What Can We Learn from Changing Multi-Family Markets?

Image: Greg Folkins

Image: Korb & Associates

WoodWorks™
WOOD PRODUCTS COUNCIL

Chelsea Drenick, SE, Regional Director, WoodWorks – Wood Products Council

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Course Description

The building design and construction community is facing an unprecedented confluence of challenges driving change. Demands for urban development continue to rise, as do land costs, and many cities are adopting sustainability-driven goals for carbon reduction. At the same time, building codes are evolving in significant ways to recognize new materials and technologies that allow mass timber and wood-frame buildings at heights and scales previously unattainable. Meanwhile, an especially catastrophic wildfire season has drawn attention to the value of forest thinning and timber utilization, while the COVID-19 pandemic creates even more pressure to provide cost-effective, efficient solutions.

With an emphasis on the western half of the country, this online symposium will combine market data, project examples, and practical knowledge on the design and construction of modern wood buildings. Among the highlights, mass timber developers will share financial deal information on their projects publicly for the first time; ULI will highlight its perspectives on sustainability and resiliency; and mass timber and innovative light-frame project design teams will discuss the elements that must be carefully planned and implemented for projects to be successful. Join us for a dynamic mix of speakers and panel topics tailored to developers, building designers, contractors and sustainability consultants. Learn from project case studies, and get the knowledge you need to utilize innovative wood systems.

Learning Objectives

1. Review updates to the International Building Code, emphasizing the impacts on wood buildings.

2. Highlight emerging design topics in timber buildings, such as wood-frame fire and structural design, and explain their applications in modern facilities.

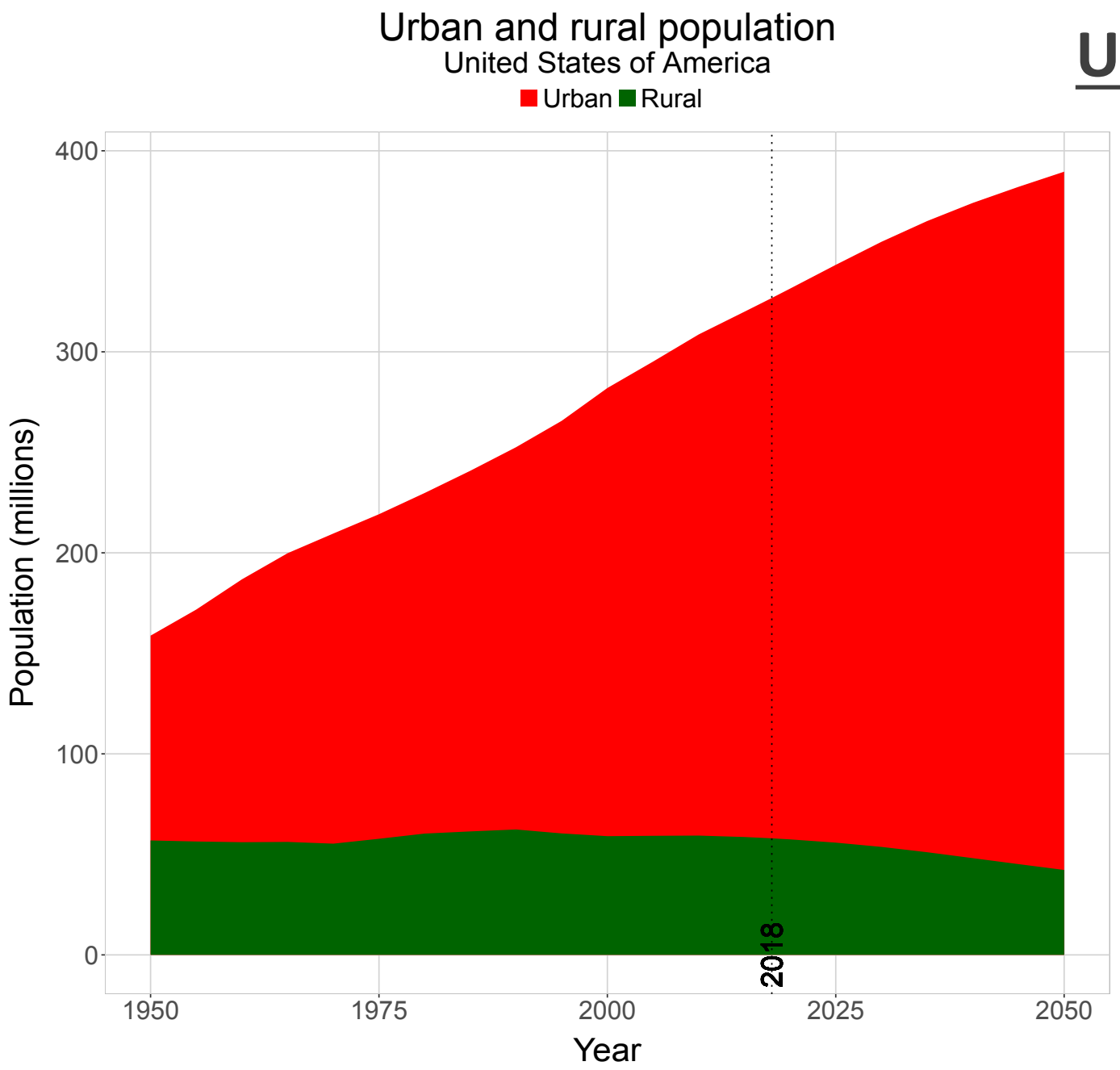
3. Discuss trends in mid-rise wood-frame construction, such as off-site and hybrid systems, and highlight project design and delivery strategies that meet code requirements and project budgets.

