Construction Codes Advisory Council



DEPARTMENT OF LABOR AND INDUSTRY Construction Codes Advisory Council (CCAC)

Nov. 21, 2024

DEPARTMENT OF LABOR AND INDUSTRY

Deputy Commissioner Kate Perushek Department update

DEPARTMENT OF LABOR AND INDUSTRY

Director Todd Green Construction Codes and Licensing Division update

Legislative request for fee adjustments

Electrical permit fees

- Last adjusted 2007
- \$25 application fee
- Inspection fee increase \$35 to \$55
- Circuit fee increase \$6 to \$12

Elevator inspections fees

- Last adjusted 2007
- Annual operating permit increase from \$100 to \$145
- New \$10 virtual inspection

Plumbing plan review and permit fees

- Review fees last adjusted in 2007
- Permit fees last adjusted 2013
- Shift to valuation-based fees
- Fees adjusted to cover costs approximately double
- Only affecting residential with five or more dwellings in the building

Legislative request for fee adjustments

Manufactured structures

- Last adjusted 2007
- Installation seals increase \$80 to \$130
- New shipment fee \$75 per floor
- New resale decal \$100
- New salesperson license \$80/2 years
- IIBC/prefab plan review and inspections fees moving to valuation-based fees to match the CCLD Plan Review and Permitting fee structure for in-plant valuation of work.

Boiler inspection fees

- Last adjusted 2007
- Boiler registration fee increase \$10 to \$25

Assistant Director – Greg Metz Construction Codes and Licensing Division update



BOT Grants – Training the next generation

Building Official Training Grants program suspended for 2025

- Pending legislative approval of fee increases
- BOT Program may be re-initiated in 2026 if fee increases are approved







Highlights and updates from the 2024 Technical Advisory Groups | Other rulemaking

- 1300/1301/1302/1303 Administration, Certification, Special Provisions Greg Metz
- 1305 Commercial Buildings Britt McAdamis
- 1311 Existing Buildings Wendy Rannenberg
- 1341 Accessibility Karen Gridley
- 1346 Mechanical/Fuel Gas Chris Rosival
- 1303/1305/1309/1311 Structural review and coordination Dan Kelsey
 Other rulemaking:
- Adult-sized changing facilities
- Window cleaning safety

1300/1301/1302/1303 Administration, Certification, Special Provisions – Greg Metz



1300/1301/1302/1303 Administration, Certifications, Special Provisions – Greg Metz

- Single-family and two-family dwellings redefined to be detached.
- Townhouses with three or more dwelling units may be constructed per MR 1305.
- Recreational piers constructed over lakes, rivers or wetlands are exempt from building code unless part of a means of egress.



- Adding minimum of three hours of continuing education <u>in plumbing</u> for building officials.
- Adding change of occupancy to State Building Code Application in 1300.0030 10

1303 additions to radon provisions

- Clarify that 10-foot separation from radon exhaust to windows is required when the window is less than 2 feet below the exhaust point.
- Change thickness of radon protection membrane when not covered by concrete from 6 mil to 12 mil.
- Require 10" diameter x 12" high clear space for a future pressure gauge installation
- Create an option for 90-degree fittings below the soil-gas membrane instead of just a T-fitting.
- Add a requirement for radon labels on sumps.





Commercial Building Code TAG update

Britt McAdamis | Co-chair, Building Plan Review lead worker Ryan Rehn | Co-chair, Building Plan Review supervisor <u>britt.mcadamis@state.mn.us</u> | 651-284-5276

