual Retail Completions (Sq. Ft.)	***10-Year Demand Forecast (Sq. Ft.)***		***20-Year Demand Forecast (Sq. Ft.)***	
	Low	***High***	***Low***	***High***
69,444	550,000	700,000	1,000,000	1,300,000

Office

The utilization of office space is currently experiencing a notable shift. As the COVID-19 pandemic began, many companies moved to remote work to mitigate the spread of the virus. For those companies that were able, allowing employees to work from home provided maximum flexibility to respond to the pandemic. According to an analysis by Pew Research Center (COVID-19 Pandemic Continues to Reshape Work in America, February 2022), remote work continues to influence office activity with approximately 59% of workers with jobs that can be done remotely electing to stay at home as of January 2022. It is possible that many companies will not stay fully remote in the long-term, however hybrid work options are likely to influence the amount and configuration of space that businesses need.

Since 2010, an average of 40,000 square feet of office space has been completed per year in Albemarle County. This ranges significantly from year to year, with some years having no new office space and some years with more than 100,000 square feet added. The additions in 2020 are related to two office buildings. The largest of the two is within UVA at North Fork (formerly known as the University of Virginia (UVA) Research Park).

Albemarle County Office Completion Trends, 2010-2022

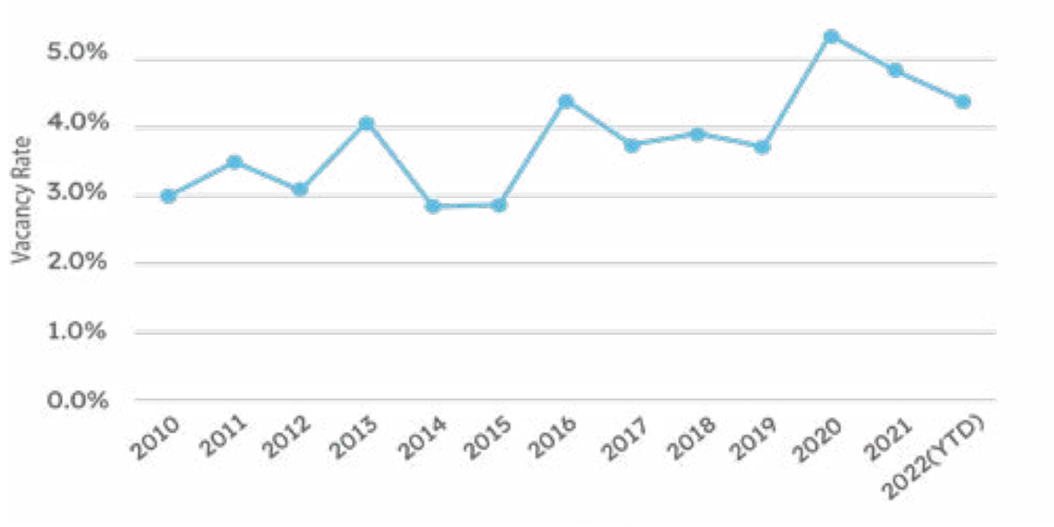


Source: Albemarle County Tax Card Level Data (2022)

Office Vacancy Rates

Office vacancy in Albemarle County has fluctuated since 2010, impacted by several years that more space was vacated than leased, driving vacancy up. This trend was most notable between 2011 and 2012, when the vacancy rates increased to 9.8%. Limited new construction and modest, but positive, net absorption resulted in a steadily decline in vacancy until the onset of the COVID-19 pandemic. A large tenant moving out at the State Farm Regional Office has elevated the overall vacancy rate in the County to a peak of more than 12.0%.

Albemarle County Office Vacancy Rate Trends, 2010-2022

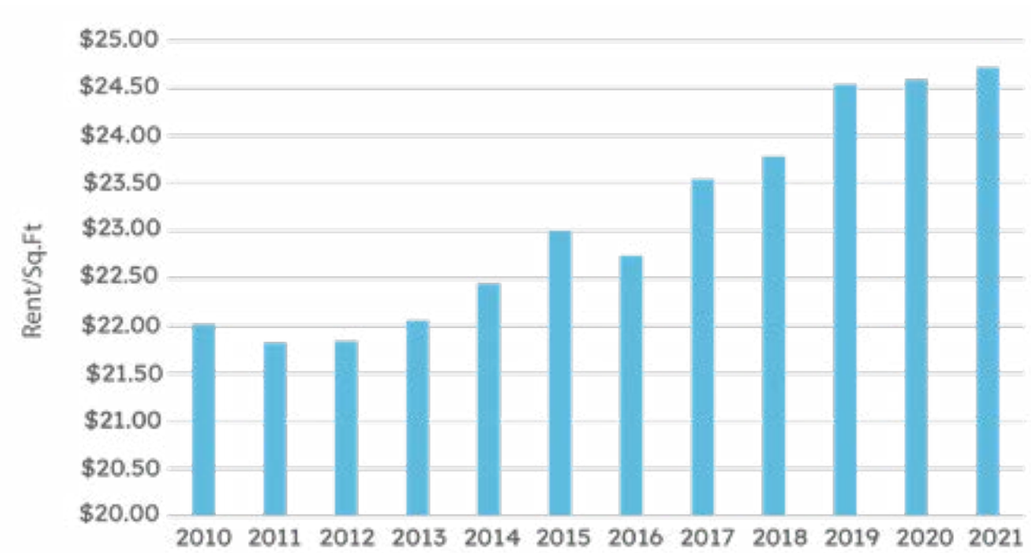


Source: CoStar (2022)

Office Rental Rates

Office lease rates in Albemarle County increased from $22.02 per square foot in 2010 to nearly $25.00 per square foot at year-end 2021. Average annual increases were 1.1% for the County, but rent growth slowed in the last two years with an increase of only 0.3% per year.

Albemarle County Office Rent Trends, 2010-2021



Source: CoStar (2022)

Office Demand Forecast

Ten-year office demand is forecasted to be between 325,000 and 500,000 square feet. Ten-year demand focuses on the annual average of nearly 40,000 square feet added per year in the last decade. This more conservative measure considers the elevated current vacancy rate, modest increases in rental rates in the last two years, as well as shifting

office dynamics during and following the pandemic. The 20-year forecasted demand could range from 750,000 to 1.0 million square feet and assumes a stabilization of the office market in Albemarle County.