4. Explore the building designer-building official interaction on common wood-frame project typologies and discuss effective communication techniques for code-compliance and project approval.

Why are Multi-Family Markets Changing?

Necessity

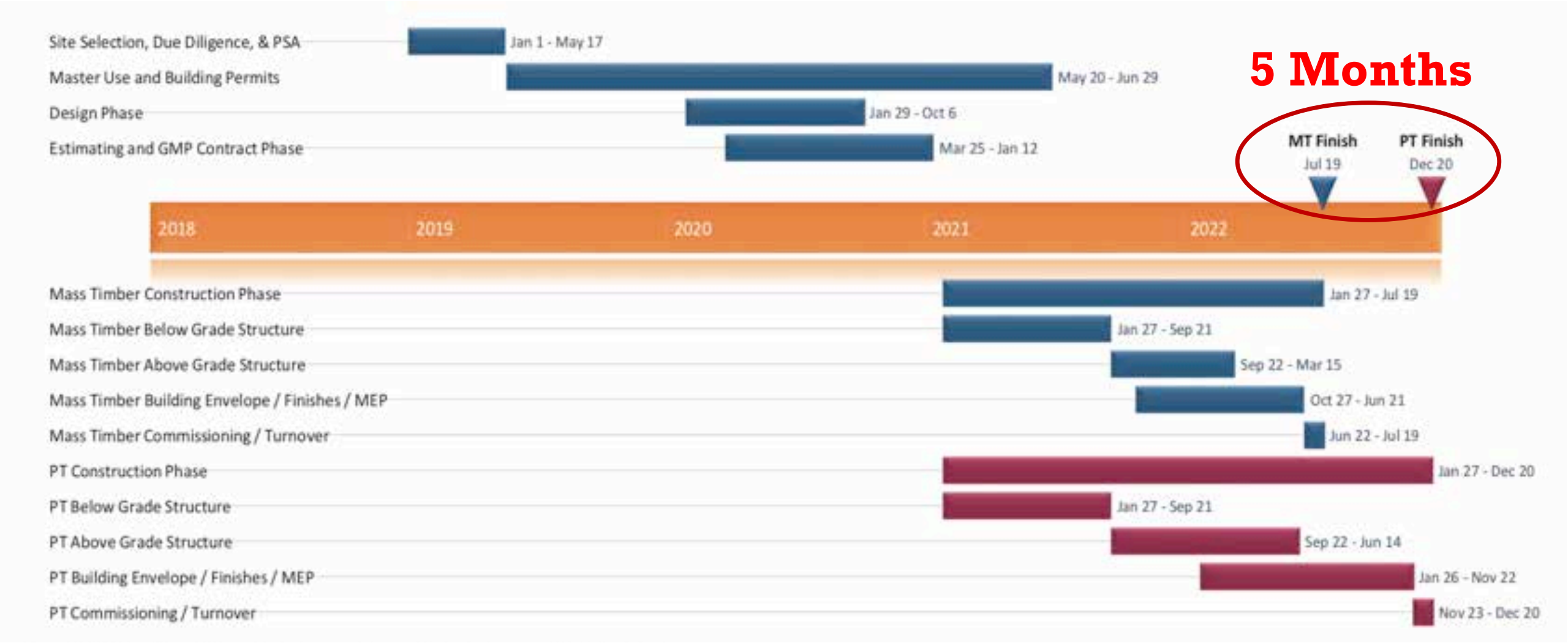
US URBAN POPULATION BOOM



	URBAN	RURAL
2019	271.4 M	57.7 M
2030	301 M	53.7 M
2050	347.3 M	42.2 M

Construction Impacts: Labor Availability

