SOG #: Sample SOG
Title: Procedure For Handling Elevator Emergencies
Date:

Scope: This guideline applies to all uniformed and investigatory personnel of the FD.

Purpose: To provide safe guidelines, and operational procedures used at EMERGENCIES and INCIDENTS in which people are trapped in stalled elevators.

Authority: Fire Chief

GUIDELINE

Response: First Due Truck Company & Rescue Company 1

All members of the FD, when dealing with a stalled elevator, are limited to the safe removal of persons trapped in the elevator car or hoistway. Repairs to and reactivation of elevators shall **never** be carried out by members of the FD.

Stalled elevator operations are divided into two categories;
INCIDENTS and EMERGENCIES.

INCIDENT:

A stalled elevator with passengers trapped inside, not in immediate danger and no evidence of injury. They are merely inconvenienced

Note: Conditions must be constantly monitored; an INCIDENT may escalate to an EMERGENCY.

EMERGENCY**:**

A situation where one or more of the following exist:

a. Fire endangering passengers in a stalled elevator.

b. Passengers who are sick, ill or injured in a stalled elevator.

c. Passengers who are in panic, in a stalled elevator.

Important:

Wait for an elevator mechanic to arrive if possible (20 minute maximum wait-time). The following situations will prohibit FD members in waiting for an elevator mechanic:

a. Emergency situation (see above)
b. Availability & response time of elevator mechanic.
c. FD apparatus availability & call volume.

Operating Procedures:

At a minimum, all FD members shall follow these important safe procedures at all stalled elevator operations:

- **Initial Response Steps (see below) shall be initiated upon arrival of stalled elevator.**
- **The power to the stalled elevator shall be removed along with all battery and generator back-ups (using lock-out/tag-out procedures) from all stalled elevators, prior to passenger removal, if initial response steps fail (see below).**
- **The power to the stalled elevator shall never be restored by FD members. Lock-out/tag-out shall remain in place and the key shall be stored in the Knox Box.**
- **FD members shall set up and utilize a fall arrest system for the removal of the passenger(s) and for firefighter safety, when a passenger is removed via an emergency exit.**

Warning: EXTREME CAUTION MUST BE EXERCISED WHEN REMOVING PASSENGERS VIA THE TOP ESCAPE HATCH. THIS MUST BE CONSIDERED A TECHNICAL RESCUE.

Important: When there are other elevators operating in a common hoistway, clear adjacent elevator(s) of passenger(s), and position elevator(s) along side the stalled elevator. This procedure will eliminate the hazard of a moving elevator and eliminate some of the falling hazard. Power to the adjacent elevator(s) must be disconnected along with all battery and generator back-ups. Lock-out/tag-out procedures must be implemented. Confirmation must be received before further operations continue.

Initial Response Steps:

1. Upon arrival the Incident Commander shall meet with the complainant, if possible, to determine if there is a person trapped in the stalled elevator and how many persons are affected.

2. Upon the determination that a rescue is necessary, the Incident Commander shall request an elevator repair service to respond.

3. Obtain Knox Box key. The Knox Box shall contain, machine room key, hoistway door key, and the fireman service key.

4. Two firefighters shall be sent to the elevator machine room equipped with keys for the room (if available), hand lights, FE tools, radios, extinguisher, lock-out/tag-out kit. The machine room may be located at the top of the shaft, in a separate structure on the roof, at the bottom of the shaft adjacent to the elevator, or two levels above the highest floor serviced by the elevator. The firefighters in the machine room shall wait for further instruction and remain in place.

5. If a multiple car bank is present, you **must** determine which elevator is stalled before opening any doors. Opening the door to the running elevator may create a second stalled elevator.

6. The position of the car in the hoistway shall be determined. The following are ways to determine the car's position:
    a. Use the position indicator.
    b. Speak to the occupant(s) through the hoistway door.
    c. Speak to the occupant(s) via the intercom.
    d. Use the adjacent car.
    e. Look up the shaft-way without physically entering. (power **must** be off if you enter the hoistway)
    f. The machine room team can look down the hoistway through the smoke hole in machine room (traction elevator).
    g. Use floor selector in machine room (if available)
    h. Use a laser tape (if available).

7. The Incident Comander shall establish contact with the cars occupant(s) and attempt to determine how many people are inside, if any medical conditions are present and then advise them to do the following:

    a. Sit on the floor, with their back against the wall of the elevator.
    b. Do not smoke.
    c. Stay away from the elevator doors.
    d. The rescue is in progress, and they are safe.

8. If a medical condition does exist and/or communication is not established, Command shall immediately request the dispatch of EMS.

