

Improving Small Multifamily Housing Design & Availability through Building Code Reform

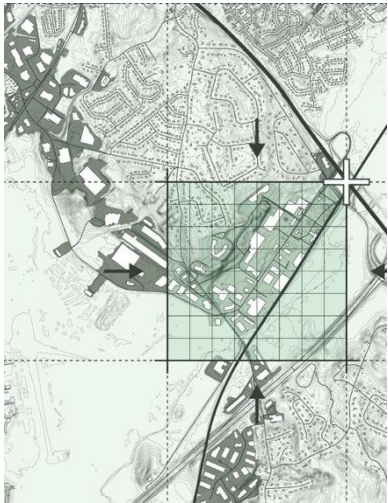


September 15, 2026

Housing Practice



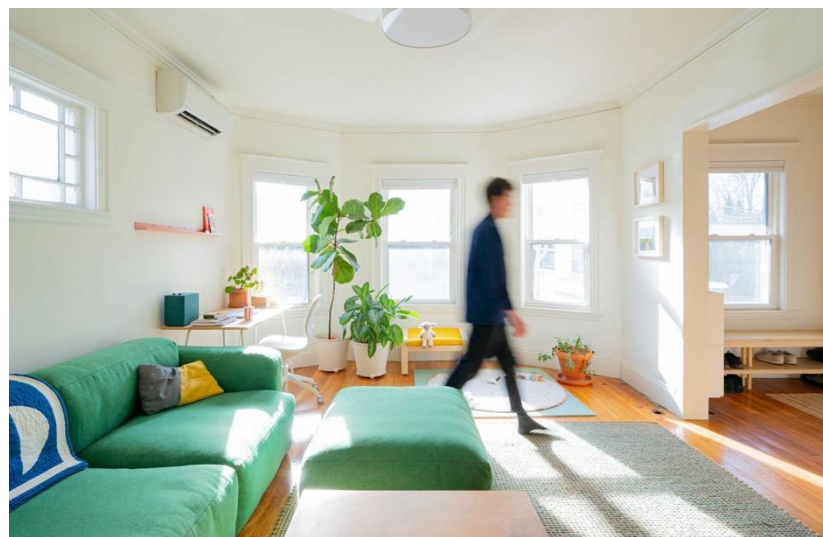
Nominal
Architecture & Design



Research & Reports

CODE BARRIERS TO DESIGN

James M. Cox





Better daylight



Cross ventilation



Outdoor space



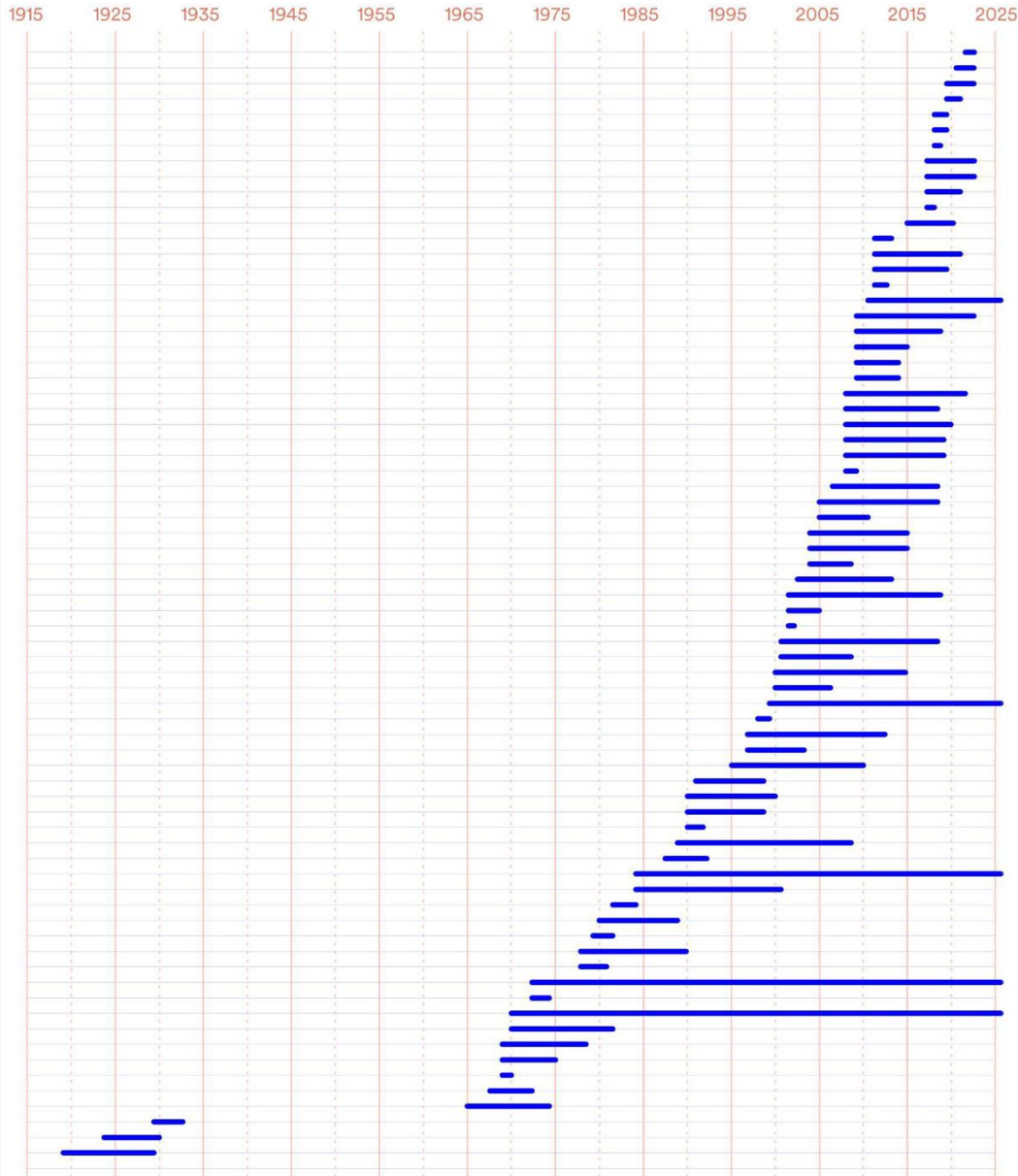
Smaller, more
tight-knit
communities

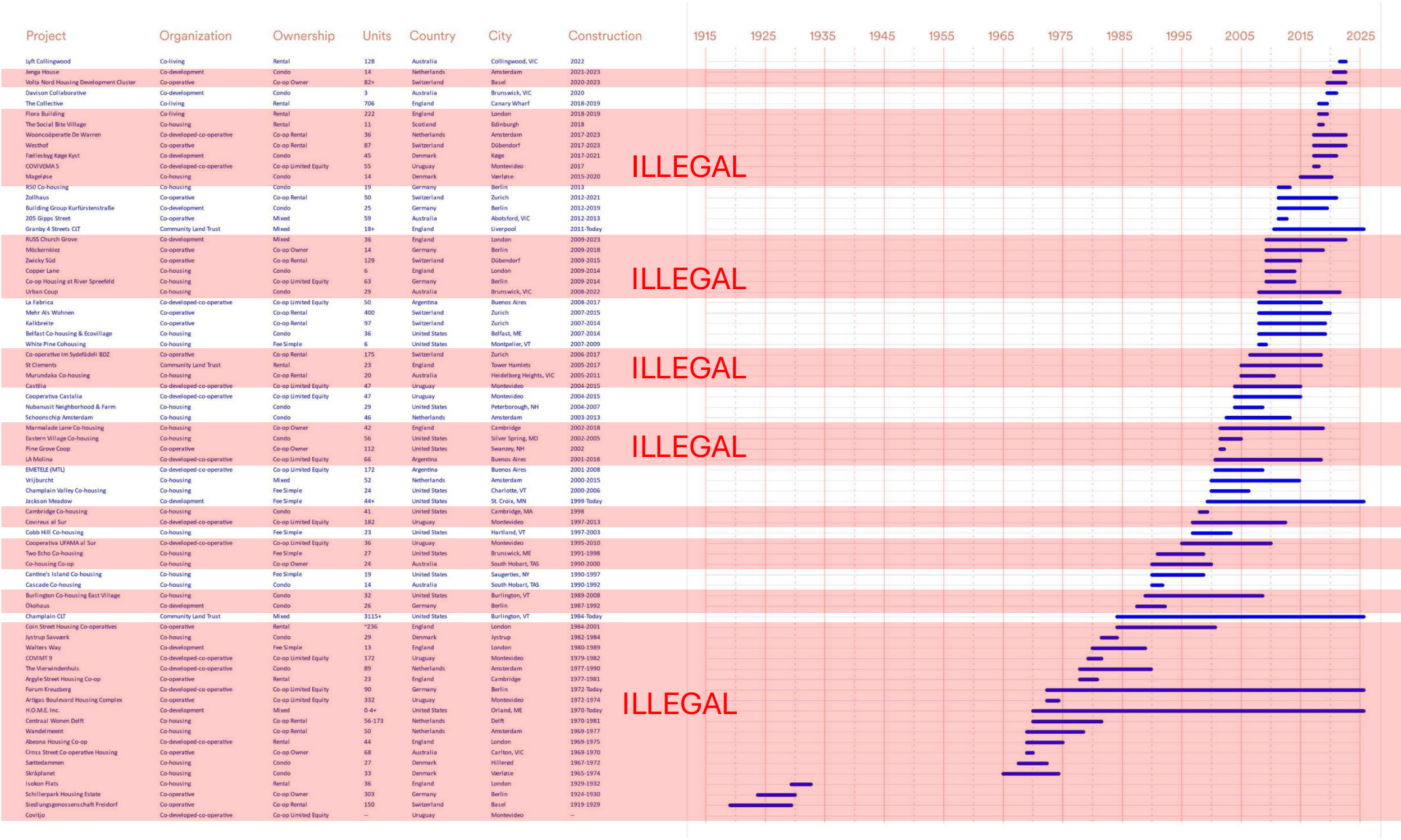


Greater accessibility



Project	Organization	Ownership	Units	Country	City	Construction
lyft Collingwood	Co-living	Rental	128	Australia	Collingwood, VIC	2022
Jenga House	Co-development	Condo	14	Netherlands	Amsterdam	2021-2023
Nata Nord Housing Development Cluster	Co-operative	Co-op Owner	82+	Switzerland	Basel	2020-2023
Davison Collaborative	Co-development	Condo	3	Australia	Brunswick, VIC	2020
The Collective	Co-living	Rental	706	England	Canary Wharf	2018-2019
Flora Building	Co-living	Rental	222	England	London	2018-2019
The Social Site Village	Co-housing	Rental	11	Scotland	Edinburgh	2018
Wooncoöperatie De Warren	Co-developed-co-operative	Co-op Rental	36	Netherlands	Amsterdam	2017-2023
Westhof	Co-operative	Co-op Rental	87	Switzerland	Dübendorf	2017-2023
Fællesbyg Kage Kyst	Co-development	Condo	45	Denmark	Kage	2017-2021
COVIVEMA 5	Co-developed-co-operative	Co-op Limited Equity	55	Uruguay	Montevideo	2017
Magelise	Co-housing	Condo	14	Denmark	Verlase	2015-2020
R50 Co-housing	Co-housing	Condo	19	Germany	Berlin	2013
Zollhaus	Co-operative	Co-op Rental	50	Switzerland	Zurich	2012-2021
Building Group Kurfürstenstraße	Co-development	Condo	25	Germany	Berlin	2012-2019
205 Gipps Street	Co-operative	Mixed	59	Australia	Abbotsford, VIC	2012-2013
Granby 4 Streets CLT	Community Land Trust	Mixed	18+	England	Liverpool	2011-Today
RUSS Church Grove	Co-development	Mixed	36	England	London	2009-2023
Mickernkiez	Co-operative	Co-op Owner	14	Germany	Berlin	2009-2018
Zwicky Süd	Co-operative	Co-op Rental	129	Switzerland	Dübendorf	2009-2015
Copper Lane	Co-housing	Condo	6	England	London	2009-2014
Co-op Housing at River Spreedfeld	Co-housing	Co-op Limited Equity	63	Germany	Berlin	2009-2014
Urban Coup	Co-housing	Condo	29	Australia	Brunswick, VIC	2008-2022
La Fabrica	Co-developed-co-operative	Co-op Limited Equity	50	Argentina	Buenos Aires	2008-2017
Mehr Als Wohnen	Co-operative	Co-op Rental	400	Switzerland	Zurich	2007-2015
Kalkbreite	Co-operative	Co-op Rental	97	Switzerland	Zurich	2007-2014
Belfast Co-housing & Ecovillage	Co-housing	Condo	36	United States	Belfast, ME	2007-2014
White Pine Cohousing	Co-housing	Fee Simple	6	United States	Montpelier, VT	2007-2009
Co-operative Im Sydöfådeli BDZ	Co-operative	Co-op Rental	175	Switzerland	Zurich	2006-2017
St Clements	Community Land Trust	Rental	23	England	Tower Hamlets	2005-2017
Murundaka Co-housing	Co-housing	Co-op Rental	20	Australia	Heidelberg Heights, VIC	2005-2011
Castilia	Co-developed-co-operative	Co-op Limited Equity	47	Uruguay	Montevideo	2004-2015
Cooperativa Castalia	Co-developed-co-operative	Co-op Limited Equity	47	Uruguay	Montevideo	2004-2015
Nubanusit Neighborhood & Farm	Co-housing	Condo	29	United States	Peterborough, NH	2004-2007
Schoonschip Amsterdam	Co-housing	Condo	46	Netherlands	Amsterdam	2003-2013
Marmalade Lane Co-housing	Co-housing	Co-op Owner	42	England	Cambridge	2002-2018
Eastern Village Co-housing	Co-housing	Condo	56	United States	Silver Spring, MD	2002-2005
Pine Grove Coop	Co-operative	Co-op Owner	112	United States	Swaney, NH	2002
La Molina	Co-developed-co-operative	Co-op Limited Equity	66	Argentina	Buenos Aires	2001-2018
EMETLE (MTL)	Co-developed-co-operative	Co-op Limited Equity	172	Argentina	Buenos Aires	2001-2008
Wijlburcht	Co-housing	Mixed	52	Netherlands	Amsterdam	2000-2015
Champlain Valley Co-housing	Co-housing	Fee Simple	24	United States	Charlotte, VT	2000-2006
Jackson Meadow	Co-development	Fee Simple	44+	United States	St. Croix, MN	1999-Today
Cambridge Co-housing	Co-housing	Condo	41	United States	Cambridge, MA	1998
Covireu al Sur	Co-developed-co-operative	Co-op Limited Equity	182	Uruguay	Montevideo	1997-2013
Cobb Hill Co-housing	Co-housing	Fee Simple	23	United States	Hartland, VT	1997-2003
Cooperativa UFAMA al Sur	Co-developed-co-operative	Co-op Limited Equity	36	Uruguay	Montevideo	1995-2010
Two Echo Co-housing	Co-housing	Fee Simple	27	United States	Brunswick, ME	1991-1998
Co-housing Co-op	Co-housing	Co-op Owner	24	Australia	South Hobart, TAS	1990-2000
Cantine's Island Co-housing	Co-housing	Fee Simple	19	United States	Saugerties, NY	1990-1997
Cascade Co-housing	Co-housing	Condo	14	Australia	South Hobart, TAS	1990-1992
Burlington Co-housing East Village	Co-housing	Condo	32	United States	Burlington, VT	1989-2008
Olohaus	Co-development	Condo	26	Germany	Berlin	1987-1992
Champlain CLT	Community Land Trust	Mixed	3115+	United States	Burlington, VT	1984-Today
Coin Street Housing Co-operatives	Co-operative	Rental	~236	England	London	1984-2001
Jystrup Savværk	Co-housing	Condo	29	Denmark	Jystrup	1982-1984
Walters Way	Co-development	Fee Simple	13	England	London	1980-1989
COVIMT 9	Co-developed-co-operative	Co-op Limited Equity	172	Uruguay	Montevideo	1979-1982
The Vierwindenhuis	Co-developed-co-operative	Condo	89	Netherlands	Amsterdam	1977-1990
Argyle Street Housing Co-op	Co-operative	Rental	23	England	Cambridge	1977-1981
Forum Kreuzberg	Co-developed-co-operative	Co-op Limited Equity	90	Germany	Berlin	1972-Today
Artigas Boulevard Housing Complex	Co-operative	Co-op Limited Equity	332	Uruguay	Montevideo	1972-1974
H.O.M.E. Inc.	Co-development	Mixed	0-4+	United States	Orland, ME	1970-Today
Centraal Wonen Delft	Co-housing	Co-op Rental	56-173	Netherlands	Delft	1970-1981
Wandelmeent	Co-housing	Co-op Rental	50	Netherlands	Amsterdam	1969-1977
Abeona Housing Co-op	Co-developed-co-operative	Rental	44	England	London	1969-1975
Cross Street Co-operative Housing	Co-operative	Co-op Owner	68	Australia	Carlton, VIC	1969-1970
Sættedammen	Co-housing	Condo	27	Denmark	Hillørd	1967-1972
Skårplanet	Co-housing	Condo	33	Denmark	Verlase	1965-1974
Isokon Flats	Co-housing	Rental	36	England	London	1929-1932
Schillerpark Housing Estate	Co-operative	Co-op Owner	303	Germany	Berlin	1924-1930
Siedlungsgenossenschaft Freidorf	Co-operative	Co-op Rental	150	Switzerland	Basel	1919-1929
Covitjo	Co-developed-co-operative	Co-op Limited Equity	—	Uruguay	Montevideo	—