Construction Impacts: Schedule



Seattle Mass Timber Tower Study, Source: DLR Group | Fast + Epp | Swinerton Builders

Carbon Storage

Wood ≈ 50% Carbon (dry weight)

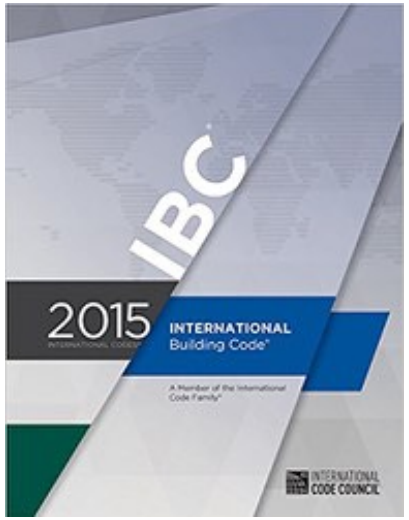
Image: Kaiser + Path

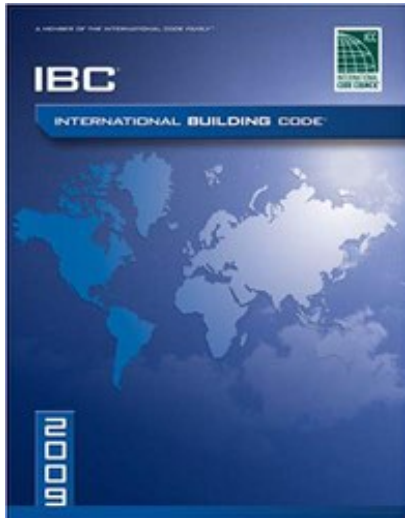
Image: Lever Architecture

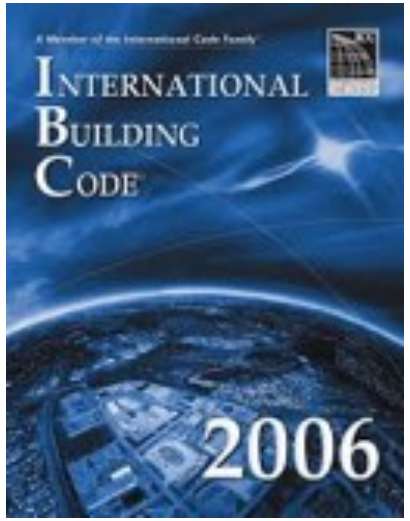
What is Facilitating this Change in Multi-Family Markets?

