



# Design, Build, Transform

**A Multi-Faceted Approach to Vermont's Housing Affordability Challenge:  
An Applied Policy Project**

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For Yestermorrow Design/Build School*



# Table of Contents

<b>DISCLAIMER.....</b>	<b>4</b>
<b>ACKNOWLEDGEMENTS AND DEDICATION.....</b>	<b>4</b>
<b>GLOSSARY.....</b>	<b>5</b>
<b>EXECUTIVE SUMMARY.....</b>	<b>6</b>
<b>INTRODUCTION.....</b>	<b>7</b>
<b>PROBLEM STATEMENT .....</b>	<b>9</b>
<b>CLIENT OVERVIEW.....</b>	<b>9</b>
<b>BACKGROUND AND CONTEXT.....</b>	<b>10</b>
HISTORICAL HOUSING AND DEVELOPMENT PATTERNS .....	10
THE TRANSFORMATION OF HOUSING CONSTRUCTION.....	11
THE SKILLED LABOR SHORTAGE .....	12
THE GROWING DEMAND FOR SUSTAINABLE BUILDING .....	13
THE REGULATORY ENVIRONMENT AND LAND USE CONTROLS .....	13
THE RISE OF ALTERNATIVE HOUSING MODELS .....	14
STAKEHOLDERS .....	14
<b>EXISTING EVIDENCE.....</b>	<b>14</b>
CONSTRUCTION WORKFORCE DEVELOPMENT MODELS .....	14
<i>Apprenticeships .....</i>	<i>14</i>
<i>Train-the-trainer programs and Stackable Credentials.....</i>	<i>15</i>
COMMUNITY-BASED HOUSING SOLUTIONS .....	15
<i>Public-Private Partnerships.....</i>	<i>15</i>
ALTERNATIVE HOUSING MODELS AND THEIR IMPACT .....	16
<i>Cost-benefit analyses comparing these models to traditional housing.....</i>	<i>16</i>
POLICY INCENTIVES FOR SMALL-SCALE DEVELOPMENT .....	16
<i>Zoning Reforms .....</i>	<i>16</i>
<i>Streamlined permitting processes for smaller projects.....</i>	<i>17</i>
<i>Financing mechanisms for non-traditional housing .....</i>	<i>17</i>
<i>Housing Trust Funds.....</i>	<i>18</i>
<i>Tax Incentives.....</i>	<i>18</i>
SYNTHESIS AND IMPLICATIONS.....	18
<b>POLICY ALTERNATIVES.....</b>	<b>19</b>
EVALUATION CRITERIA.....	19
<i>Effectiveness .....</i>	<i>19</i>
<i>Efficiency .....</i>	<i>20</i>
<i>Equity and Inclusivity.....</i>	<i>20</i>
<i>Administrative Feasibility .....</i>	<i>20</i>
<i>Political Feasibility .....</i>	<i>21</i>
<b>ANALYSIS.....</b>	<b>21</b>
STATUS QUO .....	22
<i>Housing Implications.....</i>	<i>22</i>
<i>Construction Workforce Implications .....</i>	<i>22</i>
<i>Economic and Social Consequences .....</i>	<i>22</i>
<i>Implications for Yestermorrow.....</i>	<i>22</i>
ALTERNATIVE 1: TRAIN-THE-TRAINER PROGRAM.....	22
ALTERNATIVE 2: COLLEGE-CREDIT BEARING APPRENTICESHIP PROGRAM.....	24
ALTERNATIVE 3: ALTERNATIVE HOUSING PROTOTYPE AND POLICY ADVOCACY INITIATIVE.....	26

ALTERNATIVE 4: COMMUNITY-BASED DESIGN-BUILD PARTNERSHIP PROGRAM .....	28
SUMMARY OF FINDINGS AND RECOMMENDATION .....	30
<b>IMPLEMENTATION.....</b>	<b>31</b>
PHASE ONE: TRAIN-THE-TRAINER PROGRAM (MONTHS 1-24) .....	31
PHASE TWO: ALTERNATIVE HOUSING PROTOTYPE INITIATIVE (MONTHS 18-36).....	32
PHASE THREE: COMMUNITY-BASED DESIGN-BUILD PARTNERSHIP PROGRAM (MONTHS 30-60).....	33
<b>CONCLUSION.....</b>	<b>34</b>
<b>APPENDIX ONE: STAKEHOLDER ANALYSIS .....</b>	<b>35</b>
<b>APPENDIX TWO: OUTCOMES MATRIX .....</b>	<b>37</b>
<b>APPENDIX THREE: RESOURCE REQUIREMENTS.....</b>	<b>38</b>
<b>APPENDIX FOUR: FINANCIAL FRAMEWORK AND SUSTAINABILITY ANALYSIS.....</b>	<b>39</b>
<b>APPENDIX FIVE: STAKEHOLDER ENGAGEMENT STRATEGY .....</b>	<b>43</b>
<b>APPENDIX SIX: PERFORMANCE METRICS AND EVALUATION .....</b>	<b>44</b>
<b>APPENDIX SEVEN: RISK MANAGEMENT STRATEGIES .....</b>	<b>45</b>
<b>APPENDIX EIGHT: ACCOUNTABILITY STRUCTURE AND GOVERNANCE .....</b>	<b>47</b>
<b>REFERENCES.....</b>	<b>48</b>

## **Disclaimer**

The author conducted this study as part of the program of professional education at the Frank Batten School of Leadership and Public Policy, University of Virginia. This paper is submitted in partial fulfillment of the course requirements for the Master of Public Policy degree. The judgments and conclusions are solely those of the author, and are not necessarily endorsed by the Batten School, by the University of Virginia, or by any other agency.

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## Glossary

**Accessory Dwelling Unit (ADU):** A smaller, secondary housing unit located on the same lot as a primary residence. ADUs can be attached to the main house (such as a converted garage or basement) or detached (like a backyard cottage).

**Affordability Ratio:** A metric comparing home prices to household income, used to assess housing affordability in a region. When this ratio exceeds sustainable thresholds, it indicates a housing affordability crisis.

**Career and Technical Education (CTE):** Educational programs that specialize in skilled trades, applied sciences, modern technologies, and career preparation, typically offering both academic and career-oriented courses.

**Community Development Financial Institutions (CDFIs):** Specialized financial institutions that work in market niches underserved by traditional financial institutions, providing financial products and services to low-income communities.

**Construction Sector Capacity:** The workforce, materials, expertise, and systems available within the construction industry to meet building demands in a region.

**Cost-burdened:** Households that spend more than 30% of their income on housing costs, including rent/mortgage, utilities, insurance, and taxes.

**Euclidean Zoning:** A system of land use regulation that divides a municipality into districts with different permitted uses (residential, commercial, industrial), typically mandating separation of these uses.

**Housing Trust Fund:** A dedicated source of revenue reserved for affordable housing development and preservation, often established by local or state governments.

**NIMBY:** An acronym for "Not In My Back Yard," referring to opposition by residents to proposed developments in their local area, often despite accepting the need for such development elsewhere.

**Public-Private Partnerships (PPPs):** Collaborative arrangements between government agencies and private sector companies to finance, build, and operate projects that serve public needs.

**Severely Cost-burdened:** Households that spend more than 50% of their income on housing costs.

**Tax Increment Financing (TIF):** A public financing method used to subsidize development, infrastructure, and other community-improvement projects by allocating future tax revenue increases from a defined area to pay for current improvements.

**Upzoning:** Changing zoning regulations to allow higher-value uses, greater density, or both on a given parcel of land, often done to encourage housing development.

**U.S. Department of Housing and Urban Development (HUD):** A federal agency responsible for national policy and programs addressing housing needs, improving and developing communities, and enforcing fair housing laws.

**Vermont Housing Improvement Program (VHIP):** A state program offering grants of up to \$50,000 per unit to property owners to create affordable rental units, including the development of ADUs on owner-occupied properties.

## Executive Summary

Vermont faces a severe housing affordability crisis driven by two interconnected challenges: a critical housing supply shortage and a significant deficit of skilled construction labor. Currently, over half of Vermont renters and nearly a quarter of homeowners are cost-burdened, spending more than 30% of their income on housing. The state needs at least 24,000 new homes by 2030, but average construction production rates fall vastly short of reaching that goal.

This policy analysis examines how Yestermorrow Design/Build School, a nonprofit educational institution in Waitsfield, Vermont, can strategically address this dual crisis. The school's integrated design-build approach positions it to simultaneously expand the supply of innovative housing solutions while training a new generation of skilled builders.

After analyzing Vermont's housing ecosystem, this report evaluates four policy alternatives against criteria of effectiveness, efficiency, equity, administrative feasibility, and political feasibility:

1. **Train-the-Trainer Program:** Specialized curriculum and certification for construction professionals to become effective educators, creating a multiplier effect through Vermont's educational institutions and industry partners
2. **College-Credit Bearing Apprenticeship Program:** Offering stackable credentials with academic pathways to elevate construction careers
3. **Alternative Housing Prototype Initiative:** Creating demonstration models and pre-approved plans for ADUs to address regulatory barriers
4. **Community-Based Design-Build Partnership Program:** Establishing structured collaborations with municipalities to produce affordable housing while training students

Based on this evaluation, this report recommends a phased implementation strategy:

- **Phase 1 (Months 1-24):** Launch the **Train-the-Trainer Program**. Develop curriculum and certify construction professionals as educators to multiply workforce development impact efficiently across Vermont's educational institutions and industry partners. This builds a foundation with relatively low initial costs.
- **Phase 2 (Months 18-36):** Develop the **Alternative Housing Prototype Initiative**. Create replicable, pre-approved designs and demonstration models for ADUs and tiny homes to tackle regulatory hurdles and showcase viable, sustainable housing options.
- **Phase 3 (Months 30-60):** Gradually implement the Community-Based Design-Build Partnership Program as organizational capacity grows, leveraging structured collaborations to directly produce housing units while providing hands-on training.

This strategic sequencing allows Yestermorrow to leverage its strengths, tackle both Vermont's housing supply and workforce challenges, build momentum through early successes, create sustainable programming, and solidify its leadership at the intersection of education, workforce development, and affordable housing. By pursuing this phased approach, Yestermorrow can maximize its impact on Vermont's housing ecosystem while ensuring organizational sustainability and alignment with its core mission.

## Introduction

Vermont faces a housing affordability crisis with far-reaching economic, social, and environmental implications. Over half of Vermont renters and nearly a quarter of homeowners are "cost-burdened," spending more than 30% of their income on housing, and a quarter of renters are "severely cost-burdened," spending more than 50% of their income on housing (U.S. Department of Housing and Urban Development [HUD], 2021; Vermont Department of Housing and Community Development, 2024b). Low-income and minority households are more likely to be cost burdened, less likely to live in opportunity-rich neighborhoods, and less likely to meet the income and downpayment requirements for homeownership (Joint Center for Housing Studies of Harvard University, 2023). The affordability ratio—measuring home prices against income—has exceeded affordable thresholds since 2019 and continues to worsen, particularly for renters (Vermont Department of Housing and Community Development, 2024a). As seen in Figure One, home price growth has dramatically outpaced household income growth and the disparity between the two metrics has accelerated in the years following the pandemic.

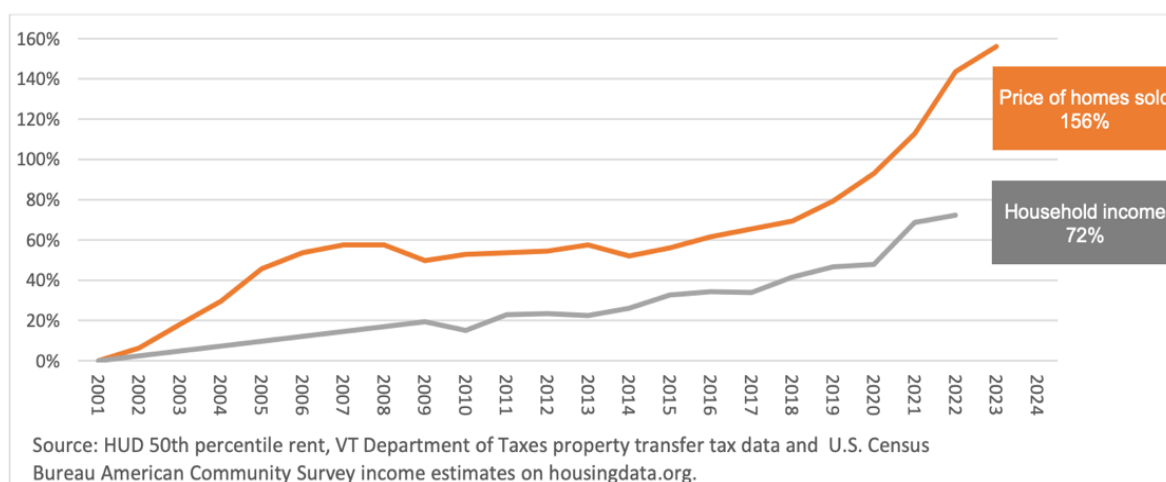


Figure 1. Change in median household income and median home sale price, 2001-2023

These statistics represent real families sacrificing healthcare and food to maintain shelter, workers commuting excessive distances, and essential service providers unable to live in communities they serve (Klein & Thompson, 2025). Beyond the devastating effects on individuals and households, the consequences of dwindling affordability are wide-reaching: businesses are forced to relocate, taking job opportunities with them; income inequality and generational cycles of poverty are exacerbated; and hurts the economy (Bipartisan Policy Center, 2024). Increasing affordability is good for individuals, families, communities, and the economy.