10- and 20-Year Albemarle County Office Demand Forecasts

2010-2021 Annual Office Completions (Sq. Ft.)	10-Year Demand Forecast (Sq. Ft.)		20-Year Demand Forecast (Sq. Ft.)	
	Low	High	Low	High
39,924	325,000	500,000	750,000	1,000,000

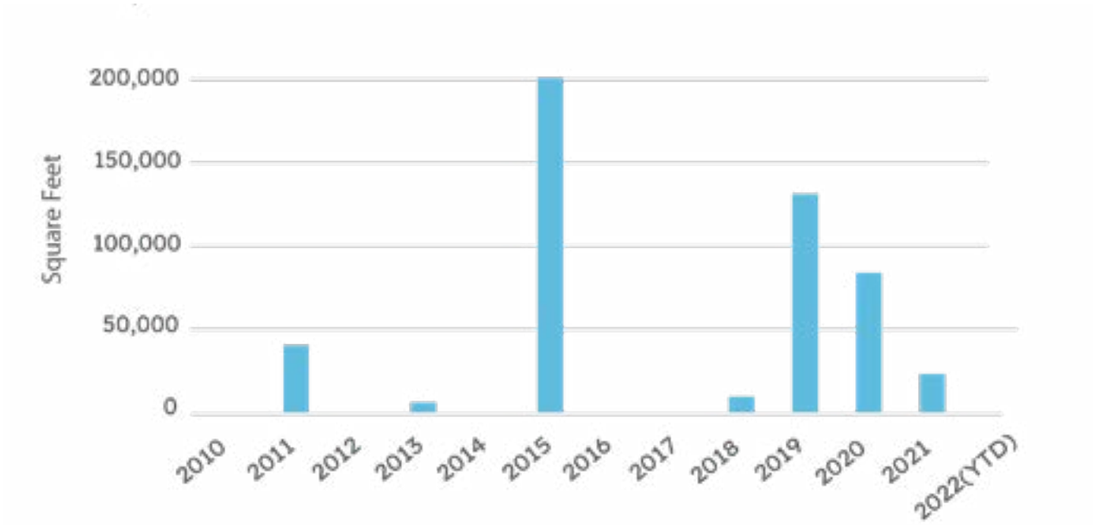
Industrial

Nationally, industrial development, particularly warehouse and distribution space, has been bolstered by the COVID-19 pandemic, driven by the increase in online shopping as brick-and-mortar retailers closed and consumers were minimizing their time in public spaces. Pre-pandemic, the light industrial sector had already been experiencing strong

growth as companies competed to address last-mile distribution gaps to accelerate completion time.

For this study, industrial space includes three categories: manufacturing, warehouse, distribution, and storage, and research and development/flexible workspaces. Warehouse space, including mini-warehouse and storage facilities, comprises most of the space in Albemarle County. Since 2010, an average of 41,000 square feet of industrial space has been completed per year. This ranges significantly from year to year, with some years having no new supply and 200,000 new industrial square feet added in 2015. Consistent with recent trends, warehouse space, including mini-storage facilities, is the predominant product type completed in recent years.

Albemarle County Industrial Completion Trends, 2010-2022



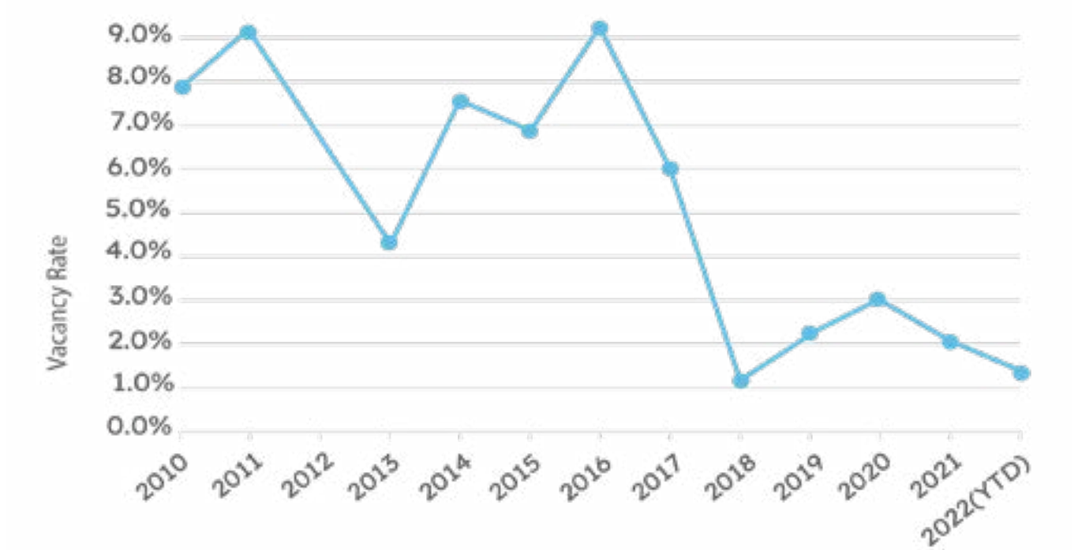
Source: Albemarle County Tax Card Level Data (2022)

Based on feedback from local real estate stakeholders, the decline in completion of new industrial space is likely influenced by higher land costs in Albemarle County, competition from nearby markets, and limited availability of properties that are prepared for development. As previously noted, the forecasts presented in this section are not constrained by the availability of land, the cost of land or development, site readiness factors, site location and access to infrastructure, or environmental constraints.

Industrial Vacancy Rates

Consistent with national trends, industrial space vacancies have declined in recent years, following two strong years of space occupancy in 2017 and 2018 and limited new completions. The most recently reported vacancy rate for manufacturing, warehouse, and research and development industrial space in Albemarle County was approximately 1.4% in first-quarter 2022. As a point of comparison, current vacancy rates in other major Virginia markets are also well below historic averages, including 2.6% in Richmond, 4.5% in Roanoke, 1.3% in Harrisonburg, and 1.7% in Virginia Beach.

Albemarle County Industrial Vacancy Rate Trends, 2010-2022

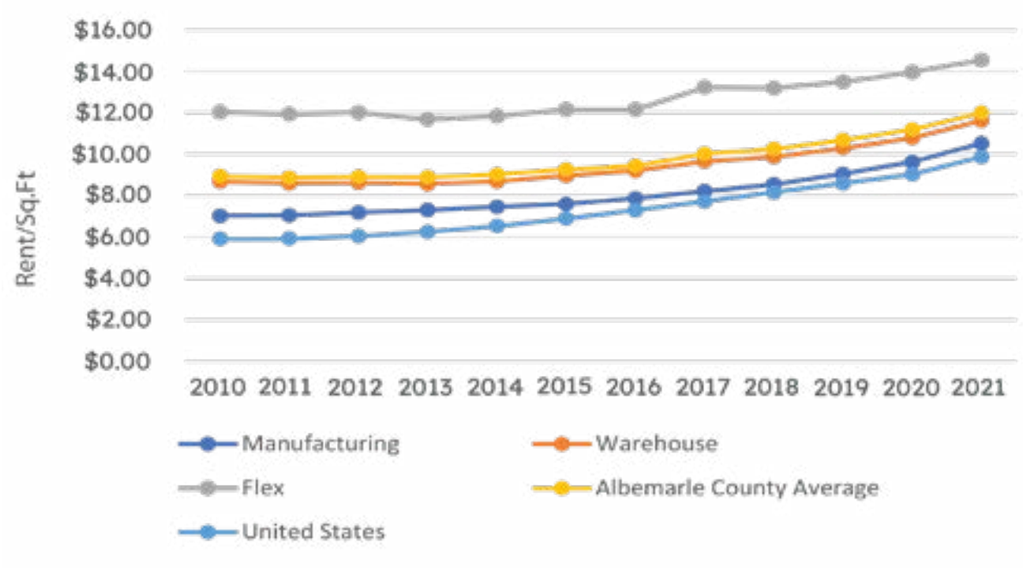


Source: CoStar (2022)

