DATE: July 24, 1995

FROM: Minnesota Fatality Assessment and Control Evaluation (MN FACE) Program
Minnesota Department of Health

SUBJECT: MN FACE Investigation 95MN00401
Hotel Custodian Dies From Injuries Sustained During Fall Down Stairs

SUMMARY

The victim was working alone at the time that the unwitnessed incident occurred. As a result, this report is based upon information obtained during the site investigation interview and an inspection of the incident site.

A 33-year-old male hotel custodian (victim) died from injuries sustained when he fell down a stairway. Guests staying in a second floor room requested a roll-away bed which the victim was asked to deliver to the room. The victim went to a first floor storage room and obtained one of the roll-away beds. He apparently rolled it down a hotel room hallway until he reached the bottom of a stairway that led to the second floor. After reaching the bottom of the stairway, the victim carried the roll-away bed up the stairs. Since he was working alone, it was not known how far up the stairway he carried it. At some point along the stairway or after he reached the top landing, he lost his balance and fell down the stairway. He was discovered by hotel guests shortly after he had been told to deliver the roll-away bed to a second floor room. He was found lying on his back at the bottom of the stairway with his feet resting on the first step of the stairway. The roll-away bed was lying almost directly on top of the victim's chest. Emergency medical personnel were called and arrived at the scene shortly after the victim was discovered. The victim was transported to a local hospital where he was pronounced dead shortly after he was brought into the hospital. MN FACE investigators concluded that to reduce the likelihood of similar occurrences, employers should:

- ensure that employees do not move items from one building level to another

level unless absolutely necessary; and

- ensure that more than one employee is involved when large, bulky, or heavy items must be manually moved from one building level to another.

INTRODUCTION

On February 10, 1995, MN FACE investigators were notified of a work-related fall fatality that occurred on December 8, 1994. A site investigation was conducted by MN FACE investigators on April 18, 1995. During the site investigation, information concerning the incident was provided by the manager of the hotel where the incident occurred.

The employer in this incident was a hotel that had been in business for 21 years. The hotel employed approximately 100 employees. The hotel manager was responsible for safety programs and procedures. The victim was an experienced part-time custodian who had worked for the hotel for 10 years.

INVESTIGATION

The victim was working alone at the time that the unwitnessed incident occurred. As a result, this report is based upon information obtained during the site investigation interview and an inspection of the incident site.

The hotel rooms were arranged on two floors around the perimeter of the building. A center court area of the hotel was surrounded by rooms on three sides and by the registration lobby, hotel offices, and a hotel restaurant on the other side. The center court was enclosed and contained an indoor pool and other recreational facilities for use by the hotel guests. Several inside stairways provided employees and guests access to rooms on the second floor.

The victim was working an 11:00 p.m. to 7:00 a.m. shift and had been at work for approximately 50 minutes. Guests staying in a room on the second floor requested a roll-away bed which the victim was asked to deliver to the room. The roll-away bed consisted of a steel frame, a wire mattress support spring, and a 5 inch thick innerspring mattress. The roll-away bed was being delivered in its closed position. The dimensions of the closed roll-away bed were 11 inches thick by 40 inches wide by 48 inches high and it weighed approximately 63 pounds. In the closed position the roll-away bed could be moved on two 8 inch diameter

wheels and two 5 inch diameter wheels. Roll-away beds were stored in several storage rooms on both levels of the hotel.

The victim went to a first floor storage room and obtained one of the roll-away beds. He apparently rolled it down a hotel hallway until he reached the bottom of a stairway that led to the second floor (Figure 1). The stairway was 58 inches wide and had handrails on each side that were 32 inches above and parallel to the slope of the steps. The stairway consisted of 13 runs, each 11.5 inches wide and 14 risers, each 7.5 inches high. The landing at the top of the stairway was 58 inches wide by 59 inches deep. The stairway and both the upper and lower landings were covered with tightly woven carpet that was securely fastened and in good condition. A 36 inch wide door to the second floor hallway opened toward or onto the landing at the top of the stairway. Adequate stairway lighting was provided by wall mounted light fixtures. The upper and lower stairway landings each had a light fixture that was six feet above the landing floor. After reaching the bottom of the stairway, the victim carried the roll-away bed up the stairs. Since he was working alone, it was not known how far up the stairway he carried the roll-away bed. At some point along the stairway or after he reached the top landing, he lost his balance and fell down the stairway. He was discovered by hotel guests shortly after he had been told to deliver the roll-away bed to a second floor room. He was found lying on his back at the bottom of the stairway with his feet resting on the first step of the stairway. The roll-away bed was lying almost directly on top of the victim's chest. Emergency medical personnel were called and arrived at the scene shortly after the victim was discovered. The victim was transported to a local hospital where he was pronounced dead shortly after he was brought into the hospital.