The Vermont Housing Needs Assessment projects that Vermont needs 24,000-36,000 new homes by 2030 to address existing shortages and accommodate projected growth; however, the occupied housing stock only grew by 1,200 homes per year between 2010 and 2020 – a rate severely insufficient to meet the stated need (Vermont Department of Housing and Community Development, 2024a). A critical barrier stands in the way: a construction sector without sufficient capacity to meet development needs.

A workforce survey for the Northeast region reveals a critical skilled labor shortage across the industry, with 88% of firms reporting difficulty filling salaried positions and 84% struggling to fill craft positions (Associated General Contractors of America, 2023). The Vermont Department

of Labor projects a need for 5,000 new carpenters over the next decade—a 33% increase from 2022 levels (Allen, 2022). This estimate addresses only one trade and doesn't account for the additional plumbers, electricians, and other skilled workers required. This shortage is having tangible impacts on project timelines, with 66% of firms reporting project delays directly attributed to worker shortages (Associated General Contractors of America, 2023). Rising labor costs, as employers compete for limited talent, have dramatically increased project expenses (Peters, 2024b).

This demonstrates a paradoxical interdependency: housing shortages prevent workforce growth while workforce shortages limit housing construction.

This policy analysis examines the factors contributing to Vermont's housing crisis, identifies the market and policy failures perpetuating it, and evaluates potential interventions focused on the critical intersection of housing supply and construction industry capacity. By analyzing several policy alternatives against criteria of effectiveness, efficiency, equity, and political feasibility, this report aims to provide Yestermorrow with actionable recommendations to maximize its impact on Vermont's housing ecosystem. In their book, *Escaping the Housing Trap*, the authors emphasize that genuine solutions to the housing crisis will require efforts from many different entities “pursuing separate objectives in a dance that is never fully choreographed” (Marohn & Herriges, 2024). Yestermorrow alone will not solve the problem, but they have an important role to play in the effort to create pathways toward more affordable, sustainable, and equitable housing outcomes for Vermonters across the income spectrum.



## Problem Statement

***Vermont confronts a severe housing affordability crisis stemming from two interconnected challenges: a persistent housing supply shortage and a critical deficit of skilled construction labor.*** This dual constraint has created market conditions where traditional housing development models consistently fail to meet demand, with particularly adverse impacts on low- and moderate-income residents (Vermont Housing Finance Agency, 2024). The consequences extend beyond individual households, as the crisis threatens Vermont's economic growth potential, with 80% of Vermont employers reporting housing challenges affecting their ability to hire and retain employees (VHFA, 2023b).

Housing insecurity affects workforce stability, limits business expansion, and undermines community development efforts throughout the state. Access to adequate housing represents a fundamental human right (Massimo, 2021; Tars 2021). Achieving the national housing goal that "every American family be able to afford a decent home in a suitable environment" requires urgent intervention to address both the supply constraints and workforce development needs simultaneously (Cranston-Gonzalez National Affordable Housing Act, 1990).

## Client Overview

Yestermorrow Design/Build School, a nonprofit educational institution founded in 1980 in Waitsfield, stands at the intersection of Vermont's housing and workforce development challenges. Founded by John Connell, the school's mission centers on empowering students to create sustainable communities through practical, design-driven construction methods that bridge the traditionally separate processes of architectural design and building construction (Stephenson, 2010). This integrated approach positions Yestermorrow uniquely within Vermont's educational landscape and makes it particularly relevant to addressing the state's housing affordability crisis.

The school currently serves approximately 800 students annually through a diverse curriculum ranging from intensive weekend workshops to semester-long accredited courses offered in partnership with the University of Massachusetts (C. Bellmyer, personal communication, September 9, 2024). While maintaining the founder's vision of integrated design-build education, Yestermorrow has evolved to emphasize inclusivity and equitable opportunity. This commitment manifests in specialized courses for underrepresented groups in construction, including women and LGBTQ+ individuals, and through the school's recruitment and employment of instructors from diverse backgrounds who serve as role models for students.

What distinguishes Yestermorrow in the educational landscape is its holistic philosophy that extends beyond conventional construction training. The school incorporates ecological building practices, energy efficiency, and climate resilience as foundational elements rather than add-ons. Unlike traditional trades education focusing primarily on building techniques, Yestermorrow teaches students to move fluidly between design and implementation, emphasizing how built environments can strengthen communities and increase accessibility across socioeconomic boundaries. The school further differentiates itself through experimentation with alternative materials, adaptive reuse, and emerging building technologies. Courses on Accessory Dwelling

Units (ADUs), shipping container adaptations, and tiny home design and construction are particularly relevant to Vermont's housing challenges.

Yestermorrow demonstrates capacity to contribute simultaneously to both dimensions of Vermont's housing crisis by expanding the supply of innovative, sustainable housing solutions while training a new generation of skilled builders who understand both design principles and construction techniques. This dual impact potential makes Yestermorrow an ideal client for exploring policy interventions at the nexus of housing supply and workforce development.

## Background and Context

Vermont's housing affordability crisis emerges from a complex interplay of economic, regulatory, and societal factors that have evolved over decades. This analysis focuses on a critical supply-side intersection: the shortage of housing stock compounded by a construction industry with a severe shortage of skilled workers. This section examines the evolution of these challenges, providing context for evaluating policy alternatives aimed at addressing Vermont's housing and workforce needs through Yestermorrow's unique design-build approach.

### Historical Housing and Development Patterns

Following World War II, the United States experienced a transformation in housing development patterns that continues to influence Vermont's housing landscape today. The postwar era saw rapid suburbanization fueled by government-backed mortgages, highway construction, and cultural emphasis on single-family homeownership (Jackson, 1985). This expansion prioritized car-dependent development, contributing to sprawling land use patterns that required significant infrastructure investment. While creating housing opportunities for many white, middle-class households, these patterns also institutionalized segregation through discriminatory lending practices and exclusionary zoning (Marohn & Herriges, 2024; Rothstein, 2017). Rigid, Euclidean zoning reduced pollution risks by keeping industrial land uses separate from residential land uses; however, it also exacerbated segregation issues, limited housing supply by mandating low densities, and encouraged urban sprawl (Watsky, 2018). As suburban development boomed, housing types and sizes evolved substantially. The average American home grew progressively larger—from approximately 1,000 square feet in 1950 to over 2,300 square feet by 2020 (Joint Center for Housing Studies of Harvard University, 2023). This trend toward larger homes increased construction costs as more materials, labor, and land were required per housing unit. Vermont mirrored these national trends and the median house size today is around 2000 square feet (Federal Reserve Bank of St. Louis, 2025). Local governments benefited from this shift since property taxes are largely influenced by the value of the ‘improvements’ made to a parcel of land (Cohen & Coughlin, 2005).

Between 2010 and 2020, Vermont produced 10,580 housing units—less than half the number created in the previous decade. This production slowdown, coupled with a shift toward larger, more expensive homes, has exacerbated affordability challenges and created a mismatch between the housing stock constructed and the needs of a diverse population. Figure Two highlights this

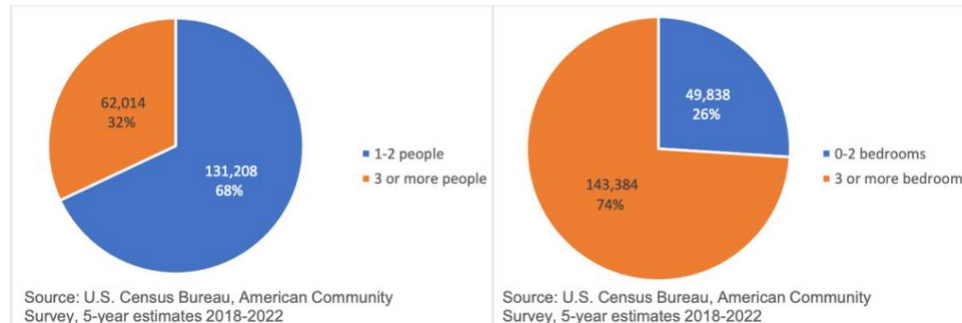


Figure 2. Household Size Vs Home Size in Vermont

mismatch: 68% of households consist of 1 or 2 people while only 26% of the state's homes have two bedrooms or fewer (Vermont Department of Housing and Community Development, 2024b). Too few

right-sized homes for smaller households can result in families having no choice but to purchase and/or rent larger homes than they need, which can inflate housing expenses and exacerbates housing affordability issues. Vermont's old housing stock and cold weather make this inflationary effect of upsizing especially notable. The average household devotes 4% of household income towards heating costs; however, low-income households devote 21% of their income towards heating and electricity – eight percentage points more than the national average (Vermont Department of Housing and Community Development, 2024a). Heating and cooling a larger home than needed has real financial implications for families.

An additional constraint on the existing housing stock is the proliferation of short-term rental homes. The state saw a 46% increase in the number of homes listed as short-term rentals from July 2017 - December 2024, reaching 12,441 active listings (Vermont Housing Finance Agency, n.d.).

## The Transformation of Housing Construction

The construction industry has also undergone a profound transformation over the past century. Collective homebuilding and community barn-raising date back centuries (Housing Assistance Council, 2015)). This collaborative approach kept housing costs manageable and fostered community bonds and shared responsibility. As building codes grew more complex and construction methods more technical, the industry fragmented into specialized trades and multiple layers of contractors, subcontractors, project managers, and consultants. Each additional intermediary in the construction process also added another layer of cost. According to the Joint Center for Housing Studies at Harvard University (2023), the percentage of housing costs due to overhead, profit margins for various intermediaries, regulatory compliance, and financing have increased substantially. In areas like Vermont where small-scale contractors make up most of the industry, these added costs are often passed directly to homebuyers and renters, exacerbating affordability challenges.

This shift toward professionalization coincided with—and perhaps contributed to—a societal devaluation of skilled trades, creating the workforce challenges that now constrain housing production capacity.

## **The Skilled Labor Shortage**

By the end of 2023, Vermont's unemployment rate stood at 2.0%—a 0.3 percentage point decrease from 2022 (Vermont Department of Labor, 2024). Economists generally consider a healthy unemployment rate to be around 4-5% (Haynes & Palmquist, 2022). This rate accounts for normal labor market dynamics including people transitioning between jobs and structural mismatches between worker skills and available positions. When unemployment falls too low, significant economic challenges (e.g., severe labor shortages preventing business expansion, wage inflation from competition between employers, productivity declines from hiring less qualified workers, increased employee turnover, and compressed profit margins due to higher labor costs) emerge (Haynes & Palmquist, 2022). These are the precise challenges construction industry professionals report in workforce studies.

The shortage of skilled construction labor represents a critical bottleneck in Vermont's housing supply chain and stems from several intersecting factors:

First, the post-war era witnessed a growing emphasis on white-collar professions, often at the expense of blue-collar trades. As manufacturing declined and the service sector expanded, societal prestige shifted toward higher education and professional careers (Bluestone & Harrison, 1982). This cultural shift contributed to a perception that skilled trades were less desirable or prestigious, in turn making them seem less important or desirable (Fiori, 2012; Kovacs, 2024; Randstad, 2025; PRT Staffing, 2024; Tracy, 2020).

Second, the physically demanding nature of construction work, coupled with often cyclical employment patterns, can make trades less appealing to potential workers (PRT Staffing, 2024). The construction industry is susceptible to boom-and-bust cycles that make maintaining a consistent workforce challenging. Many skilled laborers left the industry permanently during the downturn created by the Great Recession, leaving lasting impacts on Vermont's construction capacity (Hoffman & Cillo, 2009).