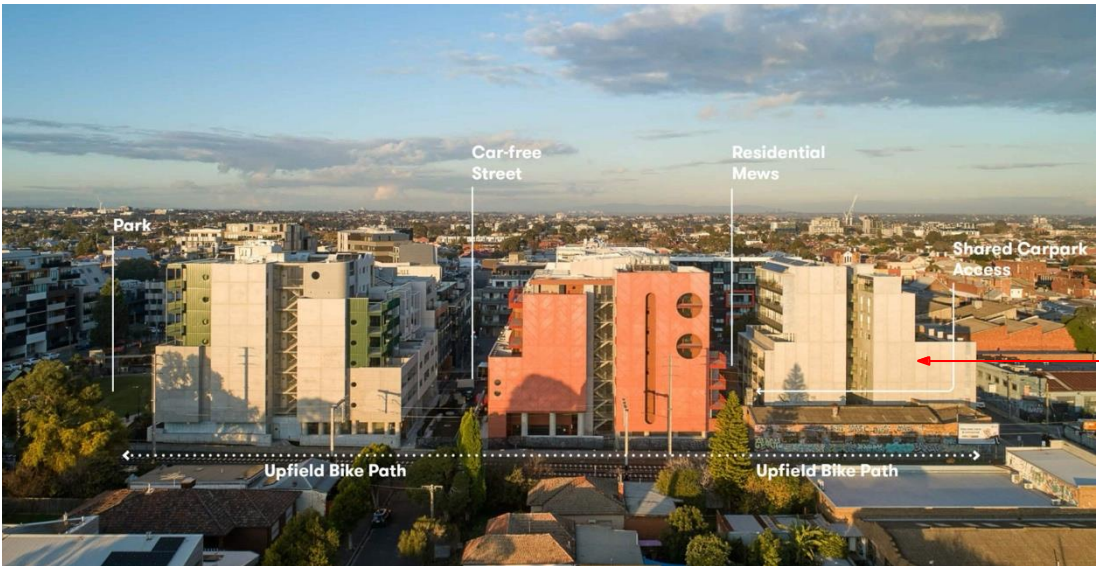




Building Code Barriers to Good Design — Stairs



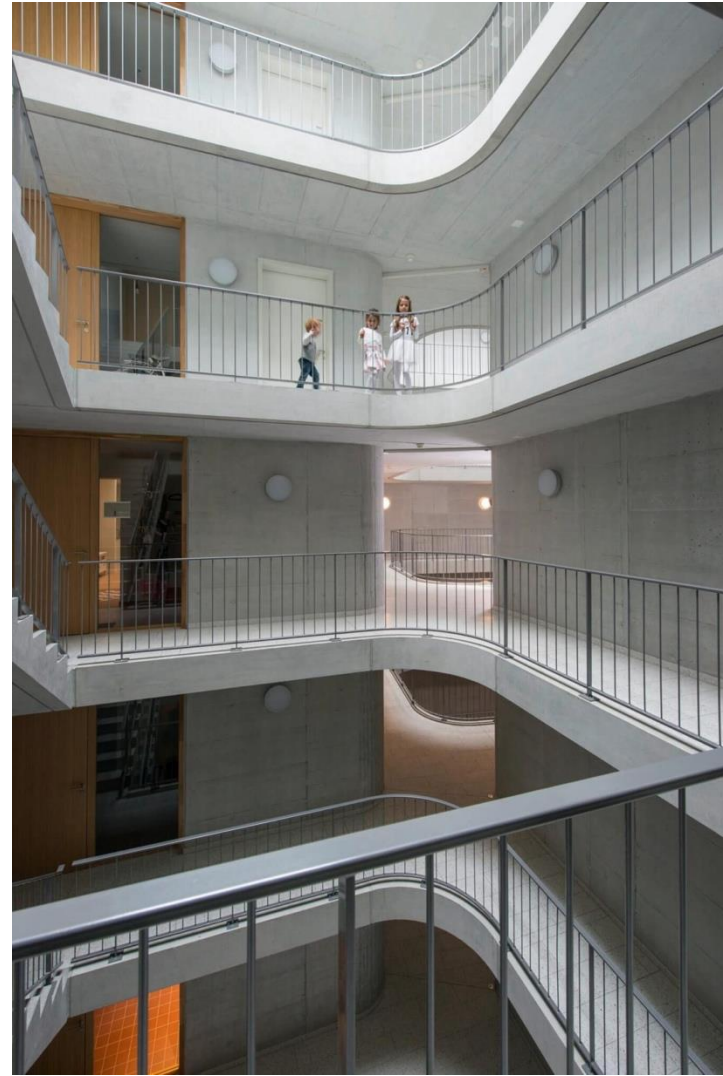
Single-stair



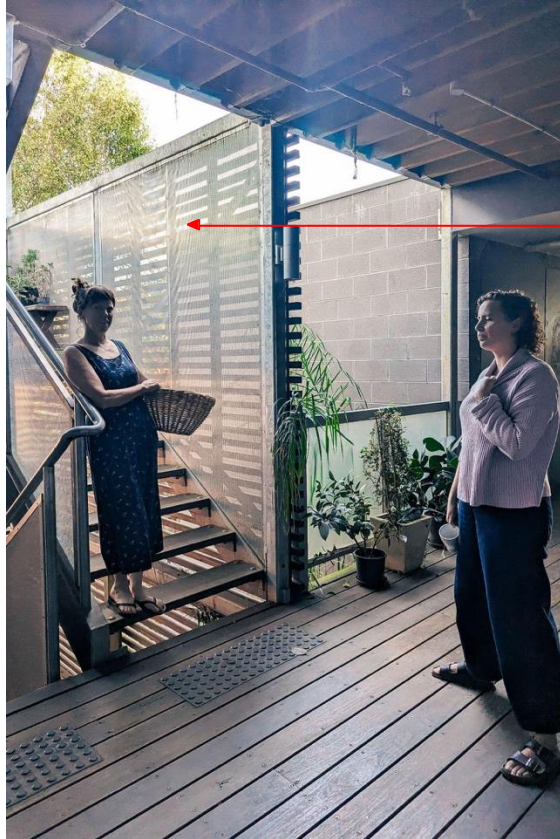
Single-stair



Building Code Barriers to Good Design — Stairs



Building Code Barriers to Good Design — Circulation



Stair open to
sky

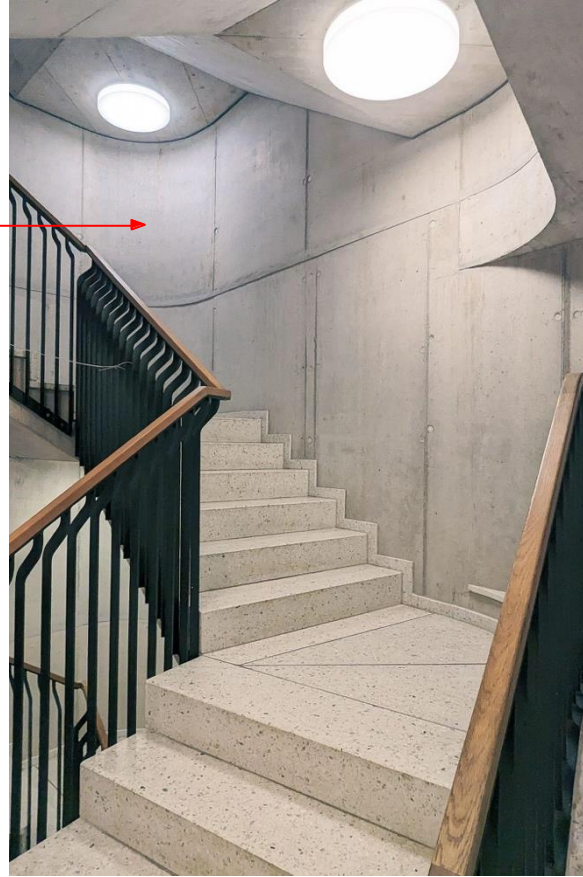
Stair open to
corridor



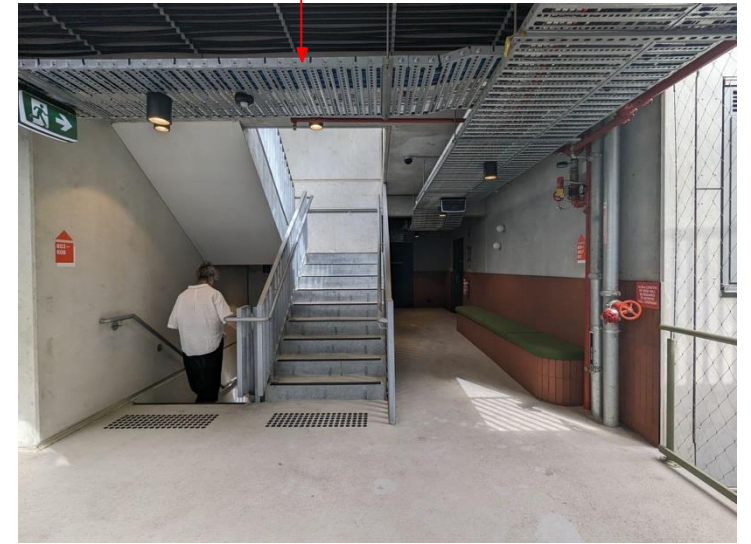
Good Design — Circulation



Elevator open
to stair



Stair open to hallway &
exterior



Good Design — Accessibility



Step



Step

Step

Good Design — Accessibility

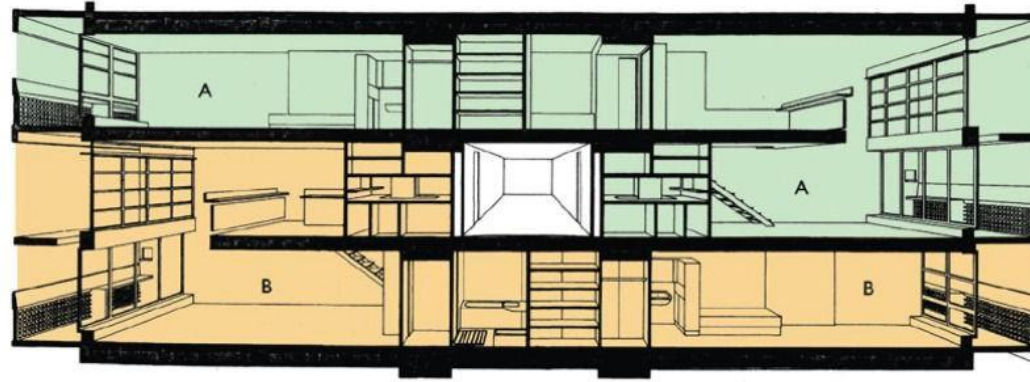


Multi
story
Unit





From social housing to a luxury product to illegal to build again



CODE BARRIERS TO DEVELOPMENT

Mid-Rise

Small Multifamily

Multifamily Development Options



Cambridge, MA



Malmö, Sweden

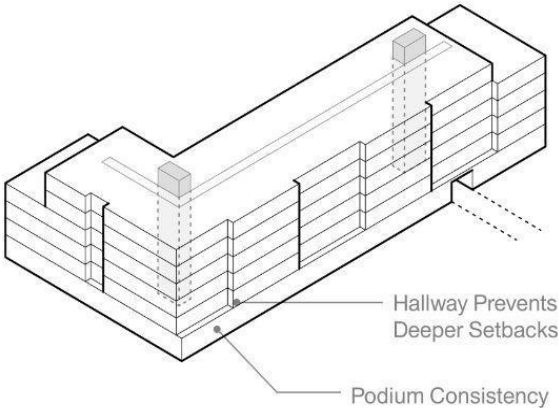


Boston, MA

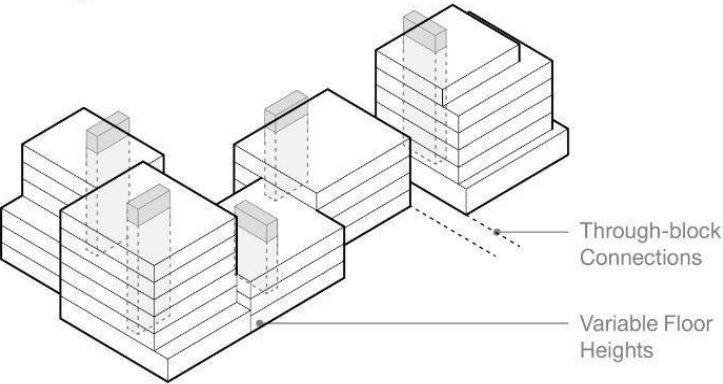


Amsterdam, Denmark

Mid-Rise Double-Loaded Podium
Limited Massing Options



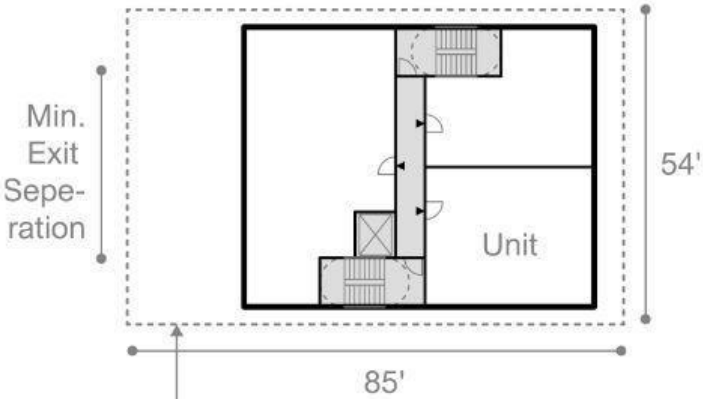
Mid-Rise PABs in Sequence
Variable Massing Possible



