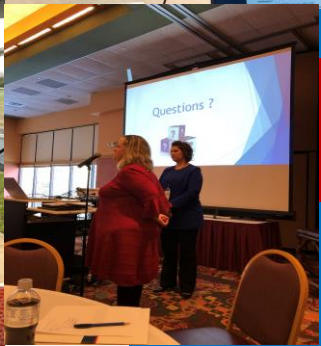




Mass Timber Task Force

Jennifer Garrett, Director of Public Affairs
Wisconsin Department of Safety & Professional Services

2021 Council on Forestry Meeting
November 17, 2021





Department of Safety & Professional Services

Mission

To promote economic growth and stability while protecting the citizens of Wisconsin.

Vision

To create a workplace which values staff and their expertise enabling the department to complete processes efficiently and provide excellent service to the citizens of Wisconsin.

Agency Make Up

Policy Development

- 250 Employees

Management Services

- Five Offices:

- Green Bay

- Hayward

- Madison

- Onalaska

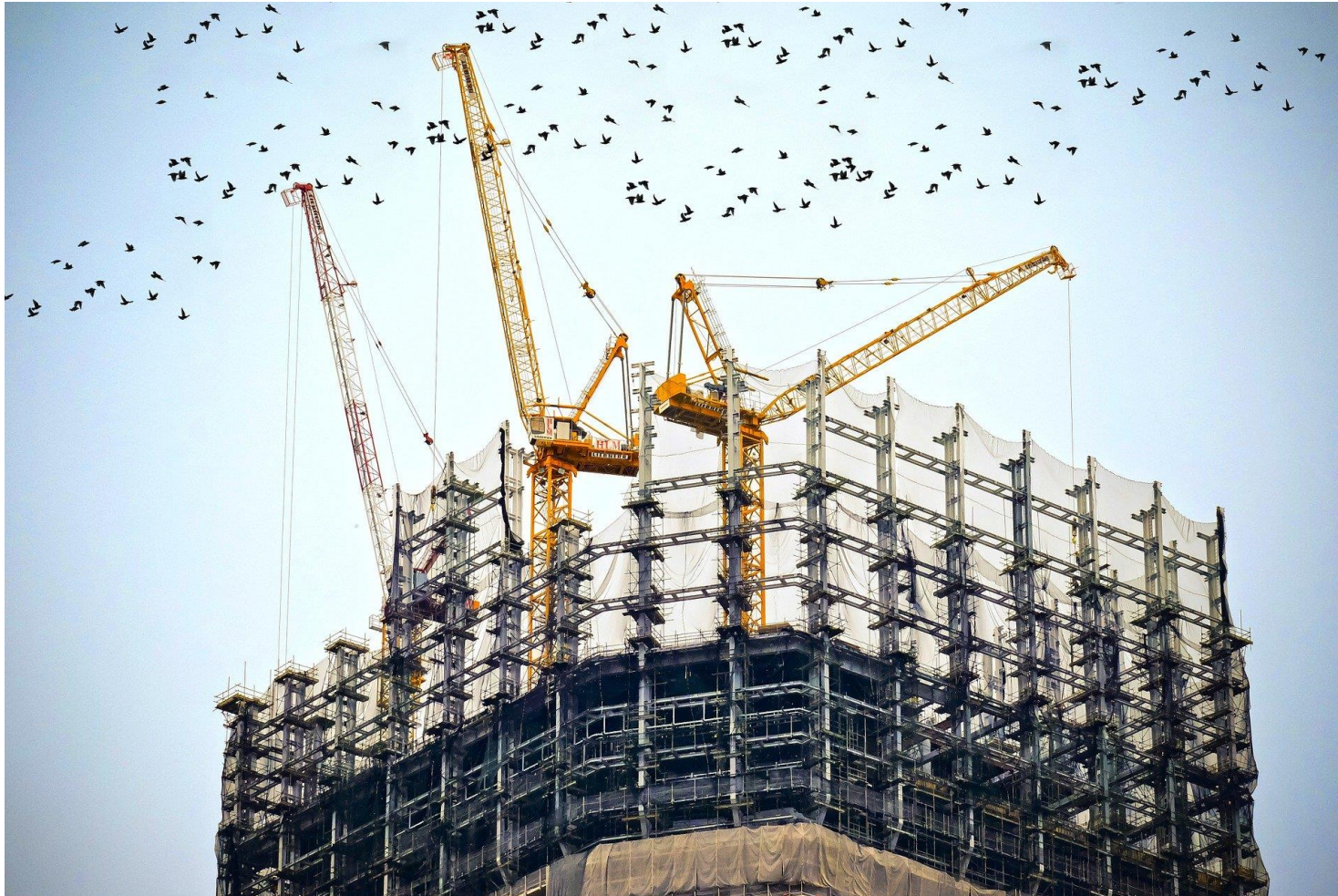
- Waukesha

Credential Processing

Legal Services

Industry Services

DSPS Helps Build Wisconsin



DSPS Regulates the Construction Industry

Our construction oversight straddles divisions and is one of our largest areas of work

- **Plan Review**: Directly and through oversight of delegated agents
- **Building Inspection**: During construction or major renovation
- **Commercial Building Code Council**:
 - We administer the CBCC, which oversees code updates
 - Members include DSPS staff, inspectors, engineers, architects, fire service, and other industry experts
 - In the middle of comprehensive code update, a 12 to 18 month process that began in December 2020
- **Industry Support**: We offer educational, professional development, and grant programs for the construction industry