Industrial Rental Rates

The average lease rates for industrial space in Albemarle County increased from $8.94 per square foot in 2010 to $12.00 per square foot at year-end 2021. This measure represents the combined average for all industrial types in Albemarle County. Average annual increases were 2.7% in the County, with the strongest growth rates experienced over the last five years. By type, flex/research and development had the highest average rent per square foot at year-end 2021 at $14.54, followed by warehouse/distribution space at $11.62 per square foot, and manufacturing space at $10.52 per square foot. Increases were demonstrated across all types of industrial space.

Albemarle County Industrial Rate Trends, 2010-2021



Source: CoStar (2022)

Industrial Demand Forecast

There is nearly 4.3 million square feet of manufacturing, warehouse, distribution, flex, and research/development space in Albemarle County. With a current population of 112,395, that equates to an industrial average of 37 square feet per person. Based on an assumed 20-year population increase of 25,800 to 30,300 new residents, that could result in 955,000 to 1.1 million new square feet through 2040.

Ten-year industrial demand is forecasted to be between 450,000 and 600,000 square feet and considers the low vacancy rates of existing space. The 20-year forecasted demand could range from 950,000 to 1.1 million square feet. To the extent that improved sites (with existing utilities, appropriate zoning districts, and other site readiness factors) are not available in Albemarle County, demand would likely shift to surrounding counties with similar access to highway corridors and labor market.

10- and 20-Year Albemarle County Industrial Demand Forecasts

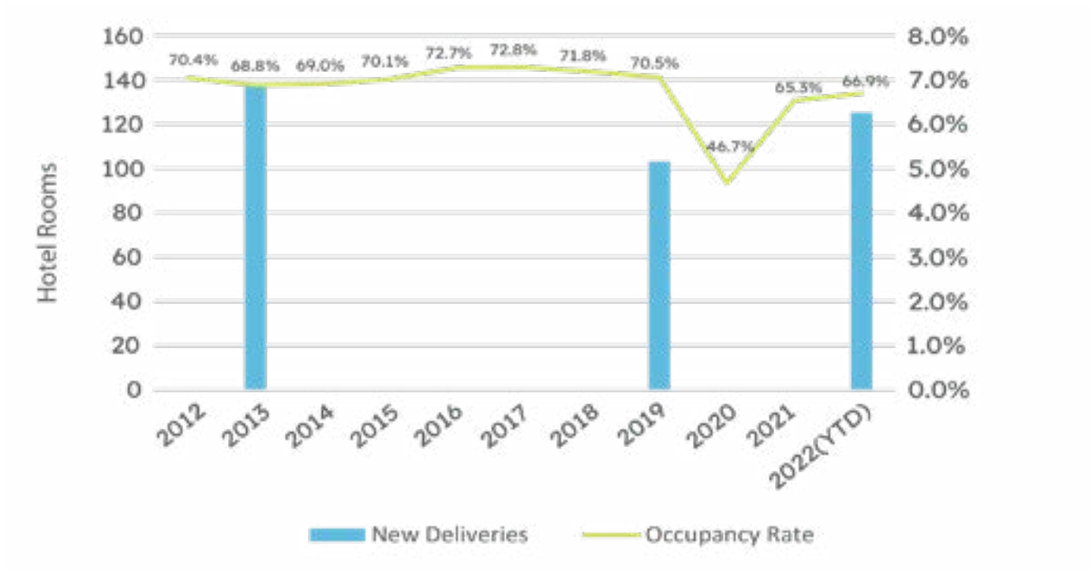
2010-2021 Annual Industrial Completions (Sq. Ft.)	10-Year Demand Forecast (Sq. Ft.)		20-Year Demand Forecast (Sq. Ft.)	
	Low	High	Low	High
41,288	450,000	600,000	950,000	1,100,000

Hotel Rooms

Hospitality is one of the most impacted real estate sectors through the COVID-19 pandemic. National real estate research firms forecast that recovery for the hospitality industry could extend well into 2023 as travelers and businesses are slowly regaining confidence in safe movement around the country. Additionally, professional business travel may never fully recover to pre-pandemic levels as corporations have leveraged virtual meetings.

Prior to the COVID-19 pandemic, hotel occupancy in Albemarle County typically ranged from 70% to 73%, a range that is considered a sign of a healthy market. Consistent with national trends, occupancy declined rapidly at the onset of the pandemic. Initial recovery occurred in 2021, however the market has not fully reached pre-pandemic measures for occupancy. An estimated 365 new hotel rooms have been completed in Albemarle County since 2012, with the newest hotel built in first-quarter 2022, Holiday Inn Express on Pantops Corner Way.

Albemarle County Hotel Occupancy Trends, 2012-2022



Source: CoStar (2022)

It should be noted that occupancy data provided in this analysis was based on information from February 2022. Since that time, the hotel industry in Albemarle County has demonstrated higher occupancy rates, falling in-line with measures that were commonly represented pre-pandemic.

Ten-year hotel demand is based on the 2010-2021 trend of annual average hotel completions, which totaled approximately 37 rooms per year. This analysis assumes that recovery from the pandemic will extend into 2023. The ten-year demand forecast is expected to be between 350 and 500 rooms and the 20-year forecasted demand could range from 750 to 900 rooms.

10- and 20-Year Albemarle County Hotel Demand Forecasts

2010-2021 Annual Hotel Completions (Rooms)	10-Year Demand Forecast (Sq. Ft.)		20-Year Demand Forecast (Sq. Ft.)	
	Low	High	Low	High
37	350	500	750	900

Summary of Demand Forecasts by Land Use

The following table summarizes the ten- and 20-year demand forecasts by land use for Albemarle County.