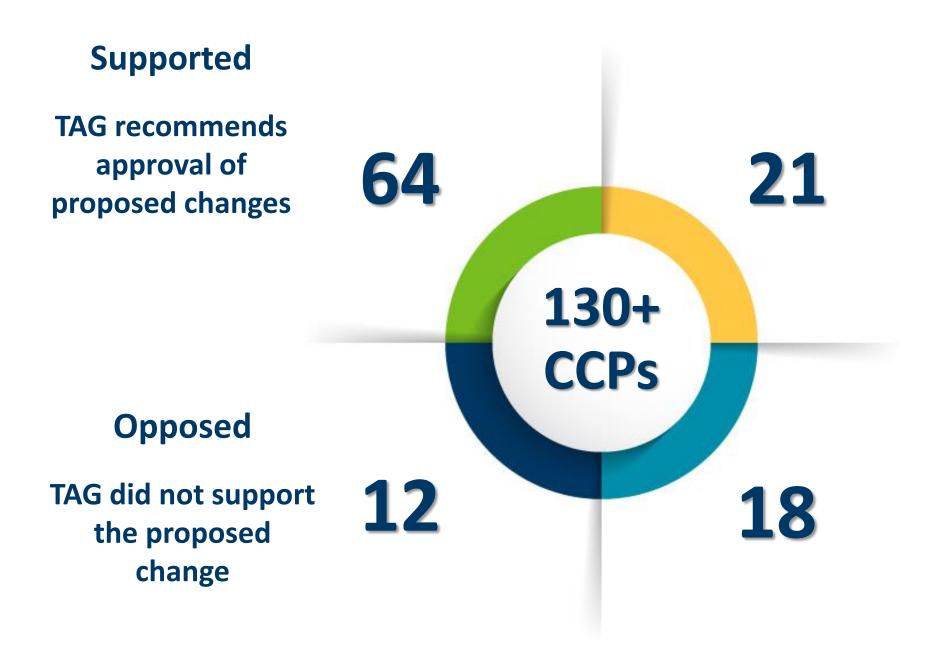
April – November

- 17 meetings
- 51 hours
- 883 reviewed items
- 132 code change proposals

Commercial Building Code TAG

13 TAG members

- DLI staff
- State Fire Marshal
- Building officials
- Plan reviewers
- Design professionals
- Building code specialists



Tabled

TAG provided feedback and comments to proponent for resubmittal

Withdrawn

Based on TAG discussion, proposal was withdrawn by proponent

- Multiple code modifications and amendments to include assisted living facilities and assisted living facilities with dementia care which are licensed by Minnesota Department of Health and defined as state-licensed facilities under 326B.103.
- Modify numerous code sections to include requirements for electric vehicle charging stations and systems. Code sections include, definitions, motor vehicle occupancies, electrical provisions and accessibility requirements as recommended by the Electrical Vehicle Charging Facilities TAG.



- Bring the construction requirements for ship stairs back to the building code. Coordinated with the Mechanical Code TAG to match construction requirements for uniformity across codes.
- Require the exit discharge to be a maintainable surface able to be cleared free of ice and snow.
- Require frost protection be provided at exterior landings of exterior doors used for egress purposes.

Single Exit Proposal for Group R-2 up to 4 stories.

- Maximum 4,000 square feet per story.
- Limit to 4 or fewer dwellings per story.
- NFPA 13 sprinkler system.
- Increased width for exit stair to 48".
- 1-hour fire-resistance rated required in exit access.
- Emergency escape and rescue openings required.
- Similar proposal received support at the ICC Committee Actions Hearings, pending final outcome, would be approved for the 2027 IBC.

Multi-user toilet rooms not separated by sex:

- Compartment walls extend from floor to ceiling.
- Doors not undercut by more than 1/2".
- Locking device distinguishable as locked from both sides of the door.
- Lavatories required within 20% of compartments, but not less than one.

Group E specific provisions:

- Observable from primary circulation areas for visual supervision.
- Doors to swing out and held open when not in use.
- No less than two entry points into each toilet facility.
- Lavatories required within 40% of compartments, but not less than two.

Significant changes to the 2024 IBC



Adds Type IV-A, IV-B and IB-C construction which allows for taller mass timber buildings with more stories above grade plane and greater allowable areas.



Includes provisions for the repurposing of shipping containers and buildings and structures.

Elevators and related devices TAG recommendations

Jim Weaver | Co-chair, chief elevator inspector Mark Sneep | Co-chair, elevator inspections supervisor



Elevator recommended model code editions

- ASME A17.1/CSA B44-2022 Safety Code for Elevators and Escalators
- ASME A17.3-2023 Safety Code for Existing Elevators and Escalators
- ASME A17.5-2019 Elevator and Escalator Electrical Equipment
- ASME A17.7/CSA B44.7-2007 Performance-Based Safety Codes for Elevators and Escalators
- ASME A18.1-2023 Safety Standard for Platform Lifts and Stairway Chairlifts
- ASME A90.1-2023 Safety Standard for Belt Manlifts
- ASME B20.1-2021 Safety Standard for Conveyors and Related Equipment

Significant changes to the ASME standards – new installations

Pit ladders

A means provided to detect elevator personnel using a pit ladder to prevent the elevator from moving when the pit is accessed.

