



Unlocking Affordable Housing Production in the DMV

How factory-built rental communities, housing tax credits, and targeted zoning changes can help deliver more affordable homes with less local gap funding across the Washington region.

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Introduction

Housing affordability is testing a central promise of the American Dream: that hard work should provide a stable home, the confidence to raise a family, and the opportunity to get ahead. For many households, an attainable home is the first stepping stone toward that future. But when housing costs consume too much of a household's income, there is less room for the steps that follow—saving, preparing for homeownership, and building financial security. In 2024, approximately 49% of U.S. renter households spent more than 30% of their income on rent and utilities.

Expanding that opportunity to more households requires producing more homes at attainable rents. Yet rising development costs and interest rates are making those homes increasingly difficult to produce. Across the Washington region, counties are committing substantial public resources to bridge the gap between what affordable housing costs to build and what restricted rents and federal housing tax credits can finance. Pandemic-era federal relief helped developments move forward during a particularly challenging period, but those one-time resources cannot sustain housing production over the long term.

For counties, the challenge is how many affordable homes they can help deliver with limited public funds. Virginia Housing's 2025 LIHTC application data illustrates the scale of the problem: six selected Northern Virginia developments requested an average of approximately \$95,000 per home in identified local support. Reducing the contribution required per home could allow counties to stretch those resources further and help deliver more homes.

This paper examines a three-part solution: a new generation of single-story HUD-code duplexes, quadplexes, and selected detached homes; established federal 4% LIHTC financing; and local zoning that allows these buildings to operate together as a commonly owned, professionally managed multifamily rental neighborhood. Together, these elements offer a way to lower complete development costs and reduce reliance on additional public gap funding.

The strategy builds on several years of research and development by Kronenberg Enterprises (KES), including financial analysis, factory-built housing evaluation, site planning, and engagement with manufacturers, lenders, prospective tax-credit investors, housing agencies, and local officials. With its development partners, KES is advancing more than 300 homes through predevelopment in the Washington region.

To illustrate the strategy's financial potential, this paper presents a separate Case Study of a proposed 175-home rental community on a real site whose identifying details have been removed. At rents modeled to a blended 60% of area median income, proposed financing covers the \$47.33 million complete development budget without additional local or state gap funding. Federal 4% LIHTC equity remains essential, and the model assumes no property-tax abatement. **The Case Study illustrates a different approach to affordable housing production: reducing the financing gap by lowering what homes cost to deliver, rather than continually increasing the public funding request to build them.**



What Changed—and Why Counties Can Act Now

Recent changes in federal housing policy have opened new possibilities for factory-built housing. HUD’s final rule, published September 16, 2024, accommodates up to four dwelling units within a single manufactured home, expanding the potential for duplexes and quadplexes with private entrances within neighborhood-scale multifamily rental communities. [5]

Regional housing policy is also moving toward greater recognition of factory-built housing. Maryland’s Housing Expansion and Affordability Act of 2024, HB 538, protects qualifying new manufactured homes and modular dwellings in zones allowing single-family residential uses. Virginia’s HB 655 and SB 346, effective July 1, 2026, strengthen placement protections and equal treatment for qualifying manufactured homes in districts allowing site-built housing. [15,47,48]

The federal 21st Century ROAD to Housing Act, enacted July 11, 2026, reinforces that direction through manufactured- and modular-housing provisions, including changes concerning homes without a permanent chassis and a review of federal construction-financing barriers. [46]

More recently, HUD’s October 7, 2026 Next Generation Manufactured Housing Action Plan reinforces this momentum. HUD is advancing work on standards for chassis-free construction and installation, more flexible assembly of factory-built modules, pathways for additional manufacturers, and a future performance-based code for buildings containing five or more dwelling units within a single building. While these initiatives would expand the possibilities for factory-built housing, the existing HUD-code framework already accommodates the duplexes and quadplexes central to this paper. [109,110]

For counties, the opportunity to act is already here. Federal standards govern how manufactured homes are constructed, but local zoning determines whether multiple HUD-code buildings can be developed together as a commonly owned, professionally managed rental community. Even where manufactured homes and multifamily housing are permitted separately, local regulations may lack a clear pathway for combining these housing forms on one development parcel as a multifamily rental community.

Counties can address this through a coordinated review by housing, planning, and zoning staff, working with counsel, followed by targeted amendments where needed. Establishing a clear, generally available zoning pathway in suitable districts would give developers greater certainty to pursue sites and financing while preserving ordinary development reviews and public safeguards. **As the analysis that follows illustrates, proactively establishing this zoning pathway could be one of the most meaningful steps counties take to expand attainable housing production in our region, while potentially saving millions in local public resources that would otherwise be needed to deliver those homes.**

Reading guide: the growing financing gap (p. 3); the factory-built rental community model (pp. 4–5); the 175-home financial case study (pp. 6–9); the working households behind the numbers (pp. 10–12); broader benefits and site suitability (p. 13); and zoning reforms and next steps for counties (pp. 14–15). Supporting research, financial methodology, sources, and conceptual illustrations follow in the appendices.

1 The Growing Financing Gap in Affordable Housing Development

Affordable housing operates within a fundamental financial constraint: rents are restricted by household income limits rather than the cost of developing the property. Although HUD adjusts income limits annually, LIHTC rent ceilings do not rise in response to higher construction costs or borrowing rates. [11,84] After operating expenses and reserves, rental income determines how much mortgage financing a development can support, while federal housing tax credits provide investor equity. When these sources are insufficient to cover complete development costs, the remaining financing gap must be filled before construction can proceed.

How Rising Costs and Interest Rates Compound the Problem

In recent years, two financial pressures have converged to make affordable housing increasingly difficult to produce. The Census Bureau’s national constant-quality multifamily construction index rose 26.5% from Q4 2020 to Q4 2025 and 50.5% from Q4 2015. [49] At the same time, higher interest rates reduced borrowing capacity. The annual average 10-year Treasury yield rose from 0.89% in 2020 to 4.29% in 2025, illustrating the broader increase in borrowing costs rather than LIHTC mortgage rates. [50]

Consider a hypothetical 250-home conventional affordable rental development with an assumed \$94 million complete cost under FY2021 conditions. At 4% mortgage interest, restricted rents support a \$53.21 million mortgage after allowing for payments on state loans. Federal LIHTC equity provides \$28.90 million, supplemented by a \$2 million deferred developer fee, \$2.70 million in specified state loans, and \$2 million in sponsor-contributed land. The potential local gap is \$5.19 million, or about \$21,000 per home. Appendix D explains the fee, eligible-basis, and funding assumptions. [7,8,111–116]

Under FY2026 conditions, complete costs are assumed to rise \$25 million to \$119 million, with mortgage interest at 6.5%. Higher published Washington-area rent ceilings between 2021 and 2026, after rising expenses and the same state-loan payments, support a \$50.95 million mortgage; added eligible costs increase federal equity to \$35.70 million. Even with those offsets, the potential local gap reaches \$25.65 million, or about \$103,000 per home. **The same 250 homes need \$20.46 million more in gap financing—about \$81,830 per home.** Without that additional capital, production can stall. Appendix D explains the assumed cost increase and financing calculation. [7,8,107]

Temporary Federal Relief Helped Bridge the Gap, but Financing Pressures Persist

One-time federal pandemic recovery funds helped counties respond as construction costs and interest rates rose. Fairfax County, for example, committed \$55 million in American Rescue Plan Act (ARPA) funds to affordable housing, helping bridge financing gaps and advance developments during a challenging period. That funding was temporary; the financial pressures it helped alleviate have persisted. [20]

The need for additional financing remains substantial. Six selected 2025 Northern Virginia LIHTC applications, representing 416 homes, requested an average of \$94,790 per home in identified local support, giving each application equal weight. [2] Alexandria provides a longer perspective. In 2022, the city reported that its subsidy per affordable home had increased from approximately \$40,000–\$50,000 in 2013 to \$90,000–\$100,000 or more, reflecting both rising development costs and deeper affordability requirements. [55]

By March 2026, Alexandria identified three developments ready to proceed but awaiting \$7 million in city funding, beyond \$11.6 million in planned FY2027 funding already committed to other projects. City staff estimated that more than \$100 million would be needed to address its existing affordable housing pipeline. The distinction is critical: a strong pipeline of proposed affordable housing does not guarantee that those homes will be built when the financing needed to move them forward remains unresolved. [52]

Sustaining affordable housing production requires a response to persistent financing gaps beyond temporary funding. Increasing public funding remains one option; lowering complete development costs offers another, helping counties stretch limited resources further and sustain production. That is the opportunity this paper examines.

2 A Lower-Cost Development Model: Factory-Built Rental Communities

The proposed strategy approaches the affordable housing financing gap from a different direction: reducing the complete cost of delivering homes rather than relying solely on larger public subsidies. It combines factory-built residential construction, common ownership and professional management, and established LIHTC financing within a unified rental community.

A single owner controls the land, homes, and common areas, while professional management handles community maintenance and administers the applicable income and rent restrictions. Residents rent complete homes with individual entrances and access to shared amenities.

New Housing Forms, One Rental Community

HUD-code duplexes and quadplexes provide more ways to organize homes within a low-rise neighborhood. Different bedroom sizes and building forms can operate together as one multifamily rental development.



Figure 1. Duplex concept with private entrances and a one-story residential form. [24]

This ownership structure places responsibility for the homes and shared infrastructure with the property owner. Maintenance, landscaping, private streets, utilities, and common facilities can be managed through a unified operating budget. The buildings sit on permanent foundations and connect to public utilities.

Manufactured housing follows federal HUD construction standards. Modular housing follows a separate building-code pathway. Both are forms of factory construction, but the Case Study focuses on HUD-code products. [5,83]

How LIHTC Financing Fits the Model

LIHTC provides a familiar framework for financing and maintaining income-restricted rental housing. Investor equity reduces the amount the property must borrow, and affordable rents support operating costs and mortgage payments. The aim is to use lower complete development costs to reduce the additional public contribution needed after those sources are applied.

Virginia Housing has already begun incorporating manufactured housing into LIHTC rental development. In December 2025, it reported its first manufactured-housing LIHTC allocation, involving 47 manufactured homes on scattered sites in Petersburg. This establishes a relevant precedent: manufactured rental homes can receive LIHTC financing in Virginia. Separately, its 2025 innovation awards included a demonstration comparing modular and conventional construction, showing support for evaluating new building methods. The common-parcel duplex and quadplex communities proposed here would still require project-specific financing and program approvals. [45,77]

The broader strategy can also serve age-restricted communities. KES’s separate predevelopment work includes an age-restricted LIHTC component with similarly promising modeled results. That work remains in predevelopment; it is distinct from the general-occupancy 175-home Case Study. [66]



Figure 2. Streetscape concept showing homes, sidewalks, landscaping, and shared space. [24]

Where Local Zoning Comes In

Local zoning needs to accommodate both the complete rental community and its HUD-code building forms, including multiple principal buildings on a common development parcel. Counties can clarify suitable existing permissions or adopt targeted changes that make this approach available to qualifying developments in appropriate districts. Individual projects would then proceed through the applicable site-review and permitting processes.

The Case Study that follows brings together the complete cost of development, the income affordable rents can generate, the mortgage financing that income can support, and the equity available through federal 4% housing tax credits. Its modeled sources cover the budget without additional local or state gap funding, illustrating how lower production costs could remove a major financing barrier and help bring more attainable homes to the Washington region.



3 A Financial Case Study: 175 Affordable Rental Homes

The Homes and Their Affordability

The Case Study evaluates 175 proposed general-occupancy rental homes on a real site, using a modeled area of 20.62 gross acres and density of approximately 8.49 homes per acre. The program combines one- through four-bedroom homes, permanent foundations, public utilities, private entrances, and common ownership. Mixed-bedroom duplex pairings can be refined through site design. [1,18]

Table 1. The Modeled Home And Rent Schedule

Home Type	Homes	Modeled Area	Net Rent / Month	Utility Allow.	HUD Max: Rent / Month
1 bedroom, quadplex concept	45	507 sf	\$1,769	\$100	\$1,869
2 bedrooms, duplex concept	35	1,137 sf	\$2,092	\$150	\$2,242
3 bedrooms, duplex concept	75	1,137 sf	\$2,416	\$175	\$2,591
4 bedrooms, detached concept	20	1,674 sf	\$2,690	\$200	\$2,890
Total	175	181,365 sf	\$387,825 combined	—	—

Source: [1], residential assumptions. Gross rent ceilings use FY2026 Washington-area MTSP limits effective May 1, 2026 [10,95]

Ninety-five homes, or 54.3%, have three or four bedrooms. That offering gives the concept a distinct role alongside conventional apartments: family-sized rental homes in a low-rise neighborhood setting.

The Complete Development Cost

The complete development budget is \$47.33 million at the February 2028 construction start, or \$270,469 per home. It includes \$1.83 million of escalation above the April 2026 estimate and the factory-unit and on-site improvement allowances for all 175 homes. Table 2 brings together the full cost of delivering the community. [1, pp. 3, 12]

Table 2. Complete Development Budget In February 2028 Dollars

Cost Category	Total	Per Home	Share
Land	\$3,110,000	\$17,771	6.6%
Hard costs excluding contingency	\$28,599,454	\$163,425	60.4%
Soft costs excluding developer fee	\$3,685,834	\$21,062	7.8%
Construction interest	\$2,646,432	\$15,122	5.6%
Financing costs excluding interest	\$1,445,804	\$8,262	3.1%
Developer fee	\$4,111,000	\$23,491	8.7%
Construction contingency	\$1,423,111	\$8,132	3.0%
Deposits, reserves and working capital	\$2,310,477	\$13,203	4.9%
Total development cost	\$47,332,112	\$270,469	100.0%

Source: [1], pp. 1, 3 and 5. Components total \$47,332,112; per-home values divide by 175. Small rounding differences may occur. The budget includes factory units, on-site improvements, site infrastructure, and the other costs of delivery.

Where the Expected Cost Advantage Comes From

The model combines factory-produced homes with simple one-story forms and individual entrances. Its building allowance separates \$11.84 million for factory units—about \$67,669 per home—from \$6.34 million for on-site home improvements, about \$36,204 per home. Repeated layouts and factory assembly are intended to reduce on-site building work. Private entrances avoid the need for shared interior corridors and elevators in the proposed residential buildings. [1, p. 12]

Site development represents \$9.19 million, or \$52,492 per home, including \$2.11 million for amenities. Land and acquisition add \$3.11 million. The estimate includes allowances for installation, foundations, roads, utilities, drainage, required fire and accessibility work, and escalation. Historical manufacturer prices inform the product allowances; installation and site work are included separately to account for the full cost of delivery.

How the Costs Compare with Other Affordable Housing Developments

Table 3 compares complete costs and bedroom mix with the Northern Virginia application sample.

Table 3. Development Costs and Bedroom Mix

Development / Sample	Homes	Cost Per Home	Bedrooms Per Home
Case Study	175	\$270,469	2.40
Northern Virginia 4% new-construction applications, 2022–2026	2,973 in 29 records	\$510,989 average	1.58

Sources: [1,2]. Application costs are averaged by record; bedroom counts are weighted by homes. Bedroom count does not establish comparable floor area. Appendix E explains the sample and methods.

The comparison is striking: \$270,469 versus \$510,989 per home represents approximately 47% lower modeled complete development costs, while the Case Study provides 2.40 bedrooms per home versus 1.58. This points to an opportunity to deliver more family-sized affordable rentals while reducing the amount counties must help finance. Differences in sites, building forms, dates, and requirements prevent attributing the entire cost difference to factory construction. The central implication remains: lower complete costs can reduce the financing gap and the additional public contribution needed to close it. [1,2; Appendix E]



Rents and Operating Income

The intended affordability program combines homes designated at 50%, 60%, and 70% AMI, balanced to approximately a 60% average. For simplicity, the model expresses this blend as 60%-AMI rental revenue; balancing designations within bedroom categories preserves that revenue apart from minor rounding. Section 4 explains what these designations mean for residents. [9–11]

LIHTC affordability restrictions generally extend for at least 30 years, subject to applicable requirements and any longer agency commitment. The goal is a lasting supply of homes where working households can find stability and plan for the future. [84]

At April 2026 assumptions, monthly owner rent averages \$2,216 per home after utility allowances, before vacancy. Annual operating expenses average \$7,067 per home excluding property taxes. Table 4 shows how rental and other income cover those expenses and leave income available for financing. These are annualized base-date operations; the mortgage comparison below uses February 2028 trended income.

Table 4. April 2026 Annual Operations — Totals and Per Home

Operating Item	April 2026 Annual Total	April 2026 Annual Per Home
Apartment owner rent	\$4,653,900	\$26,594
Other income	\$54,534	\$312
Gross potential income	\$4,708,434	\$26,905
Vacancy at 5%	(\$235,422)	(\$1,345)
Effective gross income	\$4,473,013	\$25,560
Operating expenses excluding taxes	(\$1,236,690)	(\$7,067)
Property taxes	(\$303,008)	(\$1,731)
Net operating income	\$2,933,314	\$16,762
Replacement reserve	(\$52,500)	(\$300)
Income available before financing	\$2,880,814	\$16,462

Source: [1], pp. 22–26 and 29–31. Per-home amounts divide annual totals by 175 and are rounded to the nearest dollar. Small differences arise from rounding. Appendix D preserves the separate February 2028 assumptions used for mortgage coverage.

Property taxes add \$1,731 per home annually, with no abatement, bringing operating expenses including taxes to about \$8,798 per home. A \$300 annual replacement reserve leaves approximately \$16,462 per home before financing. Owner rent excludes the utility allowance; gross rent includes it for affordability-limit purposes.

How Rental Income Supports the Mortgage

For the February 2028 comparison, income after operating expenses and reserves is \$3,041,236. At 6.75% interest and 40-year amortization, the modeled \$31.00 million mortgage requires approximately \$2.24 million in annual principal and interest, or \$2.32 million including mortgage insurance. That same-date income provides about 1.31 times coverage of the combined payment. In practical terms, that is about \$1.31 of income after operating expenses and replacement reserves for every \$1.00 of annual mortgage principal, interest, and insurance payments—a coverage cushion at the modeled affordable rents. [1; Appendix D] Federal tax-credit equity complements the mortgage, supplying capital that restricted rental income does not have to repay through scheduled debt service.