Finally, the construction industry has struggled to attract and retain underrepresented groups. Women comprise only 8.6% of the construction workforce – less than the national share – and face significant barriers including unequal treatment, poor mentorship, and even harassment (Burrows, 2023; Lumber, 2024). Similarly, racial and ethnic minorities encounter obstacles including discrimination and limited access to training and advancement opportunities (Burrows, 2023). This not only constrains the potential labor pool but also deprives the industry of varied perspectives and talent.

Despite data showing that skilled trades often offer competitive starting wages and lower educational debt than many four-year degree paths, fewer young people are entering the trades (Vermont Talent Pipeline Management, 2021). As a result, the existing workforce is aging rapidly. Today, the average age of Vermont's skilled construction workforce is 45—four years older than the national average—and is projected to continue to rise (Vermont Talent Pipeline

Management, 2021). Without sufficient new entrants, the state faces an impending decline in building capacity due to both reduced labor availability and loss of specialized knowledge and skills.

An additional challenge for the industry is the rural nature of the state. Smaller construction firms have limited capacity to sponsor apprentices, dispersed regions create transportation barriers, and training networks are weaker compared to more populated areas (NREA, 2018).

The educational infrastructure for training construction workers is hampered by a critical shortage of CTE instructors. While Vermont's regulations require instructors to have "appropriate work experience in their technical field," they fail to create viable pathways for experienced tradespeople to transition into teaching roles (Vermont Agency of Education, n.d.). A recent analysis confirms that construction trades teaching positions remain among the hardest to fill, largely due to compensation disparities between industry and education and burdensome certification requirements (Augenblick & Palaich, 2025). This instructor shortage directly limits Vermont's ability to train the construction workforce needed to address housing shortages.

## **The Regulatory Environment and Land Use Controls**

Vermont's approach to land use regulation evolved significantly during the late 20th century, culminating in the 1970 passage of Act 250—the state's landmark land use and development law. Created in response to concerns about uncontrolled growth and environmental degradation, Act 250 established a comprehensive permit process evaluating major development projects against ten criteria related to environmental and community impacts (Vermont Natural Resources Board, 2023).

While Act 250 has successfully preserved Vermont's environmental quality and community character—values central to the state's identity and economic vitality—it has also increased the complexity, timeline, and cost of housing development. The permit process requires developers to navigate multiple regulatory layers, often necessitating specialized legal and engineering consultation. Regulatory costs—including permit fees, impact fees, and compliance expenses—can add between 18% and 20% to housing development costs (Peters, 2024a). These regulatory barriers particularly disadvantage smaller developers and innovative housing models that might otherwise provide more affordable options.

At the municipal level, restrictive zoning practices further constrain housing supply and affordability. Many Vermont towns maintain large minimum lot size requirements—often one to five acres per dwelling unit—and designate vast areas of land exclusively for single-family homes (Walton, 2025). These zoning regulations limit housing density and diversity, driving up land costs per unit and making housing development at affordable levels increasingly difficult.

The cumulative effect of local zoning ordinances, state regulations, and Act 250 requirements has created an environment where housing development faces significant barriers. These barriers drive up costs (HUD, 2021; Rosado, n.d.)

## **The Rise of Alternative Housing Models**

The convergence of housing affordability challenges, workforce constraints, and regulatory requirements has created growing interest in alternative housing models. Accessory Dwelling Units (ADUs), tiny homes (typically under 400 square feet), and adaptive reuse projects (shipping container, sheds, and barn conversions) are pathways to increase housing supply, improve affordability, and advance environmental goals (Mallery, 2019; Vermont Department of Housing and Community Development, 2024b).

## **Stakeholders**

Addressing this crisis requires understanding the interests, influence, and positions of key stakeholders who will either enable or constrain potential solutions. While many stakeholders support affordable housing in principle, the reality of development often faces significant opposition. For example, NIMBY responses – often masquerading as concern about environmental impacts, property values, or community character – are a significant barrier to housing development (Scally & Tighe, 2015). Understanding community dynamics is crucial for evaluating the political feasibility of housing initiatives. A full stakeholder analysis can be found in Appendix One.

The following section examines evidence-based approaches to address the dual constraints of workforce shortages and housing supply, focusing on interventions that align with Yestermorrow's mission and capabilities.

## **Existing Evidence**

This section explores evidence-based approaches to addressing housing affordability challenges, with specific focus on interventions relevant to housing supply and skilled labor constraints and Yestermorrow's potential role. Building on the context established in the background section, this review synthesizes research on workforce development, community-based housing solutions, alternative housing models and their impact, and policy incentives for small-scale development to inform effective recommendations.

## **Construction Workforce Development Models**

The skilled labor shortage identified in Vermont's construction sector represents a critical constraint on housing supply. Research consistently links labor shortages with rising construction costs and housing affordability challenges (DeSilver, 2024; Elbashbisy & El-adaway, 2024; Peters, 2024b; Vermont Housing Finance Agency, 2024). Evidence indicates that effective workforce development programs directly align training with employer needs, provide comprehensive support services to address barriers faced by trainees, and engage employers in curriculum development and job placement (Callan & Ashworth, 2004; Maag & Jacoby, 2024).

## **Apprenticeships**

Apprenticeships combine paid on-the-job training with classroom instruction, creating an "earn while you learn" model (Maag & Jacoby, 2024; Reed et al., 2012). Apprenticeships have been used to teach the skilled trades for thousands of years (Prak & Wallis, 2019). Their strengths lie in the hands-on skills training apprentices gain through observation and application, with expert

guidance and immediate feedback throughout the learning process (Collins et al., 1991). Research from the Institute for Construction Employment Research highlights how successful apprenticeship programs incorporate targeted recruitment strategies, mentorship networks, and anti-harassment policies to create more inclusive environments (Bilginsoy et al., 2022). These interventions demonstrate how well-designed apprenticeships can simultaneously build workforce capacity and transform construction culture.

### **Train-the-trainer programs and Stackable Credentials**

The train-the-trainer model – one person or people receive initial training and they, in turn, train others at their parent organization – has a sound body of literature supporting its effectiveness in a variety of contexts. In healthcare and education, the research suggests the train-the-trainer model is both efficient and cost-effective (Suhreinhich, 2011). Although it is common to use outside trainers to provide training, their services are often expensive and their time commitment to trainees limited. Almost two thirds of construction firms surveyed reported difficulty filling open positions due to available candidates either not being qualified or lacking the skills required, demonstrating a need for in-house trainers (Associated General Contractors, 2023). McKinsey researchers identify this model as a critical strategy for scaling trade education, noting that many skilled professionals lack the pedagogical training needed to effectively pass on their knowledge (Greenberg et al., 2024).

Complementing this approach, stackable credential programs allow individuals to progressively build qualifications through a series of shorter-term, career-aligned credentials with standalone labor market value (Bailey & Belfield, 2017; Ganzglass, 2014; Xu & Trimble, 2016). This model is particularly effective at increasing participation in trade careers by lowering initial barriers to entry by offering shorter completion timeframes and more immediate employment outcomes, accommodating non-traditional students, and creating visible pathways for career advancement that address concerns about limited growth opportunities in trades (Austin et al., 2012; Carnevale et al., 2012; Daugherty et al., 2020; Wilson, 2016). Virginia’s Workforce Credential Grant uses a pay-for-performance model to fund a workforce training program and demonstrates how public funding can support short-term credentials in high-demand fields through community colleges while ensuring strong outcomes through innovative financing models (Maag & Jacoby, 2024).

### **Community-Based Housing Solutions**

Collaborative housing models—including cohousing, Community Land Trusts (CLTs), and community self-build initiatives—offer documented social, financial, and environmental benefits (Lubik & Kosatsky, 2019; Czischke et al., 2020). CLTs particularly excel at securing long-term affordability by separating land ownership from buildings while keeping decision-making power in community hands (Mayer, 2022).

### **Public-Private Partnerships**

Effective Public-Private Partnerships (PPPs) for housing production pool resources from developers, financial institutions, non-profits, and government agencies, featuring clear agreements and equitable risk structures (Friedman, 2016). Massachusetts's Community Investment Tax Credit program exemplifies this approach by providing state tax credits to businesses investing in community development corporations working on affordable housing (Massachusetts Housing Partnership Fund, n.d.).

## **Alternative Housing Models and Their Impact**

There is a growing movement to legalize and encourage alternative housing models to increase density within existing neighborhoods (Mallery, 2019). These smaller-scale projects can utilize land more efficiently, often integrating into existing neighborhoods without requiring extensive new infrastructure. In Vermont, where many properties feature large single-family homes on underutilized lots, ADUs represent a particularly promising approach to increase housing density while maintaining community character (Vermont Department of Housing and Community Development, 2024b.)

The 2025-2029 Housing Needs Assessment explicitly identifies alternative housing models as essential components of addressing Vermont's housing needs. Demographic trends further reinforce the need. Vermont's population is significantly older than the national average, with 21.6% of residents over age 65 compared to 17.3% nationwide (Vermont Department of Housing and Community Development, 2024b). This aging demographic profile, combined with the projection of 90,000 additional residents over age 65 by 2030, creates substantial demand for smaller, more accessible, and lower-maintenance housing options.

### **Cost-benefit analyses comparing these models to traditional housing**

In 2021, the average tiny home was 5.72 times less expensive than the average traditional home (Carrizosa, 2021). Tiny homes are less expensive to build, less expensive to heat/cool, and less expensive to maintain (Saxton, 2021).

## **Policy Incentives for Small-Scale Development**

Beyond the targeted interventions discussed above, research documents a range of policy instruments being leveraged to address housing affordability challenges across diverse contexts. Existing zoning ordinances, building codes, and community acceptance are influenced by negative perceptions and/or unfamiliarity. As with most things, people resist what they do not know. As more people are exposed to alternative housing solutions and learn more about the possibilities, the resistance to them will wane. In the meantime, policymakers can help alleviate resistance.

### **Zoning Reforms**

Cities around the country are leveraging zoning reform to encourage development. Minneapolis passed a landmark zoning overhaul that removed single-family zoning, allowing for greater density and opportunity across the city - often called 'upzoning' (Wang, 2023). Increased housing density disperses land costs, decreasing the cost per unit of housing and increasing affordability. While restrictive zoning is often blamed for limiting housing supply (and is therefore the target of upzoning reforms), research suggests the relationship between zoning and development is more complex (Been et. al., 2022; Corazza, 2024).

Vermont municipalities have begun exploring targeted zoning reforms, particularly to accommodate alternative housing types like tiny homes and accessory dwelling units, encouraging gentle density increases in existing neighborhoods (Vermont Agency of Commerce and Community Development, 2020; Vermont Agency of Commerce and Community Development, 2024; Vermont Department of Housing and Community Development, 2024b).



Further reforms could focus on reducing minimum lot sizes, allowing significant density increases in designated growth centers, leveraging inclusionary zoning, and streamlining permitting processes for larger affordable housing projects (HUD, 2021; Peters, 2024a; Pinto, 2025; Potter, 2023). Inclusionary zoning requires a certain percentage of affordable units be included in new development projects (Wang & Balachandran, 2021). However, evidence from other regions indicates Vermont should carefully consider potential unintended consequences and integrate anti-displacement strategies alongside supply-focused reforms. Oregon's House Bill 2001, which effectively eliminated exclusive single-family zoning statewide, provides a prominent example. Analysis of Portland following implementation found the proportion of middle housing types in new construction within formerly single-family zones increased from 13.4% to 44.7%; however, the same study noted concerns about potential gentrification (Potter, 2023).

While zoning reform is important to allow for increased density and diversity of housing, additional regulatory interventions are necessary. Even in areas where increased density could facilitate more affordable housing, the permitting and development process is so cumbersome that it prevents development (Pinto, 2025; Potter, 2023). Streamlining the permitting processes reduces costs, unnecessary delays, and administrative burden, which helps ensure affordable housing is affordable to develop (Klein & Thompson, 2025).