Administration Priorities: Sustainability



Administration Priorities: Sustainability

- Executive Order 52:
Established the
Governor's Task Force on
Climate Change in
October 2019
- Task Force delivered
report in October 2020



Direct DSPS Responsibility

12

Update state commercial and residential building energy codes

STRATEGY Update state commercial and residential building energy codes; include EV charging.

- Executive/
Agency Action
- Legislation

POLICY PATHWAYS

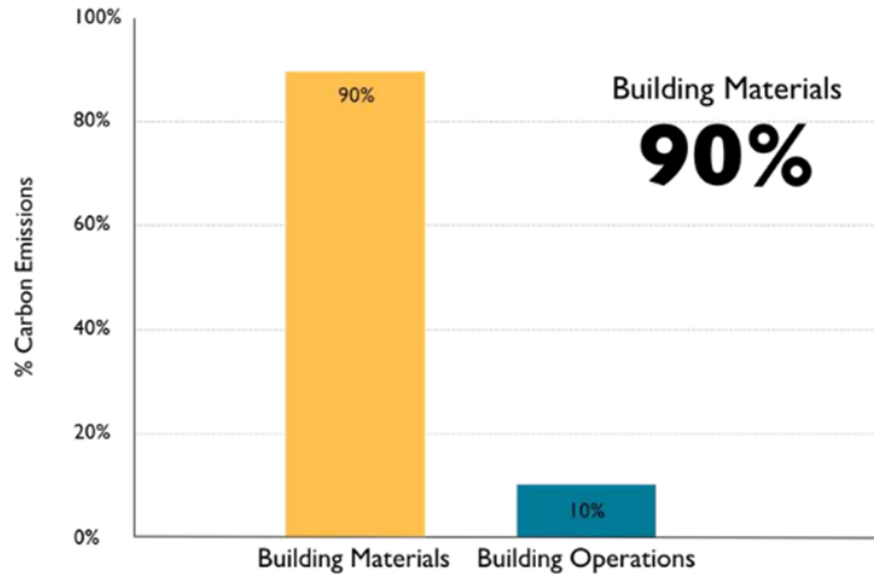
- The Department of Safety and Professional Services proposes updates to state residential and commercial codes. Wisconsin should adopt the most current energy code without amendment (unless specific provisions are not feasible or cost-effective in Wisconsin) and should establish a process for more regularly updating the state code to align with the model code.
- Legislation that would provide for 1) regularly updating the state energy codes based on model codes, including for EV readiness, unless specific provisions in the model codes are not feasible or cost-effective in Wisconsin, 2) updating the state energy codes beyond generally accepted model codes if it is feasible and cost-effective to do so in Wisconsin, and 3) allowing local communities to implement their own ordinances that are more stringent than the state energy codes so long as they clearly provide how to comply with the state and local codes.

What else can DSPS do to advance sustainability?