Unlocking Production

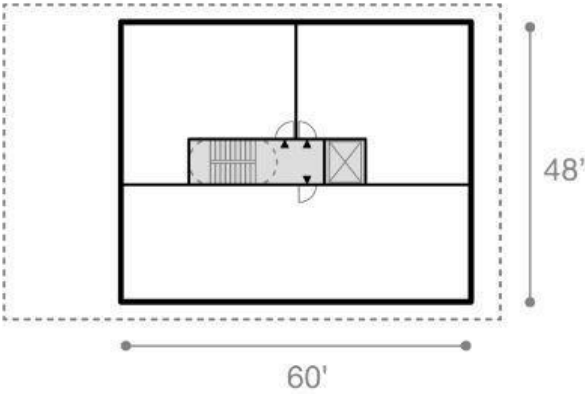
Small Double-Loaded Plan
82% Efficient

2,880 GSF Floor Plate
3 Units



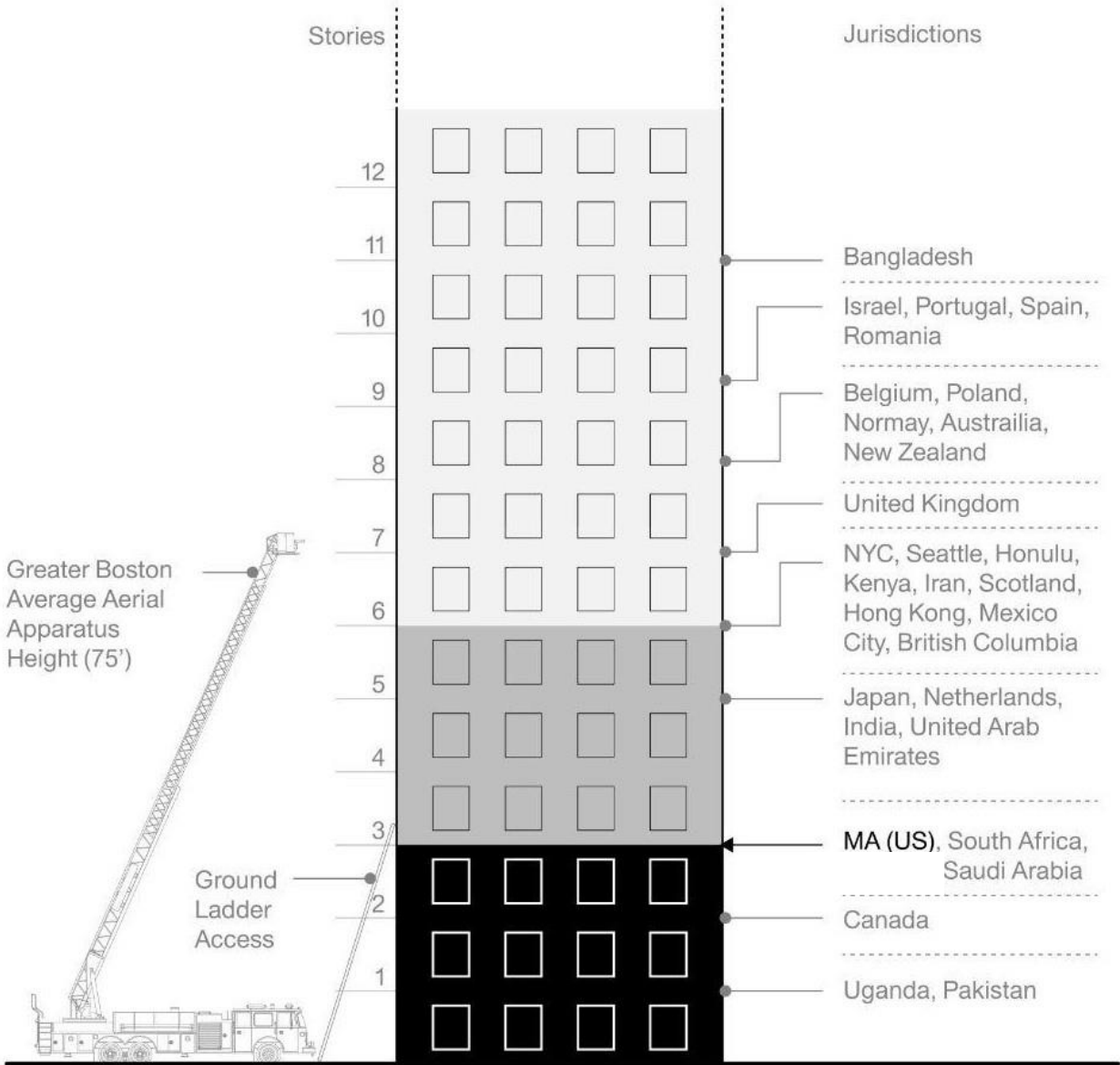
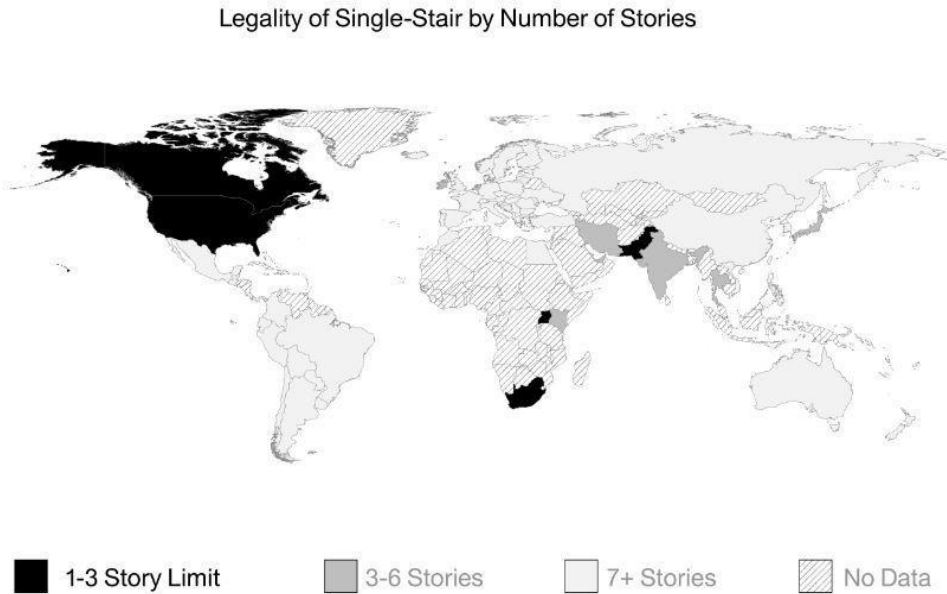
Small Single-Stair Plan
92% Efficient

2,880 GSF FP
3 Units



Median Parcel Size in Greater Boston (4,600 SF)

International Outlier



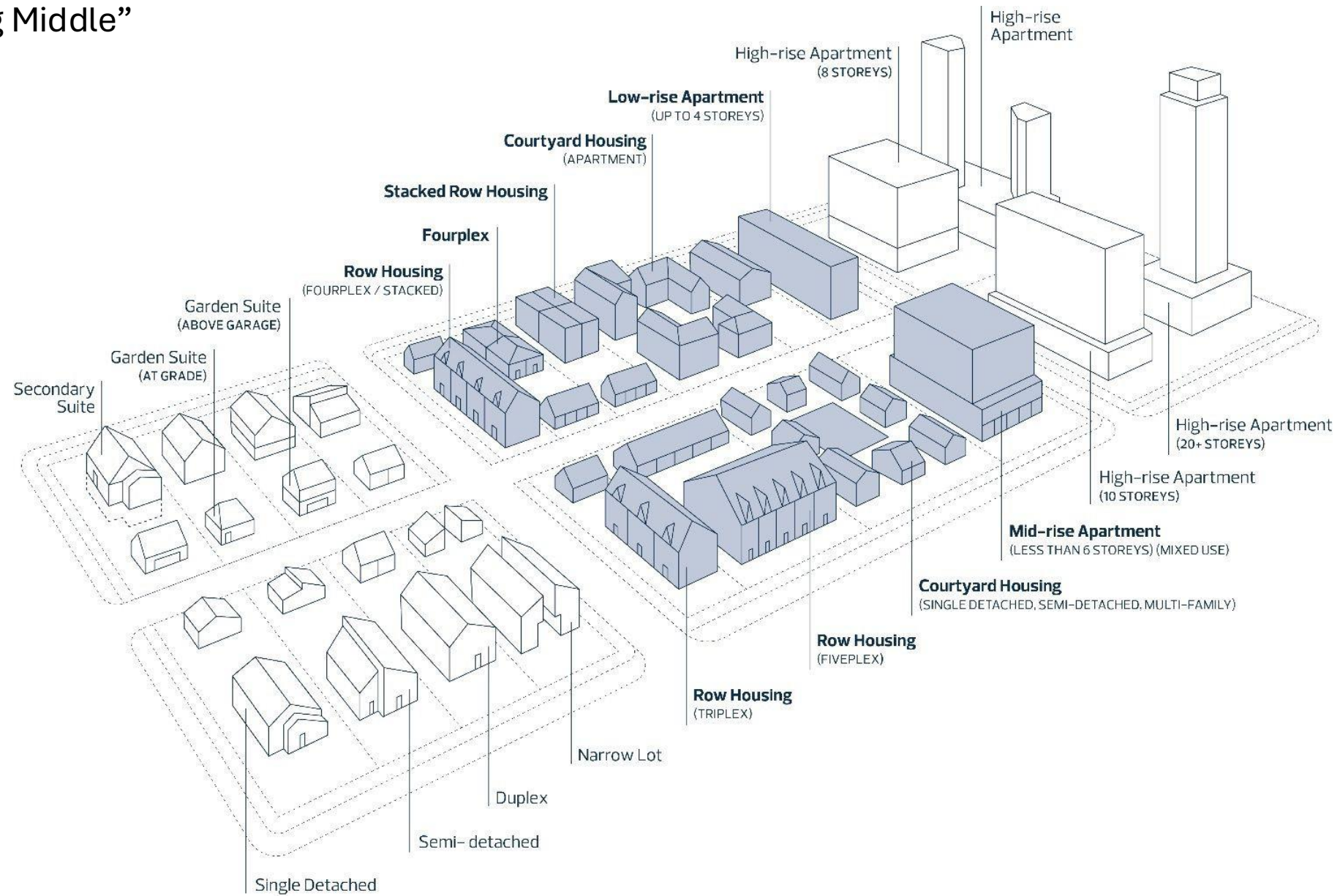
Actually possible in
Cambridge now with 45'
zoning, but not yet
financially feasible! Due
to SES restrictions.

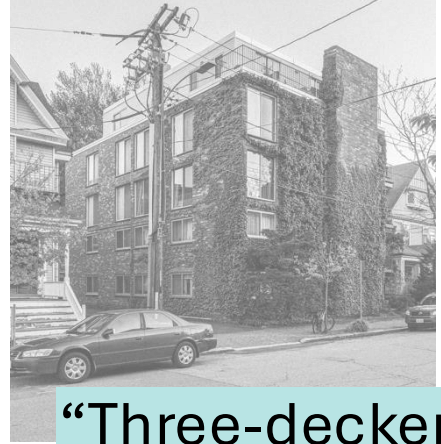


Low-Rise

Small Multifamily

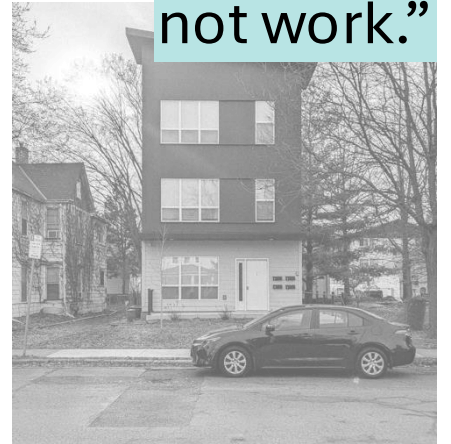
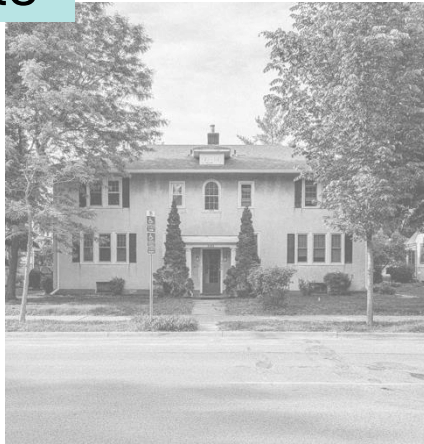
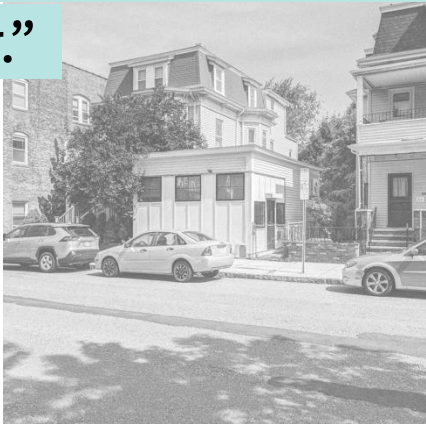
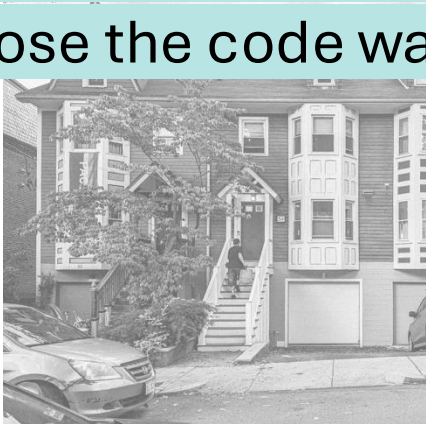
The “Missing Middle”





“triplexes and fourplexes up to mid-rise apartments—may win the zoning battle but lose the code war.”

“Three-deckers do not work.”