### **Streamlined permitting processes for smaller projects**

Streamlined permitting processes accelerate housing development by offering pre-approved designs, reducing review times, waiving fees, and simplifying application requirements. Cities like San Jose and Encinitas, California have implemented successful programs featuring "off-the-shelf" building plans that have already passed planning review, significantly reducing permitting timelines from months to as little as one week (City of San Jose, 2024; Kopko & Warfield, 2023). The results have been substantial: Encinitas saw a dramatic increase in ADU construction with 116 units approved in 2019 compared to just 20 in 2012-2013 combined, while San Jose processed approximately 600 ADU permits in 2020 with projections reaching 1,000 in 2021 (Kopko & Warfield, 2023; Villa Homes, 2022). These successful models demonstrate how removing bureaucratic barriers through pre-approved plans, fee waivers, and dedicated staff resources can efficiently expand housing options without sacrificing quality or safety standards.

### **Financing mechanisms for non-traditional housing**

Traditional mortgage lenders often hesitate to fund unconventional housing types due to perceived risks, limited comparable sales data, and regulatory uncertainties (Vermont Community Loan Fund, n.d.). Although it remains a challenge, financing is not impossible. State-backed loan guarantee programs can reduce lender risk and specialized loan products through Community Development Financial Institutions (CDFIs) demonstrate potential pathways forward.

According to the Housing Budget and Investment Report 2024, the state has increasingly diversified its funding beyond traditional affordable housing developments to include middle-income housing, manufactured home replacement, and accessory dwelling units. Notably, the Vermont Housing Improvement Program (VHIP) dedicated \$9 million to rehabilitate 329 vacant and substandard housing units in FY 2023, demonstrating growing recognition that addressing

Vermont's housing crisis requires multiple, complementary approaches beyond new construction alone (Vermont Department of Housing and Community Development, 2024b). For smaller-scale developments, VHIP offers grants of up to \$50,000 per unit to property owners to create affordable rental units, including the specific development of Accessory Dwelling Units (ADUs) on owner-occupied properties (Vermont Department of Housing and Community Development, 2024b).

### **Housing Trust Funds**

Housing trust funds provide dedicated revenue streams for affordable housing development and preservation, offering stable and predictable funding for diverse housing activities. (National Low Income Housing Coalition, 2016). Effective HTFs incorporate sustainable revenue sources such as real estate transfer taxes, document recording fees, or inclusionary zoning in-lieu fees.

### **Tax Incentives**

Tax Increment Financing (TIF) is an economic tool that uses future increases in property tax revenue to finance current development projects (Coffin, 2018; National Housing Conference, 2017). Often used for economic development project, TIF can also be used as a dedicated funding source for affordable housing development in appreciating neighborhoods (Merriman, 2018). Successful TIF programs include long-term affordability requirements, income-targeting mechanisms, and anti-displacement provisions, though their effectiveness ultimately depends on strong oversight, community involvement, and explicit dedication to housing rather than commercial development (Theodos et al., 2014).

Land Value Taxes (LVT) shift the tax base from buildings to unimproved land value, encouraging development of underutilized parcels by increasing holding costs for vacant land and reducing penalties for property improvements (Cohen & Coughlin, 2005). Pennsylvania municipalities that implemented split-rate taxation showed measurable increases in building density and construction activity compared to those with traditional property tax systems (Oates & Schwab, 1997). Dye and England (2010) concluded that LVT would likely generate more compact development patterns and increase housing production in high-value areas, while Ingram and Hong (2012) demonstrated that LVT can capture publicly created values while creating incentives for more efficient land use that potentially moderates housing prices.

Property tax abatements for ADUs and tiny homes are becoming increasingly common as municipalities seek to encourage infill development, with programs in cities like Vancouver, Washington offering exemptions for up to 12 years when at least 20% of units are set aside for low-income households (Local Housing Solutions, 2022). These tax incentives are particularly effective for small-scale development because they reduce ongoing operating costs without requiring complex financing arrangements, allowing homeowners and small developers to improve project feasibility with minimal administrative burden while creating naturally affordable housing within existing neighborhoods (Local Housing Solutions, 2022).

### **Synthesis and Implications**

This review highlights a critical intersection where Yestermorrow can make a significant impact on Vermont's housing landscape through its distinctive design-build educational approach. As

Vermont grapples with both a severe construction workforce shortage and a housing affordability crisis, Yestermorrow is uniquely positioned to address these interlinked challenges through a multi-faceted approach focusing on train-the-trainer programs, alternative housing models, and policy advocacy. The evidence suggests that stackable credential programs and train-the-trainer models could effectively expand the construction workforce while making training more accessible and effective (Associated General Contractors, 2023; Suhrheinrich, 2011). Meanwhile, research demonstrates that alternative housing models like ADUs and tiny homes offer viable, cost-effective solutions for increasing housing supply, with documented environmental benefits and significantly lower construction costs—approximately 5.72 times less expensive than traditional housing (Carrizosa, 2021; Saxton, 2021). Vermont's existing grant programs for ADUs and policy initiatives around streamlined permitting present immediate opportunities for Yestermorrow to leverage its expertise in sustainable design-build education to develop pre-approved, buildable plans and specialized training programs that directly address regulatory and workforce barriers identified in the research. By strategically focusing on these evidence-based interventions, Yestermorrow can amplify its impact beyond individual training outcomes to systematically address Vermont's housing crisis through both construction workforce development and innovative, small-scale housing models that align with the state's demonstrated needs for more diverse, affordable, and sustainable housing options.

Based on this evidence review, the analysis now turns to specific policy alternatives that Yestermorrow could implement to address Vermont's housing crisis. Each alternative represents a strategic approach leveraging Yestermorrow's unique position at the intersection of education, design, and construction. These options will be systematically evaluated against criteria reflecting both the multi-dimensional nature of the housing crisis and Yestermorrow's organizational capacity and mission alignment.

## **Policy Alternatives**

The evidence presented in the previous sections highlights Vermont's dual crisis: a critical housing supply shortage coupled with a significant deficit of skilled construction labor. Yestermorrow Design/Build School occupies a unique position at this intersection, with its integrated approach to sustainable design and construction education. Potential policy alternatives leverage Yestermorrow's established expertise in sustainable design-build education to address both dimensions of the crisis and will be evaluated against the following five criteria: effectiveness, efficiency, equity, administrative feasibility, and political feasibility. Each criterion includes specific impact categories that reflect the dual nature of Vermont's housing crisis and Yestermorrow's unique position to address it.

## **Evaluation Criteria**

### **Effectiveness**

Effectiveness measures each alternative's potential impact in addressing Vermont's critical workforce and housing challenges by evaluating how well each option addresses both dimensions of the crisis: the housing supply shortage and the skilled labor deficit.

### **Impact Categories**

- **Workforce Development Impact:** Estimated number of individuals trained and projected entry into construction trades

- **Housing Supply Contribution:** Potential direct and indirect contributions to housing production
- **Alternative Housing Advancement:** Capacity to promote and normalize alternative housing models identified in the literature
- **Long-term System Change:** Potential for creating sustainable, structural improvements in Vermont's housing ecosystem

### **Efficiency**

The efficiency criterion evaluates the economic and resource efficiency of each alternative by comparing implementation costs against potential returns. This analysis recognizes Yestermorrow's status as a nonprofit educational institution with limited resources and identifies approaches that maximize impact relative to investment.

#### **Impact Categories**

- **Implementation Costs:** Financial resources required for full implementation (scored inversely)
- **Revenue Generation Potential:** Capacity to create sustainable funding streams for Yestermorrow
- **Time-to-Impact Ratio:** Balance between immediate results and long-term benefits
- **Value Creation Beyond Revenue:** Broader economic and social benefits relative to resources invested

### **Equity and Inclusivity**

Aligning with Yestermorrow's commitment to breaking down barriers in the construction industry, this criterion assesses how each alternative promotes equitable outcomes and increases access for underrepresented groups. This directly connects to the workforce dimension of Vermont's housing crisis by addressing the industry's historical lack of diversity identified in the background section.

#### **Impact Categories**

- **Reach to Underserved Communities:** Potential to engage and benefit disadvantaged populations
- **Reduction of Entry Barriers:** Capacity to address obstacles faced by women, minorities, and low-income individuals
- **Alignment with Inclusivity Mission:** Consistency with Yestermorrow's commitment to diversity
- **Meaningful Opportunity Creation:** Ability to create substantive economic mobility for diverse populations

### **Administrative Feasibility**

This criterion evaluates Yestermorrow's organizational capacity to implement each alternative. It recognizes the practical constraints facing the institution and assesses the alignment between proposed interventions and existing capabilities.

#### **Impact Categories**

- Staff Time & Resource Requirements: Additional demands on Yestermorrow personnel (scored inversely)
- Fundability: Potential for external funding sources to cover the costs
- Organizational Infrastructure Compatibility: Alignment with existing systems and processes
- Expertise Alignment: Match between required skills and Yestermorrow's current faculty expertise
- Scalability: Potential for growth and adaptation as implementation progresses

### **Political Feasibility**

This final criterion assesses each alternative's viability within Vermont's broader policy environment and institutional landscape. It evaluates external factors that might facilitate or impede implementation, connecting to the regulatory barriers identified in the background section.

### **Impact Categories**

- Alignment with State Workforce and Housing Policies: Consistency with Vermont's existing policy priorities
- Educational Institution Support: Potential for collaboration with schools, colleges, and training programs
- Regulatory Compatibility: Alignment with existing regulatory frameworks
- Stakeholder Support: Likelihood of endorsement from key constituencies including industry, government, and community groups

<b>Analysis</b>
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This analysis evaluates each alternative against equally weighted criterion. Each criterion contributes 20% to the final assessment score, reflecting Yestermorrow's balanced approach to addressing both dimensions of Vermont's housing crisis while maintaining organizational sustainability. Time horizons for evaluation vary slightly between alternatives due to their different implementation pathways, with workforce development initiatives generally showing results within 2-3 years, while housing supply initiatives may require 3 years or more to demonstrate full impact. Cost projections are informed by typical Yestermorrow expenses, but implementation costs for new initiatives may vary. Further due diligence (e.g., a detailed budgeting exercise that considers staffing requirements, facility needs, materials, and administrative overhead specific to each approach) is recommended to ensure assumptions made in this analysis match existing market conditions at the time of implementation.

Alternatives are scored using a standardized scale (low, medium, high) with corresponding numeric values (1-5), providing a clear and nuanced framework for comparison. For some impact categories with reverse implications (such as costs and staff demands), scoring is inverted to maintain consistency in interpretation (e.g., high costs earn a 1 while low costs earn a 5). Appendix Two contains the Outcomes Matrix, detailing the scores for each criterion and impact category.

## **Status Quo**

If no action is taken, Vermont faces a continued downward spiral in which housing constraints limit workforce growth, which further constrains housing production. This cycle would progressively undermine the state's economic vitality, environmental goals, and community wellbeing. This "status quo" scenario helps establish the baseline against which policy alternatives are evaluated and underscores the urgent need for intervention.

## **Housing Implications**

Without intervention, Vermont's housing shortage would accelerate based on current trends. The current housing deficit would worsen, median home prices would continue to outpace income growth, and the percentage of cost-burdened households would increase. More Vermonters, particularly young families and essential workers, would be priced out of communities, forcing longer commutes, relocation outside the state, or housing insecurity.

## **Construction Workforce Implications**

With the current construction workforce having an average age of 45, a significant portion will reach retirement age within the next decade without sufficient replacements. As skilled workers retire without replacement, Vermont's already-constrained housing production capacity would further diminish, creating a negative feedback loop that exacerbates supply shortages.

## **Economic and Social Consequences**

The combined effect of these trends would create broader negative consequences. Vermont's aging population trend would accelerate as housing constraints continue to drive younger residents out of state, further reducing workforce availability across all sectors. As essential workers struggle to find affordable housing near employment centers, municipalities would face growing challenges staffing critical services like education, healthcare, and emergency response. The affordability crisis would disproportionately impact lower-income Vermonters and underrepresented groups, widening existing socioeconomic disparities.

## **Implications for Yestermorrow**

Yestermorrow would face both challenges and missed opportunities. Yestermorrow's unique position at the intersection of sustainable design education and housing innovation would remain underleveraged in addressing Vermont's most pressing challenges. Without new programmatic initiatives that generate additional revenue streams, Yestermorrow would face increased financial pressure as operational costs continue to rise. Recruiting and retaining qualified instructors would become increasingly difficult as the skilled trades workforce diminishes.

## **Alternative 1: Train-the-Trainer Program**

Building on evidence that successful workforce programs require strong educational partnerships, this alternative primarily addresses the skilled labor shortage component of the affordability crisis by building capacity within Vermont's broader educational system. This program would include specific curriculum modules addressing alternative housing types like ADUs that align with state housing priorities.