Building Codes = Opportunity

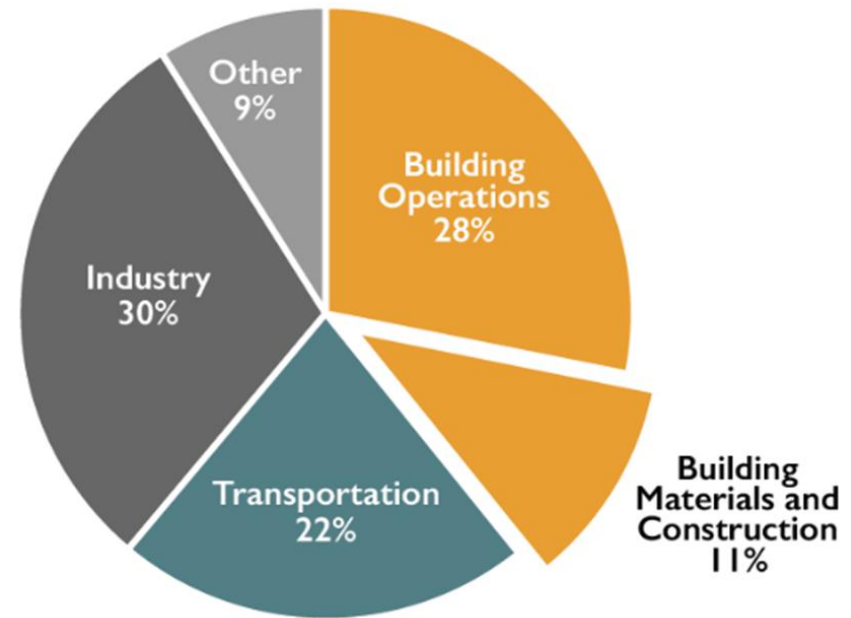
Building Sector CO₂ Emissions
New Construction: 2015-2050



Source: © 2018 2030, Inc. / Architecture 2030. All Rights Reserved.
Data Source: EIA (2011), Richard Stein, CBECS (2003), McKinsey Global Institute



Global CO₂ Emissions by Sector



Source: © 2018 2030, Inc. / Architecture 2030. All Rights Reserved. Data Sources:
UN Environment Global Status Report 2017; EIA International Energy Outlook 2017

Building Codes = Timing



November 2019



- Met with sustainability and code experts at UW-Milwaukee School of Architecture and Urban Planning -- Lieutenant Governor Barnes attended
 - Discussed potential code updates, sustainability history in Wisconsin codes
 - Professor Jim Wasley provided a tour of the building/grounds. He had pieces of CLT in the courtyard and talked about the carbon-capture features.
 - Learned about USDA Forest Products Lab mass timber research

February 2020

- Met with Marco LoRicco and his team at USDA Forest Products Lab on UW-Madison campus
 - Learned that Wisconsin forests have potential—currently underharvested
 - A multi-disciplinary team at FPL is conducting research on the safety (fire, lateral force) of mass timber products and is collaborating with academics and industry in Wisconsin.



December 2020

- Commercial Building Code Council convenes
- Currently Wisconsin uses a heavily modified (Wisconsinisms) version of the 2015 International Building Code model code
- Use of mass timber products currently quite limited
- Secretary Crim charged council to look closely at mass timber provisions and consider adopting most updated mass timber code provisions



18 STORIES
 BUILDING HEIGHT 270'
 ALLOWABLE BUILDING AREA 972,000 SF
 AVERAGE AREA PER STORY 54,000SF

TYPE IV-A



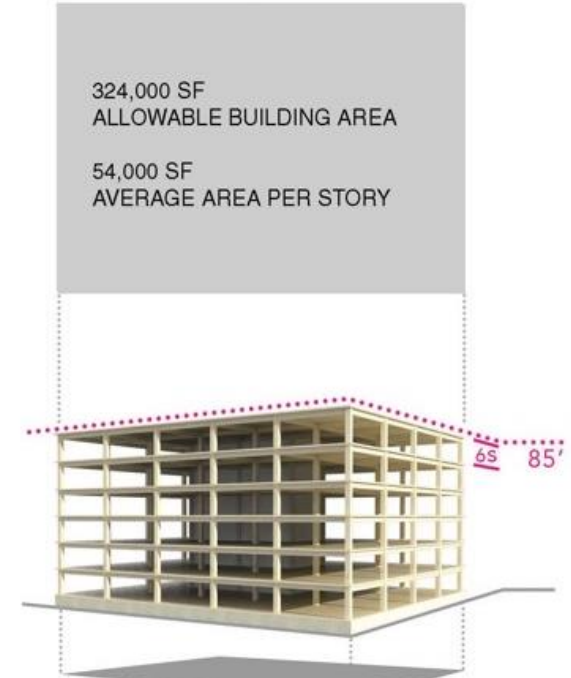
12 STORIES
 BUILDING HEIGHT 180 FT
 ALLOWABLE BUILDING AREA 648,000 SF
 AVERAGE AREA PER STORY 54,000SF