Door detection

Passenger elevators be equipped with a door detection device that detects objects approaching the door opening.

Significant changes to the ASME standards – new installations

RIO

Adding some restrictions for the use of remote interaction operation that allows off-site systems to interact with the automatic operation features of elevators that are connected to the internet.

Cyber security

Adding security requirements for elevators connected to the internet. Significant changes to the ASME Standards

Existing installations

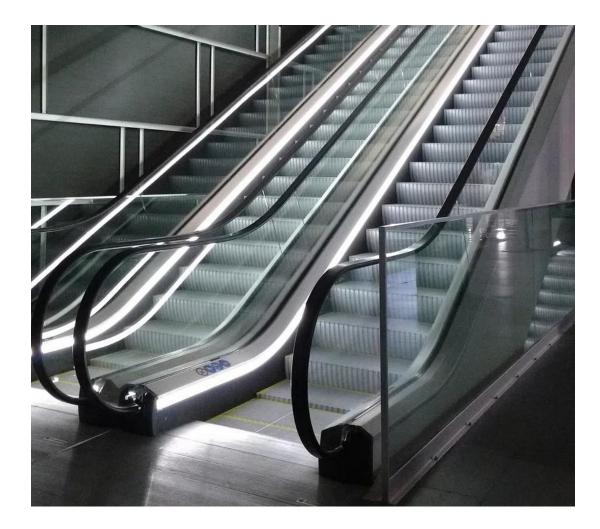
Unintended movement – Existing electric elevators will be required to be provided with protection from unintended movement and ascending car overspeed. Required on new units since 2007

DLM – Existing hydraulic elevators will be required to have door lock monitoring. This prevents the operation of an elevator with faulty door contact circuits. Required on electric elevators since 2020.

Significant changes to the ASME Standards – existing installations

Escalator comb plates

Existing escalators and moving walks will be required to have a device to stop the unit when a comb plate moves vertically. Required on new units since 1999.



New installations

- **Two-way communication** Modify section 2.27.1.1 of the ASME A17.1/CSA B44-2022. This section requires elevators be provided with two-way emergency communication systems that display messages and video of the inside of the elevator car.
- Compliance may be difficult in areas that lack broadband or cellular service.

New installations

- **Pit guarding** Modify sections 2.2.3.1 and 2.2.3.2 of the ASME A17.1/CSA B44-2022 to require a guard between elevator pits to prevent injury to elevator personnel that may occur due to the movement of an adjacent elevator.
- This requirement is expected to be in ASME A17.1-2025.

Existing installations

- Standard railings Modify section 3.4.1(c) of the ASME A17.3 to require existing installations be provided with standard railings on top of the car to eliminate fall hazards.
- Standard railings have been required on new installations since 2007.

Existing installations

- Escalator removal Modify chapter 1307.0090, subpart 8, to require drive chains, steps, and treadways be removed by licensed elevator personnel when escalators or moving walks are being removed.
- The stored energy unique to this equipment poses a hazard to untrained personnel.

New installations

- Modify ASME A17.1/CSA B44-2022 to delete section 2.8.7. The proposal is intended to not permit the installation of emergency responder radio coverage equipment in elevator hoistways and cars due to the possible hazards to elevator personnel.
- The TAG was split 50/50 on the issue.
- Staff recommends rejecting the proposal.



Conservation Code for Existing Buildings

Mike Bunnell | Construction Code Rep II – Plan Review Wendy Rannenberg | Construction Code Rep I – Plan Review



Meetings and members

April – July

- 7 meetings
- 21 hours
- 291 reviewed items
- 17 code change proposals



TAG members (8)

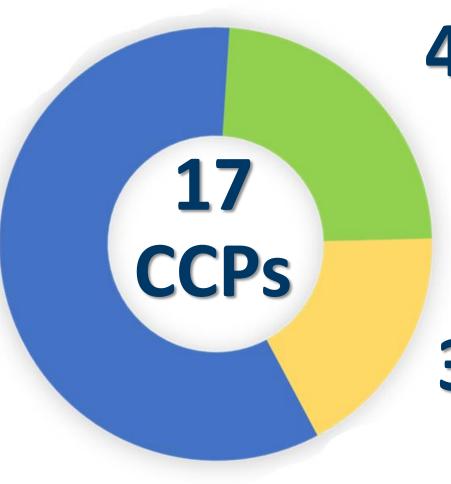
- DLI staff (2)
- Municipal Fire Marshal (1)
- Building officials (2)
- Plan reviewers (2)
- Design professional (1)

IEBC TAG chairs anticipate one more meeting in December to complete review of three additional CCPs and unfinished items.

