

No Place Like Home:
Strategies for Building Sustainable Communities and Equitable Green Spaces

A Research Paper submitted to the Department of Engineering and Society

Presented to the Faculty of the School of Engineering and Applied Science
University of Virginia • Charlottesville, Virginia

In Partial Fulfillment of the Requirements for the Degree
Bachelor of Science, Civil Engineering

Grace Franklin

Spring 2025

On my honor as a University student, I have neither given nor received unauthorized aid on this assignment as defined by the Honor Guidelines for Thesis-related Assignments.

Advisor

Prof. Pedro Augusto P. Francisco, Department of Engineering and Society

Introduction

Public parks provide a myriad of environmental advantages, particularly in urban areas. Improved air quality, heat relief, increased public support for environmental issues, and land protection from future development can all alleviate the effects of climate change (Environmental Protection Agency [EPA], 2024). Moreover, numerous social and economic benefits can be gained from developing new parks. A common gathering space can strengthen bonds with loved ones, heighten one's sense of belonging in their community, and improve physical and mental health through recreational activity and connection with nature (Lee et al., 2015). Parks can also bring increased revenue, visitors, and jobs. However, the desire to live near a beautiful park, with all its wide-open space and health advantages, attracts new residents to the area, causing property values and taxes to rise (Trust for Public Land, n.d.).

Greening thus offers a unique integration of the social, economic, and environmental pillars of sustainability, but oftentimes, the environment is prioritized while social and economic impacts to vulnerable groups are less considered (Sauri & Domene, 2009). Surging rents and taxes caused by greening disproportionately affect low-income residents who may be forced to leave their homes and communities behind. Because they can no longer afford to stay or because they feel out of place, existing residents fail to make use of the new parks (Jelks et al., 2021). Pointing out equity concerns can be controversial, since greening projects have many upsides. The effects of this paradox are becoming increasingly pronounced; in some cases, the cities with the highest-profile sustainability programs result in the most severe gentrification (Immergluck & Balan, 2017). In the pursuit of social justice, the risks of green gentrification can no longer be ignored or separated from city politics (Sauri & Domene, 2009). Urban growth that maintains the status quo of class and race inequality is unethical and unsustainable, even when done

unintentionally (Immergluck & Balan, 2017). To ensure equitable access to quality green space, policy tools such as rent control and affordable housing construction must be enacted to combat green gentrification (Jelks et al., 2021).

One example of urban greening is the development of Biscuit Run Park, a new park currently under construction near Charlottesville, Virginia. At 1,190 acres, it will be the largest park in Albemarle County by a large margin (Albemarle County Parks & Recreation, 2023). Directly bordering Biscuit Run is the Southwood Community, a 100-acre mobile home park with more than 1,500 residents, the majority of whom are low-income. Facing bankruptcy, the owner of Southwood offered the residents a choice — sell to a developer and likely be displaced or sell to Habitat for Humanity (Habitat), a nonprofit organization committed to home security and policy reform for underserved communities. Southwood chose Habitat, and as a result, the neighborhood is currently undergoing a massive redevelopment process with the goal of non-displacement and permanent affordable housing (Habitat for Humanity [Habitat], n.d.). Biscuit Run Park should be utilized and appreciated by all residents, without inflicting financial or social harm to those living in Southwood. This thesis will analyze the multidisciplinary safeguards that must be prioritized in the early stages and throughout the development process of new urban green spaces to resist green gentrification, examining Biscuit Run Park and the Southwood Community as a case study.

Background and Significance

Defining “Gentrification”

While there is no single definition for gentrification, in a broad sense, gentrification occurs when the character of a low-income urban area is changed by wealthier people moving in, often leading to price-based displacement of the existing community. Thus, gentrification only occurs where there is some degree of wealth inequality. Narrowing the wealth gap is the most direct way to equitable development, but until that monumental task is achieved, communities still must contend with gentrification’s effects (Miller, 2019). In a conversation with Peter Krebs, who serves as the Albemarle and Charlottesville Community Advocacy Manager for Piedmont Environmental Council (PEC), the definition of “gentrification” and its many nuances were examined. Krebs asserts that gentrification is no longer a useful term in conversations about neighborhood change, and yet a better term has yet to replace it. Areas changing for “the worse” or for “the better” is complicated, because ultimately, any change will be worse for some and better for others (P. Krebs, personal communication, October 23, 2024). Gentrification can also take on many sparkly names, such as “neighborhood revitalization” and “urban renewal” (Schnake-Mahl et al., 2020). But what do these words even mean?

In a typical gentrification scenario, if the current residents of gentrifying areas, often low-income people of color, are not displaced entirely, they do not get the chance to play a meaningful role in their neighborhood’s evolution. Elevating their voices should be the priority. But in trying to give them a voice, previously underrepresented groups are suddenly thrust into the spotlight for having different circumstances, a phenomenon known as “othering” (Curle, 2020). By wishing to protect vulnerable populations, are we unintentionally contributing to segregation? In an attempt to avoid gentrification, are we instead disinvesting in these

neighborhoods that so desperately need both green space and affordable housing measures (McMillan, 2021)?

Engineers, urban planners, and greening practitioners cannot prevent these communities from changing, as change is the only constant in life. Instead, it is the utilitarian engineer's role to harness change and growth to provide a healthier, happier, and safer life for as many people as possible (Zeeshan, 2024). Of course, a happy life will look different for everyone, which is why it is important to give the community members agency over their own living situations. The residents, not the developers, should be the ones who decide what a "better" life looks like for them and their loved ones (P. Krebs, personal communication, October 23, 2024).