A Steep Cliff

IRC
Residential Code



Single-family



Duplex

IRC
Residential Code

IBC
Commercial Code



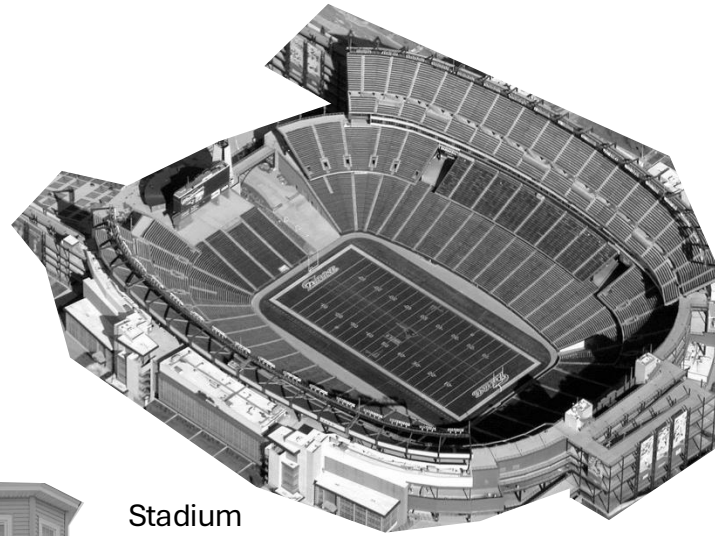
Single-family



Duplex



Three-family



Stadium



High-rise



Large Multifamily



University



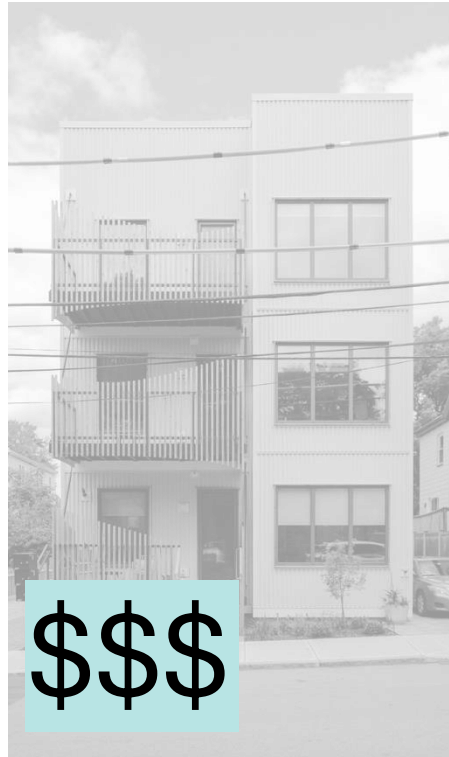
Four-plex

Incentivize Residential Types

IRC
Residential Code



IBC
Commercial Code



IRC - Residential Code

IBC - Commercial Code



New duplex in Newton, MA



New multifamily in Chelsea, MA

Small House

Large Duplex

Small Multifamily

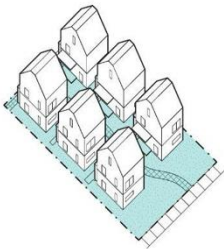
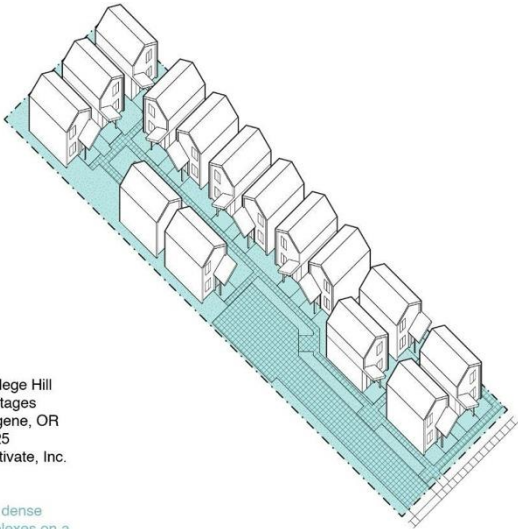
Large Multifamily

IRC Compliant Dense New Housing

Project
Location
Completed
Architect(s)
Dwellings

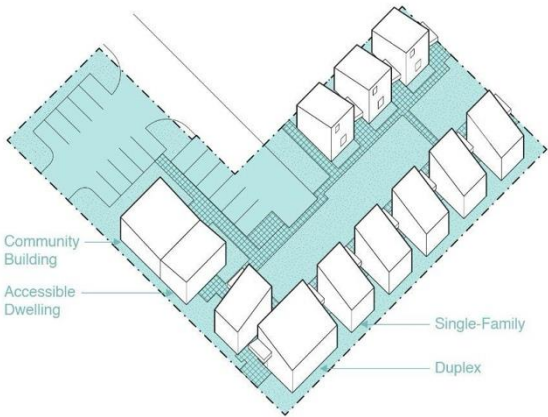
Shortstack Milwaukie
Milwaukie, OR
2025
WORKS Architecture
15

Detached single family
houses on micro lots
with minimal setbacks



College Hill
Cottages
Eugene, OR
2025
Cultivate, Inc.
6

Six dense
duplexes on a
deep lot

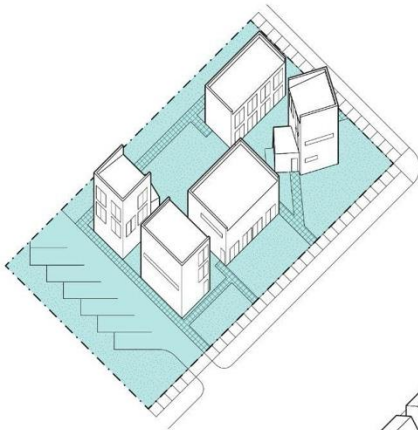


Tempe Micro Estates
Tempe, AZ
2022
coLAB Studio
13

A cottage court of single
family homes with lofted
second stories

Single-Family

Duplex

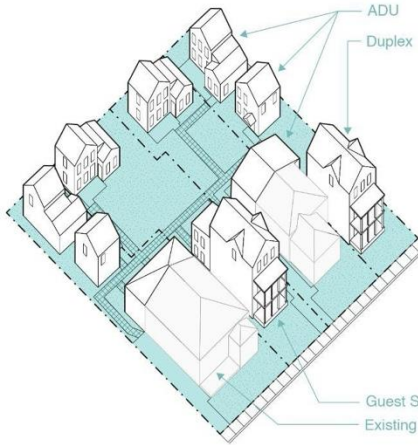
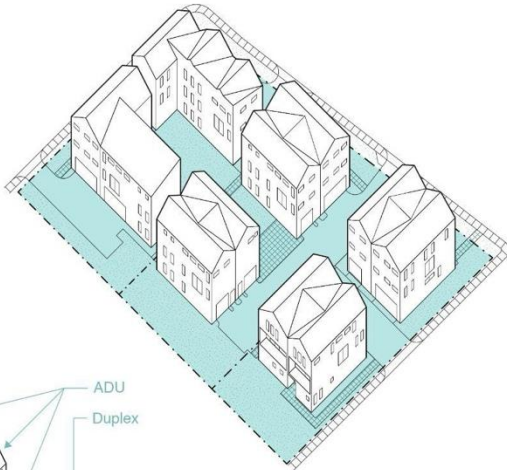