How the Development Budget Is Financed

The intended structure pairs tax-exempt bond financing with 4% LIHTC equity. Bond financing helps a qualifying development access federal credits; an investor contributes equity in exchange for credits claimed over ten years. The 4% rate applies to qualified basis, not total project cost. Bonds are part of the debt execution, not an extra source to add on top of the modeled mortgage. [14,84,85]

The illustrative financing plan assumes a \$31.00 million HUD Section 221(d)(4) mortgage and \$12.98 million of federal tax-credit equity. Together they cover 92.9% of complete development cost. Deferred developer fee, interim operating income, and a small residual sponsor contribution cover the balance. [1]

Table 5. Permanent Capital Sources And The Remaining Gap

Capital Source	Amount	Share
Senior mortgage	\$31,003,150	65.5%
Federal LIHTC equity	\$12,980,242	27.4%
Deferred developer fee	\$2,000,000	4.2%
Interim operating income	\$1,347,422	2.8%
Sponsor cash in the sources table	\$1,298	<0.1%
Local / state gap funding	\$0	0.0%
Total sources	\$47,332,112	100.0%
Total development cost	\$47,332,112	100.0%
Remaining financing gap	\$0	0.0%

Source: [1], pp. 5–6, 32–34 and 37–38.

The \$1,298 sponsor-cash line balances permanent financing; it is not the total upfront cash required. The model includes approximately \$1.67 million in predevelopment equity, construction bridge financing, interim operating income, and \$2 million of deferred developer fee. Private capital and construction funding remain necessary; Appendix D explains timing and repayment. [1; Appendix D]

What a Zero Local Funding Gap Could Mean

Under the modeled assumptions, listed sources cover the complete budget without additional local or state gap financing. Federal tax-credit equity remains essential public support; no state credit, geographic basis boost, donated land, or property-tax abatement is assumed. Reducing each development’s additional contribution could preserve county resources for more homes, deeper affordability, preservation, or other needs. The next section considers the working households these economics could serve.

4 The Working Households Behind the Numbers

Attainable housing should offer a place to build a life at every stage—from a young professional’s first rental home, where saving toward homeownership can begin, to a family needing more space or an older adult looking to downsize without leaving a familiar community. This strategy can serve teachers, first responders, healthcare and service workers, and households supported by one income or two. Private entrances, low-rise neighborhood character, shared outdoor space, and professional maintenance offer the appeal of a quiet suburban neighborhood at income-restricted rents, potentially leaving more room in household budgets for savings, family needs, and long-term financial security. In the Washington region, even incomes that may seem substantial nationally can fall within affordable-housing income limits.

Working Households Across a Range of Incomes

Eligibility depends on actual household size, combined countable income, and the local HUD income-limit area. The examples below show how these rules accommodate different household circumstances. AMI is locally adjusted program terminology, not a rule that simply divides a county’s median household income in half. [10,94,102]

Table 6. Illustrative Working Households Using Published Wage Inputs

Illustrative Household	People	Annual Income	Washington-Area Designation
Medical assistant living alone	1	\$46,640	50% AMI
Beginning public-school teacher living alone	1	\$65,000	60% AMI
Firefighter supporting two children	3	\$66,980	50% AMI
Teaching assistant and restaurant cook with two children	4	\$89,120 combined	60% AMI
Paramedic and retail salesperson with two children	4	\$111,800 combined	70% AMI

Published wages; illustrative household compositions. BLS May 2025 Washington-area annual medians, except the teacher’s 2026–27 starting base salary at Prince William County Public Schools (PWCS), for a bachelor’s degree and 195-day contract. The designation shown is the lowest of 50%, 60%, and 70% that accommodates the example, not its only possible designation. Examples assume no other countable income; they are not verified applications, occupancy commitments, or occupation-based admission preferences. [97–100]

Household size matters as much as the paycheck. A beginning teacher earning \$65,000 alone fits the 60%-AMI designation, while a firefighter earning \$66,980 and supporting two children fits 50%. An empty-nester couple with an illustrative \$75,000 in combined countable income falls below the two-person 60% limit of \$79,740. [10,94,97,100]

Family-Sized Homes Near Work and School

The Case Study includes 75 three-bedroom and 20 four-bedroom homes: 95 family-sized rentals, or 54.3% of the development, compared with a 12.8% three-plus-bedroom share in the 25 general-occupancy Northern Virginia applications reviewed. [1,2] Adequate bedrooms, individual entrances, single-story living, and neighborhood-scale buildings could give families more options near work and school without the expense of buying a house or renting a more expensive market-rate property. The conceptual plans pair sidewalks and shared open space with professional maintenance and LIHTC affordability protections. [24,25]



What Attainable Housing Can Mean for a Family's Future

For many working households, the challenge is not simply finding a home, but finding one they can afford while still meeting everyday needs and building financial security. Across three selected Loudoun apartment communities, published two-bedroom base rents average \$2,967 per month, compared with the Case Study's modeled 60%-AMI base rent of \$2,092, a difference of approximately \$10,500 annually. For three-bedroom homes, the comparison is \$3,542 versus \$2,416, a potential difference of \$13,500 annually. For the teaching assistant and restaurant cook in Table 6, raising two children on a combined \$89,120, those three-bedroom rents would consume approximately 48% versus 33% of gross household income. [1,4,28–30]

Homeownership presents an even greater financial hurdle. Appendix G illustrates purchasing a \$765,000 home in Loudoun County. A 5% down payment requires \$38,250, increasing to approximately \$61,200 with an assumed 3% allowance for closing costs, before other upfront expenses. With the larger mortgage and mortgage insurance, the estimated monthly ownership budget reaches approximately \$7,037. Even with a 20% down payment of \$153,000, monthly ownership costs are approximately \$5,888. A smaller down payment reduces the initial cash requirement but does not necessarily make the ongoing cost of ownership affordable.[72–74,79,117,118].

For many households, this illustrates the missing first rung on the housing ladder. Market-rate rents can consume the income families need to save, while homeownership requires substantial savings and the earnings to support an even larger monthly housing payment. An attainable rental home can provide that critical starting point—a stable place to live while building the financial foundation for what comes next.

The potential impact becomes significant over time. If sustained for five to seven years, the illustrated two- and three-bedroom rent differences represent \$52,500–\$94,500 in additional household budget capacity before investment returns. For a family able to save a meaningful portion of that difference, the opportunity to accumulate a future down payment becomes much more realistic. The higher amounts could cover the illustrative 5% down payment and estimated closing costs discussed above. Actual savings depend on household circumstances, and purchasing a home would still require sufficient income to support ongoing ownership costs. [1,4,28–30,72–74,118]

Long-term investing offers another path toward financial security. Investing half of the illustrative \$13,500 annual three-bedroom rent difference for seven years, then leaving it invested without further contributions, could grow to approximately \$169,000 by Year 30 at an assumed 5% annual return. Investing the full difference could produce approximately \$338,000. Appendix G provides the calculations.

The benefits extend beyond what can be measured in dollars. More manageable housing costs can give families greater freedom to balance work, childcare, caregiving, and time together. Some of that financial breathing room can also flow back into the local economy through spending at neighborhood shops, restaurants, and services, supporting the businesses and communities where residents live. Young professionals may find it easier to save toward their first home, families may have greater flexibility in how they raise their children, and older adults may be able to downsize without leaving familiar communities. **The value of attainable housing is not that it guarantees the next step in life, but that it gives people greater financial freedom, opportunity to take it, and allows our communities to thrive.**



What Households Can Earn—and What They Could Pay

The intended program combines homes designated at 50%, 60%, and 70% AMI, balanced to approximately a 60% average. Eligibility uses actual household size and countable income; rent ceilings use bedroom count. Tables 7 and 8 show the income limits and monthly base rents. Appendix G explains the balancing arithmetic and final compliance requirements. [9,94–96]

Table 7. FY2026 HUD Maximum Annual Household Income — Washington Area

Household Size	50% AMI	60% AMI	70% AMI
1 person	\$58,150	\$69,780	\$81,410
2 people	\$66,450	\$79,740	\$93,030
3 people	\$74,750	\$89,700	\$104,650
4 people	\$83,050	\$99,660	\$116,270
5 people	\$89,700	\$107,640	\$125,580
6 people	\$96,350	\$115,620	\$134,890

Official FY2026 limits, effective May 1, 2026. Sources: [10,94,95].

For a family of four, the teaching assistant and restaurant cook earning \$89,120 combined fit the 60% limit; the paramedic and retail salesperson earning \$111,800 fit the 70% limit. One or two paychecks can therefore support an eligible household. [97–100]

Table 8. Illustrative Monthly Base Rents — Case Study Housing Types

Home Type	50% AMI	60% AMI	70% AMI
1 bedroom	\$1,457	\$1,769	\$2,080
2 bedrooms	\$1,718	\$2,092	\$2,466
3 bedrooms	\$1,984	\$2,416	\$2,848
4 bedrooms	\$2,208	\$2,690	\$3,172

Illustrative monthly base rents payable by tenants, before separately paid utilities: maximum gross ceilings less modeled utility allowances of \$100/\$150/\$175/\$200 for one through four bedrooms. Actual rents, allowances, and final designations remain subject to project-specific requirements. [1,11,94,95]

Three-bedroom base rents of \$1,984–\$2,848 across the 50%–70% range compare with \$3,542 at the three selected Loudoun communities. Income averaging broadens the options beyond a single designation. Some eligible households may need lower rents or rental assistance. [1,4,28–30,94]

Why Location Matters

Nine of the eleven priority counties share these Washington-area income and rent limits: Loudoun, Prince William, Stafford, Fauquier, and Spotsylvania in Virginia; Montgomery, Frederick, Charles, and Prince George’s in Maryland. The Case Study’s regulated ceilings and eligibility calculations apply across all nine, giving the strategy a broad regional starting point. Actual rents and costs remain site-specific. [10,94,95]

Howard uses Baltimore-area limits; St. Mary’s has its own schedule. Their 60%-AMI three-bedroom gross ceilings are \$2,091 and \$2,209, versus Washington’s \$2,591. Lower restricted revenue can reduce mortgage capacity, but lowering complete costs still reduces the amount to finance. Lower land, infrastructure, or operating costs may offset part of the revenue difference. The strategy warrants consideration throughout the region; a zero-gap result requires local underwriting. A workable zoning pathway lets developers test sites and pursue savings under each county’s conditions. [10,94,95]



5 Broader Benefits and Where the Model Fits

More Housing from Limited Public Capital

The six selected 2025 Northern Virginia applications provide a concrete scale for local funding needs: Goose Creek Village West requested \$75,000 per home, Commonwealth Lofts identified about \$81,600 including a fee waiver, and the equal-application average was \$94,790. [2] Informed by that separate application evidence and Alexandria’s historical subsidy estimates, \$100,000 per home is a rounded illustrative gap-funding benchmark in today’s regional affordable housing discussion: \$5 million supports 50 homes at that amount. [55]

Avoiding or reducing a new public gap loan preserves lending capacity for other housing priorities. The public benefit also depends on repayment expectations, tax revenue, public-service costs, and other assistance. County-administered funds may combine federal, state, and locally raised dollars; Appendix E distinguishes these sources in the county comparisons.

Less Debt at the Next Preservation Cycle

Closing the initial funding gap does not settle the long-term cost of public soft debt. Subordinate loans often receive only the operating cash left after senior debt, deferred developer fees, and other priorities, with larger repayments deferred until a sale or refinancing. Substantial balances can remain when rehabilitation or potential resyndication is needed, competing with repairs and reserves for new financing. For counties relying on revolving funds, capital remains unavailable for other homes until cash is actually returned; accrued interest alone does not replenish the fund. These obligations deserve attention alongside the subsidy needed to get a development built. [23,78]

Commonwealth Lofts makes the issue tangible. Using its submitted projections, the simplified screens in Appendix F leave approximately 53% to 84% of the original county-loan principal outstanding after 15 years, before interest or sale/refinancing proceeds. A long-term balance may be intentional, and not every property resyndicates in Year 15; the practical question is how much financing flexibility remains when preservation work is needed to bring the community into the next chapter. [7,23,78]

Lower initial development costs can reduce the amount of subordinate debt a project requires, leaving more flexibility for future rehabilitation and keeping public capital available for other housing needs. Counties benefit both when a loan is avoided and when the homes need less additional support at a later financing cycle. These are related consequences of avoiding the same debt, not separate savings to add together. Appendix F explains why genuine replenishment depends on net cash returned after any new county lending.

Site Conditions That Support Feasibility

Suitable sites need sufficient developable land and allowable density, available utilities and infrastructure, workable road access and stormwater solutions, and practical connections to jobs, schools, and services. Approximately 15–60 acres illustrates the scale of larger neighborhood-style communities, not a minimum parcel size; Appendix C’s 11.33-acre concept shows why smaller opportunities should remain available. To translate zoning reform into actual housing production, the pathway should apply in appropriate districts where realistically developable land is available. A pathway confined to areas with little developable land would do little to expand production. [66; Appendix C]

6 Making Room for Factory-Built Rental Communities

A county may allow manufactured homes and multifamily housing yet still lack a clear pathway for a rental community that combines them. Separate definitions for manufactured homes, parks, detached dwellings, duplexes, and multifamily buildings can leave the proposed arrangement caught between categories. Even where density is sufficient, rules for individual lots, principal buildings, building forms, or setbacks may prevent otherwise suitable communities from being considered. [93]

Recognizing the Complete Rental Community

Federal HUD standards govern how manufactured homes are constructed; local zoning governs where and how they may form a rental community. Counties can authorize the complete development as a multifamily or integrated residential use while expressly including HUD-code detached homes, duplexes, and quadplexes. General permission for multifamily housing is insufficient if manufactured-home definitions still exclude those buildings or place them under incompatible park regulations. The ordinance should identify which local provisions apply and which the community standards replace. A new local use classification would not change or override the buildings' federal HUD-code construction classification. [5,83,93]

The framework should allow multiple principal residential buildings on a common development parcel without requiring separate dwelling lots. Density would be counted consistently by dwelling units, within authorized district limits. Setbacks at exterior property boundaries and coordinated internal building-separation standards would regulate the shared site. Necessary road parcels and recorded access or utility easements could remain part of the development arrangement.

Private internal roads, parking, sidewalks, utilities, stormwater facilities, and shared open space should be addressed together, with professional management and enforceable maintenance responsibilities that continue with successor owners. Applicable construction, fire, accessibility, environmental, engineering, infrastructure, and public-safety requirements would remain. The result would regulate the community according to its residential use and impacts while providing standards suited to how it is owned and operated.

Existing County Precedents: Useful Building Blocks, but Not a Complete Pathway

Existing county ordinances already contain useful pieces of this framework, although none independently authorizes the complete proposed model:

Prince George's County's Greenbelt overlay permits specified multiple principal dwellings on one parcel and gives qualifying RSF-A development relief from selected individual-lot dimensional standards. It supports coordinated buildings on a shared parcel, but the relevant dimensional exemption expressly excludes multifamily dwellings. [90]

Howard County's cottage-cluster provisions coordinate small detached homes, including single-owner rentals, with shared maintenance and site standards. They offer a framework for managed residential clusters, but apply to age-restricted detached cottages—not this general-occupancy HUD-code duplex and quadplex model. [91]

Charles County measures side and rear yards at exterior parcel boundaries where individual lots are absent, allowing setbacks to address a shared site. A separate restriction on multiple principal buildings remains, so the setback provision alone does not authorize the proposed community. [92]

These existing provisions offer familiar building blocks that counties can adapt through targeted amendments.

Counties can establish where this housing form may be proposed and which site standards apply without first resolving individual LIHTC structures, investor commitments, or federal construction approvals. Developers and financing participants would pursue those project-specific approvals through the normal processes. [5,16,89]



7 The Next Step for Counties

Counties should proactively establish a predictable, generally available zoning pathway for qualifying attainable factory-built rental communities in districts where suitable developable land exists. County leaders can direct housing, planning, and zoning staff, working with counsel, to clarify existing permissions or prepare targeted amendments for public consideration. The framework should accommodate appropriate HUD-code housing forms and multiple principal residential buildings on a commonly owned development parcel, without relying on individually negotiated rezonings or project-specific exceptions.

The pathway should apply where suitable parcels can realistically be developed or assembled, with sufficient usable land, infrastructure and utility capacity, road access, stormwater accommodations, and connections to jobs, schools, and services. Larger neighborhood-style communities might occupy approximately 15–60 acres, while smaller parcels may also work. Roughly 8–16 homes per gross acre is an indicative planning range, not a regulatory mandate or promised yield; the Case Study models approximately 8.49. Feasibility depends on site conditions, housing forms, infrastructure, and allowable zoning. [66; Appendix C]

The housing products already exist. The federal financing tools are established. Developers are ready to put them to work. In many counties, a clear local zoning pathway remains the missing piece needed to bring these elements together. Without that pathway, developers may pass over even financially promising sites before a proposal is ever submitted. County leaders have an opportunity to establish it now—opening the door to more attainable homes while making limited public resources go further.

For young professionals beginning their careers, working families raising children, and older adults looking to downsize without leaving their communities, the benefits extend far beyond lower housing costs: more financial breathing room for everyday needs and savings, greater freedom to make choices about work and family, more money available to support local businesses, and the stability to put down roots and plan for the future. **For county leaders, those potential benefits present a compelling case for a carefully crafted zoning text amendment that opens the door to these communities while preserving ordinary development safeguards.** At its heart, that is the promise of the American Dream—a place to call home and the opportunity to build a better life.



Author's Note

I grew up in Loudoun County, Virginia, and have watched housing affordability become an increasingly difficult challenge across the Washington region. As far back as 2013, when many of my friends were beginning their careers in DC, I saw some spending half or more of their incomes on housing, with limited affordable options and little room left to save, build financial security, or plan for a family.

My experience in real estate development and affordable housing finance has motivated me to find practical ways to produce the homes our communities need. For several years, I've devoted much of my work through Kronenberg Enterprises (KES) to developing the approach presented in this paper, working with manufacturers, financing institutions, housing agencies, development partners, and local officials.