9. Passenger assist procedures shall be implemented as follows:

    a. Have the occupant(s) cycle the stop switch a few times, to ensure the switch is not in the stop position.
    b. Have the occupant(s) push a couple of floor buttons.
    c. Have the occupant(s) push the door open button,
    d. Have the occupant(s) push close the car door.
    e. Make sure all hoistway doors are fully closed (front/rear/side). Check in the immediate vicinity of the stalled elevator (at the floor, floor above and floor below).

10. If the elevator service is equipped with Phase I Fire Recall service, attempt to recall the elevator. **Caution: Occupant(s) must be notified before activating phase 1. If they are attempting self rescue you can injure or kill the occupant(s) if fire recall activates.**

11. Have the machine room team cycle the mainline disconnect in an attempt to restart the elevator. Turn the main line off, wait approximately 30 seconds; turn the main line back on. The following is a safe procedure for turning the mainline disconnect off and on:

    a. Understand the equipment and its potential hazards.
    b. Operate switch to shut off the power, when ordered by the IC.

c. Do not stand directly in front of the mainline disconnect when operating.
d. Place a fist on the knife switch. **Do Not** grab with hand.
e. Place other hand behind back or in a pocket. This will prevent grounding.
f. Turn head and look away from disconnect switch.
g. Repeat steps b through f when turning power to the on position.

WARNING: the lighting inside the elevator has a separate dedicated 110v circuit. The absence of lighting inside the car **DOES NOT** indicate that power has been secured at the main line disconnect.

Occupant Removal

The safest way to remove a passenger from a stalled elevator is through the normal entranceway and floor level. Sometimes this is not always possible. When ever possible remove trapped occupant(s) from the floor above (minimizes some of the falling hazard). If the opening through the normal entranceway has less than 3 feet of clearance, remove occupant(s) via the top escape hatch. **Never have a victim slide out through a narrow opening. The results may be deadly.**

Safe order of removal:

1. Floor level through the normal entranceway (safest)
2. Floor above through the normal entranceway
3. Floor below through the normal entranceway (barricade opening to shaft)
4. Top escape hatch (**must** use fall arrest system)

- Car at or near the landing (within 18 inches)
- Car within 3 feet of the landing
- Car stalled more than 3 feet of the landing (stalled above the landing)
- Car stalled more than 3 feet of the landing (top escape hatch removal)

Warning: EXTREME CAUTION MUST BE EXERCISED WHEN REMOVING PASSENGERS VIA THE TOP ESCAPE HATCH. THIS MUST BE CONSIDERED A TECHNICAL RESCUE.

Important: When there are other elevators operating in a common hoistway, clear adjacent elevator(s) of passenger(s), and position elevator(s) along side the stalled elevator. This procedure will eliminate the hazard of a moving elevator and eliminate some of the falling hazard. Power to the adjacent elevator(s) shall be disconnected along with all battery and generator back-ups. Lock-out/tag-out procedures shall be implemented. Confirmation shall be received before further operations continue.

Incident Termination:

After occupant(s) have been safely removed from the stalled elevator car, the following procedures shall be followed:

a. FD members shall secure the hoistway door. An unsecured hoistway door is one of the most common causes of elevator fatalities.
b. Power to all elevators that were used during the rescue operation shall be restored.
c. Power to the stalled elevator shall not be restored by FD members. Lock-out/tag-out shall remain in place.
d. The key for the lock-out/tag-out shall be placed in the building's Knox Box.
e. The elevator company and/or building management shall be briefed on what actions were taken to free the occupant(s). They shall also be told what power was turned off, stop switches were thrown and if any damage was made to the elevator(s).

Summary: (five most important points)

1. Always consider safety first when working around the elevator hoistway and equipment.
2. Unless there is a true emergency, it is always best to wait for the elevator mechanic (20 minute maximum wait-time).
3. Power to the stalled elevator shall be disconnected along with all battery and generator back-ups at every elevator Incident and Emergency. Lock-out/tag-out procedures shall be implemented. Confirmation shall be received before further operations continue.
4. FD members shall set up and utilize a fall arrest system for the removal of the passenger(s) and for firefighter safety, when a passenger is removed via an emergency exit.
5. Power to the stalled elevator shall not be restored by FD members. Lock-out/tag-out shall remain in place. The key for the lock-out/tag-out shall be placed in the Knox Box.

References:

- A.S.M.E. A17.1 – Safety Code for Elevators & Escalators
- A.S.M.E. A17.4 – Emergency Evacuation of Passengers from Elevators
- N.E.I.E.P. – Modules 1 – 8 & Module 12
- F.D.N.Y. - Training Bulletin/Emergencies 1/Elevator Operations/March 15, 1997