The Canopy
Detroit, MI
EC3 & Studio Detroit
10

Confetti-esque
arrangement of five
duplexes in a shared
garden landscape

Mira Development
Austin, TX
Plural Office
12

Six clustered three
story duplex homes
with individual
garages



Finley St Cottages
Atlanta, GA
Kronberg Urbanists Architects
16

A cottage court of mixed
typologies and a renovation of
two single family homes

Guest Suite
Existing Single-Family

IRC Code-Hacking



Austin, TX



Tempe, AZ



Atlanta, GA

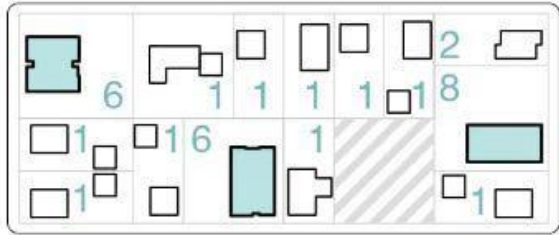


Detroit, MI

Small Buildings, Big Potential



Incremental Density through SMH



Prototypical Block in Natick Station

Existing Density 5.3 DU/A
New Density 8.4 DU/A



Urban Patterns

Boston Fine- Grain Urban Fabric

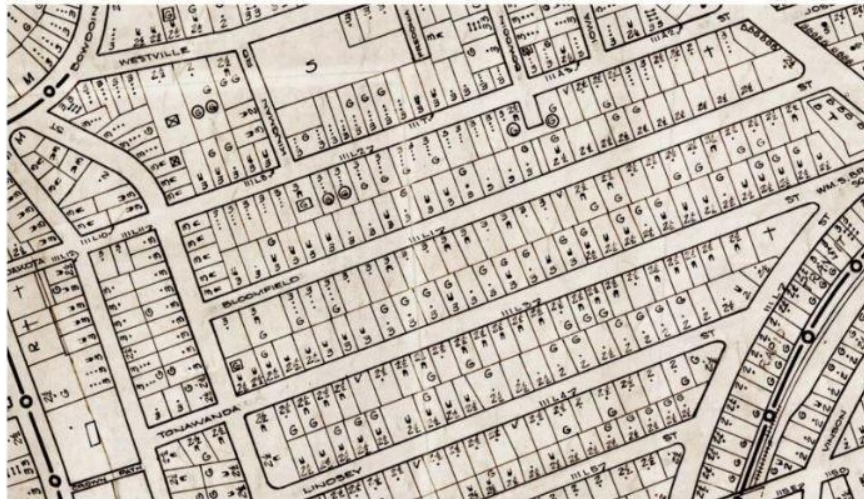
1874



1894



1935

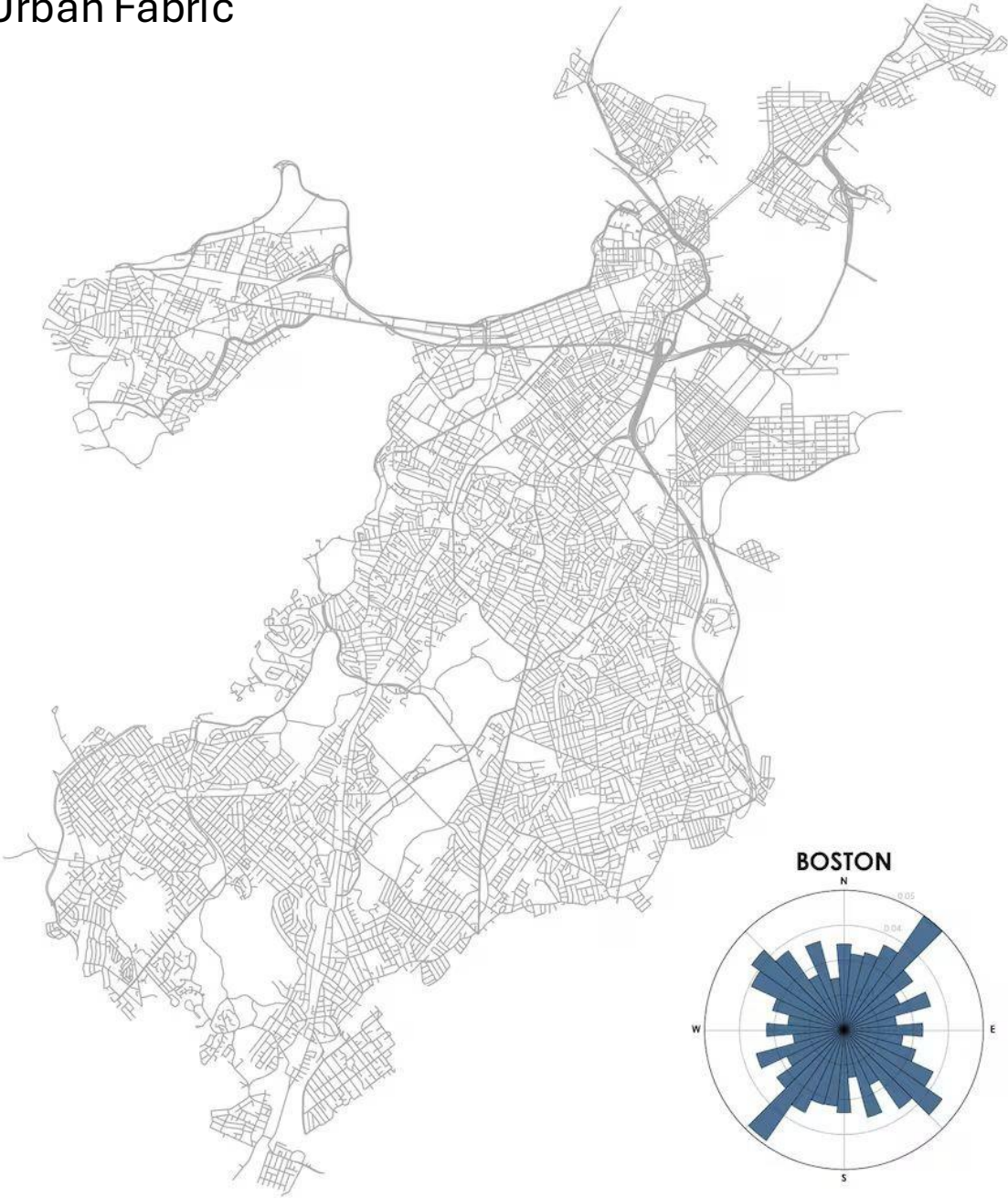


2019

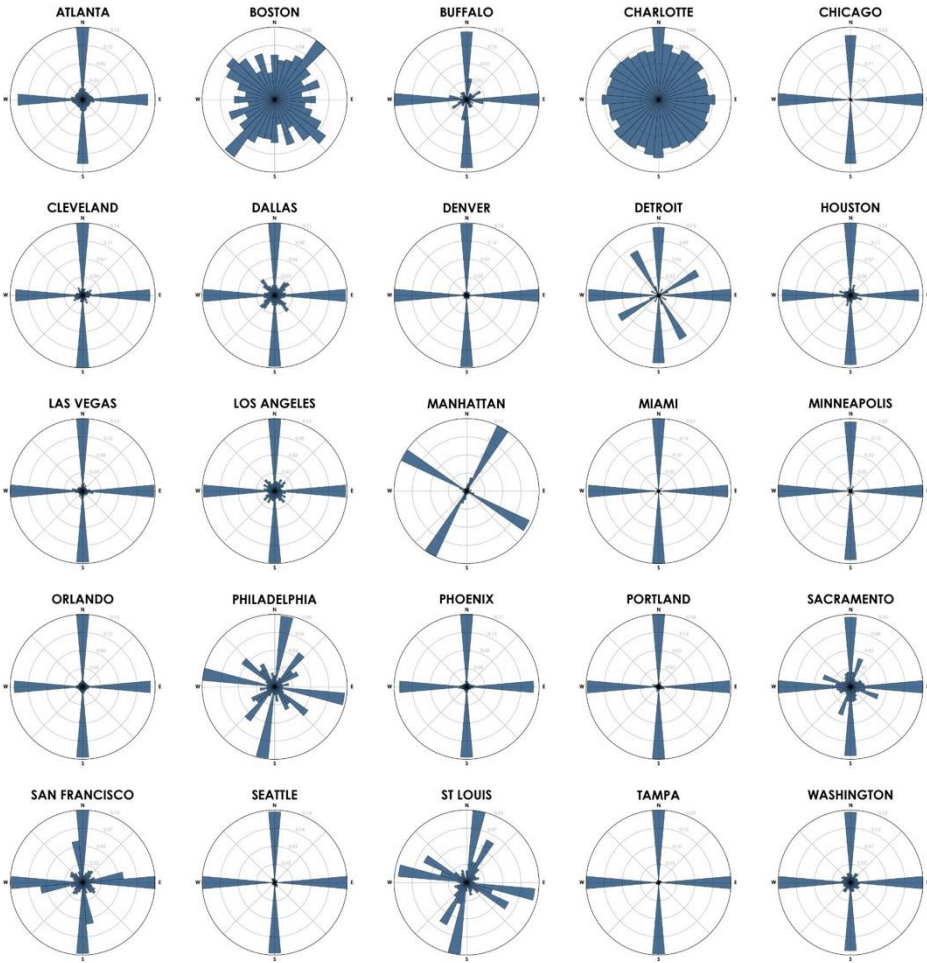


Dorchester through
the years Via
MapJunction

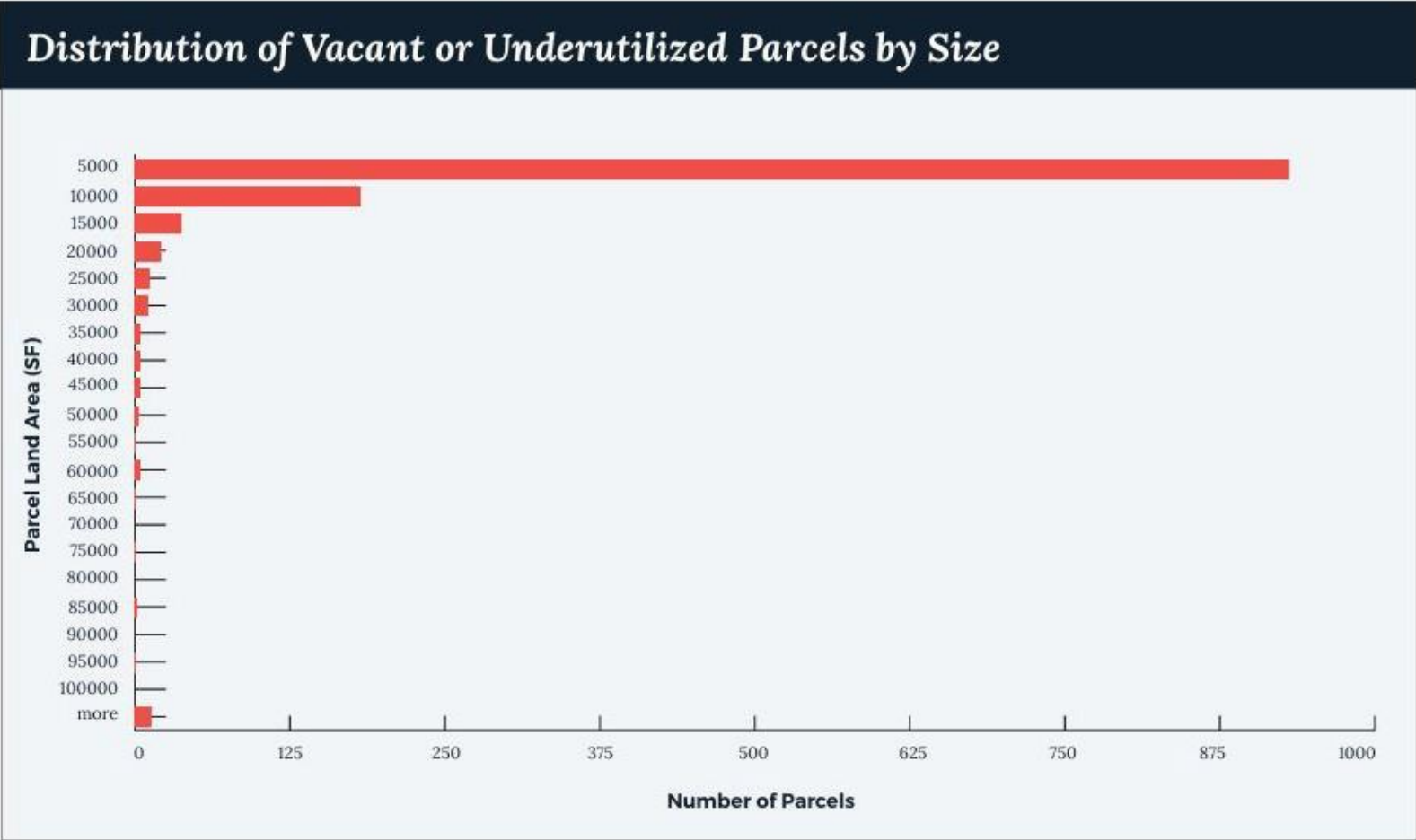
New England Urban Fabric

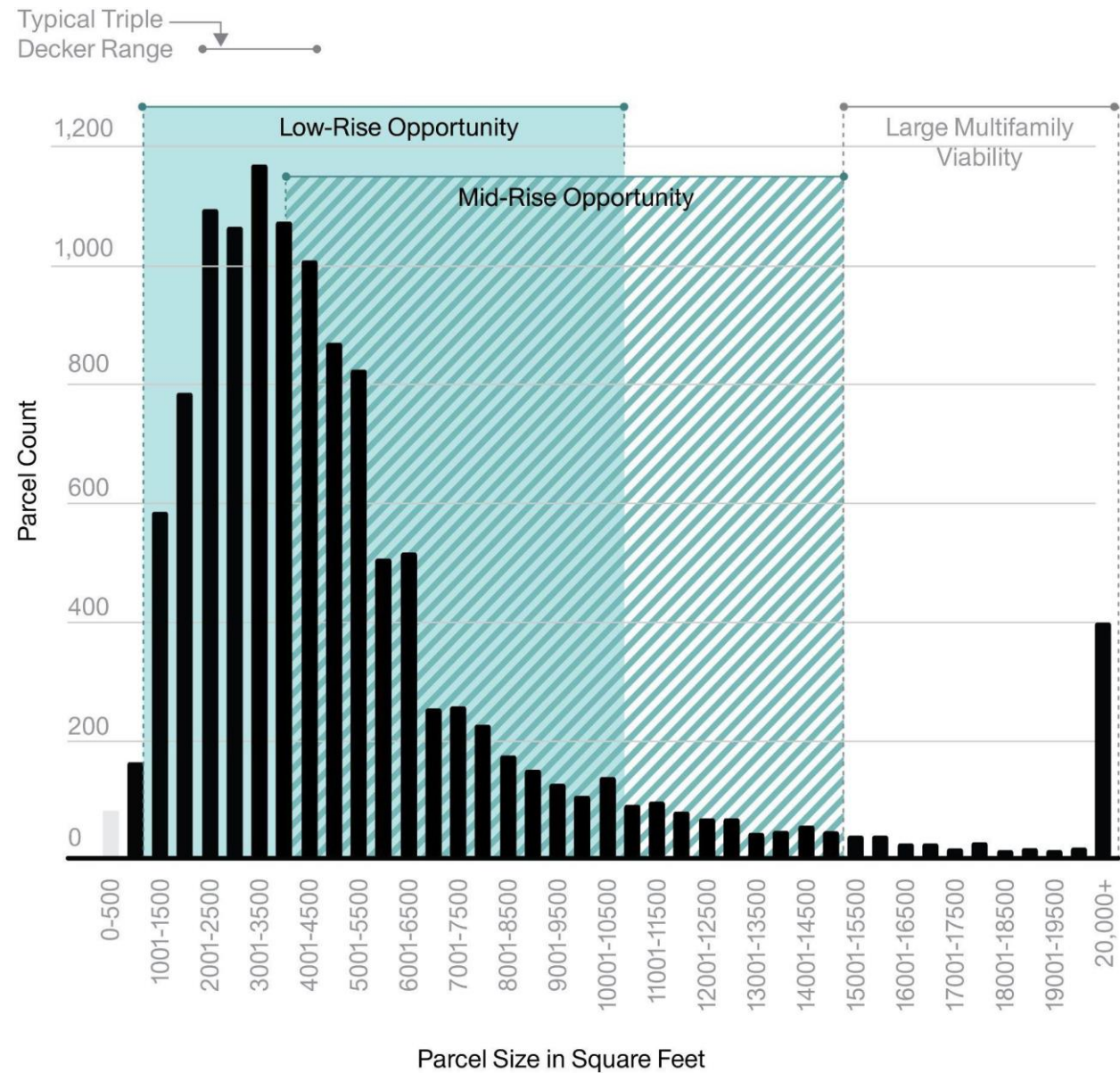


City Street Network Orientation



City Owned Land Prime for
Redevelopment is on Small
Sites





Missing Development Options



Small Low-Rise Multifamily



Small Mid-Rise Multifamily

TWO REPORTS



Single-Stair Report, 2024
Small Mid-Rise Multifamily



Small Multifamily Report, 2026
Small Low-Rise Multifamily



Single-Stair Report, 2024
Small Mid-Rise Multifamily





Small Multifamily Report, 2026
Small Low-Rise Multifamily

SMALL MULTIFAMILY

KEY REFORMS

Mid-Rise ← → Low-Rise



Single-Stair



High-Rise
Threshold



Elevator Rules



Accessibility Codes



Sprinklers

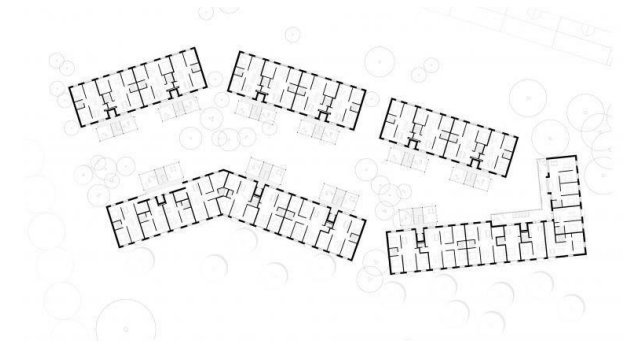


Other Small
Multifamily Reforms

Small Mid-Rise Multifamily Single-Stair

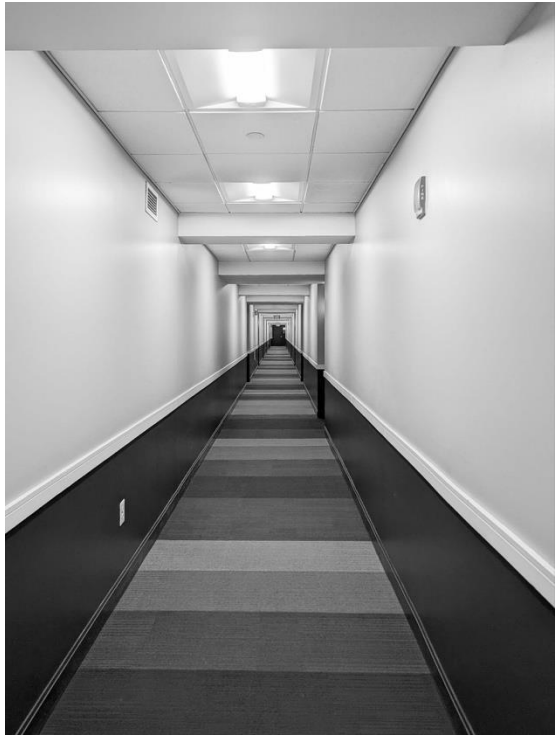


US & Canada



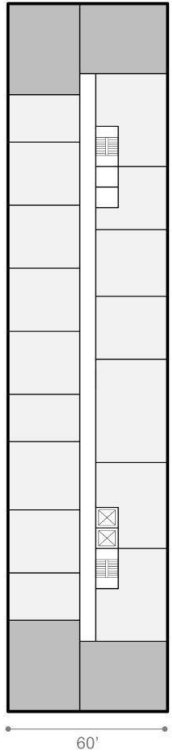
Elsewhere

Small Mid-Rise Multifamily
Single-Stair



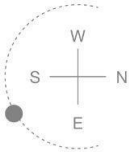
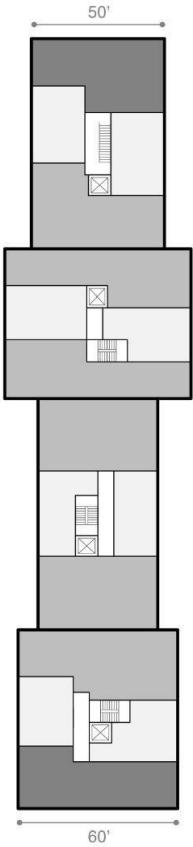
Double-Loaded
Floor Plan

16,000 GSF Floor Plate
20 Units
88% Efficient



Point-Loaded
Floor Plan

16,000 GSF FP
16 Units
91% Efficient



Single-Aspect Dual-Aspect Triple-Aspect

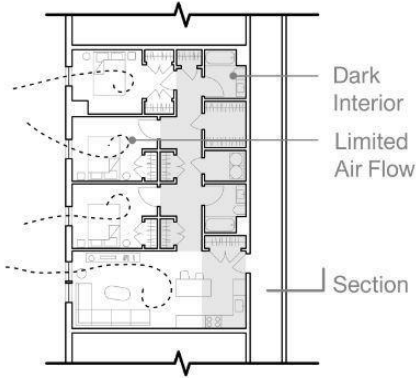


Small Mid-Rise Multifamily
Single-Stair



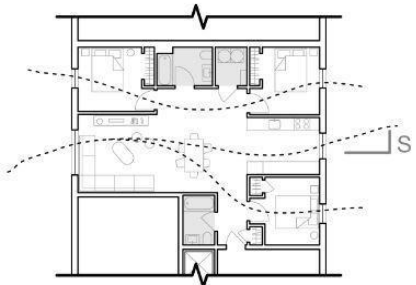
Double-Loaded
Unit Plan

3 Bed / 2 Bath
Single-Aspect

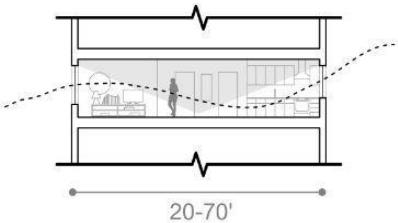
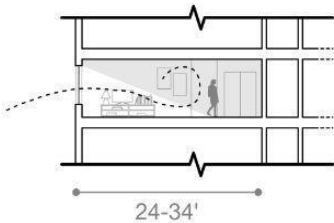


