## **Construction Codes Advisory Council**









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# Department update Deputy Commissioner Kate Perushek



# Building codes and standards update State Building Official Greg Metz

- Building Official Training Grants
- CCLD rulemaking updates
- Legislative updates



## **Building Official Training (BOT) Grants Program**

## **BOT Grants Program update**

- 10 grants available, \$75,000 each
- 11 applicants
- 10 grants awarded



- Albert Lea
- Alexandria
- Brooklyn Center
- Chaska
- Crystal
- Eagan
- Golden Valley
- Moorhead
- Ramsey
- St. Paul
- West St. Paul



## CCLD rulemaking updates

- Residential Building Code final report
- Residential Energy Code final report
- Administrative Provisions Update, MR 1301 and 1303 final report



## Briefing: MR 1311 MN Conservation Code for Existing Buildings

Ryan Rehn | senior manager, CCLD Plan Review



# Residential Building Code (Chapter 1309) Technical Advisory Group review summary

Terence Olson and Jesse Szykulski | TAG leaders

## Residential Building Code TAG (Chapter 1309)

Residential Building Code TAG members **met 20 times** for Chapter 1309. TAG members **received 42 code change proposals.** The Residential Building Code TAG **members recommend adopting the 2024 IRC:** 

- Chapters 2-10 on Building Code
- Chapter 11 on Energy Code and...
- Chapters 12- 24 to address HVAC

## Recommended code changes (cont.)

• Repeal 1309.0323, for storm shelters or safe rooms to meet ICC 500.

## Recommended code changes (cont. 1)

- Repeal 1309.0323, for storm shelters or safe rooms to meet ICC 500.
- A registered design professional must provide an assessment when excavation will reduce the support for any existing foundations adjacent to the site.

## Recommended code changes (cont. 2)

- Repeal 1309.0323, for storm shelters or safe rooms to meet ICC 500.
- A registered design professional must provide an assessment when excavation will reduce the support for any existing foundations adjacent to the site.
- Increase the ceiling height for lofts in tiny houses from 36" to 42"

## Recommended code changes (cont. 3)

 Adopt Appendix BJ to permit strawbale construction with the following amendments.

## Recommended code changes (cont. 4)

- Adopt Appendix BJ to permit strawbale construction with the following amendments.
  - Require an approved third party to test the moisture content density of bales during construction.

## Recommended code changes (cont. 5)

- Adopt Appendix BJ to permit strawbale construction with the following amendments.
  - Require an approved third party to test the moisture content density of bales during construction.
  - Add a section that requires silicate mineral paint to exterior plasters applied over strawbale walls.

## Recommended code changes (cont. 6)

- Adopt Appendix BJ to permit strawbale construction with the following amendments.
  - Require an approved third party to test the moisture content density of bales during construction.
  - Add a section that requires silicate mineral paint to exterior plasters applied over strawbale walls.
  - Increase the ground separation of bales from 8" to 12".

## Recommended code changes (cont. 7)

Adopt Appendix BJ to permit strawbale construction with the following amendments.

• Change the plaster clearance from the ground from 6" to 8".

## Recommended code changes (cont. 8)

Adopt Appendix BJ to permit strawbale construction with the following amendments.

- Change the bale clearance from the ground from 6" to 8".
- Require roof overhangs with a 20" for 1-story buildings and 30" for 2-story buildings unless provided with ventilated cladding.

## Recommended code changes (cont. 9)

Adopt Appendix BJ to permit strawbale construction with the following amendments.

- Change the bale clearance from the ground from 6" to 8".
- Require roof overhangs with a 20" for 1-story buildings and 30" for 2-story buildings unless provided with ventilated cladding.
- Add language to provide 1/4"noncorrosive screening a minimum of 18" above grade for rodent protection.

## Recommended code changes (cont. 10)

 Adopt Appendix BL for hemp-lime construction with the following modifications.

## Recommended code changes (cont. 11)

- Adopt Appendix BL for hemp-lime construction with the following modifications.
  - Clarify that mechanical, electrical and plumbing components that are made of metal are to be isolated from the hemp-lime.

