I do offer to the NRC's project team the following considerations as planning for the next phases of the project proceeds.

- Residential (Group C) occupancies does not differentiate occupant characteristics very well. We can have aged, young or mobility/cognitively impaired occupants that all have different needs during emergencies and evacuations. We were happy to hear the representative from Accessibility Canada speak up on this point. We must consider occupants characteristics and their needs in the analysis for single means of egress in residential.
- We feel the team must consider how maintenance of the single means of egress will be achieved. The National Defence Fire Service finds all sorts of things in exits – jeeps, totem poles, cam nets and other prohibited materials. Considering we have a fairly rigorous monitoring program, how will these risks be managed in jurisdictions with less ability to enforce code requirements?
- Maintenance of fire protection systems must also be considered; presuming automatic sprinklers will form part of any proposal to increase permissions for single egress configurations, the reliability and cost to maintain systems operational must be accounted for in any proposed increase in permissions for a single means of egress. We have a rigorous maintenance program at National Defence; how will the average small residential block owner know to maintain any active fire protection systems so safety assumptions made during design phase are assured throughout the life of the building? Inevitably, irresponsible owners could knowingly omit code mandated maintenance activities, putting occupants at risk.
- As many of our fire service colleagues echoed, NRC's team must take into account the unpredictable nature of the future. The example of lithium ion batteries and their impact of failure in residential occupancies cannot be sufficiently highlighted. We are now only getting a full picture of how this new technology impacts a structure in failure scenarios, and we recommend inclusion of a certain amount of 'future proofing' in the approach to the safety of people in their homes.
- We feel loss statistics in other jurisdictions must be considered, and strongly suggest reaching as far as Eastern Europe. Our recent experience in this region does give examples of 6 storey residential construction with a single means of egress that may be of use to the NRC.
- DND/CAF does have some residential occupancies with a similar egress configurations. Although configured as singles quarters (hotel style rooms), we have documented cases of means of egress being blocked, and members having to jump out of second storey windows to evacuate, injuring themselves in the process. We can make the study for how to mitigate this problem available to NRC if desired.
- We must absolutely consider how increasing the permission for a single means of egress in residential affects fire department operations. As many of our colleagues stated, this constitutes a not-insignificant change to basic safety assumptions in fire department operations, and the impact of the adjustment to any new configurations must be considered in the overall analysis. The NRC only recently added first responder safety to the intent and objectives of some code requirements. It's important that we continue to apply the equivalency method in the alternative solution approach to ensure we do not increase risk to first responders while trying to manage the current housing crisis.

We appreciate the NRC's effort to ensure a balanced, data-based approach to considering code changes that affect the lives of all Canadians. National Defence continues to offer our support for this important work.

Very respectfully

Pat Gallagher, C.E.T.

Fire protection officer
Canadian Forces Fire Marshal / Department of National Defence / Government of Canada