## **Key Components**

1. **Specialized Training Program** preparing experienced construction professionals to effectively teach their skills to others.
2. **Professional Development Workshop Series** for high school, career center, and community college educators, offered as intensive in-person events at Yestermorrow or at regional locations during summer or weekends. These workshops would equip educators with specialized knowledge, hands-on skills, and pedagogical approaches to effectively teach sustainable design and building principles.
3. **Sustainable Design/Build Curriculum Package** encompassing lesson plans, student activities, project guides, and assessment tools that educational institutions could license and adopt. This comprehensive resource would ensure consistent, high-quality sustainable trades education aligned with industry needs.

This program offers a strategic solution to the aging workforce challenge, where many experienced workers are nearing retirement. Companies can send their highly skilled veteran employees to Yestermorrow to become certified trainers, creating a structured pathway for these experienced craftspeople to transfer their knowledge. This extends their working lifetime by transitioning them to less physically demanding roles while preserving their decades of accumulated expertise. Training experienced workers as educators fosters a more inclusive workplace culture centered around mentorship and knowledge sharing. The program would also ensure consistency in training content and delivery across different educational institutions, creating a reliable pipeline of qualified workers with standardized skills aligned with industry needs.

**Effectiveness:** *Medium*

The effectiveness of "train-the-trainer" models for scaling educational impact is well-documented, particularly in workforce development and professional development contexts where they enable efficient dissemination of expertise and sustainable capacity building within existing systems (Suhreinrich, 2011). This alternative achieves this effectiveness through its strategic multiplier effect. If Yestermorrow can train 12-18 construction professionals to be certified instructors annually and those instructors each teach 18-22 students, the program could indirectly reach between 215 to 400 additional students per year. While the housing supply contribution remains indirect and long-term, the potential scale of workforce impact addresses a fundamental constraint in Vermont's construction system.

**Efficiency:** *Medium-High*

Implementation costs would be moderate, primarily involving curriculum development, instructor time, and marketing/outreach to educational institutions. While this alternative involves a significant initial investment, it offers strong potential for long-term cost-effectiveness. Professional development workshops and curriculum licensing are established and viable revenue models for educational institutions and training providers, supporting the cost-effectiveness potential of this approach. This alternative further diversifies Yestermorrow's student base and would generate sustainable revenue through tuition, licensing of curriculum materials to educational institutions, and potential grant funding from workforce development agencies. Documented return on investment in training provides Yestermorrow with a strong value proposition for potential participants.

The time-to-impact ratio is also favorable, with initial training programs potentially launched within 6-12 months and measurable impacts on workforce development visible within 2-3 years as trained instructors begin teaching in various settings.

**Equity and Inclusivity:** *Medium – High*

This alternative strongly aligns with Yestermorrow's commitment to inclusivity in the construction industry. By specifically training instructors who can create supportive learning environments, the program could effectively address barriers faced by underrepresented groups. The program could incorporate specific modules on creating inclusive classrooms, addressing implicit bias, and developing supportive learning environments for diverse student populations.

**Administrative Feasibility:** *Medium-High*

This alternative aligns well with Yestermorrow's existing expertise in design-build education. The school already possesses the instructional knowledge required, needing primarily to formalize and package this expertise into a structured curriculum tailored for industry professionals and CTE educators. Resource requirements would include dedicated staff time for curriculum development, instructor recruitment, and program administration. However, these demands are manageable given Yestermorrow's existing educational infrastructure. The program could start with modest enrollment and scale gradually as demand and resources permit. Funding opportunities appear strong, with potential support from state workforce development initiatives, industry associations concerned about labor shortages, and federal grants targeting construction workforce development.

**Political Feasibility:** *High*

The Train-the-Trainer Program demonstrates excellent political feasibility, directly addressing Vermont's identified gap in construction education capacity. It complements state workforce initiatives and would create valuable partnerships with educational institutions seeking to enhance construction trades education; industry associations confronting workforce shortages; state agencies focused on workforce development and housing; and municipalities struggling with housing production.

**Overall Assessment:** *4.1/5*

The program aligns strongly with state priorities, industry needs, and Yestermorrow's organizational mission, particularly its commitment to inclusivity in construction trades. Implementation challenges are manageable within the school's existing capabilities, and potential funding sources appear accessible. While it does not directly increase housing supply, it tackles a fundamental constraint.

**Alternative 2: College-Credit Bearing Apprenticeship Program**

This alternative proposes developing an apprenticeship program that leverages university partnerships to offer stackable credentials that lead to academic degrees, integrating practical construction skills with academically recognized qualifications.

**Key Components**



1. **Blended Learning Model** integrating Yestermorrow's hands-on apprenticeship curriculum with online academic coursework from a university partner such as UMass Amherst or Vermont State University
2. **Stackable Credentials** that have both standalone labor market value and build toward academic credentials
3. **Clear Degree Pathways** toward associate or bachelor's degrees in related fields
4. **Industry Recognized Certifications** integrated into the curriculum
5. **Applied Learning Projects** addressing real community needs

**Effectiveness:** *Medium*

This alternative demonstrates moderate effectiveness by addressing workforce quality and industry attractiveness. By offering college credits and clear degree pathways, the program could help reposition construction careers as prestigious and desirable, countering the cultural shift that has prioritized white-collar professions over blue-collar trades (Bluestone & Harrison, 1982). The applied learning projects component could provide direct, though modest, contributions to housing production while students complete their training. However, the overall impact on housing supply would be indirect and long-term.

**Efficiency:** *Medium*

This alternative requires substantial investment for program development, annual operating costs, and university partnership management. However, the revenue potential is noteworthy, as college-credit bearing programs can justify higher tuition fees reflecting the enhanced value proposition. While implementation costs are substantial, the long-term value creation extends beyond direct revenue through enhanced institutional prestige, access to new funding sources, and improved graduate outcomes that contribute to Vermont's construction sector.

The time-to-impact ratio is less favorable than other alternatives, with considerable upfront investment required before the first cohort completes the program and enters the workforce. Full implementation could take 1-2 years, with workforce impacts not visible for 2-4 years depending on program length.

**Equity and Inclusivity:** *Medium*

The college-credit component could attract a more diverse student body, including individuals who might not have considered a traditional apprenticeship because of societal pressure for degree attainment, creating accessible entry points for underrepresented populations (Xu & Trimble, 2016). However, the potentially higher tuition associated could create financial barriers for low-income students.

**Administrative Feasibility:** *Medium-Low*

While Yestermorrow already partners with the University of Massachusetts for some accredited courses, expanding to a comprehensive degree pathway represents a substantial increase in complexity that would require new systems for academic advising, credit tracking, and institutional coordination that extend well beyond its current operations. Additionally, qualified instructors would need to meet both industry expertise requirements and academic teaching qualifications, potentially limiting the pool of available faculty. This dual qualification

requirement could prove particularly challenging given the existing shortage of construction professionals.

**Political Feasibility:** *Medium-High*

This alternative aligns well with Vermont's broader workforce development goals and growing interest in innovative higher education models. Stakeholder support would likely be strong from university partners seeking innovative programs; students seeking academic credentials alongside trades skills; and employers concerned about workforce readiness. The U.S. Department of Labor has increasingly supported apprenticeship programs connected to academic credit, suggesting potential federal funding alignment as well.

**Overall Assessment:** **3.4/5**

The College-Credit Bearing Apprenticeship Program offers a promising approach to elevating the status of construction trades and creating more attractive pathways into the industry. Its strengths lie in addressing the cultural devaluation of skilled trades and creating multiple entry points for diverse learners through stackable credentials. While the program could effectively contribute to workforce development over the long term, its impact on housing supply long-term and indirect. Additionally, high implementation costs reduce its overall feasibility for Yestermorrow.

**Alternative 3: Alternative Housing Prototype and Policy Advocacy Initiative**

This alternative proposes developing demonstration housing models and advocacy tools to address regulatory barriers facing alternative housing types. Yestermorrow would develop a series of full-scale, replicable prototype housing models (ADUs, tiny homes, container adaptations) on its campus or partner sites to serve as living laboratories where students gain hands-on experience; public demonstration sites with regular tours and open houses; research platforms documenting costs, timelines, and performance; and testing grounds for innovative financing approaches. Drawing from the demonstration projects, Yestermorrow would develop evidence-based resources for municipalities and residents who wish to replicate the projects. Working with local policymakers, Yestermorrow would develop a catalog of standardized, pre-approved building plans for ADUs and tiny homes that are specifically designed for Vermont's climate, building codes, and demographic needs. This catalog would incorporate a range of designs varying in size, features, and construction methods; complete documentation package ready for permitting; designs optimized for energy efficiency in cold climates; construction manuals suitable for owner-builders and small contractors; and streamlined permitting with municipalities.

**Key Components**

1. **Demonstration Project Program** - Full-scale, replicable prototype housing models.
2. **Pre-Approved ADU and Tiny Home Design Library**
3. **Policy Advocacy Toolkit**

**Effectiveness:** *High*

This alternative directly addresses the housing supply component of Vermont's crisis by tackling a critical barrier: the regulatory and acceptance challenges facing alternative housing models. The initiative has potential to catalyze systemic change in Vermont's housing ecosystem by

providing evidence-based models for municipal zoning reform and alternative housing acceptance, all while providing hands-on learning opportunities for Yestermorrow's students.

**Efficiency:** *Medium-High*

This alternative offers excellent efficiency by creating resources with significant multiplier effects. Once developed, the standardized plans and policy tools could be widely distributed and repeatedly implemented across Vermont at minimal marginal cost. Implementation costs would be moderate to high, primarily involving the construction of demonstration prototypes, documentation development, and staff time for advocacy work. These costs could be offset through various revenue streams, including fees for pre-approved plans; consulting services; and grant funding from housing organizations and foundations.

**Equity and Inclusivity:** *Medium-High*

The alternative housing focus directly addresses equity concerns by promoting housing types that are more affordable and accessible. Developing various prototype designs could ensure options meet diverse needs, including accessibility features for older adults and people with disabilities. However, it does not directly address workforce challenges. While it might inspire more diverse participation through exposure to the prototypes, this impact would be indirect and difficult to quantify.

**Administrative Feasibility:** *Medium*

Yestermorrow has significant expertise in alternative housing design and construction, making the technical aspects of this alternative highly feasible. However, the policy advocacy component requires specialized knowledge of municipal regulations, building codes, and legislative processes that may extend beyond Yestermorrow's current expertise. Building effective relationships with policymakers and developing persuasive advocacy materials would require dedicated staff time and potentially new skill sets.

**Political Feasibility:** *High*

This alternative aligns strongly with Vermont's current housing policy priorities. The state's existing grant programs for ADUs through VHIP provides a ready funding mechanism that could be leveraged for implementation. However, some municipalities might resist regulatory changes that challenge established zoning patterns and traditional builders could view alternative housing promotion as competitive. The strategy would require careful stakeholder engagement to maximize political support and overcome potential resistance.

**Overall Assessment:** *4.1/5*

The Alternative Housing Prototype and Policy Advocacy Initiative represents a highly effective approach to addressing Vermont's housing supply challenges by removing barriers to innovative, smaller-scale housing options. This alternative leverages Yestermorrow's core expertise in sustainable design-build while creating resources with significant multiplier effects across the state.

The initiative directly addresses critical mismatches in Vermont's housing market—between household sizes and available housing types, and between income levels and housing costs. By providing tangible examples and practical tools for implementation, it bridges the gap between innovative concepts and actual housing production.

While this alternative requires moderate investment and some expansion of Yestermorrow's advocacy capabilities, its strong alignment with state policy priorities and potential funding mechanisms makes implementation highly feasible. The demonstration projects would also enhance Yestermorrow's visibility and reputation as a leader in sustainable housing solutions, potentially attracting more students to its educational programs.

#### **Alternative 4: Community-Based Design-Build Partnership Program**

This alternative would establish structured collaborations between Yestermorrow, community organizations, and municipalities to directly produce affordable housing while training students through an integrated educational and production model, addressing both components of the affordability crisis simultaneously. This alternative would utilize a formal application system for Vermont communities to propose small-scale affordable housing projects (2-6 units) that address specific local housing needs; have secured partial funding or land donations; demonstrate community support and regulatory feasibility; and commit to long-term affordability requirements. Selected projects would become the basis for term-length Yestermorrow courses where students receive hands-on training (and potentially academic credit) while building actual housing units; local apprentices and trades workers could participate alongside students while professional instructors ensure quality control and code compliance; and community stakeholders are engaged throughout the design and construction process.