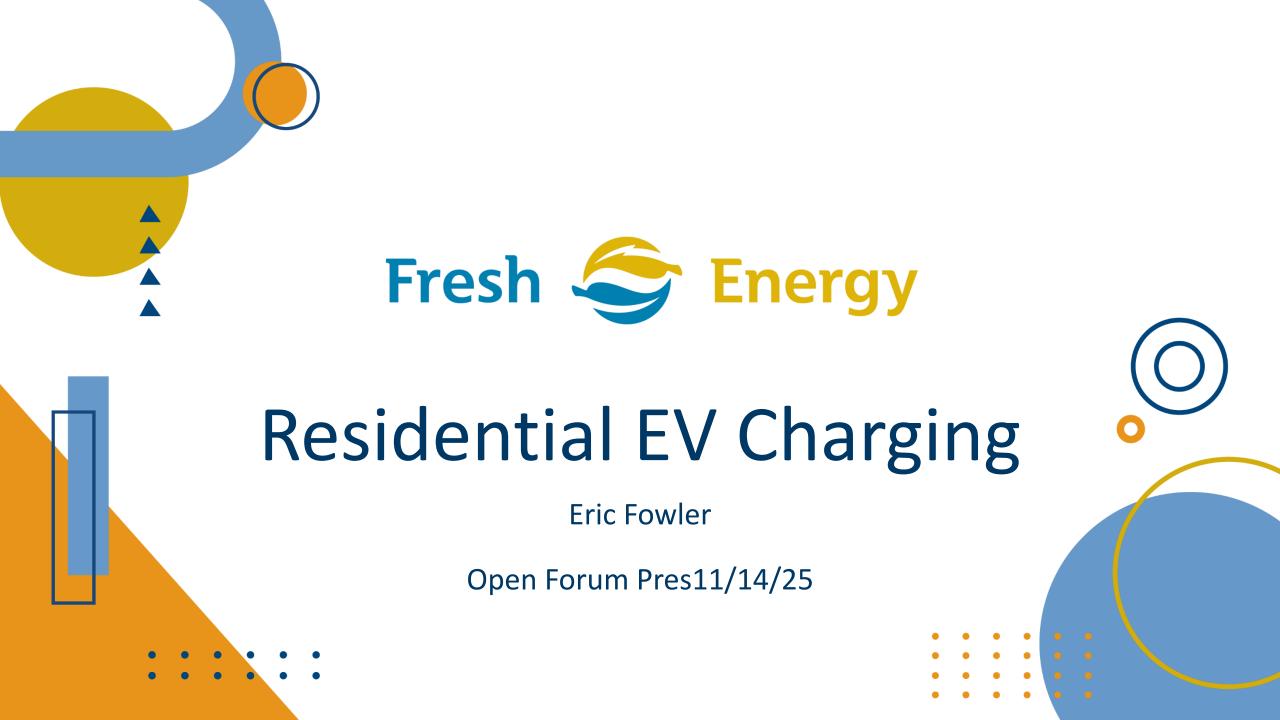
## Recommended code changes (cont. 12)

- Adopt Appendix BL for hemp-lime construction with the following modifications.
  - Clarify that mechanical, electrical, and plumbing components that are made of metal are to be isolated from the hemp-lime.
  - Require 24" roof overhang for 1-story buildings and a 30" for 2story buildings unless walls are provided with a ventilated cladding system.

## Residential Building Code rulemaking

### Motion

Move to approve the Minnesota Residential Code TAG Report as submitted.