How and Why Green Gentrification Happens

The development of public parks has numerous positive impacts on local quality of life and public health, but has historically excluded the financially vulnerable (EPA, 2024). Investment in green spaces, or "greening", tends to result in rising property values and taxes, displacing residents who can no longer afford to rent or own their homes and enabling wealthier residents to move in, a process known as green gentrification (Kim et al., 2024). Increases in rent and property taxes are more deeply felt by low-income residents, who are less likely to have savings that can cushion the shock (Immergluck & Balan, 2017).

Larger regional park projects, such as Biscuit Run, are also more susceptible to placing the interests and profits of private developers over the well-being of the residents (Sauri & Domene, 2009). For larger parks, the "Announcement Effect" can result in housing prices rising even before construction begins due to news coverage and buzz around the project (Immergluck & Balan, 2017). Thus, gentrification can both precede and follow greening. Studies have shown

that greening is more likely to occur in areas already experiencing gentrification, and the financial strain on low-income residents only worsens as a result (Rigolon et al., 2024). Oftentimes, equitable access to green space is a goal set forth by city municipalities, so funding for new parks will purposefully go towards park-poor, low-income neighborhoods. Inadvertently, these efforts can intensify gentrification and displacement if not paired with affordable housing initiatives (Rigolon et al., 2024).

A recent study found that greening practitioners recognize gentrification as an issue related to or even driven by their work, but spend little time working on the topic, considering it outside of their scope. These practitioners, which include urban planners, landscape architects, urban foresters, and recreation managers, are resistant to any critiques of greening, and emphasize the importance of greening despite gentrification impacts (Nesbitt et al., 2023). While greening is important, and there has been an increased focus on green equity in recent years, practitioners need to better understand the interaction effects of their work if true equity is what they desire. More research in this realm is also required. There is a lot of literature about the conditions that lead to green gentrification, but there is less information available about how to responsibly create green space without triggering gentrification (Kim et al., 2024).

Healthy Living Inequities

While urban greening and the development of new parks generally reduces stress, encourages healthier lifestyles, and provides a “third place” for social interaction, these positive effects are only enjoyed by some. Green gentrification has been found to negatively shape the health and wellbeing of vulnerable populations, such as low-income residents and residents of color. Affected residents report a lower sense of community and feeling as though they do not

belong in the new green space, which results in these residents visiting green spaces less frequently than their White, higher income counterparts. For those who are displaced from their communities as a result of green gentrification, the loss of valuable social networks can be devastating (Jelks et al., 2021).

The United States is currently in the midst of a loneliness epidemic. According to a 2023 advisory report from Dr. Vivek Murthy, former U.S. Surgeon General, people are spending less in-person time together across all age groups, but this loss of connection is most pronounced for 15- to 24-year-olds. Compared to 20 years ago, this age group has 70% less social interaction with friends. Loneliness can have serious health impacts, including increased risk of heart disease, stroke, and dementia (Summers et al., 2023). Loneliness is only worsened by current urban design, which is often loud and seldom walkable. Streets are designed for cars, not people, and many neighbors are strangers. Natural beauty must be sought out. Our parks play an important role in connection, which became more apparent than ever during the COVID-19 pandemic.

Park programs such as litter clean ups, invasive species removal, intramural sports, and even bird watching clubs can attract hesitant visitors (Feng & Burt, 2022). From the earliest stages of park development, disenfranchised residents should be granted the opportunity to participate in the design and maintenance process. Green spaces are culturally thought of as a shared resource, belonging to the people who use and care for them, no matter their race or social class. The simple act of visiting, sharing in, and caring for green space can decrease feelings of loneliness. If groups that have historically been excluded from green spaces are considered, valued, and protected, they would be more likely to visit the park and reap the health benefits (Jelks et al., 2021).

A Brief Historical Analysis of Charlottesville's Affordable Housing Crisis

The City of Charlottesville and Albemarle County are currently facing an affordable housing crisis, with housing costs rising significantly each year. Communities of color have been disproportionately harmed by increasing housing costs, with many low-income residents being displaced from their homes. Between 2000 and 2018, average rent costs in Charlottesville rose by 88 percent, while the median household incomes for Black residents increased by only 17 percent. White residents, on the other hand, saw a median income increase of 103%. Due to this overwhelming income gap, White residents are much more likely to withstand rising housing costs, while residents of color are left further and further behind. As a result, nearly one in four Black homeowners in Charlottesville have moved or lost their homes since the year 2000, losing access to their communities. These families want nothing more than to stay in their homes. In a survey conducted by the Charlottesville Low Income Housing Coalition, 87% of Black residents expressed a desire to remain in their current neighborhood for at least the next five years, compared to 65% of White residents. Additionally, these Black residents had lived in their neighborhood for an average of 30 years, while White respondents in the same neighborhood had only lived there for an average of seven years (Charlottesville Low Income Housing Coalition [CLIHC], 2020).

In the 20th century, single-family zoning and racial covenants planted the seeds for segregated Charlottesville neighborhoods and generational wealth barriers for Black families. Current laws and policies only serve to exacerbate the problem. Developers with special use permits are required to either build a certain number of affordable housing units or pay a relatively inexpensive amount into the Charlottesville Affordable Housing Fund. Most decide to pay, but affordable housing funds remain insufficient, and there are not enough units of public

housing to meet the needs of Charlottesville families. In 2020, when the Charlottesville Low Income Housing Coalition published their report, more than 3,300 households in the city had unmet housing needs. Meanwhile, there were only 376 units of public housing and 290 Section 8 housing-choice vouchers, and many private landlords can choose to not accept these vouchers. Habitat is committed to zero-displacement and uplifting Southwood residents in decision-making and leadership roles. While nonprofits and communities such as Habitat and Southwood are making tremendous strides in the housing equity domain, the City of Charlottesville still has a long way to go when it comes to affordable housing, bridging the gaps, and righting the wrongs of the past (CLIHC, 2020).