This program would require a clear financial structure that outlines community contribution requirements (land, partial funding, in-kind support); educational fees, grant funding, and affordable housing subsidies; and long-term affordability mechanisms (land trusts, deed restrictions). This alternative would establish a replicable model for educational institution participation in affordable housing creation, strengthen relationships with Vermont municipalities and housing organizations, draw significant media coverage highlighting innovative approach to housing challenges, and has potential for program expansion through additional partnerships and funding sources.

This alternative is particularly relevant to the Mad River Valley, where the vacancy rate for year-round rental housing has fallen below 1%, well below the 5% threshold considered necessary for a healthy market (Mad River Valley Planning District, 2024). The Valley's combination of high housing costs, limited rental inventory, and significant workforce housing demand creates an ideal testing ground for Yestermorrow's community-based construction model.

##### **Key Components**

1. Partnership with municipalities and nonprofits to identify suitable projects
2. Student and instructor teams building real housing units for communities
3. Focus on alternative housing models like ADUs and tiny homes
4. Integration with Vermont Housing Improvement Program funding
5. Structured to enable participation by diverse community members

##### **Effectiveness:** *Very High*

By directly producing affordable housing units while training students, the program creates immediate, tangible impacts on both dimensions of the problem. This alternative creates immediate housing while developing sustainable workforce capacity, offering the most direct approach to addressing the dual dimensions of Vermont's housing crisis.

**Efficiency:** *Medium-High*

This alternative combines educational outcomes with housing production, creating exceptional efficiency through dual-purpose resource utilization. Students receive valuable hands-on training while simultaneously producing tangible housing assets for communities.

Implementation costs would be substantial, including materials, specialized equipment, transportation, and instructor time. However, these costs would be offset by multiple revenue streams, including tuition fees from students, contributions from partner communities (land, partial funding, in-kind support); grant funding from housing agencies; and potential tax credits or other incentives for affordable housing production. The requirement for communities to secure partial funding or land donations ensures resource-sharing across partners, improving overall efficiency.

The time-to-impact ratio is exceptionally favorable, with direct housing production beginning as soon as the first project launches. Both workforce development and housing supply impacts would be visible within the first year of implementation.

**Equity and Inclusivity:** *High*

This alternative addresses equity concerns through multiple mechanisms. First, it requires partner communities to commit to long-term affordability, ensuring housing remains accessible to those most burdened by the current crisis. Second, the community-based approach empowers local stakeholders to identify and address specific housing needs relevant to their populations.

The hands-on, community-embedded nature of the program could be particularly effective at attracting diverse participants, including those who might not otherwise consider construction careers. Working on meaningful projects with direct community benefits creates powerful motivation for learning and engagement.

**Administrative Feasibility:** *Medium-Low*

This alternative presents significant administrative challenges due to its complexity and scale. Managing multiple construction projects across different communities would require substantial coordination, quality control systems, and risk management protocols. These demands extend beyond Yestermorrow's current operational capacity as primarily an educational institution. Resource requirements would include expanded staff capabilities in project management, community relations, and affordable housing finance. The school would need systems for evaluating community applications, structuring partnership agreements, and ensuring compliance with affordability requirements and building codes.

The logistical challenges of transporting students and materials to various project sites throughout Vermont would be considerable, particularly given the state's rural character and sometimes challenging weather conditions. These factors could limit the number of projects feasible in initial implementation years.

However, the potential for external funding and partnership resources could mitigate some of these challenges. Communities motivated by their housing needs would likely contribute significant resources, and housing agencies might provide both funding and technical assistance.

**Political Feasibility:** *Medium-High*

The Community-Based Partnership approach aligns exceptionally well with Vermont's housing and workforce development priorities. The model would receive strong support from municipalities facing housing shortages, who would welcome a program that brings both expertise and labor resources to create affordable units; state agencies, who would see direct production outcomes from their investments; and CTE educational institutions, who would gain expanded learning opportunities for students. The approach creates win-win scenarios for multiple stakeholders, enhancing political support.

### **Overall Assessment: 4.1/5**

The Community-Based Design-Build Partnership Program represents the most comprehensive approach to Vermont's housing crisis, creating simultaneous impacts on both workforce development and housing supply. Its direct production of affordable housing units while training students and local workers creates exceptional efficiency through dual-purpose resource utilization.

The program's community-embedded structure ensures housing solutions are tailored to local needs while building broad stakeholder support. The requirement for long-term affordability mechanisms addresses the equity dimensions of the crisis, ensuring housing remains accessible to those most in need.

While the administrative challenges are substantial, the potential for external resources and partnerships could mitigate these constraints over time. The program's strong alignment with state priorities and existing funding mechanisms creates a highly favorable implementation environment.

This alternative has the greatest potential for transformative impact on Vermont's housing ecosystem but also requires the most significant expansion of Yestermorrow's organizational capacity. A phased implementation approach, perhaps starting with a single pilot project, could mitigate risks while building the necessary systems and expertise.

### **Summary of Findings and Recommendation**

Based on the evaluation of all four alternatives, I recommend implementing **Alternative 1 (Train-the-Trainer Program)** as the foundation for a phased approach, providing the highest near-term return on investment while building capacity for more ambitious initiatives. Once the train-the-trainer program has reached stabilization, I recommend developing **Alternative 3 (Alternative Housing Prototype Initiative)** as a *complementary* program to address the housing supply dimension that Alternative 1 doesn't directly impact. The long-term vision is to phase in **Alternative 4 (Community-Based Design-Build Partnership Program)** after establishing foundational capacity, allowing Yestermorrow to gradually build the organizational capabilities needed for this transformative but complex program.

The recommended phased approach reflects both strategic priorities and implementation realities. While the analysis identified multiple high-potential alternatives, translating these concepts into actionable programs requires careful sequencing, resource allocation, and milestone planning. The following implementation strategy provides Yestermorrow with a

roadmap for converting analytical insights into tangible impact, building capacity progressively while generating measurable outcomes in both workforce development and housing production.

## Implementation

This section outlines the recommended strategy, implementing three complementary initiatives in sequence. An overlapping timeline allows for knowledge transfer between phases while preventing organizational overextension, allowing Yestermorrow to build internal capacity while generating early wins.

- **Phase 1 (Months 1-24):** Starts with the highest-impact, lowest-risk alternative (Train-the-Trainer Program)
- **Phase 2 (Months 18-36):** Address regulatory barriers to alternative housing with the complementary Alternative Housing Prototype Initiative as organizational capacity expands
- **Phase 3 (Months 30-60):** Directly produce housing while training builders

### Phase One: Train-the-Trainer Program (Months 1-24)

The Train-the-Trainer program strategically leverages Yestermorrow's established assets to ensure efficient implementation while maintaining organizational authenticity.

#### Strategic Preparation (Months 1-3)

##### *Implementation Team Formation (Month 1)*

- Designate a Program Director with both education and construction expertise
- Establish a core team including curriculum specialist, industry liaison, and evaluation coordinator
- Define clear decision-making protocols and accountability mechanisms

##### *Market Validation and Partnership Development (Months 1-3)*

- Conduct structured interviews with 12-15 potential employers to validate training needs
- Identify 5-8 experienced construction professionals as potential early adopters
- Secure formal partnerships with Vermont Agency of Education, Associated General Contractors of Vermont, and 2-3 technical education centers

#### Program Development (Months 3-6)

##### *Curriculum Design (Months 3-5)*

- Adapt existing Yestermorrow curricula for trainer certification
- Incorporate adult learning principles and inclusive teaching methodologies
- Develop assessment tools measuring both technical mastery and teaching effectiveness

##### *Quality Assurance Framework (Month 6)*

- Establish certification requirements balancing rigor with accessibility
- Create trainer observation protocols and feedback mechanisms
- Design post-training support systems including mentoring and communities of practice

#### Pilot Implementation (Months 6-12)

##### *Initial Cohort Selection (Month 6)*

- Recruit 10-12 participants, prioritizing candidates with established industry connections and mentoring aptitude
- Conduct pre-training assessment to establish baseline skills and knowledge

##### *Program Delivery and Refinement (Months 7-12)*

- Implement initial training program with integrated feedback mechanisms
- Provide structured support as trainers deliver their first educational sessions
- Document emerging best practices and implementation challenges

- Conduct mid-point and final evaluations measuring both trainer competency and satisfaction

### **Full Implementation and Scaling (Months 12-24)**

#### *Program Expansion (Months 12-18)*

- Refine curriculum based on pilot feedback
- Develop certification levels allowing for progressive skill development
- Create specialized modules addressing alternative housing construction
- Expand capacity to 24-36 trainers annually through multiple program cycles

#### *Sustainability Planning (Months 18-24)*

- Formalize curriculum licensing structure for educational institutions
- Develop implementation guide for employers developing in-house training programs
- Establish quality assurance system for maintaining certification standards
- Secure long-term funding through industry partnerships and workforce development grants

## **Phase Two: Alternative Housing Prototype Initiative (Months 18-36)**

Building on momentum from Phase One, this initiative addresses housing supply constraints through regulatory innovation and demonstration projects.

### **Research and Design Development (Months 18-24)**

#### *Housing Needs Analysis (Months 18-20)*

- Analyze Vermont Housing Needs Assessment to identify highest-priority housing types
- Conduct focus groups with diverse demographic segments to understand preferences
- Document regulatory barriers in 5-8 representative municipalities

#### *Design Portfolio Development (Months 20-24)*

- Create 3-5 alternative housing designs specifically calibrated to Vermont needs
- Prioritize designs based on:
  - Construction accessibility for owner-builders
  - Material availability and cost constraints
  - Energy performance in cold climate
  - Demographic alignment with state housing needs
- Develop comprehensive construction documentation for each design

### **Municipal Partnerships (Months 21-30)**

#### *Partner Selection and Engagement (Months 21-24)*

- Identify 3-5 municipalities demonstrating commitment to housing innovation
- Prioritize geographic diversity and representation of different community types
- Establish formal agreements outlining responsibilities and implementation process

#### *Regulatory Innovation Collaborative (Months 24-30)*

- Work with municipal partners to develop pre-approval processes for standardized designs
- Create model zoning language addressing barriers to alternative housing types
- Develop streamlined permitting checklist tailored to each community's regulatory framework
- Pilot expedited review process with reduced fees for approved designs

### **Demonstration Projects (Months 24-36)**

#### *Prototype Construction (Months 24-30)*

- Build full-scale demonstration unit(s) on Yestermorrow campus
- Document construction process with time studies and cost analysis



- Leverage construction as hands-on learning opportunity for students
- Create high-quality visual documentation for educational and advocacy purposes

#### *Knowledge Dissemination (Months 30-36)*

- Develop comprehensive implementation guides for each housing type
- Create virtual tours and educational materials showcasing completed prototypes
- Host demonstration events targeted to different stakeholder groups
- Establish monitoring program tracking long-term performance and occupant satisfaction

### **Phase Three: Community-Based Design-Build Partnership Program (Months 30-60)**

This culminating initiative integrates workforce development and housing production in a transformative model that directly addresses Vermont's dual crisis.

#### **Program Structure Development (Months 30-36)**

##### *Partnership Framework (Months 30-33)*

- Establish clear criteria for community partner selection
- Develop formal application process with resource contribution requirements
- Create project evaluation matrix balancing feasibility, impact, and educational value
- Define affordability standards and long-term compliance mechanisms

##### *Financial Model Development (Months 33-36)*

- Design sustainable funding structure integrating multiple revenue streams
- Establish cost-sharing guidelines with community partners
- Create mechanisms to leverage existing state housing funds
- Develop strategic approach to philanthropic support

#### **Pilot Project Implementation (Months 36-48)**

##### *Partner Selection (Months 36-39)*

- Conduct competitive application process
- Select initial partner based on demonstrated commitment and resource availability
- Establish clear project parameters and timeline
- Secure all necessary regulatory approvals

##### *Project Execution (Months 39-48)*

- Integrate educational programming with construction schedule
- Implement quality control systems ensuring both learning outcomes and construction standards
- Document process with particular attention to replicability challenges
- Conduct comprehensive evaluation addressing both housing and workforce impacts

#### **Program Refinement and Expansion (Months 48-60)**

##### *Implementation Model Refinement (Months 48-54)*

- Analyze pilot project outcomes and lessons learned
- Develop streamlined implementation protocols
- Create scalable quality assurance framework
- Establish regional approach for geographic expansion

##### *Capacity Building for Sustainability (Months 54-60)*

- Develop comprehensive program guide for potential replication
- Establish knowledge-sharing network with other educational institutions
- Create long-term monitoring system tracking housing and workforce outcomes
- Secure diversified funding portfolio supporting ongoing operations

## Conclusion

Vermont's housing affordability crisis represents a complex challenge requiring coordinated intervention across multiple dimensions. Market forces alone cannot resolve the dual constraints of inadequate supply and workforce shortages. The status quo trajectory would result in continued deterioration of affordability, further displacement of essential workers and young families, and cascading economic consequences throughout the state.