## EV Uptake is Exponential

- Almost 80,000 EVs on the road in MN today
- 7% of new sales in 2024
- MnDOT's goal: 20% of light-duty vehicles registered in Minnesota to be EVs by 2030

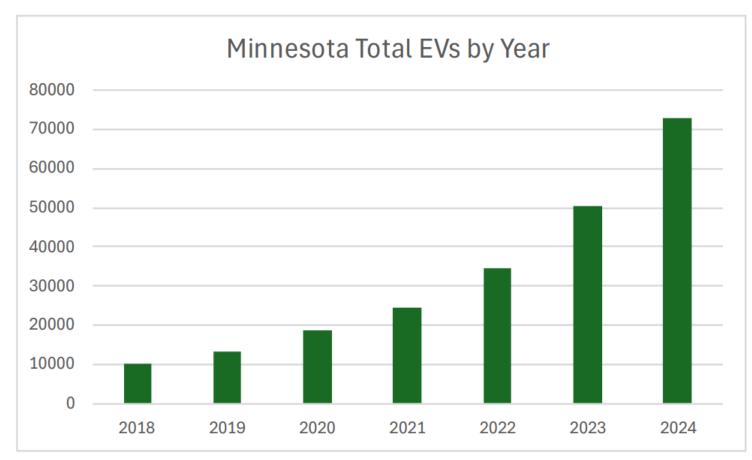


Figure 1:

Registered EVs in Minnesota by year.



## EV Uptake is Exponential

- Over 100 models available in the US today (EVInfoList.com)
- Ford announced \$5
   billion EV investment in
   August
- Growing used market

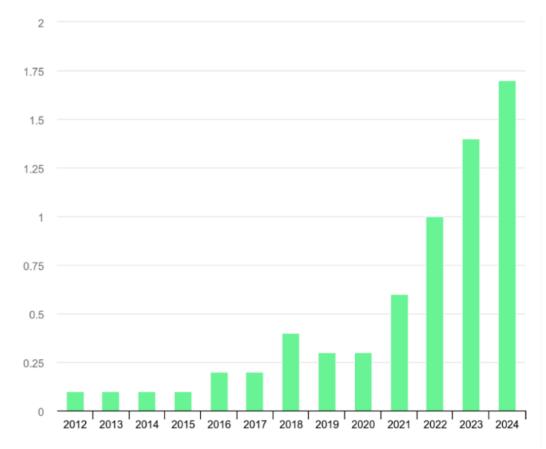
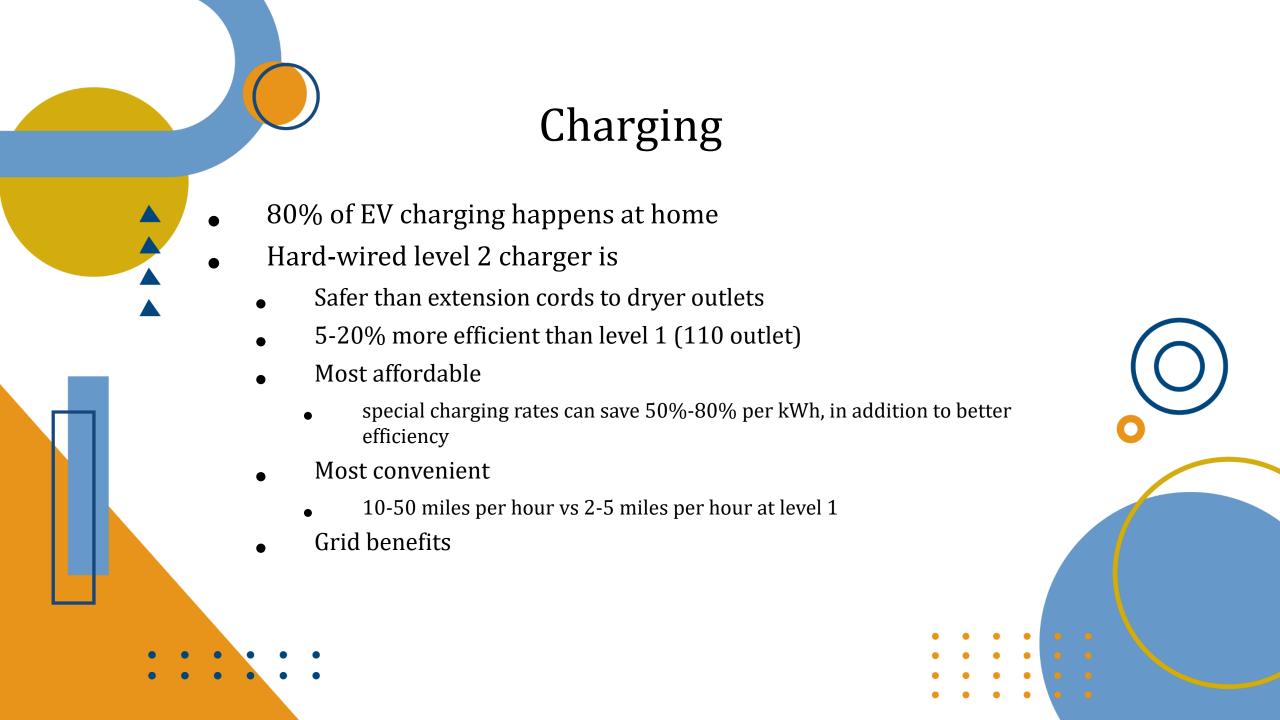