10- and 20-Year Albemarle County Market Demand Forecasts

Land Use Type	2010-2021 Average Annual Completions	10-Year Demand Forecast		20-Year Demand Forecast	
		Low	High	Low	High
Residential (units)	646	6,000	7,500	11,500	13,500
Retail (sq. ft.)	69,444	550,000	700,000	1,000,000	1,300,000
Office (sq. ft.)	39,924	325,000	500,000	750,000	1,000,000
Industrial (sq. ft.)	41,288	450,000	600,000	950,000	1,100,000
Hotel (rooms)	37	350	500	750	900

Chapter 5: Development Areas: Maximum Theoretical Buildout

Summary of Development Areas-wide Buildout

Albemarle County has 2,842 acres of available land in the Development Areas based on the methodology described for this analysis. Removing acreage that would be required to support necessary infrastructure and accommodate environmental constraints and open space needs, and removing parcels designated entirely greenspace and green systems, it was determined that Albemarle County has 1,634 acres of buildable land remaining. The County has a total land mass of 464,640 acres, or approximately 726 square miles. The total buildable acreage accounts for slightly more than 0.3% of the County's land mass.

Summary of Buildout Acreages

Geography	Total Acres	Available Acres	Buildable Acres	Buildable Acres Share of Total
Albemarle County	464,640	2,842	1,634	0.35%
Development Areas	23,800	2,842	1,634	6.9%

Combined, the Development Areas contain approximately 23,800 acres, or 5.6% of the County-wide land mass. Based on the prescribed buildout methodology, the buildable acres comprise 6.9% of the Development Area total. Overall, the county exhibits pockets of developable land within each Development Area.

Based on the available and buildable acreage totals and incorporating the assumptions for buildout in Chapter 2 of this report, the County's Development Areas could potentially have capacity for a maximum of approximately 9,252 residential units, 1.9 million square feet of retail, 2.7 million square feet of office space, over 5.5 million square feet of industrial space, and 2,554 hotel rooms at full theoretical buildout. Appendix B demonstrates the buildout analysis totals for each future land use type across all Development Areas.

Summary of Development Areas Theoretical Maximum Buildout

Available Acres	Buildable Acres	Residential Units	Retail/ Commercial Sq.Ft.	Office/ Institutional Sq.Ft.	Hotel Rooms	Industrial Sq.Ft.
2,842	1,634	9,252	1,959,849	2,725,883	2,554	5,565,023

Summary of Development Areas Residential Buildout

Albemarle County closely tracks pipeline residential projects. Recall that these identified parcels were removed from the available acreage so that no double counting of units occurred. There are currently 9,377 approved units and 5,504 currently under review, for a total of 14,881 maximum housing units. It should be noted that it is a common occurrence for larger rezonings to not use all the original approved capacity, so the pipeline figures are likely overestimated based on what will get completed. It is difficult to estimate how many of the maximum approved or under review units will get built, so no adjustment has been made to these figures. In total, Albemarle County could potentially have capacity for an additional 24,133 residential units at full buildout. The maximum unbuilt approved units comprise 38.8% of the estimated buildout total.

Summary of Development Area Residential Pipeline and Buildout Totals

Maximum Remaining Unbuilt Approved Units	Maximum Units Under Review	Residential Theoretical Maximum Buildout Estimate	Total Theoretical Maximum Future Residential Buildout
9,377	5,504	9,252	24,133

Summary of Development Areas Non-Residential Buildout

The following table shows the estimated non-residential theoretical maximum buildout by Development Area. As noted in Chapter 3, this buildout estimate does not include the non-residential pipeline.

Summary of Maximum Theoretical Buildout by Development Area

Development Area	Retail (sq. ft.)	Office (sq. ft.)	Hotel (rooms)	Industrial (sq. ft.)
Neighborhood 1	305,828	370,936	581	59,178
Neighborhood 2	178,177	342,955	374	0
Neighborhood 3	174,803	103,742	133	112,690
Neighborhood 4	117,547	494,001	191	455,434
Neighborhood 5	55,289	98,971	20	521,406
Neighborhood 6	14,702	0	0	0
Neighborhood 7	16,198	12,148	0	0
Hollymead	594,229	839,065	358	3,629,083
Piney Mountain	135,719	98,989	198	237,574
Crozet	367,357	365,076	698	549,658
Village of Rivanna	0	0	0	0
Total	**1,959,849**	**2,725,883**	**2,554**	**5,565,023**

Comparing Land Use Buildout with Future Demand

The Albemarle County theoretical maximum land use buildout estimates exceed the 20-year demand forecast. This suggests that residential growth and development could continue to occur at a similar historical pace and still be accommodated under the existing future land use designations over the next 20 years. However, it is important to note that the 20- year demand forecasts do not take into consideration potential growth limitations like the availability of land, the cost of development, or environmental constraints. Chapter 6 addresses the challenges associated with building out based on the theoretical maximum and presents adjustments to the residential buildout accordingly. Although it is acknowledged that some new population growth will occur in the Rural Areas, this analysis considers whether the Development Areas have sufficient land area and units in the pipeline to accommodate all the County's expected growth.

Summary of Residential Findings

Land Use Type	20-Year Demand Forecast		Theoretical Maximum Buildout Esimates			
	Low	High	Max. Approved	Max. Under Review	Max. Buildout Estimate	Total
Residential (units)	11,500	13,500	9,377	5,504	9,252	24,133

Based on the 20-year demand forecasts presented in this report, non-residential development could continue to occur at a similar historical pace and still be accommodated under the existing future land use designations over the next 20 years. This is consistent across all four sectors analyzed: retail, office, industrial, and hospitality. However, consistent with the residential buildout, there are challenges that could impact the future development potential for non-residential land uses. These are described in Chapter 7.