Code change proposals

Supported 10

TAG recommends approval of proposed code changes



Withdrawn

Based on TAG discussion and research, proposal was withdrawn by proponent

Undetermined

TAG will review additional CCPs at a future meeting

Recommended code change proposals

Additions, new work in alterations, reconstruction, substantial energy improvements, and work areas in Level 3 Alterations to comply with Minnesota Residential Energy Code or Minnesota Commercial Energy Code.



Recommended code change proposals

Electric vehicle charging infrastructure required

- Where more than 10 parking spaces are added and the work area is undergoing a Level 2 alteration or an addition that exceeds 50% of the building area, or
- When an existing building is undergoing an alteration or change of occupancy that adds dwellings units.



Recommended code change proposals

Assign hazard categories for converting IRC structures

Add buildings constructed in accordance with the IRC to the list of occupancy classifications and assign a hazard category for those buildings for the purposes of converting IRC structures to commercial occupancies.





Existing Building Code TAG

Recommended code change proposals

Existing single exit buildings

- Permit a single exit from spaces in the basement, first, second, or third story and occupiable roofs over the first or second story that are sprinklered throughout and comply with certain other conditions.
- The proposal deletes the third condition that would permit a single exit in a Group R-2 occupancies with any number of stories with not more than four units per floor.



Existing Building Code TAG

- Significant IEBC model code changes
- **Exterior wall coverings**

New requirement for additions and replacements of exterior wall coverings and exterior wall envelopes to comply with the requirements for new construction in the IBC if:

• The added or replaced exterior wall covering or exterior wall envelope involves two or more continuous stories and comprises more than 15 percent of the total wall area on any side of the building.



Accessibility Code TAG (Chapter 1341) recommendations

Karen Gridley | Co-chair, Building Plan Review – Accessibility Specialist Lee Gladitsch | Co-chair, Building Plan Review – Construction Code Representative II

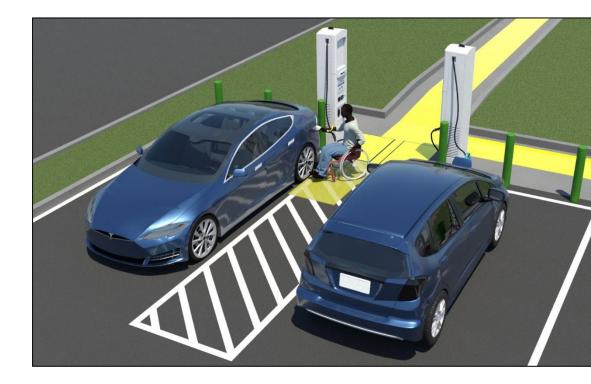
7 meetings May – August 21 hours 8 TAG members	Accessibility Code TAG	27 code change proposals reviewed 217 items reviewed
Supported 25 code change proposals 8 of these were supported as modified during meeting	Opposed 1 code change proposal	1 code change proposal withdrawn based on TAG action taken on a similar proposal

Accessibility Code TAG recommended changes

Accessible electric vehicle charging spaces

Moved to the Accessibility Code TAG from the EV Charging Facilities TAG and includes:

- Minimum number
- Accessible route
- Space size
- Access aisle
- Signage
- Clearances around charging equipment



Accessibility Code TAG recommended changes

Definitions of existing building and existing facility

Clarifies the definitions to mean "existing building" and "existing facility" are buildings or facilities that were erected, or for which a building permit was issued, prior to the effective date of the 2026 Minnesota State Building Code.

Recommended code changes

Assisted living facilities

Added I-2 assisted living with dementia care occupancy group.

Group I-2 nursing homes and I-2 assisted living

facilities with dementia care

10% but not less than one of each type of dwelling unit or sleeping unit to be an Accessible unit.

90% of units must comply with Minnesota Department of Health licensing rule part 4658.4510.

Percentages preferred by MDH.