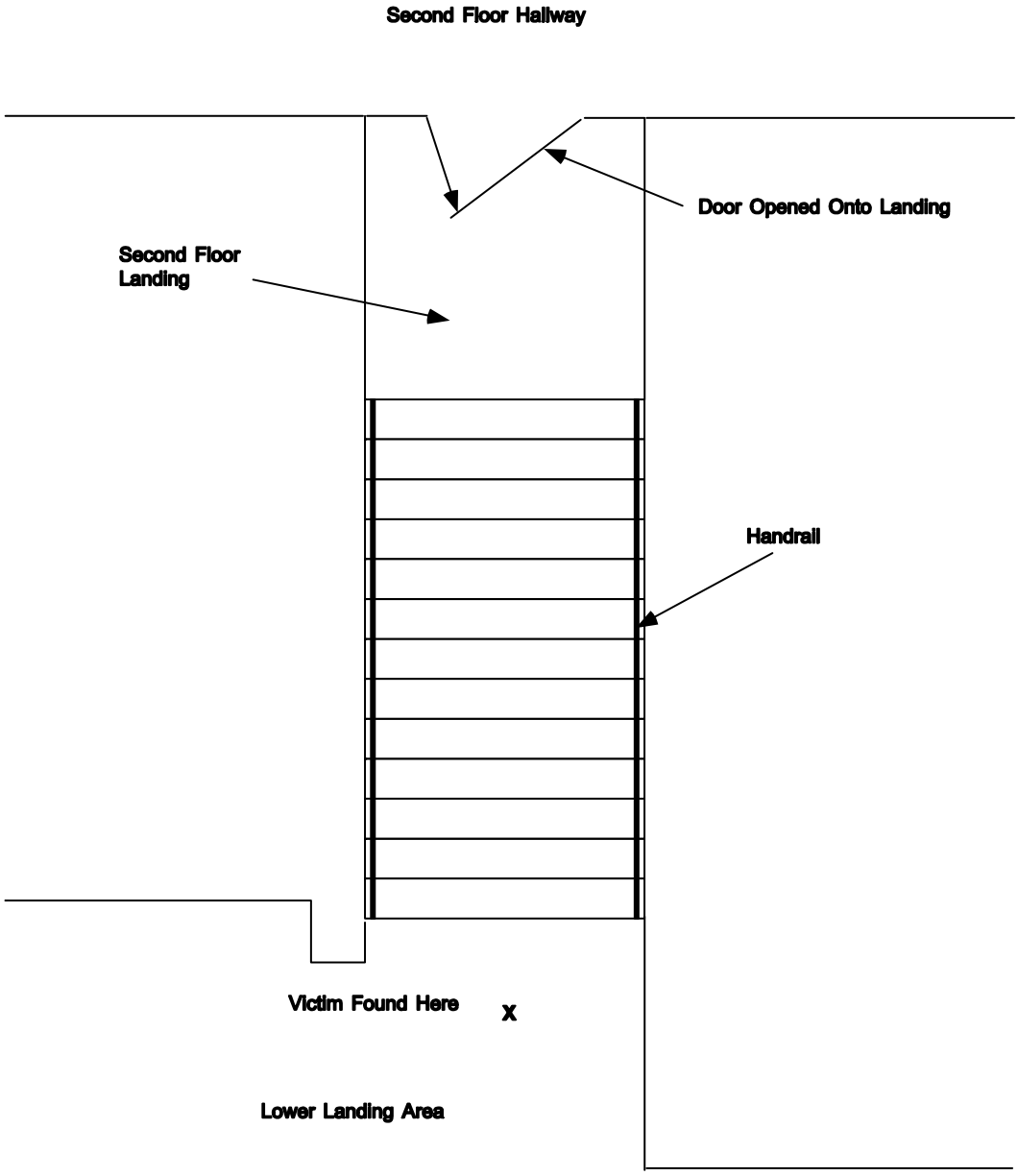

Figure 1. Stairway and Landings, Aerial View
Not To Scale

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CAUSE OF DEATH

The cause of death listed on the death certificate was closed head injury due to fall on stairs.

RECOMMENDATIONS/DISCUSSION

Recommendation #1: Ensure that employees do not move items from one building level to another level unless absolutely necessary.

Discussion: Roll-away beds that were not in use by hotel guests were kept in storage rooms on both floors of the hotel. It could not be determined why the victim attempted to move one of the roll-away beds from a first floor storage room to a second floor guest room. Movement of the roll-away bed from the first floor to the second floor required that it be carried up a stairway and exposed the victim to the risk of a fall. If a roll-away bed had been obtained from a second floor storage room, this fatality might have been prevented.

Recommendation #2: Ensure that more than one employee is involved when large, bulky, or heavy items must be manually moved from one building level to another.

Discussion: In the closed position, the roll-away beds rested on four small wheels. In this position, one person could easily move a roll-away bed from either storage room to guest rooms on the same floor. However, to move a bed between floors required that it be carried up or down one of the hotel stairways. The size and the weight of the roll-away bed was large enough to create a dangerous situation for a single worker attempting to carry it on the stairway. Whenever large, bulky, or heavy items must be carried up or down stairways, an adequate number of workers should be involved to ensure that the item can be safely moved. The involvement of multiple workers would reduce the risk of a fall by a worker and would reduce the risk of someone being injured by a falling object. If additional workers had been involved in carrying the roll-away bed up the flight of stairs, this fatality might have been prevented.

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