Yestermorrow Design/Build School occupies a unique position at the intersection of education, workforce development, and sustainable housing innovation. This position allows the school to catalyze systemic change through strategic interventions that simultaneously address both workforce capacity and housing supply constraints. The recommended phased implementation strategy provides a financially sustainable pathway for Yestermorrow to maximize its impact while maintaining alignment with its core mission. By starting with the Train-the-Trainer Program, Yestermorrow can efficiently multiply its educational impact across Vermont's construction ecosystem while generating revenue to support more resource-intensive initiatives. The subsequent Alternative Housing Prototype Initiative directly addresses the regulatory and acceptance barriers that currently limit the adoption of innovative housing models identified in the Vermont Housing Needs Assessment as critical to meeting demographic demands. Finally, the Community-Based Design-Build Partnership Program creates a transformative model for directly producing affordable housing while training the next generation of skilled builders.

Beyond the direct outcomes of each initiative, this strategy positions Yestermorrow as a catalyst for broader system change. By documenting and disseminating successful models, the school can influence policy development, educational approaches, and housing production methods throughout Vermont and potentially beyond. The approach aligns with emerging national recognition that addressing housing affordability requires innovative, multi-faceted strategies that engage diverse stakeholders. Through this strategic approach, Yestermorrow can fulfill its foundational mission of empowering students to create sustainable communities—not merely as an abstract ideal, but as a tangible reality for Vermonters across the income spectrum.

For Yestermorrow's leadership, this analysis offers both a strategic framework and an implementation roadmap that can guide resource allocation, partnership development, and program design over the next five years. The challenges are substantial, but so is the opportunity. Through strategic intervention at the critical intersection of workforce development and housing innovation, Yestermorrow can help transform Vermont's housing landscape while creating meaningful pathways into construction careers for diverse participants. In doing so, it will not only address immediate housing needs but contribute to building a more resilient, sustainable, and equitable housing ecosystem for future generations of Vermonters.

## Appendix One: Stakeholder Analysis

### Primary Stakeholders

#### *Construction Industry*

The construction industry has varying capacity to engage in solutions: larger firms can more readily participate in training initiatives, while smaller contractors (the majority in Vermont) face production pressures limiting involvement (Vermont Department of Labor, 2023). Industry associations like the Associated General Contractors of Vermont serve as crucial aggregators and potential implementation partners.

#### *Educational Institutions*

Vermont's 17 Career and Technical Education (CTE) centers are directly relevant but face instructor shortages and curriculum challenges (Vermont Agency of Education, 2022). Community colleges and K-12 schools represent additional partners, though adoption depends on alignment with existing frameworks and resources.

#### *Construction Workforce*

This diverse group includes:

- Experienced workers nearing retirement who could become trainers but may need preparation support
- Underrepresented groups (women and minorities) facing unique barriers to entry
- Young Vermonters who might be deterred by perceptions about construction careers despite competitive wages

#### *Vermont Employers*

67% of surveyed employers indicate willingness to implement housing assistance programs, with 63% identifying workforce housing as a high priority (VHFA, 2023b). Their interests range from immediate employee housing concerns to longer-term community development.

#### *Yestermorrow Internal Stakeholders*

Staff, faculty, and board members directly influence implementation quality and organizational capacity is limited by size. Perspectives may vary on which initiatives best leverage Yestermorrow's design-build expertise.

### Secondary Stakeholders

#### *State Government Agencies*

Key agencies include:

- Department of Labor (apprenticeship programs, workforce development funding)
- Agency of Education (CTE programs, instructor credentialing)
- Department of Housing and Community Development (housing funds, ADU initiatives)
- Vermont Housing Finance Agency (innovative financing mechanisms)

The current administration has demonstrated commitment to addressing both housing and workforce challenges (Vermont Department of Housing and Community Development, 2024).

### *Municipalities*

Local governments vary significantly in housing policies and capacity to engage. Planning and zoning boards influence development through regulatory decisions that can facilitate or impede alternative housing models.

### *Affordable Housing Organizations*

Statewide entities (Vermont Housing and Conservation Board) and regional trusts have direct interests in expanding production while maintaining affordability, with demonstrated willingness to explore alternative models.

### *Funders and Foundations*

Organizations like the Vermont Community Foundation, High Meadows Fund, and national foundations (Home Depot Foundation, Kresge Foundation) represent potential financial enablers for initiatives aligned with their priorities.

This complex stakeholder landscape underscores why the private market alone cannot adequately meet Vermont's housing needs, highlighting the importance of coordinated, multi-stakeholder approaches that Yestermorrow is uniquely positioned to help facilitate.

## Appendix Two: Outcomes Matrix

Criteria & Impact Categories	Alt 1: Train-the-Trainer Program	Alt 2: College-Credit Bearing Apprenticeship	Alt 3: Alternative Housing Prototypes	Alt 4: Community-Based Design/Build
<b>EFFECTIVENESS</b>	3.75	3.5	4.5	4
Workforce Development Impact	5	5	4	3
Housing Supply Contribution	2	2	4	4
Alternative Housing Advancement	3	3	5	5
Long-term System Change	5	4	5	4
<b>EFFICIENCY</b>	4	3.2	4	3.2
Implementation Costs	4	3	2	3
Revenue Generation Potential	4	3	4	2
Fundraising Potential	3	3	5	4
Cost-Effectiveness	4	3	4	3
Value Creation Beyond Revenue	5	4	5	4
<b>EQUITY &amp; INCLUSIVITY</b>	4	3.5	4	4.25
Reach to Underserved Communities	3	3	4	4
Reduction of Entry Barriers	4	3	3	4
Alignment with Inclusivity Mission	5	4	5	5
Meaningful Opportunity Creation	4	4	4	4
<b>ADMINISTRATIVE FEASIBILITY</b>	4	2.6	3	3.2
Staff Time & Resource Requirements	3	2	2	3
Organizational Infrastructure Compatibility	3	3	2	2
Expertise Alignment	5	3	4	4
Fundability	4	2	4	4
Scalability	5	3	3	3
<b>POLITICAL FEASIBILITY</b>	4.5	4	4	4
Alignment with State Policies	5	4	4	4
Educational Institution Support	4	4	5	5
Regulatory Compatibility	5	4	3	3
Stakeholder Support	4	4	4	4
<b>OVERALL ASSESSMENT</b>	4.1	3.4	3.9	3.7

## Appendix Three: Resource Requirements

Staffing			
When	Role	Desired Skills	Responsibility
Phase 1	Program Director	Experienced educator with construction background	Dedicated coordinator with expertise in both construction education and program management to oversee the Train-the-Trainer initiative.
Phase 1	Curriculum Developer	Design specialist with industry knowledge	Design specialist with construction industry knowledge to develop comprehensive curriculum materials.
Phase 2	Housing Innovation Coordinator	Architect/builder with policy expertise	By Phase Two, add a staff position focusing on alternative housing design and prototype development.
Phase 3	Community Liaison	Relationship builder with housing background	By Phase Three, add a position responsible for managing relationships with municipal partners and coordinating community-based projects.
All	Administrative Support	Project Manager	Coordination, documentation, and logistics

Financial Resources			
Phase	How much?	For What?	Potential Funding Sources
Initial Implementation	\$85,000-\$120,000	Curriculum development: \$30,000-\$45,000 Program launch and administration: \$40,000-\$55,000 Evaluation and quality assurance: \$15,000-\$20,000	-VT DOL workforce innovation grants -Industry association contributions -Foundation/Philanthropic support
Alternative Housing Prototype Initiative	\$150,000-\$200,000	Design development: \$50,000-\$70,000 Prototype construction: \$80,000-\$100,000 Documentation and outreach: \$20,000-\$30,000	-Housing innovation grants -Corporate sponsorships -Community foundation support
Community-Based Program	\$300,000-\$400,000	Program infrastructure: \$75,000-\$100,000 Construction costs: \$200,000-\$250,000 Evaluation and documentation: \$25,000-\$50,000	-Vermont Housing Improvement Program -Community contributions -Tuition Revenue -Foundation/Philanthropic support

## Appendix Four: Financial Framework and Sustainability Analysis

### Methodology and Assumptions

This financial analysis employs a conservative estimation approach using multiple data sources to develop realistic projections. Cost estimates for staffing are derived from Vermont Department of Labor occupational wage data for comparable positions and 3% annual increases. Program development costs reflect WIOA workforce development grant allocations, with higher first-year investments and reduced maintenance costs in subsequent years. Construction and material costs are based on the Vermont Housing Needs Assessment (2024) data for ADU development, adjusted to reflect efficiencies from student labor, donated materials, and smaller footprints (300-400 sq ft). Revenue projections incorporate Yestermorrow course fees, published Vermont Housing Improvement Program grant guidelines, industry partnership contribution levels from AGC-VT data, and typical community development contribution patterns. Long-term projections (Years 6-10) apply a 3% annual cost increase while using a 5% revenue growth rate based on program maturation, expanded reach, and enhanced institutional capacity. The financial model incorporates strategic cross-subsidization between phases, allowing early positive returns to support more resource-intensive later implementation stages.

**Table 1: Ten-Year Financial Projection by Phase (in thousands of dollars)**

Phase	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Total
<b>Phase 1: Train-the-Trainer</b>											
Costs	120.8	103.2	105.8	109.0	112.2	115.6	119.1	122.6	126.3	130.1	1,164.6
Revenue	125.0	210.0	220.5	231.5	243.1	255.3	268.1	281.5	295.5	310.3	2,440.8
Annual Net	4.2	106.8	114.7	122.5	130.9	139.7	149.0	158.9	169.2	180.2	1,276.2
<b>Phase 2: Alternative Housing Prototypes</b>											
Costs	-	102.5	203.0	177.6	159.9	164.7	169.6	174.7	179.9	185.3	1,517.2
Revenue	-	102.0	265.0	290.0	304.5	319.7	335.7	352.5	370.1	388.6	2,728.1
Annual Net	-	(0.5)	62.0	112.4	144.6	155.0	166.1	177.8	190.2	203.3	1,210.9
<b>Phase 3: Community-Based Design-Build</b>											
Costs	-	-	137.5	273.0	381.7	420.8	441.9	464.0	487.2	511.5	3,117.6
Revenue	-	-	127.0	254.0	376.0	430.0	464.4	501.6	541.7	584.6	3,279.3
Annual Net	-	-	(10.5)	(19.0)	(5.7)	9.2	22.5	37.6	54.5	73.1	161.7
<b>Consolidated Financial Summary</b>											
<b>Total Costs</b>	120.8	205.7	446.3	559.6	653.8	701.1	730.6	761.3	793.4	826.9	5,799.5
<b>Total Revenue</b>	125.0	312.0	612.5	775.5	923.6	1,005.0	1,068.2	1,135.6	1,207.3	1,283.5	8,448.2
<b>Annual Net</b>	4.2	106.3	166.2	215.9	269.8	303.9	337.6	374.3	413.9	456.6	2,648.7
<b>Cumulative Net</b>	4.2	110.5	276.7	492.6	762.4	1,066.3	1,403.9	1,778.2	2,192.1	2,648.7	

*Note: The current economic landscape is changing rapidly and likely has broad-sweeping impacts to multiple aspects of this projection. An analysis based on current market conditions at the time of implementation is recommended before the initiation of each phase.*

**Phase 1: Train-the-Trainer Program Budget**

The Train-the-Trainer program leverages Yestermorrow's core expertise while requiring minimal additional infrastructure. This creates a highly efficient financial model with strong returns that can help fund subsequent phases.