Point-Loaded
Unit Plan

3 Bed / 2 Bath
Dual-Aspect



Unit Sections



Small Mid-Rise Multifamily Single-Stair

Proposed Requirements

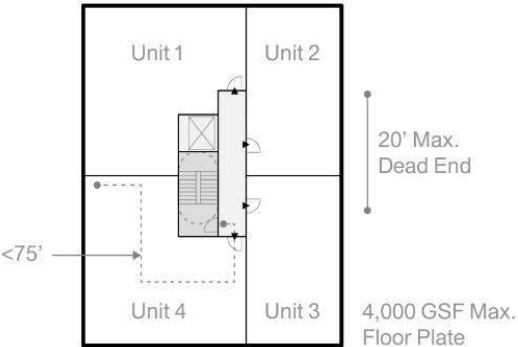
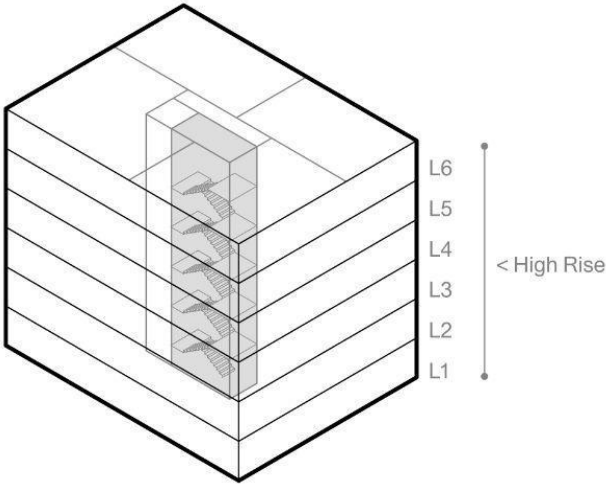
- 4 maximum units per floor
- 6 stories maximum (non-high rise)
- 4,000 GSF maximum floor plate
- 75' maximum exit access travel distance
- 20' maximum corridor length
- 45-minute minimum rated unit entry doors

Additional measures (if not already required)

- Equipped with a NFPA 13 sprinkler system
- Two-hour rated exit stair (smokeproof enclosure)
- Equipped with emergency escape and rescue openings
- Buildings can be mixed-use, but other occupancies cannot be above the ground floor

Optional Measures

- Exit stair discharge requirements such as mandating it directly exit to a public way and cannot be through another occupancy or a residential lobby
- Stair smoke control features such as pressurization, stairwell emergency smoke ventilation systems, or exterior stairwells
- Even higher unit entry door rating requirements
- Noncombustible construction type limitations



Small Mid-Rise Multifamily
Single-Stair

OUR WORK ▾INSIGHTS & PERSPECTIVES ▾ABOUT ▾

Pew

Q

TOPICS: STRENGTHEN STATE GOVERNMENT | BUILD COMMUNITIES

PROJECTS: HOUSING POLICY

Small Single-Stairway Apartment
Buildings Have Strong Safety Record

Revised building codes could encourage construction, boost supply of
lower-cost homes

MINNESOTA

HOUSING
INDUSTRY NEWS

THE MINNESOTA HOUSING INDUSTRY NEWS SOURCE BY HOUSING FIRST MINNESOTA

NEWS ▾ABOUTARCHIVE

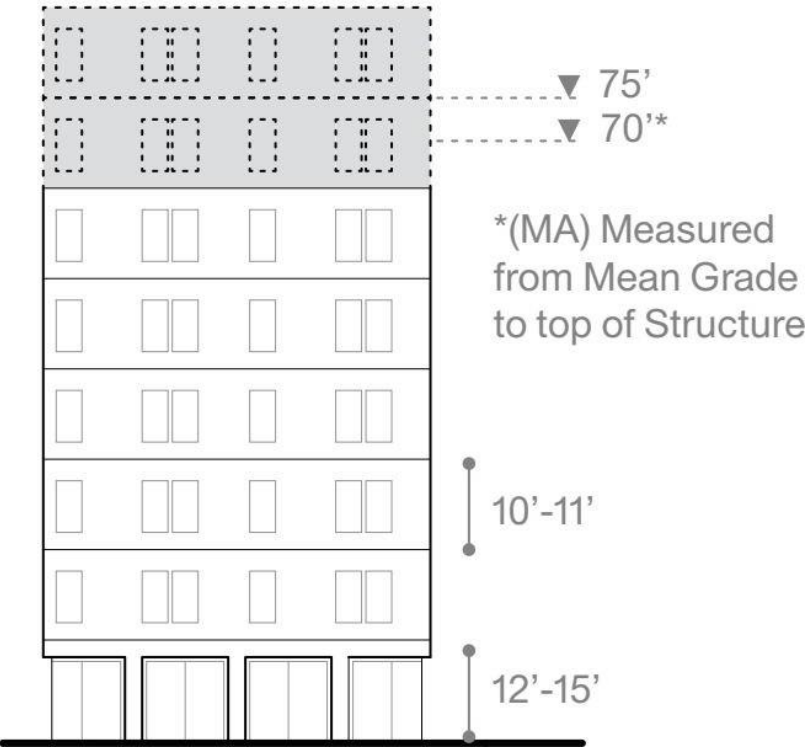
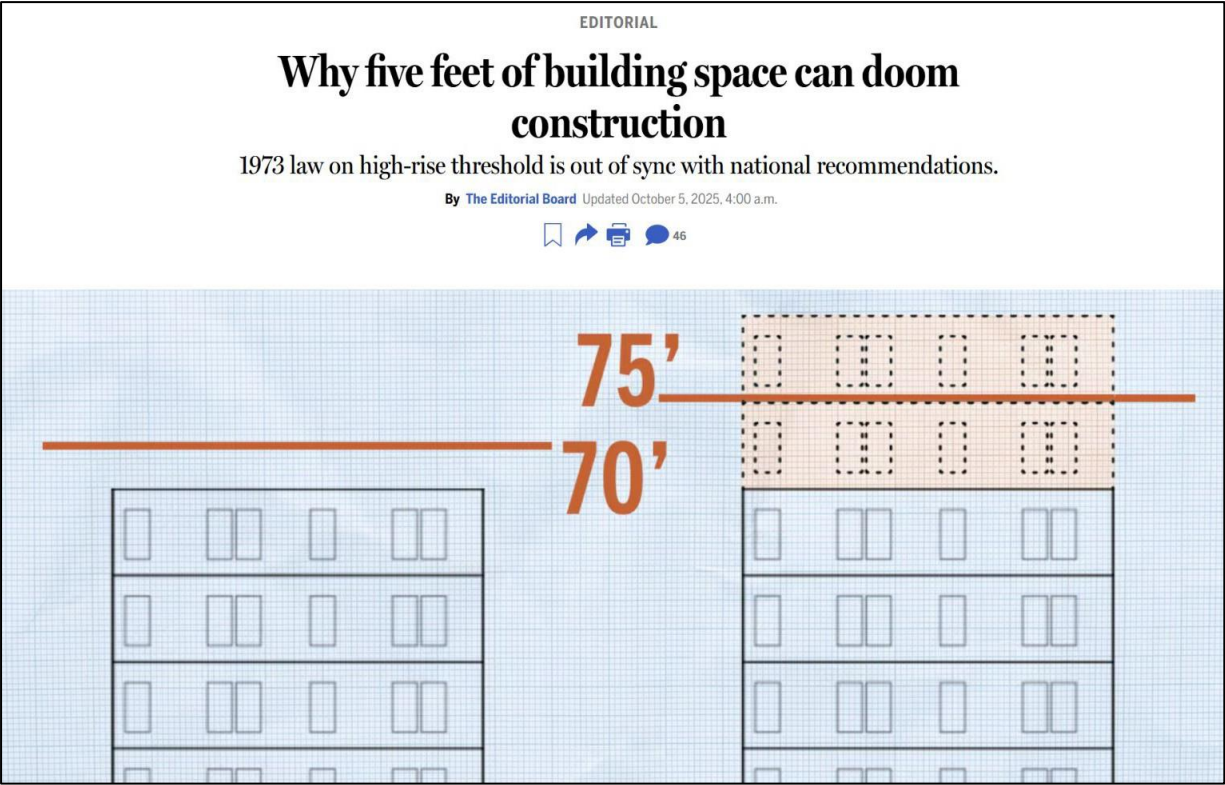
REGULATORY AFFAIRS Housing Affordability, Multifamily, Regulatory Affairs, Single Stair, State Regulations

Exclusive: Minnesota single stair review shows taller
buildings possible with code changes

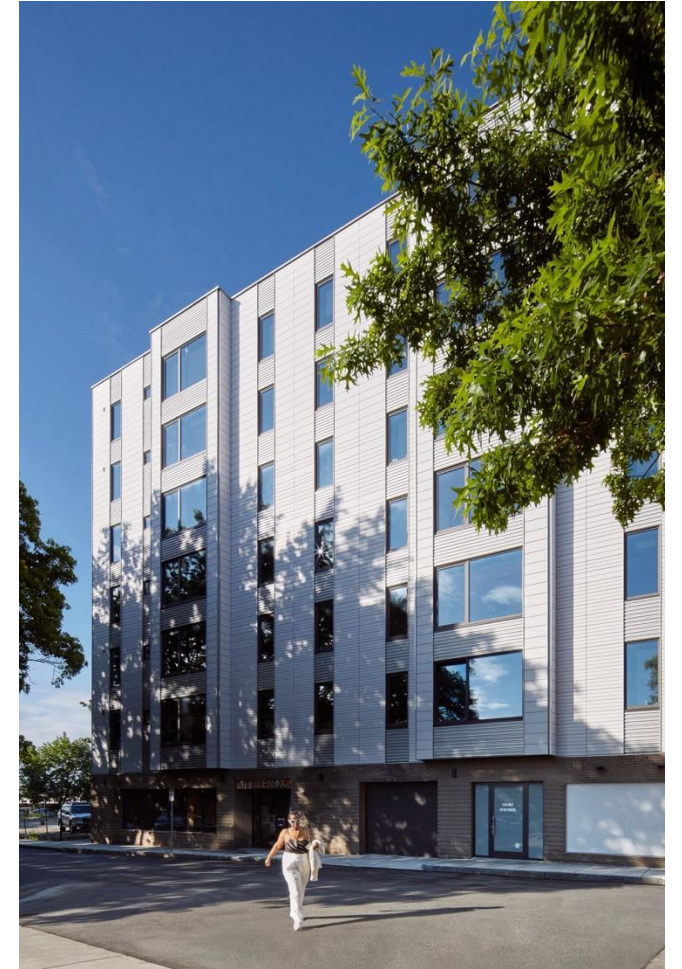
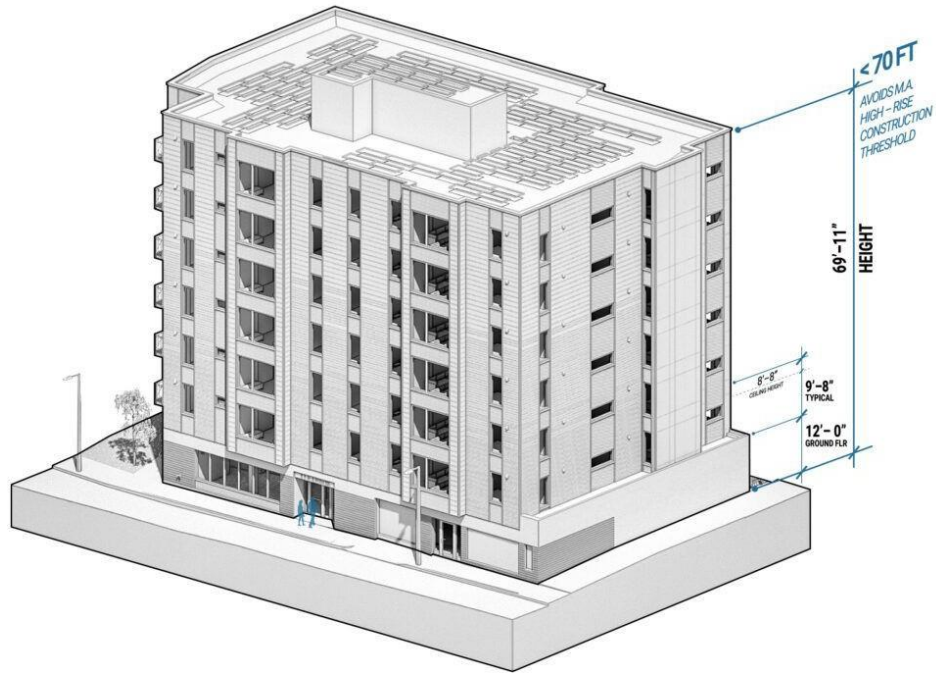
January 5, 2026