Significant accessibility changes to the 2024 IBC

New assisted toileting and bathing criteria

- New option for assisted toilet and bathing features in Group I-1 care facility resident rooms in substitute for up to 50% of accessible toilet and bathing facilities.
- Allows space and features for caregiver to assist
 - Increased clearance around water closet.
 - Swing-up grab bars on both sides of water closet.
 - Permanent shower seats not permitted.
 - Shower controls located to facilitate caregiver access.

Significant accessibility changes to the 2024 IBC

Power operated doors

Requires power operated doors at public entrances that are required to be accessible in:

- Group A1, A2, A3 and A4 occupancies with occupant loads that are more than 300.
- Group B, M, and R-1 occupancies with occupant loads that are more than 500.

Previously, power door operators were an option for accessible entrance doors.



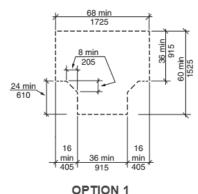
Significant accessibility changes to the ICC A117.1-2017 Turning circle and clear floor space size increased

- For new buildings
- The diameter of the circular turning space increased from 60 inches to 67 inches
- Clear floor space length increased from 48 inches to 52 inches

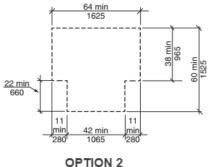
Significant accessibility changes to the ICC A117.1-2017

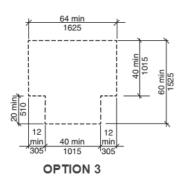
T-shaped turning space size increased

- For new buildings
- Three size options include:
 - 60" x 68" with arms and base 36" in width and 8" long chamfered inner corners at the intersection of the arms and base.
 - 2. 60"x 64" with arms that are 38" in width and 42" base.
 - 3. 60" x 64" with arms and base that are 40" in width.











MR Chapter 1346 Minnesota Mechanical and Fuel Gas Code TAG Chris Rosival

Chris.Rosival@state.mn.us | 651-284-5510

Mechanical & Fuel Gas Code TAG recommended code changes

Amend existing Chapter 1346 to apply to all buildings EXCEPT buildings constructed to the IRC.

No longer incorporate by reference ASHRAE 62.2-Ventilation and Acceptable Indoor Air Quality in Residential Buildings and refer to the ventilation requirements in the 2024 IMC.



Modify IMC Section 404.1 requirements for carbon monoxide/nitrogen dioxide detection to exempt buildings that accommodate less than six vehicles.



Modify IMC Section 403 to require balanced ventilation in multifamily dwelling units.

Mechanical & Fuel Gas Code TAG recommended code changes



Modify IMC Section 507 to include airflow rates for existing unlisted Type I commercial hoods.



Modify IMC Section 1101.1 to include a reference to Minn. Stat. §326B.106, subd. 17, that permits the use of federal mandated refrigerants not listed in the IMC.



Modify IMC Section 508.1 to clarify the conditioning requirements for make-up air supplied to commercial kitchens.



Repeal an existing Minnesota amendment that restricts the use of some listed chimney liners and reverts to 2024 model code language.

Mechanical & Fuel Gas Code significant code changes



2018

The 2024 IMC addresses the use of A2L and B2L refrigerants not previously recognized in the 2018 IMC.

The 2024 IMC allows domestic ductless range hoods in Group I-1 and I-2 occupancies that the 2020 Minnesota Mechanical Code prohibited.



Structural Review 1303/1305 Commercial/1309 Residential/1311 Existing Buildings

Dan Kelsey | Structural Engineer – Plan Review Wendy Rannenberg | Construction Code Rep I – Plan Review