Figure 2: Millions of EV sales in the United States





## Proposal: add EV readiness to the residential code

- Option 1: EV Capable
  - Conduit or prewiring for future electric vehicle supply equipment (EVSE)
  - Reserved electric panel space
    - Includes exception if this increases the utility side cost to the builder or developer by more than \$450 per dwelling unit
  - Industry standard
  - Easily use Appendix NE
- Option 2: Conduit only
  - Conduit or prewiring only
  - Simpler requirement, but less standard and further from model code
- Recommended Exception
  - The raceway or cable assembly and the enclosure or junction box are not required where the electrical distribution equipment or panelboard is located in the same room as the EV capable space.



### Avoided costs

- Preparing buildings saves significantly over retrofits
  - Conduit install: \$100-\$250 if 50% comply through panel location in the garage (\$200-\$500 base)
  - \$2,000-\$3,500 retrofit without conduit
    - May include trenching, sod, drywall, texture, painting, other work in addition to electrical work
  - \$500-\$1,750 retrofit with conduit
  - Net savings after 7%-14% install EVSE
- Atlas Public Policy: in MN, EV prep in code could save consumers \$143,309,000 through 2035



Electric vehicle charging readiness

#### **Motion:**

Move to incorporate electric vehicle charging readiness, as presented, into the Minnesota Residential Building Code.



## Appendix BC- Accessory Dwelling Units

**Scott Anderson** 



# Accessory dwelling units - Appendix BC Presentation by Scott Anderson

#### **BC101.1.1** Prohibited conditions.

An ADU shall not be permitted within:

1. <u>Live/work units located in townhouses.</u> <u>IRC-2 Two Family Dwellings and IRC-3 Townhouses.</u>

**Exception: Detached ADU's** 

- 2. Owner-occupied lodging houses with five or fewer guestrooms.
- 3. A care facility with five or fewer persons receiving custodial care within a dwelling unit.
- 4. A care facility with five or fewer persons receiving medical care within a dwelling unit.
- 5. A day care facility with five or fewer persons of any age receiving care within a dwelling unit.



#### **BC101.2 Conditions.**

ADUs shall be permitted without requiring a change of occupancy where in compliance with all of the following:

- 1. An ADU shall be permitted within or attached to an existing <u>detached</u> single-family <u>detached</u> dwelling <u>or within an existing townhouse unit</u> that is within the scope of the International Residential Code.
- 2. Only one ADU shall be permitted for each primary dwelling unit.

**EXCEPTION: Detached ADU's** 

3. The owner of a property containing an ADU shall reside in either the primary dwelling unit or the ADU, as of the date of permit approval.

**EXCEPTION:** Detached ADU's

- 4. An ADU shall have a separate house number from the primary dwelling unit.
- 5. ADUs shall be secondary in size and function to the primary dwelling unit and shall comply with all of the following limits:
- 5.1. Not less than 190 square feet (17.65 m<sup>2</sup>) in area.
- 5.2. Not more than 50 percent of the area of the primary dwelling unit.
- 5.3. Not more than  $\frac{1,200}{800}$  square feet (111 m<sup>2</sup>) in area.