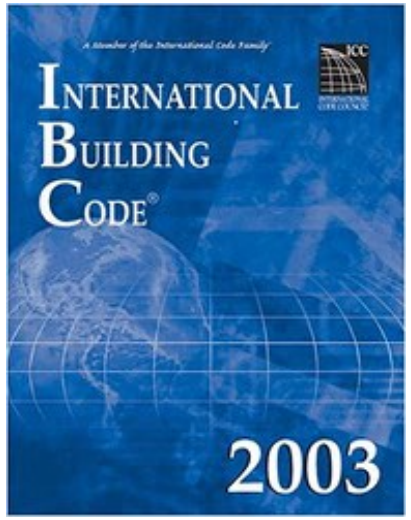
Building Codes, Materials & Technologies are Changing

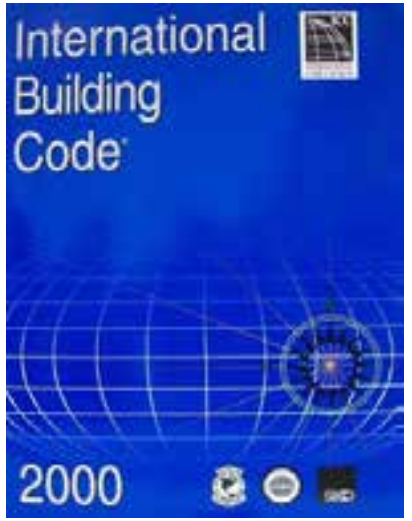
3 YEAR CODE CYCLE





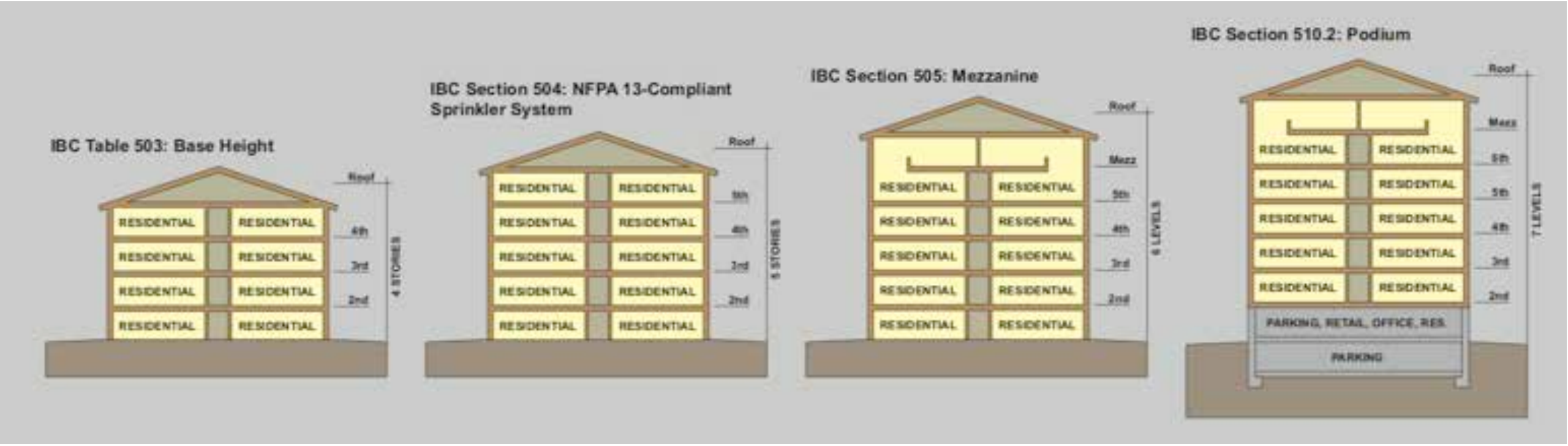






Source: ICC

Evolution of Multi-Family: Mid-Rise in the US



Type V → Type III → + Mezzanines → + Podiums

Source: WoodWorks

6 & 7 story multi-family possibilities

5 stories of Type III
Over 1 story podium

5 stories of type III over 2 story podium

Photo credit: Matt Todd & PB Architects

Off-Site Construction

Image: Ecocor

Modular Construction

The Graphic
Cambridge, MA

Credit: ICON Architecture

Evolution of Multi-Family: High-Rise Globally

Photos: Michael Elkan | Naturally Wood | UBC

BROCK COMMONS, BRITISH COLUMBIA

18 STORIES | 174 FT