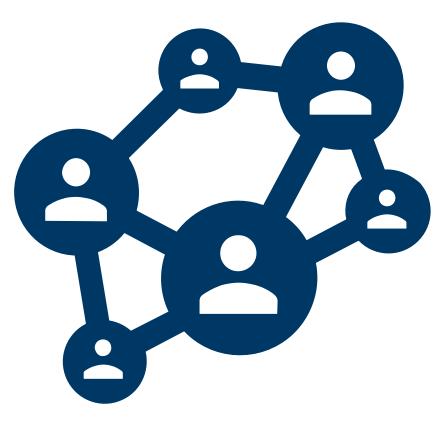


Structural TAG

Meetings and members

April – September

- 9 meetings
- 27 hours
- 295 items reviewed

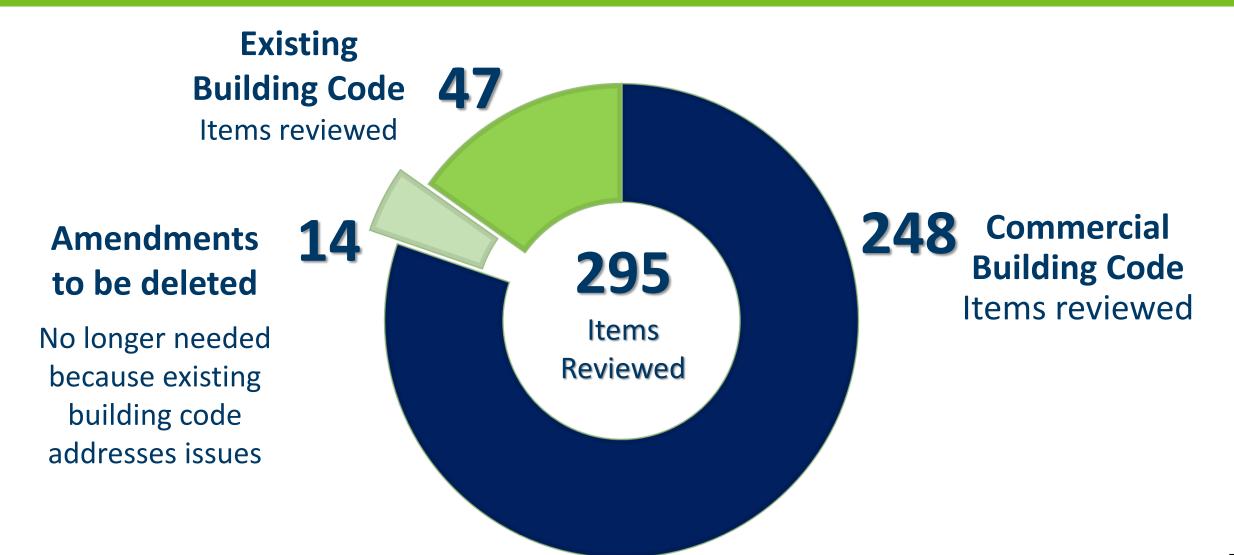


TAG members (10)

- DLI staff (2)
- Building officials (2)
- Design professional (5)
- Minnesota builders (1)

Structural TAG Chairs have scheduled five additional meetings from December through February to review 1309 Residential Code items.

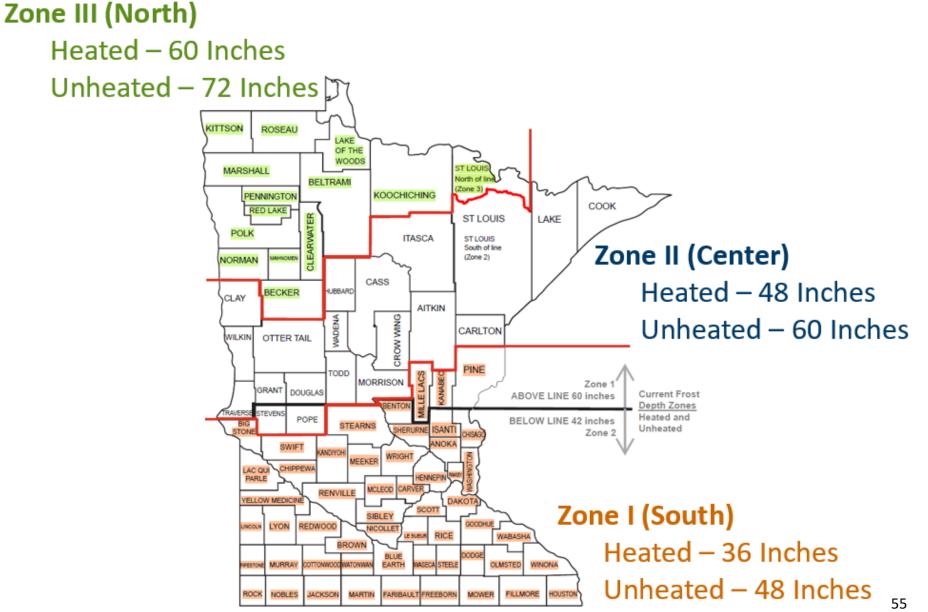
Structural TAG



Structural Review 1303, 1305, 1309, 1311

Footing Depth for Frost Protection 1303.1600 Subp. 1

Code change proposal



Structural review 1303/1305/1309/1311

Significant change in model Commercial and Residential Building Codes

Ground snow design loads

2020

MR 1303.1700 MN Provisions Ground snow design loads are 60 psf or 50 psf, determined by county.



