



Public Safety Committee Update

Anchorage Fire Department – April, 2023

Assembly Public Safety Committee-of-the-Whole



- AFD/MOA Building Collapse Response
- Residential Fire Fatalities
- PulsePoint Update
- AFD Sullivan Arena Responses

AFD/MOA Building Collapse Response



- Heavy snow loads mixed with warm weather has led to 19 known structural collapses.
- Several notable collapses, including 1 with trapped victims, prompted assessment by MOA Development Services to determine common factors in these collapses.

AFD/MOA Building Collapse Response



- **2/17/2023 – Turnagain CrossFit @ 1101 E 76th Ave.**
 - Roof system overloaded with ice build-up overlaid with snow
 - Roof structural member failed and the roof/wall connection allowed the wall to fall away, leading to a partial roof collapse onto the occupants
- **3/4/2023 – FashionPact @ 55 Ingra St.**
 - Roof structural member failed at the wall support
 - Loss of connection led to opposite wall to fail outward, leading to a complete structural collapse
- **3/15/2023 – Northway Mall @ 3101 Penland Pkwy.**
 - Partial collapse after failure of the roof members led to gas leak inside and outside the building
- **3/20/2023 – Metrie @ 2503 Arctic Blvd.**
 - Failure of the roof members likely due to overloading at this location with snow unable to shed because of adjacent building

AFD/MOA Building Collapse Response



- MOA Development Services has identified older flat roof truss systems (top chord bearing) as a common element in these failures



- The structural engineering community is assessing these and other buildings with similar flat roof systems for potential failures

AFD/MOA Building Collapse Response



- Concentrated loading is a cause for concern
- Areas where snow/ice/water can accumulate are problematic
 - Poor insulation can cause thicker ice lenses
 - Roof leaks can lead to deterioration of structural members
- Failures can be gradual (ductile) or sudden (brittle)
 - Gradual failures can come with visible clues (e.g. roof dips, bowing or leaning walls)
 - Sudden failures typically do not show any signs

AFD/MOA Building Collapse Response



Public information effort warning of potential dangers.

News media coverage, web pages & social media engagement

- Mayor's Office
- OEM
- MOA Development Services
- AFD



Mayor Dave Bronson ✓
March 17 at 9:25 PM · 🌐

The following updated guidance has been issued by our Building experts to owners of commercial properties described below:

MOA Guidance Regarding Potential Ro... [See more](#)

Anchorage Office of Emergency Management ✓
February 18 · 🌐

Anchorage has near-record snow conditions this winter. Anchorage residents and property owners should consider the benefits and dangers of snow removal from roofs. Below are some key safety issues:





AFD/MOA Building Collapse Response

MOA Development Services Department continues to work with the engineering community and building owners to identify and address these structural issues



Snow Load Safety Concern Collapses from One Type of Wood Truss Premanufactured Wood Trusses, hanging down from top chord

Summary

Premanufactured wood trusses connected with steel "gangnail" plates are common in timber construction. For such trusses **HUNG DOWN** from their top chords, a common design flaw has been implicated in multiple structural collapses and partial collapses in Anchorage.

Top-Chord Bearing Truss Design Concern:

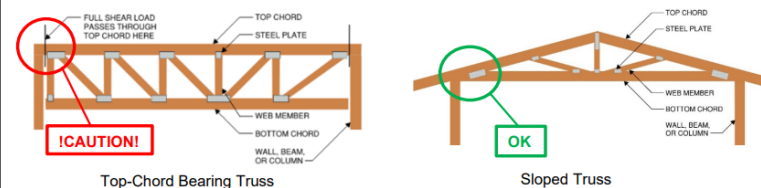
The concern is specific to wood trusses with steel plate connections that are hung from their top chord (see image, below, left). These often put the full weight supported by the truss into the last few inches of the top chord (typically a 2x6) alone.

Collapses and partial collapses in multiple Anchorage buildings have been attributed to this design flaw.

Typically not a Concern with the Following Truss Types:

Wood trusses with bottom chords at the level of support (common in residences)

Wood trusses with steel web members (TJL, TJM, etc.)



Recommendation:

1. Remove excessive snow/ice from roof to unload the trusses.
2. Consult with a structural engineer to determine course of action.

Failure has already initiated in the truss in the photos below. Do not wait for this to occur!





Residential Fire Fatalities

- Between **January 1st** and **March 16th**, 2023, AFD responded to over **60 fire incidents** occurring in residential structures.
- 4 of those incidents accounted for 5 adults losing their lives as a result of the fire in their home.