TYPE IV-B



9 STORIES
 BUILDING HEIGHT 85'
 ALLOWABLE BUILDING AREA 405,000 SF
 AVERAGE AREA PER STORY 45,000 SF

TYPE IV-C



324,000 SF
 ALLOWABLE BUILDING AREA

54,000 SF
 AVERAGE AREA PER STORY

6 STORIES MAXIMUM
 85'-0" MAXIMUM BUILDING HEIGHT
 324,00 SF MAXIMUM AREA

TYPE IV- HT

IBC 2015

IBC 2021

BUSINESS OCCUPANCY [GROUP B]

atelierjones, llc
 architecture | ecodeign | planning

*BUILDING FLOOR-TO-FLOOR HEIGHTS ARE SHOWN AT 12'-0" FOR ALL EXAMPLES FOR CLARITY IN COMPARISON BETWEEN 2015 TO 2021 IBC CODES.

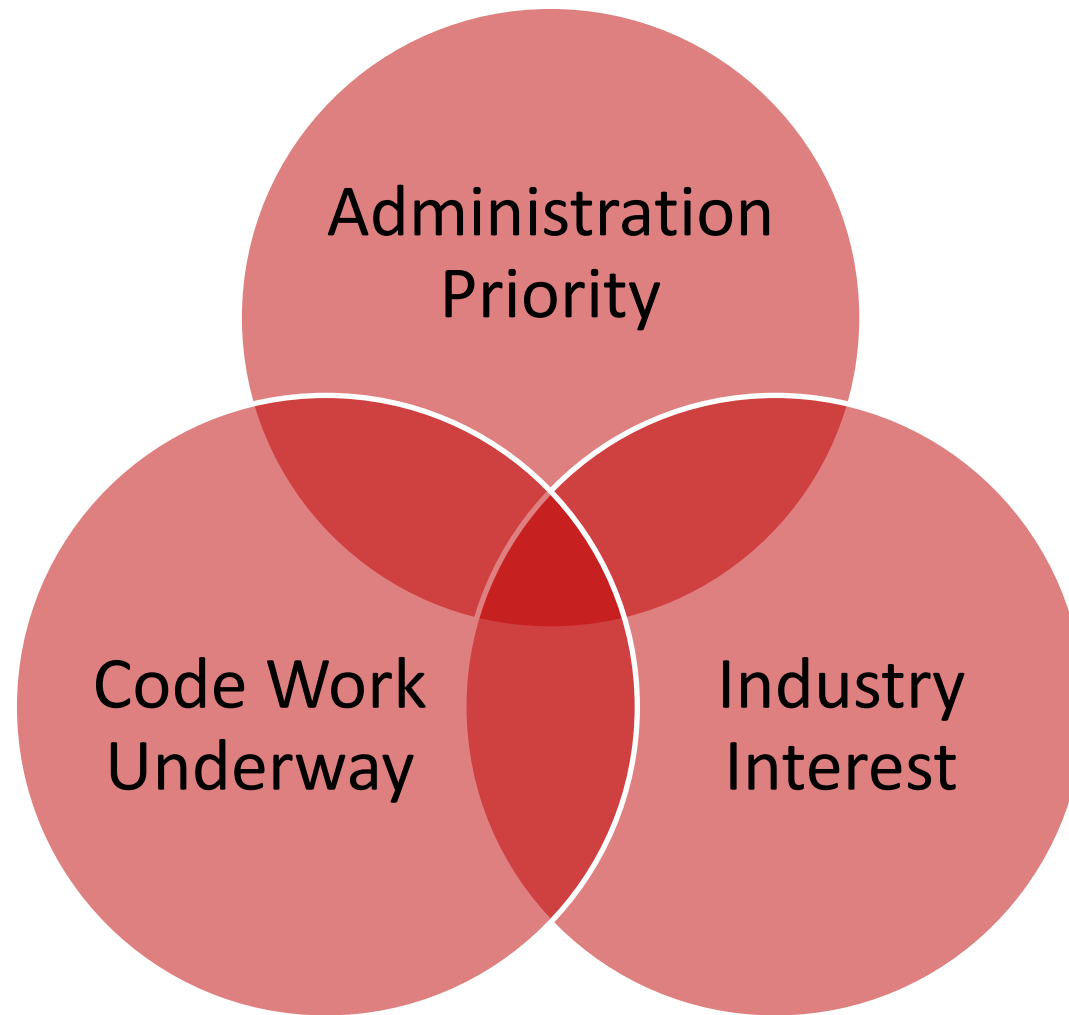
Allowable Mass Timber increases with updated code

IBC 2021 allows for much taller mass timber construction than does Wisconsin's current code.