Small Mid-Rise Multifamily

High-Rise Threshold

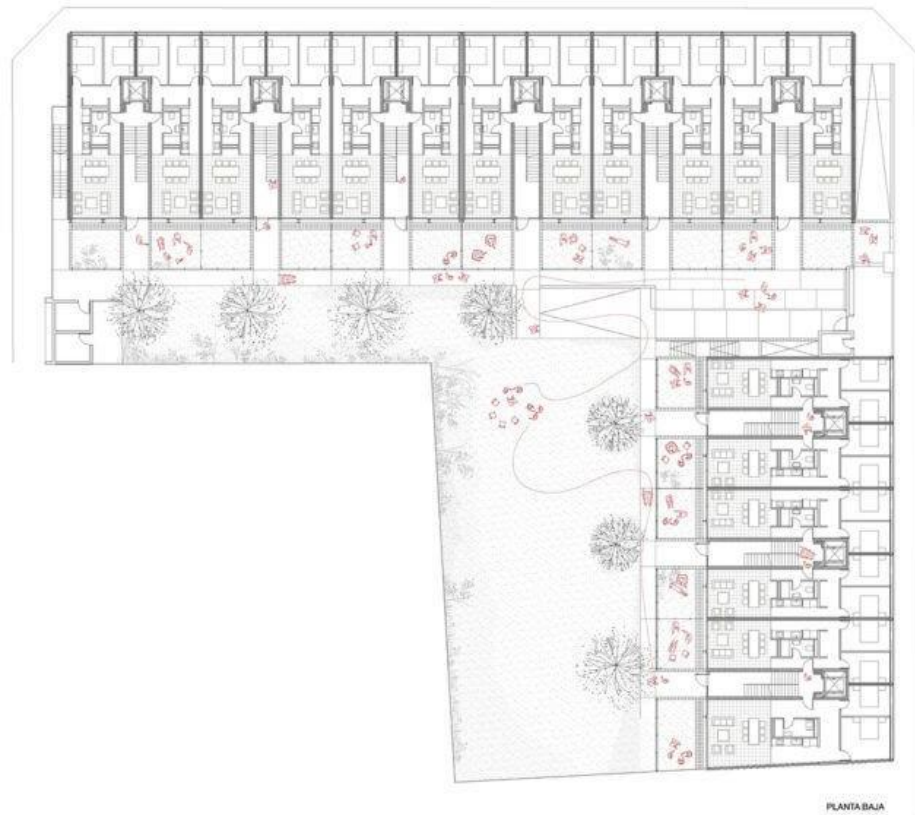


Small Low- & Mid-Rise Multifamily High-Rise Threshold



Small Low- & Mid-Rise Multifamily Elevators

VIA CENTER FOR BUILDING IN NORTHAMERICA

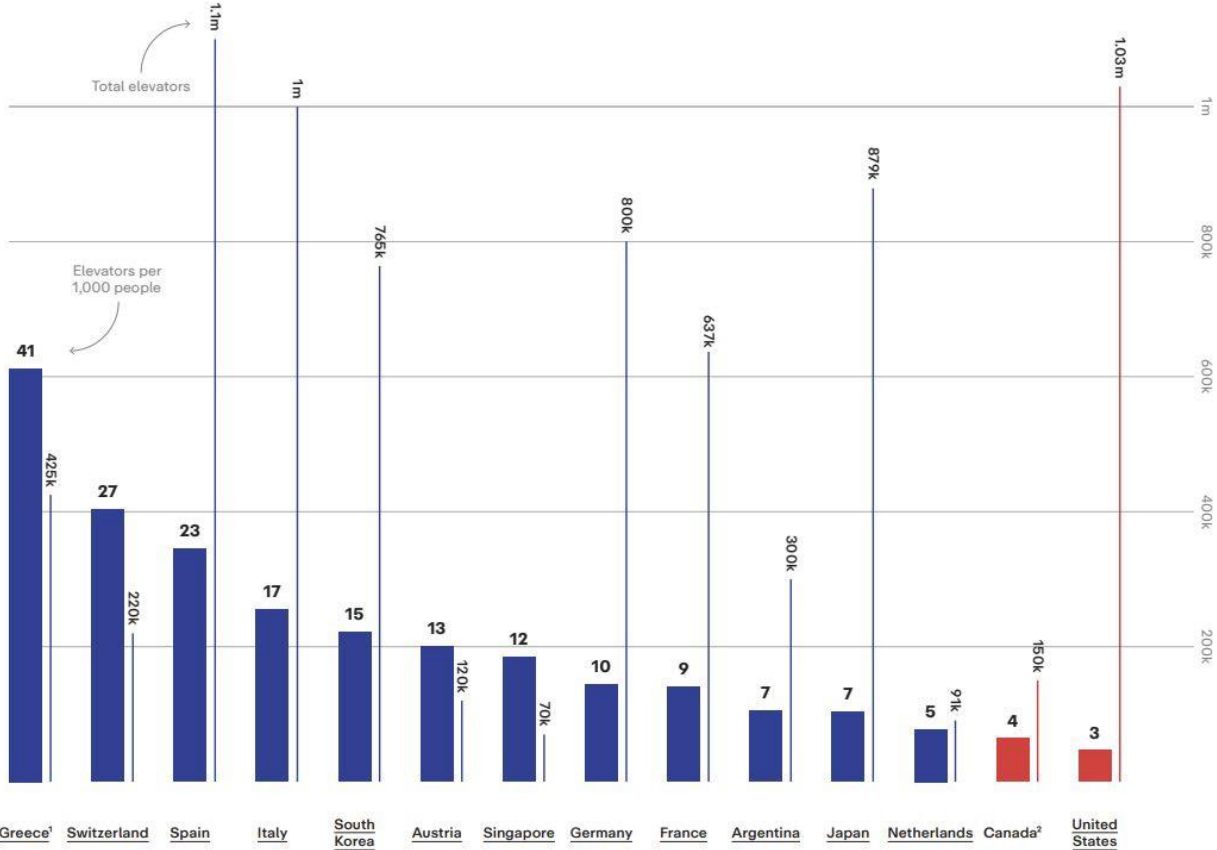


Small Low- & Mid-Rise Multifamily Elevators

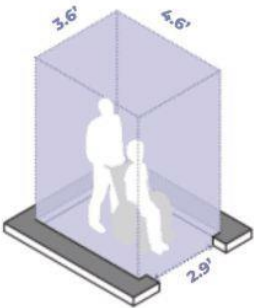
VIA CENTER FOR BUILDING IN NORTHAMERICA

Figure 1

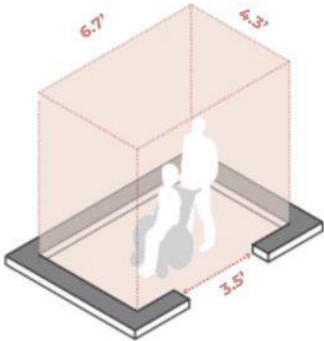
National elevator stocks per capita



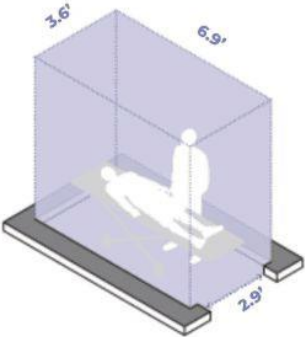
Standard wheelchair
Europe
Capacity: 1,389 lbs



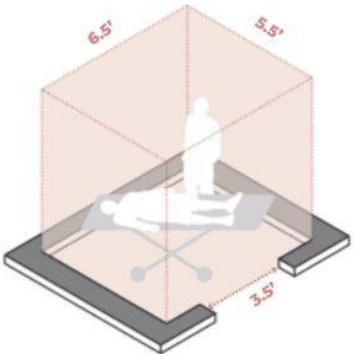
Wheelchair
North America
2,500 lbs



Stretcher
Europe
2,204 lbs



Stretcher (IBC)
North America
3,500 lbs

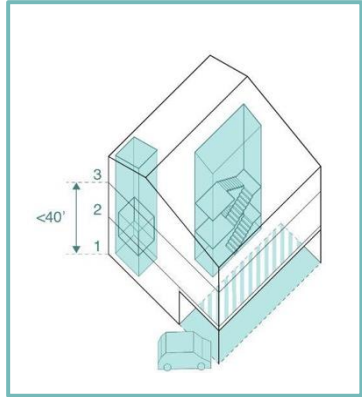


Building and Construction Conference

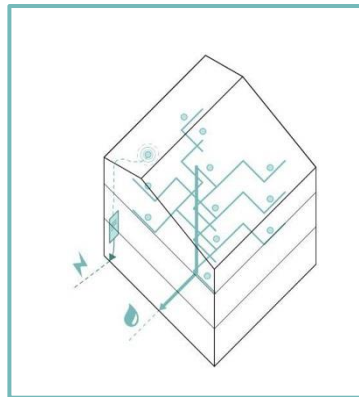
Rise Multifamily

Overview

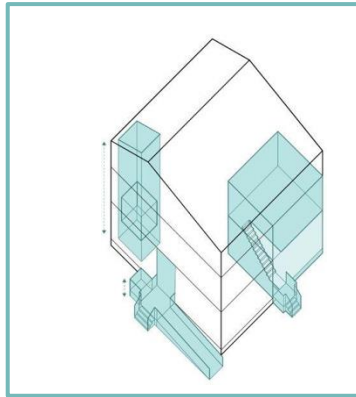
Building Form & Layout



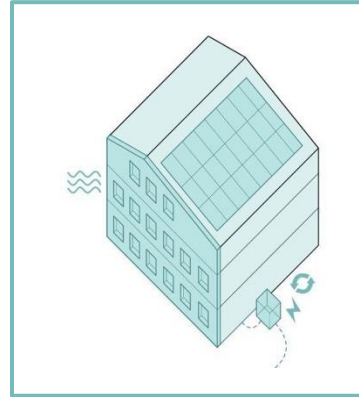
Sprinklers & Fire Alarm Requirements



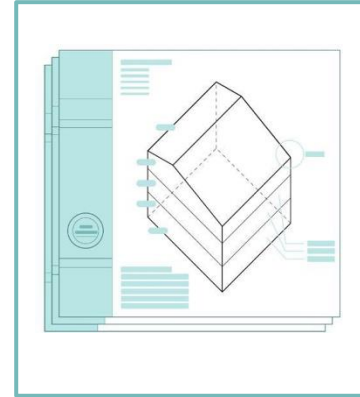
Accessibility & Site Requirements



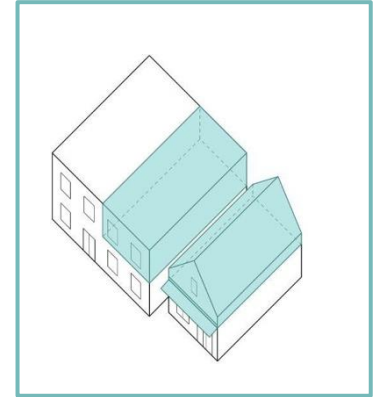
Envelope & Energy Performance Requirements



Process & Soft Costs



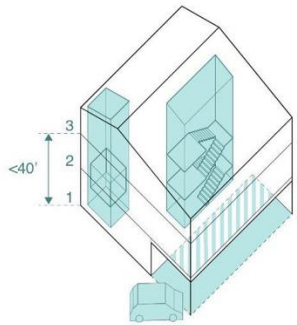
Mixed-use & Adaptive Re-use



Rise Multifamily

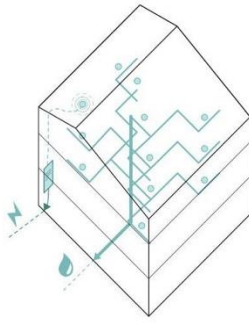
Overview

Building Form & Layout



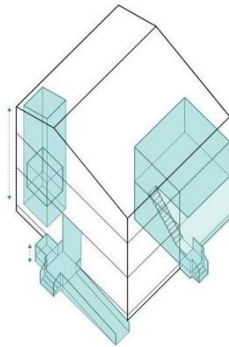
- > Expand Single-stair rules
- > Allow smaller elevators
- > Clarify parking codes

Sprinklers & Fire Alarm Requirements



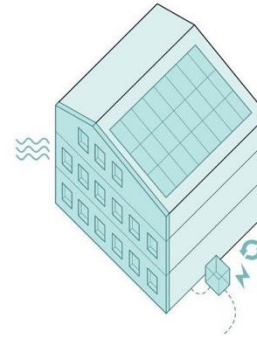
- > Remove Sprinkler mandate for small buildings
- > Right-size fire alarm requirements
- > Focus on passive fire protection features

Accessibility & Site Requirements



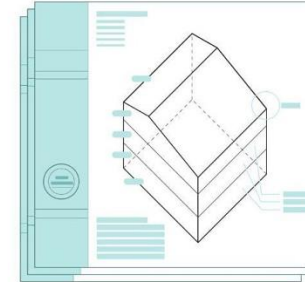
- > Permit lifts and other options for on-grade access
- > Reform elevator rules
- > Exempt multistory dwellings from code reqs.

Envelope & Energy Performance Requirements



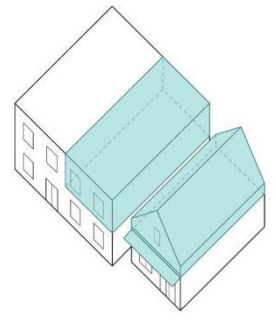
- > Reduce passive house threshold
- > Provide prescriptive code paths for compliance

Process & Soft Costs



- > Reduce engineering requirements for permit
- > Utilize more delegated design strategies

Mixed-use & Adaptive Re-use

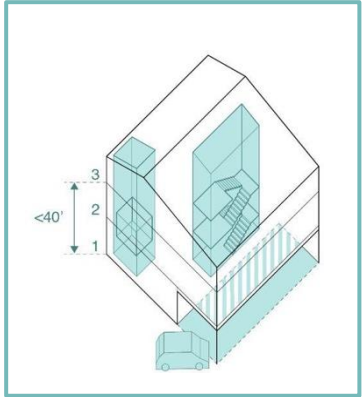


- > Allow mixed-use and live-work residential uses in the appendix
- > Revise existing building code requirements for upgrading older buildings

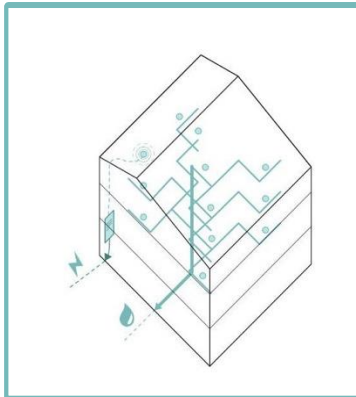
Rise and Fall Multifamily

Overview

Building Form & Layout

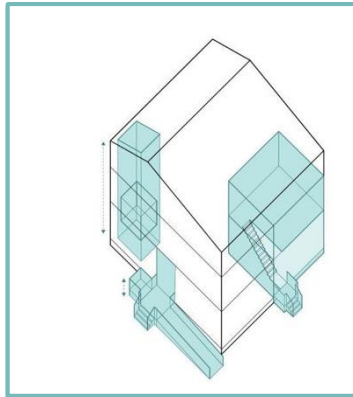


Sprinklers & Fire Alarm Requirements



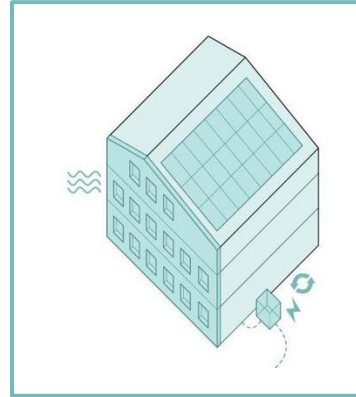
- > **Remove Sprinkler mandate for small buildings**
- > **Right-size fire alarm requirements**
- > **Focus on passive fire protection features**

Accessibility & Site Requirements

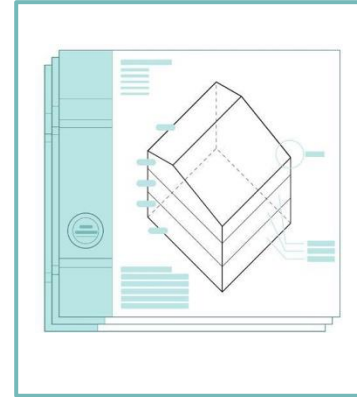


- > **Permit lifts and other options for on-grade access**
- > **Reform elevator rules**
- > **Exempt multistory dwellings from code reqs.**

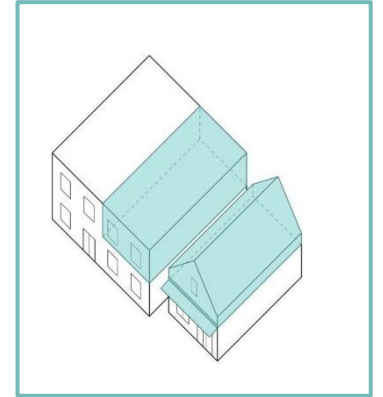
Envelope & Energy Performance Requirements



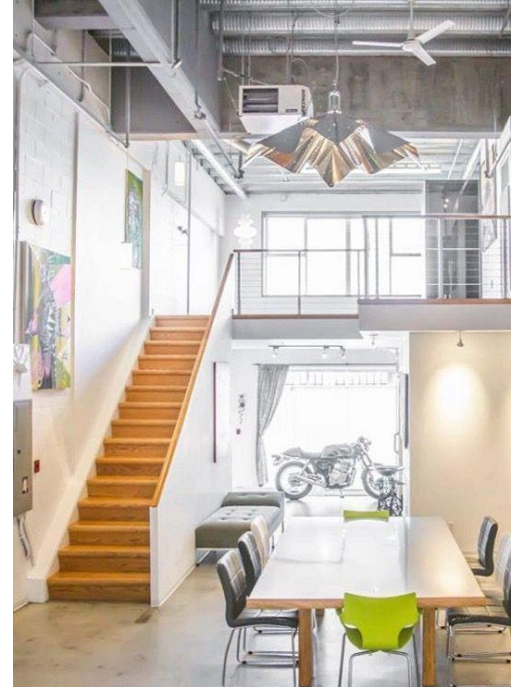
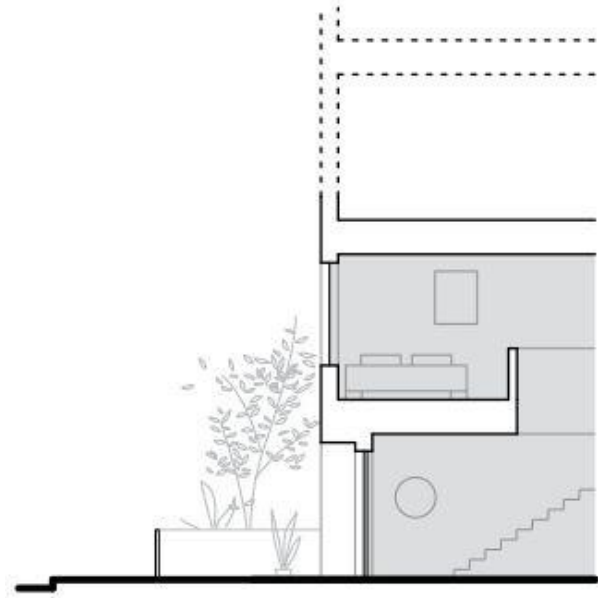
Process & Soft Costs