Table 2: Detailed Annual Budget for Train-the-Trainer Program (Years 1-2)			
Category	Year 1	Year 2	Notes & Sources
Expenses			
Curriculum Development	\$35,000	\$12,000	Based on Vermont WIOA training program development costs (Vermont DOL, 2024, p.43)
Program Director (0.75 FTE)	\$48,750	\$50,200	Based on median construction education coordinator salary in Vermont (Vermont DOL, 2023)
Instructional Materials	\$10,000	\$15,000	Aligned with typical CTE program material costs (Vermont Agency of Education, 2022)
Marketing & Outreach	\$12,000	\$8,000	Based on small-scale workforce development program marketing budgets
Training Space & Equipment	\$8,000	\$6,000	Minimal upgrades to existing Yestermorrow facilities (See Equipment Plan)
Evaluation & Quality Assurance	\$7,000	\$12,000	Based on workforce program evaluation costs (Maag & Jacoby, 2024, p.18)
Total Expenses	\$120,750	\$103,200	
Revenue			
Tuition Revenue	\$60,000	\$100,000	12 trainees @ \$5K in Y1, 20 trainees @ \$5K in Y2
Curriculum Licensing	\$0	\$25,000	5 educational institutions @ \$5K in Y2
Industry Partner Contributions	\$20,000	\$30,000	Based on AGC-VT workforce initiative contribution levels (Associated General Contractors of America, 2023)
Workforce Development Grants	\$45,000	\$55,000	Aligned with Vermont DOL workforce grant averages (Vermont DOL, 2024, p.67)
Total Revenue	\$125,000	\$210,000	
Annual Net	\$4,250	\$106,800	



## Phase 2: Alternative Housing Prototype Initiative Budget

Phase 2 benefits significantly from leveraging in-house architectural expertise, reducing external design costs by approximately 62% compared to outsourcing. This approach not only improves financial outcomes but better reflects Yestermorrow's integrated design-build philosophy.

**Table 3: Detailed Annual Budget for Alternative Housing Prototype Initiative (Years 2-3)**

Category	Year 2 (partial)	Year 3	Notes & Sources
Expenses			
<b>Housing Innovation Coordinator (1.0 FTE)</b>	\$32,500	\$65,000	Based on comparable positions in VT housing nonprofits
<b>Design Development (In-house)</b>	\$15,000	\$8,000	Using existing staff architect at 0.2 FTE + materials
<b>Prototype Construction</b>	\$30,000	\$80,000	ADU construction costs average \$110/sq ft for small units (Vermont DHCD, 2024b, p.87)
<b>Documentation &amp; Educational Materials</b>	\$12,000	\$20,000	Includes development of replicable plans and guides
<b>Municipal Partnership Development</b>	\$8,000	\$15,000	Travel, meetings, regulatory research
<b>Policy Advocacy Work</b>	\$5,000	\$15,000	Limited in Y2, expanded in Y3
Total Expenses	<b>\$102,500</b>	<b>\$203,000</b>	
Revenue			
<b>Design Package Sales</b>	\$0	\$45,000	15 packages @ \$3K in Y3 (based on market rates for pre-approved ADU plans)
<b>Training Programs Using Prototypes</b>	\$12,000	\$60,000	Course fees based on current Yestermorrow pricing
<b>Consulting Services</b>	\$0	\$35,000	Municipal consulting at industry-standard rates
<b>Housing Innovation Grants</b>	\$70,000	\$85,000	Based on Vermont Housing Improvement Program grant levels (VHCD, 2024a, p.23)
<b>Corporate Sponsorships</b>	\$20,000	\$40,000	Based on comparable building industry sponsorship levels
Total Revenue	<b>\$102,000</b>	<b>\$265,000</b>	
Annual Net	<b>(\$500)</b>	<b>\$62,000</b>	

### Phase 3: Community-Based Design-Build Partnership Program Budget

This phase creates direct housing production while providing hands-on training. While it operates near breakeven financially, it delivers substantial social impact through affordable housing creation.

**Table 4: Detailed Annual Budget for Community-Based Design-Build Partnership**

Category	Year 3 (partial)	Year 4	Year 5	Notes & Sources
<b>Expenses</b>				
Community Liaison (1.0 FTE)	\$27,500	\$55,000	\$56,650	Based on comparable community development positions
Project Management	\$20,000	\$45,000	\$70,000	1 project in Y3, 2 in Y4, 3 in Y5
Construction Materials	\$45,000	\$90,000	\$135,000	\$45K per project based on ADU costs (Vermont DHCD, 2024b, p.87)
Equipment & Transportation	\$20,000	\$35,000	\$50,000	Based on construction logistics costs
Student Instructional Costs	\$15,000	\$30,000	\$45,000	Faculty, materials, documentation
Documentation & Evaluation	\$10,000	\$18,000	\$25,000	Program evaluation and project documentation
<b>Total Expenses</b>	<b>\$137,500</b>	<b>\$273,000</b>	<b>\$381,650</b>	
<b>Revenue</b>				
Student Tuition	\$32,000	\$64,000	\$96,000	Based on comparable Yestermorrow course fees
Community Partner Contributions	\$30,000	\$60,000	\$90,000	\$30K per project (land, permits, site work)
VHIP/Housing Grants	\$40,000	\$80,000	\$120,000	VHIP offers up to \$50K/unit (Vermont DHCD, 2024a, p.19)
Philanthropic Support	\$25,000	\$50,000	\$70,000	Based on comparable program funding levels
<b>Total Revenue</b>	<b>\$127,000</b>	<b>\$254,000</b>	<b>\$376,000</b>	
<b>Annual Net</b>	<b>(\$10,500)</b>	<b>(\$19,000)</b>	<b>(\$5,650)</b>	

### Financial Sustainability Analysis

The Ten-Year projection demonstrates that Yestermorrow's phased initiative achieves long-term financial sustainability while delivering substantial social impact:

1. **Early Stability:** Phase 1 generates positive returns within the first year and becomes a consistent revenue source.
2. **Progressive Growth:** Phase 2 achieves profitability in Year 3 and maintains strong positive returns.
3. **Mission-Driven Investment:** Phase 3 approaches breakeven by Year 5 and becomes profitable in Year 6, while directly producing affordable housing.
4. **Cross-Subsidization Model:** The financial structure allows profitable early phases to support more resource-intensive later phases.
5. **Diversified Revenue:** By Year 5, no single revenue source exceeds 20% of total income, creating resilience against funding fluctuations.
6. **Financial Risk Management:** Each phase has distinct decision points allowing for adaptation based on actual performance.
7. **Long-Term Growth:** By Year 10, the initiative generates over \$450,000 in annual net positive returns, enabling expanded impact or new initiatives.

## **Appendix Five: Stakeholder Engagement Strategy**

Recognizing the vital importance of external relationships identified in the stakeholder analysis, Yestermorrow will implement a structured engagement approach:

### **Industry Partners**

- Quarterly advisory meetings with construction industry representatives
- Annual workforce needs assessment informing curriculum refinement
- Structured feedback loops ensuring training relevance
- Co-development of certificate programs with recognized industry value

### **Educational Institutions**

- Formal articulation agreements with CTE centers and community colleges
- Technical assistance for curriculum implementation
- Train-the-trainer cohorts targeted to education professionals
- Collaborative grant applications addressing shared priorities

### **Government Agencies**

- Regular engagement with Department of Labor on workforce initiatives
- Partnership with Department of Housing on regulatory innovation
- Alignment with state strategic priorities for housing and economic development
- Data sharing demonstrating program impacts on state policy goals

### **Community Organizations**

- Targeted outreach to underrepresented populations through community partners
- Collaborative projects with housing nonprofits and advocacy organizations
- Community listening sessions informing design and implementation
- Structured involvement in decision-making processes

## Appendix Six: Performance Metrics and Evaluation

Clear metrics for measuring success ensure accountability and continuous improvement. While not all encompassing, the following metrics are offered for consideration to develop a comprehensive performance monitoring system tracking outcomes across all three initiatives:

Metrics		Target
Workforce Development	# of trainers produced annually	24-36 after full implementation
	Demographic diversity of trainer cohorts	Min 20% underrepresented groups
	Participant satisfaction & knowledge assessment scores	Min 85%
	Geographic distribution of training impact	All Vermont counties represented
Housing Innovation	# of prototype designs completed	5-8 by month 30
	# of municipalities adopting pre-approval processes	5+ by program completion
	# of units built using Yestermorrow designs	5-8
	# of students (cite new initiative)	10% increase in enrollment
	Cost savings	30-40% per square foot
	Units constructed using Yestermorrow designs	50+ by year 5
Organizational Capacity	Energy performance of completed units	> code requirements by 25%+
	Strategic partnerships established	15+ formal agreements by year 3
	Media coverage and public awareness	Quarterly feature coverage
	Faculty and staff retention	<15% annual turnover
	Organizational reputation	Measured through stakeholder surveys
	Revenue sustainability	30%+ from program-generated sources by year 3

## Appendix Seven: Risk Management Strategies

Phase One			
Risk	Probability	Impact	Mitigation Strategy
Low industry participation	Medium	High	Engage AGC-VT and HBRA early; document ROI; offer flexible scheduling; secure industry champions
Insufficient trainer quality	Medium	High	Robust certification standards; mentoring support; remedial training options; quality verification
Budget constraints	Medium	Medium	Tiered implementation approach; pursue DOL grants; industry co-funding; curriculum licensing fees
Staff turnover	Low	High	Knowledge management systems; distributed expertise; succession planning; documentation of processes
Regulatory changes affecting instructor requirements	Low	Medium	Maintain relationship with Agency of Education to monitor changes, design flexible curriculum components, engage CTE administrators in advisory capacity
Phase Two			
Risk	Probability	Impact	Mitigation Strategy
Municipal resistance	Medium	High	Focus initially on receptive communities; document economic benefits; provide model language; showcase successes, build evidence for more resistant communities
Changes in state housing policy priorities	Low	High	Align with fundamental housing needs identified in multiple administrations, maintain relationships with state entities
Construction cost volatility	Medium	Medium	Design for material substitution; establish contingency budgets; phase construction strategically
Public acceptance barriers	Medium	High	Conduct early community engagement; prioritize aesthetic quality; humanize with occupant stories
Financial sustainability	Medium	Medium	Develop revenue streams through plan sales; secure innovation grants; create sponsorship opportunities
Industry resistance: Traditional builders view alternative housing promotion as competitive	Medium	Medium	Frame initiatives as expanding the overall construction market rather than competing for existing projects. Engage traditional builders to build support and understanding.
Phase Three			
Risk	Probability	Impact	Mitigation Strategy
Project delays	High	High	Buffer schedules; phase construction to align with academic calendar; establish contingency protocols
Quality control challenges	Medium	High	Clear supervision structure; professional oversight; staged inspection process; remediation protocols
Resource constraints	Medium	High	Phased implementation; secure advance commitments; multiple funding streams; in-kind contributions
Community partner withdrawal	Low	High	Formal agreements; milestone-based commitments; multiple backup partners; clear risk-sharing protocols

All Phases			
Risk	Probability	Impact	Mitigation Strategy
Yestermorrow's existing staff capacity strained implementing multiple new initiatives	Medium	High	Phase implementation to prevent organizational overload, prioritize hiring for key positions early, and leverage strategic partnerships to distribute workload.
High program development costs	High	High	Phased implementation, partnerships to share costs, leveraging existing resources, grant funding
Staff turnover / loss of program champion	Medium	High	Documentation of processes, distributed leadership model, knowledge management system
Loss of funding	Medium	High	Diversified funding model, clearly demonstrated ROI, exploration of grants, industry sponsorships, fee-for-service model Start with the Train-the-Trainer program, which has lower implementation costs and quicker revenue generation potential through curriculum licensing. Use early successes to demonstrate impact when seeking funding for later phases.

## Appendix Eight: Accountability Structure and Governance

Clear accountability is essential for successful implementation. The following structure establishes specific oversight responsibilities throughout the implementation process:

- **Executive Director of Yestermorrow** maintains ultimate accountability for program success, approves major budget decisions, and represents the program to key external stakeholders.
- **Program Director** manages day-to-day operations, reports directly to the Executive Director, and holds decision-making authority for curriculum development, trainer selection, and operational adjustments.
- **Implementation Advisory Board** consisting of 2 industry representatives, 2 education partners, and 2 Yestermorrow board members will meet quarterly to review progress metrics, provide strategic guidance, and help resolve significant implementation challenges. The Advisory Board will formalize its role through a charter document outlining decision-making authority, term limits, and specific oversight responsibilities.
- **Phase-Specific Accountability:** During the pilot implementation phase, the Program Director holds primary responsibility for quality assessment, with authority to implement mid-course corrections. The Executive Director retains "stop button" authority if fundamental program viability is questioned. The Implementation Advisory Board must formally approve transition from pilot to full implementation based on established success metrics.

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