Meanwhile in Milwaukee...

New Land Enterprises, with Jason Korb Architects and Thornton Tomasetti Engineers, are in the middle of getting extensive variances to build what will be the tallest mass timber building in the world.



Rare alignment of interest (industry and administration) and effort (task force, code, construction)

July 2021

- Co-sponsored a mass timber round table discussion in Milwaukee with Korb + Associates
- Learned that IBC 2021 would not be enough to enable Ascent to be replicated
- Discussed developing a set of performance-based guidelines to facilitate future innovative mass timber use



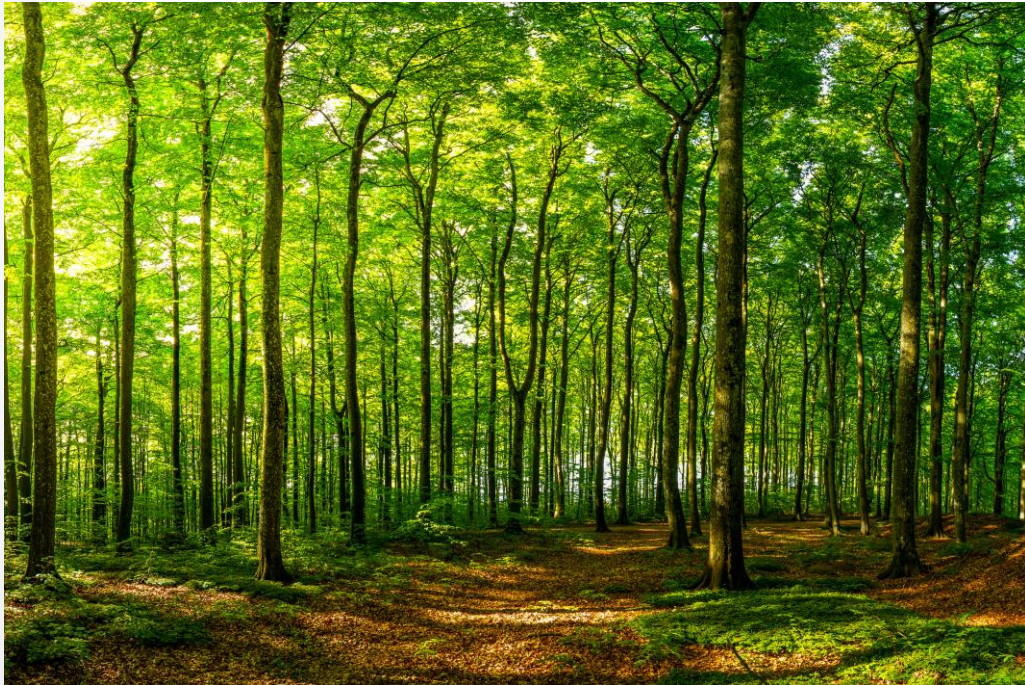
September 2021

- Launched Mass Timber Task Force
- Tasked with developing a set of performance-based guidelines to facilitate innovative mass timber projects
- Capture the extensive science behind Ascent approval
- Put Wisconsin on the map with uniquely progressive codes and guidelines

Task Force Members

- Richard Paur, chair
- Justin Gavin, DSPS
- Laura Hasburgh, FPL engineer
- Michael Mazmanian, Milwaukee Department of Neighborhood Services
- John Peronto, Thornton Tomasetti engineer
- Erich Roden, Milwaukee Fire Department
- Alexander Timmer, UW-Milwaukee

Message to Forest Products Industry



Demonstrate administration support of mass timber construction by adopting safe but permissive building codes that allow for expanded use of mass timber in construction throughout Wisconsin.

June 2021

- Ascent grand opening
- Mass Timber Task Force will issue guidelines for approval and adoption through rule-making process





Thank You