Residential Fire Fatalities

Ermine Fire – January, 2023

- 1 fatality
- Fire was intentionally set by occupant
- Smoke alarms inoperable



Huffman Fire – February, 2023

- 2 fatalities
- Fire caused by combustibles too close to portable space heater
- No smoke alarms located



Residential Fire Fatalities



Coventry Fire – February, 2023

- 1 fatality
- Fire caused by build up of dryer lint
- Smoke alarm not operable



Bragaw Fire– March, 2023

- 1 fatality
- Fire caused undetermined, smoking materials suspected
- Smoke alarm removed, disabled



Residential Fire Fatalities

- While the cause of these fires varied, a common factor in most of these fatalities were smoke alarms either no installed, disabled, or not functioning.
- Early detection may have alerted the residents, allowing for escape.



Residential Fire Fatalities



PUBLIC AWARENESS & EDUCATION IS ESSENTIAL

- Press releases/social media
- AFD Fire Marshal interviews with local media stressing the importance of checking the functionality of smoke alarms and having an escape plan.
- Public Safety Partnerships
- Collaboration with the State of Alaska Division of Fire & Life Safety to coordinate a statewide campaign in fire prevention.
- Community Risk Reduction
- Continued engagement with the community by AFD personnel on home fire safety.

PulsePoint Update

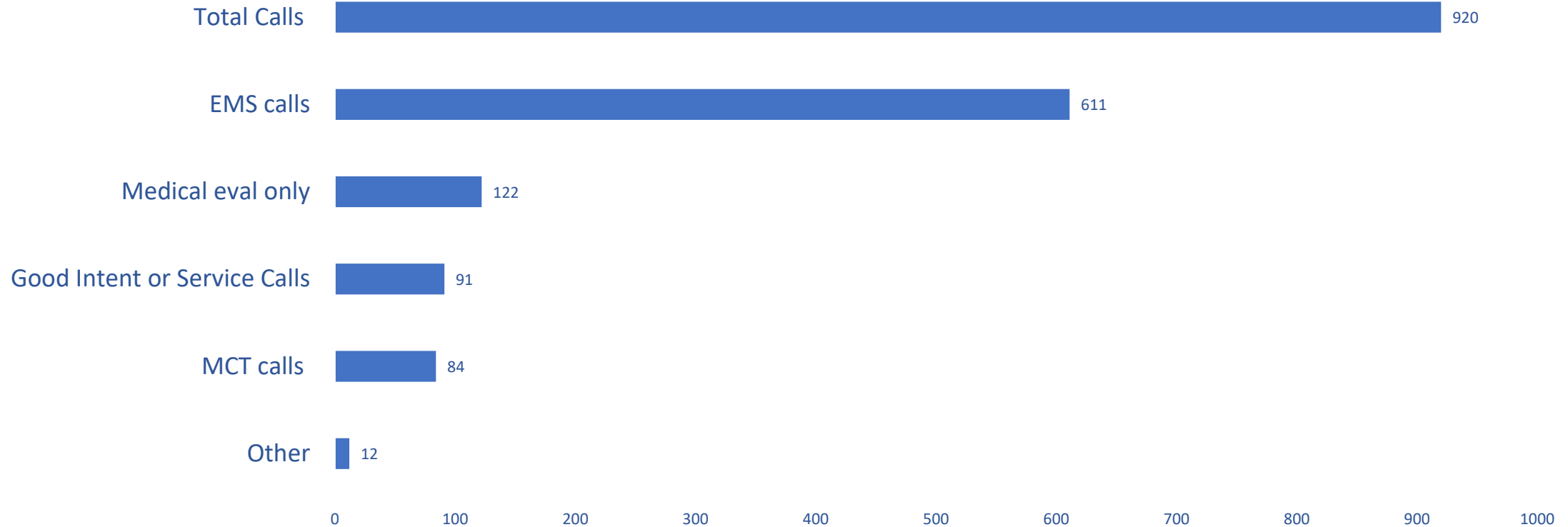


- 988 total users
- 164 cardiac arrest responses
- Outreach efforts include presentations to Rotary Clubs, etc.
- Community CPR plans in progress
- Ted Stevens International Airport has agreed to assist with marketing efforts

AFD Responses to Sullivan Arena



Calls for service 10/01-03/23



AFD Responses to Sullivan Arena



- AFD policy to always dispatch a fire company with an ambulance
- Ambulance stolen and recovered 30 minutes later
- Attempted theft of ambulance