



2007 – FIRE DRILL REPORT

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Pre-amble

Fire Drills

As per **A-2.8.3.1.(1)** of the **Manitoba Fire Code**, “a fire safety plan is of little value if it is not reviewed periodically so that all supervisory staff remain familiar with their responsibilities. A fire drill, then, is at least a review of the fire safety plan by supervisory staff. The extent to which non-supervisory staff participates in a fire drill should be worked out in cooperation with the fire department. The decision as to whether all occupants should leave the building during a fire drill should be based on the nature of the occupancy. It may be necessary to hold additional fire drills outside normal working hours for the benefit of employees on afternoon or night shifts, who should be as familiar with fire drill procedures as those who work during the day. If full scale fire drills are not possible during non-regular working hours, arrangements should be made so that night-shift supervisory staff can participate in fire drills conducted during the daytime.”

In the past, it was felt reviewing the Fire Safety Plan with Fire Wardens, dedicated staff met the intent of the Manitoba Fire Code, and conducting actual evacuation drills was left up to the faculties and departments. This has not been the case as many new staff and students need to know what a fire alarm sounds like and be able to act accordingly. Conducting actual fire evacuation drills is the best way to relay this important information. It also identifies any shortfalls in the Fire Safety Plan.

To meet the requirements of the Manitoba Fire Code and to test the Fire Safety Plan for each building, Environmental Health and Safety Office with the assistance of Security Services and Physical Plant conducted fire evacuation drills in all University of Manitoba Buildings with the exception of the Residences, Pharmacy Building, Russell Building and Parker Building.

The fire evacuation drills were previously scheduled for October but due to a labour dispute, they were rescheduled to November 2007. The cold weather was the primary reason for delaying conducting fire evacuation drills in the residences while the Pharmacy and Parker buildings had already conducted a fire evacuation drill as part of their student’s orientation in September. As for the Russell Building, a fire false alarm the week prior to the scheduled fire evacuation drills was observed by EHSO staff and the Architectural staff followed proper procedures as per the Fire Safety Plan for their building.

This report highlights the results of the fire evacuation drills with areas identified as needing improvement.

Procedure for the Fire Evacuation Drills

EHSO, Security Services and Physical Plant held meetings to develop a schedule for conducting the fire evacuation drills and criteria for their role as Observers. After confirming the dates, the Vice-President of Administration sent a memo to all faculties and departments informing them of the upcoming fire evacuation drills. The faculties and departments were not given the exact date or time of the fire evacuation drills but to minimize disruption, they were asked to notify our office of any dates or times where the drills would be problematic.

Our office created a form to be used by staff identified as observers and held an in-service on the procedures and criteria they are to use. The criteria included: time for evacuation of a floor, staff/student response to the fire alarm, identification of fire wardens, are rooms checked and are doors closed. The observers were asked not to comment to staff/student in the building unless it was necessary because there were no fire wardens or no response to the fire alarm. Any comments were to be documented as well.

Following a pre-determined schedule, EHSO, Security Services and Physical Plant Staff met at the first building on the schedule. Time was given for the observers (wearing a high visible vest and white hard hat) to get in place on each floor. The fire alarm was activated and the observers noted the reaction from staff and students in the building.

From the information gathered, EHSO created a rating system to assist with determining the effectiveness of the fire safety plan and identify areas requiring improvement. The rating system ranged from 0 (extremely poor performance) to a maximum of 30 (all requirements for a safe evacuation were met).

Summary

- From the data gathered from fire evacuation drills in 57 buildings at both the Fort Garry Campus and Bannatyne Campus:
 - 0% of the buildings received a rating a 30,
 - 5.6% of the buildings received a rating between 25 and 27,
 - 18.5% of the buildings received a rating between 20 and 24,
 - 35.2% of the buildings received a rating between 15 and 19,
 - 22.2% of the buildings received a rating between 10 and 14,
 - 18.5% of the buildings received a rating under 10.
 - 38.9% of the buildings evacuated in less than 3 minutes (the norm),
 - 53.7% of the buildings took between 3 and 5 minutes for complete evacuation,
 - 7.4% of the buildings took more than 5 minutes to evacuate.
- The Fire Warden Program and the Fire Safety Plan do work in buildings where wardens have been identified, roles understood and some education of staff has been conducted. It is clear that more planning and education is required in some buildings,
- Many buildings lack or have inadequate Fire Warden to perform required duties in the event of a fire alarm,
- Evacuation of a building is more orderly when the Fire Wardens are visible and identified,
- Fire evacuation drill will become an annual event occurring sometime in late September or early October to coincide with Fire Prevention week and further minimize disruptions.