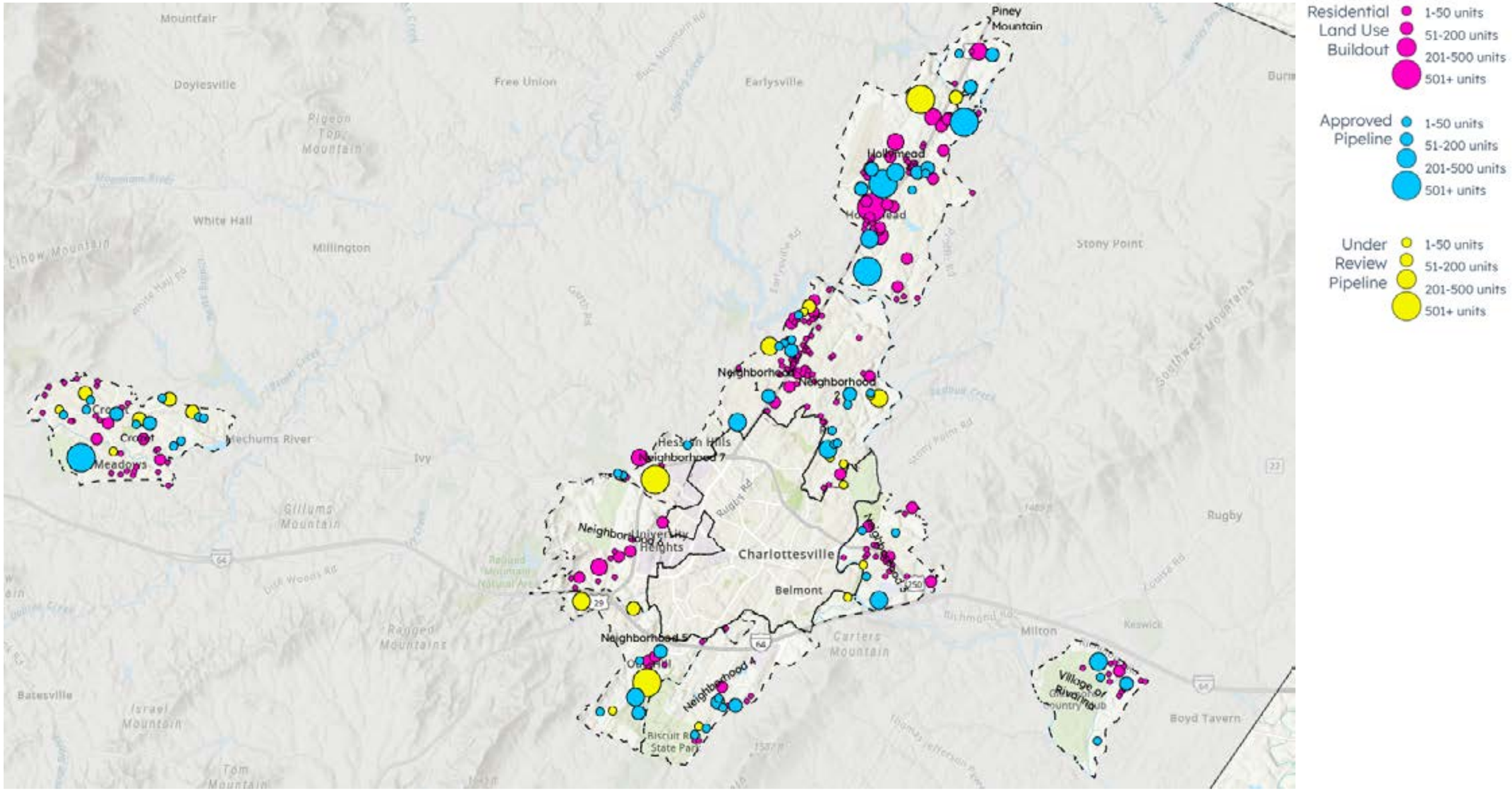
Summary of Non-Residential Findings

Land Use Type	20-Year Demand Forecast		Maximum Buildout Estimate
	Low	High	
Retail (sq. ft.)	1.0M	1.3M	1.9M
Office (sq. ft.)	750,000	1.0M	2.7M
Industrial (sq. ft.)	950,000	1.1M	5.5M
Hotel (rooms)	750	900	2,554

On the following pages, two maps are included to compare land use buildout with future demand. The map of the residential results is shown first and includes the residential pipeline. It is followed by the non-residential results map, which does not include the non-residential pipeline.

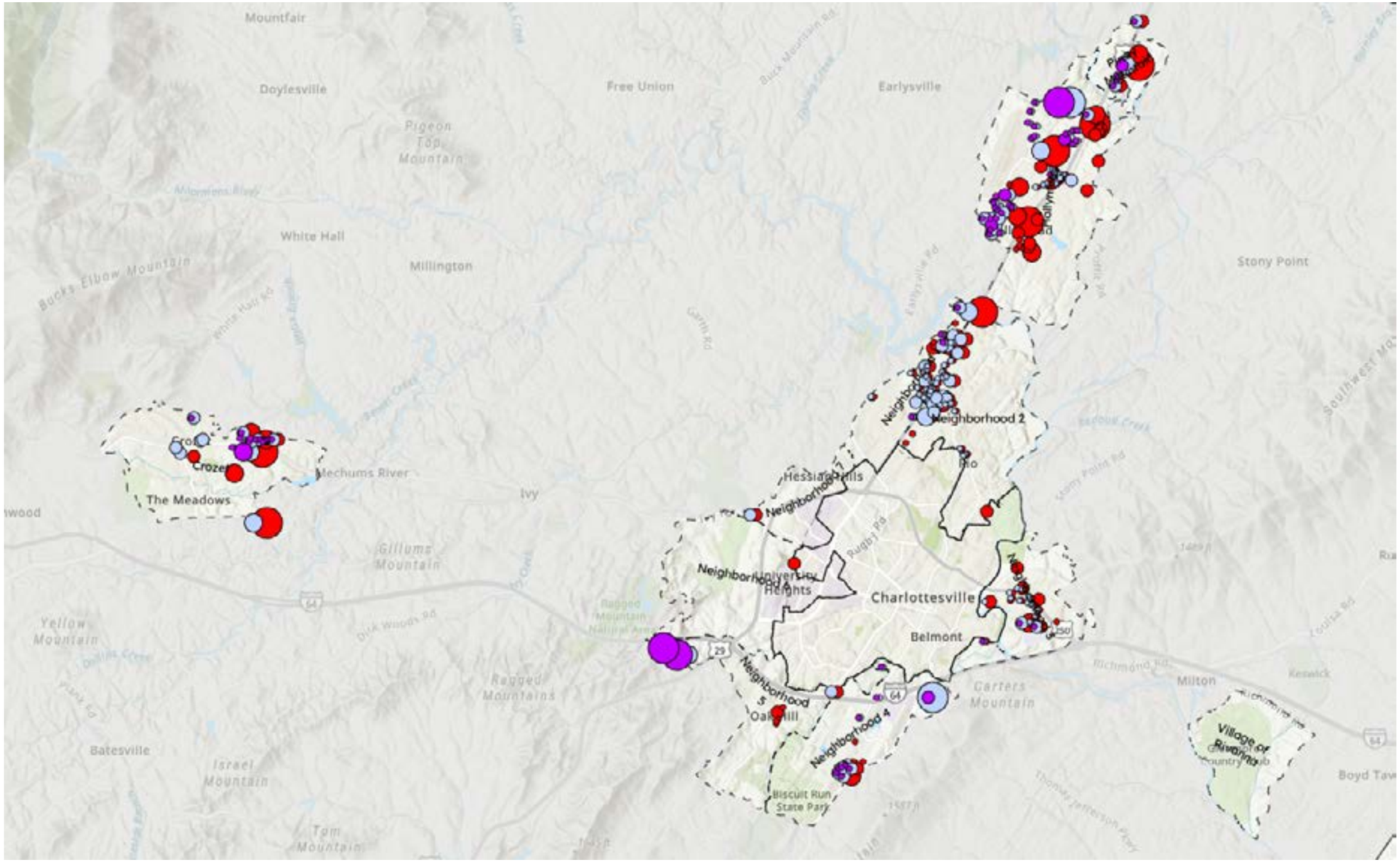
Albemarle Land Use Buildout

Map of Residential Results



Albemarle Land Use Buildout

Map of Non-Residential Results



Chapter 6: Constraining Factors for Residential Buildout

The land use buildout analysis is a maximum theoretical buildout of the County's Development Areas. A variety of constraining factors will limit actual buildout. Some of these factors are accounted for in the buildout methodology, including reductions for infrastructure and other environmental constraints. Other factors will affect buildout as well, but are not able to be captured in a Development Areas-wide model. This chapter also includes analysis on residential development in Albemarle County to provide greater context on recent trends for what has been approved and built. Based on a combination of these factors, this chapter considers what a constrained residential buildout may be if current trends continue.