Along the way, I've also learned how difficult it can be to turn encouraging conversations into meaningful action. I've worked with county officials and housing staff on promising sites and preliminary proposals that generated genuine interest, yet did not progress to a clear decision or next step. These experiences have shown me that the challenge is often not a lack of interest or commitment from the people involved, but the difficulty of navigating competing priorities and established processes that may not provide a clear pathway for new approaches. Greater clarity about what can be built, where it can be built, and how proposals move forward would help turn that shared interest into meaningful progress.

That uncertainty also has real financial consequences. Over the past decade, I've seen millions of dollars invested in predevelopment efforts that never reached construction. Developers must often commit significant capital long before financing or land-use approvals are assured. As development costs and approval risks have increased, even promising housing opportunities can become difficult to justify pursuing. A more predictable framework would allow local governments and developers to evaluate opportunities earlier, preserve important public safeguards, and focus their time and resources on projects with a realistic path to delivering homes.

That is part of why I wrote this paper. After years of evaluating conventional development, modular construction, 3D-printed homes, and other approaches, I believe this strategy represents the clearest near-term opportunity I've identified to achieve the kind of 30–40% reduction in complete development costs that are needed to make affordable housing economics sustainable over the long term. Growing federal and state recognition of modern manufactured housing makes this an especially important time to explore that potential. My purpose is to demonstrate how these products and established financing tools can come together in a professionally managed rental community—and how local zoning can make that approach possible.

I hope affordable housing advocates, organizations, industry partners, and county leaders will examine these findings, share the research, and help build support for proactive zoning changes that open a path for this approach. The opportunity is here. My hope is that we can work together to make room for it.

Stefan Kronenberg

Founder, Kronenberg Enterprises



Appendix Guide

The appendices bring together conceptual illustrations, financial methodology, regional evidence, and supporting research.

APPENDIX	PAGE
A Visualizing a Factory-Built Rental Community Aerial, streetscape, exterior, and interior concepts.	18
B Conceptual Housing Plans Illustrative one- through four-bedroom layouts.	21
C Community Planning Concepts Community layouts, site programs, and planning concepts.	25
D Methods and Key Assumptions Case Study assumptions, financing methods, and sensitivity analysis.	30
E Regional Application Evidence Regional development costs, funding requests, and county context.	38
F Soft Debt and Long-Term Preservation Repayment screens and implications for future preservation.	43
G Household Choices and Rent References Rental comparisons, homeownership illustrations, and FY2026 income and rent schedules.	44
— Sources and Evidence Numbered references and links to supporting evidence.	51

Appendix A: Visualizing a Factory-Built Rental Community

Wooded Residential Neighborhood



Figure 3. Illustrative aerial concept showing a low-rise residential neighborhood with internal streets, shared open space, landscaping, and stormwater features. [119]

Source: owner-supplied rendering [119]

Exterior Residential Design Reference



Figure 4. Exterior design reference illustrating residential character. Conceptual imagery.[24]

Streetscape and Shared Outdoor Space



Figure 5. Streetscape concept with individual entrances and common outdoor space. Conceptual imagery, not an approved site design. [24]

Interior Concepts

The interior views below are conceptual imagery. They do not establish selected products, final plans, accessibility compliance, or completed homes. [24]

Figure 6. Conceptual living, dining, bath, and bedroom concepts. [24]



Living room



Kitchen and dining



Bathroom



Bedroom

Appendix B: Conceptual Housing Plans

One-Bedroom Quadplex

KRONENBERG ENTERPRISES

KE-Q1

One-Bedroom Quadplex

Four homes | One bedroom and one bathroom per home | Individual entrances



FOUR SELF-CONTAINED HOMES IN ONE SMALL BUILDING

PRESENTATION SCHEMATIC | NOT TO SCALE

Redrawn from reference layouts. Room arrangements are illustrative; final dimensions and technical design require confirmation.

Figure 7. KE-Q1. Four one-bedroom homes with individual entrances. Conceptual redrawing adapted from manufacturer reference layouts; not to scale or manufacturer-certified. [18]

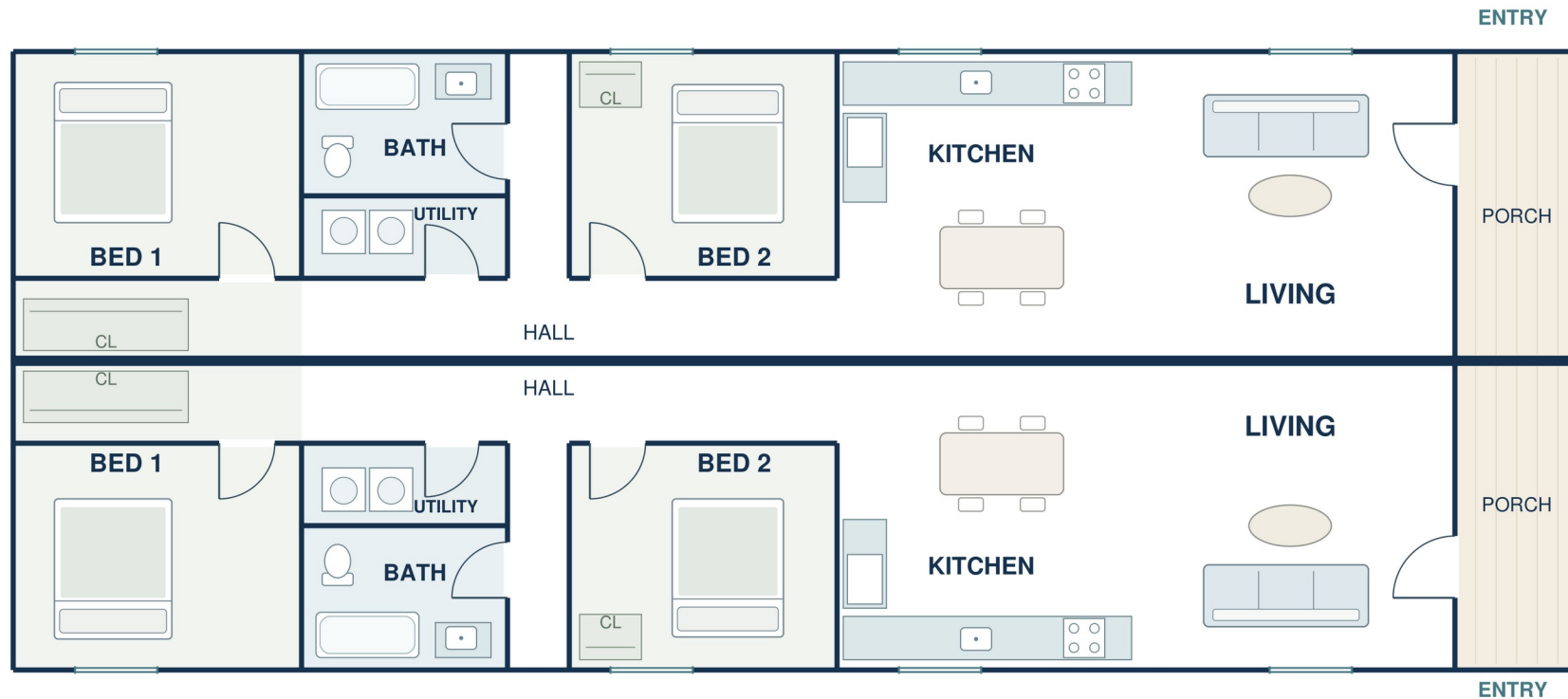
Two-Bedroom Duplex

KRONENBERG ENTERPRISES

KE-D2

Two-Bedroom Duplex

Two homes | Two bedrooms and one bathroom per home | Separate front porches



TWO COMPLETE HOMES WITH A SHARED SEPARATION WALL

PRESENTATION SCHEMATIC | NOT TO SCALE

Redrawn from reference layouts. Room arrangements are illustrative; final dimensions and technical design require confirmation.

Figure 8. KE-D2. Two two-bedroom homes. This room-layout concept does not establish the Case Study's final area or specification. [18]



Three-Bedroom Duplex

KRONENBERG ENTERPRISES

KE-D3

Three-Bedroom Duplex

Two homes | Three bedrooms and two bathrooms per home | Private front entries



FAMILY-SIZED HOMES WITH ALL LIVING SPACES ON ONE LEVEL

PRESENTATION SCHEMATIC | NOT TO SCALE

Redrawn from reference layouts. Room arrangements are illustrative; final dimensions and technical design require confirmation.

Figure 9. KE-D3. Two three-bedroom homes. The pairing and shared separation wall are conceptual, not a certified multiunit product. [18]



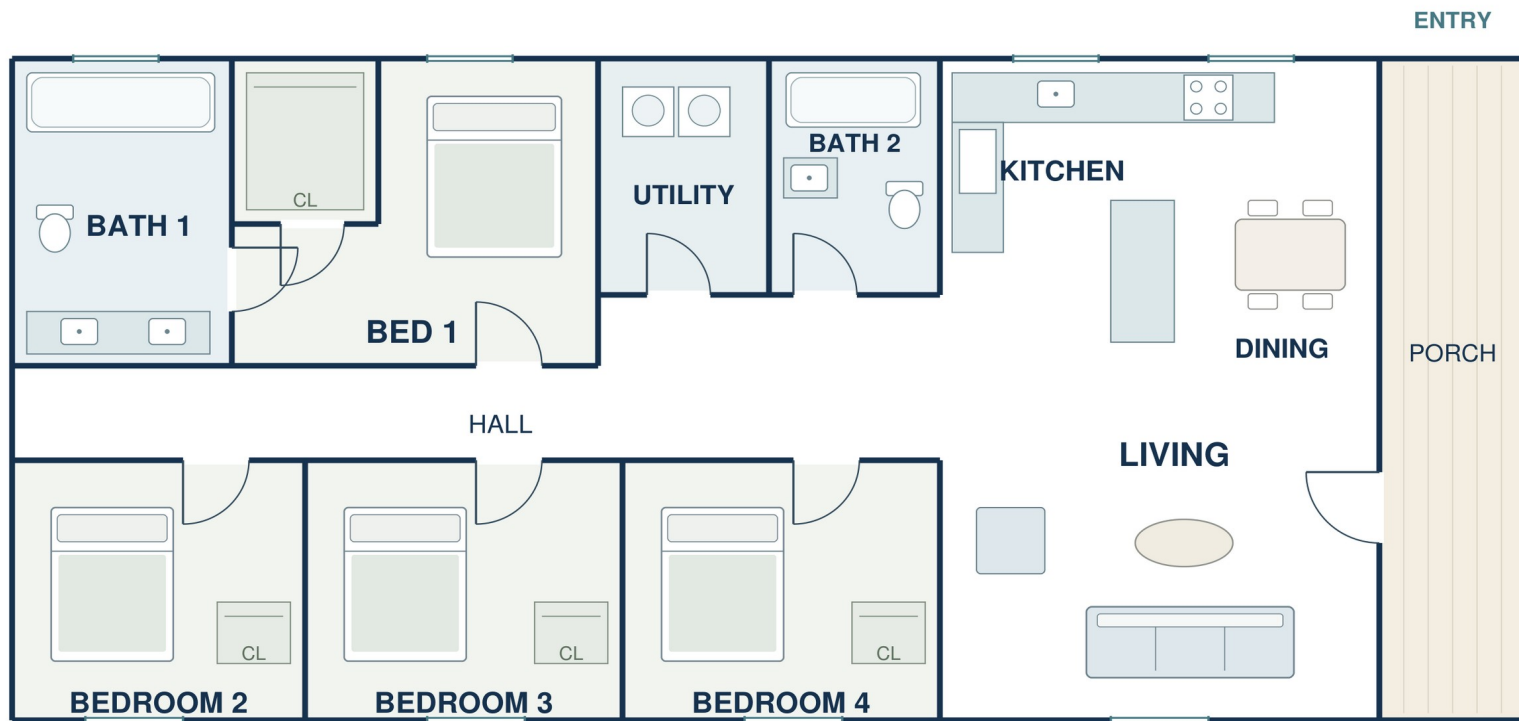
Four-Bedroom Detached Home

KRONENBERG ENTERPRISES

KE-S4

Four-Bedroom Detached Home

One home | Four bedrooms and two bathrooms | A separate porch and private entry



FOUR BEDROOMS WITH A SHARED LIVING AREA AND A PRIVATE PRIMARY SUITE

PRESENTATION SCHEMATIC | NOT TO SCALE

Redrawn from reference layouts. Room arrangements are illustrative; final dimensions and technical design require confirmation.

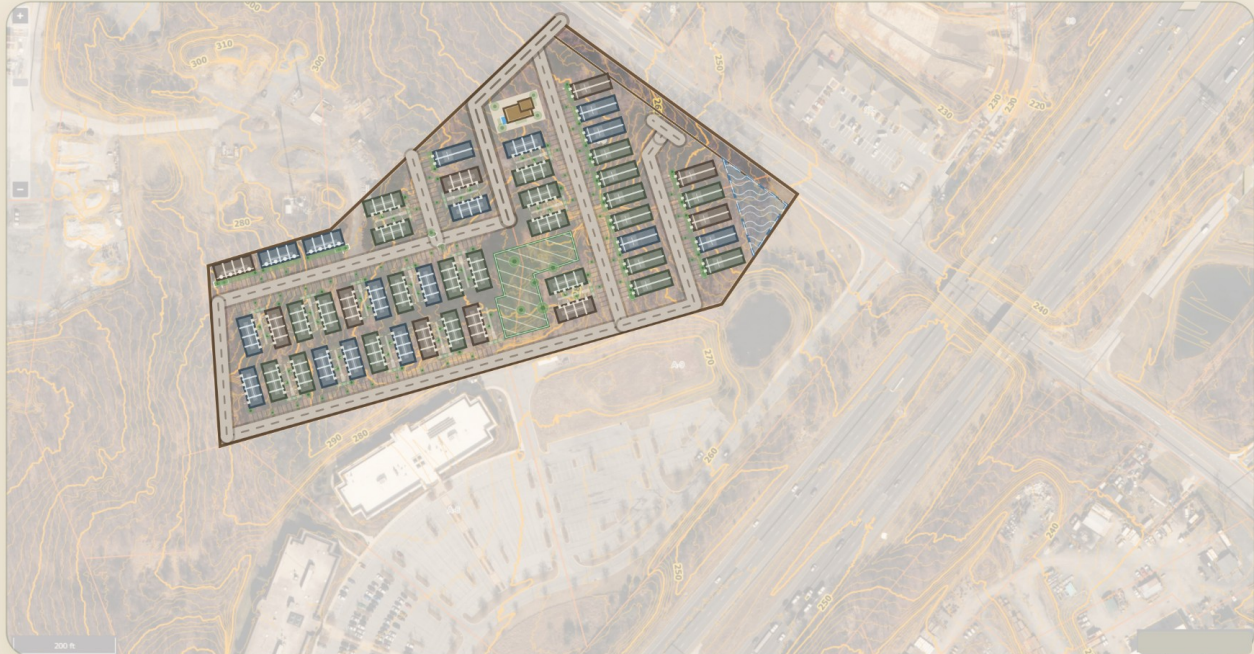
Figure 10. KE-S4. Four-bedroom detached-home concept adapted from a 1,493 sf manufacturer reference. This separate layout illustrates the housing form; the Case Study assumes a 1,674 sf product. [18]

Appendix C: Community Planning Concepts

Community Concept A

Community Concept A

164 homes | Duplexes and quadplexes around shared open space



Site Design Summary

Site + yield

Parcel area	11.33
Usable area	10.93
Buildable	Overlay ready 10.93 ac
Undeveloped land	6.00 ac
Buildings	49
Units	164
Units per usable acre	15

Land + program

Clubhouse	1 2,082 sf
Amenities	1 0.41 ac
Open space areas	0 drawn
Ponds	1 0.21 ac
Trails	0 drawn

Legend

- Parcel boundary
- Buildable area
- Site access road
- Internal road
- Planned buildings
- Community green
- Conceptual Stormwater Pond
- Clubhouse
- Amenity Area

Road + parking

Roads	7 total 1 access
Road length	3,383 ft
Site access	1 473 ft
Internal roads	6 2,911 ft
Parking	229 spaces
Parking ratio	1.4/unit

Residential inventory

Detached home	0 bldg 0 units
Duplex	16 bldg 32 units
Quadplex	33 bldg 132 units

Key assumptions

Default duplex	30' x 76' 2 units
Quadplex	30' x 76' 4 units / 76' x 30' 4 units
Quadplex court	28' x 64'
Road width	24'
Parking stalls	9' x 18'
Front setback	12'
Side-to-side	15' face-to-face
Rear-to-side	20' total 10' per bldg
Frontage order	Road > Parking > Setback > Building

Impervious + SWM

Road surface	81,200 sf
Res. footprints	111,720 sf
Parking reserve	37,098 sf
Est. impervious	232,100 sf 5.33 ac
Coverage	47.0%
SWM reserve	0.32 ac
Pond vs reserve	0.11 ac below

Parcel setbacks

Edge 1	0' custom
Edge 2	0' custom
Edge 3	0' custom
Edge 4	30' custom
Edge 5	0' custom
Edge 6	0' custom

Figure 11. Community Concept A: a separate 164-home planning study with GIS terrain, surrounding context, and site-design summary. Conceptual exhibit, distinct from the Case Study. [25]

The following page presents the concept's program and site statistics at a larger scale. Quantities are preliminary planning assumptions.



Program and Site Details

This concept arranges duplexes and quadplexes around shared outdoor space, with internal streets and a common amenity area. The GIS view on the preceding page shows the relationship between the residential layout, terrain, and surrounding development. [25]

Table C1. Community Concept A Program

Measure	Illustrative Quantity	Measure	Illustrative Quantity
Homes / buildings	164 / 49	Parcel / usable area	11.33 / 10.93 acres
Duplex buildings / homes	16 / 32	Quadplex buildings / homes	33 / 132
Parking	229 spaces	Homes per usable acre	15
Road length	3,383 feet	Road / access segments	7 total / 1 access
Clubhouse	2,082 square feet	Amenity area	0.41 acre
Residential footprints	111,720 square feet	Road surface	81,200 square feet
Estimated impervious area	232,100 square feet / 5.33 acres	Parking reserve area	37,098 square feet
Conceptual pond	0.21 acre	Stormwater reserve	0.32 acre

Source: [25], Community Concept A site-design summary. Preliminary planning quantities, subject to survey, engineering, and land-use review; separate from the Case Study.