EXCEPTION: Detached ADU not more than 1,600 square feet in area



#### **BC101.2 Conditions. (continued)**

- 1. An ADU shall be provided with a separate entrance from that serving the primary dwelling unit. The separate entrance may be accessed either from the exterior of the building or from a common hallway shared space located within the building.
- 2. An ADU shall have a maximum number of two bedrooms.
- 3. The location of a detached ADU shall comply with Section R302.
- 4. An ADU shall be provided with adequate provisions for electricity, water supply and sewage disposal.
- 5. An ADU shall be provided with the following that are independent from the primary dwelling: toilet facilities, bathing facilities. A lavatory, a food preparation area including a sink with hot and cold running water, a dedicated circuit and location for the refrigerator/freezer, and a dedicated circuit and location for a cooktop.

#### BC105.1 Heating, ventilation and air-conditioning systems.

A primary dwelling unit and an ADU shall be provided with:

- 1. A separate heating system.
- 2. Separate ducting for heating and cooling systems. Return air openings for heating, ventilation and air-conditioning shall not be taken from another dwelling unit.
- 3. Separate climate controls.
- 1. Independent climate control capability. Each dwelling unit shall have its own thermostat independent of any other unit
- 2. Air distribution separation. Air distribution systems shall not allow the transfer or recirculation of air between dwelling units. Return air openings shall not be taken from another dwelling unit.
- 3. Mechanical equipment, such as boilers or central plants, may serve more than one unit provided that each units heating and cooling operation can be controlled independently.

#### BC105.4 Water service.

A primary dwelling unit and an ADU may share a common potable water system, provided that there are separate, accessible main shutoff valves allowing the water to be turned off on one side to one unit without affecting the other any other unit.



### **BC105.2** Electrical systems.

A primary dwelling unit and an ADU shall be provided with:

- Ready access to the service disconnecting means serving the dwelling unit <u>without affecting any other unit</u>.
- 2. Ready access for each occupant to all overcurrent devices protecting the conductors supplying the dwelling unit in which they reside.

### BC105.3 Gas piping.

A primary dwelling unit and an ADU shall be provided with:

- 1. Ready access for each occupant to shutoff valves serving the dwelling unit in which they reside without affecting any other unit.
- 2. Ready access for each occupant to appliance shutoff valves serving appliances in the dwelling unit in which they reside.

# Residential Building Code considerations (cont. 3)



## **Motion:**

Move to incorporate Appendix BC, with the proposed amendments, into the Minnesota Residential Building Code.

# Residential Building Code Rule recommendation

## **Motion**

Move to recommend that the commissioner proceed with rulemaking for the Minnesota Residential Code based on the TAG recommendations, with the following modifications:

- inclusion of electric vehicle charging readiness, and
- adoption of Appendix BC with amendments for accessory dwelling units (ADUs).



# Residential Energy Code TAG

Rulemaking - TAG final report and recommendations



# TAG meetings concluded

• 10 meetings to complete the review of the 2024 IRC chapter N11.



# Significant changes

- Redefine "residential buildings" to no longer include R-2, R-3, R-4 buildings 3 stories and less. (RE-49)
- Provide an additional alternative building envelope compliance option for prescriptive path. (RE-51)
- Provide a thermal envelope backstop by establishing a 25% window to wall ratio and replace the Component Performance Alternative with a Total UA. (RE-45)
- Change the air leakage metric from air changes to cubic feet per minute per square foot of envelope leak area. (RE-43)
- Remove requirement to install exterior continuous insulation where the full extent of an exterior façade or wall covering of an existing dwelling is undergoing replacement. (RE-48)

# Residential Energy Code rulemaking

## **Motion**

Move to approve the Minnesota Residential Energy Code TAG report as submitted.

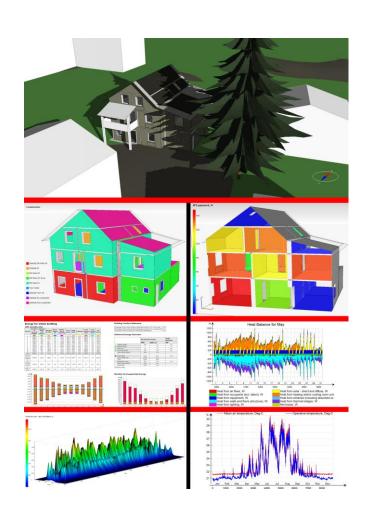
# Department recommendations (1 of 4)

RE-39 removes the simulated building performance pathway.