Constraining Factors

There are several factors that could impact the pace and quantity of new development in Albemarle County moving forward for both residential and non-residential development. These factors are highlighted below and should be take into consideration through the AC44 comprehensive planning process.

Cost of Land. According to feedback from local stakeholders, the cost of land in Albemarle County has risen rapidly, which impacts the financial viability of some development types. Based on data from Albemarle County's Tax Assessor, vacant properties that sold in 2018 averaged $40,825 per acre, compared to $56,048 per acre in 2021. This represents a 38% increase over four years. Data was pulled with a focus on sold vacant land as opposed to taxable value because it is common for properties to sell over value. While an analysis comparing land costs to nearby counties was not performed, the local development community indicated that the cost of land is typically lower in surrounding localities. The cost of land impacts all real estate sectors but can typically be more easily absorbed by residential land uses at the expense of homebuyers. Industrial land uses are the most likely to be directly impacted by land cost, with developers seeking larger tracts and lower values. High land costs could influence new industrial uses to seek space in more affordable counties.

Cost of Housing. A direct reflection of the growing land cost, housing prices have increased rapidly in Albemarle County over the last decade. This is reflected by data presented in Chapter 4 from the Albemarle County Tax Assessor that indicated that the sales price of single-family detached units increased by more than 25% since 2010, approaching an average of $570,000 in 2021. Data presented by CAAR demonstrated a similar increase across the region with the median sales price increasing by 6% in the last year alone. Albemarle County has the highest housing sales price when compared to the other counties in the region. From a land use perspective, housing cost could be a significant constraint on attracting office and industrial workers who can no longer afford to live in the County. Lacking a skilled and accessible workforce, employers could be drawn to other markets with more variation in hosing cost to accommodate all income levels.

Physical Site Constraints. The Buildout Analysis took into consideration the potential impact on available land due to physical site constraints like steep slopes, floodplains or wetlands, and protected open space. These factors are prevalent in many of the Development Areas, and although reductions were made to the buildable acreage, a parcel-by-parcel analysis was not completed. As in most locations, historic development has typically favored sites with the least constraints. As new growth is attracted to Albemarle County, developers will likely need to consider properties that have more constraints, will cost more to develop, and require additional regulatory approvals. This could slow the pace of growth over time, particularly for non-residential land uses that are often more intensive and require more impervious surface. Physical site constraints will be most impactful for the future growth of retail, office, industrial, and hospitality.

Site Location and Infrastructure Access. At the confluence of all the constraining factors is the consideration of site location and infrastructure access, which is particularly important for retail, office, industrial, and hotel land uses. Non-residential land uses are typically seeking parcels with superior access and visibility to major transportation corridors and with proximity to a population base. The availability of utility infrastructure is also paramount to site selection. Land that has a supportive land use designation and optimal site location attributes may be more limited when reviewing these factors together.



Misalignment Between Existing Zoning and Future Land Use. To reach the theoretical maximum land use buildout, a significant number of rezonings would be needed. Across the Development Areas, there are many properties where the future land use designation and the current zoning district do not align. When a property owner requests to change the zoning district of their property, a rezoning application is needed. If a property owner decides to proceed to develop their property by-right (that is, under the existing zoning district), the buildout of the property may be less dense or have a different mixture of land uses than is recommended in the property's future land use designation.



Rezoning Process and Final Buildout Decisions. The rezoning process is uncertain and can be time-consuming, with some rezonings taking more than two years to be approved from initial application submittal. Additionally, proposed and approved densities are often lower than maximum densities recommended in the Comprehensive Plan. From 2016 to 2021, the total residential density approved through rezonings was approximately 58 percent of the maximum recommended density per future land use designations for those properties. Even when projects are approved at higher densities, sites may not build out to the maximum approved number of units, especially for larger developments. For example, it is expected that Old Trail Village in Crozet will build out at 1,000 units less than the maximum approved number of units.



Local and State Ordinance Requirements. Local and state ordinance requirements include Albemarle County's Zoning Ordinance, the County's Water Protection Ordinance, Department of Environmental Quality (DEQ) requirements, the County's Subdivision Ordinance, and the State Building Code. These requirements affect how a site can be developed. For example, the Zoning Ordinance requirements affect the form and density of development, including minimum lot size, setbacks, building height, parking requirements, landscaping requirements, and open space requirements.

Additional Factors to Consider and Residential Buildout Trends

For projects approved by rezoning in the past five years (2016 through 2021), the total number of units approved was approximately 58 percent of the maximum number of units recommended per the Comprehensive Plan.

Individually, some projects were approved at or above the maximum number of units recommended per the Comp Plan. Examples include Bamboo Grove in Crozet (6 units approved compared to 4 units max recommended) and River's Edge in Hollymead (100 units approved compared to 50 units max recommended). Recent rezonings with the future land use designation of Neighborhood Density Residential have tended to request densities at or above the recommended maximum (3-6 units/acre). However, projects with the designation of Urban Density Residential (6.01-34 units/acre) have tended to request densities in the middle of this recommended range.

For rezonings approved from 2016 through 2021 with a primary future land use designation of Urban Density Residential, the average approved net density was 17.62 units/acre. For rezonings approved in the same period with a primary designation of Neighborhood Density Residential, the average approved net density was 7.59 units/acre, which is above the recommended range of 3-6 units/acre.

Once approved, rezonings tend to use most or all of their maximum units. For developments that have built out since 2005, the average final buildout was 94 percent of the maximum units approved. Old Trail Village in Crozet is expected to be a significant exception and will likely build out at about half of the maximum approved units.

If these trends were to continue with the current Comprehensive Plan, the maximum theoretical buildout would not be reached. Applying the 58 percent figure to the maximum theoretical buildout of 9,252 units, an estimated buildout instead would be 5,366 units. This would be closer to the estimated buildout per by-right zoning, which ranges from 2,505 to 4,361 units. Combined with the approved and under review pipelines, the total theoretical maximum buildout would be 20,247 units.

When projects build out by-right based on existing zoning, the units built tend to be significantly fewer than the number of units recommended per the Comprehensive Plan, since future land use and existing zoning often do not align. For example, the Pavilions at Pantops (zoned R-6) built 347 units by-right, while the Comprehensive Plan recommended up to 711 units. As another example, there were 200 units built at 5th Street Place (zoned R-15) by-right, compared to a maximum of 523 units recommended per the Comprehensive Plan.