Methodology

In an effort to research how public parks, affordable housing, green gentrification, and social sustainability are all intertwined, literature review and interviews were conducted. Furthermore, an ethical assessment of the impact of Biscuit Run Park on the Southwood Community was considered using actor-network theory (ANT) and care ethics. Academic papers looking at the effects of large, small, urban, exurban, American, and foreign parks were all read to better understand the spatiotemporal and cultural links between greening and the cycle of gentrification. To learn more about Biscuit Run and Southwood, prevalent online reports and human-interest stories were examined, primarily using sources published by Habitat and local news outlets. Geospatial mapping tools published by the Virginia Department of Environmental Quality (DEQ) were also used for demographic data in these areas. While reaching out directly to Habitat and PHA for further research was considered, it was ultimately decided against to avoid being extractive, since both nonprofits are extremely busy with their very important work.

In addition to an extensive literature review, an open and informative conversation was had with Peter Krebs, Albemarle and Charlottesville Community Advocacy Manager for PEC and an expert in sustainable community design. Krebs offered invaluable knowledge about Charlottesville-specific dynamics. Findings from the literature review and interviews were then analyzed through an STS framework of ANT, revealing how Charlottesville, Southwood, Biscuit Run, and all other actors exist within an interconnected system. Actors, which can be human or non-human, all have agency. Their actions have consequences for the other actors, and even the network itself can be an actor, because the interactions themselves can impact other actors (Best & Walters, 2013, Francisco, 2024). With the addition of the care ethics lens, these synergistic relationships expose the universal truth of how all actors require care, and it is our moral responsibility to give care (Sander-Staudt, n.d.).

Research, Results, and Discussion

The Situation in Southwood

Twenty million Americans live in mobile home parks and, most commonly, residents own their trailer but not the land beneath it, which can be a risky investment (Habitat, n.d.-b). Southwood Mobile Park first welcomed tenants in the 1950s and grew into the largest affordable housing complex in Albemarle County with a total of 1,500 residents, many of whom have lived in Southwood all their lives (Habitat, 2019; Sentara, n.d.). By the mid-2000s, however, old sewer and electrical infrastructure had begun to fail, creating unsafe conditions for residents. Threatened with widespread eviction, which would have been catastrophic for low-income residents who have built community and cultural ties over the decades, Southwood was sold for \$7 million to Habitat for Humanity of Greater Charlottesville in 2007 (Habitat, 2019).

Habitat's goal was to first stabilize the housing situation for all residents, replace the pipes and wiring, and then begin building permanent, mixed-income housing that the residents ultimately own (Habitat, n.d.-b). Mortgages are specially set so that no family pays more than 30% of their monthly income with a zero interest rate (Southwood Community, n.d.-b). By building in phases, residents can stay in their current homes until their new homes are constructed, ensuring zero displacement (Ratliff, 2023). New residents can also move into fair market units, which will improve property values and diversify the neighborhood, making the affordable housing units a better investment for low-income residents without saddling them with higher costs (Southwood Community, n.d.-b). Construction of new housing units officially began in 2020, with the first of 11 new villages opening in August 2023 (Fountain, 2023).

Figure 1

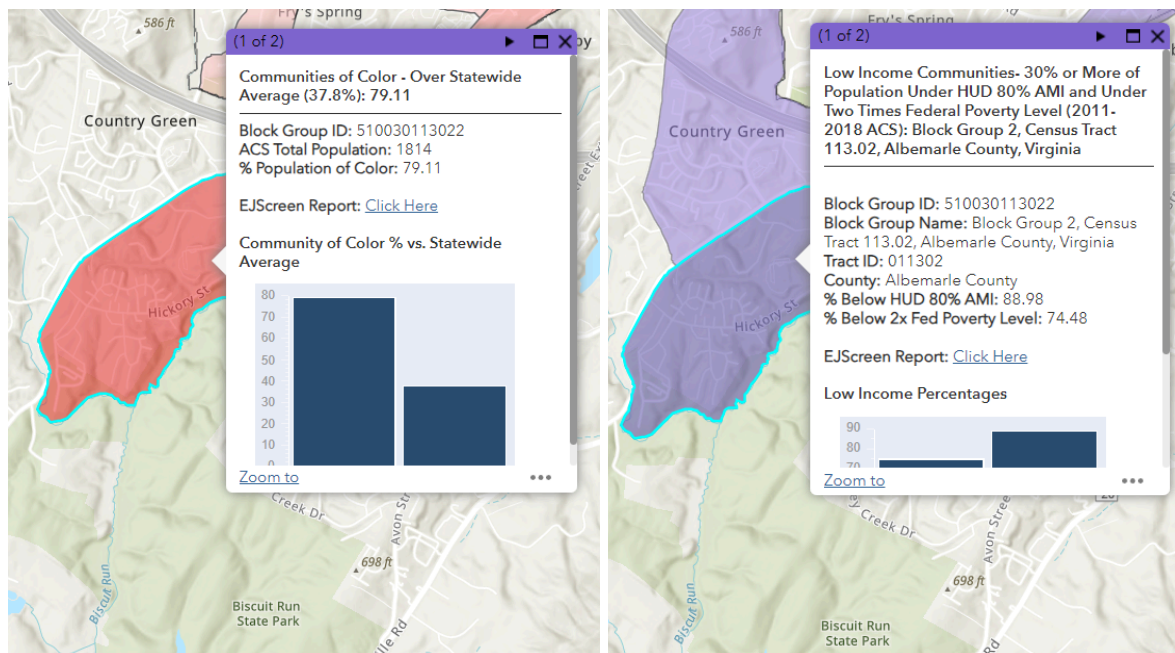
Affordable Housing Construction in Southwood (Hemphill, 2024)