Design Elements to Evaluate

The concept allows county staff to examine building arrangement, common open space, internal access, and infrastructure at a neighborhood scale. Site engineering would establish grading, stormwater design, utility connections, fire access, and final building spacing. The exhibit's density is specific to this planning study.

Community Concept B



Figure 12. Community Concept B: a separate 445-home planning study with GIS context and site program. Conceptual exhibit, distinct from the Case Study. [25]

The following page presents the concept's program and site statistics at a larger scale. Quantities are preliminary planning assumptions.



Program and Site Details

This larger planning study combines detached homes, duplexes, and quadplexes under a coordinated layout. It illustrates how several housing forms can share circulation, open areas, and professional management within one rental community. [25]

Table C2. Community Concept B Program

Housing Form	Buildings	Homes
Detached homes	23	23
Duplexes	91	182
Quadplexes	60	240
Total	174	445

Table C3. Community Concept B Bedroom Mix And Site Measures

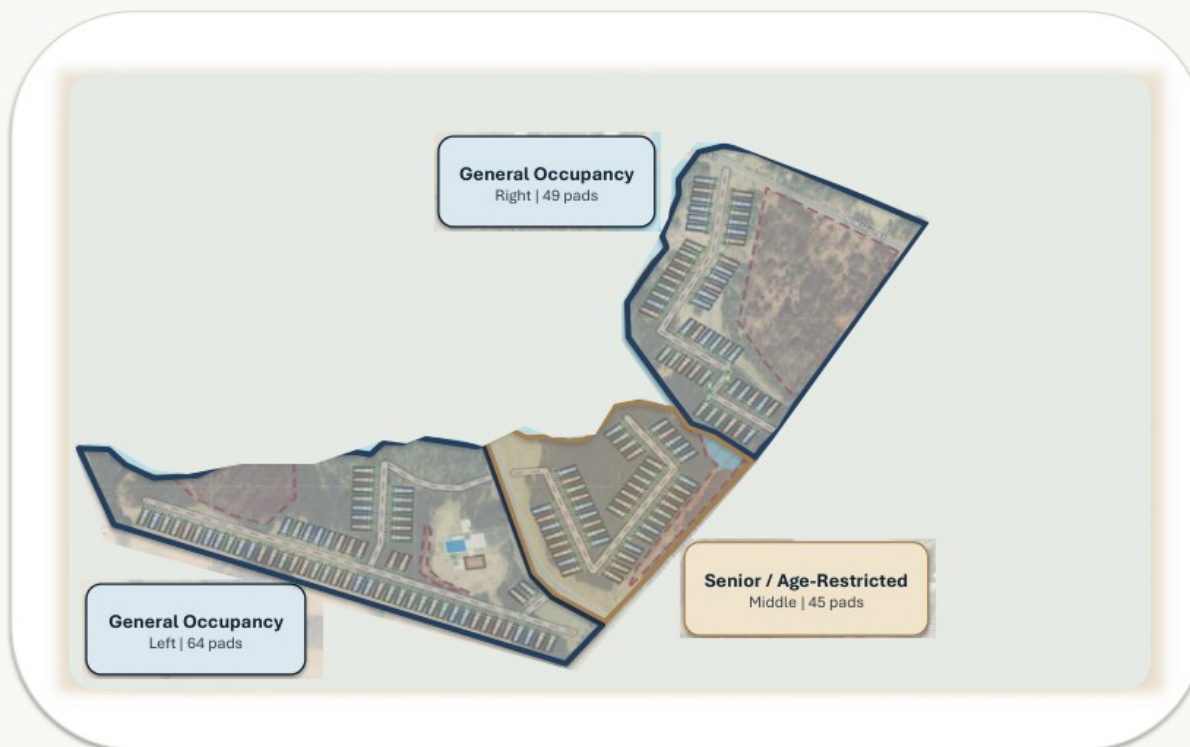
Bedroom Mix	Homes	Site Measure	Illustrative Quantity
1 bedroom	240	Gross site area	45.23 acres
2 bedrooms	55	Gross density	9.84 homes/acre
3 bedrooms	127	Parking program	733 planned spaces
4 bedrooms	23	Impervious area	31.23 acres / 69.0%
Total	445	Building footprint	378,626 square feet

Source: [25], Community Concept B program schedule. Total buildings are calculated from the listed housing forms. Quantities are preliminary and subject to zoning, environmental, infrastructure, and engineering review; separate from the Case Study.

Community Concept C

Community Concept C

395 homes | General-occupancy and age-restricted neighborhoods



Site Plan

The current concept places age-restricted housing in the middle portion of the site and organizes general occupancy housing in the left and right portions. The layout accommodates for-rent duplex, quadplex, and single-family structures on a single-record lot under unified ownership and professional management.

Community Breakdown

Age-Restricted: 45 pads | 144 units
General Occupancy: 113 pads | 251 units

Project Total

395 units | 158 pads
81 duplex | 52 quadplex | 25 single-family

Figure 13. Community Concept C: a separate 395-home study with 144 senior and 251 general-occupancy homes. The Case Study uses different land and financing assumptions and excludes senior-only products. [26]



Appendix D: Methods and Key Assumptions

The Case Study

The Case Study uses KES's October 2026 underwriting for a proposed 175-home community at a real, anonymized site. The model records 20.62 gross acres; that input is not a survey certification or confirmation of buildable area. The program, costs, rents, and financing are modeled assumptions, not a completed development, approved site plan, executed financing commitment, or guaranteed outcome. Table 9 distinguishes the base estimate, construction start, and stabilization; Appendix E distinguishes application requests from public funding awards. [1]

Table 9. Dates And Assumptions Used In The Case Study

Basis	Treatment In This Report
April 2026	Untrended rent and operating assumptions. Owner rent of \$387,825/month or \$4,653,900/year; utility allowances of \$100/\$150/\$175/\$200 by bedroom count.
February 2028	Construction closing and trended development cost of \$47,332,112, including \$1,831,396 of escalation above April 2026. Annualized February 2028 income supports the mortgage-coverage comparison.
Delivery and stabilization	Early deliveries begin November 2028; substantial completion is June 2029; stabilization is September 2029. These are modeled delivery and leasing dates.
Permanent financing	Selected mortgage of \$31,003,150, at 6.75% with 40-year monthly amortization and 0.25% annual mortgage insurance. Final credit-equity installment is scheduled for January 2030.
Operating assumptions	5% vacancy; rents grow 3% annually; operating expenses grow 3% before stabilization and 2% afterward. Replacement reserve begins at \$300/home annually.

Complete Costs and Product Assumptions

The estimate includes land and acquisition, factory-unit allowances, on-site home improvements, civil infrastructure, amenities, professional and financing costs, fees, contingency, and reserves. Historical manufacturer pricing informs the development estimate; adjustments for product selection, installation, improvements, and escalation explain why the modeled allowances differ from earlier quotes. [1,6,18]

The mix totals 181,365 square feet and 420 bedrooms: 45 one-bedroom homes at 507 sf, 35 two-bedroom and 75 three-bedroom homes at 1,137 sf, and 20 four-bedroom homes at 1,674 sf. Areas reflect KES's confirmed product assumptions. The four-bedroom reference layout in Appendix B is a separate concept; final configurations and specifications would follow site-specific design. [1,18]



Interpretation and Comparisons

The capital stack assumes no additional local or state gap financing, state housing tax credit, geographic basis boost, donated land, or property-tax abatement. Product and project eligibility remain subject to applicable agency, lender, investor, and legal approvals. County fees, infrastructure costs, achievable rents, and market demand inform site selection and project underwriting.

Regional comparisons use proposed complete costs and identified funding; Appendix E explains selection and averaging. They establish a benchmark, not a matched estimate of factory-construction savings. The following sensitivities show individual arithmetic changes without recalculating the full forecast.

Financing Methods and Sensitivities

How the Two Major Sources Are Calculated

Federal credit equity equals $\$44,200,000$ of modeled allocated non-land cost $\times$ 89% estimated eligible share $\times$ 4% annual credit $\times$ 10 years $\times$ $\$0.825$ per credit dollar $\times$ 99.99% investor ownership = $\$12,980,242$, rounded. All homes are modeled as affordable. Final eligible basis, bond requirements, and equity terms are established through the transaction. [1,84,85]

The February 2028 loan-sizing schedule uses effective gross income of $\$4,722,098$, operating expenses of $\$1,305,557$, property taxes of $\$319,882$, and reserves of $\$55,424$, leaving $\$3,041,236$ before financing. The selected $\$31,003,150$ mortgage at 6.75% and 40-year monthly amortization requires $\$2,244,716$ annually in principal and interest. Adding 0.25% mortgage insurance on the initial balance gives approximately $\$2,322,223$; coverage is 1.31 times. This comparison uses the selected loan and construction-start income, not Table 4's April 2026 income or the larger maximum loan sized at 1.15 times coverage. [1, pp. 33–34]

Funding Timing and Deferred Fee

Tax-credit equity arrives in installments: 15% at construction closing, 65% at substantial completion, 15% at stabilization, and 5% afterward. A $\$12.38$ million bridge at 7%, approximately $\$1.67$ million in predevelopment equity, and interim operating income address funding timing. Table 5's $\$1,298$ sponsor-cash line balances permanent sources; it does not represent total upfront cash needs. Complete cost includes $\$2.65$ million of construction interest and $\$2.31$ million of reserves and working capital. [1, pp. 19–21, 32–34]

The $\$2$ million deferred developer fee is subordinate to the first mortgage. Repayment from the property is limited to permissible surplus cash under the intended HUD structure; HUD guidance also allows non-project funds. Deferral changes the timing of payment, while final documents govern repayment, maturity, and investor obligations. It is not a scheduled operating expense or first-mortgage payment. [1,86]



Selected Illustrative Sensitivities

Table 10. Separate Changes To The Case Study Assumptions

Change	Additional Capital Needed
Hard costs before contingency increase 10%	\$2.86M before any extra credit equity; \$2.02M with the hypothetical offset below.
Credit equity price falls from \$0.825 to \$0.800	\$0.39M, holding the credit allocation fixed.
Interim operating income is unavailable	\$1.35M, holding all other sources fixed.
Deferred fee must instead be paid in cash	\$2.00M, holding all other sources fixed.

Each calculation changes one assumption independently. Reductions in financing sources receive no offset from additional tax credits. Final financing, timing, and eligibility determine the amount that would need to be replaced.

The hypothetical cost offset assumes 89% of added non-land cost becomes eligible basis. Each added dollar then generates $89\% \times 4\% \times 10 \times \$0.825 \times 99.99\% = 29.37$ cents of equity, if those credits and proceeds are available. A dollar already established as fully eligible basis yields about 33.00 cents; land and ineligible costs yield none. Incremental costs with no additional equity require full replacement funding.

Independent Conventional Development Illustration

This separate 250-home illustration tests a conventional development under two financing environments about five years apart. It uses FY2021 and FY2026 Washington-area rent ceilings, with hypothetical complete costs, operating budgets, and mortgage rates. It is not an observed 2021-to-2026 transaction or a forecast. The 175-home Case Study supplies none of its cost, mortgage, operating, or equity inputs. [2,7,8,104–107]

Table D1. Reconciled Conventional Development Sources and Uses

Source or Use	Earlier Conditions	Five Years Later
Complete development cost	\$94,000,000	\$119,000,000
Income-supported senior mortgage	\$53,208,633	\$50,951,921
Federal 4% LIHTC equity	\$28,897,110	\$35,696,430
Deferred developer fee	\$2,000,000	\$2,000,000
Virginia Housing Trust Fund loan	\$700,000	\$700,000
HIEE energy-efficiency loan	\$2,000,000	\$2,000,000
Sponsor-contributed land	\$2,000,000	\$2,000,000
Potential local gap loan	\$5,194,257	\$25,651,649
Total financing sources	\$94,000,000	\$119,000,000
Local requirement per home	\$20,777	\$102,607
Senior mortgage / complete cost	56.6%	42.8%
Federal LIHTC equity / complete cost	30.7%	30.0%

The additional local gap is \$25,000,000 of added cost + \$2,256,713 of reduced senior mortgage capacity – \$6,799,320 of added federal equity = \$20,457,393. Combined with the initial \$5,194,257 requirement, the later gap is \$25,651,649. State loans totaling \$2.70 million are already included before calculating these residual local needs. Calculations retain full precision; individually rounded figures may differ by \$1. State sources and terms are explained below. [111–114]

Complete costs are \$94 million and \$119 million, or \$376,000 and \$476,000 per home. Each includes a \$4 million developer fee: \$2 million paid during development and \$2 million deferred. Reducing the previous \$10 million fee removes \$6 million from each budget without shifting costs elsewhere. The \$25 million increase is 26.6%, an illustrative budget assumption informed by the owner’s regional experience, not a verified complete-cost index or the Census construction-price change. [2,49]

Developer Fee and Credit-Basis Treatment

The \$2 million deferred fee is 50% of the \$4 million total fee; the remaining \$2 million is funded by other sources. Deferral does not determine tax eligibility. The assumed \$2 million land contribution remains included in complete cost and excluded from eligible basis. Commonwealth's application defers about 6.0% of cost; Overlook reports contributed land of about 5.6%. These support the mechanisms, not the hypothetical amounts. [7,8]

Federal equity retains \$85 million of eligible basis initially and \$105 million later, comprising assumed non-fee eligible costs of \$82 million/\$102 million plus **\$3 million of developer fee in each period**. With all homes qualified, eligible and qualified basis are equal. Basis $\times$ 4% annual credit $\times$ 10 years $\times$ \$0.85 pricing $\times$ 99.99% investor ownership gives \$28,897,110/\$35,696,430. There is no basis boost, state credit, or pricing increase. The \$20 million basis increase equals 80% of the added complete cost; its equity offsets 27.2% of that cost. [84,108]

Developer fees cannot automatically be treated as fully eligible. IRS guidance distinguishes building-development services from activities such as land acquisition, partnership organization, and syndication. A development agreement, services allocation, reasonable fee, and support for deferred payment are needed; an agency ceiling is not proof of federal tax eligibility. [115]

Virginia's earlier rules limited fee included in basis to \$3 million and total fee to \$5 million. Current rules permit more than \$3 million of fee in a 4% development's basis when at least 30% is deferred, subject to the \$5 million and percentage limits. This illustration conservatively retains a \$3 million fee allowance in both periods, with \$1 million of the revised fee excluded from modeled credit basis. The \$4 million fee and 50% deferral satisfy those dollar and deferral screens; applicable percentage calculations and agency review still apply. [116]

The original aggregate basis figures did not itemize developer services. The \$82 million/\$102 million non-fee split and \$3 million fee allowance therefore make the scenario explicit; they are **modeling assumptions, not a certified cost allocation**. On this treatment, the removed \$6 million was outside the modeled credit allowance, so the budget reduction does not reduce equity. The former \$10 million fee was not a compliant Virginia fee benchmark. Each \$1 million reduction in the assumed eligible fee would instead reduce equity by \$339,966 and increase the local gap by the same amount. [115,116]

The 80% incremental allocation is retained as an assumption: \$20 million of the \$25 million increase enters eligible basis; \$5 million does not. Excluded costs total \$9 million initially and \$14 million later, including unchanged land and ineligible fee amounts. Construction costs and properly capitalized construction-period interest can qualify; reserves, syndication, and bond-issuance costs do not. The aggregate budgets lack a line-item cost certification, so the allocation requires project-specific verification. [115]

If only 70% of the \$25 million increase entered eligible basis, later basis would be \$102.5 million, federal equity \$34,846,515, and the potential local gap \$26,501,564, or \$106,006 per home, with other assumptions fixed. Each \$1 million of eligible-basis reduction increases the gap by \$339,966.

The \$119 million is an all-in budget assumption, including construction financing costs; no separate increase is added again. Without a draw schedule, construction interest cannot be independently recalculated. Table D2 retains its expense-growth assumptions, including taxes and insurance; no assessed-value or insured-value schedule links them to cost. Accordingly, the income-supported mortgage is unchanged. Actual construction financing, assessments, and insurance quotes could alter the result.

Rent Growth and Mortgage Capacity

The housing program stays at 50 one-bedroom, 125 two-bedroom, and 75 three-bedroom homes, all designated at 60% AMI. FY2021 maximum gross monthly rents are \$1,451, \$1,741, and \$2,013, respectively; FY2026 limits are \$1,869, \$2,242, and \$2,591. Their weighted increase is 28.8%, equivalent to about 5.2% annually over five years. These are published ceiling comparisons, not assumed future annual HUD increases. [95,107]

Initial modeled utility allowances of \$75/\$100/\$125 grow 3% annually and are deducted from gross rent. The illustration assumes the resulting owner rents are achievable; there is no project-based rental assistance or ancillary income. A 5% vacancy and collection allowance applies in both periods.

Table D2. Operating Income and Debt Sizing

Annual Amount Unless Noted	Earlier Conditions	Five Years Later
Average owner rent / home / month	\$1,662	\$2,153
Annual scheduled owner rent	\$4,986,300	\$6,459,823
Effective income after 5% vacancy	\$4,736,985	\$6,136,832
Operations excluding taxes and insurance	\$1,062,500	\$1,292,694
Property taxes	\$312,500	\$380,204
Insurance	\$125,000	\$167,278
Replacement reserve	\$75,000	\$86,946
Income after expenses and reserves	\$3,161,985	\$4,209,711
Senior mortgage interest rate	4.00%	6.50%
Amortization / aggregate coverage	40 years / 1.15×	40 years / 1.15×
Supportable total annual debt service	\$2,749,552	\$3,660,618
Less: state-loan annual interest	\$81,000	\$81,000
Available senior mortgage debt service	\$2,668,552	\$3,579,618
Supportable senior mortgage	\$53,208,633	\$50,951,921

Initial annual expenses per home are \$4,250 for operations excluding taxes and insurance, \$1,250 for property taxes, \$500 for insurance, and \$300 for reserves. Operations and taxes grow 4% annually, insurance 6%, and reserves 3%. No tax abatement is assumed. Total expenses and reserves rise from \$6,300 to \$7,708 per home. Income available for debt service rises 33.1%; it is calculated separately from rental growth. These are illustrative operating assumptions, not a local expense index.