Factors in Determining the Rating

The total rating was evaluated at 30 points based on the following:

Evacuation (total rating 10 – 5 for shortest from floor and 5 for total building evacuation):

- 5 points if evacuation occurred in less than 2 minutes
- 3 points if evacuation occurred in less than 3 minutes (norm)
- 1 point if evacuation occurred in less than 5 minutes
- -1 point if evacuation took over 5 minutes.

Staff/Student response (total rating 5 based on observers' notes):

- 5 points if response was very good
- 3 points if response was good
- 1 point if response was average
- -1 point if response was poor
- -3 points if staff/student refused to evacuate.

Fire Warden Response (total rating 10 – 5 for Fire Warden presence times two (x2) if they were properly identified):

- 5 points if Fire Wardens were noticed on all floors
- 4 points if Fire Wardens were noticed on 80% of the floors
- 3 points if Fire Wardens were noticed on 50% of the floors
- 1 point if Fire Wardens were noticed on 20% of the floors
- -1 point if no Fire Wardens were present or noticed.

Checking of Rooms as per Fire Plan (total rating 5):

- 5 points if rooms on all floors were checked
- 4 points if 50-80% of the rooms were checked
- 3 points if 20-50% of the rooms were checked
- 1 point if 10-20% of the rooms were checked
- -1 point if no rooms were checked.

Conclusion

Annual fire evacuation drills at the University will become a regular event and occur each Fall. EHSO has developed a program to address areas/buildings requiring more fire drills to meet the intent of the Manitoba Fire Code (such as laboratories).

The information gathered for the fire evacuation drills will assist with the development of or transition to the Building Emergency Response Plan that will include the Fire Safety Plan.

The rating system will be updated to remove as much as possible the subjective element. It is understood buildings like the EITC Building, University Centre and Brodie/John Buhler Research Centre are unique and the rating system must reflect this. The intent of the rating system is to identify components of the Building Fire Safety Plan requiring improvement.

EHSO would be please to discuss with Building Chief Fire Wardens the rating their building achieved (see Appendix “A”) and discuss ways to improve both the Fire Safety Plan and response to fire alarms in the building.

APPENDIX A

Individual Building Score – (Maximum points – 30)