According to the Environmental Justice Screen published by the Virginia DEQ, which provides socioeconomic indicators from 2021, 79.11% of the residents in Southwood are people of color. The statewide average is 37.80% and, given present data, this is the highest percentage in all of Charlottesville. In addition, 74.48% of households in Southwood have a household income less than or equal to twice the federal poverty level. 88.98% are below the 80% annual income limit (AMI), set by the United States Department of Housing and Urban Development (HUD) to determine eligibility for programs like Section 8 and public housing (HousingForward Virginia, n.d.). To put it simply, nearly 90% of households in Southwood are considered lower income by HUD. These statistics are summarized in Figure 2.

Figure 2

Virginia DEQ Environmental Justice Screen Data for Southwood (Virginia DEQ, n.d.)



Literature Review: Combatting Green Gentrification

Dr. Alessandro Rigolon, with the University of Utah, and Dr. Jon Christensen of the University of California, Los Angeles have both extensively researched green gentrification and environmental justice. In one particular study, Rigolon and Christensen analyzed 27 large park development projects in 19 major cities in the United States that were threatening low-income or marginalized residents, including the Beltline in Atlanta and the 11th Street Bridge Park in Washington, DC. Based on the findings of this study, a total of 26 parks-related anti-displacement strategies (PRADS) were identified as being planned or enacted in these projects. On average, seven different PRADS were deployed per project, signaling that a multidisciplinary approach is key to avoiding displacement and gentrification. In addition, Rigolon and Christensen concluded that the PRADS selected for each project must be site-specific for successful implementation. For example, in an area with a hot real estate market surrounding the new park, PRADS directed towards increasing homeownership rates for low-income residents might be challenging. In every case, though, taking deliberate action early-on in the development process will best protect neighborhoods from green gentrification effects. In fact, planners and city managers ought to begin employing these tools at the earliest stages of a park's inception, and anti-displacement should remain a central mission throughout the project's lifespan. Early action will also help to avoid a spike in housing costs due to the Announcement Effect (Rigolon & Christensen, 2019).

Figure 3

Complete List of PRADS, Classified into Six Categories of Actors (Rigolon & Christensen, 2019)

Parks-Related Anti-Displacement Strategies (PRADS)

 For Renters Strategies that protect renters or provide them with services, especially renters in existing units	<ul style="list-style-type: none"> ➤ Just cause eviction ordinance ➤ Rent control ➤ Rent review board ➤ Renters workshops (education and empowerment) ➤ Risk mitigation fund for displaced renters ➤ Renters commission ➤ Other services for low-income renters
 For Homeowners Strategies to preserve or create homeownership among longtime, low-income residents	<ul style="list-style-type: none"> ➤ Foreclosure assistance ➤ Forgivable loans for home improvements ➤ Homebuyers club (education) ➤ Homebuyer financial assistance (e.g. down payment) ➤ Property tax freeze for low-income homeowners ➤ Accessory dwelling units and compact lot subdivision
 For Businesses and Jobs Strategies to create or preserve jobs and small businesses for longtime, low-income residents	<ul style="list-style-type: none"> ➤ Job creation for long-time, low-income residents (e.g. first source hiring) ➤ Small business creation and preservation (e.g. small business disruption funds)
 For Private-Sector Housing Developers Strategies that require or incentivize developers to produce affordable housing units in new developments	<ul style="list-style-type: none"> ➤ Single-room occupancy preservation ➤ Condominium conversion ordinance ➤ Inclusionary zoning ➤ Production incentives (e.g. density bonus ordinance) ➤ Community benefits agreement ➤ Housing linkage fee ➤ Commercial linkage fee
 For Non-Profit and Public Housing Organizations Strategies to create permanently affordable housing, including units owned by nonprofits and public agencies	<ul style="list-style-type: none"> ➤ Housing trust fund ➤ Community land trust and other nonprofit- or city-owned affordable housing ➤ Value capture (e.g. tax increment financing)
 For Public Park Funding Agencies Strategies wherein competitive funding for parks requires or incentivizes anti-displacement strategies	<ul style="list-style-type: none"> ➤ Competitive funding for parks requiring or incentivizing anti-displacement strategies

The list of 26 PRADS, as illustrated in Figure 3, were then classified into six distinct categories of actors — the beneficiaries of PRADS (renters, current and prospective homeowners, business and workers) and the implementers of PRADS (private sector developers,

nonprofits and public housing organizations, and park funding agencies). Researchers also pointed out that park agencies and advocates play a role in all PRADS scenarios but must collaborate with both the beneficiary and implementer actors to achieve their equity goals (Rigolon & Christensen, 2019). It is important to note that many of these PRADS must be applied citywide rather than just in the region surrounding a new park, which can make them more difficult to accomplish, further underscoring the need for a concerted effort. A few of the PRADS for renters, however, are not currently legal under Virginia state law. Rent control or stabilization is banned by Va. Code Ann. § 55.1-1200, allowing landlords to increase rent by any amount at any time (Virginia Residential Landlord and Tenant Act, 2024). Eviction policies in Virginia are also riddled with flaws that harm tenants. Landlords must give a reason for eviction, but it is uncommonly easy to do in Virginia. In 2016, five Virginia cities were ranked in the top 10 locations across America for the most evictions, with Richmond, Virginia holding the second-highest position at an 11.44% eviction rate. That means that in 2016, 17.38 Richmond renter homes were evicted every day (Eviction Lab, n.d.). Additionally, a federal survey found that for every formal eviction, there are two to five informal forced moves that are not well-documented in statistics (Gromis & Desmond, 2021). These forced moves could result from unlivable conditions, failure of landlords to respond to maintenance requests, and tenants not understanding their rights. Landlords can also choose not to renew a lease without having to give any reason. Requiring “just-cause” eviction protections at the state level would decrease Virginia’s disproportionately high eviction rates (Dobbs, 2024).