Total annual debt-service capacity = income after expenses and reserves ÷ 1.15. Senior mortgage debt service = that capacity – \$81,000 of scheduled state-loan interest. Dividing the remainder by the annual mortgage constant sizes the senior loan. With r = annual interest ÷ 12 and 480 monthly payments, the constant is:

$$12r \div [1 - (1 + r)^{-480}]$$

The annual mortgage constants are 5.0153% at 4% and 7.0255% at 6.5%. Coverage applies to combined scheduled senior and state payments. Revised senior loan-to-cost ratios are 56.6%/42.8%, or 59.5%/45.1% including the state loans. These ratios do not establish a breach of a specified cost cap; the scenario retains its assumption that other lender limits are nonbinding. No appraisal or statutory loan-limit test is supplied, so actual loan availability remains unverified. No separate FHA insurance charge is modeled; rates are assumptions, not historical market averages. [7,8,104,111–114]

Historical Capital Stack Checks

Eight selected new-construction, general-occupancy 4% applications provide a plausibility check across 2022–2026: seven Northern Virginia records and one earlier Richmond example. This is a purposive sample of application assumptions, not a market estimate or evidence of actual 2021 financing terms. Costs and housing programs differ. Percentages below divide identified financing by complete development cost. [2,7,8,104–106]

Table D3. Selected Application Financing Shares

Application	Cost / Per Home	Base Loan	REACH Loans	Federal Equity	Deferred Fee	Local Support	Other
7000 Carnation 2022 • 218 homes	\$52.51M \$240.9k	49.0%	0.0%	45.9%	1.7%	NI	3.3%
Braddock Terrace 2023 • 20 homes	\$10.28M \$514.0k	37.2%	3.9%	39.9%	0.0%	NI	19.0%
431 S. Columbus, Block 4 2024 • 100 homes	\$62.47M \$624.7k	54.7%	0.0%	33.9%	5.8%	NI	5.5%
Atlantic Boulevard 2024 • 80 homes	\$32.55M \$406.9k	27.0%	19.7%	29.4%	4.1%	19.8%	<0.1%
Commonwealth Lofts 2025 • 94 homes	\$39.53M \$420.6k	20.4%	18.7%	29.5%	6.0%	19.4%	6.0%
Overlook at Broadlands 2025 • 64 homes	\$31.89M \$498.3k	15.7%	22.7%	32.1%	2.2%	21.6%	5.6%
Signals at Occoquan 2025 • 133 homes	\$43.63M \$328.1k	34.1%	18.3%	40.4%	6.9%	NI	0.3%
Clear Springs I 2026 • 97 homes	\$41.43M \$427.1k	22.7%	23.4%	29.4%	4.0%	8.2%	12.3%

Base loan identifies the principal non-REACH amortizing mortgage, not a verified final lien position. Scheduled-payment REACH loans are shown separately; they are state-supported debt, not county gap loans. Combined shares range from 38.4% to 54.7%. NI means no separately identified local amount, not verified zero. Construction bonds are not added to permanent debt. Amounts are requests or assumptions, not awards or closings.

Federal equity ranges from 29.4% to 45.9% in the selected applications, reflecting different bases and structures. The illustration’s unboosted 30.7%/30.0% shares use the separate basis calculation above rather than that sample average. The Signals figure includes \$4.07 million of additional federal equity listed under “Other” in its application; 431 S. Columbus includes a geographic boost. Neither boost is used in the hypothetical model. [104,105]

“Other” includes named state loans, contributed land, seller financing, accrued interest, 45L proceeds, and grants where identified. The 7000 Carnation row includes a Richmond-administered ARPA grant, distinguished from recurring local revenue. Local support for Atlantic Boulevard and Commonwealth includes fee waivers. The 2022, 2023, and Atlantic Boulevard figures use the retained application extracts in [2]; the other five records were checked against their original application packages. [7,8,104–106]



Financing Assumptions and Limits

The starting senior mortgage share of 56.6% exceeds the 54.7% high end of this selected sample following the fee reduction; it is independently supported by the rent-and-expense calculation at 4%, after state-loan payments. It is not a historical regional average. Reviewed base mortgage rates range from 5.45% to 6.50%, with 35–40-year amortization and first-year coverage of approximately 1.15–1.19 times. The earlier 4% rate is hypothetical; the later 6.5% rate appears in both Loudoun applications. [7,8,104–106]

Specified State Loans

The illustration assumes \$700,000 from the Virginia Housing Trust Fund (VHTF) and \$2 million from Housing Innovations in Energy Efficiency (HIEE), held fixed in both periods. DHCD’s fall 2021 funding cycle, announced January 13, 2022, awarded that combination to projects including the new-construction Choice Neighborhood phases III-R and IV-R, which also received federal NHTF funds. The illustration uses only the state components and is calibrated to that cycle, not a verified 2021 closing. [111,112]

For 2026, the assumed amounts fit the VHTF and HIEE limits. HIEE requires a competitive ASNH award and qualifying energy performance; its ceiling is \$2 million or 10% of construction costs, whichever is less. The scenario assumes at least \$20 million of eligible construction costs and includes green-certification and Zero Energy Ready requirements within its existing budgets. The 60%-AMI program fits both sources’ income limits, but awards, source-assisted units, subsidy layering, and lender and investor approval remain project-specific. [113,114]

Both sources are modeled as loans at 3% current interest with principal deferred for 30 years: \$21,000 plus \$60,000 in annual payments. This uses published standard rental terms; no grant or cash-flow-only waiver is presumed. Historical terms varied: Commonwealth’s 2025 application lists \$2 million of ASNH debt at 1% with \$20,000 in annual service. Federal HOME and NHTF funds are distinct from state funding and are not used here. The full \$2.70 million principal remains due at maturity, subject to any approved restructuring. [7,111,113,114]

Deferred Fee and Remaining Local Gap

Half of the \$4 million total fee is deferred. That \$2 million is assumed payable after scheduled senior and state debt service, before local-loan repayments and distributions. Annual residual cash remains approximately \$412,433 initially and \$549,093 later. With unchanged cash flow devoted entirely to the fee, repayment would occur during years five and four, respectively; fifteen-year totals are \$6.19 million and \$8.24 million. This is a capacity screen, not an approved waterfall or forecast. Actual reserves, priorities, loan terms, and investor requirements determine available payments.

The residual after state assistance is labeled a potential local loan to show the demand on local funding if no further nonlocal resources are available. It assumes no scheduled annual service on that local soft loan. No county commitment is implied; actual funding could involve other sources or different repayment terms. The illustration does not establish that a county can or should supply the entire residual.

Rent realization matters. The central example gives the development the full benefit of higher published ceilings. If net owner rents instead grew only 3% annually for five years, with later expenses and other assumptions fixed, the senior mortgage would be approximately \$42.96 million and the residual local gap \$33.64 million, or \$134,558 per home. This sensitivity distinguishes rent ceilings from achievable operating income.

The modeled \$20,777-to-\$102,607 local requirement per home illustrates a mechanism. It does not explain Alexandria’s actual historical subsidy increase, which also reflected deeper affordability, or estimate the \$94,790 equal-application average in the separate six-project sample. Those records provide context for potential funding needs. Reducing complete costs can shrink the amount to be financed, although a reduction in eligible basis can also reduce tax-credit equity. [2,52,55]

Appendix E: Regional Application Evidence

To establish a development-cost benchmark, KES reviewed Virginia Housing’s 2022–2026 LIHTC application records, focusing on new construction using the 4% program. Its independent compilation, dated September 16, 2026, contains 334 application records. The cost sample includes records with usable total development costs and home counts, excluding identified additional-credit requests and superseded revisions. The resulting new-construction 4% sample comprises 80 applications representing 8,733 homes statewide, including 29 applications and 2,973 homes in Northern Virginia. [2]

Table 11. Cost Sample Summary

4% New-Construction Applications	Records / Homes	Minimum Total Cost Per Home	Maximum Total Cost Per Home	Average Total Cost Per Home
Virginia statewide	80 / 8,733	\$216,415	\$1,015,965	\$403,316
Northern Virginia	29 / 2,973	\$319,209	\$1,015,965	\$510,989

The reported average gives each application’s cost per home equal weight. Home-weighted averages divide aggregate development cost by total homes: \$380,780 statewide and \$500,543 in Northern Virginia. Ten Loudoun applications represent 729 homes at \$447,988 per home on that basis. Costs are nominal, and 2026 coverage is partial. Phases, resubmissions, and paired transactions are not fully consolidated, so the sample describes application records rather than a census of unique developments or completed homes.

Table 12. Principal Local Support Sample From 2025 Applications

Application / County	Homes	Local-Named Support	Per Home
Avonlea Family / Loudoun	67	\$10,000,000	\$149,254
Commonwealth Lofts / Loudoun	94	\$7,670,981	\$81,606
Goose Creek Village West / Loudoun	72	\$5,400,000	\$75,000
Kindred Crossing / Fairfax	95	\$10,456,539	\$110,069
Stone Ridge Towns / Loudoun	24	\$1,080,000	\$45,000
Overlook at Broadlands / Loudoun	64	\$6,900,000	\$107,813

The local-support comparison includes five Loudoun applications and one Fairfax application from the 2025 Northern Virginia cost sample with positive, identifiable financing bearing a local-government or housing-authority name. Dividing each request by its home count and averaging the six results gives \$94,790.21 per home. Total support of \$41,507,520 across 416 homes yields a home-weighted average of \$99,777.69. Three other 2025 records lack identified amounts and are excluded rather than assigned zero.

The requests include a \$100,000 fee waiver for Commonwealth Lofts and accrued county-loan interest and stormwater funding for Kindred Crossing. The comparison therefore covers more than new cash loans. A local agency’s name also does not establish where its funds originated or whether they were committed. Broader categories of subordinate financing are excluded from this benchmark because their funding origin and treatment require separate review.



Selected Application Cost Comparisons

Table 13. Selected Submitted Budgets And Bedroom Mix

Development / Application Year	Homes	Average Bedrooms Per Home	Total Cost	Cost Per Home
Case Study	175	2.40	\$47.33M	\$270,469
Harbor at Quantico Creek, 2024 (senior)	125	1.35	\$39.90M	\$319,209
Atlantic Boulevard Apartments, 2024	80	1.71	\$32.55M	\$406,929
Commonwealth Lofts, 2025	94	1.73	\$39.53M	\$420,552
Overlook at Broadlands, 2025	64	1.50	\$31.89M	\$498,296
Moorefield Station 4, 2026	128	1.16	\$55.41M	\$432,909

Sources: [1,2,7,8]. The Case Study is compared with submitted application budgets. Costs reflect different homes, affordability requirements, sites, dates, and building forms. The senior development is identified and excluded from the separate general-occupancy bedroom comparison.

Average bedroom counts divide total scheduled bedrooms by homes, counting studios as zero and the four-or-more-bedroom category as four. The full 29-application Northern Virginia sample averages 1.58 bedrooms per home; its 25-application general-occupancy subset averages 1.62. Floor areas are not consistently reported, so these figures do not establish a cost-per-square-foot advantage.

The 47.07% difference cited in the main report is $1 - (\$270,469.21 \div \$510,988.904)$, comparing the Case Study's complete cost per home with the unweighted application average. Isolating savings attributable to factory construction would require matched sites, housing programs, specifications, affordability, dates, and cost scopes. These applications provide a regional benchmark, not that matched comparison.

A reduction in complete development cost does not necessarily reduce the remaining financing gap dollar-for-dollar. Eligible tax-credit basis and investor equity may change along with costs, while mortgage capacity and other sources depend on their own underwriting and program terms. The comparison establishes the potential to reduce the amount that must be financed; it does not recalculate financing for the application sample. [1,2]

Completed projects can strengthen the evidence over time by documenting selected products, installation and infrastructure scope, contracted prices, change orders, and delivered cost. Comparisons with conventional construction should use the same site, affordability program, timing, and complete-cost definition.

Project Budgets and Commitments

Table 14. Two Loudoun Submitted Application Budgets

Application Budget And Financing	Commonwealth Lofts	Overlook At Broadlands
Homes at 60% AMI	94	64
Total development cost	\$39,531,887	\$31,890,972
Nonlocal permanent loans	\$17,480,000	\$12,250,000
Federal LIHTC equity	\$11,652,803	\$10,244,907
Sponsor and other equity sources	\$2,728,103	\$2,496,065
Total sources before local support	\$31,860,906	\$24,990,972
Remaining local financing requirement	\$7,670,981	\$6,900,000
Local requirement per home	\$81,606	\$107,813
Local requirement as share of cost	19.4%	21.6%
Land acquisition cost per home	\$27,000	\$27,969
Projected annual real estate taxes per home	\$1,745	\$1,000

Sources: [7,8], submitted 2025 applications. Commonwealth: \$7,570,981 county loan plus \$100,000 fee waiver. Overlook: \$6.9M county loan. Their combined \$14,570,981 of proposed local support divided by 158 homes equals \$92,221/home, a separate two-project measure. Land and annual taxes are underwritten amounts. The source list links to the applications and identifies the relevant original pages.

Examples at the Award or Commitment Stage

Table 15. Additional Public Agency Project Announcements

County	Documented Project Funding
Loudoun	2025 loan awards: \$19.3M for 249 homes at Moorefield Station (about \$77,500 per home); \$12.375M for 180 homes across two Tuscarora Crossing phases (about \$68,800 per home). [59]
Fairfax	The FY2025 Moving to Work plan reports \$3M more approved for The Exchange at Spring Hill Station because of rising costs and rates, beyond \$10M previously approved under federal Moving to Work authority. [60]
Montgomery	The county reported a \$38M permanent loan for 268 affordable apartments at NoBE II in March 2026—about \$141,800 per home. [61]
Howard / Prince George's	Howard reported \$5.5M and \$4.27M of gap financing for two redevelopments in July 2025, alongside other assistance. Prince George's approved \$2.5M for each of two New Carrollton phases in April 2025. [62,64]

Sources: [59–62,64]. These are dated commitments, distinct from application assumptions. Project scope, affordability and funding origin differ. Fairfax's Moving to Work resources are federal funds administered by the housing authority; none of the per-home calculations is a complete subsidy estimate.

Housing Goals and Annual Contributions

Table 16 compares published housing goals with annual contributions or identified allocations, rather than accumulated trust-fund balances. The programs serve different income levels, geographic areas, periods, and production or preservation purposes. Where a comparable contribution could not be established, the table identifies that limitation without treating the amount as zero.

Table 16. County Goal And Funding Context

County	Published Goal Or Direction	Annual Funding Evidence
Fairfax	10,000 new affordable homes by 2034 at or below 60% AMI	\$52.73M recurring FY2027 revenue to the wider fund; \$46.98M Blueprint allocation is within it. [20,31,81]
Loudoun	8,200 new attainable homes and 7,800 preserved/made attainable by 2040; at or below 100% AMI	\$29M FY2027 Housing Fund contribution, including \$3M for homebuyer assistance. [21,32,70]
Prince William	No comparable adopted numerical production target established in the cited review	\$5M FY2027 Affordable Housing reserve contribution; separate from the accumulated balance. [35–37]
Prince George's	19,500 affordable homes within the 26,000-home 2030 target	At least \$10M FY2027 Housing Investment Trust Fund contribution in the annual action plan. [3,38]
Howard	County affordable-housing programs and trust fund	\$1M one-time FY2027 trust-fund contribution, not a recurring funding floor. [71]
Frederick	150 new rental homes in the three-year consolidated plan	\$4.45M listed for the multiyear rental goal, including preservation; not an annual contribution. [65]
Montgomery	Production, preservation, and other housing programs	\$108M FY2027 production/preservation allocation includes broader resources and loan repayments; not fresh annual gap funding alone. [22]
Charles	Affordable-housing implementation and PILOT work	No comparable recurring annual gap contribution established by the cited materials. [39–41]
Stafford	Expand housing options and financing partnerships	Committee recommendations do not establish an adopted numerical goal or recurring annual appropriation. [42]

These figures show the scale of county housing objectives and funding programs. Counties also pursue affordability through inclusionary requirements, private development, state and federal assistance, and preservation; annual funds may support homeownership and deeper affordability as well. Because those tools contribute differently to each goal, subtracting annual fund contributions from total housing goals would not establish a county funding shortfall.

Dated county budget and program evidence; amounts are program-specific. Confirm the applicable appropriation and eligible uses when preparing a county-specific proposal.



Funding Capacity and Further Context

What the County Performance Measure Shows

Table 17. Fairfax Local Investment And Illustrative Home Equivalents

Fiscal Year / Status	Local Funding Per Home	Homes Per \$10 Million of Local Gap Financing
FY2024 Actual	\$82,460	121
FY2025 Actual	\$93,000	108
FY2026 Estimate	\$95,000	105
FY2027 Estimate	\$105,000	95

Source: [51], FY2027 advertised budget, printed p. 517, FY2024/2025 are actuals; FY2026/2027 estimates. The measure covers rental or for-sale homes affordable up to 80% AMI placed in service, funded through Funds 30300 and 40300. It is not limited to the separate 60% AMI production goal. Home equivalents are \$10M divided by the reported amount, rounded.

Fairfax’s reported investment increased 12.8%, from \$82,460 to \$93,000 per home. Project mix and delivery timing affect this measure alongside costs. It provides a useful view of public capital requirements, while the application comparisons describe a different population of proposed developments.