Staff recommendation: Reject proposal.

- Proposal was narrowly approved (6 yea, 5 nay, 1 abstain).
- Does not require a third party to model and rate; may be more useable in rural areas.

# Additional Residential Energy Code considerations



Simulated Building Performance Pathway RE-39

#### Motion:

Move to <u>reject RE-39</u> and <u>retain</u> the Simulated Building Performance Pathway, with modifications to align its efficiency with that of the Energy Rating Index method.

# Department recommendations (2 of 4)

RE-41.1 Increases required efficiency points twofold and introduces heat pumps to the table in N1108.

Proposal was TAG-approved (10 yea, 1 nay).

Staff recommendation: Reject this code change proposal.

- Doubling the required additional energy conservation points in the prescriptive path is a large first step and will add significant cost to housing.
- National modeling approach may not effectively quantify the efficiency gains.
- As written, proposal would allow earning points for heat pumps that are not "cold-climate" heat pumps and the CCP does not stipulate a coefficient of performance at a specified temperature crossover.

# Additional Residential Energy Code considerations



## Level setting for heat pumps (RE-41.1)

#### Motion:

Move to <u>reject</u> Code Change Proposal RE-41.1, which would double the required additional efficiency credits from 10 to 20 and increase the number of points allowed for <u>federal</u> minimum efficiency heat pumps from 0 to 15 in Climate Zone 6 and 0 to 16 in Climate Zone 7.

# Department recommendations (3 of 4)

RE-43 changes measurement from air changes/hour to cubic feet per minute/square foot enclosure and decreases allowable leakage rate to 0.18 cfm/sf.

**Staff recommendation:** Amend proposal.

- Maintain change in measurement from ACH to CFM/SFE but increase allowable leakage to a more achievable 0.20 cfm/sf eliminating exceptions
- 95% of homes with a HERS rating in past 3 years would have met or exceeded this level. Only 83% of these homes would meet 2.5 ACH in the 2024 IECC. RESNET data

# Additional Residential Energy Code considerations



## Air leakage (CCP 43.1)

#### Motion:

Move to **modify** Code Change Proposal RE-43.1 by resetting the air leakage rate to 0.20 cfm/sf of the exterior thermal envelope and by deleting the exceptions that permit a rate of 0.27 cfm/sf for multi-family buildings and for dwellings under 1,500 sf.

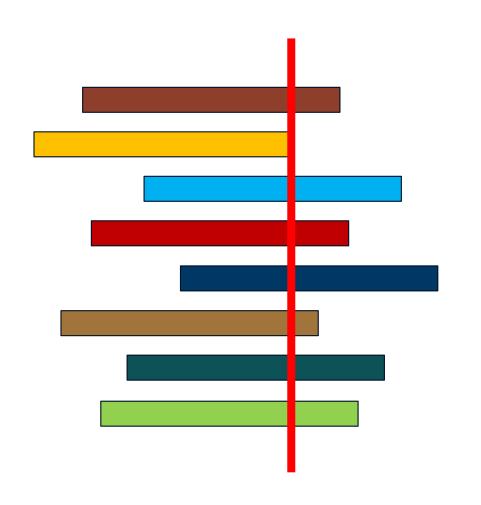
# Department recommendations (4 of 4)

RE-44 changes tradable envelope allowance in ERI path from 15% to zero (2024 prescriptive envelope).

Staff recommendation: Amend proposal.

- Increase tradable budget from zero to 8%.
- Increases efficiency and yet sets backstop to current 2015 Minnesota prescriptive envelope requirements.

# Additional Residential Energy Code considerations



## **Performance Pathway Backstops (RE-44)**

#### Motion:

Move to **modify** Code Change Proposal RE-44 by changing the building envelope trade-off allowance from 0% to 8%.

# Next steps in adoption

- CCAC makes recommendations to the commissioner for rulemaking.
- Undergo "durability study" (Minnesota Statutes 326B.118).
- Finalize rule.