Most renters are evicted because of failure to pay rent, but the typical grace period for being late is five days after a written “pay or quit” notice. Considering most employees are paid biweekly, this is often not enough time for the tenant to receive a paycheck and pay the owed

rent. Extending the grace period to 14 days is currently under consideration by the Virginia General Assembly (Glass, 2024). Those who don't have enough money to pay rent almost certainly don't have the savings for a security deposit and first month's rent on a new place to live. Other legal protections for tenants such as a right-to-counsel would even the playing field substantially, considering 71% of landlords have legal representation in Virginia eviction cases, compared to only 1.6% of renters (Dobbs, 2024). According to city data, 53% of non-student households in Charlottesville are renters, 54% fall below the 80% AMI, and 52% are above the age of 55 (Robert Charles Lesser & Co., 2016). These demographics demonstrate that protecting renters will protect our most vulnerable residents, making ethical greening a possibility.

Figure 4

Protest in Charlottesville's Belmont Neighborhood Following a Flood of Evictions in 2019
(O'Hare, 2021)



A large portion of the PRADS outlined in Rigolon and Christensen's report are aimed at energizing private-sector housing developers to pay into or build affordable housing units, such as inclusionary zoning and developer impact fees. However, as pointed out by the Charlottesville Low Income Housing Coalition's 2020 Report, these procedures have found little success in Charlottesville. Further incentives and mandates are required for developers to become a constructive actor in the affordable housing fight (CLIHC, 2020). For low-income, pre-existing residents living near new parks, the PRADS focuses on creating homeownership opportunities, offering more stability and working to reduce the racial inequalities observed in homeownership rates across the country (Rigolon & Christensen, 2019).

For businesses and workers, the primary goal is to increase the earnings of low-income residents, while also nurturing local small businesses. These strategies could be realized as policies and funding at the city-wide level, similar to the renter protection strategies, or they can be more localized to the neighborhoods surrounding new parks. Job training programs and employment related to park maintenance and operation provide community engagement and investment into the green space, allowing marginalized residents, who otherwise would not have made use of the green space, to feel more welcome and considered (Jelks et al., 2021). By tying affordable housing to job and income opportunities, the root causes of green gentrification can be combated from multiple angles (Rigolon & Christensen, 2019).

Why Southwood Succeeds

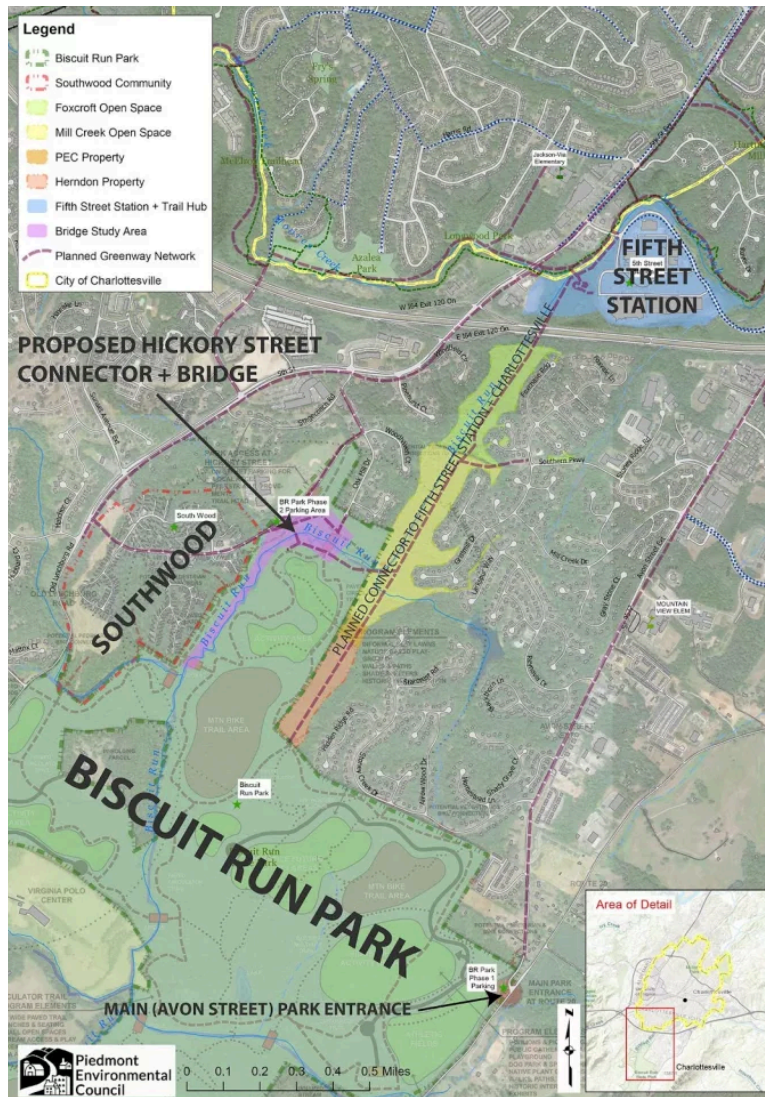
Since construction of Biscuit Run Park began, no Southwood residents have been displaced, a sign that Southwood has been able to protect itself from the risks of green gentrification up to now. When looking back at why this occurred, the order of events was

coincidentally favorable. It is well proven that early-stage initiatives towards affordable housing yields best results (Immergluck & Balan, 2017). Biscuit Run was originally going to be a residential development, but because of the housing market crash, the owners sold the land to the state in late 2009. While the proposed park had been announced, the official master plan wasn't approved until 2019, and Phase 1 construction didn't start until 2024 (Albemarle County Parks & Recreation, 2023). Because Habitat bought Southwood back in 2007 and had already developed a plan for zero displacement phased construction by the time Biscuit Run got rolling, low-income residents didn't need to fear rising property values and real estate speculation as a result of the new park (Habitat, 2019).