Buildout Totals by Zoning District

Looking at the study's findings through a zoning lens, primarily residential zoning districts have a higher total of properties with the opportunity to develop than primarily commercial or industrial zoning districts, which is in alignment with the historical growth of Albemarle County.

The table below shows the estimated Development Areas acreage available in each zoning district, using properties that were found to have development opportunity per the land use buildout assumptions. The numbers shown as the "Total Buildable Acres" are estimated based on the study assumptions found in Appendix A. It should be noted that the available and buildable acreage totals presented in the following table differ from totals previously presented because the table excludes the Rural Areas zoning district. Five Development Areas have acreage with this zoning district: Neighborhood 4, Hollymead, Piney Mountain, Crozet, and Village of Rivanna.

Zoning Districts	Total Available Acres	Total Buildable Acres (Estimate)
R1 Residential	703	492
R2 Residential	90	63
R4 Residential	186	130
R6 Residential	35	25
R10 Residential	2	1
R15 Residential	55	39
Planned Unit Development	19	13
Planned Residential Development	8	6
C1 Commercial	84	55
CO Commercial Office	37	24
Highway Commercial	137	96
Planned Development Shopping Center	70	46
Planned Development Mixed Commercial	111	61
Downtown Crozet District	12	6
Light Industry	244	171
Heavy Industry	61	43
Planned Development Industrial Park	4	3
Unassigned	12	8
TOTAL	**1,870**	**1,282**

Comp Plan	Zoning (by-right)	
Land Use Buildout Estimate	Estimated Units: Zoning (Low)	Estimated Units: Zoning (High)
9,252 units	2,505 units	4,361 units

Using the available acres in the Development Areas by zoning district, and applying assumptions based on by-right development potential, an estimated 2,505 to 4,361 units could be built. This estimate does not include the residential pipeline.

Conclusion

Based on the constraining factors and recent residential development trends, the maximum theoretical land use buildout would not be reached if current trends continue. There are several options for the County to address the differences between actual buildout and approvals and what is recommended in the Comprehensive Plan. One option is to adjust recommended densities in future land use categories to better align with recent buildout trends. However, depending on the extent of the changes to recommended densities, changes to the Development Areas may also be needed to accommodate projected growth. Another option is to update and revise County policies and regulations to better support densities recommended in the Comprehensive Plan. This could include better alignment between zoning districts and land use designations in the Comprehensive Plan, and additional infrastructure to support densities recommended in the Comprehensive Plan, such as public transit and recreation opportunities.

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Chapter 7: Constraining Factors for Non-Residential Buildout

Consistent with the Residential Buildout Analysis presented in Chapter 6, the 20-year demand forecasts for non-residential uses do not take into consideration potential growth limitations like the availability of land, the cost of development, or environmental constraints. They also do not consider site readiness, which is described further in this chapter. The factors described in Chapter 6 are highly relevant in the true availability of land for non-residential development, as well as the pace and quantity of growth.

- ***Cost of Land***
- ***Site Location and Infrastructure Access***
- ***Cost of Housing***
- ***Misalignment Between Existing Zoning and Future Land Use***
- ***Physical Site Constraints***
- ***Rezoning Process and Final Buildout Decisions***
- ***Land and State Ordinance Requirements***

Development Area Tier Analysis and Additional Factors to Consider

This section provides a secondary analysis of the total Development Area buildable acreage presented previously in Chapter 5. Albemarle County has 2,842 acres of available land in the Development Areas based on the methodology described for this analysis. Removing acreage that would be required to support necessary infrastructure and accommodate environmental constraints and open space needs, and removing parcels designated entirely greenspace and green systems, it was determined that Albemarle County has approximately 1,634 acres of buildable land remaining.

A tier analysis of non-residential development adds important context to the potential feasibility of future buildout. Each "tier" represents a different level of readiness for site development. As shown in the graphic below, Tier 1 parcels are the least ready for development whereas Tier 5 parcels are prime for development. Tier 1 properties are typically raw land that is at least designated for commercial or industrial development and Tier 5 parcels have permits in place and are ready to receive development.

Tier System Analysis for Site Selection
(as defined by VEDP)

Tier 5 (Construction Timeline)
Construction Ready
All permits in place; site ready for site disturbance permit from locality; shovel/pad ready
>90% Success Odds

Tier 4 (12-18 months)
Infrastructure in Place, Issues Cleared, Certifiable Site
Permit issues identified and quantified; all construction (building and infrastructure) in place or deliverable in 12 to 18 months
70-80% Success Odds

Tier 3 (1-2.5 years)
Zoned, Estimated Costs, Due Diligence
Zoned for industrial or commercial uses; minimal to no infrastructure; due diligence studies performed; estimated costs and timelines quantified
40-50% Success Odds

Tier 2 (2-4 years)
Designated in Comprehensive Plan and Site Controlled
Designated in Comp Plan for industrial or commercial uses but not zoned as such; publicly owned or optioned; minimal infrastructure; minimal due diligence performed
<20% Success Odds

Tier 1 (3-7 years)
Raw Land/Privately Owned
Designated in Comp Plan for development but not zoned as such; seller is willing; minimal to no infrastructure; no due diligence performed
<10% Success Odds

With constant pursuit of development, Tier 1 sites may develop in 3-7 years. Tier 5 sites expect to be delivered in one year or less.

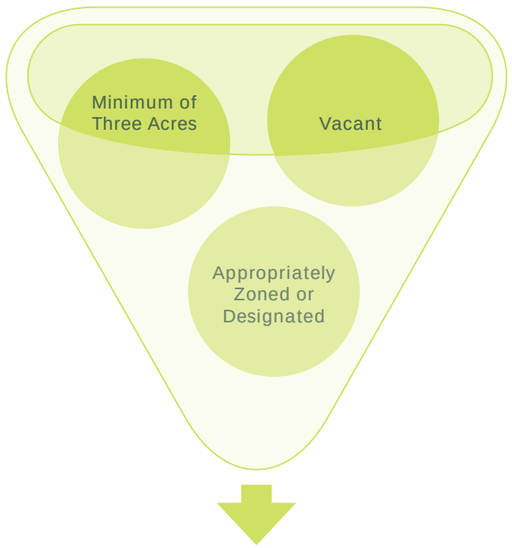
The tier classification is useful because it broadly communicates the risk and uncertainty associated with developing a specific site. The tier level generally indicates the overall risk to developing a site, including time, financial cost, opportunity cost, regulation, and other factors. Parcels that are considered "site ready" are classified as Tier 4 or Tier 5 and the market expectation is that a project could be delivered within 12 to 18 months. This timeline and relative certainty for successful development makes Tier 4 and Tier 5 properties highly desirable. Properties within Tiers 1-3 are riskier to bring to market and considered less attractive investment opportunities.