How Per-Home Funding Needs Affect Housing Goals

Loudoun’s 2027 plan identifies 750 attainable opportunities, including 500 new homes. If every new home required \$100,000 of local capital, that would imply \$50M, versus the \$29M annual fund contribution with other uses. At \$50,000/home the illustration is \$25M. Neither calculation establishes the county’s actual annual shortfall. [21,32,70]

Frederick’s three-year goal of 150 newly constructed rentals and listed \$4.45M rental resources imply \$29,667 per target home if spread evenly. At a hypothetical \$100,000 each, those homes would need \$15M. The listed resources also serve preservation; this comparison is not a verified deficit or a recurring annual contribution. [65]

Additional Regional Evidence

Fairfax’s \$55M ARPA commitment includes the earlier \$10.97M allocation for Dominion Square West Phase I and \$19.03M for Somos at McLean Metro. Those project amounts are components of the overall commitment. Treasury’s general SLFRF obligation deadline was December 31, 2024; its general expenditure deadline is December 31, 2026. [20,53,54]

Alexandria’s March 2026 assessment identified more than \$100M in funding needs for its existing pipeline. Earlier city analysis linked higher subsidy per affordable home to both rising costs and deeper affordability. Its Ladrey redevelopment changed course as financing conditions became difficult, followed by a rehabilitation strategy. These examples illustrate local financing pressures at particular points in time rather than a regionwide production trend. [52,55,57,58]

Arlington’s FY2025 Housing Commission analysis reported no new AHIF funding notice while existing commitments used available funding. Spotsylvania’s budget materials and St. Mary’s housing resources provide further policy context, but the cited review does not establish comparable annual rental gap contributions for either. [43,44,56]

Appendix F: Soft Debt and Long-Term Preservation

A public loan can bridge the initial gap while leaving a substantial obligation at a later recapitalization. The relevant questions are when principal is expected to return, what other payments have priority, and whether refinancing can repay the loan while meeting rehabilitation and reserve needs. Year 15 is a useful review point, not a requirement that every property resyndicate. [23]

Table 18. Commonwealth Lofts Application Inputs

Input	Submitted Projection
Homes	94
County subordinate loan	\$7,570,981, or \$80,542/home
Listed loan terms	2% interest; 40 years; no scheduled annual debt service
15 stabilized years of projected cash flow	\$3,533,955 after listed expenses and debt service
Starting deferred developer fee	\$2,357,746

Source: [7], submitted application, original PDF pp. 37, 42–43 and 63. Figures are operating projections and listed loan terms, subject to final agreements.

Table 19. Favorable Principal Repayment Screens

Simplified Repayment Screen	County Principal Remaining	Share Remaining
Ignore interest; apply all 15-year cash flow to county principal	\$4.04M	53%
Ignore interest; pay the starting deferred fee first, then apply all remaining cash flow to county principal	\$6.39M	84%

Screen 1: $\$7,570,981 - \$3,533,955 = \$4,037,026$. Screen 2: $\$7,570,981 - (\$3,533,955 - \$2,357,746) = \$6,394,772$. Both ignore county interest and sale/refinancing proceeds. They do not reproduce the contractual cash-flow waterfall. Other obligations and interest may increase the balance; a capital transaction may repay it.

The screens use the sum of the application's 15 annual operating cash-flow projections. Contractual payment priorities, interest, and capital-transaction proceeds determine actual repayment; these calculations isolate the scale of principal that operating cash alone could return.

For scale, repaying \$75,000 per home over 15 years requires an average of \$5,000 annually for principal alone, or \$875,000 each year for 175 homes. That cash must be available after any higher-priority payments. If repayment begins later, the amount needed in the remaining years increases.

Loudoun's guidelines allow loan terms up to 40 years, annual cash-flow sharing, repayment from capital transactions, and a maturity balloon. Long-term lending can be an intentional preservation tool. To assess how quickly capital can be reused, counties can track principal returned, accrued interest, balances before and after preservation, and net new public funding. When a new county loan repays an old one, only the county's net cash recovery replenishes its capacity to finance other homes. [78]

Appendix G: Household Choices and Rent References

Table 20. Bedroom Mix In The Case Study And Regional General Occupancy Sample

Bedrooms	Case Study Homes	Case Study Share	NoVA Homes	NoVA Share
Studio	0	0.0%	124	4.7%
1 bedroom	45	25.7%	1,101	42.0%
2 bedrooms	35	20.0%	1,063	40.5%
3 bedrooms	75	42.9%	306	11.7%
4 or more	20	11.4%	29	1.1%
Total	175	100%	2,623	100%

Sources: [1,2]. Regional sample excludes four elderly records and contains 25 records/2,623 homes. Average bedrooms are 1.62 versus 2.40 in the Case Study. Studios count as zero and 4+ as four; this does not measure floor area or market demand.

Table 21. Dated Loudoun Rent References

Community / Comparison	1 Bedroom	2 Bedrooms	3 Bedrooms
Aventon Moorefield	\$2,498	\$3,197	\$3,799
Vyne One Loudoun	\$2,574	\$3,090	\$3,572
Jameson at Kincora	\$2,033	\$2,615	\$3,255
Average of the three communities	\$2,368	\$2,967	\$3,542
Case Study: rent net of utility allowance	\$1,769	\$2,092	\$2,416
Monthly rent difference from comparison average	\$599	\$875	\$1,126

Sources: [4,28–30], 2026 Loudoun Apartment Guide, pp. 8–9 and 11. Equal-weighted property averages by bedroom count; not an unrestricted-only or regionwide survey. Fees, utilities, concessions, sizes, and features are not normalized. These comparisons are context, not a market study for the proposed site.

Using unrounded property averages gives annual base-rent differences of \$7,192, \$10,504, and \$13,512 for one, two, and three bedrooms. Preserving \$10,504 after tax is equivalent to \$14,005 of gross pay at an assumed 25% marginal tax rate: $\$10,504 \div 0.75$. That is an illustration of budget capacity, not a measured resident outcome or individual tax calculation.

For the main-text savings illustration, the annual two- and three-bedroom differences are rounded to \$10,500 and \$13,500. Five years gives \$52,500/\$67,500; seven years gives \$73,500/\$94,500. The stated \$52,500–\$94,500 range combines the low five-year and high seven-year cases. It holds differences constant and assumes no investment return; rent changes, fees, utilities, other household needs, and actual saving behavior can change the outcome. These are potential budget differences, not verified savings. [1,4,28–30]

The FY2026 Washington-area regular six-person 60% income limit is \$115,620. Applying $30\% \div 12$ yields a four-bedroom gross rent ceiling of \$2,890.50 under the imputed-occupancy approach, consistent with the model's rounded \$2,890. Household eligibility, applicable limits, utility allowances, and achievable rents still need site-specific verification. [9–11]

Larger Rentals and Homeownership

Table 22. Dated Four Bedroom Rental Comparisons

Four-Bedroom Home	Area	2026 Monthly Rent Evidence	Difference From Case Study Base Rent
Case Study detached home	1,674 sf modeled	\$2,690 modeled	—
20940 Cox Mills Court	2,100 sf	\$3,490 final advertised rent before August removal	\$800
20060 Northville Hills Terrace	2,990 sf	\$4,300 reported closed rental, June 15	\$1,610

Sources: [1,75,76]. Listing histories reviewed October 3, 2026. Cox Mills advertised the rent before the listing was removed August 27 and also listed a \$29 monthly package. Northville reported a June 15 closing with a \$95 monthly fee; the amount is based on the listing record rather than an executed lease. These are historical comparisons, not current availability.

The \$800 and \$1,610 monthly base-rent differences equal \$9,600 and \$19,320 annually. Different sizes, utility costs, and features prevent treating those differences as measured savings for an otherwise identical home.

Table 23. Homeownership Cash Budget — 5% and 20% Down

Purchase and Household Budget	5% Down	20% Down
Purchase price	\$765,000	\$765,000
Down payment	\$38,250	\$153,000
Closing-cost allowance, 3% (separate from down payment)	\$22,950	\$22,950
Down payment plus closing-cost allowance	\$61,200	\$175,950
Mortgage principal; 30 years at 7.28%	\$726,750	\$612,000
Monthly principal and interest	\$4,973	\$4,187
Monthly private mortgage insurance (PMI)	\$363	\$0
Monthly county tax / homeowners insurance	\$513 / \$150	\$513 / \$150
Monthly maintenance / utilities / HOA	\$638 / \$300 / \$100	\$638 / \$300 / \$100
Total modeled monthly ownership budget	\$7,037	\$5,888
Annual income at a 30% budgeting ratio	About \$281,000	About \$236,000

Sources: [72–74,79,117,118]. Both scenarios use the existing dated 7.28% national mortgage benchmark, not a borrower quote. County tax = price $\times$ 0.805% $\div$ 12; maintenance = 1% annually. Insurance, utilities, and HOA remain scenario allowances. Totals use unrounded amounts; displayed components may differ by \$1.

The 5%-down case assumes conventional borrower-paid PMI at 0.60% of initial principal annually: $\$726,750 \times 0.006 \div 12 = \$363.38$ monthly. This equals \$50 per \$100,000 borrowed, the midpoint of Freddie Mac’s published \$30–\$70 range; actual pricing depends on loan-to-value and credit characteristics. At that range, this case’s total monthly budget would be about \$6,891–\$7,182. PMI may end when applicable cancellation requirements are met. The 20%-down case assumes no PMI. [117]

The 3% closing-cost allowance is \$22,950, within Freddie Mac’s published 2%–5% of purchase price (\$15,300–\$38,250 here). Adding the down payment gives \$53,550–\$76,500 at 5% down, or \$168,300–\$191,250 at 20%. Prepaid items, initial escrow deposits, moving costs, and reserves require separate cash planning; avoid double counting charges included in a lender’s estimate. No assistance or seller credits are assumed. [118]



Five to seven years of the illustrated rent differences could support part or all of the 5%-down cash hurdle if actually saved. They do not establish mortgage approval or ongoing affordability. The unrounded monthly budgets are \$7,036.58 and \$5,888.07; a 30% budgeting ratio implies \$281,463 and \$235,523 of annual income, not lender qualification thresholds. Additional town or district taxes and special assessments are excluded. Principal repayment builds equity, but this illustration evaluates cash needs, not future property values or investment returns.

Illustrative Long-Term Value of Household Savings

The five-to-seven-year savings comparison above assumes no investment return. A separate illustration asks what could happen if a household invested half or all of the rounded \$10,500–\$13,500 annual rent difference for seven years, then left the money invested through the end of year 30 without further contributions or withdrawals. The 30-year horizon begins with the first year of saving; continued residence in the community is not assumed after year seven.

Table G1. Separate Investment Illustration for Seven Years of Contributions

Share Invested	Annual Amount	Seven-Year Contributions	Value at Year 30
Half	\$5,250–\$6,750	\$36,750–\$47,250	\$131,000–\$169,000
All	\$10,500–\$13,500	\$73,500–\$94,500	\$263,000–\$338,000

Calculated illustration, not an investment forecast. Assumptions: constant annual contributions at each year-end for seven years; 5% nominal annual compound return throughout 30 years; no withdrawals, taxes, or fees; values rounded to the nearest \$1,000. Rent differences come from [1,4,28–30]; the return and saving behavior are explicit scenario assumptions.

For annual contribution C , the balance after seven years is $C \times [(1.05^7 - 1) \div 0.05]$. Compounding that balance for another 23 years gives the year-30 value. At zero return, only the seven-year contributions would remain: \$36,750–\$47,250 when half is saved, or \$73,500–\$94,500 when all is saved. Returns vary and losses are possible; taxes, fees, inflation, and withdrawals can materially reduce the eventual value or purchasing power.

This illustration describes one possible use of a lower housing-cost burden. Families may instead use that room in their budgets for childcare, education, debt reduction, emergencies, or a home purchase. The invested dollars above are not simultaneously available for a down payment, and they are not added to the separate five-to-seven-year savings comparison. Neither illustration establishes actual resident savings, future investment performance, or mortgage qualification.



FY2026 Income, Rent, and Workforce Schedules

The following schedules support Section 4. Published figures are official income limits, rent ceilings, and wage inputs. Calculated comparisons apply the stated arithmetic; household compositions are illustrative. Limits are effective May 1, 2026, with HUD's income-averaging correction dated May 18. The three schedules below cover the eleven priority development counties without duplicating identical county limits. [10,94,95]

Table 24. Priority Counties and FY2026 HUD MTSP Income-Limit Areas

County	State	County FIPS	Income-Limit Area
Loudoun	VA	51107	Washington area
Prince William	VA	51153	Washington area
Stafford	VA	51179	Washington area
Fauquier	VA	51061	Washington area
Spotsylvania	VA	51177	Washington area
Montgomery	MD	24031	Washington area
Howard	MD	24027	Baltimore area
Frederick	MD	24021	Washington area
Charles	MD	24017	Washington area
Prince George's	MD	24033	Washington area
St. Mary's	MD	24037	St. Mary's County area

Published county mapping: [10,94,95]. Washington = Washington-Arlington-Alexandria, DC-VA-MD HUD Metro FMR Area (METRO47900M47900). Baltimore = Baltimore-Columbia-Towson, MD MSA (METRO12580M12580). St. Mary's = St. Mary's County, MD HUD Metro FMR Area (METRO30500N24037). Fairfax remains supporting regional context, not a priority county in this comparison.

Table 25. Maximum Annual Household Income by Actual Household Size

Area / County	AMI	1 Person	2 People	3 People	4 People	5 People	6 People
Washington	50%	58,150	66,450	74,750	83,050	89,700	96,350
Washington	60%	69,780	79,740	89,700	99,660	107,640	115,620
Washington	70%	81,410	93,030	104,650	116,270	125,580	134,890
Howard	50%	46,900	53,600	60,300	67,000	72,400	77,750
Howard	60%	56,280	64,320	72,360	80,400	86,880	93,300
Howard	70%	65,660	75,040	84,420	93,800	101,360	108,850
St. Mary's	50%	49,600	56,650	63,750	70,800	76,500	82,150
St. Mary's	60%	59,520	67,980	76,500	84,960	91,800	98,580
St. Mary's	70%	69,440	79,310	89,250	99,120	107,100	115,010

Annual U.S. dollars. Published HUD 50% and 60% limits; 70% confirmed against HUD's income-averaging file and agency schedules. Calculated 60% and 70% values equal the applicable published 50% limit $\times$ 1.2 and $\times$ 1.4, respectively. Sources: [10,94].



Gross Rent Ceilings and Calculation Notes

Table 26. Maximum Gross Monthly LIHTC Rent by Bedroom Count

Area / County	AMI	1 Bedroom	2 Bedrooms	3 Bedrooms	4 Bedrooms
Washington	50%	\$1,557	\$1,868	\$2,159	\$2,408
Washington	60%	\$1,869	\$2,242	\$2,591	\$2,890
Washington	70%	\$2,180	\$2,616	\$3,023	\$3,372
Howard	50%	\$1,256	\$1,507	\$1,742	\$1,943
Howard	60%	\$1,507	\$1,809	\$2,091	\$2,332
Howard	70%	\$1,758	\$2,110	\$2,439	\$2,721
St. Mary's	50%	\$1,328	\$1,593	\$1,841	\$2,053
St. Mary's	60%	\$1,593	\$1,912	\$2,209	\$2,464
St. Mary's	70%	\$1,859	\$2,231	\$2,577	\$2,875

Published agency ceilings, effective May 1, 2026, independently calculated from HUD income limits. U.S. dollars per month before deducting applicable tenant-paid utility allowances; not achieved market rents or approved property-specific rents. Sources: [10,94,95].

Income and Rent Use Different Household Sizes

Eligibility uses actual household size and all applicable countable income. Gross rent uses 1.5 imputed people per bedroom: 1.5 for one bedroom, 3 for two, 4.5 for three, and 6 for four. Fractional sizes average the adjacent income limits. Multiply the resulting annual income limit by 30% and divide by 12; round down to whole dollars to match the published schedules. For a Washington three-bedroom home at 60%: $(\$99,660 + \$107,640) \div 2 \times 30\% \div 12 = \$2,591.25$, giving a \$2,591 ceiling. [94,102]

The illustrative monthly base rent payable by the tenant equals the gross ceiling less the applicable tenant-paid utility allowance. The allowance is not cash rent received by the property owner, and actual utility bills may differ. Mandatory charges treated as rent must also fit within the ceiling; assistance payments or owner-paid utilities can require different treatment. The Case Study's allowances remain modeled assumptions, not newly approved project allowances. [1,11,102]

Income Averaging and Whole-Dollar Rounding

Washington's three-bedroom ceilings illustrate the equivalence: $\$2,159 (50\%) + \$3,023 (70\%) = \$5,182$, matching two \$2,591 homes at 60%. The designation average, $(50\% + 70\%) \div 2 = 60\%$, concerns homes, not occupants' incomes. Revenue equivalence requires balancing within bedroom categories, with identical utility allowances for net rents. Whole-dollar rounding leaves Washington's one-bedroom pair \$1 lower monthly; Howard's two- and three-bedroom pairs \$1 lower; and St. Mary's one-bedroom pair \$1 higher. Other one- through four-bedroom pairs match. An unpaired home may retain a 60% designation, including an odd bedroom-category count. Actual rents and occupancy affect collections. These are calculated comparisons, not a unit assignment or new underwriting; final elections and approvals follow. [94,95]

Applicable Schedule and Model Vintage

All eleven counties' reviewed HUD records use the Regular HERA classification. These schedules describe the standard FY2026 new-development comparison; historical hold-harmless limits or rent floors can differ for existing properties. The Case Study retains its April 2026 model base date and the 60%-AMI revenue equivalent of the intended blended designations, using FY2026 ceilings effective May 1. The earlier FY2025 Novogradac Loudoun calculator does not govern these schedules. [10,94,95]

Workforce Benchmarks and Household Comparisons

Table 27. Published Earnings Used in the Five Household Examples

Occupation / Position	SOC / Basis	Annual Earnings	Measure and Vintage
Medical assistant	31-9092	\$46,640	BLS annual median, May 2025
Beginning PWCS teacher, bachelor's degree	Employer scale	\$65,000	2026–27 starting base salary
Firefighter	33-2011	\$66,980	BLS annual median, May 2025
Teaching assistant, except postsecondary	25-9045	\$46,200	BLS annual median, May 2025
Restaurant cook	35-2014	\$42,920	BLS annual median, May 2025
Paramedic	29-2043	\$75,190	BLS annual median, May 2025
Retail salesperson	41-2031	\$36,610	BLS annual median, May 2025

Sources: [97–100]. BLS Washington-Arlington-Alexandria, DC-VA-MD-WV MSA, area 47900, all industries and ownerships; annual medians, not starting salaries or means. National release May 15, 2026; regional release July 10, 2026. PWCS uses zero completed years of experience, a bachelor's degree, and a 195-day contract; base salary excludes employer benefits.