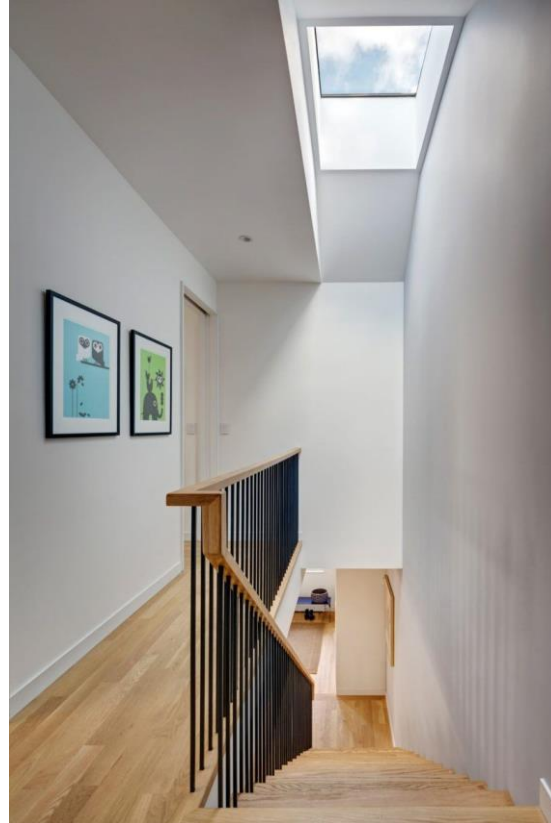
Mixed-use & Adaptive Re-use



Small Low-Rise Multifamily Accessibility



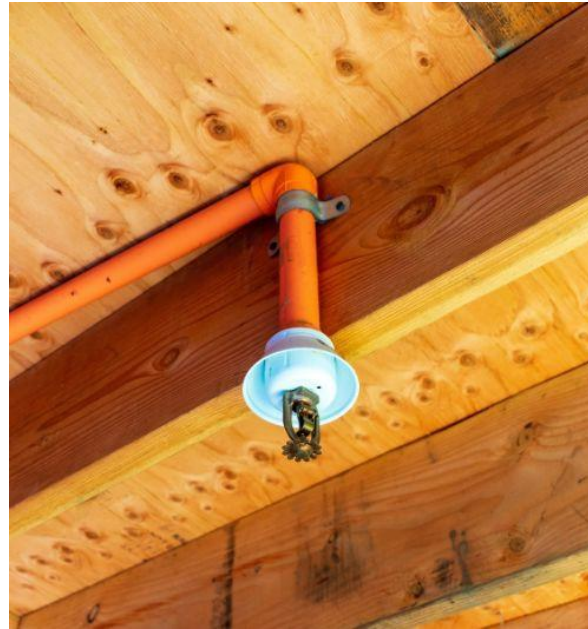
Small Low-Rise Multifamily Accessibility



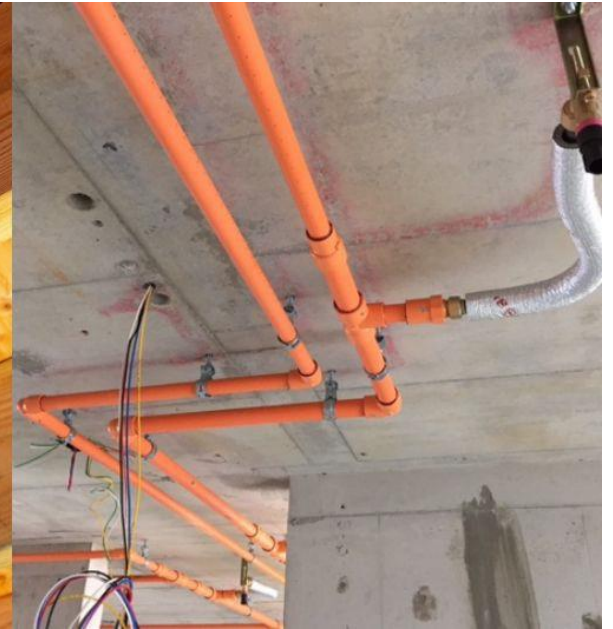
Small Low-Rise Multifamily Sprinklers



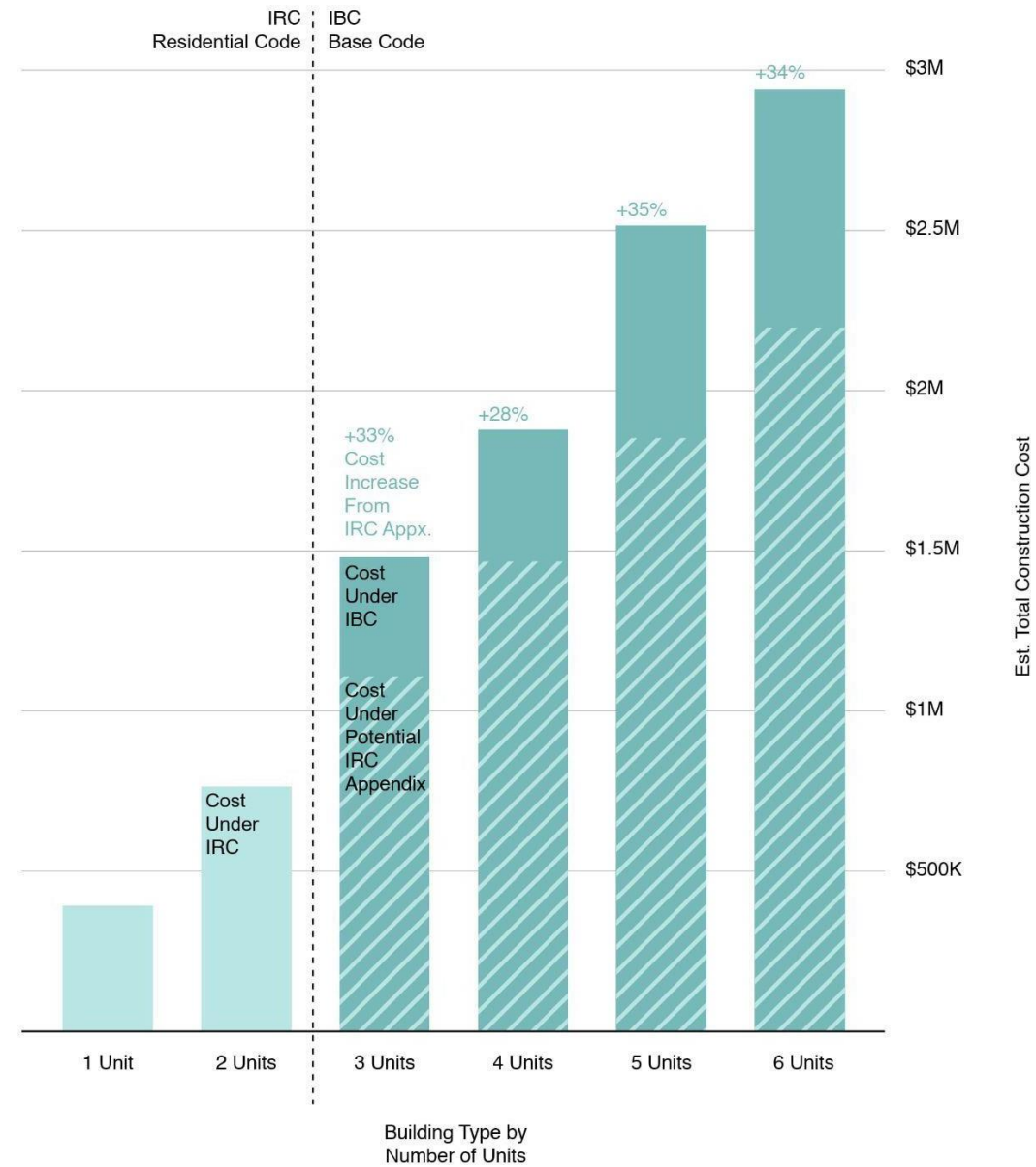
Houses & Duplexes
($< 14,400$ SF)



Multifamily
(any SF)

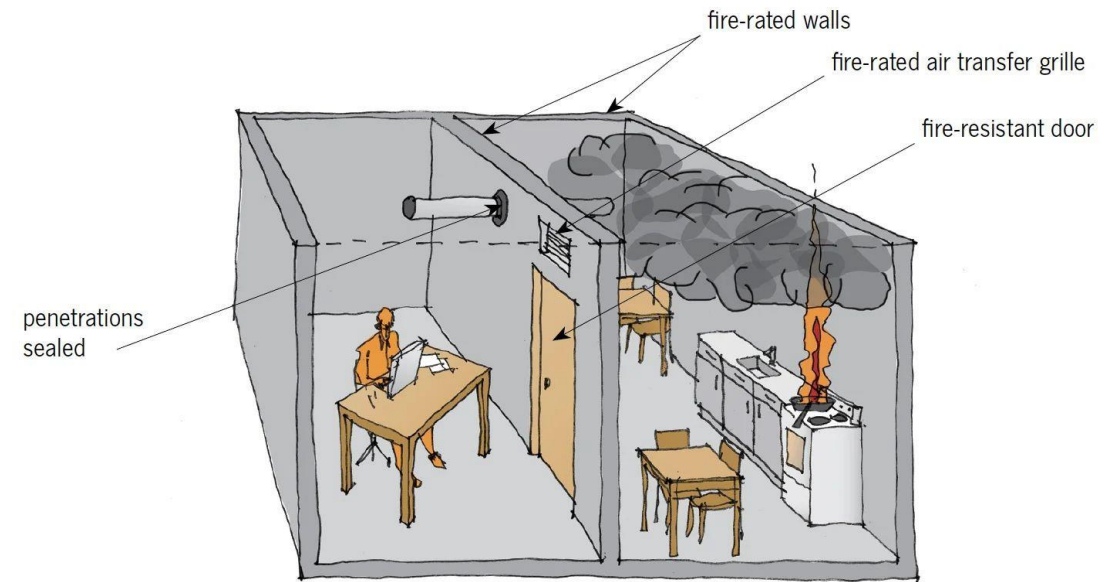


Construction Cost Study





Wood frame fire separation walls



Fire spread controlled through passive compartmentalization

Proposed Changes for SMH Appendix

- **Sprinklers & Alarms**

Sprinklers should not be unilaterally required for SMH. Instead optional pathways of compliance should be available to achieve safety. One path, based on Memphis SMH appendix,⁷⁴ could have a menu of options that looks like this:

SMH size/scale	No Sprinklers 2-hour separations	NFPA 13D Sprinklers 1-hour separations	NFPA 13R Sprinklers ½-hour separations
3–6 dwelling units < 5,000 GSF < 30' in height	Permit Pathway 1	Pathway 2	Pathway 3
7–12 dwelling units < 12,000 GSF < 40' in height	Not Permitted (NP)	Pathway 2	Pathway 3
12–24 dwelling units < 24,000 GSF < 40' in height	NP	NP	Pathway 3

PROCESS & NEXT STEPS

Small Low-Rise Multifamily Overview

1

Build capacity into the state building code board to:

- + **Focus on unlocking housing production** in its code amendment process
- + **Add resources** to study the effects of the code on development
- + **Add board members** who can speak for small multifamily
- + **Create a multifamily-focused subcommittee**

2

Develop a small multifamily code appendix to the state building code:

- + Right size rules on **sprinklers, fire alarms and assemblies**
- + Revise **accessibility codes**
- + Revisit **energy code standards** and thresholds
- + Loosen **engineering requirements** for permit
- + Evaluate impact on **mixed-use** and **adaptive reuse** projects

Next Steps...



HOUSING

Austin City Council moves to make it easier to build fourplexes

by: By Sean Hemmersmeier – Staff Writer, Austin Business Journal
Posted: Sep 3, 2026 / 09:49 AM CDT
Updated: Sep 3, 2026 / 08:54 PM CDT



Updates

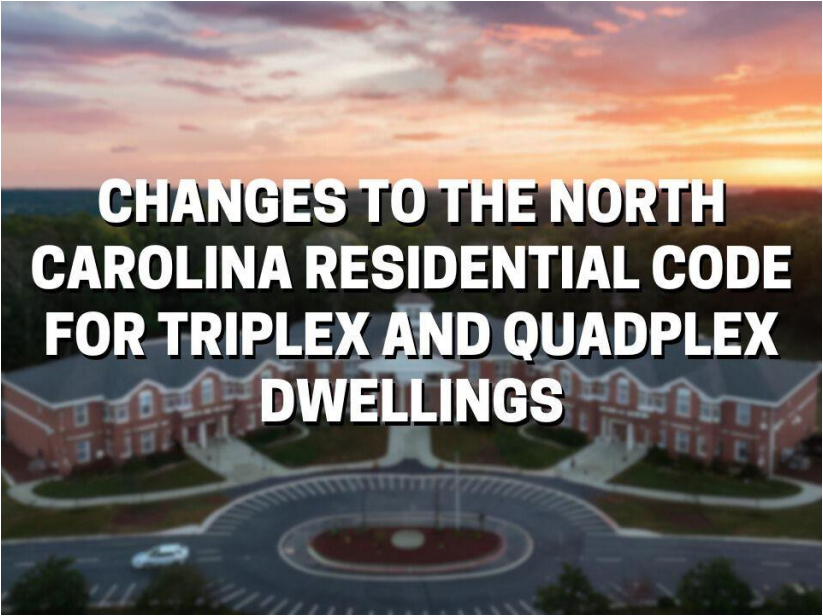
Memphis, TN Amends Local Building Code to Allow up to Six Units Under Residential Building Code (IRC) to Enable Missing Middle Housing

CODES (/PUBLICSQUARE/CATEGORY/CODES)

Your city legalized triplexes. The building code said no

To build more affordable 'missing middle' housing, changing zoning laws is not enough. We need small multifamily buildings to be regulated under the residential code.

MATTHEW PETTY (/node/11042), MATTHEW HOFFMAN (/node/11043) APR. 1, 2026



Next Steps

...

- **Executive Committee on Single-Stair Reform**
Push to be changed as part of next code cycle & hopefully above 4 stories
- **State Board of Building Standards and Regulations (BBRS) Reform**
Push for more funding and more of a mandate to update codes to comport with zoning initiatives
- **Legislature Engagement**
Push to be engaged with code writing and updating.
- **Build Coalition of Multifamily Builders**
Engage this core demographic for best learning lessons from the field.
- **Further Technical Code Research & Studies**
Push for a small multifamily code appendix