Another fundamental principle of PRADS is collaboration amongst actors. The two most relevant groups of implementers are the nonprofit and public housing organizations, which are Habitat and PEC, among others, and public park funding agencies, which in this case, are the Commonwealth of Virginia and the Albemarle County governments. These groups have frequently worked together to achieve their respective goals. In March 2017, they participated in a land swap, which allowed Habitat to build athletic fields near Southwood while the state gained a meadow with a scenic overlook for the park (Tubbs, 2017). Advocates from PEC, including Peter Krebs, are also working with the county to connect Southwood and Biscuit Run by building a bridge over a creek that would otherwise be difficult to cross. The bridge and adjoining trails will be ADA compliant so that the park will be completely accessible for wheelchairs, strollers, bicycles, and pedestrians with minimized environmental impact (Krebs, 2023). Providing residents in Southwood with direct entry to the park that is essentially in their backyard, even if they do not own a car, will ensure equitable access to green space historically underutilized by marginalized communities (Jelks et al., 2021).

Figure 5

Proposed Southwood and Biscuit Run Connector (Krebs, 2023)



In the future, the park's trail system will also connect Southwood residents to a planned greenway that will run from Biscuit Park to Fifth Street Station, a nearby shopping center (Figure 5). The greenway will be approximately 1.25 miles long and will allow Southwood residents to walk or bike to grocery stores and places of employment. From there, the Rivanna Trail can also be accessed, which loops around all of Charlottesville (Krebs, 2023). Habitat also plans on

building storefronts right in Southwood, bringing business to the community (Southwood Community, n.d.-a). Job creation and capping the amount of income that is put towards rent can help Southwood residents to build wealth through a variety of means, highlighting the multidisciplinary nature of PRADS (Rigolon & Christensen, 2019).

Most importantly, Rigolon and Christensen assert that community engagement is essential to the success of PRADS and greening without gentrification (Rigolon & Christensen, 2019). Habitat held several educational workshops where Southwood residents learned all about how housing gets built, from land development engineering to financial aspects. Residents were able to work directly with architects to design their homes, along with community centers and neighborhood parks. A “sweat equity” volunteering program invites the homeowners to build their homes and the homes of their neighbors themselves (Habitat, n.d.-a). Southwood has many professional builders, construction workers, and tradesmen among them, and the manual labor contributes to the sense of ownership. Homeownership is worth more than a piece of paper when you’ve built your house with your own hands (P. Krebs, personal communication, October 23, 2024). Habitat understands that change can be scary, and while many have always dreamed of homeownership, it can be an unfamiliar and confusing experience. It is Habitat’s mission to form a personal relationship with the Southwood Community, taking baby steps towards sustainable redevelopment and seeking engagement from the residents at every stage (Habitat, 2019).

An Ethical Assessment: Applying Actor-Network Theory and Care Ethics

When analyzing the topic of this thesis, the following actors could conceivably be in a network together: the residents of Southwood, residents of Charlottesville and surrounding Albemarle County, the city and county governments, the Albemarle County Department of Parks

and Recreation, urban planners and engineers involved in the development of Biscuit Run, nonprofits such as Habitat and PEC, the park itself, including all infrastructure, flora and fauna, park visitors, and the climate. Of course, there could be infinite actors, but it is important to delineate a network envelope (Francisco, 2024). Rigolon and Christensen applied this concept in their PRADS report, differentiating between beneficiary and implementer actors for green gentrification prevention (Rigolon & Christensen, 2019). All of these actors affect each other, and understanding those relationships will impact both park management and how the Charlottesville community can care for Southwood.

Similarly, care ethics is a philosophy that places caretakers and caregivers in an interconnected network, where the giving and receiving of care is the primary interaction (Sander-Staudt, n.d.). Rather than being in competition with one another, all humans depend on each other, needing to both care and be cared for, even if it is subconsciously felt (Kwan, n.d.; Maio, 2017). This idea could be extended to include our dependence on the natural world — we must care for the environment as it cares for us. Public parks both improve the environment and provide society with a connection to nature, as well as connections to one another. Families can gather for a picnic or a birthday party. When passing someone on a city sidewalk, rarely do we smile and say hello, but it is commonplace on a trail.

Combining ANT and care ethics reveals some significant linkages. As actors under ANT and members of a community, we are influenced by our fellow community members, and they are influenced by us, most likely in ways that are invisible to us. With care, we can have a more intentional, positive impact. By helping to uplift the most vulnerable in our community, we strengthen the community as a whole and improve life for all. These acts of care are not handouts, rather, care ethics stresses that there is mutual respect and balance. Though there is

inherent asymmetry, there will also be reciprocity. Needing care is not a flaw, because it is universal (Maio, 2017). As previously emphasized, the people of Southwood play an active role in the betterment of their own lives, a concept that is clearly deeply felt by Habitat and the other nonprofits working tirelessly for others.