To further analyze the land capacity under the lens of properties that are ready to support non-residential development in the short-term, this analysis prepared a secondary tier analysis for available and buildable parcels within the Development Areas based on the following attributes:

- At least three (3) acres in size
- Currently vacant
- Already zoned or designated for non-residential uses, including Light Industrial, Heavy Industrial, Office/RD/Flex, Planned Development Industrial Park (PDIC), C1 Commercial, Highway Commercial, or Planned Development Mixed Commercial

Based on the site attributes described above, the Development Area tier analysis yielded only 39 parcels that met each of the defined criteria, totaling less than 890 acres. As a point of comparison, there are more than 22,900 total parcels within the County's Development Areas.

22,900 Total Development Area Parcels



39 Development Area Tier Qualified Parcels

Albemarle County Economic Development staff reviewed each of the 39 parcels that met the tier criteria to estimate its level of site readiness. Only one property in the Development Areas met the description of a Tier 4 site where infrastructure is in place, site challenges have been addressed, and a project could be brought to market in 12-18 months. None of the properties met the definition of a Tier 5 site. Staff estimated that nine additional properties could also support development in the 12–18-month timeframe but may require some extension of infrastructure.

It should be noted that all but one of the sites identified as having the potential to support non-residential development in a 12–18-month timeframe are in the Hollymead Development Area. The future buildout capacity of the Hollymead Development Area could be constrained by current infrastructure capacity. Additionally, a concentration of most of the County's ready sites in a singular location undermines the goals of Project ENABLE, the current economic development strategic plan. One of the foremost goals of Project ENABLE is to retain existing businesses that are expanding in the County (Goals 1, 2, 3). A diversity of sites regarding both size and location is needed to be successful in supporting these goals.

Project ENABLE Goals

Goal 1: Strengthen Existing Business Retention and/or Expansion to Help Existing Businesses be Successful

Goal 2: Improve the Business Climate

Goal 3: Lead the County's Readiness to Accommodate Business

Goal 4: Seek Private Investment to Further the Public Good

Goal 5: Educate the Community and Enhance the Visibility of Economic Development

Goal 6: Lead External Efforts to Create Strategic Partnerships with Economic Development Institutions

Goal 7: Partner to Expand Efforts to Build the County's Tourism Sector

Albemarle County Economic Development seeks to have a robust portfolio of Tier 4 and Tier 5 sites that are diverse from geographic, acreage/amenity, land cost, and end user perspectives. A successful portfolio would include:

- Sites that are ready and available within all the County's Development Areas. To date, the County has experienced the highest demand for spaces that are located north, south, and central to the urban ring of the County and the City of Charlottesville. Having spaces throughout all of the Development Areas will also provide greater diversity in property size and price point.
- Sites that range in size to attract a wider variety of end users. To address future needs, ready sites of all sizes are needed, including those that range from five acres or less to ones that offer more than 100 contiguous developable acres.
- Sites that range in price point that would be attractive to a wide variety of end users.
- Sites that have existing infrastructure, including power, water, sewer, roads, and broadband.
- Sites with a variety of locational attributes, including:
  - Proximity to the University of Virginia (within a 10-minute commute)
  - Proximity to the Charlottesville-Albemarle (CHO) airport (within a 20-minute commute)
  - Accessibility to I-64/Rt29
  - Accessibility to rail

Conclusion

Although the land use buildout analysis for non-residential uses suggests sufficient capacity to meet future demand, constraining factors result in less than maximum buildout and negatively impact the amount of developable land for non-residential uses, especially in the short-term. The tier analysis found only 39 parcels can support significant non-residential development within an 18-month timeframe that would be attractive to job-creating land uses. Additional coordination with the County's Economic Development Office and the Economic Development Authority would allow for the identification and preparation of critical properties to support future job creation. This type of effort would align with Project ENABLE's goal of strengthening existing businesses and accommodating a diverse inventory of new businesses.

Properties designated in the Comprehensive Plan to support non-residential development should be carefully reviewed to confirm that they align with the location and infrastructure needs of the County's targeted economic sectors. Efforts to reduce the negative impacts of the constraining factors will support non-residential growth that better aligns with the theoretical maximum buildout estimate.

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Chapter 8: Conclusion

The Albemarle County Land Use Buildout Analysis developed a holistic model for estimating the capacity to accommodate future growth in Albemarle County based on future land use designations. The study established methodology to "build out" the County's Development Areas by using the existing future land use types per the 2015 Comprehensive Plan. These buildout estimates will be used as one point of consideration during the AC44 Comprehensive Plan update. While it is acknowledged that some new growth will occur in the Rural Area, this analysis considers whether the Development Areas have sufficient land area and units in the pipeline to accommodate the County's expected growth.

Based on the findings of this analysis, there appears to be sufficient capacity (using future land use designations) for residential and non-residential growth within the existing Development Areas. However, this is predicated on a number of assumptions, including: development at the higher end of recommended ranges, significant redevelopment and infill development, updates to zoning to match future land use, incentives for affordable housing, and economic development initiatives. Lower ends of recommended densities and uses and development under current by-right zoning may not be sufficient to accommodate future growth.

The Land Use Buildout Analysis is based on the theoretical maximum buildout of vacant and underdeveloped land in the Development Areas, based on Comprehensive Plan future land use designations. The analysis accounts for some additional factors that reduce buildable acreage, including space needed on-site for infrastructure, environmental constraints, and required open space. Many other variables and constraints will affect the actual total buildout and the timing of development, including misalignment between existing zoning and future land use, the rezoning process, final buildout decisions, site location and access to existing infrastructure, physical site constraints, local and state ordinance requirements, the cost of land, and the cost of housing.

Providing housing choice, which includes a variety of housing types at a variety of price points, is a critical component of the County's Housing Policy, which acknowledges that an inadequate housing supply combined with increased demand and competition for housing can have negative impacts on both long-term and new residents. Driving new residential growth into surrounding localities can exacerbate local traffic issues and greenhouse gas emissions from increased commuting, and high housing prices can lower quality of life due to reduced spending power and lead to displacement of existing residents. Although many people may work in the County's Development Areas or the City of Charlottesville and choose to live in the Rural Area or in adjacent counties due to lifestyle preferences, many are also unable to afford to live closer to where they work, shop, and go to school.

In the next 20 years, Albemarle County is expected to have continued growth in all of the land uses analyzed in this study: residential, commercial/retail, office, industrial, and hotel. In theory, there appears to be sufficient capacity to accommodate this future growth within the Development Areas, based on future land use designations. However, the constraining factors outlined in this study will limit the actual buildout. The County should evaluate how it encourages and allows development within the Development Areas, and what actions can be taken to mitigate these constraining factors. This will be especially important as the County updates both its Comprehensive Plan and Zoning Ordinance.