# Residential Energy Code rule recommendation

Motion: Move to recommend to the commissioner proceed with rulemaking based on TAG recommendations for the Minnesota Residential Energy Code with the following modifications:

- Reject CCP RE-39 which eliminates the Simulated Building Performance Compliance Pathway.
- Reject CCP RE-41.1 which doubles the required number of additional energy credit points and drastically increases credits for federal minimum heat pumps.
- Modify CCP-RE 43.1 to change the air leakage allowance from 0.18 cfm/sf to 0.20 cfm/sf.
- Modify CCP RE-44 resetting the backstops for performance compliance to allow 8% offset in lieu of requiring the prescriptive envelope criteria 0% offset.



## Fire Code TAG

Tom Jensen | DPS Minnesota Fire Code subject matter expert

Forrest Williams | DPS Minnesota Fire Code subject matter expert



# Meetings

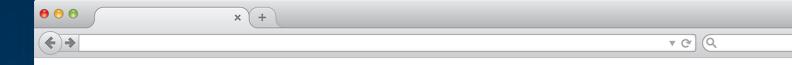
- 3 meetings
- 9/11; 9/25; 10/9

# Proposals

- 41 Proposals reviewed.
- Proposals:
  - 38 supported
  - 2 withdrawn
  - 1 rejected
  - (simple majority poll)

## Recommendation

TAG recommends adoption of the 2024 IFC with amendments as proposed.



# **General Topics**

- Code updates/language tune-up.
- Add inspections to NFPA 13D systems in care facilities.
- Allow fire extinguishers to be obstructed from view in care facilities.
- Require interconnected battery-powered smoke alarms in existing Group I-1 and R care facilities.
- Require aisle accessways in existing buildings without fixed seating to comply with MR 1305.

# Administrative provisions rule recommendation

### **Motion**

Move to recommend to the commissioner proceeding with rulemaking on Minnesota Rule 7511, the Minnesota Fire Code, based upon TAG recommendations.



Briefing: Administrative Provisions (Chapters 1300 and 1301)

Greg Metz | TAG leader

## MN Rule 1300.0070 new definitions

Manufactured home - Correct reference to MS 327.31, subd. 6.

**Mobile home -** New definition for homes constructed before the HUD program (June 15, 1976).

Industrialized/modular construction - Creating cross reference to MR 1361.0200.

Prefabricated building - Creating cross reference to MR 1360.0200

**Tiny house -** Adding definition into the body of the code. "Tiny House" means a one-story residential building intended for year-round occupancy with a floor area not exceeding 400 square feet excluding lofts. Tiny homes shall be considered Group IRC-1 occupancy and may be site-built, prefabricated, or modular construction. Tiny home installation requires a licensed residential contractor.

## MN Rule 1301.0300 revisions to building official certification

## Education points:

AAS degree in building inspection technology (60+ college credits): **100 pts** 

Construction codes inspections certificate (30 college credits): **60 pts** 

Building inspections technologies certificate (14 college credits): **28 pts** 

Exams prerequisites:

Minnesota certified building official: 100 pts

Minnesota limited building official: 30 pts

## Experience points:

Fulltime building inspection under a MN certified building official: 5 pts/3 mo Fulltime building construction related work: 5 pts/6 months

# Administrative provisions rule recommendation

### **Motion**

Move to recommend that the commissioner proceed with rulemaking, based upon TAG recommendations, as presented, to:

- Add the proposed new definitions to Minnesota Rule 1300
- Amend Minnesota Rule 1301.300 to revise the credentialing point system for building official certification based on college credits









# New business



# Briefing: Manufactured Housing TAG

Greg Metz | TAG leader

## Manufactured Homes TAG

#### Met four times thus far.

- DLI created Notice of Compliance forms for sales and rental of used manufactured homes with existing statutory language for use as of Jan. 1, 2026.
- Reviewed nine existing items.
- TAG concurred with the forms.
- TAG is considering rewording the forms so that compliance could be readily observable without professional inspections.
- TAG will recommend having separate criteria for rental of manufactured homes added into the statute so that more items may be addressed that are pertinent to rental housing habitability.
- TAG is still considering adding to the Notice of Compliance for sale of used manufactured homes.

