Operating Guideline # 821

Multi Unit Dwellings

December 10, 2019

PURPOSE:
The purpose of this Operating Guideline (OG) is to outline some of the challenges associated with fires and other incidents in multi-unit dwellings.

ISSUE/RATIONALE:
Fire deaths in Ontario continue to be dominated by fires in residential occupancies and so it follows that higher density dwellings present a greater risk of injuries and deaths.
Older, converted dwellings lend themselves to even greater risks because of the many renovations that may have been made over the years, void spaces, the potential presence of dated electrical components, the presence of questionable fire separations, etc.

GUIDELINE:
1. Many multi-unit dwellings are required to have a "Fire Safety Plan" available to the fire department. This plan is an invaluable source of information and should be utilized by the Incident Commander wherever possible when responding to any incident at such a premise.

2. Floor assignments in multi-story building may be described as follows:
- Hot Zone, Fire Floor/IDLH environment
- Warm Zone RIT, Floor immediately below, used for RIT/RIT Staging
- Warm Zone OPERATIONS, two floors below, used for Staging, Rehab, Entry Control and Accountability
- Cold Zone, all floors below including lobby.

3. A Safety Officer should be designated for any significant incident in a multi-story dwelling.

4. When positioning apparatus at a taller building, crews should be cognizant of the need for a safety perimeter around the building to guard against falling objects (including glass and debris). Wind direction and velocity should also be factored into such decisions. Crews should avoid breaking glass in higher buildings if possible. Where this action is necessary, the Incident Commander should always be advised prior to this action being taken.

5. Crews should always carry equipment into these buildings to assist with fire attack. Extra air cylinders, medical supplies including a defibrillator and personnel should always be moved to upper staging area's as a proactive measure.

6. MLFD staff members attending fire alarm activations at a multi-unit dwelling should assume a proactive posture based on the presumption that a fire condition exists until such point as the Incident Commander is able to confirm actual conditions through FD resources that are on scene. At least two pumping units should respond to any fire alarm activation in a multi-unit dwelling.
7. Fire alarms systems, when activated, should not be silenced by fire department staff or a building representative unless the Incident Commander has confirmed that no fire condition exists, or it is necessary to facilitate fire suppression activities.

8. Fire alarm systems shall not be restored or reset by fire department personnel as this is the responsibility of the building owner or representative.
NOTE: this is not to preclude FD members from providing assistance to building owners in resetting alarm systems where the fire department staff member has the necessary knowledge, skills and abilities to do so.

9. Arriving crews should always check the annunciator panel if provided to determine the source of the alarm even if witnesses/occupants are available. If multiple locations are indicated on the annunciator panel, this could be an indication of an unusual situation that requires extra care during size-up and fire attack. If multiple locations are indicated, each location should be checked starting with the lowest location first.

10.Firefighters should bear in mind that most apartments are relatively small in terms of gross floor area (one or two bedrooms, small kitchen and dining area and living room) while it would not be uncommon for a condominium unit in a similar looking building to have a much larger living space, and therefore higher fuel packages. In addition, it's not uncommon in a modern multi-story condominium to encounter larger open spaces and even multi-floor level arrangements. This suggests that initial 65mm attack hose lines may be more appropriate in a condominium setting with significant fire present.

11.Newer, purpose built multi-unit dwellings (apartment buildings) frequently feature slab concrete construction and are designed to be "compartmentalized". This is a generalized statement however given that recent building code changes now allow the use of wood frame construction in buildings of up to six storeys in height.

12. Single family dwellings that have been converted into apartments typically will be built with "ordinary" combustible construction features, and may have lightweight construction elements including trusses or engineered I beams. Firefighters should be cautious of buildings that utilize "legacy" construction and be wary of balloon frame construction.

13.Given the larger occupant loads in a multi-unit dwelling and therefore the increased life risk, the Incident Commander should consider an early call for additional help including mutual aid crews if a working fire is encountered.

14.The Incident Commander should consider the need for one or more aerial devices during any initial size-up and call for these specialized devices early in the incident. Apparatus placement will be critical for the effective deployment of these devices and should be considered by all apparatus operators as they approach the incident scene. A hydrant of sufficient water flow should be identified/reserved for any incoming aerial device. SEE ALSO OG 830 – Aerial Operations.

15.In a traditional, purpose built apartment building, there are usually two or more stairwells that provide for upper floor exiting. If it becomes necessary to utilize one of these stairwells for firefighting operations (i.e. – to extend a hose line up from a floor below) it is important to designate this stairwell as being restricted for fire operations (the "operational" stairwell). If possible, alert the building occupants to this and direct them to another stairwell for exiting purposes (the "exiting" stairwell) as the "operational" stairwell may become quickly contaminated due to smoke migration. The top of some stairwells may be equipped with a roof hatch, and it may be advisable to open this hatch to assist in ventilation in some circumstances.