Most BLS annual figures assume 2,080 hours; the teaching-assistant figure is reported annually and is not annualized again. OEWS excludes overtime, shift differentials, nonproduction bonuses, and employer benefits; actual countable household income may include additional amounts. The Washington labor-market estimates are not county-specific wages for Howard or St. Mary's, which lie outside that wage area. [98,99]

Table 28. The Same Illustrative Households Across Three Income-Limit Areas

Illustrative Household	People	Annual Income	Washington	Howard	St. Mary's
Medical assistant living alone	1	\$46,640	50%	50%	50%
Beginning public-school teacher living alone	1	\$65,000	60%	70%	70%
Firefighter supporting two children	3	\$66,980	50%	60%	60%
Teaching assistant and restaurant cook with two children	4	\$89,120	60%	70%	70%
Paramedic and retail salesperson with two children	4	\$111,800	70%	Above 70%	Above 70%

Calculated from Tables 25 and 27. Two-earner totals are $\$46,200 + \$42,920 = \$89,120$ and $\$75,190 + \$36,610 = \$111,800$. Designations are the lowest of 50%, 60%, and 70% that accommodate the hypothetical income, assuming no other countable income. "Above 70%" means above the designations studied, not ineligible for every housing program. The same wage inputs are held constant across areas; these are not local wage estimates for Howard or St. Mary's. [10,94,97,100]

Eligibility is not a rent-affordability finding. The medical assistant's 30% budget is $\$46,640 \times 30\% \div 12 = \$1,166$; the \$1,557 Washington one-bedroom 50% maximum consumes 40.1% of that income. The teacher's corresponding budget is $\$65,000 \times 30\% \div 12 = \$1,625$. For the \$111,800 four-person household, the \$2,616 two-bedroom 70% ceiling consumes $\$2,616 \times 12 \div \$111,800 = 28.08\%$ of gross income. Lower charged rent or rental assistance may be necessary for some households. Compositions are illustrative, not actual applications or admissions preferences. The selected Loudoun comparison in Table 21 is $(\$3,197 + \$3,090 + \$2,615) \div 3 - \$2,092 = \$875.33$ monthly, or \$10,504 annually; the main narrative rounds these to \$875 and \$10,500.



Project Elections and Compliance

The income and rent comparisons explain potential reach, not approval of a particular development. Final structuring must address the following distinct requirements.

Average-Income Election

Under Section 42(g)(1)(C) and 26 CFR §1.42-19, a qualifying group in these locations must include at least 40% of residential units, with counted units satisfying the applicable restrictions and an average designation no greater than 60%. The group used to determine credit-eligible applicable fractions must also qualify. Meeting the minimum threshold does not automatically make every remaining home credit-eligible. The minimum set-aside election is irrevocable. The 2025 final procedural regulations supplement the 2022 substantive framework. [9,84,96]

Separate Tax-Exempt Bond Requirements

Section 142(d) retains the separate bond-issuer election of at least 20% of units occupied by households at or below 50%, or at least 40% at or below 60%. Section 42 income averaging does not replace those occupancy tests. A 70%-designated unit does not count merely because another designation offsets it; actual household income and the elected bond test matter. A balanced 50%/70% concept can accommodate the numerical requirements if occupancy and the elected tests are satisfied. No bond election or lease-up finding is made here. [16,101]

Multiple Buildings and Final Implementation

Common ownership and one parcel do not alone establish a single LIHTC project. Form 8609 line 8b and final documents govern multiple-building project grouping, which matters when averaging across duplexes, quadplexes, and detached rental buildings; line 10c addresses the minimum set-aside election. Maryland's 2026 QAP requires compliance with both Sections 42 and 142 for bond-financed projects. Virginia Housing's January 2023 guidance must be read with the later federal rules. [16,84,96,103]

The owner, tax-credit agency, bond issuer, lenders, investors, and counsel would establish the final designation schedule and qualifying-group records, household certifications, student and other eligibility checks, approved utility allowances, and recorded affordability commitments. The Case Study's 175 homes, 60%-AMI rent underwriting, development budget, mortgage capacity, and equity assumptions are unchanged. [9,11,16,84,101–103]



Sources and Evidence

The references below distinguish KES's financial and planning work from public agency records and other published research. Public links are included where available. Legal and central policy sources were reviewed October 7, 2026; the HUD effective date and selected regional zoning provisions were checked October 8. Other research dates appear in the individual entries. FY2026 income, rent, and workforce sources were checked in the supporting research dated October 9, 2026; their publication and effective dates are identified below.

[1] Kronenberg Enterprises. Financial Case Study for a Proposed 175-Home Affordable Rental Community. Updated proforma V2, supplied October 8, 2026. Anonymized site; modeled area of 20.62 gross acres. Residential assumptions: pp. 22–23; operations: pp. 24–26 and 29–31; budget: p. 3 and pp. 10–21; schedule: p. 27; financing: pp. 32–35; tax credits: pp. 9 and 36–38. Page references identify the 38-page analysis. The report uses KES's October 8 housing-area clarification and the revised costs and financing, including the two-bedroom homes and 6.75% HUD mortgage assumption.

[2] Virginia Housing. Housing Tax Credit Application Archive, 2022–2026. Independent compilation and analysis by Kronenberg Enterprises, September 16, 2026, covering 334 application records. Appendices E and G describe sample selection and averaging methods. Individual application citations and original page references are retained in the supporting research records. [Source](#)

[3] Metropolitan Washington Council of Governments. Officials set regional housing targets. September 11, 2019; target geography and 2020–2030 period. [Source](#)

[4] Loudoun County. 2026 Apartment Guide. Vyne One Loudoun, Aventon Moorefield, and Jameson at Kincora; PDF pp. 8–9 and 11. Property-reported average rents; not an unrestricted-only rent series. [Source](#)

[5] HUD. Manufactured Home Construction and Safety Standards, 89 FR 75704, published September 16, 2024; §§3280.2 and 3280.215. The original March 17, 2025 effective date was postponed to September 15, 2025 by the notice published February 25, 2025, 90 FR 10593. HUD's September 11, 2024 announcement also describes the immediate alternative-construction approval pathway for multiunit homes. [Final Rule](#) [HUD Announcement](#) [Effective-Date Notice](#)

[6] Manufacturer housing price schedule, December 19, 2025. Product estimates and delivery notes for the referenced housing forms. Historical pricing informs product allowances; installation and site-development costs are budgeted separately.

[7] Commonwealth Lofts. Submitted 2025 Virginia Housing 4% LIHTC application. Funding: p. 37; equity: p. 40; cash flow: pp. 42–43; land and development summary: p. 55; deferred developer fee: p. 63; annual real estate taxes: p. 31. Original application pagination. Appendix F analyzes the 15 annual projected cash flows; figures reflect application assumptions. [Source](#)

[8] The Overlook at Broadlands. 2025 Virginia Housing 4% application. Funding p. 40, equity p. 43, land acquisition and development summary p. 68, annual real estate taxes p. 33; Unit Details also reviewed. Proposed application figures. [Source](#)

[9] Treasury and IRS. Section 42 Low-Income Housing Credit Average Income Test Regulations. Final regulations, October 12, 2022. [Source](#) Current 26 CFR §1.42-19 consulted in the October 9, 2026 supporting research; see [96] for the September 2025 procedural update. [Current Regulation](#)

[10] HUD. FY2026 MTSP Income Limits. Regular Washington-Arlington-Alexandria, DC-VA-MD HMFA row, PDF p. 297. Effective May 1, 2026; six-person 60% limit \$115,620. [Source](#) The October 9, 2026 supporting research also checked all eleven county rows, Regular HERA classifications, the Maryland report rows (p. 129), and the income-averaging workbook corrected May 18, 2026. County mapping and income schedules use the published HUD files. [County Data](#) [Income Averaging Data](#) [FY2026 Area Definitions](#)

[11] Treasury regulation 26 CFR 1.42-10. Utility allowances and gross-rent treatment. Current electronic code consulted October 7, 2026. [Source](#)

[12] HUD. Mortgagee Letter 2025-03. January 8, 2025. Multifamily DSCR and loan-to-value or cost changes; pp. 1–2. [Source](#)

[13] HUD. Descriptions of Multifamily Programs. Section 221(d)(4) and manufactured-home-park program descriptions. Product-specific eligibility is not established by the general descriptions. [Source](#)

[14] Maryland DHCD. Multifamily Housing Notice 25-15. December 3, 2025. Conditional federal 25% test and CDA bond issuance guidance for post-2025 closings. [Source](#)

[15] Code of Virginia §15.2-2290. Uniform regulations for manufactured housing. Current text includes 2026 amendments; consulted October 7, 2026. [Source](#)

[16] Maryland DHCD. Notice 26-05. April 14, 2026; QAP and Multifamily Rental Financing Program Guide effective April 8, 2026. [Source](#) The governor-approved 2026 QAP, effective April 8, 2026, Section A.3, printed pp. 1–2, addresses set-aside elections and both Sections 42 and 142 for bond-financed projects. [2026 QAP](#)



- [17] Stephen H. O'Connor. Cape Cod Workforce Housing: A Financing Gap Analysis. 12-page research report consulted for the financing-gap analytical method.
- [18] Manufacturer reference plans for one-bedroom quadplexes, two-bedroom duplexes, and four-bedroom detached homes, November 2025; three-bedroom stamped plan, January 5, 2024, revised July 2024. Appendix B presents conceptual redrawings adapted from these layouts, rather than manufacturer-certified construction plans.
- [19] HUD. FY2026 Income Limits Summary, Washington-Arlington-Alexandria, DC-VA-MD HMFA. Jurisdiction list; geography is distinct from the broader metropolitan statistical area. [Source](#)
- [20] Fairfax County. FY2027 adopted budget, Fund 30300, and adopted Housing Development capital plan. \$46,978,009 Housing Blueprint allocation; \$52,729,057 recurring real-estate-tax revenue to the wider fund. [Source](#)
- [21] Loudoun County. FY2027 budget adoption announcement. Housing Fund investment of \$29 million. [Source](#)
- [22] Montgomery County. FY2027 Approved Operating Budget, Housing and Community Affairs, initiatives, pp. 1–2. \$108 million production/preservation investment; composition and wider services funding. [Source](#)
- [23] HUD / Abt Associates. What Happens to Low-Income Housing Tax Credit Properties at Year 15 and Beyond? August 2012. Soft-debt, transfer and recapitalization discussion, printed pp. 31–32, 77–78, and 82 (note 42); federal compliance and extended use distinction. [Source](#)
- [24] Innovative Regional Housing Initiative. Six-page outreach document, pp. 3–6, containing exterior and streetscape references. Figures 1 and 2 and Appendix A's interiors include AI-assisted conceptual imagery; Figure 2 reflects the October 8, 2026 revision. Images illustrate residential character rather than completed properties or certified specifications.
- [25] MH Site Planner community planning studies, October 2026. Community Concepts A and B illustrate 164-home and 445-home programs, respectively. Their program schedules describe planning studies separate from the Case Study.
- [26] KES Attainable Housing Proposal. April 2026. Concept site plan: p. 3; program: p. 4. Presented as Community Concept C. The 395-home proposal includes senior housing and different land terms from the Case Study.
- [27] U.S. Census Bureau. Nearly Half of Renter Households Are Cost-Burdened. September 2024 release of 2023 ACS findings. [Source](#)
- [28] Avention Companies. Avention Moorefield portfolio and company announcement of the 425-home development, February 2024. New-construction context for the rent comparison. [Source](#)
- [29] L.F. Jennings. Vyne One Loudoun project portfolio. Development completion reference for the newer-community comparison. [Source](#)
- [30] TRITEC. The Jameson project portfolio. Developer description of the 333-home Kincora community. [Source](#)
- [31] Montgomery County Office of Legislative Oversight. Report 2026-8, Local Affordable Housing Production and Preservation Programs Across the Region. Table 9, printed p. 36; affordable-housing target definitions and county profiles. [Source](#)
- [32] Loudoun County. FY2027 Budget in Brief, Housing Fund, p. 11. \$29 million annual contribution; \$3 million dedicated to homebuyer assistance. [Source](#)
- [33] Arlington County. Affordable Housing Master Plan. Goal 1.1: affordable rental homes as a share of total housing stock by 2040. [Source](#)
- [34] Arlington County. FY2027 Adopted Budget Guide. Affordable Housing Investment Fund: approximately \$11 million, including ongoing and federal HOME funding. [Source](#)
- [35] Prince William County. Board Adopts FY2027 Budget and Reduces Real Estate Tax Rate. \$5 million Affordable Housing reserve contribution and \$21 million cumulative FY2024–2027 investment. [Source](#)
- [36] Prince William County. FY2027 Adopted Budget, Housing and Community Development. Performance target of three Affordable Housing Fund loans. [Source](#)
- [37] Prince William County. Affordable Housing Fund, FY2027 Notice of Funding Availability. Funding availability and gap-financing provisions, pp. 5–6. [Source](#)
- [38] Prince George's County DHCD. FY2027 Annual Action Plan, expected resources. Minimum \$10 million county Housing Investment Trust Fund contribution and eligible uses. [Source](#)
- [39] Charles County. Comprehensive Plan implementation reporting. Affordable-housing actions and technical assistance priorities. [Source](#)
- [40] HAND Housing Indicator Tool. Charles County jurisdictional profile; county survey reporting on adopted housing targets. Consulted October 2026. [Source](#)



- [41] Charles County. Board of County Commissioners agenda, September 22, 2026. Request for direction on an affordable-housing PILOT notice of funding availability. [Source](#)
- [42] Stafford County Board of Supervisors. Workforce and Affordable Housing Ad Hoc Committee, Executive Committee Report, following its 2023 work. Resource constraints, implementation needs, and regional partnerships; this is not an adopted annual funding appropriation. [Source](#)
- [43] Spotsylvania County. FY2027 Budget. Official adopted-budget materials. [Source](#)
- [44] Housing Authority of St. Mary's County. Resources and Programs. Rental assistance, Maryland Affordable Housing Trust, and related resources. [Source](#)
- [45] Virginia Housing. Five Partners Will Continue Exploring New Horizons With 2025 Innovation Grants. June 16, 2025. Morton Circle modular and conventional construction demonstration; evidence of state support for evaluating construction innovation. [Source](#)
- [46] United States. 21st Century ROAD to Housing Act, H.R. 6644, Public Law 119-101, enacted July 11, 2026. Title III, §§301–302: manufactured homes with or without a permanent chassis, associated standards, and review of FHA construction-financing barriers and draw schedules. Implementation and project-specific financing eligibility remain subject to applicable federal requirements. [Source](#)
- [47] Maryland General Assembly. Housing Expansion and Affordability Act of 2024, HB 538, Chapter 122. Manufactured-home and modular-dwelling placement provisions codified at Land Use §4-104(d); qualifying manufactured homes are, or will be after purchase, converted to real property. [Chapter](#) [Current Statute](#)
- [48] Virginia General Assembly. HB 655 and SB 346, Zoning; manufactured housing, 2026 Acts of Assembly, Chapters 19 and 20. Amendments to Code §§15.2-2247 and 15.2-2290. The nonagricultural placement provision includes conversion to real property, a certificate of occupancy within five years of manufacture, and individual lots. [HB 655](#) [SB 346](#) Effective July 1, 2026; confirmed in the Governor's July 1 announcement. [Effective Date](#)
- [49] U.S. Census Bureau. Price Indexes of New Multifamily Housing Units Under Construction, constant-quality Laspeyres series, and methodology. Q4 values: 151.2 (2015), 179.8 (2020), 227.5 (2025, preliminary). Calculated changes: 26.5% over five years; 50.5% over ten. National construction-price measure. [Data](#) [Method](#)
- [50] Federal Reserve Bank of St. Louis, FRED. Market Yield on U.S. Treasury Securities at 10-Year Constant Maturity, annual average (R1FLGFCY10NA). 2015: 2.14%; 2020: 0.89%; 2025: 4.29%. The mortgage illustration is a separate calculation with monthly payments and 40-year amortization; its assumed rates are not observations from this Treasury series. [Source](#)
- [51] Fairfax County. FY2027 Advertised Budget, Housing and Community Development Programs Overview, printed p. 517 (PDF p. 11). FY2024 and FY2025 actual local investment per home produced; FY2026 and FY2027 estimates. Covers rental/for-sale homes up to 80% AMI. [Source](#)
- [52] City of Alexandria. FY27 Budget Q&A #003, overview of borrowing for affordable housing, March 18, 2026. Three ready projects awaiting \$7 million; \$11.6 million planned FY2027 funding already committed; existing pipeline need above \$100 million. Figures describe that budget assessment. [Source](#)
- [53] Fairfax County. Federal and State Stimulus Funding Update, November 18, 2022, p. 6. ARPA awards of \$10.97 million for Dominion Square West Phase I and \$19.03 million for Somos at McLean Metro, included within the later \$55 million commitment reported in [20]. [Source](#)
- [54] U.S. Treasury. State and Local Fiscal Recovery Funds update, September 24, 2026. Obligation deadline December 31, 2024; general expenditure deadline December 31, 2026. These are SLFRF deadlines, not universal deadlines for all pandemic-related housing programs. [Source](#)
- [55] City of Alexandria. FY23 Budget Q&A #045, affordable-housing project pipeline, 2022. Historical local subsidy comparison for 2013 and 2022; rising costs and deeper affordability requirements both affect the reported amounts. [Source](#)
- [56] Arlington County Housing Commission. FY2025 Budget Analysis and Draft Recommendations, March 2024, pp. 2–3. No new AHIF funding notice for FY2025, continuing FY2023–FY2024, with available funds expected to serve existing commitments. [Source](#)
- [57] Alexandria Redevelopment and Housing Authority. ARHA Purchases Alate Senior Living Facility for Ladrey Residents, August 7, 2025. Financing conditions made the previously approved Ladrey redevelopment infeasible and prompted an acquisition-based relocation strategy. [Source](#)
- [58] City of Alexandria. File 26-0845, April 2026 materials concerning Ladrey Apartments financing. Rehabilitation of 159 homes under the subsequent preservation strategy. [Source](#)