2024 IBC and IRC

Provide for determining locationspecific ground snow load values using ASCE 7 Hazard Tool, an online geodatabase of geocoded design ground snow load values.

Structural review 1303/1305/1309/1311

Significant change in Commercial Building Code

Tornado loads

NEW

Provisions for design and construction of Risk Category III and IV buildings and other structures.



Other rulemaking Adult-sized changing facilities and window cleaning safety



Adult-sized changing facilities and window cleaning safety

- Adult-sized changing facilities addition to the building code posted in the State Register on Nov. 18. Effective date is Aug. 15, 2025.
- Window cleaning safety modification to the building code awaiting the governor's approval to proceed.



New business

Greg Metz | Assistant Director/State Building Official

Residential Energy Code TAG

- TAG adjustments due to scope changes
- Reviewing the 2024 IRC Chapter 11 as the basis for the next Minnesota Residential Energy Code.
- Legislative goal of 70% more efficient than the 2006 IECC by 2038.
- Legislative initiative starts with model codes published in or after 2025.

Name	Role	Organization	Representing
Mike Robertson	Low-resource housing advocate	Habitat for Humanity	NGO/home builders
Greg Olson	Residential builder	Olson Associates Consulting	BAM
Randy King	Municipal code enforcement	Prokore	Building officials
Steve Shold	Residential Energy Code SME (Leader)	MN DLI/CCLD	State rulemaking
John Smith	Mechanical engineer	Retired	Practical engineering
Isaac Smith	Residential programs	MN Ctr for Energy & Environment	Energy advocacy
Eric Fowler	Building efficiency, decarbonization, electrification	Fresh Energy	Public interest and energy conservation
Eric Boyd	Market housing advocate		Housing First MN
Chris Rosival	Mechanical and energy plan review	MN DLI/CCLD	Code coordination
Alyssa Jagdfeld	Residential architect	SALA Architects	MN AIA
Jim Kummon	Residential developer	Heirloom Properties	Small developers
Alison Lindburg	Energy conservation specialist	Midwest Energy Efficiency Alliance	Energy advocacy

Residential Energy Code TAG

Motion to modify the Residential Energy Code TAG to substitute stakeholder representation where previous members are no longer available to serve.

Motion

Commercial Energy Code TAG – 2022 ASHRAE 90.1

- Legislative mandate to adopt the next code.
- Legislative goal of 80% more efficient than the 2004 ASHRAE 90.1 by 2036.
- 2022 ASHRAE 90.1 is the latest issue of the Commercial Energy model code.
- 90.1 has progressive amendments which are incorporated to form the next generation of code on a 3-year cycle.



Name	Role	Organization	Representing
Steve Shold	TAG lead, MN energy code specialist	DLI/CCLD	Plan rev. & enf.
Chris Rosival	TAG co-lead, MN energy code specialist	DLI/CCLD	Plan rev. & enf.
Eric Fowler	Energy conservation advocate	Fresh Energy	
Rachael Spires	Commercial architect	BWBR Architects	MN AIA
Eric Johansen	Energy conservation engineer	CenterPoint Energy	Utilities
Russ Landry	Energy conservation engineer	Center for Energy & Environment	
Michael Waite	Energy conservation advocate	Am. Council for Energy Eff. Econ.	
Dennis Schilling	Power engineer	WSP	10K Lakes BO's
Eric Johansen	Energy efficiency engineer	CenterPoint Energy	
Erin Sherman	Energy conservation engineer	RMI	Greater MN Hsg
Chris Burgess	Energy conservation advocate	Midwest Energy Efficiency Alliance	MEEA
Randy King	Private inspections/enforcement	Prokore	SW MN Code Officials
John Smith	Mechanical engineer	Consultant	-

Commercial Energy Code TAG

Motion to establish a Technical Advisory Group, as presented, for the purpose of developing recommendations for the next generation of MN Rule 1323 the Commercial Energy Code, based upon the 2022 ASHRAE 90.1 Standard and all approved amendments at the time the TAG completes its work.

Motion



A copy of this presentation can be found on the Construction Codes Advisory Council's webpage

https://www.dli.mn.gov/about-department/boards-andcouncils/construction-codes-advisory-council