16. If direct access to the interior of any unit is not available from the exterior, fire attack operations may be initiated from a common interior corridor or hallway. The degree to which the corridor on the fire floor is contaminated will often be the determining factor – a non-contaminated hallway will be an indicator that the hallway door to the affected unit is intact and closed. Where the corridor is relatively free from contaminants, fire crews may stretch lines, affect evacuation of adjoining units served by the same corridor, and initiate fire control measures.

17.Where the corridor is significantly contaminated and visibility is restricted, it may be safer to initiate operations from the floor below by stretching hose lines up the stairwell.

18.In some cases, long corridors are separated into smoke control zones by hallway doors, typically equipped with automatic closure devices. Care should be taken to ensure these doors are closed and have not been defeated by occupant installed door wedges or similar makeshift devices. If building occupants are utilizing such zones as an area of refuse, they should be relocated down via the designated exit stairwell to another floor area or outside if possible and practical.

19.Most multi-unit dwellings will be protected by a fire alarm and detection system. If the system has not been activated and an actual fire condition exists, the Incident Commander may order the system be put into "alarm" mode to alert building occupants to the situation.

20.Where the alarm system IS sounding, the Incident Commander should direct that the system stay in alarm mode and not be silenced UNLESS it is necessary to allow for effective fire attack and control operations (i.e. – if the sound of the activated alarm is interfering with fire communications to the extent that safety of crews is placed in jeopardy, the Incident Commander may order that the system be silenced.

21.Where the building is equipped with a sprinkler and/or standpipe system, the incident commander should take full advantage of these systems.

22.Where a multi-unit dwelling is equipped with a voice communications system, the Incident Commander shall assign a firefighter to make the following announcement immediately upon arrival:
"Attention Attention, this is the Muskoka Lakes Fire Department. We have been called to this building because of an activation of the fire alarm system and are currently investigating the cause of the alarm. If you have not evacuated your unit at this time, please stay in your unit if you are safe. Further information will follow."
NOTE: Deviation from this or any "script" is permitted based on incident particulars.

23.Further use intermediate directions shall be supplied as directed by the incident commander as the incident progresses.

24.At the conclusion of fire department operations, the Incident Commander shall cause a final update to be provided to building occupants via the voice address system such as:.

"Attention Attention, This is the Muskoka Lakes Fire Department. Our operations have concluded at this building and there is no longer a need for our presence. Thank-you for your attention."

25. Use of building elevators by fire department staff to access upper floors should only be considered for incidents on the 4th floor or higher.

26.Where it is necessary to utilize an elevator to access the 4th floor or above, crews should always stop the elevator at least one floor (preferably two) below the incident location, and walk up the final flight(s) of stairs to assess corridor conditions etc. Utilize the clean air environment of lower flows to orient crews to unit layouts, numbering etc where applicable.

27.One radio equipped firefighter should be assigned as the "elevator operator" and where possible, this firefighter should remain with the elevator at all times.

28.Elevators should NOT be used to access levels below grade – use the stairs.
29. Building HVAC systems may be considered for use by the Incident Commander to pressurize certain areas of the building or exhaust smoke, these systems should only be operated by someone who is intimately familiar with their operation.

30.The use of exterior stairways or fire escapes to access upper floors for fire control operations should be cautiously evaluated by the Incident Commander prior to use.

31.Crews should be equally cautious about utilizing exterior balconies that have been exposed to the elements as these may be structurally unstable.

32. Lag time is the time it takes for crews to reach the desired destination within a structure after arrival on scene. Generally, the higher the destination, the longer the lag time will be. The potential for continued fire growth can be significant during this time.

33.All crews and the Incident Commander should be aware that radio's may not be operational in some circumstances (i.e. – underground parking) and interior crews should attempt to make contact with the Incident Commander at regular intervals to report on progress being made.

34.The presence of underground parking structures presents a unique challenge for responding crews. Often, smoke and water accumulation can pose additional hazards for crews, and access (and therefore exiting) is generally limited.

35.Controlling access to underground parking is advisable to prevent persons from entering the building in this matter during operations.

36. A fire that extends beyond the unit of origin is a unique circumstance, and in every such instance, the OFMEM shall be contacted post-incident for a proper fire cause determination investigation. SEE ALSO OG 1807 – Essential and Enhanced level Fire Investigations.

RESPONSIBILITY:
It is the responsibility of all Departmental staff to adhere to the provisions of this OG.

REFERENCES:
- Fire Officer's Handbook of Tactics, third Edition, John Norman, Penwell Publishing
- MLFD OG 207 – Accountability System
- MLFD OG 501 – Apparatus Response
- MLFD OG 504 - Mutual and Automatic Aid
- MLFD OG 510 – False Alarms