| Building | Shortest Time | Shortest Time Score | Longest Time | Longest Time Score | Staff/Student Response Score | Fire Wardens Identifiable Score | Room Checks Score | Total |
|------------------------------------|---------------|---------------------|--------------|--------------------|------------------------------|---------------------------------|-------------------|-----------------------|
| CAST Building | | | | | | | | Plan Review only |
| Dairy Sciences | | | | | | | | Plan Review only |
| Powerhouse | | | | | | | | Plan Review only |
| Administration Building | <2 | 5 | 3 | 3 | 5 | 10 | 4 | 27 |
| Pharmacy | <1 | 5 | 1.3 | 5 | 5 | 6 | 4 | 25 |
| Russell | <1 | 5 | 1.5 | 5 | 5 | 6 | 4 | 25 |
| University College | <2 | 5 | 2.5 | 3 | 5 | 6 | 4 | 23 |
| Education Building | 1.58 | 5 | 3.15 | 1 | 5 | 8 | 4 | 23 |
| Parker | 1 | 5 | 3 | 3 | 5 | 6 | 4 | 23 |
| Human Ecology | 2 | 3 | 3 | 3 | 5 | 8 | 3 | 22 |
| Ceramics | 1.02 | 5 | 2 | 5 | 5 | 4 | 3 | 22 |
| Robson Hall | 1.45 | 5 | 3 | 3 | 5 | 3 | 5 | 21 |
| Basic Sciences | 2 | 5 | 2 | 5 | 5 | 1 | 5 | 21 |
| BMSB | 1.75 | 5 | 5 | 1 | 5 | 6 | 3 | 20 |
| Ellis Building | 2 | 5 | 2.58 | 3 | 3 | 6 | 3 | 20 |
| Agriculture Building | 1.2 | 5 | <2 | 5 | 5 | 2 | 3 | 20 |
| Buller Building | 2 | 3 | 4.5 | 1 | 5 | 6 | 4 | 19 |
| Medical Rehabilitation | 1 | 5 | 2 | 5 | 5 | 1 | 3 | 19 |
| Elizabeth Dafoe Library | 3.25 | 1 | 4 | 1 | 5 | 8 | 4 | 19 |
| Isbister | 3 | 3 | <5 | 1 | 5 | 6 | 4 | 19 |
| Investor's Group Athletic Facility | 1.45 | 5 | 3 | 3 | 5 | 2 | 4 | 19 |
| Architecture II | <2 | 5 | 3.5 | 1 | 3 | 6 | 4 | 19 |
| Animal Sciences Entomology Bldg | <2 | 5 | 2.75 | 3 | 5 | 2 | 4 | 19 |
| Pembina Hall | 1.5 | 5 | 3 | 3 | 3 | 4 | 4 | 19 |
| Machray Hall | 1.92 | 5 | 3.5 | 1 | 5 | 6 | 1 | 18 |
| Crop Technology Centre | <1 | 5 | 1.5 | 5 | 3 | 1 | 4 | 18 |
| Music | 1 | 5 | 2.5 | 3 | 5 | 1 | 4 | 18 |
| University Centre | 2.5 | 3 | 5 | 1 | 5 | 6 | 3 | 18 |
| Dentistry | 2 | 5 | 5 | 1 | 5 | 2 | 4 | 17¹ |
| Duff Roblin | 1.83 | 5 | 4 | 1 | 5 | 2 | 4 | 17 |
| Plant Science Building | 0.67 | 5 | <2 | 5 | 5 | -1 | 3 | 17 |
| Helen Glass Centre for Nursing | 1.83 | 5 | 3.15 | 1 | 3 | 3 | 4 | 16 |
| Fitzgerald Building | 0.67 | 5 | 3 | 3 | 5 | 2 | 1 | 16 |
| Wallace Building | 1.5 | 5 | 3.5 | 1 | 3 | 3 | 3 | 15 |
| Stores Building | <2 | 5 | 2.95 | 3 | 5 | 1 | 1 | 15 |
| St Paul's College | 1.92 | 5 | 3.33 | 1 | 5 | 2 | 1 | 14 |
| Fletcher Argue Building | 2.2 | 3 | 4 | 1 | 3 | 2 | 4 | 13 |
| Frank Kennedy Centre | 1.3 | 5 | 6 | -3 | 5 | 2 | 4 | 13 |
| Max Bell | 2 | 5 | 3.4 | 1 | 5 | -1 | 3 | 13 |
| Services Building | 0.92 | 5 | 1.5 | 5 | 5 | -1 | -1 | 13 |
| Physical Plant | 1 | 5 | 2 | 5 | 5 | -1 | -1 | 13 |

¹ Although Dentistry received a score of 17, it should be acknowledged the score does not reflect the difficulty with evacuating patients in their care. The Faculty has an excellent Fire Warden program and should be commended for evacuating all patients in approximately 5 minutes.

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|---------------------------|------|---|------|----|----|----|----|-----------|
| Music Annex | 0.5 | 5 | 1.5 | 5 | 5 | -1 | -1 | 13 |
| Brodie / JBRC | 2.5 | 3 | 6 | -1 | 5 | 1 | 4 | 12 |
| Allen Physics Building | 2 | 3 | 4.5 | 1 | 5 | -1 | 3 | 11 |
| Medical Services | 1 | 5 | 2 | 5 | 3 | -1 | -1 | 11 |
| Art Barn | 1.83 | 5 | 2 | 3 | 5 | -1 | -1 | 11 |
| RCFFN | <2 | 5 | 3 | 3 | 1 | 2 | -1 | 10 |
| St John's College | 2.25 | 3 | 3.5 | 1 | 5 | -1 | 1 | 9 |
| Armes Lecture Block | 2 | 3 | 5 | 1 | 5 | -1 | 1 | 9 |
| Chown Building | <2 | 5 | 3.17 | 1 | 5 | -1 | -1 | 9 |
| Tier | <2 | 5 | >5 | -3 | 5 | -1 | 3 | 9 |
| Pathology | 2 | 5 | 2 | 5 | -1 | -1 | -1 | 7 |
| Drake Centre | 2.87 | 3 | 5 | 1 | 5 | -1 | -1 | 7 |
| Grain Storage Building | 1.43 | 5 | | 0 | 3 | -1 | -1 | 6 |
| EITC | 4.87 | 1 | 7 | -1 | 1 | 1 | 4 | 6 |
| Agriculture Engineering | 1.27 | 5 | 5 | 3 | -1 | -1 | -1 | 5 |
| Agriculture Lecture Block | 1.5 | 5 | | 0 | -1 | -1 | -1 | 2 |