Photos: Bygg Mesteren | Voll Arkitekter

MJOSTARNET, NORWAY

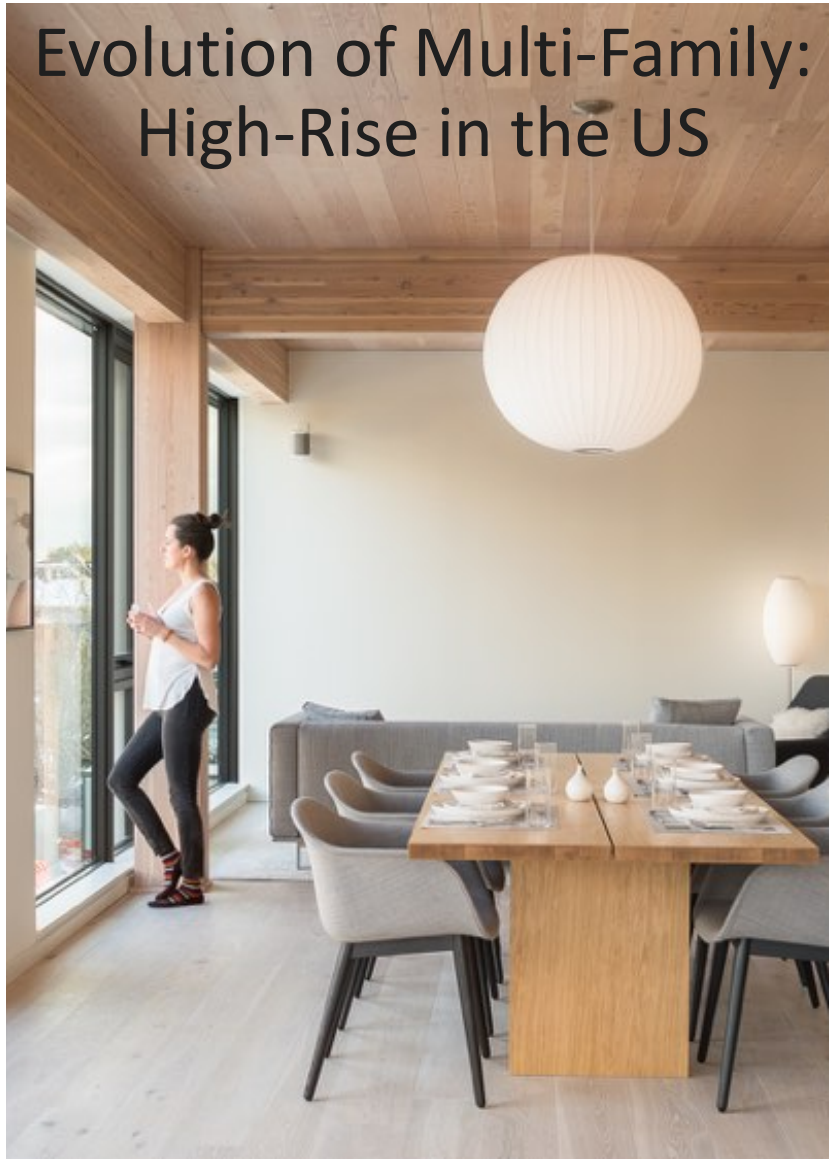
18 STORIES | 280 FT

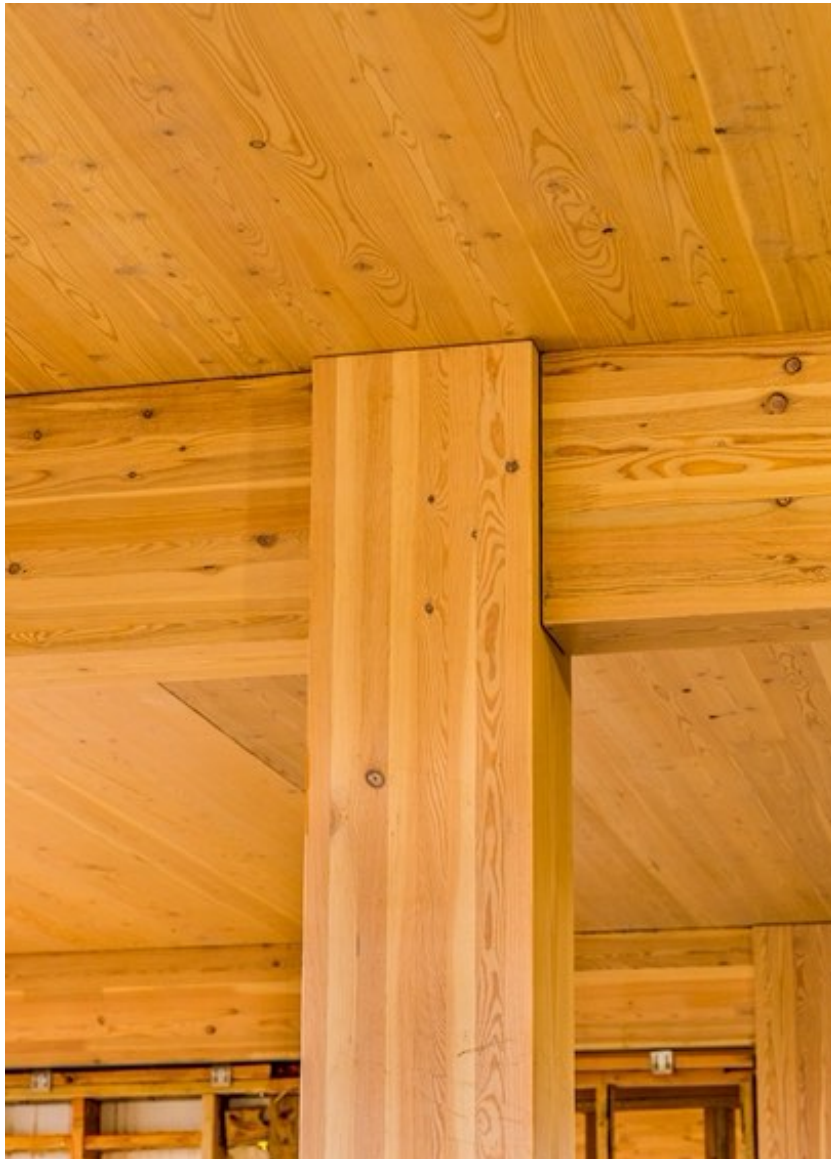
Photos: *RLP Rüdiger Lainer + Partner, RWTplus*

HOHO, AUSTRIA

24 STORIES | 275 FT

Evolution of Multi-Family: High-Rise in the US





Photos: Baumberger Studio/PATH Architecture/Marcus Kauffman | Architect: PATH Architecture

CARBON12, PORTLAND, OR

8 STORIES | 85 FT

Evolution of Multi-Family: High-Rise in the US

Credit: Susan Jones, atelierjones

INTRO, CLEVELAND

9 Stories | 115 ft
8 Timber Over 1 Podium

512,000 SF
297 Apartments, Mixed-Use

Photo: Harbor Bay Real Estate Advisors, Image Fiction | Architect: Hartshorne Plunkard Architecture

ASCENT, MILWAUKEE

Photo: Korb & Associates Architects |
Architect: Korb & Associates Architects

ASCENT, MILWAUKEE

25 STORIES

19 TIMBER OVER 6 PODIUM, 284 FT

493,000 SF

259 APARTMENTS, MIXED-USE

Photo: Korb & Associates Architects | Architect: Korb & Associates Architects

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Keep your **regional staff member** in mind for questions and support:

Mark Bartlett, PE
TX, AR, KS, OK
(214) 679-1874
mark.bartlett@woodworks.org

Chelsea Drenick, SE
CA-North, NV, UT
(303) 588-1300
chelsea.drenick@woodworks.org

David Hanley
CO, MT, NE, ND, SD, WY
303-570-8293
david.hanley@woodworks.org

Janelle Leafblad, PE
WA, OR, AK, HI, ID
(415) 310-8549
janelle.leafblad@woodworks.org

Mike Romanowski, SE
CA-South, AZ, NM
(619) 206-6632
mike.romanowski@woodworks.org

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