Conclusion

The strong partnership between Habitat and Southwood alongside the development of Biscuit Run Park serves as a model for how both procedural and cultural solutions can be successfully applied to avoid green gentrification and its detrimental effects. Because of Habitat's paradigm of early intervention for affordable housing paired with employment opportunities, community centers, and connectivity to greater Charlottesville, a strong economic and cultural foundation has been established for Southwood that is capable of weathering any gentrification effects (Rigolon & Christensen, 2019; Southwood Community, n.d.-a). Collaboration amongst nonprofits, the county government, and Southwood residents will allow for inclusive access to Biscuit Run, so that everyone can enjoy the health and social benefits provided by the park (Jelks et al., 2021, Rigolon & Christensen, 2019). While these efforts are mostly focused on the Biscuit Run and Southwood area, more widespread policy solutions can be implemented by the City of Charlottesville, Albemarle County, and the Commonwealth of Virginia to better protect low-income families from the threat of gentrification and displacement, both in the pursuit of urban greening and otherwise (Rigolon & Christensen, 2019). Habitat's work towards non-displacement and community involvement in Southwood is unparalleled, and while the work is still ongoing, their strategies will certainly be implemented in future redevelopment projects (P. Krebs, personal communication, October 23, 2024).

Works Cited

Albemarle County Parks & Recreation. (2023). *(Future) Biscuit Run Park*.

<https://www.albemarle.org/government/parks-recreation/biscuit-run-park#ad-image-7>

Best, J. & Walters, W. (2013). “Actor-Network Theory” and International Relationality: Lost (and Found) in Translation: Introduction. *International Political Sociology*, 7(3), 332–334. https://doi.org/10.1111/ips.12026_1

Charlottesville Low Income Housing Coalition. (2020). *The Impact of Racism on Affordable Housing in Charlottesville*.

<https://www.justice4all.org/wp-content/uploads/2020/03/Housing-Report-FINAL.pdf>

Curle, C. (2020, January 24). *Us vs. Them: The process of othering*. Canadian Museum for Human Rights. <https://humanrights.ca/story/us-vs-them-process-othering>

Dobbs, L. (2024, September 6). *Evictors without a cause*. Housing Opportunities Made Equal of Virginia. <https://homeofva.org/just-cause-eviction-law/>

Eviction Lab. (n.d.). *Top Evicting Large Cities in the United States*.

<https://evictionlab.org/rankings/#/evictions?r=United%20States&a=0&d=evictionRate&l=1&lang=en>

Feng, X., & Burt, T. A. (2022). *1 in 4 Australians is lonely. Quality green spaces in our*

cities offer a solution. University of New South Wales Sydney.

<https://www.unsw.edu.au/newsroom/news/2022/08/1-in-4-australians-is-lonely--quality-green-spaces-in-our-cities>

Fountain, L. (2023, August 6). *Habitat Homecoming: Residents celebrate opening of first village at Southwood.* The Daily Progress.

https://dailyprogress.com/news/local/habitat-homecoming-residents-celebrate-opening-of-first-village-at-southwood/article_4f7404f8-33d5-11ee-8451-5f5684e95f60.html

Francisco, P. A. P. (2024, September 17). *Objects, algorithms, creatures, ghosts, and deities: networks of many actors* [Course presentation]. Department of Engineering and Society, School of Engineering and Applied Science, University of Virginia.

Glass, M. (2024, October 24). *Charlottesville to add renter protections to legislative priority list.* WVIR 29 News.

<https://www.29news.com/2024/10/24/charlottesville-add-renter-protections-legislative-priority-list/>

Gromis, A. & Desmond, M. (2021). Estimating the Prevalence of Eviction in the United States: New Data from the 2017 American Housing Survey. *Cityscape: A Journal of Policy Development and Research*, 23(2).

<https://www.huduser.gov/portal/periodicals/cityscpe/vol23num2/ch15.pdf>

Habitat for Humanity of Greater Charlottesville. (n.d.-a). *Homeownership Program*.

<https://www.cvillehabitat.org/apply/homeownership-program.html>

Habitat for Humanity of Greater Charlottesville. (n.d.-b). *Southwood: What We Do*.

<https://www.cvillehabitat.org/what-we-do/southwood-new.html>

Habitat for Humanity of Greater Charlottesville. (2019). *Empowering residents to drive the redevelopment of a trailer park*.

https://www.habitat.org/sites/default/files/documents/COH_Case_Study_GreaterCharlottesville.pdf

Hemphill, E. (2024, December 26). *Habitat awarded \$29.1M in federal grant money for Southwood redevelopment*. The Daily Progress.

https://dailyprogress.com/news/local/business/development/habitat-awarded-29-1m-in-federal-grant-money-for-southwood-redevelopment/article_ac4efbec-c164-11ef-82c3-33b55f70fb1.html

HousingForward Virginia. (n.d.). *HUD AMI Limits Sourcebook*.

<https://housingforwardva.org/applications/sourcebook/affordability-hud-ami/#:~:text=These%20levels%20correspond%20to%20common,AMI%20is%20extremely%20low%20Income.>

Immergluck, D., & Balan, T. (2017). Sustainable for whom? Green urban development,

environmental gentrification, and the Atlanta Beltline. *Urban Geography*, 39(4), 546–562. <https://doi.org/10.1080/02723638.2017.1360041>

Jelks, N. O., Jennings, V., & Rigolon, A. (2021). Green Gentrification and Health: A Scoping Review. *International Journal of Environmental Research and Public Health*, 18(3), Article 3. <https://doi.org/10.3390/ijerph18030907>

Kim, J., Kim, Y., & Stuhlmacher, M. (2024). The green space dilemma: Pathways to greening with and without gentrification. *Journal of Urban Affairs*, 1–22. <https://doi.org/10.1080/07352166.2024.2326489>