- [59] Loudoun County. Affordable Multi-Family Housing Loan Program, completed or in-progress project list, accessed October 2026. 2025 awards: Moorefield Station, \$19.3 million / 249 units; Tuscarora Crossing phases 1 and 2, \$6.275 million and \$6.1 million / 90 units each. County awards differ from application-stage financing estimates. [Source](#)
- [60] Fairfax County Redevelopment and Housing Authority. FY2025 Moving to Work Plan, activity 2021-1, p. 46. Reports FY2024 approval of an additional \$3 million for The Exchange at Spring Hill Station to address higher project costs and interest rates. Moving to Work funds are federal resources administered by the authority. [Source](#)
- [61] Montgomery County. NoBE II groundbreaking announcement, March 27, 2026. \$38 million permanent county loan and 268 income-restricted apartments. Calculated county loan per apartment: approximately \$141,800; this is not the project's total public support. [Source](#)
- [62] Howard County. Groundbreaking for The Vision at Parkway and The Legacy at Cedar Lane, July 16, 2025. County gap financing, separate Section 108 lending, and PILOT agreements. These are mixed-income redevelopments; total homes and affordable homes should not be treated interchangeably. [Source](#)
- [63] Prince William County. Opens Applications for Affordable Housing Fund Program, May 28, 2026. First funding notice, repayable gap-financing terms, and anticipated October 2026 awards. Annual FY2027 reserve contribution is separately documented in [35]. [Source](#)
- [64] Prince George's County Council. Resolutions CR-027-2025 and CR-029-2025, adopted April 29, 2025. \$2.5 million of Housing Investment Trust Fund gap financing for each New Carrollton affordable phase. [Phase 1](#) [Phase 2](#)
- [65] Frederick County. FFY2025–2027 Consolidated Plan, HUD approval September 26, 2025. Printed pp. 4, 8, and 123–125: county program years, developer loan program, 150 rental construction outcome, and \$4.45 million listed resources. [Source](#)
- [66] Stefan Kronenberg, Kronenberg Enterprises. Professional résumé, January 2026; author-provided development and financing account updated October 10, 2026. Several years of financial analysis, factory-built housing evaluation, site planning, and engagement with manufacturers, lenders, prospective LIHTC equity investors, state housing agencies, and local officials. Active predevelopment with development partners includes more than 300 homes in a separate Washington-region effort with an age-restricted LIHTC component. The author reports similarly promising age-restricted modeled results, preliminary evaluations of comparable costs in lower-rent markets, and a preferred 15–60-acre site-selection range. These statements describe owner-reported research and work in progress, not an independent regional cost study, formal endorsements, approvals, or executed financing commitments.
- [67] Chris Herbert, Alexander Hermann, Daniel McCue, and Chadwick Reed. A Review of Barriers to Greater Use of Manufactured Housing for Entry-Level Homeownership. Harvard Joint Center for Housing Studies, January 23, 2024. Reviews financing constraints, zoning, and persistent perceptions; its homeownership focus is distinguished from the rental model proposed here. [Source](#)
- [68] Kevin A. Park. Real and Personal: The Effect of Land in Manufactured Housing Loan Default Risk. Cityscape 24(3), 2022, published by HUD. Explains home and land ownership and real-property versus personal-property financing; manufactured homes have existed in both owned-land and land-lease arrangements. [Source](#)
- [69] HUD USER. Building a Regulatory Framework for Innovative Housing Development, December 18, 2025. Discussion of zoning, permitting, and contemporary factory-built products at the 2025 Innovative Housing Showcase; policy context for local review. [Source](#)
- [70] Loudoun County. Unmet Housing Needs Strategic Plan, approved September 8, 2021, printed pp. 18–19. Goal definitions and annual schedule: 750 opportunities including 500 new homes in 2027. [Source](#)
- [71] Howard County. FY2027 adopted budget announcement, May 20, 2026, Housing and Community Services section. \$1 million one-time contribution to the Housing Opportunities Trust Fund, separate from other housing programs. [Source](#)
- [72] Freddie Mac. Primary Mortgage Market Survey, October 1, 2026. National 30-year fixed mortgage average 7.28%; benchmark, not a borrower-specific quote. [Source](#)
- [73] Dulles Area Association of REALTORS. 2026 Market Reports, August row; updated September 25, 2026. Loudoun median sales price \$765,000 across home types, 443 sales. [Source](#)
- [74] Loudoun County. Property Tax Rates 2026. General real property rate \$0.805 per \$100 of assessed value; additional special-district and town charges can apply. [Source](#)
- [75] Zillow listing history. 20940 Cox Mills Court, Ashburn. 4BR, 2,100 sf; reduced to \$3,490 August 13, 2026, removed August 27. Listing text identifies an additional \$29 monthly package. Reviewed October 3, 2026. [Source](#)
- [76] Coldwell Banker / Bright MLS VALO2119148. 20060 Northville Hills Terrace, Ashburn. 4BR, 2,990 sf; reports closed rental at \$4,300 June 15, 2026 and a \$95 monthly fee. Reviewed October 3, 2026; no executed lease inspected. [Source](#)



- [77] Virginia Housing. An Innovative Approach Pairs Tax Credits and Manufactured Homes. December 3, 2025. Reports its first manufactured-housing LIHTC allocation at Dorsey Homes, 47 homes, with nine occupied at publication. This is the manufactured-home component, distinct from the school-conversion apartments. [Source](#)
- [78] Loudoun County. Attainable Housing Loan Program Guidelines, revised June 17, 2025, section 6. Up to 40-year terms; annual cash-flow sharing; capital-transaction repayment; maturity balloon. Current policy context, not evidence of Commonwealth Lofts' final loan terms. [Source](#)
- [79] Fannie Mae. How to Build Your Maintenance and Repair Budget. Guidance to budget 1%–4% of home value annually. The ownership comparison uses 1% of the cited Loudoun price as a planning allowance. [Source](#)
- [80] Howard County. County Executive Calvin Ball Launches New Housing Affordability Initiatives. March 5, 2026. Proposed bond authority for the Housing Opportunities Trust Fund, distinct from an adopted recurring appropriation. [Source](#)
- [81] Fairfax County. Affordable Housing Data dashboard. Reports progress since 2019 toward the 10,000-home goal by 2034; establishes the full-plan period for the annual-pace illustration. [Source](#)
- [82] Harvard Joint Center for Housing Studies. America's Rental Housing 2026, released March 12, 2026. ACS-based 2024 findings: 22.7 million cost-burdened renter households (49%); 12.1 million severely burdened; increasing pressure on middle-income renters. [Source](#)
- [83] Electronic Code of Federal Regulations. 24 CFR 3280.2, current display through October 5, 2026, reviewed October 7. Definition of dwelling includes one to four dwelling units. The displayed manufactured-home definition still refers to a permanent chassis; the separate 2026 statutory amendment directs implementation. Construction-code compliance does not itself establish financing eligibility. Current regulation
- [84] Internal Revenue Code, Section 42(b), (f), (h)(6) and (i), and IRS Instructions for Form 8609 (December 2025). Credit percentage, ten-year credit period, fifteen-year compliance period and extended-use requirements. Statutory text governs any superseded form instructions. [Source](#) Form 8609 instructions also address multiple-building grouping (line 8b) and the minimum set-aside election (line 10c). [Form 8609 Instructions](#)
- [85] Public Law 119-21, Section 70422(b), July 4, 2025. Alternative 25% tax-exempt bond threshold for qualifying buildings placed in service in taxable years beginning after 2025; includes post-2025 issuance and 5%-of-aggregate-basis conditions. See also Maryland guidance [14]. [Source](#)
- [86] HUD. Multifamily Accelerated Processing Guide, 4430.G, section 14.12.2(A), Deferred Developer Fee. Repayment from the property is restricted to Surplus Cash; non-project funds may also be used. Repayment terms belong in the organizational documents and/or note. Guidance reviewed October 7, 2026. HUD MAP Guide
- [87] U.S. Bureau of Labor Statistics. Consumer expenditures in 2024, Report 1119, August 2026. Housing is the largest category of consumer spending. [Source](#)
- [88] HUD. Trends in Housing Costs: 1985–2005 and the 30-Percent-of-Income Standard, June 2008. Explains the longstanding affordability benchmark and the need to leave household income available for other essential needs. [Source](#)
- [89] Virginia Housing. Housing Tax Credits and Tax Credit Application Process, consulted October 8, 2026. Minimum QAP requirements for 4% applications and project-stage zoning certification. [Program requirements](#) [Application process](#)
- [90] Prince George's County. Zoning Ordinance §27-4403(a)(5)(A)(iv)(bb)–(cc), Greenbelt Neighborhood Conservation Overlay; CB-104-2021, DR-3, adopted November 16, 2021, effective with the new ordinance April 1, 2022. Specified multiple principal dwellings and individual-lot dimensional relief in RSF-A within the overlay; multifamily dwellings excluded from the dimensional exemption. Current code and enacted bill reviewed October 8, 2026. [Current Code](#) [Enacted Bill](#)
- [91] Howard County. CB25-2026 / ZRA224, enacted June 10, 2026, effective August 10, 2026; Zoning Regulations §§103.0 and 128.0.R.4.F, I, K and N. Age-restricted detached cottage clusters, including single-owner rentals, common maintenance, boundary setbacks and internal spacing. Scope checked against introduced text and adopted Amendments 1, 2, 7 and 9, as recorded in the June 1 Council journal, pp. 7–10; consolidated final PDF was not retrievable. Amendment 9 limits cottages to single-story detached dwellings with footprints no greater than 1,200 sf and no basement. Reviewed October 8, 2026. [Legislative Record and Amendments](#) [Introduced Text](#) [Council Journal](#) [Amendment 9](#)
- [92] Charles County. Zoning Ordinance §297-26.B(3), read with §§297-25.A and 297-26.A. Adopted provisions for side and rear yards at parcel boundaries in projects without individual lots, the separate principal-building restriction, and front-yard measurement from roads or access. Current code reviewed October 8, 2026. These provisions are distinct from the proposed Mixed Residential Community amendment. [Current Code](#)



[93] Kronenberg Enterprises supporting research. A Clear Zoning Path for Common-Parcel Rental Communities, October 8, 2026. Companion research memorandum, especially pp. 13–15 and official source register, pp. 19–24. Supports the coordinated framework and approval-authority review. The white paper draws selectively on the ordinance findings; the detailed framework remains in the separate memorandum. The research is not a parcel-specific legal determination.

[94] Maryland DHCD. Low Income Housing Tax Credit Program Income and Rent Limits. Effective May 1, 2026; separate publication day not printed. PDF pp. 1, 3, and 5 establish Howard, Washington-group counties, and St. Mary's; p. 8 explains methods. Schedule for properties placed in service May 1, 2026 or later. All 54 income figures and 36 gross rents were corroborated in the October 9 supporting research. [Source](#)

[95] Virginia Housing. MTSP and HERA Special Rent Limits, May 2026, effective May 1 and revised May 18, 2026; pp. 9, 15, 21, and 24 cover the five priority Virginia counties. Program Income and Rent Limits Memorandum, May 2026, specifies implementation by June 15; this does not make the limits effective in April. Exact initial publication days are not stated. [Rent Schedule Timing Memorandum](#)

[96] Treasury and IRS. Section 42 Low-Income Housing Credit Average Income Test Procedures. Final regulations, TD 10036, 90 FR 46756–46762, published and effective September 30, 2025. Specified procedural provisions generally apply to taxable years beginning on or after that date, with consistent optional earlier application. Supplements the 2022 framework in [9]. [Source](#)

[97] U.S. Bureau of Labor Statistics. May 2025 Metropolitan and Nonmetropolitan Occupational Employment and Wage Statistics. Released May 15, 2026. MSA_M2025_dl.xlsx in oesm25ma.zip; area 47900, NAICS 000000, ownership 1235; published A_MEDIAN fields and SOC codes. Regional occupation estimates, not observed household incomes. [Data Index](#) [Data Download Release](#)

[98] U.S. Bureau of Labor Statistics. Technical Notes for May 2025 OEWS Estimates. Modified May 15, 2026. Wage coverage, exclusions, annualization, and six survey panels from November 2022 through May 2025 adjusted to the May 2025 reference date. Annual-only education measures are not annualized again. [Source](#)

[99] U.S. Bureau of Labor Statistics. Occupational Employment and Wages in Washington-Arlington-Alexandria. Published July 10, 2026; May 2025 wage reference. Regional geographic coverage includes the nine Washington-tier priority counties but excludes Howard and St. Mary's. [Source](#)

[100] Prince William County Public Schools. Salary Scale Information and New Teacher Placement Chart, 2026–27. Beginning teacher with zero completed years as of June 30, 2026; bachelor's degree, 195-day contract, \$65,000 annual base salary. Excludes employer benefit costs; separate publication day not stated. [Source](#)

[101] IRS. Revenue Procedure 2004-39, Internal Revenue Bulletin 2004-29, July 19, 2004, Sections 2.04–2.08 and 5.01; effective for bonds sold on or after that date, with stated earlier-use option. Internal Revenue Manual 20.1.10, revised and effective August 12, 2026. Section 142(d) bond-issuer elections and household-occupancy tests remain separate from Section 42 income averaging. [Revenue Procedure](#) [Current IRS Manual](#)

[102] IRS. Publication 5913, Guide for Completing Form 8823, January 2024 edition. Chapter 11, F.2–F.7, particularly printed pp. 136–137: imputed 1.5-person-per-bedroom occupancy, fractional household calculations, and gross-rent methods. [Source](#)

[103] Virginia Housing. Average Income Test Written Guidance, Version 3, January 26, 2023, and Compliance Monitoring resources. Project grouping, designations, extended-use and regulatory agreements, and Form 8609. Read with the later 2025 federal procedural regulations in [96]. [Guidance](#) [Compliance Resources](#)



- [104] Virginia Housing. 431 S Columbus St – Block 4, submitted 2024 application. PDF pp. 1, 37–38, 40–41 and 49: mortgage, boosted eligible basis, equity, operating assumptions and complete budget. Original checked October 12, 2026. [Source](#)
- [105] Virginia Housing. The Signals at Occoquan, submitted 2025 application. PDF pp. 35–36, 39, 41–42 and 54. Total federal LIHTC equity includes \$13,562,255 on the federal-equity line plus \$4,068,669 labeled “LIHTC Equity – Basis Boost Preservation” under other sponsor sources. Original checked October 12, 2026. [Source](#)
- [106] Virginia Housing. Clear Springs Apartments Phase I, submitted 2026 application. PDF pp. 39–42, 44–45 and 56. Proposed financing includes amortizing REACH loans, Loudoun and state-administered subordinate sources. The anomalous printed NHTF interest-rate field is not used to calibrate the hypothetical loan. Original checked October 12, 2026. [Source](#)
- [107] HUD. FY2021 MTSP Income Limits, effective April 1, 2021, national PDF p. 294, Washington-Arlington-Alexandria HMFA. FY2026 limits, effective May 1, 2026, national PDF p. 297, same area. Calculated gross rents use 30% of the applicable 60% income limit at imputed household sizes of 1.5, 3 and 4.5, divided by 12 and rounded down to whole dollars. See also [95]. [Source](#)
- [108] Internal Revenue Service. Revenue Ruling 2021-20, December 2021. Applicability and limitations of the minimum 4% credit percentage for post-2020 transactions. The hypothetical illustration assumes an eligible post-2020 bond-financed new development. [Source](#)
- [109] HUD. HUD Announces the Next Generation Housing Action Plan. October 7, 2026. Announcement reviewed October 12, 2026. [Source](#)
- [110] HUD. Next Generation Manufactured Housing Action Plan. Released October 7, 2026; pp. 1–3, particularly actions 2–7. Prospective work, not final regulatory standards. Reviewed October 12, 2026. [Source](#)
- [111] Virginia DHCD. HB854 Statewide Housing Study, Affordable and Special Needs Housing fact sheet, October 2021, and Chapter 20, Rental Production Programs. Historical ASNH structure, income targeting, HIEE introduction, and standard 3% current-interest terms. Read with the subsequent fall-cycle awards in [112]. Reviewed October 13, 2026. [Fact Sheet](#) [Chapter 20](#)
- [112] Virginia DHCD. Governor Northam Announces Over \$60 Million in Affordable and Special Needs Housing Loans, January 13, 2022. Fall 2021 cycle awards; Choice Neighborhood III-R and IV-R each include \$700,000 VHTF and \$2 million HIEE alongside separate NHTF funding. Award precedent, not proof of identical final loan terms. Reviewed October 13, 2026. [Source](#)
- [113] Virginia DHCD. Affordable and Special Needs Housing Rental Program Manual, FY2027, July 2026, pp. 5, 12 and 14. Source caps, standard loan terms and energy-performance requirements. Reviewed October 13, 2026. [Source](#)
- [114] Virginia DHCD. ASNH Competitive Application Program Guidelines, revised July 2026, pp. 7, 10–13 and 28. VHTF/HIEE eligibility, HIEE construction-cost cap, 30-year standard rental loan terms and minimum energy performance. Reviewed October 13, 2026. [Source](#)
- [115] Internal Revenue Service. Audit Technique Guide: IRC §42, Low-Income Housing Credit, September 2014 revision, Chapter 8, pp. 8-16–8-20 and 8-26–8-28; Appendix C, financing-cost and reserve entries. Official IRS guide hosted by the Arkansas Development Finance Authority; developer services, fee reasonableness, deferred payment, and eligible-basis treatment of financing and reserve costs. The guide is not a binding statement of law. Basis treatment rechecked October 14, 2026. Reviewed October 13, 2026. [Guide](#)
- [116] Virginia Housing. 13VAC10-180-60(J), current fee limits, and Virginia Register, Vol. 35, Issue 10, final regulation effective January 1, 2019, earlier \$3 million basis-fee and \$5 million total-fee caps. Current 4% exception requires at least 30% deferral. These ceilings do not establish the federal eligibility of a particular service. Reviewed October 13, 2026. [Current Rules](#) [Earlier Rules](#)
- [117] Freddie Mac. What Is Private Mortgage Insurance? Last reviewed January 3, 2025; accessed October 13, 2026. Published monthly range of \$30–\$70 per \$100,000 borrowed, with pricing dependent on loan-to-value and credit. Appendix G uses the midpoint as a scenario assumption, not a borrower quote. [Source](#)
- [118] Freddie Mac. Understanding Homebuying Costs. Accessed October 13, 2026. Closing costs generally 2%–5% of purchase price; upfront escrow and other cash needs are distinct. Appendix G uses a 3% closing-cost allowance and separately identifies additional cash requirements. [Source](#)
- [119] Kronenberg Enterprises. Owner-supplied enhanced aerial residential-neighborhood concept, supplied October 14, 2026. AI-assisted image editing removed the unreliable “Residential Program Summary” inset and reconstructed the obscured background. Original rendering provenance and planning quantities were not independently verified. The image is a conceptual visualization, not an engineering reproduction, approved plan, completed community, or the 175-home Case Study.