# TAG-recommended changes to MS 327.32 used manufactured homes

Add new subd. 1g. Notice of Compliance Form for Lease or Sublease as required in Minnesota Statutes, section 327.32, subdivision 1.

### Summary:

- Doors have access to grade (stairs)
- Bedrooms have an openable egress window
- No evidence of leaks or water damage
- Floor is structurally sound throughout
- Smoke and CO detectors work and < 10 years</li>
- Underfloor insulation & protection is intact
- Skirting is intact without openings
- Wood fireplaces are listed for mfgd homes
- Home meets heating and snow load reqmts
- Plumbing fixtures and drains are in working order and drains are trapped

- Water and gas shut off valves are accessible and functional
- Kitchen, bath and laundry exhaust vents are operable where installed
- Gas water heaters and gas furnaces are listed, operational and flues are vented correctly, water heater has pressure relief
- The home is electrically grounded
- Electrical switches, outlets and fixtures are firmly attached, function, without damage
- Electric range & dryer outlets are grounded
- Provided appliances are in working order



# Proposed legislative change - state delegations

# TAG-recommended changes to MS 326B.107, Subd. 2 (a)

(a) The commissioner shall enter into an agreement with a municipality other than the state for plan review, inspection, code administration, and code enforcement on public buildings and state-licensed facilities in the jurisdiction if the municipality requests to provide those services and the commissioner determines that the municipality has enough adequately trained and qualified inspectors to provide those services based on project complexity and type. In determining whether a municipality has enough adequately trained and qualified inspectors to provide the service, the commissioner must consider all inspectors who are employed by the municipality, are under contract with the municipality to provide inspection services or are obligated to provide inspection services to the municipality under any other lawful agreement. The commissioner shall develop rules addressing the delegation of plan review, inspection, code administration, and code enforcement services on public buildings and state licensed facilities.

# Statutory modification to make rules for delegations

#### **Motion**

Move to support the staff recommendation amending Minnesota Statutes 326B.107, Subpart 2 (a), to authorize rulemaking for guiding the delegation of public buildings and state-licensed facilities to municipal jurisdictions.



# New technical advisory group

# TAG: Statutes and rules for delegation of public buildings and state-licensed facilities

Name	Organization	Representing	Role
Greg Metz	DLI/CCLD	State of Minnesota	State Building Official
Scott Wheeler	DLI/CCLD	State of Minnesota	Delegations Program Lead
Scott McKown	DLI/CCLD	State of Minnesota	State Inspections Manager
Ryan Rehn	DLI/CCLD	State of Minnesota	State Plan Review Manager
Bryan Kirby	DLI/CCLD	State of Minnesota	State Regional Services Supervisor
Paul Swett	DLI/CCLD	State of Minnesota	Code Services Representative
Jerry Backlund	City of Hastings	AMBO	Medium sized code admin.
Lonnie Johnson	City of Hastings	AMBO	Medium sized code admin.
Jerry Norman	City of Rochester	AMBO	Large Municipal Admin- Plan Review
James Coyle	City of Rochester	AMBO	Large Municipal Admin-Inspections
Scott Anderson	Mpls Const. Code Services	10K Lakes	Large Municipal Admin- Plan Review
Randy King	City of North Mankato	Small Municipal Admin	Comprehensive administration
Kyle Dimler	City of Hutchinson	Small Municipal Admin	Comprehensive administration
Travis Dunn	Dunn Solutions	Contract Bldg Officials	Enterprise Code Administration
Nichole Kastern	City of Bloomington	Recent Applicants	Outside-In Perspectives on Process

# Rulemaking TAG for State Delegation Agreements

### **Motion**

Move to approve the technical advisory group as presented to form new rules outlining the Delegations Program for public buildings and state-licensed facilities.



# A copy of this presentation can be found on the CCAC's webpage.

dli.mn.gov/about-department/boards-and-councils/construction-codes-advisory-council