Krebs, P. (2023). *Southwood / Biscuit Run Bridge Project*. Piedmont Environmental Council. <https://www.pecva.org/region/albemarle-charlottesville-region/southwood-biscuit-run-bridge/>

Kwan, J. (n.d.). *Care Ethics*. Markkula Center for Applied Ethics at Santa Clara University. <https://www.scu.edu/ethics/ethics-resources/ethical-decision-making/care-ethics/care-ethics.html>

Lee, A. C., Jordan, H. C., & Horsley, J. (2015). Value of urban green spaces in promoting healthy living and wellbeing: prospects for planning. *Risk management and healthcare policy*, 8, 131–137. <https://doi.org/10.2147/RMHP.S61654>

Maio, G. (2017). Fundamentals of an Ethics of Care. *Care in Healthcare: Reflections on Theory and Practice*. https://doi.org/10.1007/978-3-319-61291-1_4

McMillan, B. (2021, June 18). 'Gentrification' Is Not the Real Problem. Shelterforce. <https://shelterforce.org/2021/06/18/a-case-to-stop-saying-gentrification/>

Miller, L. M. (2019). We Need to Change How We Think About Gentrification. *National Civic Review*, 107(4). <https://www.nationalcivicleague.org/ncr-article/we-need-to-change-how-we-think-about-gentrification/>

Nesbitt, L., Sax, D. L., Quinton, J., Harris, L. M., Barona, C. O., & Konijnendijk, C. (2023). Greening practitioners worry about green gentrification but many don't address it in their work. *Ecology & Society*, 28(4), 1–32. <https://doi.org/10.5751/ES-14579-280429>

O'Hare, E. (2021, April 12). *Charlottesville could become first city in the South to fund right to counsel for eviction proceedings*. Charlottesville Tomorrow. <https://www.cvilletomorrow.org/charlottesville-could-become-first-city-in-the-south-to-fund-right-to-counsel-for-eviction-proceedings/>

Ratliff, C. (2023, April 26). *Resident-led redevelopment*. C-VILLE Weekly. <https://c-ville.com/resident-led-redevelopment/>

- Rigolon, A., & Christensen, J. (2019). *Greening without Gentrification: Learning from Parks-Related Anti-Displacement Strategies Nationwide*. UCLA Institute of the Environment and Sustainability. <https://www.ioes.ucla.edu/project/prads/>
- Rigolon, A., Collins, T., Kim, J., Stuhlmacher, M., & Christensen, J. (2024). Does gentrification precede and follow greening? Evidence about the green gentrification cycle in Los Angeles and Chicago. *Landscape and Urban Planning*, 248, 105095. <https://doi.org/10.1016/j.landurbplan.2024.105095>
- Robert Charles Lesser & Co. Real Estate Advisors. (2016, January 13). *Comprehensive Housing Analysis and Policy Recommendations: Affordable and Workforce Housing*. <https://www.charlottesville.gov/DocumentCenter/View/1521/Charlottesville-Comprehensive-Housing-Analysis-and-Policy-Recommendations-PDF>
- Sander-Staudt, M. (n.d.). *Care Ethics*. Internet Encyclopedia of Philosophy. <https://iep.utm.edu/care-ethics/>
- Sauri, D., Parés, M., & Domene, E. (2009). Changing Conceptions of Sustainability in Barcelona's Public Parks. *Geographical Review*, 99(1), 23–36. <http://www.jstor.org/stable/40377364>
- Schnake-Mahl, A. S., Jahn, J. L., Subramanian, S. V., Waters, M. C., Arcaya, M. (2020).

Gentrification, Neighborhood Change, and Population Health: a Systematic Review.
Journal of Urban Health, 97(1):1–25. <https://doi.org/10.1007/s11524-019-00400-1>

Sentara. (n.d.). *Southwood: A Community Reborn*.

<https://sentaracares.com/blog/southwood-a-community-reborn/>

Southwood Community. (n.d.-a). *Frequently Asked Questions*.

<https://southwoodcommunity.org/frequently-asked-questions>

Southwood Community. (n.d.-b). *The Habitat Affordability Model*.

<https://southwoodcommunity.org/affordability>

Summers, J., Acovino, V., Intagliata, C. (2023, May 2). *America has a loneliness epidemic. Here are 6 steps to address it*. National Public Radio: All Things Considered.

<https://www.npr.org/2023/05/02/1173418268/loneliness-connection-mental-health-dementia-surgeon-general>

Trust for Public Land. (n.d.). *Economic & Health Benefits*.

<https://www.tpl.org/resource/economic-health-benefits>

Tubbs, S. (2017, March 23). *Habitat swaps land with state for future Biscuit Run Park*.

Charlottesville Tomorrow. <https://www.cvilletomorrow.org/habitat-swaps-land-with-state/>

United States Environmental Protection Agency. (2024). *Benefits of Green Infrastructure*.

<https://www.epa.gov/green-infrastructure/benefits-green-infrastructure>

Virginia Department of Environmental Quality. (n.d.). *Virginia EJScreen+*.

<https://geohub-vadeq.hub.arcgis.com/pages/v-a-e-j-screen>

Virginia Residential Landlord and Tenant Act, Va. Code Ann. § 55.1–1200 *et seq.* (2024).

<https://law.lis.virginia.gov/vacode/title55.1/chapter12/>

Zeeshan, M. (2024, April 2). *Bridging Ethics and Engineering: The Utilitarian Approach in Civil Engineering*. Alsyed Construction.

<https://alsyedconstruction.com/bridging-ethics-and-engineering-the-utilitarian-approach-in-civil-engineering/>